

EVANS-FINTUBE FINAL REPORT

**EVANS-FINTUBE PROPERTY
118/150/186 NORTH LANSING AVENUE
TULSA, OKLAHOMA 74120**

ENERCON PROJECT NO. CTYTUL0050 & CTYTUL0-00091



Prepared for:
City of Tulsa
175 East 2nd Street
Tulsa, Oklahoma 74103
Attention: Michelle Barnett

Date:
September 20, 2019

Prepared by:



5100 East Skelly Drive - Suite 450
Tulsa, Oklahoma 74135
(918) 665-7693 (Phone)
(918) 665-7232 (Fax)

Submitted By:

A handwritten signature in black ink that reads "Matthew Payne".

Matthew Payne
Environmental Scientist

Reviewed By:

A handwritten signature in purple ink that reads "Andrew Foreman".

Andrew Foreman
Senior Project Manager
OCC Licensed Environmental Consultant #2049

TABLE OF CONTENTS

| <u>SECTION</u> | <u>PAGE</u> |
|--|-------------|
| 1.0 INTRODUCTION | 4 |
| 1.1 Purpose | 4 |
| 1.2 Involved Parties | 4 |
| 2.0 SITE BACKGROUND AND HISTORY | 5 |
| 2.1 Section 1 Environmental History | 7 |
| 2.2 Section 2 Environmental History | 11 |
| 2.3 Section 3 Environmental History | 18 |
| 2.4 Brownfields Site Characterization, Proposal, and Cleanup Design | 28 |
| 3.0 REMEDIATION ACTIVITIES | 32 |
| 3.1 Scope of Work Summary – Section 1 | 32 |
| 3.1.1 Scope of Work Deviations – Section 1 | 35 |
| 3.2 Scope of Work Summary – Section 2 and Section 3 | 35 |
| 3.2.1 Scope of Work Deviations – Section 2 and Section 3 | 40 |
| 4.0 INSTITUTIONAL CONTROLS..... | 42 |
| 5.0 CONCLUSION | 44 |

Appendix A – Figures:

- Site Map
- Section 1 Detail Map
- Section 2 Detail Map
- Section 3 Detail Map
- Section 1 Historical Exceedances
- Section 2 Historical Exceedances
- Section 3 Historical Exceedances
- Section 1 Pre-Excavation Exceedances
- Section 2 Pre-Excavation Exceedances
- Section 3 Pre-Excavation Exceedances
- Section 1 Post-Excavation Exceedances
- Section 2 Post-Excavation Exceedances
- Section 3 Post-Excavation Exceedances
- Revised Section Boundaries Map
- Post-Excavation Exceedances with Revised Section Boundaries Map

Appendix B – Tables:

- Table 1: Historical Surface Soil Sample Analytical Results
- Table 2: Historical Subsurface Soil Sample Analytical Results
- Table 3: Historical Groundwater Sample Analytical Results
- Table 4: Seneca Pre-Excavation Soil Sample Analytical Results
- Table 5: Seneca Post-Excavation Soil Sample Analytical Results (1-Foot BGS)
- Table 6: Seneca Post-Excavation Soil Sample Analytical Results (1.5-Foot BGS)
- Table 7: Seneca Post-Excavation Soil Sample Analytical Results (2-Foot BGS)
- Table 8: EWI Pre-Excavation Soil Sampling Results – PP Metals
- Table 9: EWI Pre-Excavation Soil Sampling Results – PAHs
- Table 10: EWI Pre-Excavation Soil Sampling Results – TPH

Table 11: EWI Post-Excavation Soil Sampling Results – PP Metals
Table 12: EWI Post-Excavation Soil Sampling Results – PCBs
Table 13: EWI Post-Excavation Soil Sampling Results – TPH
Table 14: EWI Post-Excavation Soil Sampling Results – PAHs
Table 15: Excavation Summary

Appendix C – Hand-Auger Soil Boring Logs
Appendix D – Laboratory Analytical Reports & Chains-of-Custody
Appendix E – Meets and Bounds Survey
Appendix F – ODEQ TBA Report & Contractor Reports

1.0 INTRODUCTION

1.1 Purpose

The purpose of this Final Report is to document all activities performed, and results thereof, within the Brownfields Proposal and cleanup Phase I and Phase II conducted at the Evans-Fintube facility (Site). The subject property is large and was divided by the City of Tulsa into three sections (Section 1, Section 2, and Section 3) (see attached Site Map for section locations). The Site is located at 118/150/186 North Lansing Avenue in Tulsa, Oklahoma and is owned by the City of Tulsa. The Site is occupied by two large building complexes (the Evans Building Complex and the Fintube Building Complex) and vacant lots. All observations are current as of the dates each phase of work was completed at the Site. Property modification, events, or information made available subsequent to these dates are not addressed herein.

1.2 Involved Parties

The City of Tulsa contracted with Enercon Services, Inc. (ENERCON) to serve as the technical oversight contractor for the three sections. Seneca Companies, Inc. (Seneca) was contracted by the City of Tulsa to perform remedial activities in accordance with the scope of work requirements of the Brownfields Remedial Action Plan (BRAP) for Section 1. Seneca utilized the services of Razek Environmental (Razek) for the permanent closure of five (5) onsite monitoring wells and O6 Environmental Services (O6) for the excavation and hauling of contaminated material in Section 1. Environmental Works, Inc. (EWI) was contracted by the City of Tulsa to perform remedial activities in accordance with the scope of work requirements of the BRAP for Sections 2 and 3.

Mr. Matt Liechti served as the Brownfields Senior Manager (BSM) for the City of Tulsa. Ms. Michelle Barnett, P.E., served as the Quality Assurance Manager (QAM) for the City of Tulsa. Mr. Paul Johnson served as the Project Officer (PO) for the United States Environmental Protection Agency (USEPA) Region 6. Mr. Sam Hooker served as the Brownfields Project Manager for the Oklahoma Department of Environmental Quality (ODEQ). Mr. Andrew Foreman served as the Environmental Consultant for ENERCON.

2.0 SITE BACKGROUND AND HISTORY

The Evans-Fintube facility is located at 118/150/186 North Lansing Avenue in Tulsa, Oklahoma 74106. The site currently consists of two building complexes and two vacant lots.

The southern complex, which is located at 118/150 North Lansing Avenue, is identified as the Evans Building Complex. The Evans Building Complex consists of three north-south oriented buildings to the north and two east-west oriented buildings to the south. The Evans Building Complex was formerly a steel manufacturing facility that contained a foundry on the northern end.

The Foundry is the northernmost section of the Evans building at 118 North Lansing Avenue and was among the first units constructed when Oklahoma Iron Works purchased the 30-acre parcel at East Archer Street and North Lansing Avenue in 1911. The Foundry has a length of approximately 150-feet and a width of approximately 100 feet. At the northwest corner of the building, an original core oven was later replaced with an electric oven, allowing the production of high-grade steel parts.

The August 31, 1913 issue of the Tulsa Daily World described Oklahoma Iron Works as having a Foundry Department run by compressed air and electricity, producing both ferrous and nonferrous castings. Special molding, jarring, and core-making machines were in constant use. Twenty tons of gray castings were produced each day. The department had a Blacksmith Department with a capacity of ten tons per day. It was equipped with steam hammers, one of which was said to be the largest west of the Mississippi River.

The southern portion of the Foundry has a concrete foundation and brick walls. There is a small, one-story concrete block addition on the east elevation. The southern end of the Foundry is open to the Machine Shop. The floor is of earth and wood blocks. The floor of the Foundry can be distinguished because it is lower than the floor of the Machine Shop and the other sections of the building.

The Machine Shop, which was constructed between 1913 and 1939, is the largest building segment at 118 North Lansing Avenue. The Machine Shop has a length of approximately 320-feet and a width of approximately 118-feet. The Machine Shop has a concrete foundation and brick walls. Near the center of the east elevation is a small one-story concrete block addition. Two concrete block rooms located along the west side of the corridor are later additions. The floor has a mixture of concrete paving as well as wood blocks.

The Warehouse Department at the Evans location, which was constructed between 1915 and 1939, is located at the north end of the Machine Shop and has an east/west orientation. It has a length of approximately 250-feet and a width of approximately 63-feet. The interior of this unit has a concrete floor. The west end of this unit opens to the Assembly Department Addition, which is dated to the same period. The Assembly Department Addition has a length of approximately 70-feet and a width of approximately 63-feet. The interior of this unit has the same characteristics as the Warehouse Department.

The Welding Shop was constructed west of the Machine Shop, opposite a rail siding that entered the building from the north between 1915 and 1939. Warehousing and then welding operations were conducted there from prior to 1939 through 1962. A paint shop was located in its southeast corner of the Welding Shop.

The Rail Spur Addition, which was probably built prior to 1962, is located in between the Machining Department and the Welding Shop in the location formerly occupied by a rail spur. The interior features a concrete floor.

The Assembly Department, which was constructed between 1939 and 1962, is at the southwest corner of the Evans building and is open to the Warehouse/Assembly Department Addition along its north side. The interior features a concrete floor.

In early 1963, Central States Steel, Inc., a seller of wire, steel, and building material products, bought the property at 118 North Lansing Avenue. Central States' parent company, Warehouse Properties, owned the complex into the 1980s and used the buildings for warehousing construction materials.

After the removal of Bethlehem Steel/Oklahoma Iron Works in 1962-1963, the Warehouse and Assembly Department Addition buildings, located at 150 North Lansing Avenue, were occupied by Evans Electric for the warehousing of electrical parts and transformers.

The northern complex, which is located at 186 North Lansing Avenue, is identified as the Fintube Building Complex. The Fintube Building Complex consists of four buildings oriented north-south and one smaller building to the southeast that is oriented east-west. The Fintube Building Complex was formerly used as a metal manufacturing facility and a producer of heat exchangers that consisted of a concrete reservoir, a

forge, and welding and fabrication shops. The site has also been a scrap metal recycling facility and a storage yard for a wrecker service and highway construction equipment and materials.

Based upon aerial photography in 1962, the primary buildings at 186 North Lansing Avenue (Fintube property) had been constructed and a neighborhood occupied the northwest quarter of the overall site. The Fintube property consisted of a forge, welding and fabrication shops which were part of the Bethlehem Steel/Oklahoma Iron Works operations.

Air Cooled Exchangers, a manufacturer of heat exchangers, occupied the property at 186 North Lansing Avenue between 1962 and 1980. They were later known as Western Supply Company – Heat Exchanger Division.

Between 1980 and the present, the plant site was divided into parcels with Fintube Technologies, a manufacturer of heat transfer equipment, acquiring the northern portion at what is now 186 North Lansing Avenue. Evans Electric acquired the southern portion at what is now 118 North Lansing Avenue, which included the foundry/machine shop building.

The Tulsa Development Authority acquired 118 and 150 North Lansing Avenue (Evans) in 2003 and 186 North Lansing Avenue (Fintube) in 2005 with the goal of redeveloping them for non-industrial uses. In 2011, ownership of the parcels was transferred to the City of Tulsa and site business operations were removed.

2.1 Section 1 Environmental History

In 1989, inspectors found that vandals had released approximately 200 gallons of Aroclor 1260-containing dielectric fluid (polychlorinated biphenyls (PCB)) from transformers at 118 North Lansing Avenue and the oil had entered the floor drains at the site. See Background section for Section 2 for details. Contaminated sediment was removed from the drains and blasting media used to clean surfaces was drummed and temporarily stored at 150 North Lansing Avenue.

In March 1992, the Tulsa Development Authority had a “Level II Environmental Audit” or Phase I Environmental Site Assessment (ESA) conducted by MinTech, Inc. (MINTECH) for the property at 150 North Lansing Avenue prior to demolishing buildings at the site. The Phase I ESA noted the presence of labeled drums from the previously mentioned PCB-cleanup in Section 2 temporarily stored in a building

on the property. The Phase I ESA found asbestos containing building materials (ACBM) consisting of floor tile and thermal pipe insulation. Abatement of the thermal pipe insulation was recommended prior to demolition. Two filled “pits” were observed in Section 1 and broken automotive batteries were observed in one of the “pits”. The Phase I ESA also noted a fueling area consisting of three 400-gallon above-ground storage tanks for gasoline and diesel fuel in an asphalt paved area. The tanks were observed to be leaking onto the asphalt surface.

On September 13, 1992, the drums of PCB-contaminated waste from the previously mentioned PCB-cleanup in Section 2 were transferred to a disposal facility operated by Aptus, Inc.

In October 1994, an update of the Phase I ESA for 150 North Lansing Avenue was conducted by MINTECH. At that time, it was noted that the fuel storage tanks had been removed, the automotive batteries had been removed from the “pit”, and the PCB-remediation waste drums were not noted to be present. However, four unlabeled drums were found at the site, two open top and two closed, on an asphalt-paved area. Oil had spilled from the two open top drums and drained to surface soil. The report also noted that used oil appeared to have been poured along the railroad track. Several areas were noted where the asphalt had sunken in but the cause for the depressions was unknown.

Asbestos was abated from 150 North Lansing Avenue in 2003. Its buildings were demolished in June 2006.

In September 2009, a Phase I ESA was conducted for all three Sections by ALL Consulting (ALL). The following Recognized Environmental Conditions (REC) were observed in Section 1: An historical railroad spur located along the western boundary of Section 1 was likely to have resulted in hydrocarbon and/or metals impact to surficial and subsurface soils. Additionally, the customary practice of using a spray car to apply herbicides to rail lines and crossings may have led to surficial and subsurface impact due to these chemicals. Also, a review of the 1939 Sanborn Map depicted the former presence of a fuel oil tank of unknown size in Section 1. No visual or documented evidence of contamination due to these tanks was discovered, however, the lack of environmental regulations and controls in place during the existence of these tanks made the potential for unreported spills an REC in Section 1.

In June 2010, a Phase II ESA was conducted for all three Sections by ALL. Field activities performed during the Phase II ESA included drilling 10 soil borings, installation of temporary monitor wells in the soil borings, sampling surface and subsurface soils, sampling groundwater from the temporary wells, well

abandonment, temporary storage and disposal of investigative-derived waste, inspection of suspect lead-based paint (LBP), and inspection and sampling of suspect ACBM. Soil borings SB-2, SB-3, and SB-6 were installed in Section 1. A total of 31 surficial soil samples based on a 120-foot x 120-foot grid (3 collected from soil borings SB-2, SB-3, and SB-6), 3 subsurface soil samples, and 3 groundwater samples were collected in Section 1. The soil and groundwater samples were selectively analyzed for the presence volatile organic compounds (VOC), semi-volatile organic compounds (SVOC), total petroleum hydrocarbons (TPH), herbicides, PCBs, and Priority Pollutant (PP) Metals. Aroclor 1248 exceeded the 40 Code of Federal Regulations (CFR) 761.61 cleanup level of 1 milligram per kilogram (mg/kg) for Aroclors at high-occupancy areas in 1 of the 31 surficial soil samples. Arsenic exceeded the USEPA Region 6 RSL for arsenic in soil of 1.6 mg/kg in 30 of the 31 surficial soil samples. The United States Geological Survey (USGS) has reported that naturally occurring arsenic levels in Oklahoma soils typically range from 0 to 32 mg/kg, which is considered the background range. All surficial soil sample arsenic concentrations were within the background range. Benzo(a)pyrene exceeded the USEPA Region 6 RSL for benzo(a)pyrene in soil of 0.210 mg/kg in 7 of the 31 surficial soil samples. Benzo(b)fluoranthene exceeded the USEPA Region 6 RSL for benzo(b)fluoranthene in soil of 2,100 mg/kg in 1 of the 31 surficial soil samples. Dibenzo(a,h)anthracene exceeded the United States Environmental Protection Agency (USEPA) Region 6 Regional Screening Level (RSL) for dibenzo(a,h)anthracene in soil of 0.210 mg/kg in 2 of the 31 surficial soil samples. Arsenic exceeded the USEPA Region 6 RSL for arsenic in soil of 1.6 mg/kg, but was within the background range, in all 3 of the subsurface soil samples. Arsenic exceeded the USEPA Region 6 RSL for arsenic in groundwater of 10 micrograms per liter ($\mu\text{g}/\text{l}$) in 2 of the 3 groundwater samples. Beryllium exceeded the USEPA Region 6 RSL for beryllium in groundwater of 4 $\mu\text{g}/\text{l}$ in 2 of the 3 groundwater samples. Cadmium exceeded the USEPA Region 6 RSL for cadmium in groundwater of 5 $\mu\text{g}/\text{l}$ in 1 of the 3 groundwater samples. Chromium exceeded the USEPA Region 6 RSL for chromium in groundwater of 100 $\mu\text{g}/\text{l}$ in 1 of the 3 groundwater samples. Copper exceeded the USEPA Region 6 RSL for copper in groundwater of 1,300 $\mu\text{g}/\text{l}$ in 1 of the 3 groundwater samples. Lead exceeded the USEPA Region 6 RSL for lead in groundwater of 15 $\mu\text{g}/\text{l}$ in 2 of the 3 groundwater samples. Nickel exceeded the USEPA Region 6 RSL for nickel in groundwater of 730 $\mu\text{g}/\text{l}$ in 1 of the 3 groundwater samples. Thallium exceeded the USEPA Region 6 RSL for thallium in groundwater of 2 $\mu\text{g}/\text{l}$ in 1 of the 3 groundwater samples. Groundwater samples collected from soil borings SB-2, SB-3, and SB-6 were not field-filtered prior to collection, and could have caused a “false high” for metals concentrations. For this reason, ODEQ did not consider the metals concentrations in the groundwater sample collected from soil boring SB-2 to be of concern. Naphthalene exceeded the USEPA Region 6 RSL for naphthalene in groundwater of 0.14 $\mu\text{g}/\text{l}$ in 1 of the 3 groundwater samples. All other chemicals of concern (COC) were below their RSLs.

In July 2011, a Phase I ESA was conducted for all three Sections by ALL as an update to the ALL September 2009 Phase I ESA. The same RECs were observed as in the ALL September 2009 Phase I ESA.

In September 2011, a Targeted Brownfields Assessment (TBA) was prepared by ALL for the U.S. Army Corps of Engineers, Tulsa District.

In October 2015, An Analysis of Brownfield Cleanup Alternatives (ABCA) was developed by ENERCON, based on walk-through of all three sections by ENERCON in September 2015. Since Oklahoma is located within EPA Region 6, cleanup alternatives were evaluated in accordance with EPA Region 6 protocols and general guidance required prior to the implementation of a cleanup design using EPA Brownfields Grant funding.

In January 2016, A Quality Assurance Project Plan (QAPP) was developed by ENERCON to serve as a method for the documentation of planning, implementation, assessment, and QA/QC procedures implemented in accordance with Part B requirements of ANSI/ASQC E4-1944 for the PL-12-01 Professional Environmental and Engineering Services for The Evans/Fintube project. This QAPP was prepared in accordance with EPA QA/R-5 (EPA Requirements for Quality Assurance Project Plans – Final March 2001).

In May 2017, ODEQ performed a Targeted Brownfields Assessment (TBA) to address data gaps identified in initial consultation with the agency. As part of the TBA, ODEQ installed five monitor wells, collected groundwater samples from the five monitor wells, collected one subsurface soil sample from monitor well MW-2, and collected 12 surficial soil samples from Section 1 through Section 3. One monitor well (MW-4) was installed in Section 1 and a groundwater sample was collected. The groundwater sample was analyzed for PCBs. All COCs (PCB) in the groundwater sample collected from monitor well MW-4 were below the laboratory detection limits. Three surficial soil samples (SS-6 through SS-8) were collected from Section 1. Surficial soil samples SS-6 through SS-8 were analyzed for PCBs. Three subsurface soil samples (CS-2 through CS-4) were collected from Section 1. Subsurface soil samples CS-2 through CS-4 were analyzed for PCBs. Refer to the attached ODEQ TBA Report for additional information regarding the TBA activities and results.

In June 2017, the USEPA released updated RSLs. Arsenic exceeded the USEPA Region 6 RSL (June 2017) for arsenic in soil of 3.0 mg/kg in 28 of the 30 surficial soil samples. Arsenic exceeded the USEPA Region

6 RSL (June 2017) for arsenic in soil of 3.0 mg/kg in all 3 of the subsurface soil samples. Arsenic exceeded the USEPA Region 6 RSL (June 2017) for arsenic in groundwater of 10 µg/l in 2 of the 3 groundwater samples. The arsenic concentrations in all soil and groundwater samples collected from Section 1 during the June 2010 ALL Phase II are within the background range. Naphthalene exceeded the USEPA Region 6 RSL (June 2017) for naphthalene in groundwater of 0.17 µg/l in 1 of the 3 groundwater samples. No other COC exceeded the USEPA Region 6 RSLs (June 2017) for soil or groundwater samples collected from Section 1 during the June 2010 ALL Phase II. The Section 1 Historical Exceedances Map is included in Appendix A.

2.2 Section 2 Environmental History

In 1989, inspectors found that vandals had released approximately 200 gallons of Aroclor 1260-containing dielectric fluid (PCBs) from transformers at 118 North Lansing Avenue. Oil had entered floor drains at the site and moved from south to north.

In August 1991, Terra-Kleen Corporation (TERRA-KLEEN), in coordination with the USEPA Region 6 PCB Coordinator, collected composite samples as part of the PCB cleanup activities at the Evans Building Complex (Section 2). Contaminated sediment was removed from the drains and blasting media used to clean surfaces was drummed and temporarily stored at 150 North Lansing Avenue (Section 1).

On September 13, 1992, a hazardous waste manifest shows that 200 kilograms (kg) of PCB and isopropyl alcohol were transferred to a disposal facility operated by Aptus, Inc. A waste profile sheet shows that approximately 38 tons of sand, concrete dust, and PCBs were removed from the Site after concrete near the PCB spill was sandblasted. A second waste profile sheet states that 14 barrels of debris and plastic from the PCB cleaning were removed from the Site.

In September 2009, a Phase I ESA was conducted for all three Sections by ALL. The following RECs were observed in Section 2:

- Throughout Building 3 at the Evans Building Complex, wooden bricks being used as floor covering were observed to be saturated with a hydrocarbon substance and exhibited a hydrocarbon odor. The presence of hydrocarbons on the porous flooring potentially resulted in hydrocarbon impact to surface and subsurface soils of the Site;
- A historical railroad spur located along the eastern and western sides of Section 2 was likely to have resulted in hydrocarbon and/or metals impact to surficial and subsurface soils. Additionally,

the customary practice of using a spray car to apply herbicides to rail lines and crossings may have led to surficial and subsurface impact due to these chemicals;

- Throughout the interior and exterior of the Evans Building Complex, multiple open trenches, pits, sumps, and floor drains were observed. The extent of staining throughout the Site suggested that leaking fluids may have potentially drained into these openings throughout the historic use of the Site. Past usage of the site, including the handling of metals and hydrocarbons, potentially presented an environmental threat to soil and groundwater at the Site;
- Five full 55-gallon drums were located on a wooden pallet along the west side of Building 4 at the Evans Building Complex. No secondary containment was in place for the drums. Each of the 55-gallon drums showed signs of rusting on its exterior surface. One of the drums was labeled as pre-catalyzed polymer, and two of the drums were unlabeled. The remaining two drums were labeled as containing xylene and were observed to have bulging lids. The bulging lids were indicative of a buildup of pressure which represented a threat of explosion of the drums. Due to the visible rust on the exterior of the drums, the signs of pressure buildup, the toxic nature of xylene, the unknown contents of two of the drums, and the presence of a nearby floor drain, these five (5) 55-gallon drums presented a threat to the Site;
- Piles of fill material, approximately 200-feet x 20-feet x 6-feet, were observed west of the northern portion of Building 3 at the Evans Building Complex. These piles of fill material contained gravel, stone, railroad ties, and scrap metal. It was possible that the fill material also consisted of sand which would have been used as molds for metal castings at the foundry, which was formerly located in Building 3 of the Evans Building Complex. The sand may have potentially contained traces of metals since molten metal was poured into the molds to form castings. Due to the potential for impact of metals to surface and subsurface soils, these piles of fill material were considered a threat to Site;
- Pieces of furnace refractory material were observed scattered throughout the western portion of Section 2 and Section 3. Refractory material was used to line the chamber of a forge where it comes into contact with the coal or petroleum coke that was being used as fuel. Due to its previous contact with hydrocarbon materials, the refractory material posed a threat to surface and subsurface soils within the Site;
- A damaged 12-V lead-acid battery was observed in a drainage ditch located immediately north of Building 2 at the Evans Building Complex. The exterior of the battery was observed to contain an approximately 5"x3" hole. Due to being located in a water way, and consisting of lead and sulfuric acid, the damaged battery was considered a threat to groundwater and soils at the Site. A leaking

transformer and electric motors in the vicinity of floor drains in the western portion of the Evans Building Complex may have potentially resulted in PCB and hydrocarbon impact to soils and groundwater at the Site;

- The presence of staining on or near cracks in the concrete floor of the Evans Building Complex potentially resulted in hydrocarbon impact to soils and groundwater at the Site;
- Past usage of the Site for foundry and forging operations by Bethlehem Steel Works potentially resulted in hydrocarbons and/or metals impact to surface soils at the Site;
- The historical presence of Bankoff Scrap Metals presented the potential for metals impacts to the Site;
- The past presence of the Storey Wrecker Storage Lot within the Site suggested the potential for impacts due to leaking engine oil, gasoline, and other automobile fluids;
- The former presence of fuel oil and gasoline storage tanks located up-gradient to and within the Site was considered an environmental concern to the Site due to the lack of environmental regulations and controls in place during the existence of these tanks;
- The presence of the Big Four Foundry located 400-feet west of the southwest portion of the Site was considered an environmental concern to the Site due to the potential for airborne deposition of metals onto the soil of the Site.

In June 2010, a Phase II ESA was conducted for all three Sections by ALL. Field activities performed during this Phase II ESA included drilling 10 soil borings, installation of temporary monitor wells in the soil borings, sampling surface and subsurface soils, sampling groundwater from the temporary wells, well abandonment, temporary storage and disposal of investigative-derived waste, inspection of suspect lead-based paint (LBP), and inspection and sampling of suspect ACBM. Soil borings SB-5 and SB-8 through SB-10 were installed in Section 2. A total of 29 surface soil samples based on a 120-foot x 120-foot grid (4 were collected from soil borings SB-5 and SB-8 through SB-10), 4 subsurface soil samples, and 4 groundwater samples were collected in Section 2. The soil and groundwater samples were selectively analyzed for the presence VOCs, SVOCs, TPH, herbicides; PCBs; and PP Metals. Arsenic exceeded the USEPA Region 6 2017 RSL for arsenic in soil of 1.6 mg/kg in all 32 surficial soil samples. The USGS reported that naturally occurring arsenic levels in Oklahoma soils typically range from 0 to 32 mg/kg, which was considered the background range. Two of the 32 surficial soil sample arsenic concentrations were above the background range. Lead exceeded the USEPA Region 6 RSL for lead in soil of 800 mg/kg in 4 of the 32 surficial soil samples. Benzo(a)anthracene exceeded the USEPA Region 6 RSL for benzo(a)anthracene in soil of 2.100 mg/kg in 1 of the 31 surficial soil samples. Benzo(a)pyrene exceeded the

USEPA Region 6 RSL for benzo(a)pyrene in soil of 0.210 mg/kg in 5 of the 31 surficial soil samples. Benzo(b)fluoranthene exceeded the USEPA Region 6 RSL for benzo(b)fluoranthene in soil of 2.100 mg/kg in 1 of the 31 surficial soil samples. Dibenzo(a,h)anthracene exceeded the USEPA Region 6 RSL for dibenzo(a,h)anthracene in soil of 0.210 mg/kg in 2 of the 31 surficial soil samples. Indeno(1,2,3-cd)pyrene exceeded the USEPA Region 6 RSL for indeno(1,2,3-cd)pyrene in soil of 2.100 mg/kg in 1 of the 31 surficial soil samples. TPH/diesel range organics (DRO) exceeded the ODEQ Tier 2 Generic TPH Cleanup Level for TPH-DRO in Industrial Soil of 2,500 mg/kg in 8 of the 31 surficial soil samples. TPH-Lube Oil range organics exceeded the ODEQ Generic TPH Cleanup Level for TPH-Lube Oil range organics in Industrial Soil of 5,000 mg/kg in 6 of the 31 surficial soil samples. Aroclor 1248 exceeded the 40 CFR 761.61 cleanup level of 1 mg/kg for Aroclors at high-occupancy areas in 1 of the 31 surficial soil samples. Aroclor 1254 exceeded the 40 CFR 761.61 cleanup level of 1 mg/kg for Aroclors at high-occupancy areas in 1 of the 31 surficial soil samples. Aroclor 1260 exceeded the 40 CFR 761.61 cleanup level of 1 mg/kg for Aroclors at high-occupancy areas in 7 of the 31 surficial soil samples. Arsenic exceeded the USEPA Region 6 RSL for arsenic in soil of 1.6 mg/kg, but was within the background range, in all 5 of the subsurface soil samples. Arsenic exceeded the USEPA Region 6 RSL for arsenic in groundwater of 10 µg/l in 2 of the 5 groundwater samples. Beryllium exceeded the USEPA Region 6 RSL for beryllium in groundwater of 4 µg/l in 1 of the 5 groundwater samples. Cadmium exceeded the USEPA Region 6 RSL for cadmium in groundwater of 5 µg/l in 1 of the 5 groundwater samples. Chromium exceeded the USEPA Region 6 RSL for chromium in groundwater of 100 µg/l in 1 of the 5 groundwater samples. Lead exceeded the USEPA Region 6 RSL for lead in groundwater of 15 µg/l in 2 of the 5 groundwater samples. Chloroform exceeded the USEPA Region 6 RSL for chloroform in tap water of 0.15 µg/l in 1 of the 5 groundwater samples.

In July 2011, a Phase I ESA was conducted for all three sections by ALL as an update to the ALL September 2009 Phase I ESA. The same RECs were observed as in the ALL September 2009 Phase I ESA. The following RECs were observed in Section 2:

- Throughout Building 3 at the Evans Building Complex, wooden bricks being used as floor covering were observed to be saturated with a hydrocarbon substance and exhibited a hydrocarbon odor. The presence of hydrocarbons on the porous flooring potentially resulted in hydrocarbon impact to surface and subsurface soils of the Site. Sampling during the Phase II ESA conducted by ALL in 2010 noted the presence of hydrocarbons in surface soils collected from these areas that exceeded regulatory screening levels;

- A historical railroad spur located along the eastern and western sides of Section 2 was likely to have resulted in hydrocarbon and/or metals impact to surficial and subsurface soils. Additionally, the customary practice of using a spray car to apply herbicides to rail lines and crossings may have led to surficial and subsurface impact due to these chemicals. Sampling during the Phase II ESA conducted by ALL in 2010 noted the presence of hydrocarbons in surface soils collected from these areas that exceeded regulatory screening levels;
- Throughout the interior and exterior of the Evans Building Complex, multiple open trenches, pits, sumps, and floor drains were observed. The extent of staining throughout the Site suggested that leaking fluids may have potentially drained into these openings throughout the historic use of the Site. Past usage of the site, including the handling of metals and hydrocarbons, potentially presented an environmental threat to soil and groundwater at the Site. Sampling during the Phase II ESA conducted by ALL in 2010 noted the presence of hydrocarbons in surface soils collected from these areas that exceeded regulatory screening levels;
- Piles of fill material, approximately 200-feet x 20-feet x 6-feet, were observed west of the northern portion of Building 3 at the Evans Building Complex. These piles of fill material contained gravel, stone, railroad ties, and scrap metal. It was possible that this fill material also consisted of sand that would have been used as molds for metal castings at the foundry, which was formerly located in Building 3 of the Evans Building Complex. The sand may have potentially contained traces of metals since molten metal was poured into the molds to form castings. Due to the potential for impact of metals to surface and subsurface soils, these piles of fill material were considered a threat to Site;
- The former presence of a leaking transformer and the continued presence of electric motors in the vicinity of floor drains in the western portion of the Evans Building Complex potentially resulted in PCB and hydrocarbon impact to soils and groundwater at the Site;
- Sampling during the Phase II ESA conducted by ALL in 2010 noted the presence of PCBs in surficial soils in the Evans Building Complex that exceeded regulatory screening levels;
- Past usage of the Site for foundry and forging operations by Bethlehem Steel Works potentially resulted in hydrocarbons and/or metals impact to surface soils at the Site. Sampling during the Phase II ESA conducted by ALL in 2010 noted the presence of hydrocarbons in surface soils collected from these areas that exceeded regulatory screening levels;
- The past presence of the Storey Wrecker Storage Lot within the Site suggested the potential for impacts due to leaking engine oil, gasoline, and other automobile fluids. Sampling during the Phase

II ESA conducted by ALL in 2010 noted the presence of hydrocarbons in surface soils collected from these areas that exceeded regulatory screening levels;

- The former presence of fuel oil and gasoline storage tanks located up-gradient to and within the Site was considered an environmental concern to the Site due to the lack of environmental regulations and controls in place during the existence of these tanks;
- The presence of the Big Four Foundry located 400-feet west of the southwest portion of the Site was considered an environmental concern to the Site due to the potential for airborne deposition of metals onto the soil of the Site.

In September 2011, a TBA was prepared by ALL for the U.S. Army Corps of Engineers, Tulsa District.

In October 2015, An ABCA was developed by ENERCON, based on walk-through of all three sections by ENERCON in September 2015. Cleanup alternatives were evaluated in accordance with EPA Region 6 protocols and general guidance required prior to the implementation of a cleanup design using EPA Brownfields Grant funding.

In January 2016, a QAPP was developed by ENERCON to serve as a method for the documentation of planning, implementation, assessment, and QA/QC procedures implemented in accordance with Part B requirements of ANSI/ASQC E4-1944 for the PL-12-01 Professional Environmental and Engineering Services for The Evans/Fintube project. This QAPP was prepared in accordance with EPA QA/R-5 (EPA Requirements for Quality Assurance Project Plans – Final March 2001).

An Asbestos Abatement Project Design dated April 27, 2016 was developed by ENERCON to provide a prudent course of action for handling of asbestos abatement of contaminated debris and piping insulation at the subject facility. Specific governing regulations affecting this work include, but are not limited to, 29 CFR 1926.1101 (Occupational Safety and Health Administration (OSHA) Construction Industry Asbestos Standard), 29 CFR 1910.134 (OSHA Respiratory Protection), 40 CFR 61, Subpart M (Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP)) and Oklahoma Administrative Code (OAC) 380:50 (Oklahoma Rules for Abatement of Friable Asbestos). This project design was submitted to the Oklahoma Department of Labor (ODOL), Asbestos Division for approval.

Lead Paint Abatement Specifications dated April 2016 was developed by ENERCON to provide a prudent course of action for handling of LBP on interior brick wall, interior I-Beams, a concrete stem wall, and

stairs in the Evans complex. Specific governing regulations affecting this work include, but are not limited to, 29 CFR 1926.162 (OSHA Construction Industry Lead Standard), 29 CFR 1910.134 (OSHA Respiratory Protection), and 40 CFR 261, (Standards Applicable to Generators of Hazardous Waste).

The bid process for the selection of an abatement contractor was administered by the City of Tulsa Engineering Services Department utilizing standard City of Tulsa procurement procedures for projects involving state and federal funds. Specifications for asbestos and lead-based paint were developed by ENERCON and included in published bid packages. An initial bid process was conducted in July 2016. Bids for the published scope of work received on August 5, 2016; with Abatement Systems, Inc. of Broken Arrow, Oklahoma was selected as the low responsive bidder.

Final permits and notifications were filed by Abatement Systems, Inc and work at the site commenced on January 9, 2017 and continued until January 27, 2017.

In May 2017, ODEQ installed five monitor wells, collected groundwater samples from the five monitor wells, collected one subsurface soil sample from monitor well MW-2, and collected 12 surficial soil samples from Section 1 through Section 3. One monitor well (MW-5) was installed in Section 2 and a groundwater sample was collected. The groundwater sample was analyzed for PCBs. All concentrations of COCs (PCBs) in the groundwater sample collected from monitor well MW-5 were below the laboratory detection limits. Six surficial soil samples (SS-4, SS-5, and SS-9 through SS-12) were collected from Section 2. Surficial soil samples SS-4, SS-5, and SS-9 through SS-12 were analyzed for PCBs. All COCs (PCBs) concentrations in surficial soil samples SS-4, SS-5, and SS-9 through SS-12 were below the 40 CFR 761.61 cleanup level of 1 mg/kg for Aroclors at high-occupancy areas.

In June 2017, the USEPA released updated RSLs. Arsenic exceeded the USEPA Region 6 RSL (June 2017) for arsenic in soil of 3.0 mg/kg in 30 of the 31 surficial soil samples. Two of the 31 surficial soil sample arsenic concentrations were above the background range. Lead exceeded the USEPA Region 6 RSL (June 2017) for lead in soil of 800 mg/kg in 4 of the 31 surficial soil samples. Benzo(a)pyrene exceeded the USEPA Region 6 RSL for benzo(a)pyrene in soil of 2.100 mg/kg in 1 of the 31 surficial soil samples.

TPH-DRO exceeded the ODEQ Tier 2 Generic TPH Cleanup Level for TPH-DRO in Industrial Soil of 2,500 mg/kg in 8 of the 31 surficial soil samples. TPH-Lube Oil range organics exceeded the ODEQ Generic TPH Cleanup Level for TPH-Lube Oil range organics in Industrial Soil of 5,000 mg/kg in 6 of the

31 surficial soil samples. Aroclor 1248 exceeded the 40 CFR 761.61 cleanup level of 1 mg/kg for Aroclors at high-occupancy areas in 1 of the 31 surficial soil samples. Aroclor 1254 exceeded the 40 CFR 761.61 cleanup level of 1 mg/kg for Aroclors at high-occupancy areas in 1 of the 31 surficial soil samples. Aroclor 1260 exceeded the USEPA Region 6 RSL (June 2017) for 40 CFR 761.61 cleanup level of 1 mg/kg for Aroclors at high-occupancy areas in 7 of the 31 surficial soil samples.

Arsenic exceeded the USEPA Region 6 RSL for arsenic in groundwater of 10 µg/l in 2 of the 5 groundwater samples. Beryllium exceeded the USEPA Region 6 RSL for beryllium in groundwater of 4 µg/l in 1 of the 5 groundwater samples. Cadmium exceeded the USEPA Region 6 RSL for cadmium in groundwater of 5 µg/l in 1 of the 5 groundwater samples. Chromium exceeded the USEPA Region 6 RSL for chromium in groundwater of 100 µg/l in 1 of the 5 groundwater samples. Lead exceeded the USEPA Region 6 RSL for lead in groundwater of 15 µg/l in 2 of the 5 groundwater samples. Groundwater samples collected from soil borings SB-5 and SB-7 through SB-10 were not field-filtered prior to collection, which could have caused a “false high” for metals concentrations. For this reason, ODEQ does not consider the metals concentrations in the groundwater samples collected from soil borings SB-5 and SB-7 through SB-10 to be of concern. Chloroform exceeded the USEPA Region 6 RSL for chloroform in tap water of 0.22 µg/l in 1 of the 5 groundwater samples. No other COC exceeds the USEPA Region 6 RSLs (June 2017) for soil or groundwater samples collected from Section 2 during the June 2010 ALL Phase II. The Section 2 Historical Exceedances Map is included in Appendix A.

2.3 Section 3 Environmental History

In November 1994, a Phase I ESA was conducted for 186 North Lansing Avenue (Section 3) by Dames & Moore. The following RECs were observed in Section 3:

- A Paint/Storage Shed at the south end of the property
- Groundwater Seep at the south end of the property
- Two aboveground storage tanks (AST) on the northwest exterior of the building
- The compressor room on the west side of the building
- A concrete pad on the west side of the building

In November and December 1994, a Phase II ESA was performed at 186 North Lansing Avenue (Section 3) by Dames & Moore. Field activities performed during this Phase II ESA included drilling 23 soil borings, installation of temporary monitor wells in the soil borings, sampling surface and subsurface soils, sampling groundwater from the temporary wells, well abandonment, and temporary storage and disposal of

investigative-derived waste. The report does not indicate whether groundwater samples were filtered prior to analysis for metals. The soil borings targeted five areas of interest:

- Paint/Storage Shed at the south end of the property (3 borings)
- Groundwater Seep at the south end of the property (6 borings)
- Area of two ASTs on the northwest exterior of the building (5 borings)
- Exterior of the compressor room on the west side of the building (4 borings)
- A concrete pad on the west side of the building (5 borings)

A total of 2 surficial soil samples, 29 subsurface soil samples, and 4 groundwater samples were collected in Section 3. The soil and groundwater samples were selectively analyzed for the presence benzene, toluene, ethylbenzene, and xylenes (BTEX), VOCs, SVOCs, TPH, and PP Metals. The groundwater samples were selectively analyzed for the presence of BTEX, VOCs, SVOCs, TPH, and PP Metals. TPH-DRO exceeded the Oklahoma Corporation Commission (OCC) Action Level for TPH-DRO in soil of 50 mg/kg at the groundwater seep (actually a water line leak). Cadmium, vinyl chloride, 1,1-dichloroethene, cis-1,2-dichloroethene, trichloroethene, and tetrachloroethene exceeded the 1994 USEPA Region 6 RSL–Maximum Contaminant Levels (MCL) in groundwater of 0.005 µg/l, 2 µg/l, 7 µg/l, 70 µg/l, 5 µg/l, and 5 µg/l respectively at the former paint storage area. Lead exceeded the 1994 USEPA Region 6 RSL – MCL of 0.015 µg/l at the groundwater seep. It is not known whether groundwater samples were filtered. According to an ODEQ letter from January 1995 “It is unlikely that groundwater encountered in this boring poses a threat to other ground waters or surface waters in the area...Due to the hydrogeological settings and reported low levels of contamination at these facilities, no remedial work is required at this time”.

In June 2000, a Phase I ESA was conducted for 186 North Lansing Avenue (Section 3) by EnecoTech, Inc. (ENECOTECH). During this Phase I ESA, it was observed that a portion of the RECs mentioned in the 1994 Dames & Moore Phase I ESA had been addressed and remediated. Some of the stained soil had been excavated, the hydrotest water sump and paint booth had been cleaned, the paint storage shed had been removed, floor drains inside the building had been modified, and the two fuel ASTs had been removed. Thirty-five samples of suspect ACBM were collected and analyzed for asbestos. Ten of these samples of suspected ACBM tested positive for asbestos. Three samples of suspected LBP were collected and analyzed for lead. All three of these suspected LBP samples tested positive for lead. The following RECs were observed in Section 3:

- Approximately 2-gallons of what appeared to be motor oil was observed in a bucket near the west wall of the building.

- One small container of battery acid (less than one quart), which had leaked a small amount of battery acid onto the concrete wall, was observed along the east wall of the building.
- A paint booth was observed at the southeast corner of the main building.
- One fluorescent light ballast, which is suspected to contain PCBs, was located in the men's locker room in the southeast corner of the main building, and was observed to have overheated and leaked oil. Several more possible PCB-containing fluorescent light ballasts were observed in the southeast portion of the main building.
- A large pit was observed near the southwest corner of the building. According to the 1994 Dames & Moore Phase I ESA, the pit was used to collect water used in hydrostatic testing. Approximately 1-inch of fluid, which had the appearance of hydraulic fluid, was present in the bottom of the collection pit. Hydrocarbons were detected using an oil/water interface probe.

In August 2000, ENECOTECH provided asbestos and lead abatement oversight services at 186 North Lansing Avenue (Section 3). The following tasks were performed:

- Removal and disposal of flaking LBP located primarily on steel beams in the west side of the building
- Removal and disposal of approximately 1,060 square feet of ACBM (floor tiles) in four areas of the building
- Removal and disposal of approximately 38 fluorescent lighting ballasts which possibly contained PCBs.

In September 2005, a Phase I ESA was conducted 186 North Lansing Avenue (Section 3) by ENERCON. The following RECs were observed in Section 3:

- Several areas of chemical and petroleum staining were observed on concrete flooring throughout the facility. Two areas were identified along the building exterior to the west designated for chemical storage. Secondary containment pallets were present but not in use in the primary area. Visual observations identified Trihibitol (a rust inhibitor), propylene glycol, "Jeffcool P150", and used solvents. Also present were 275-gallon pallet containers of K1 Kerosene and Ferrocrete UTS. The hydrostatic testing containment pits, which were observed in the previous Phase I ESAs, were not evident at the time of the site visit.
- The reported remediation of RECs identified in the 1994 Phase I ESA by Dames & Moore and the impacted soil and groundwater identified in the 1994 Phase II ESA by Dames & Moore represented an REC.

In September 2009, a Phase I ESA was conducted 186 North Lansing Avenue (Section 3) by ALL. The following RECs were observed in Section 3:

- A historical railroad spur located along the eastern and western sides of Section 3 was likely to have resulted in hydrocarbon and/or metals impact to surficial and subsurface soils. Additionally, the customary practice of using a spray car to apply herbicides to rail lines and crossings may have led to surficial and subsurface impact due to these chemicals.
- Throughout the interior and exterior of the Fintube Building Complex, multiple open trenches, pits, sumps, and floor drains were observed. The extent of staining throughout the Site suggested that leaking fluids may have potentially drained into these openings throughout the historic use of the Site. Past usage of the site, including the handling of metals and hydrocarbons, potentially presented an environmental threat to soil and groundwater at the Site.
- Review of the Phase I ESA conducted on the Fintube Building Complex in 2000 revealed the former presence of a large pit, of unknown size, that was used to collect water for hydro-testing in the southwest corner of the Fintube Building Complex. At the time of the previous assessment, this pit contained approximately one-inch of hydrocarbon containing fluid that appeared to be hydraulic fluid. The location of the former hydrostatic test pit was not identified during the site visit. Additionally, the 2000 Phase I ESA identified two east-west oriented floor drains within the southern portion of the Fintube Building Complex, two large north-south oriented floor drains within the mid-northern portion of the Fintube Building Complex, and one large north-south oriented stormwater drain located immediately east of the central portion of the Fintube Building Complex. These drains identified in the 2000 Phase I ESA were not observed during the site visit. These former and current floor level openings represented a potential open pathway to surface soils, subsurface soils, and groundwater.
- Pieces of furnace refractory material were observed scattered throughout the western portion of Section 2 and Section 3. Refractory material was used to line the chamber of a forge where it came into contact with the coal or petroleum coke that was being used as fuel. Due to its previous contact with hydrocarbon materials, the refractory material posed a threat to surface and subsurface soils within the Site.
- Staining due to motor oil leaks and other unknown substances were observed throughout the interior of the Fintube Building Complex. Several portions of the Site contained stains that were on or near cracks in the concrete floor, which could have potentially allowed the leaked substance to impact soils or groundwater at the Site.

- A large roll-off dumpster located south of the Fintube Building Complex was observed to contain a wrapped 5-gallon bucket of kerosene, and a 5-gallon bucket containing approximately one quart of an unknown oily substance. A leak was observed on the south side of the dumpster and the soil underneath the dumpster appeared to be damp. Stormwater drains were located approximately ten feet east and west of the dumpster. Due to the hazardous materials contained within the dumpster, the observed substance leaking from the dumpster, and the proximity of the dumpster to stormwater drains, the dumpster containing hazardous materials was considered a threat to the soils and groundwater at the Site.
- Past usage of the Site for foundry and forging operations by Bethlehem Steel Works potentially resulted in hydrocarbons and/or metals impact to surface soils at the Site.
- The historical presence of Bankoff Scrap Metals presented the potential for metals impacts to the Site.
- The past presence of the Storey Wrecker Storage Lot within the Site suggested the potential for impacts due to leaking engine oil, gasoline, and other automobile fluids.
- The former presence of fuel oil and gasoline storage tanks located up-gradient to and within the Site was considered an environmental concern to the Site due to the lack of environmental regulations and controls in place during the existence of these tanks.
- The presence of the Big Four Foundry located 400-feet west of the southwest portion of the Site was considered an environmental concern to the Site due to the potential for airborne deposition of metals onto the soil of the Site.

In June 2010, a Phase II ESA was conducted for all three Sections by ALL. Field activities performed during this Phase II ESA included drilling 10 soil borings, installation of temporary monitor wells in the soil borings, sampling surface and subsurface soils, sampling groundwater from the temporary wells, well abandonment, temporary storage and disposal of investigative-derived waste, inspection of suspect LBP, and inspection and sampling of suspect ACBM. Soil borings SB-1 and SB-4 were installed in Section 3. A total of 20 surficial soil samples based on a 120-foot x 120-foot grid (2 were collected from soil borings SB-1 and SB-4), 2 subsurface soil samples, and 2 groundwater samples were collected in Section 3. The soil and groundwater samples were selectively analyzed for the presence of VOCs, SVOCs, TPH, herbicides, PCBs, and PP Metals. Arsenic exceeded the USEPA Region 6 2010 RSL for arsenic in soil of 1.6 mg/kg in 18 of the 20 surficial soil samples. The USGS has reported that naturally occurring arsenic levels in Oklahoma soils typically range from 0 to 32 mg/kg, which was considered the background range. One of the 20 surficial soil sample arsenic concentrations were above the background range.

Benzo(a)pyrene exceeded the USEPA Region 6 RSL for benzo(a)pyrene in soil of 0.210 mg/kg in 5 of the 20 surficial soil samples. Dibenz(a,h)anthracene exceeded the USEPA Region 6 RSL for dibenz(a,h)anthracene in soil of 0.210 mg/kg in 1 of the 20 surficial soil samples. TPH-DRO exceeded the ODEQ Tier 2 Generic TPH Cleanup Level for TPH-DRO in Industrial Soil of 2,500 mg/kg in 2 of the 20 surficial soil samples. TPH-lube oil range organics exceeded the ODEQ Generic TPH Cleanup Level for TPH-lube oil range organics in Industrial Soil of 5,000 mg/kg in 1 of the 20 surficial soil samples. Aroclor 1260 exceeded the USEPA Region 6 RSL for Aroclor 1260 in soil of 0.740 mg/kg in 4 of the 20 surficial soil samples. Arsenic exceeded the USEPA Region 6 RSL for arsenic in soil of 1.6 mg/kg, but was within the background range, in both of the subsurface soil samples. Benzo(a)pyrene exceeded the USEPA Region 6 RSL for benzo(a)pyrene in soil of 0.210 mg/kg in 1 of the 2 subsurface soil samples. Benzo(b)fluoranthene exceeded the USEPA Region 6 RSL for benzo(b)fluoranthene in soil of 2.100 mg/kg in 1 of the 2 subsurface soil samples. Dibenz(a,h)anthracene exceeded the USEPA Region 6 RSL for dibenz(a,h)anthracene in soil of 0.210 mg/kg in 1 of the 2 subsurface soil samples. Aroclor 1260 exceeded the 40 CFR 761.61 cleanup level of 1 mg/kg for Aroclors at high-occupancy areas in 1 of the 2 subsurface soil samples. Arsenic exceeded the USEPA Region 6 RSL for arsenic in groundwater of 10 µg/l in 1 of the 2 groundwater samples. Beryllium exceeded the USEPA Region 6 RSL for beryllium in groundwater of 4 µg/l in 1 of the 2 groundwater samples. Cadmium exceeded the USEPA Region 6 RSL for cadmium in groundwater of 5 µg/l in 1 of the 2 groundwater samples. Chromium exceeded the USEPA Region 6 RSL for chromium in groundwater of 100 µg/l in 1 of the 2 groundwater samples. Copper exceeded the USEPA Region 6 RSL for copper in groundwater of 1,300 µg/l in 1 of the 2 groundwater samples. Lead exceeded the USEPA Region 6 RSL for lead in groundwater of 15 µg/l in 1 of the 2 groundwater samples. Mercury exceeded the USEPA Region 6 RSL for mercury in groundwater of 2 µg/l in 1 of the 2 groundwater samples. Nickel exceeded the USEPA Region 6 RSL for nickel in groundwater of 730 µg/l in 1 of the 2 groundwater samples. Thallium exceeded the USEPA Region 6 RSL for thallium in groundwater of 2 µg/l in 1 of the 2 groundwater samples. Zinc exceeded the USEPA Region 6 RSL for zinc in tap water of 11,000 µg/l in 1 of the 2 groundwater samples. Groundwater samples collected from soil borings SB-1 and SB-4 were not field-filtered prior to collection, and could have caused a “false high” for metals concentrations. For this reason, ODEQ does not consider the metals concentrations in the groundwater sample collected from soil boring SB-1 to be of concern. Naphthalene exceeded the USEPA Region 6 RSL for naphthalene in groundwater of 0.14 µg/l in 1 of the 2 groundwater samples. Chloroform exceeded the USEPA Region 6 RSL for chloroform in tap water of 0.15 µg/l in 1 of the 2 groundwater samples. Aroclor 1260 exceeded the USEPA Region 6 RSL for Aroclor 1260 in groundwater of 0.034 µg/l in 1 of the 2 groundwater samples. 1,2,4-Trichlorobenzene exceeded the USEPA Region 6 RSL for 1,2,4-Trichlorobenzene in groundwater of

70 µg/l in 1 of the 2 groundwater samples. All other concentrations of COCs were below their respective RSL.

In July 2011, a Phase I ESA was conducted for all three Sections by ALL as an update to the ALL September 2009 Phase I ESA. The same RECs were observed as in the ALL September 2009 Phase I ESA. The following RECs were observed in Section 3:

- A historical railroad spur located along the eastern and western sides of Section 3 was likely to have resulted in hydrocarbon and/or metals impact to surficial and subsurface soils. Additionally, the customary practice of using a spray car to apply herbicides to rail lines and crossings may have led to surficial and subsurface impact due to these chemicals.
- Throughout the interior and exterior of the Fintube Building Complex, multiple open trenches, pits, sumps, and floor drains were observed. The extent of staining throughout the Site suggested that leaking fluids may have potentially drained into these openings throughout the historic use of the Site. Past usage of the site, including the handling of metals and hydrocarbons, potentially presented an environmental threat to soil and groundwater at the Site.
- Review of the Phase I ESA conducted on the Fintube Building Complex in 2000 revealed the former presence of a large pit, of unknown size, that was used to collect water for hydro-testing in the southwest corner of the Fintube Building Complex. At the time of the previous assessment, this pit contained approximately one inch of hydrocarbon containing fluid that appeared to be hydraulic fluid. The location of the former hydrostatic test pit was not identified during the site visit. Additionally, the 2000 Phase I ESA identified two east-west oriented floor drains within the southern portion of the Fintube Building Complex, two large north-south oriented floor drains within the mid-northern portion of the Fintube Building Complex, and one large north-south oriented stormwater drain located immediately east of the central portion of the Fintube Building Complex. These drains identified in the 2000 Phase I ESA were not observed during the site visit. These former and current floor level openings represented a potential open pathway to surface soils, subsurface soils, and groundwater.
- Staining due to motor oil leaks and other unknown substances were observed throughout the interior of the Fintube Building Complex. Several portions of the Site contained stains that were on or near cracks in the concrete floor, which could have potentially allowed the leaked substance to impact soils or groundwater at the Site. Sampling during the Phase II ESA conducted by ALL in 2010 noted the presence of hydrocarbons in surface soils collected from these areas that exceeded regulatory screening levels.

- Past usage of the Site for foundry and forging operations by Bethlehem Steel Works potentially resulted in hydrocarbons and/or metals impact to surface soils at the Site. Sampling during the Phase II ESA conducted by ALL in 2010 noted the presence of hydrocarbons in surface soils collected from these areas that exceeded regulatory screening levels.
- The historical presence of Bankoff Scrap Metals presented the potential for metals impacts to the Site.
- The past presence of the Storey Wrecker Storage Lot within the Site suggested the potential for impacts due to leaking engine oil, gasoline, and other automobile fluids. Sampling during the Phase II ESA conducted by ALL in 2010 noted the presence of hydrocarbons in surface soils collected from these areas that exceeded regulatory screening levels.
- The former presence of fuel oil and gasoline storage tanks located up-gradient to and within the Site was considered an environmental concern to the Site due to the lack of environmental regulations and controls in place during the existence of these tanks.
- The presence of the Big Four Foundry located 400-feet west of the southwest portion of the Site was considered an environmental concern to the Site due to the potential for airborne deposition of metals onto the soil of the Site.

In September 2011, a TBA was prepared by ALL for the U.S. Army Corps of Engineers, Tulsa District.

In October 2015, an ABCA was developed by ENERCON, based on walk-through of all three sections by ENERCON in September 2015. Cleanup alternatives were evaluated in accordance with EPA Region 6 protocols and general guidance required prior to the implementation of a cleanup design using EPA Brownfields Grant funding.

In January 2016, a QAPP was developed by ENERCON to serve as a method for the documentation of planning, implementation, assessment, and QA/QC procedures implemented in accordance with Part B requirements of ANSI/ASQC E4-1944 for the PL-12-01 Professional Environmental and Engineering Services for The Evans/Fintube project. This QAPP was prepared in accordance with EPA QA/R-5 (EPA Requirements for Quality Assurance Project Plans – Final March 2001).

An Asbestos Abatement Project Design dated April 27, 2016 was developed by ENERCON to provide a prudent course of action for handling of asbestos abatement of contaminated debris and piping insulation at the subject facility. Specific governing regulations affecting this work include, but are not limited to, 29 CFR 1926.1101 (OSHA Construction Industry Asbestos Standard), 29 CFR 1910.134 (OSHA Respiratory

Protection), 40 CFR 61, Subpart M (Asbestos NESHAP) and OAC 380:50 (Oklahoma Rules for Abatement of Friable Asbestos). This project design was submitted to the ODOL, Asbestos Division for approval.

The bid process for the selection of an abatement contractor was administered by the City of Tulsa Engineering Services Department utilizing standard City of Tulsa procurement procedures for projects involving state and federal funds. Specifications for asbestos and lead-based paint were developed by ENERCON and included in published bid packages. An initial bid process was conducted in July 2016. Bids for the published scope of work received on August 5, 2016; with Abatement Systems, Inc. of Broken Arrow, Oklahoma was selected as the low responsive bidder.

Final permits and notifications were filed by Abatement Systems, Inc. and work at the site commenced on January 9, 2017 and continued until January 27, 2017.

In May 2017, ODEQ installed five monitor wells, collected groundwater samples from the five monitor wells, collected one subsurface soil sample from monitor well MW-2, and collected 12 surficial soil samples from Section 1 through Section 3. Three monitor wells (MW-1 through MW-3) were installed in Section 3 and a groundwater sample was collected from each monitor well. The groundwater samples were analyzed for PCBs. All concentrations of COCs in the groundwater samples collected from monitor wells MW-1 through MW-3 were below the laboratory detection limits. Three surficial soil samples (SS-1 through SS-3) were collected from Section 3. Surficial soil samples SS-1 through SS-3 were analyzed for PCBs. All COCs (PCBs) concentrations in surficial soil samples SS-1 through SS-3 were below the laboratory detection limits. One subsurface soil sample (CS-1) was collected from monitor well MW-1. Subsurface soil sample CS-1 was analyzed for PCBs. All COCs (PCBs) concentrations in subsurface soil sample CS-2 was below the laboratory detection limits, however the analysis showed different constituents than PCBs in the chromatogram. In a memorandum on July 20, 2017, the ODEQ recommended sampling MW-2 for constituents other than PCBs during the site characterization portion of the Brownfields certificate process.

In June 2017, the USEPA released updated RSLs. Arsenic exceeded the USEPA Region 6 RSL for arsenic in soil of 3.0 mg/kg in 18 of the 20 surficial soil samples collected from Section 3 during the June 2010 ALL Phase II. The USGS has reported that naturally occurring arsenic levels in Oklahoma soils typically range from 0 to 32 mg/kg, which is considered the background range. One of the 20 surficial soil sample arsenic concentrations were above the background range.

TPH-DRO exceeded the ODEQ Tier 2 Generic TPH Cleanup Level for TPH-DRO in Industrial Soil of 2,500 mg/kg in 2 of the 20 surficial soil samples collected from Section 3 during the June 2010 ALL Phase II. TPH-Lube Oil range organics exceeded the ODEQ Generic TPH Cleanup Level for TPH-Lube Oil range organics in Industrial Soil of 5,000 mg/kg in 1 of the 20 surficial soil samples collected from Section 3 during the June 2010 ALL Phase II. Aroclor 1260 exceeded the 40 CFR 761.61 cleanup level of 1 mg/kg for Aroclors at high-occupancy areas in 2 of the 20 surficial soil samples collected from Section 3 during the June 2010 ALL Phase II. Arsenic exceeded the USEPA Region 6 RSL for arsenic in soil of 3.0 mg/kg, but was within the background range, in 1 of the 2 subsurface soil samples collected from Section 3 during the June 2010 ALL Phase II. Aroclor 1260 exceeded the 40 CFR 761.61 cleanup level of 1 mg/kg for Aroclors at high-occupancy areas in 1 of the 2 subsurface soil samples collected from Section 3 during the June 2010 ALL Phase II.

Arsenic exceeded the USEPA Region 6 RSL for arsenic in groundwater of 10 µg/l in 1 of the 2 groundwater samples collected from Section 3 during the June 2010 ALL Phase II. Beryllium exceeded the USEPA Region 6 RSL for beryllium in groundwater of 4 µg/l in 1 of the 2 groundwater samples collected from Section 3 during the June 2010 ALL Phase II. Cadmium exceeded the USEPA Region 6 RSL for cadmium in groundwater of 5 µg/l in 1 of the 2 groundwater samples collected from Section 3 during the June 2010 ALL Phase II. Chromium exceeded the USEPA Region 6 RSL for chromium in groundwater of 100 µg/l in 1 of the 2 groundwater samples collected from Section 3 during the June 2010 ALL Phase II. Copper exceeded the USEPA Region 6 RSL for copper in groundwater of 1,300 µg/l in 1 of the 2 groundwater samples collected from Section 3 during the June 2010 ALL Phase II. Lead exceeded the USEPA Region 6 RSL for lead in groundwater of 15 µg/l in 1 of the 2 groundwater samples collected from Section 3 during the June 2010 ALL Phase II. Mercury exceeded the USEPA Region 6 RSL for mercury in groundwater of 2 µg/l in 1 of the 2 groundwater samples collected from Section 3 during the June 2010 ALL Phase II. Nickel exceeded the USEPA Region 6 RSL for nickel in groundwater of 730 µg/l in 1 of the 2 groundwater samples collected from Section 3 during the June 2010 ALL Phase II. Thallium exceeded the USEPA Region 6 RSL for thallium in groundwater of 2 µg/l in 1 of the 2 groundwater samples collected from Section 3 during the June 2010 ALL Phase II. Zinc exceeded the USEPA Region 6 RSL for zinc in tap water of 6,000 µg/l in 1 of the 2 groundwater samples collected from Section 3 during the June 2010 ALL Phase II. Groundwater samples collected from soil borings SB-1 and SB-4 were not field-filtered prior to collection and could have caused a “false high” for metals concentrations. For this reason, ODEQ does not consider the metals concentrations in the groundwater sample collected from soil boring SB-1 to be of

concern. Naphthalene exceeded the USEPA Region 6 RSL for naphthalene in groundwater of 0.17 µg/l in 1 of the 2 groundwater samples collected from Section 3 during the June 2010 ALL Phase II. Chloroform exceeded the USEPA Region 6 RSL for chloroform in tap water of 0.22 µg/l in 1 of the 2 groundwater samples collected from Section 3 during the June 2010 ALL Phase II. Aroclor 1260 exceeded the USEPA Region 6 RSL for Aroclor 1260 in groundwater of 0.078 µg/l in 1 of the 2 groundwater samples collected from Section 3 during the June 2010 ALL Phase II. 1,2,4-trichlorobenzene exceeded the USEPA Region 6 RSL for 1,2,4-Trichlorobenzene in groundwater of 70 µg/l in 1 of the 2 groundwater samples collected from Section 3 during the June 2010 ALL Phase II. All other COCs were below their RSLs. No other COC exceeds the USEPA Region 6 RSLs (June 2017) for soil or groundwater samples collected from Section 3 during the June 2010 ALL Phase II. The Section 3 Historical Exceedances Map is included in Appendix A.

2.4 Brownfields Site Characterization, Proposal, and Cleanup Design

In September 2017, the City of Tulsa submitted a QAPP for the Site-Specific Brownfields Cleanup. The QAPP detailed the QA/QC measures to be followed during document review and remedial design, contractor solicitation and selection, remediation activities, and final inspections. The QAPP was amended on January 18, 2018 to revise laboratory analytical methods in order to comply with ODEQ protocols.

On September 11, 2017, ENERCON submitted a Site Characterization Work Plan for Section 2. The Section 2 Site Characterization Work Plan stated that the previous environmental investigations performed in Section 2 appeared to be complete and no additional investigative activities were recommended at that time.

On September 11, 2017, ENERCON submitted a Site Characterization Work Plan for Section 3. The scope of work identified in the Section 3 Site Characterization Work Plan included resampling monitor well MW-2 to obtain current concentrations of COCs in groundwater.

On September 27, 2017, ENERCON submitted a Site Characterization Work Plan for Section 1. The Section 1 Site Characterization Work Plan stated that the previous environmental investigations performed in Section 1 appeared to be complete and no additional investigative activities were recommended at that time.

On October 2, 2017, the ODEQ Land Protection Division Brownfields Program (LPDBP) issued a Memorandum of Agreement (MOA) for Risk-Based Remediation requiring the City of Tulsa to perform environmental remediation at the subject property under ODEQ Case # 17-188. This MOA identified the requirements of the Brownfields Program and transferred ownership and responsibility of monitor wells MW-1 through MW-5 at the Site to the City of Tulsa.

On October 17, 2017, ENERCON conducted a groundwater sampling event in accordance with ENERCON's September 11, 2017 Section 3 Site Characterization Work Plan. ENERCON submitted the October 2017 Groundwater Monitor Well Sampling Report on January 12, 2018. The groundwater sample and duplicate groundwater sample collected from monitor well MW-2 on October 17, 2017 contained detectable concentrations of cis-1,2-dichloroethylene and vinyl chloride which did not exceed their respective USEPA RSL-MCL. The concentrations of all other analyzed COCs in the groundwater samples collected from monitor well MW-2 were below the laboratory detection limits.

On January 5, 2018, the City of Tulsa submitted a Brownfields Proposal to ODEQ for the remediation of the Evans-Fintube Site. According to the Brownfields Proposal, the site was proposed to be re-developed in three sections with the east half (Section 1) having commercial development and the USA-BMX Arena. Because the arena may function as a training center with a dormitory, residential reuse was proposed. The southwest section (Section 2) holds the National Register of Historic Places (NRHP) listed Evans Building complex. This portion is slated for use as offices and commercial space. The northwest section (Section 3) of the site is occupied by the former Fintube Building complex. This section was proposed for reuse as paved event parking.

The January 5, 2018 Brownfields Proposal identified three Cleanup Alternatives for the site: Alternative 1 – No Action, Alternative 2 – Limited Soil Excavation and Groundwater Background Assessment, and Alternative 3 – Complete Soil Excavation and Groundwater Background Assessment. Alternative 2 was approved for implementation at the Site and included excavation of contaminated surface soils to the level appropriate for proposed reuse and background metals assessment of filtered groundwater at the northern and southern-most groundwater wells installed by ODEQ. The eastern half of the Site (Section 1) would be returned to restricted residential use while the west and southern portions (Sections 2 and 3) would be remediated to industrial standards. For this alternative, surface soils identified using the 2010 TBA Phase II ESA data as having contamination present above the appropriate 2017 RSL would be excavated and disposed off-site. Pre-excavation samples would be collected to determine appropriate disposal methods

and confirmation of lateral extent. For this Alternative, it was assumed that the extent would be limited to 10-feet from each surface soil location requiring excavation for contamination. In areas where PCBs were delineated in accordance with 40 CFR 761 Subpart N, soils would be excavated to 10-feet from the original surface soil sample. These soils would be excavated across the site by conventional means, including inside buildings, and disposed at a local landfill that accepts contaminated non-hazardous soils. Confirmatory sampling of the floor of the excavation would also be performed. Each confirmation sample would be analyzed for PAHs, TPH, and/or PP metals according to the contamination present in that particular area as defined by the 2010 and 2017 Phase II analytical results. Confirmatory sampling of PCB locations would use the methods outlined in 40 CFR 761 Subpart O. The exterior excavated areas would be backfilled with clean soil, while the interior areas would not be backfilled, but rather left for future building reuse. An assessment of groundwater PP metals contamination would be conducted at two of the permanent wells installed by the ODEQ in 2017. Groundwater samples would be filtered and analyzed for PP metals. Based upon the May 2017 PCB assessment event conducted by ODEQ, it was believed that this would function as confirmatory sampling and no additional actions with respect to groundwater would be required. This alternative was expected to be moderately protective, due to the amount of soil removed by excavation and groundwater assessment. Institutional controls would be necessary for this alternative because contamination above unrestricted residential RSLs would remain in place in deeper subsoils after remediation was completed. Specifically, a record would need to be added to the property deed by the land owner/developer to note that chemical contamination had been left in place at the site. It was not anticipated that contaminated groundwater would remain at the site after remediation that would also require a property deed.

During the public comment period, the City of Tulsa received one comment regarding the addition of an approximate 2-foot thick gravel lot on top of areas assessed during the 2010 ALL Phase II following the completion of the Phase II. The gravel pad had been added when the site was used for staging by ODOT during reconstruction of adjacent highway bridges between 2010 and 2017. Following discussions with ODEQ, it was determined that areas SB06-SS01, SSA10, SSB08, and SSB09, previously identified as containing surficial soil impacts in 2010, were, in 2017, subsurface (greater than 2-foot BGS) due to the addition of the gravel pad and did not represent an environmental risk to the anticipated future uses of the Site. Therefore, remediation of areas SB06-SS01, SSA10, SSB08, and SSB09 was not required.

In a letter dated February 23, 2018, the ODEQ authorized the COC-impacted subsurface soils at SB06-SS01, SSA10, SSB08, and SSB09 remain in place.

On March 6, 2018, ENERCON submitted the Remedial Action Work Plan for Section 1 detailing the remedial activities to be performed in Section 1. These remedial activities included sampling monitor wells MW-1 and MW-5, plugging monitor wells MW-1 through MW-5, performing pre-excavation in-situ waste characterization soil sampling, excavation and loading of soils, post-excavation confirmation soil sampling, waste material management, and grading and backfilling.

On March 21, 2018, ENERCON submitted the Remedial Action Work Plan for Section 2 detailing the remedial activities to be performed in Section 2. These remedial activities included performing pre-excavation in-situ waste characterization soil sampling, excavation and loading of soils, post-excavation confirmation soil sampling, waste material management, and grading and backfilling.

On May 11, 2018, ENERCON submitted the Remedial Action Work Plan for Section 3 detailing the remedial activities to be performed in Section 3. These remedial activities included performing pre-excavation in-situ waste characterization soil sampling, excavation and loading of soils, post-excavation confirmation soil sampling, waste material management, and grading and backfilling.

3.0 REMEDIATION ACTIVITIES

This section summarizes the remediation activities described in the approved Remedial Action Plans for Section 1, Section 2, and Section 3.

3.1 Scope of Work Summary – Section 1

The City of Tulsa contracted with Seneca to perform pre-excavation in-situ waste characterization soil sampling, monitoring well sampling, monitoring well closure, soil excavation, and post-excavation confirmation soil sampling, and backfilling of the excavations in Section 1. Seneca prepared a Stormwater Pollution Prevention Plan (SWP3) due to the large amount of soil expected to be disturbed and filed a Notice of Intent for stormwater discharge with the ODEQ on August 29, 2018. The ODEQ approved the SWP3 on September 7, 2018 (No. OKR1029446). Additionally, Seneca filed the City of Tulsa Earth Change Permit application on September 5, 2018 and subsequently received Permit No. WSD-010910-2018.

On September 4, 2018, Seneca conducted pre-excavation in-situ waste characterization soil sampling activities. Thirteen (13) 5-point composite soil samples were collected throughout Section 1. Duplicate samples were collected in accordance with the Remedial Action Plan prepared for Section 1. The samples were shipped for analysis to Pace Analytical National Center for Testing & Innovation Laboratory (Pace), 12065 Lebanon Road, Mt. Juliet, Tennessee 37122.

The pre-excavation in-situ waste characterization soil sample analytical results are presented in Table 4 and the Seneca Pre-Excavation Soil Sample Analytical Results are included as Appendix B. Toxicity Characteristic Leaching Procedure (TCLP) Extraction lead analysis was also required by the receiving landfill in order to profile the soils for possible disposal. These results are also presented in Table 4: Seneca Pre-Excavation Soil Sample Analytical Results in Appendix B. None of the results indicated an exceedance of TCLP standards. The analytical results of the pre-excavation in-situ waste characterization samples collected in Section 1 indicated that none of the samples contained concentrations of COCs which exceeded an Industrial Risk-Based Screening Level. Refer to the attached Seneca Section 1 Report in Appendix F for additional details regarding the pre-excavation in-situ waste characterization sampling activities.

On September 5, 2018, Seneca collected groundwater samples from monitor wells MW-1 and MW-5. Prior to sampling, monitor wells MW-1 and MW-5 were gauged using an oil-water interface probe. The oil-water interface probe was decontaminated in accordance with the Remedial Action Work Plan prepared for

Section 1. During purging, groundwater temperature, pH, conductivity, and turbidity were monitored using a Horiba Model U-5000 Multi-Parameter Water Quality Meter. The multi-parameter unit was calibrated and then utilized to obtain readings as monitor wells MW-1 and MW-5 were purged of at least three well volumes using a new plastic bailer for each monitor well. Seneca collected groundwater samples from monitor wells MW-1 and MW-5 utilizing a new plastic bailer for each monitor well. All groundwater samples were submitted for analysis to Pace. Refer to the attached Seneca Section 1 Report in Appendix F for additional details regarding the monitor well gauging, purging, and sampling activities and groundwater sample laboratory analytical reports and tabulated laboratory analytical results. Groundwater samples were not found to exceed RBLs.

Seneca collected a composite sample of the first 250 cubic yards of backfill material to be used at the site submitted it to Pace for laboratory analysis. The laboratory analytical results did not exceed Risk Based Screening Levels for Industrial settings and was approved for use on the project site. Refer to the attached Seneca Section 1 Report for backfill sample laboratory analytical reports

On September 24, 2018, Seneca supervised the plugging and abandonment of monitor wells MW-1 through MW-5. All five (5) wells were plugged and abandoned according to Oklahoma Water Resources Board (OWRB) regulations by first pulling the well manway cover and the well casing from the ground. The annular space and filter pack were then drilled out and all cuttings were placed in drums for storage and subsequent disposal. Cement grout was placed from the bottom of the well to ground surface. The total volume of waste generated was five (5) 55-gallon drums of soil and one (1) 55-gallon drum of purge water. Refer to the attached Seneca Section 1 Report in Appendix F for additional details regarding the monitor well plugging and abandonment activities.

On September 25, 2018, Seneca began excavation activities in Section 1. A 20-feet by 20-feet square area was excavated to a depth of 1-foot below ground surface (BGS) in areas SSA01, SSB02, SB02-SS01, SSA03, SSB03, SB03-SS01, SSB04, SSB05, SSB06, SB04-SS01, SSA07, SSB07, and SSB11. The City of Tulsa directed contractors not to dispose of the soil excavated from Section 1 that met Risk Based Screening Levels for Industrial settings and stockpile those in Section 2 to be used as backfill wherever that use may be appropriate.

On September 26, 2018, Seneca collected post-excavation confirmation soil samples from each of the 13 excavated areas in Section 1 at a depth of 1-foot BGS. The post-excavation confirmation soil samples and

duplicate samples (as necessary) were collected in accordance with the Remedial Action Work Plan prepared for Section 1. All samples were submitted to Pace for laboratory analysis. The laboratory analytical results of the 1-foot post-excavation confirmation soil samples collected indicated five (5) areas (SB02-SS01, SSA01, SSA03, SSB07, and SSB11) which exceeded the RSLs for residential soil. The post-excavation soil sample (1-foot BGS) analytical results are presented in Table 5: Seneca Post-Excavation Soil Sample Analytical Results (1-Foot BGS) in Appendix B. The City of Tulsa authorized the excavation of an additional 6-inches of soil in these five (5) areas.

On October 5, 2018, Seneca began excavation of an additional 6-inches in areas SB02-SS01, SSA01, SSA03, SSB07, and SSB11 and collected post-excavation confirmation soil samples. The post-excavation confirmation soil samples and duplicate samples (as necessary) were collected in accordance with the Remedial Action Work Plan prepared for Section 1. All samples were submitted to Pace for laboratory analysis. The laboratory analytical results of the 1.5-foot post-excavation confirmation soil samples indicated all five (5) areas (SB02-SS01, SSA01, SSA03, SSB07, and SSB11) contained concentrations of COCs which exceeded the RSLs for residential soil. The post-excavation soil sample (1.5-foot BGS) analytical results are presented in Table 6: Seneca Post-Excavation Soil Sample Analytical Results (1.5-Foot BGS) in Appendix B. The City of Tulsa authorized the excavation of the final 6-inches of soil in these five (5) areas. Due to excessive rainfall, the decision was made to let the Site dry out for a period of time before remobilizing to the Site to complete the final excavation and backfilling activities.

On October 18, 2018, areas SSB02, SSB03, SSB03-SSA01, SSB04, SSB05, SSA07, and SSB06 were backfilled to existing grade with clean fill. Following backfilling activities, areas SB02-SS01, SSA01, and SSA03 were excavated for the final 6-inches to a depth of 2-feet BGS. The two remaining areas, SSB07 and SSB11, contained water and required a vacuum truck to remove 2,000-gallons of stormwater which had accumulated in them. This stormwater was transported under manifest to the Environmental Remediation Specialists Inc. (ERS) facility at 1105 North Peoria Avenue, Tulsa, Oklahoma. After the removal and disposal of the water from SSB07 and SSB11, these areas were excavated for the final 6-inches to a depth of 2-feet BGS. Following the excavation of areas SB02-SS01, SSA01, SSA03, SSB07, and SSB11, these areas were backfilled to existing grade with clean fill.

On November 5, 2018, Seneca collected post-excavation confirmation soil samples from areas SB02-SS01, SSA01, SSA03, SSB07, and SSB11. The post-excavation confirmation soil samples and duplicate samples (as necessary) were collected in accordance with the Remedial Action Work Plan prepared for Section 1.

All samples were submitted to Pace for laboratory analysis. The post-excavation soil sample (2-feet BGS) analytical results are presented in Table 7: Seneca Post-Excavation Soil Sample Analytical Results (2-Foot BGS) in Appendix B.

Based on correspondence with Mr. Sam Hooker with the ODEQ, it was determined that a 10^{-5} risk factor would be used to determine the EPA RSLs for detected COCs if the detected concentrations exceeded the EPA RSLs calculated using a 10^{-6} risk factor. Therefore, the post-excavation confirmation soil samples collected at a depth of 2-feet BGS did not exceed their respective RSL.

Refer to the attached Seneca Section 1 Report in Appendix F for additional details regarding the excavation, post-excavation confirmation soil sampling, and backfilling activities.

3.1.1 Scope of Work Deviations – Section 1

Due to a misunderstanding concerning the disposal of excavated soil, fourteen (14) cubic yards of soil from area SB02-SS01 were loaded onto a dump truck and transported under a non-hazardous waste manifest to American Environmental Landfill (AEL), located at 212 North 177th West Avenue, Sand Springs, Oklahoma for disposal. A summary of the excavation dates and quantities is provided as Table 15: Excavation Summary in Appendix B.

3.2 Scope of Work Summary – Section 2 and Section 3

The City of Tulsa contracted with EWI to perform pre-excavation in-situ waste characterization soil sampling, removal and disposal of floor brick pavers, soil excavation, post-excavation confirmation soil sampling, and backfilling of the excavations in Sections 2 and 3. EWI prepared an SWP3 due to the large amount of soil expected to be disturbed. Additionally, EWI filed the City of Tulsa Earth Change Permit application.

Upon approval of project documents, EWI placed silt sock around the existing stockpile of clean backfill, located southeast of the Evans building and down-gradient from anticipated excavation areas in accordance with the SWP3.

EWI collected three sets of pre-excavation in-situ waste characterization samples, as discussed below. All composite, grab, and quality control samples were collected in accordance with the Remedial Action Work Plans prepared for Sections 2 and 3 and were submitted to Pace Analytical Services, LLC (Pace Analytical)

in Lenexa, Kansas for laboratory analysis. The pre-excavation in-situ waste characterization sample analytical results are presented in Table 8: EWI Pre-Excavation Soil Sampling Results - Priority Pollutant Metals, Table 9: EWI Pre-Excavation Soil Sampling Results - Polycyclic Aromatic Hydrocarbons, and Table 10: EWI Pre-Excavation Soil Sampling Results – Total Petroleum Hydrocarbons in Appendix B.

- **Waste Characterization**
 - Floor brick pavers – because of elevated cadmium and lead concentrations documented in previous samples collected at SSD10, SSD11, SSD12, and SSD13, five-point composite samples of the brick pavers and bedding material beneath the pavers were collected for waste profiling purposes on February 18-19, 2019. The samples were submitted to Pace Analytical and analyzed for TCLP lead and cadmium (SSD11 only) concentrations. All concentrations were below USEPA hazardous waste characteristic concentrations. These results were utilized, along with existing data for samples collected at their respective locations, to prepare a non-hazardous, special waste profile for the pavers and related bedding material.
 - Subsurface soil/materials – prior to excavation activities, five-point composite samples were collected at SSC15, SSD04, SSD05, SSD15, SB05-SS01, SSE07, SSE15, and SSE16 on February 18-19, 2019 to establish a waste profile(s) for the soil to be excavated. The samples were collected by coring through the existing concrete and collecting soil beneath the concrete with a hand auger. For locations without concrete, the top 2- to 3-inches of topsoil was removed and samples collected within the upper 1-foot of soil. The collected samples were submitted to Pace Analytical and analyzed for TPH, PP metals, and PAHs. All laboratory analytical results were below USEPA hazardous waste characteristic concentrations and, therefore, one non-hazardous, special waste profile was established for all the locations.
- Contaminant concentration confirmation– to verify existing sample data and determine if excavation was necessary at SSC14, SSD10, SSD11, SSD12, SSD13, SSD14, SSE12, SSE13, SSE14, and SSF14, grab samples were collected at these locations on February 18 and 21, 2019, and submitted to Pace Analytical for analysis of TPH, PP metals, and PAHs. Results for SSC14, SSD10, SSD11, SSD12, SSD13, SSE12, SSE13, SSE14, and SSF14 were below RSLs; therefore, no excavation was conducted in these areas. TPH-DRO concentrations at SSD14 were above the RSL, therefore, excavation was conducted for this area.

Refer to the attached EWI Section 2 and Section 3 Report in Appendix F for additional details regarding the pre-excavation activities.

On March 5-7, 2019, the existing floor brick pavers (approximately 1,550 square yards) were removed from the Evans building with a combination of skid steer, excavator, and Guzzler® air-mover, and loaded directly into a dump truck for disposal at AEL located in Sand Springs, Oklahoma. Following removal of the brick pavers, clean AB-3 gravel was utilized to backfill the former pavers areas. A total of 118.61-tons of brick pavers and related bedding materials were disposed at the AEL during this work.

Based on the existing TBA Phase II ESA results and verification results discussed above, excavation activities were performed from March 7 – April 2, 2019, at the 10 locations. For areas with a concrete surface (SSD04, SSD05, and SSD14), a concrete saw was utilized to cut the 20-feet by 20-feet excavation areas. The concrete was then broken with a hydraulic breaker and removed with an excavator. Excavation activities were performed with an excavator by removing 1-foot of soil from beneath the surface or bottom of concrete. The excavated soil was loaded directly into a dump truck and transported to the AEL for disposal. Post-excavation samples were then collected and the area over-excavated or backfilled, based on the sample results. A total of 459.04-tons of impacted soil, including over-excavated soil discussed below, were disposed at AEL during this work. A summary of the excavation dates and quantities is provided as Table 15: Excavation Summary in Appendix B. Refer to the attached EWI Section 2 and Section 3 Report in Appendix F for additional details regarding the excavation activities.

Upon reaching an excavation depth of 1-foot BGS, a five-point composite post-excavation confirmation soil sample was collected at each location (SSC12, SSC15, SSD04, SSD05, SSD14, SSD15, SB05-SS01, SSE07, SSE15, and SSE16) and submitted to Pace Analytical for analyses. The results were compared to the appropriate RSLs, depending on future use (industrial in northern portion of the Site and residential in southern portion), to determine next steps. If concentrations were below the RSLs, the excavation area was backfilled with clean fill material. If concentrations were above the RSLs, an additional six inches of soil was excavated for a total depth of 1.5-feet BGS. Samples were again compared to the RSLs, and an additional six inches of soil excavated if exceedances were reported. Excavation activities did not extend beyond 2-feet BGS. The post-excavation sample analytical results are presented in Table 11: EWI Post-Excavation Soil Sampling Results - Priority Pollutant Metals, Table 12: EWI Post-Excavation Soil Sampling Results – Polychlorinated Biphenyls, Table 13: EWI Post-Excavation Soil Sampling Results –

Total Petroleum Hydrocarbons, and Table 14: EWI Pre-Excavation Soil Sampling Results – Polycyclic Aromatic Hydrocarbons in Appendix B.

Compound exceedances were reported for SSC15 (arsenic), SSE15 (arsenic and lead), and SSC12 (PCB). At SSC15 and SSE15, excavation activities were discontinued at 2-feet BGS as this is the vertical limit of the surficial direct contact exposure pathway and the areas backfilled as described in the restoration activities section below. Based on correspondence with Mr. Hooker with the ODEQ, it was determined that a 10^{-5} risk factor would be used to determine the EPA RSLs for detected COCs if the detected concentrations exceeded the EPA RSLs calculated using a 10^{-6} risk factor. Based on correspondence with Mr. Hooker, it was determined that detected concentrations of arsenic in soil samples would be compared with the USGS Background Concentration for arsenic in soil of 17 mg/kg instead of the EPA RSLs. Therefore, the post-excavation confirmation soil samples collected at a depth of 2-feet BGS did not exceed their respective RSL.

At SSC12, confirmation PCB sampling was performed in accordance with 40 CFR 761 Subpart O, following the non-point source protocol and coordination/consultation with ODEQ. The Aroclor 1260 concentration for SSC12-post-3:1' was reported at 1.17 mg/kg, which exceeds the 40 CFR 761.61 cleanup level of 1 mg/kg for Aroclors at high-occupancy areas. Based on this concentration, the SSC12 area was over-excavated on April 12, 2019, to 2-feet BGS and an additional 5-feet laterally in each direction, followed by the collection of additional composite post-excavation confirmation soil samples. PCB concentrations for confirmation samples collected at 2-feet BGS were below the 40 CFR 761.61 cleanup level of 1 mg/kg for Aroclors at high-occupancy areas, except for SSC12-post-3:2', which was reported at 1.930 mg/kg. As such, excavation activities were extended an additional 5-feet to the east to over-excavate impacted soil in this area. One side wall, composite, confirmation sample (SSC12-post-6:2') was collected following this over-excavation and did not include any detections of PCBs above the 40 CFR 761.61 cleanup level of 1 mg/kg for Aroclors at high-occupancy areas or laboratory reporting limit. The area was then backfilled with the onsite fill material discussed above. Refer to the attached EWI Section 2 and Section 3 Report in Appendix F for additional details regarding the post-excavation confirmation soil sampling and over-excavation activities.

Following excavation activities to 1-foot BGS at SSD14, water migrated into the excavation area overnight. The water contained a petroleum-like odor and apparent petroleum-related sheen. Soil along the excavation area sidewalls also contained staining that appeared to be petroleum-related. Since the TPH-DRO

concentration for the SSD14 1-foot BGS confirmation sample was below the RSL, EWI collected a sample of the water for laboratory analysis and removed and transported the water (5,033-gallons) to AEL for disposal as non-hazardous special waste on March 29, 2019. The area was then backfilled and finished with concrete on March 29, 2019.

Following on-site discussions with ODEQ, City of Tulsa, EWI, and Enercon personnel, additional investigation activities were performed in this area to investigate the potential source of the impact and water.

- Shallow water – groundwater levels for the closest monitoring well (MW-5) were reviewed to identify depth to the shallow groundwater table. Depth to groundwater levels were recorded at 13.2-feet below monitoring point (bmp) or deeper. Additionally, a drain pipe was observed on the south side of the Evans building, approximately 25-feet southwest of SSD14. The drain pipe was gauged with an electronic oil/water interface probe to evaluate if it could be a potential conduit for outside rain water to flow beneath the building slab in the vicinity of SSD14. No liquids were detected in the pipe. Based on this information, it was determined that the water in SSD14 excavation area (1- to 2-feet BGS) was not naturally occurring groundwater and was likely pooled rainwater beneath the building concrete slab.
- Shallow petroleum-related impact – based on visual observations, it appears that a storm water drain pipe is located along the southern edge of SSD14 and positioned below the concrete slab in an east-west direction. Upon further investigation, a small (approximately 2-feet by 2-feet) “T” shaped area was observed in the concrete, approximately 30-feet east of SSD14 and adjacent to the apparent storm water drain pipe. The exact nature of the “T” is unknown, but it is suspected that it may be related to an old floor drain or lift.

In order to evaluate if the “T” could be a potential source, EWI collected two samples adjacent to the storm water drain pipe between SSD14 and the “T” on May 17, 2019. The two samples (Drain Sample-East and Drain Sample-West) were submitted to Pace Analytical for TPH analyses. TPH-DRO and TPH-oil range organics (ORO) were reported below the residential RSLs for the west sample.

Additionally, sand and dirt located in the “T” were removed on March 29, 2019, to discover that the bottom of the “T” is concrete. Two samples of the materials in the area were collected (T-Zone: North and T-Zone: South) and submitted to Pace Analytical for TPH analyses. TPH concentrations were below the respective RSLs. Materials removed from the “T” were contained and transported to AEL for disposal as non-

hazardous special waste (1.56-tons). Refer to the attached EWI Section 2 and Section 3 Report in Appendix F for additional details regarding the additional investigation activities.

Upon excavating to 2-feet BGS or receiving confirmation results below the RSLs, EWI backfilled the excavation areas with clean fill material located onsite from previous re-development-related activities in uncontaminated portions of the Site. The surfaces of each area were then finished with materials to match the surrounding surface grade (i.e. soil, gravel, concrete). The exceptions are SSD04 and SSD05, which were finished with gravel as the Fintube building is anticipated to be razed during 2019. Following backfill activities, the remaining backfill (45.25-tons) was transported to AEL for disposal. The post-excavation sample analytical results are presented in Table 11: EWI Post-Excavation Soil Sampling Results - Priority Pollutant Metals, Table 12: EWI Post-Excavation Soil Sampling Results – Polychlorinated Biphenyls, Table 13: EWI Post-Excavation Soil Sampling Results – Total Petroleum Hydrocarbons, and Table 14: EWI Pre-Excavation Soil Sampling Results – Polycyclic Aromatic Hydrocarbons in Appendix B.

During performance of the work, multiple rain events occurred, which resulted in 8,871-gallons of water accumulating in SSC12 and 1,741-gallons of water accumulating in SSC15 prior to backfill activities. EWI collected a sample of the water for laboratory analysis. The water was recovered with a vacuum truck and hauled to AEL for disposal as non-hazardous special waste.

Finally, as part of restoring the Evans building for future development activities, approximately 500 square yards of the clean gravel previously placed in the brick pavers area were removed on June 18, 2019, and placed east/southeast of the building. The brick pavers area was then completed with concrete to match the surrounding surface.

A final site inspection was completed by City of Tulsa, ODEQ, and ENERCON personnel on August 1, 2019, which identified 25 sample locations inside the Evans building that required plugging. The holes were plugged with concrete by EWI personnel on August 5, 2019.

3.2.1 Scope of Work Deviations – Section 2 and Section 3

Confirmation PCB sampling performed at SSD05 did not follow 40 CFR 761 Subpart O protocol as impact at this location is related to an historic transformer oil spill and not deemed PCB remediation waste by ODEQ or EPA. The confirmation samples collected at SSD05 were analyzed by the microwave extraction method (3546). According to 40 CFR 761 Subpart O, extraction methods 3540 (soxlet process) or 3550

(sonication process) must be used for PCB analyses. However, following ODEQ consultation with USEPA Region 6, it was confirmed that the microwave extraction method (3546) is acceptable as methods 3540 and 3550 are outdated and will be removed with future codification changes.

4.0 INSTITUTIONAL CONTROLS

The City of Tulsa revised the proposed section boundaries based on concentrations of COCs in soil remaining in place at the Site. The eastern portion of the Site, which was previously identified as Section 1, the extreme eastern portion of Section 3, and the eastern portion of Section 2, was proposed to be zoned for residential use. The western portion of the Site, which was previously identified as Section 3 and the northwest portion of Section 2, was proposed to be zoned for commercial/industrial use. The portion of the Site south of the Evans Building Complex, which was previously identified as the southern portion of Section 2, was proposed to be zoned for residential use based on revised site reuse planning. A Revised Section Boundary Map is included in Appendix A.

ODEQ requested additional surficial soil samples be collected along the revised proposed section boundaries to confirm the left in place concentrations of COCs in soil were below the applicable screening levels based on the revised site reuse planning. On August 20, 2019, ENERCON mobilized to the Site to collect confirmatory soil samples along the proposed deed restriction section boundaries. ENERCON collected the samples by hand-augering each of the six sample points (ESB-1 through ESB-6) to a depth of 6-inches BGS. The soil recovered from each hand-auger soil boring location was composited into one composite sample per boring. The hand-auger was decontaminated between each hand-auger soil boring location utilizing a Liquinox and tap water rinse followed by a tap water rinse. The soils recovered from each hand-auger soil boring were placed in new Ziploc plastic bags and field screened with a photoionization detector (PID) for volatile organic vapors and the soil lithology was recorded. The PID was first calibrated with 100 ppm isobutylene gas. Boring logs for hand-auger soil borings ESB-1 through ESB-6 are included as Appendix C. Excess soils were placed back into their respective hand-auger soil boring boreholes. All composite soil samples were labeled, recorded on the chain-of-custody, and placed on ice for preservation. These six composite samples were shipped to Pace for laboratory analysis of TPH by method Texas Natural Resource Conservation Commission (TNRCC) Method 1005, PAHs by USEPA Method 8270, PCBs by USEPA Method 8082, and the 13 PP metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc) by USEPA Methods 6010/7471. Laboratory analytical results indicated concentrations of COCs in exceedance of applicable regulatory limits in the composite soil samples collected from hand-auger soil borings ESB-1 and ESB-4. Laboratory analytical reports and associated chains-of-custody for the composite soil samples collected from hand-auger soil borings ESB-1 through ESB-6 are attached in Appendix D.

Following conversations with the City of Tulsa, it was determined that hand-auger soil boring ESB-1 had been inadvertently installed in the City of Tulsa Right-of-Way and the elevated concentrations of COCs may be attributed to industrial traffic on the adjacent street. Due to the elevated concentrations of COCs in the composite soil sample collected from hand auger soil boring ESB-4, the City of Tulsa modified the southeastern extent of the area proposed to be zoned for commercial/industrial use to include ESB-4. The City of Tulsa provided a revised proposed section boundary map and directed ENERCON to install two additional hand-auger soil borings.

On August 28, 2019, ENERCON re-mobilized to the Site to collect confirmatory soil samples along the revised deed restriction section boundaries. Hand-auger soil boring ESB-7 was installed 7-feet south of hand auger soil boring ESB-1 and hand auger soil boring ESB-8 was installed 5-feet south of the revised section boundary located south of hand-auger soil boring ESB-4 (see Revised Section Boundary Map in Appendix A). ENERCON followed the same field procedures as those utilized during the installation of hand-auger soil borings ESB-1 through ESB-6. Boring logs for hand-auger borings ESB-7 and ESB-8 are included as Appendix C. These samples were shipped to Pace for laboratory analysis of TPH by method TNRCC Method 1005, PAHs by USEPA Method 8270, PCBs by USEPA Method 8082, and the 13 PP metals by USEPA Methods 6010/7471. None of the concentrations of the analyzed COCs in the composite soil samples collected from hand-auger soil borings ESB-7 or ESB-8 exceeded their respective regulatory screening level. Laboratory analytical reports and associated chains-of-custody for the composite soil samples collected from hand-auger soil borings ESB-7 and ESB-8 are attached in Appendix D.

On September 11-12, 2019, ENERCON supervised the meets and bounds survey of the Site based on the revised section boundaries. All survey activities were performed by Bennett Surveying, Inc. The Meets and Bounds Survey Report is included in Appendix E.

5.0 CONCLUSION

All activities were performed in accordance with the approved Brownfields Proposal, QAPP, and Remedial Action Work Plans prepared for Section 1, Section 2, and Section 3. ENERCON recommends the Brownfields Certificate of Completion be issued for the Site.

ENERCON appreciates the opportunity to be of service to the City of Tulsa and ODEQ on this project. Please contact Mr. Andrew Foreman at (918) 984-6819 if you have any questions.

Sincerely,

ENERCON SERVICES, INC.



Andrew Foreman
Senior Project Manager
OCC Licensed Environmental Consultant #2049



Matthew Payne
Environmental Scientist

Cc: Ms. Michelle Barnett, P.E.
Deputy Chief of Economic Development
Office of the Mayor
City of Tulsa
175 East 2nd Street, Room 150-040
Tulsa, Oklahoma 74103

APPENDIX A
FIGURES

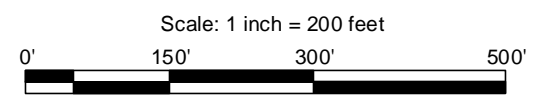
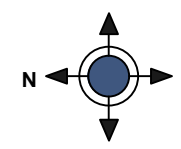
City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
 Tulsa, Oklahoma

Site-Specific Brownfields Cleanup Grant

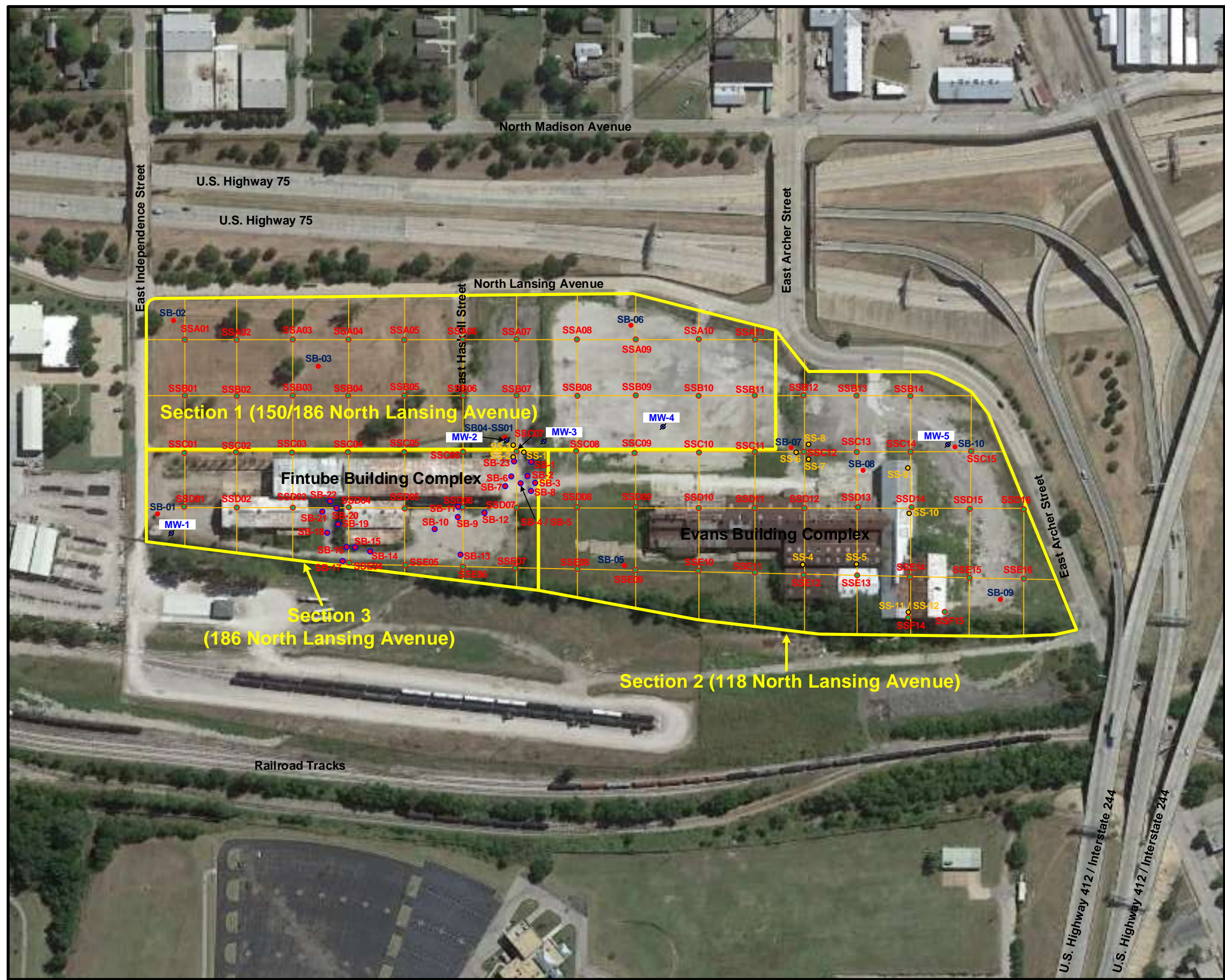
LEGEND

- SB-01 Soil Boring with Native Soil Sample Location (ALL Consulting - Installed April 13-15, 2010)
- ⊗ MW-1 Plugged Monitoring Well Location (ODEQ - Installed 05/2017)
- SS-1 Soil Sample Location (ODEQ - Collected 05/2017)
- SB-1 Soil Boring with Native Soil Sample and Groundwater Sample Approximate Location (Dames & Moore – Installed November 30 – December 2, 1994)
- SSA01 Surficial Soil Sample Location (ALL Consulting - April 13-15, 2010)



Site Map

Project No: CTYTULO-00091 Date: 09/16/2019





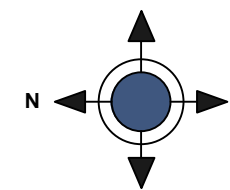
City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
 Tulsa, Oklahoma

Site-Specific Brownfields Cleanup Grant

LEGEND

- **SB-01** Soil Boring with Native Soil Sample Location (ALL Consulting - Installed April 13-15, 2010)
- ⊗ **MW-1** Plugged Monitoring Well Location (ODEQ - Installed 05/2017)
- **SS-1** Soil Sample Location (ODEQ - Collected 05/2017)
- **SB-1** Soil Boring with Native Soil Sample and Groundwater Sample Approximate Location (Dames & Moore – Installed November 30 – December 2, 1994)
- **SSA01** Surficial Soil Sample Location (ALL Consulting - April 13-15, 2010)



Scale: 1 inch = 100 feet



Section 1 Detail Map

Project No: CTYTULO-00091

Date: 09/16/2019

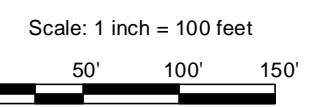
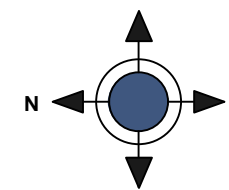
City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
 Tulsa, Oklahoma

Site-Specific Brownfields Cleanup Grant

LEGEND

- **SB-01** Soil Boring with Native Soil Sample Location (ALL Consulting - Installed April 13-15, 2010)
- ⊗ **MW-1** Plugged Monitoring Well Location (ODEQ - Installed 05/2017)
- **SS-1** Soil Sample Location (ODEQ - Collected 05/2017)
- **SB-1** Soil Boring with Native Soil Sample and Groundwater Sample Approximate Location (Dames & Moore – Installed November 30 – December 2, 1994)
- **SSA01** Surficial Soil Sample Location (ALL Consulting - April 13-15, 2010)



Section 2 Detail Map

Project No: CTYTULO-00091 Date: 09/13/2019

Site Map - Section 2 - Base Map & Historical Exceedances.vsd



Evans Building Complex

East Archer Street


Section 2 (118 North Lansing Avenue)

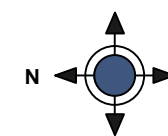
City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
 Tulsa, Oklahoma

Site-Specific Brownfields Cleanup Grant

LEGEND

- **SB-01** Soil Boring with Native Soil Sample Location (ALL Consulting - Installed April 13-15, 2010)
-  **MW-1** Plugged Monitoring Well Location (ODEQ - Installed 05/2017)
- **SS-1** Soil Sample Location (ODEQ - Collected 05/2017)
- **SB-1** Soil Boring with Native Soil Sample and Groundwater Sample Approximate Location (Dames & Moore – Installed November 30 – December 2, 1994)
- **SSA01** Surficial Soil Sample Location (ALL Consulting - April 13-15, 2010)



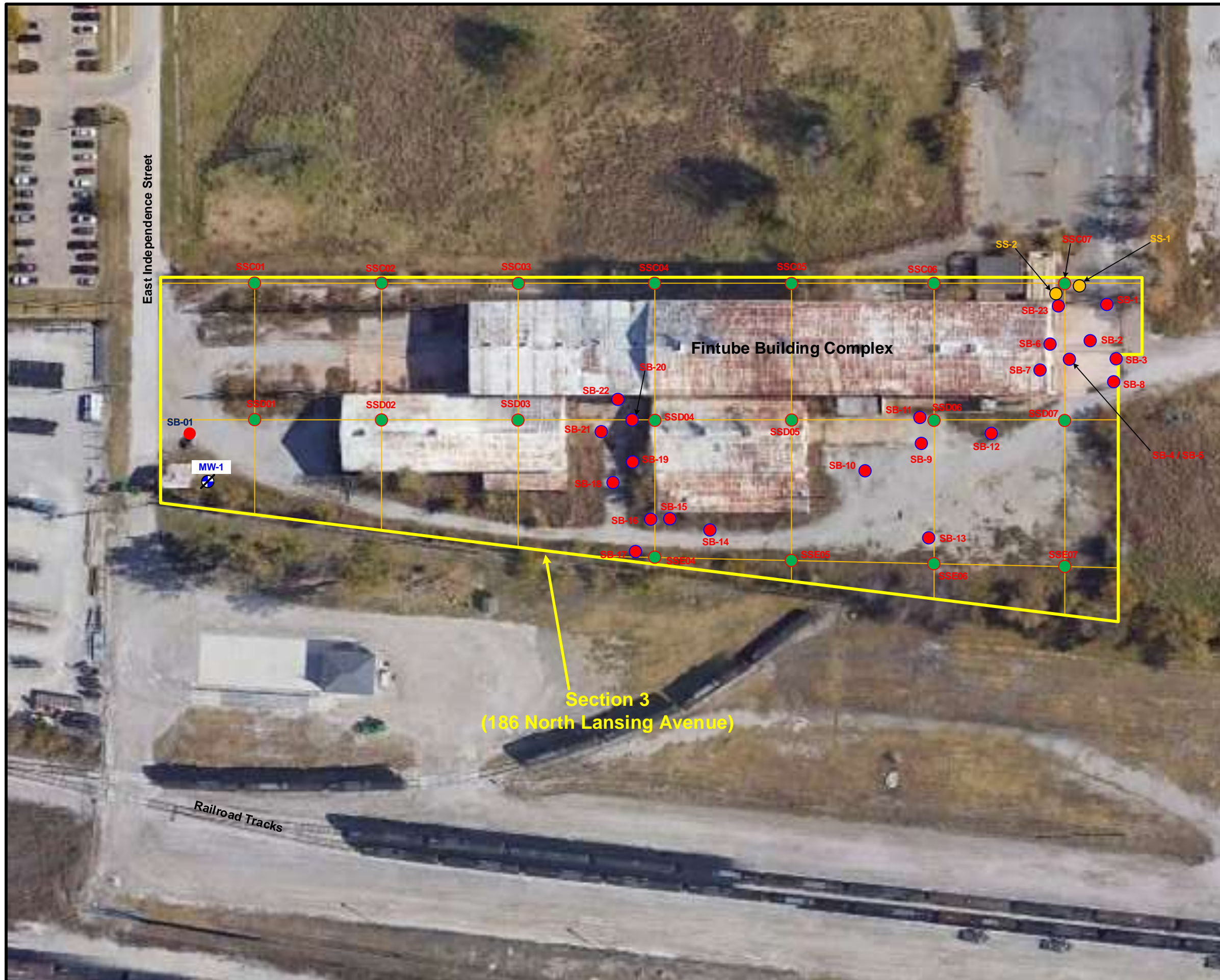
Scale: 1 inch = 80 feet



Section 3 Detail Map

Project No: CTYTULO-00091

Date: 09/13/2019



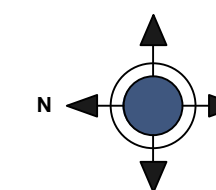
City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
 Tulsa, Oklahoma

Site-Specific Brownfields Cleanup Grant

LEGEND

- Soil Boring with Native Soil Sample Location (ALL Consulting - Installed April 13-15, 2010)
- Plugged Monitoring Well Location (ODEQ - Installed 05/2017)
- Soil Sample Location (ODEQ - Collected 05/2017)
- Soil Boring with Native Soil Sample and Groundwater Sample Approximate Location (Dames & Moore – Installed November 30 – December 2, 1994)
- Surficial Soil Sample Location (ALL Consulting - April 13-15, 2010)
- TPH Impacted Soil
- PAH Impacted Soil
- PCB Impacted Soil
- PP Metals Impacted Soil



Scale: 1 inch = 100 feet



**Section 1
 Historical Exceedances**

Project No: CTYTULO-00091

Date: 09/13/2019

Site Map - Section 1 - Base Map & Historical Exceedances.vsd



Soil chemical concentrations are reported in milligrams per kilogram (mg/kg).
 See data tables for applicable screening levels.

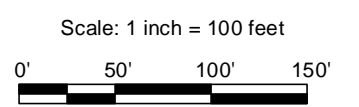
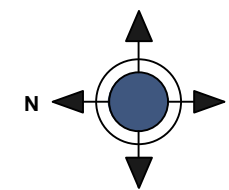
City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
Tulsa, Oklahoma

Site-Specific Brownfields Cleanup Grant

LEGEND

- **SB-01** Soil Boring with Native Soil Sample Location (ALL Consulting - Installed April 13-15, 2010)
- **MW-1** Plugged Monitoring Well Location (ODEQ - Installed 05/2017)
- **SS-1** Soil Sample Location (ODEQ - Collected 05/2017)
- **SB-1** Soil Boring with Native Soil Sample and Groundwater Sample Approximate Location (Dames & Moore – Installed November 30 – December 2, 1994)
- **SSA01** Surficial Soil Sample Location (ALL Consulting - April 13-15, 2010)
- TPH Impacted Soil
- PAH Impacted Soil
- PCB Impacted Soil
- PP Metals Impacted Soil



Section 2
Historical Exceedances

Project No: CTYTULO-00091

Date: 09/13/2019





Soil chemical concentrations are reported in milligrams per kilogram (mg/kg). See data tables for applicable screening levels.

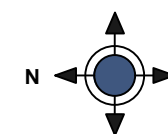
City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
 Tulsa, Oklahoma

Site-Specific Brownfields Cleanup Grant

LEGEND

- **SB-01** Soil Boring with Native Soil Sample Location (ALL Consulting - Installed April 13-15, 2010)
-  **MW-1** Plugged Monitoring Well Location (ODEQ - Installed 05/2017)
- **SS-1** Soil Sample Location (ODEQ - Collected 05/2017)
- **SB-1** Soil Boring with Native Soil Sample and Groundwater Sample Approximate Location (Dames & Moore – Installed November 30 – December 2, 1994)
- **SSA01** Surficial Soil Sample Location (ALL Consulting - April 13-15, 2010)
- TPH Impacted Soil
- PAH Impacted Soil
- PCB Impacted Soil
-  PP Metals Impacted Soil



Scale: 1 inch = 80 feet



**Section 3
 Historical Exceedances**

Project No: CTYTULO-00091

Date: 09/13/2019



SSD04
 TPH-DRO: 38,100
 TPH-ORO: 39,500

SSD05
 TPH-DRO: 44,200
 Aroclor 1260: 16.4

SSE07
 Arsenic: 34.5








Soil chemical concentrations are reported in milligrams per kilogram (mg/kg).
 See data tables for applicable screening levels.

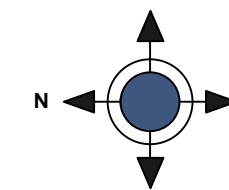
City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
 Tulsa, Oklahoma

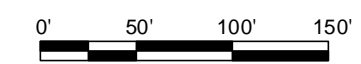
Site-Specific Brownfields Cleanup Grant

LEGEND

-  Plugged Monitoring Well Location (ODEQ - Installed 05/2017)
-  Soil Boring with Native Soil Sample and Groundwater Sample Approximate Location (Dames & Moore – Installed November 30 – December 2, 1994)
-  Surficial Soil Sample Location (SENECA - September, 2018)
-  TPH Impacted Soil
-  PAH Impacted Soil
-  PCB Impacted Soil
-  PP Metals Impacted Soil



Scale: 1 inch = 100 feet



**Section 1
 Pre-Excavation Exceedances**

Project No: CTYTULO-00091

Date: 09/13/2019



SSA01
 Benzo(a)pyrene: 0.141

SB02-SS01
 Benzo(a)pyrene: 0.535
 Dibenzo(a,h)anthracene: 0.113

SSA03
 Benzo(a)pyrene: 0.555
 Benzo(b)fluoranthene: 1.20
 Dibenzo(a,h)anthracene: 0.222

SSA07
 Total TPH: 66.0

SSB05
 Benzo(a)pyrene: 0.782
 Dibenzo(a,h)anthracene: 0.122

SSB06
 TPH-ORO: 61.1
 Total TPH: 86.5

SSB07
 TPH-ORO: 86.5
 Total TPH: 130

SSB11
 TPH-ORO: 81.9
 Total TPH: 130

Soil chemical concentrations are reported in milligrams per kilogram (mg/kg).
 See data tables for applicable screening levels.

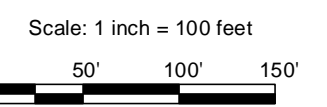
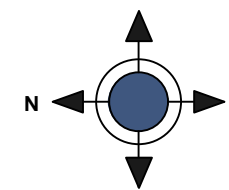
City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
 Tulsa, Oklahoma

Site-Specific Brownfields Cleanup Grant

LEGEND

- **SB-01** Soil Boring with Native Soil Sample Location (ALL Consulting - Installed April 13-15, 2010)
- ⊗ **MW-1** Plugged Monitoring Well Location (ODEQ - Installed 05/2017)
- **SS-1** Soil Sample Location (ODEQ - Collected 05/2017)
- **SB-1** Soil Boring with Native Soil Sample and Groundwater Sample Approximate Location (Dames & Moore – Installed November 30 – December 2, 1994)
- **SSA01** Surficial Soil Sample Location (ALL Consulting - April 13-15, 2010)
- TPH Impacted Soil
- PAH Impacted Soil
- PCB Impacted Soil
- PP Metals Impacted Soil



Section 2
Pre-Excavation Exceedances

Project No: CTYTULO-00091

Date: 09/13/2019



SSD13
 TPH-DRO: 54.9
 TPH-ORO: 62.4
 Total TPH: 121

SSC14
 TPH-DRO: 175
 TPH-ORO: 167
 Total TPH: 346

SSD14
 TPH-GRO: 496
 TPH-DRO: 8,680
 TPH-ORO: 2,670
 Total TPH: 12,000

SSC15
 Arsenic: 10.5

SSD10
 Total TPH: 61.6

SSE16
 Arsenic: 15.4







Soil chemical concentrations are reported in milligrams per kilogram (mg/kg).
 See data tables for applicable screening levels.

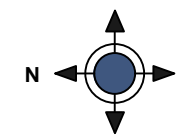
City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
Tulsa, Oklahoma

Site-Specific Brownfields Cleanup Grant

LEGEND

-  Plugged Monitoring Well Location (ODEQ - Installed 05/2017)
- MW-1**
-  Surficial Soil Sample Location (SENECA - November 2018)
- SSA01**
-  TPH Impacted Soil
-  PAH Impacted Soil
-  PCB Impacted Soil
-  PP Metals Impacted Soil



Scale: 1 inch = 80 feet



**Section 3
Pre-Excavation Exceedances**

Project No: CTYTULO-00091

Date: 09/13/2019

Soil chemical concentrations are reported in milligrams per kilogram (mg/kg).
See data tables for applicable screening levels.





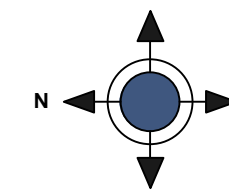
City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
 Tulsa, Oklahoma

Site-Specific Brownfields Cleanup Grant

LEGEND

- Soil Boring with Native Soil Sample Location (ALL Consulting - Installed April 13-15, 2010)
- ⊗ Plugged Monitoring Well Location (ODEQ - Installed 05/2017)
- Surficial Soil Sample Location (Seneca – September- October , 2018)
- TPH Impacted Soil
- PAH Impacted Soil
- PCB Impacted Soil
- PP Metals Impacted Soil



Scale: 1 inch = 100 feet



Section 1
Post-Excavation Exceedances

Soil chemical concentrations are reported in milligrams per kilogram (mg/kg). See data tables for applicable screening levels.

Project No: CTYTULO-00091 Date: 09/13/2019

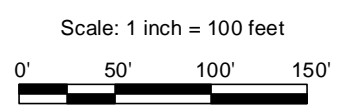
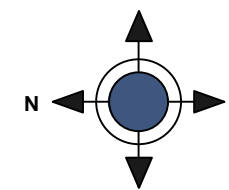
City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
 Tulsa, Oklahoma

Site-Specific Brownfields Cleanup Grant

LEGEND

- **SB-01** Soil Boring with Native Soil Sample Location (ALL Consulting - Installed April 13-15, 2010)
- ⊗ **MW-1** Plugged Monitoring Well Location (ODEQ - Installed 05/2017)
- **SS-1** Soil Sample Location (ODEQ - Collected 05/2017)
- **SB-1** Soil Boring with Native Soil Sample and Groundwater Sample Approximate Location (Dames & Moore – Installed November 30 – December 2, 1994)
- **SSA01** Surficial Soil Sample Location (ALL Consulting - April 13-15, 2010)
- TPH Impacted Soil
- PAH Impacted Soil
- PCB Impacted Soil
- PP Metals Impacted Soil



Section 2
Post-Excavation Exceedances

Project No: CTYTULO-00091

Date: 09/13/2019



Soil chemical concentrations are reported in milligrams per kilogram (mg/kg).
 See data tables for applicable screening levels.










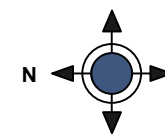
City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
Tulsa, Oklahoma

Site-Specific Brownfields Cleanup Grant

LEGEND

-  Plugged Monitoring Well Location (ODEQ - Installed 05/2017)
-  Surficial Soil Sample Location (EWI - March 18-21, 2010)
-  SSA01
-  TPH Impacted Soil
-  PAH Impacted Soil
-  PCB Impacted Soil
-  PP Metals Impacted Soil



Scale: 1 inch = 80 feet



**Section 3
Post-Excavation Exceedances**

Soil chemical concentrations are reported in milligrams per kilogram (mg/kg).
See data tables for applicable screening levels.

Project No: CTYTULO-00091







Date: 09/13/2019

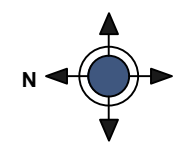
City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
 Tulsa, Oklahoma

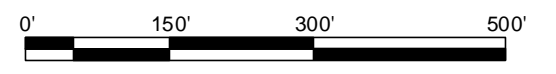
Site-Specific Brownfields Cleanup Grant

LEGEND

-  Soil Boring with Native Soil Sample Location (ALL Consulting - Installed April 13-15, 2010)
-  Plugged Monitoring Well Location (ODEQ - Installed 05/2017)
-  Soil Sample Location (ODEQ - Collected 05/2017)
-  Soil Boring with Native Soil Sample and Groundwater Sample Approximate Location (Dames & Moore – Installed November 30 – December 2, 1994)
-  Surficial Soil Sample Location (ALL Consulting - April 13-15, 2010)
-  Boundary Confirmation Surficial Sample Location (ENERCON – September 20 and 28, 2019)



Scale: 1 inch = 200 feet



Revised Section Boundaries Map

Project No: CTYTULO-00091

Date: 09/13/2019



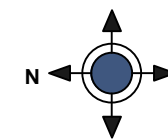
City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
 Tulsa, Oklahoma

Site-Specific Brownfields Cleanup Grant

LEGEND

- **SB-01** Soil Boring with Native Soil Sample Location (ALL Consulting - Installed April 13-15, 2010)
- **MW-1** Plugged Monitoring Well Location (ODEQ - Installed 05/2017)
- **SS-1** Soil Sample Location (ODEQ - Collected 05/2017)
- **SB-1** Soil Boring with Native Soil Sample and Groundwater Sample Approximate Location (Dames & Moore – Installed November 30 – December 2, 1994)
- **SSA01** Surficial Soil Sample Location (ALL Consulting - April 13-15, 2010)
- **ESB-1** Boundary Confirmation Surficial Sample Location (ENERCON – September 20 and 28, 2019)



Scale: 1 inch = 200 feet



Post-Excavation Exceedances with Revised Section Boundaries Map

Project No: CTYTULO-00091

Date: 09/13/2019



Soil chemical concentrations are reported in milligrams per kilogram (mg/kg).
 See data tables for applicable screening levels.

APPENDIX B

TABLES

Table 1: Historical Surface Soil Sample Analytical Results

| Sample ID | RSL based on Reuse : Residential(R)/Industrial(I) | Sample Date (M/YY) | Arsenic | Copper | Lead | Anthracene | Benzo(a)anthracene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(g,h,i)perylene | Benzo(k)fluoranthene | Dibenzo(a,h)anthracene | Indeno(1,2,3-cd)pyrene | TPH-GRO | TPH-DRO | TPH-ORO | Total TPH | Aroclor 1248 | Aroclor 1254 | Aroclor 1260 | |
|------------------------|---|--------------------|------------------|-------------|------------|------------|--------------------|----------------|----------------------|----------------------|----------------------|------------------------|------------------------|---------|---------|---------|------------|--------------|------------------|------------------|------------------|
| Units | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Residential RSL | | | 6.8 ² | 3,100 | 400 | 18,000 | 1.1 | 0.11 | 1.1 | | 11 | 0.11 | 1.1 | | | | | | 1.0 ⁵ | 1.0 ⁵ | 1.0 ⁵ |
| Industrial RSL | | | 30 ² | 47,000 | 800 | 230,000 | 21 | 2.1 | 21 | | 210 | 2.1 | 21 | | | | | | 1.0 ⁵ | 1.0 ⁵ | 1.0 ⁵ |
| Tier 1 Residential GCL | | | | | | | | | | | | | | | | | 50 | | | | |
| Tier 2 Industrial GCL | | | | | | | | | | | | | | 500 | 2500 | 5000 | | | | | |
| SSA01 | R | 4/10 ⁵ | 7 | 81.4 | 693 | 0.0561 | 0.324 | 0.371 | 0.554 | 0.26 | 0.182 | 0.0547 | 0.278 | | | | | | ND | ND | 0.013 |
| SSA02 | R | 4/10 ⁵ | 5 | 42.1 | 215 | | | | | | | | | | | | | | ND | ND | 0.0443 |
| SSA03 | R | 4/10 ⁵ | 12 | 42.4 | 455 | ND | 0.812 | 1.22 | 2.5 | 1.32 | 0.7 | 0.475 | 1.46 | | | | | | | | |
| SSA04 | R | 4/10 ⁵ | 5.8 | 24 | 141 | | | | | | | | | | | | | | | | |
| SSA05 | R | 4/10 ⁵ | 6.5 | 24.2 | 159 | | | | | | | | | | | | | | | | |
| SSA06 | R | 4/10 ⁵ | 4.7 | 16.9 | 51.1 | | | | | | | | | | | | | | ND | ND | 0.0165 |
| SSA07 | R | 4/10 ⁵ | 2.8 | 17.2 | 24.1 | | | | | | | | | ND | 236 | 188 | 424 | | | | |
| SSA08 | R | 4/10 ⁵ | 4.9 | 11.6 | 41.7 | | | | | | | | | | | | | | ND | ND | 0.0103 |
| SSA09 | R | 4/10 ⁵ | 5.7 | 11.5 | 32 | | | | | | | | | | | | | | | | |
| SSA10 | R | 4/10 ⁵ | 3.8 | 9.5 | 57.5 | | | | | | | | | ND | 147 | 176 | 323 | | | | |
| SSA11 | R | 4/10 ⁵ | 5.7 | 11.6 | 71 | ND | 0.06 | 0.0619 | 0.113 | 0.0522 | ND | ND | 0.0519 | | | | | | ND | ND | 0.020 |
| SSB1 | R | 4/10 ⁵ | 5.8 | 28 | 269 | | | | | | | | | | | | | | | | |
| SSB2 | R | 4/10 ⁵ | 5.6 | 3980 | 291 | ND | 0.165 | 0.188 | 0.281 | 0.134 | 0.0894 | ND | 0.143 | ND | ND | 39.2 | 39.2 | | | | |
| SSB3 | R | 4/10 ⁵ | 10.5 | 84.9 | 272 | | | | | | | | | | | | | | | | |
| SSB4 | R | 4/10 ⁵ | 5.9 | 38.5 | 180 | ND | 0.130 | 0.136 | 0.225 | 0.101 | 0.0699 | ND | 0.104 | | | | | | ND | ND | 0.0173 |
| SSB5 | R | 4/10 ⁵ | 4.5 | 29.1 | 144 | ND | 0.237 | 0.33 | 0.545 | 0.31 | 0.151 | 0.0652 | 0.291 | | | | | | ND | ND | 0.024 |
| SSB6 | R | 4/10 ⁵ | 4.1 | 24.3 | 46.2 | | | | | | | | | ND | 97.5 | 60.7 | 158 | | ND | ND | 0.0613 |
| SSB7 | R | 4/10 ⁵ | 4.5 | 41.7 | 34.6 | | | | | | | | | ND | 114 | 96.9 | 211 | | | | |

Table 1: Historical Surface Soil Sample Analytical Results

| Sample ID | RSL based on Reuse : Residential(R)/Industrial(I) | Sample Date (M/YY) | Arsenic | Copper | Lead | Anthracene | Benzo(a)anthracene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(g,h,i)perylene | Benzo(k)fluoranthene | Dibenzo(a,h)anthracene | Indeno(1,2,3-cd)pyrene | TPH-GRO | TPH-DRO | TPH-ORO | Total TPH | Aroclor 1248 | Aroclor 1254 | Aroclor 1260 |
|------------------------|---|--------------------|------------------|--------|------|------------|--------------------|----------------|----------------------|----------------------|----------------------|------------------------|------------------------|---------|---------|---------|-------------|------------------|------------------|------------------|
| Units | | | mg/kg | | | | | | | | | | | | | | | | | |
| Residential RSL | | | 6.8 ² | 3,100 | 400 | 18,000 | 1.1 | 0.11 | 1.1 | | 11 | 0.11 | 1.1 | | | | | 1.0 ⁵ | 1.0 ⁵ | 1.0 ⁵ |
| Industrial RSL | | | 30 ² | 47,000 | 800 | 230,000 | 21 | 2.1 | 21 | | 210 | 2.1 | 21 | | | | | 1.0 ⁵ | 1.0 ⁵ | 1.0 ⁵ |
| Tier 1 Residential GCL | | | | | | | | | | | | | | | | | 50 | | | |
| Tier 2 Industrial GCL | | | | | | | | | | | | | | 500 | 2500 | 5000 | | | | |
| SSB8 | R | 4/10 ⁵ | 4.9 | 18.5 | 65.6 | ND | 0.704 | 0.911 | 1.85 | 0.834 | 0.561 | 0.218 | 0.837 | | | | | ND | ND | 0.221 |
| SSB9 | R | 4/10 ⁵ | 3.6 | 7.6 | 57.8 | | | | | | | | | ND | 81.6 | 93.5 | 175 | | | |
| SSB10 | R | 4/10 ⁵ | 3.7 | 14.5 | 105 | | | | | | | | | ND | 18.7 | ND | 18.7 | | | |
| SSB11 | R | 4/10 ⁵ | ND | 3.8 | 79.2 | | | | | | | | | ND | 1020 | 694 | 1720 | | | |
| SSB12 | I | 4/10 ⁵ | 5.7 | 36.8 | 141 | | | | | | | | | | | | | ND | ND | 0.0901 |
| SSB13 | I | 4/10 ⁵ | 4.7 | 30.2 | 43 | | | | | | | | | ND | 47.3 | 43.7 | 91 | ND | ND | 0.0404 |
| SSB14 | I | 4/10 ⁵ | 2.3 | 13.2 | 44.1 | | | | | | | | | | | | | | | |
| SSC1 | I | 4/10 ⁵ | 3.7 | 25.7 | 95.4 | ND | 0.17 | 0.293 | 0.459 | 0.255 | 0.132 | 0.0531 | 0.261 | | | | | ND | ND | 0.0196 |
| SSC2 | I | 4/10 ⁵ | 6.4 | 52.1 | 126 | | | | | | | | | | | | | ND | ND | 0.0472 |
| SSC3 | I | 4/10 ⁵ | 6.0 | 53.5 | 176 | ND | 0.289 | 0.320 | 0.593 | 0.253 | 0.183 | 0.056 | 0.255 | | | | | ND | ND | 0.094 |
| SSC4 | I | 4/10 ⁵ | 8.3 | 38 | 213 | | | | | | | | | | | | | ND | ND | 0.0549 |
| SSC5 | I | 4/10 ⁵ | 3.4 | 42.6 | 82.5 | 0.126 | 0.520 | 0.543 | 0.847 | 0.436 | 0.251 | 0.0757 | 0.438 | ND | 139 | 149 | 288 | ND | ND | 0.033 |
| SSC6 | I | 4/10 ⁵ | 3.2 | 27.8 | 42.8 | | | | | | | | | ND | 698 | 659 | 1360 | ND | ND | 0.0735 |
| SSC7 | I | 4/10 ⁵ | ND | 7.7 | 16.1 | ND | 0.107 | 0.0924 | 0.172 | 0.0498 | 0.0585 | ND | 0.0451 | | | | | | | |
| SSC8 | I | 4/10 ⁵ | 5.1 | 12.2 | 45.3 | | | | | | | | | | | | | ND | ND | 0.612 |
| SSC9 | I | 4/10 ⁵ | 7.8 | 46.6 | 56.4 | ND | 0.0833 | 0.0972 | 0.16 | 0.0561 | 0.0588 | ND | 0.0589 | | | | | ND | ND | 0.0353 |
| SSC10 | I | 4/10 ⁵ | 6.1 | 21.6 | 53.5 | | | | | | | | | | | | | | | |
| SSC11 | I | 4/10 ⁵ | 6.5 | 22.6 | 59.6 | ND | 0.442 | 0.0526 | ND | 0.0411 | ND | ND | 0.0408 | | | | | ND | ND | 0.118 |
| SSC12 | I | 4/10 ⁵ | 5.7 | 44.8 | 60.6 | 0.0718 | 0.488 | 0.532 | 0.865 | 0.465 | 0.288 | 0.107 | 0.477 | | | | | 1.16 | ND | 0.136 |
| SS-6 ³ | I | 5/17 ⁶ | | | | | | | | | | | | | | | | ND | ND | 0.165 |

Table 1: Historical Surface Soil Sample Analytical Results

| Sample ID | RSL based on Reuse : Residential(R)/Industrial(I) | Sample Date (M/YY) | Arsenic | Copper | Lead | Anthracene | Benzo(a)anthracene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(g,h,i)perylene | Benzo(k)fluoranthene | Dibenzo(a,h)anthracene | Indeno(1,2,3-cd)pyrene | TPH-GRO | TPH-DRO | TPH-ORO | Total TPH | Aroclor 1248 | Aroclor 1254 | Aroclor 1260 | |
|------------------------|---|--------------------|------------------|--------|--------------|------------|--------------------|----------------|----------------------|----------------------|----------------------|------------------------|------------------------|---------|---------------|---------------|-----------|------------------|------------------|------------------|-------------|
| Units | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Residential RSL | | | 6.8 ² | 3,100 | 400 | 18,000 | 1.1 | 0.11 | 1.1 | | 11 | 0.11 | 1.1 | | | | | 1.0 ⁵ | 1.0 ⁵ | 1.0 ⁵ | |
| Industrial RSL | | | 30 ² | 47,000 | 800 | 230,000 | 21 | 2.1 | 21 | | 210 | 2.1 | 21 | | | | | 1.0 ⁵ | 1.0 ⁵ | 1.0 ⁵ | |
| Tier 1 Residential GCL | | | | | | | | | | | | | | | | | 50 | | | | |
| Tier 2 Industrial GCL | | | | | | | | | | | | | | 500 | 2500 | 5000 | | | | | |
| SS-7 ³ | I | 5/17 ⁶ | | | | | | | | | | | | | | | | | ND | ND | 0.108 |
| SS-8 ³ | I | 5/17 ⁶ | | | | | | | | | | | | | | | | | ND | ND | 0.488 |
| SSC13 | I | 4/10 ⁵ | 4.1 | 10.8 | 23.5 | | | | | | | | | | | | | | | | |
| SSC14 ¹ | I | 4/10 ⁵ | 4.2 | 144 | 832 | | | | | | | | | ND | 7890 | 4250 | | | ND | ND | 0.606 |
| SSC15 | I | 4/10 ⁵ | 11.5 | 17.8 | 61.3 | ND | 0.0522 | 0.0603 | 0.0902 | 0.0517 | ND | ND | 0.0398 | | | | | | | | |
| SSD1 | I | 4/10 ⁵ | 4.9 | 34.3 | 38.4 | | | | | | | | | | | | | | ND | ND | 0.0116 |
| SSD2 ¹ | I | 4/10 ⁵ | 3.0 | 31.3 | 16.1 | | | | | | | | | | | | | | | | |
| SSD3 ¹ | I | 4/10 ⁵ | 11.5 | 455 | 118 | | | | | | | | | ND | 1,400 | 2,010 | 3,420 | | ND | ND | 0.141 |
| SSD4 ¹ | I | 4/10 ⁵ | ND | 320 | ND | | | | | | | | | ND | 38,100 | 39,500 | 77,600 | | ND | ND | 0.767 |
| SSD5 ¹ | I | 4/10 ⁵ | 4.1 | 63.5 | 73.4 | | | | | | | | | ND | 44,200 | ND | 44,200 | | ND | ND | 16.4 |
| SSD6 | I | 4/10 ⁵ | 6.3 | 105 | 159 | | | | | | | | | ND | 181 | 272 | 453 | | | | |
| SSD7 | I | 4/10 ⁵ | 6.9 | 55.7 | 106 | | | | | | | | | | | | | | ND | ND | 0.759 |
| SSD8 | I | 4/10 ⁵ | 3.8 | 15.8 | 106 | | | | | | | | | | | | | | ND | 0.425 | 0.1 |
| SSD9 | I | 4/10 ⁵ | 4 | 15.2 | 95.9 | | | | | | | | | | | | | | ND | ND | 0.222 |
| SSD10 ¹ | I | 4/10 ⁵ | 19.7 | 245 | 2,560 | 2.42 | 2.13 | 4.27 | 9.48 | 8.24 | 3.04 | 1.69 | 7.57 | ND | 11,000 | 12,800 | 23,800 | | ND | ND | 1.64 |
| SSD11 ¹ | I | 4/10 ⁵ | 14.3 | 386 | 4,310 | | | | | | | | | ND | 33,500 | 22,000 | 55,000 | | ND | ND | 0.929 |
| SSD12 ¹ | I | 4/10 ⁵ | 7.8 | 117 | 351 | | | | | | | | | ND | 34,200 | 17,800 | 52,000 | | ND | 18.00 | 6.25 |
| SSD13 ¹ | I | 4/10 ⁵ | 7.8 | 74.1 | 153 | | | | | | | | | ND | 7,890 | 8,920 | 16,800 | | ND | ND | 0.662 |
| SSD14 ^{1,4} | I | 4/10 ⁵ | 9.8 | 344 | 1,700 | ND | 0.210 | 0.196 | 0.58 | 0.214 | 0.152 | ND | 0.213 | ND | 3,380 | 3,510 | 6,890 | | ND | ND | 1.81 |
| SS-10 ⁴ | I | 5/17 ⁶ | | | | | | | | | | | | | | | | | ND | ND | ND |

Table 1: Historical Surface Soil Sample Analytical Results

| Sample ID | RSL based on Reuse : Residential(R)/Industrial(I) | Sample Date (M/YY) | Arsenic | Copper | Lead | Anthracene | Benzo(a)anthracene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(g,h,i)perylene | Benzo(k)fluoranthene | Dibenzo(a,h)anthracene | Indeno(1,2,3-cd)pyrene | TPH-GRO | TPH-DRO | TPH-ORO | Total TPH | Aroclor 1248 | Aroclor 1254 | Aroclor 1260 |
|------------------------|---|--------------------|------------------|--------|--------------|------------|--------------------|----------------|----------------------|----------------------|----------------------|------------------------|------------------------|---------|--------------|--------------|-----------|------------------|------------------|------------------|
| Units | | | mg/kg | | | | | | | | | | | | | | | | | |
| Residential RSL | | | 6.8 ² | 3,100 | 400 | 18,000 | 1.1 | 0.11 | 1.1 | | 11 | 0.11 | 1.1 | | | | | 1.0 ⁵ | 1.0 ⁵ | 1.0 ⁵ |
| Industrial RSL | | | 30 ² | 47,000 | 800 | 230,000 | 21 | 2.1 | 21 | | 210 | 2.1 | 21 | | | | | 1.0 ⁵ | 1.0 ⁵ | 1.0 ⁵ |
| Tier 1 Residential GCL | | | | | | | | | | | | | | | | | 50 | | | |
| Tier 2 Industrial GCL | | | | | | | | | | | | | | 500 | 2500 | 5000 | | | | |
| SSD15 | I | 4/10 ⁵ | 70 | 70.4 | 1,180 | | | | | | | | | | | | | | | |
| SSD16 | I | 4/10 ⁵ | 6.7 | 16.3 | 77.5 | | | | | | | | | | | | | | | |
| SSE4 | I | 4/10 ⁵ | 6.3 | 113 | 112 | ND | 0.0617 | 0.08 | 0.181 | 0.0936 | 0.0531 | ND | 0.0853 | ND | 262 | 136 | 397 | ND | ND | 0.363 |
| SSE5 | I | 4/10 ⁵ | 14.3 | 63 | 127 | | | | | | | | | ND | 88.4 | 144 | 232 | ND | ND | 0.135 |
| SSE6 | I | 4/10 ⁵ | 11.6 | 77.2 | 191 | 0.0573 | 0.382 | 0.721 | 1.5 | 1.49 | 0.391 | 0.346 | 1.38 | ND | 79 | 88.9 | 168 | ND | ND | 0.033 |
| SSE7 | I | 4/10 ⁵ | 34.5 | 159 | 517 | | | | | | | | | ND | 296 | 428 | 724 | ND | 0.0836 | 0.108 |
| SSE8 | I | 4/10 ⁵ | 6.1 | 21.7 | 61.2 | | | | | | | | | ND | 41.9 | 15.1 | 57 | ND | ND | 0.04 |
| SSE9 | I | 4/10 ⁵ | 5.5 | 13 | 32.6 | | | | | | | | | | | | | | | |
| SSE10 | I | 4/10 ⁵ | 7.6 | 104 | 267 | | | | | | | | | ND | 91.3 | 94.6 | 186 | ND | ND | 0.124 |
| SSE11 | I | 4/10 ⁵ | 16.8 | 283 | 276 | ND | 0.211 | 0.255 | 0.605 | 0.301 | 0.17 | 0.0862 | 0.292 | ND | 136 | 56 | 192 | 0.123 | ND | 0.0747 |
| SSE12 ^{1,4} | I | 4/10 ⁵ | 5.5 | 170 | 211 | | | | | | | | | ND | 2,050 | 3,630 | 5,680 | ND | ND | 2.08 |
| SS-4 ⁴ | I | 5/17 ⁶ | | | | | | | | | | | | | | | | ND | 0.0411 | 0.137 |
| SSE13 ^{1,4} | I | 4/10 ⁵ | 7.2 | 5490 | 663 | | | | | | | | | ND | 2,370 | 2,140 | 4,510 | ND | ND | 2.07 |
| SS-5 ⁴ | I | 5/17 ⁶ | | | | | | | | | | | | | | | | ND | ND | ND |
| SSE14 ¹ | I | 4/10 ⁵ | 3.9 | 42.1 | 121 | | | | | | | | | ND | 7,790 | 8,270 | 161,100 | ND | ND | 0.172 |
| SSE15 | I | 4/10 ⁵ | 13.9 | 19.6 | 207 | ND | ND | ND | 0.0525 | ND | ND | ND | ND | | | | | | | |
| SSE16 | I | 4/10 ⁵ | 4.8 | 10 | 83 | 0.328 | 1.19 | 1.06 | 1.59 | 0.619 | 0.555 | 0.147 | 0.719 | ND | 108 | 127 | 234 | | | |
| SSF14 ^{1,4} | I | 4/10 ⁵ | 11.8 | 520 | 589 | ND | ND | ND | 0.938 | ND | ND | ND | ND | ND | 7,260 | 7,100 | 14,400 | ND | ND | 1.22 |
| SS-11 ⁴ | I | 5/17 ⁶ | | | | | | | | | | | | | | | | ND | ND | ND |
| SSF15 ¹ | I | 4/10 ⁵ | 8.1 | 241 | 644 | | | | | | | | | ND | 2,400 | 2,700 | 5,100 | ND | ND | 0.48 |

Table 1: Historical Surface Soil Sample Analytical Results

| Sample ID | RSL based on Reuse : Residential(R)/Industrial(I) | Sample Date (M/YY) | Arsenic | Copper | Lead | Anthracene | Benzo(a)anthracene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(g,h,i)perylene | Benzo(k)fluoranthene | Dibenzo(a,h)anthracene | Indeno(1,2,3-cd)pyrene | TPH-GRO | TPH-DRO | TPH-ORO | Total TPH | Aroclor 1248 | Aroclor 1254 | Aroclor 1260 | |
|------------------------|---|--------------------|------------------|--------|------------|------------|--------------------|----------------|----------------------|----------------------|----------------------|------------------------|------------------------|---------|---------|---------|-----------|------------------|------------------|------------------|-------------|
| Units | | | mg/kg | | | | | | | | | | | | | | | | | | |
| Residential RSL | | | 6.8 ² | 3,100 | 400 | 18,000 | 1.1 | 0.11 | 1.1 | | 11 | 0.11 | 1.1 | | | | | 1.0 ⁵ | 1.0 ⁵ | 1.0 ⁵ | |
| Industrial RSL | | | 30 ² | 47,000 | 800 | 230,000 | 21 | 2.1 | 21 | | 210 | 2.1 | 21 | | | | | 1.0 ⁵ | 1.0 ⁵ | 1.0 ⁵ | |
| Tier 1 Residential GCL | | | | | | | | | | | | | | | | | 50 | | | | |
| Tier 2 Industrial GCL | | | | | | | | | | | | | | 500 | 2500 | 5000 | | | | | |
| SB01-SS01 | I | 4/10 ⁵ | 6.4 | 33.2 | 64.3 | 0.618 | 0.40 | 0.463 | 0.814 | 0.395 | 0.238 | 0.0897 | 0.408 | | | | | | ND | ND | 0.117 |
| SB02-SS01 | R | 4/10 ⁵ | 9.8 | 51.1 | 409 | 0.347 | 1.11 | 1.04 | 1.56 | 0.73 | 0.472 | 0.1478 | 0.804 | | | | | | | | |
| SB03-SS01 | R | 4/10 ⁵ | 4.9 | 17.6 | 63 | 0.042 | 0.161 | 0.164 | 0.24 | 0.11 | 0.076 | ND | 0.115 | | | | | | | | |
| SB04-SS01 | R | 4/10 ⁵ | 9.1 | 65.5 | 145 | | | | | | | | | | | | | | ND | ND | 1.27 |
| SS-1 ³ | I | 5/17 ⁶ | | | | | | | | | | | | | | | | | ND | ND | ND |
| SS-2 ³ | I | 5/17 ⁶ | | | | | | | | | | | | | | | | | ND | ND | ND |
| SS-3 ³ | I | 5/17 ⁶ | | | | | | | | | | | | | | | | | ND | ND | ND |
| SSB05-SS01 | I | 4/10 ⁵ | 43.8 | 146 | 593 | 0.228 | 0.843 | 1.19 | 1.9 | 0.908 | 0.596 | 0.217 | 1.03 | | | | | | | | |
| SSB06-SS01 | R | 4/10 ⁵ | 6 | 19.6 | 73 | ND | 0.396 | 0.48 | 1.06 | 0.5 | 0.324 | 0.139 | 0.525 | | | | | | | | |
| SSB07-SS01 | I | 4/10 ⁵ | 6.3 | 7.2 | 22.9 | | | | | | | | | ND | 118 | ND | 118 | | | | |
| SSB08-SS01 | I | 4/10 ⁵ | 4 | 7.6 | 12.6 | ND | 0.12 | 0.114 | 0.171 | 0.0865 | 0.0398 | ND | 0.0933 | | | | | | | | |
| SSB09-SS01 | I | 4/10 ⁵ | 4.4 | 9.4 | 25.6 | | | | | | | | | | | | | | ND | ND | 0.0453 |
| SSB10-SS01 | I | 4/10 ⁵ | 1.6 | 15.7 | 99 | ND | 0.0906 | 0.072 | 0.136 | 0.0582 | 0.0483 | ND | 0.0546 | | | | | | | | |

¹ Surface soil samples collected from material on top of the concrete slab and is not considered representative of surface soils. ² Arsenic RSL using 1x10⁻⁵ risk was used for residential and industrial reuse scenarios. ³ PCB characterization in accordance with 40 CFR 761 Subpart N (2017). ⁴ PCB detections resampled at locations with cracked slabs in 2017 ⁵ 40 CFR 761.61 for cleanup guidance for high-occupancy areas ⁶ Evans-Fintube TBA Phase II ESA, ALL Consulting, June 2010. ⁶ Evans-Fintube TBA Phase II ESA, ODEQ, May 2017.
 ND Non-detect

Table 2: Historical Subsurface Soil Sample Analytical Results

| Sample ID | RSL based on Reuse : Residential(R)/Industrial(I) | | Sample Date (M/YY) | Arsenic | Copper | Lead | Anthracene | Benzo(a)anthracene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(g,h,i)perylene | Benzo(k)fluoranthene | Dibenzo(a,h)anthracene | Indeno(1,2,3-cd)pyrene | Aroclor 1248 | Aroclor 1254 | Aroclor 1260 |
|---|--|-------------------|------------------------|---------------|------------|----------------|------------|--------------------|----------------|----------------------|----------------------|----------------------|------------------------|------------------------|------------------------|------------------------|--------------|
| <i>Units</i> | | | <i>mg/kg</i> | | | | | | | | | | | | | | |
| <i>Residential RSL</i> | | | <i>6.8¹</i> | <i>3,100</i> | <i>400</i> | <i>18,000</i> | <i>1.1</i> | <i>0.11</i> | <i>1.1</i> | | <i>11</i> | <i>0.11</i> | <i>1.1</i> | <i>1.0²</i> | <i>1.0²</i> | <i>1.0²</i> | |
| <i>Industrial RSL</i> | | | <i>32¹</i> | <i>47,000</i> | <i>800</i> | <i>230,000</i> | <i>21</i> | <i>2.1</i> | <i>21</i> | | <i>210</i> | <i>2.1</i> | <i>21</i> | <i>1.0²</i> | <i>1.0²</i> | <i>1.0²</i> | |
| FIN-SB01-DS01-01 | I | 4/10 ³ | 2.4 | ND | ND | ND | ND | 1.25 | 4.98 | ND | ND | 0.515 | ND | ND | ND | 0.218 | |
| CS-1 | I | 5/17 ⁴ | - | - | - | - | - | - | - | - | - | - | - | - | ND | ND | ND |
| FIN-SB02-DS01-01 | R | 4/10 ³ | 9.6 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| FIN-SB03-DS01-01 | R | 4/10 ³ | 14 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| FIN-SB04-DS01-01 | R | 4/10 ³ | 13.3 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 124 |
| CS-2 | I | 5/17 ⁴ | - | - | - | - | - | - | - | - | - | - | - | - | ND | ND | ND |
| CS-3 | I | 5/17 ⁴ | - | - | - | - | - | - | - | - | - | - | - | - | ND | ND | ND |
| FIN-SB05-DS01-01 | I | 4/10 ³ | 8.3 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| FIN-SB06-DS01-01 | R | 4/10 ³ | 30.3 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| FIN-SB07-DS01-01 | I | 4/10 ³ | 18.7 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| FIN-SB08-DS01-01 | I | 4/10 ³ | 12.1 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| FIN-SB09-DS01-01 | I | 4/10 ³ | 23.7 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| FIN-SB10-DS01-01 | I | 4/10 ³ | 6.8 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| ¹ Arsenic RSL using 1x10 ⁻⁵ risk was used for residential and industrial reuse scenarios. ² 40 CFR 761.61 for cleanup guidance for high-occupancy areas ³ Evans-Fintube TBA Phase II ESA, ALL Consulting, June 2010. ⁴ Evans-Fintube TBA Phase II ESA, ODEQ, May 2017. | | | | | | | | | | | | | | | | | |
| ND: Non-detect | | | | | | | | | | | | | | | | | |

Table 3: Historical Groundwater Sample Analytical Results

| Analyte | Sample Date | Aroclor 1260 | Arsenic | Beryllium | Cadmium | Chromium | Copper | Lead | Mercury | Nickel | Thallium | Zinc | Naphthalene | Chloroform | 1,2,3-Trichlorobenzene | Cis-1,2, Dichloroethylene | Vinyl Chloride |
|------------------|--------------------|--------------|------------------|------------------|------------------|------------------|-------------------|-----------------|------------------|------------------|------------------|-------------------|-------------------|-----------------|------------------------|---------------------------|------------------|
| Units | M-YY | µg/l | | | | | | | | | | | | | | | |
| Region VI RSLs | | 0.0078 | 1.0 ¹ | 4.0 ¹ | 5.0 ¹ | 100 ¹ | 1300 ¹ | 15 ¹ | 2.0 ¹ | 390 ² | 2.0 ¹ | 6000 ² | 0.17 ² | 80 ¹ | 7.0 ² | 70 ¹ | 2.0 ¹ |
| FIN-SB01-GW01-01 | 4-10 ³ | ND | 533 | 34.4 | 433 | 838 | 3860 | 16000 | 8.6 | 1040 | 13.2 | 192000 | ND | 0.77 | ND | - | - |
| MW-1 | 5-17 ⁴ | ND | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| FIN-SB02-GW01-01 | 4-10 ³ | ND | 646 | 82.9 | 49.2 | 2230 | 1970 | 762 | 0.58 | 3240 | 2.2 | 8930 | 2.4 | ND | ND | - | - |
| FIN-SB03-GW01-01 | 4-10 ³ | ND | 7.4 | ND | ND | 8.4 | 6.4 | 6.1 | ND | 15.2 | 0.089 | ND | ND | ND | ND | - | - |
| FIN-SB04-GW01-01 | 4-10 ³ | 4.7 | ND | ND | ND | 2.5 | 3 | 3.4 | ND | .4 | 0.15 | 14.2 | ND | ND | 846 | - | - |
| MW-2 | 5-17 ⁴ | ND | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| MW-2 | 10-17 ⁵ | - | - | - | - | - | - | - | - | - | - | - | - | ND | ND | 0.667 | 1.11 |
| MW-2 Dup | 10-17 ⁵ | - | - | - | - | - | - | - | - | - | - | - | - | ND | ND | 0.657 | 1.09 |
| MW-3 | 5-17 ⁴ | ND | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| FIN-SB05-GW01-01 | 4-10 ³ | ND | 43.2 | 4 | 1.4 | 71 | 71.6 | 123 | 0.2 | 101 | 1.84 | 201 | ND | ND | ND | - | - |
| FIN-SB06-GW01-01 | 4-10 ³ | ND | 37.9 | 4.2 | ND | 89.8 | 73.7 | 93.6 | ND | 139 | 0.7 | 200 | ND | ND | ND | - | - |
| FIN-SB07-GW01-01 | 4-10 ³ | ND | 1.2 | ND | ND | ND | ND | 3.3 | ND | 2.4 | ND | 9 | ND | ND | ND | - | - |
| MW-4 | 5-17 ⁴ | ND | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| FIN-SB08-GW01-01 | 4-10 ³ | ND | ND | ND | ND | 2.3 | 2.8 | 4.3 | ND | 19.2 | ND | 17.8 | ND | ND | ND | - | - |
| FIN-SB09-GW01-01 | 4-10 ³ | ND | 377 | 17.3 | 5.1 | 366 | 423 | 1690 | 0.85 | 633 | 5.5 | 1020 | ND | ND | ND | - | - |
| FIN-SB10-GW01-01 | 4-10 ³ | ND | ND | ND | 1.6 | 3 | 4.1 | 7.3 | ND | 39.6 | ND | 42.1 | ND | 0.67 | ND | - | - |
| MW-5 | 5-17 ⁴ | ND | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

¹ Maximum Contaminant Level (MCL) for Drinking Water ² Region VI Screening Level for Tapwater ³ Evans-Fintube TBA Phase II ESA, ALL Consulting, June 2010. ⁴ Evans-Fintube TBA Phase II ESA, ODEQ, May 2017. ⁵ Evans-Fintube Site Characterization, City of Tulsa, October 2017 ND: Non-detect

Table 5 - Seneca Post-Excavation Soil Sample Analytical Results (1-Foot BGS)

| Constituent | Unit | RBSL for Residential Soils | RBSL for Industrial soils | SSA01 | SSB02 | SSB02-DUP | SB02-SS01 | SSA03 | SSB03 | SB03-SS01 | SSB04 | SSB05 | SSB06 | SB04-SS016 | SSA07 | SSB07 | SSB11 | Drum Composite |
|-------------------------|-------|----------------------------|---------------------------|--------|---------|-----------|-----------|---------|--------|-----------|---------|---------|-------|------------|-------|-------|-------|----------------|
| Acenaphthene | mg/kg | 3,600 | | 0.0849 | 0.00519 | 0.0011 | 0.14 | 0.00347 | | 0.00721 | 0.00571 | 0.00593 | | | | | | |
| Anthracene | mg/kg | 18,000 | 230,000 | 0.220 | 0.0364 | 0.00638 | 0.297 | 0.0212 | | 0.0207 | 0.0188 | 0.0298 | | | | | | |
| Benz(a)anthracene | mg/kg | 1.1 | 21 | 0.586 | 0.0883 | 0.0184 | 0.872 | 0.368 | | 0.0734 | 0.0762 | 0.101 | | | | | | |
| Benzo(a)pyrene | mg/kg | 0.11 | 2.1 | 0.508 | 0.0913 | 0.0238 | 0.832 | 0.47 | | 0.0847 | 0.0822 | 0.0924 | | | | | | |
| Benzo(b)fluoranthene | mg/kg | 1.1 | 21 | 0.695 | 0.136 | 0.0347 | 1.13 | 0.907 | | 0.109 | 0.114 | 0.120 | | | | | | |
| Benzo(k)fluoranthene | mg/kg | 11 | 210 | 0.249 | 0.0421 | 0.00949 | 0.348 | 0.289 | | 0.0310 | 0.0324 | 0.0391 | | | | | | |
| Chrysene | mg/kg | 110 | | 0.561 | 0.112 | 0.0241 | 0.877 | 0.517 | | 0.0777 | 0.0833 | 0.108 | | | | | | |
| Dibenzo(a,h)anthracene | mg/kg | 0.11 | 2.1 | 0.0874 | 0.0171 | 0.00471 | 0.139 | 0.152 | | 0.0152 | 0.0149 | 0.0159 | | | | | | |
| Fluoranthene | mg/kg | 2,400 | | 1.29 | 0.159 | 0.0374 | 1.87 | 0.33 | | 0.14 | 0.15 | 0.219 | | | | | | |
| Fluorene | mg/kg | 2,400 | | 0.0820 | 0.00626 | 0.00133 | 0.13 | 0.00409 | | 0.00706 | 0.00484 | 0.00645 | | | | | | |
| Indeno(1,2,3-cd) pyrene | mg/kg | 1.1 | 21 | 0.316 | 0.565 | 0.0155 | 0.511 | 0.427 | | 0.0513 | 0.0527 | 0.0503 | | | | | | |
| Naphthalene | mg/kg | 3.8 | | 0.0191 | 0.0118 | 0.00320 | 0.0284 | 0.017 | | 0.00451 | 0.00446 | 0.00299 | | | | | | |
| Pyrene | mg/kg | 1,800 | | 1.03 | 0.158 | 0.0332 | 1.56 | 0.322 | | 0.121 | 0.129 | 0.172 | | | | | | |
| 1-Methylnaphthalene | mg/kg | 18 | | 0.0273 | 0.012 | 0.00292 | 0.0279 | 0.0196 | | 0.0048 | 0.00511 | 0.00241 | | | | | | |
| 2-Methylnaphthalene | mg/kg | 240 | | 0.0296 | 0.0137 | 0.00311 | 0.0221 | 0.0274 | | 0.00398 | 0.00501 | 0.00276 | | | | | | |
| Antimony | mg/kg | 31 | | 1.63 | 2.19 | 1.77 | 1.29 | 4.89 | 2.14 | | | | | 0.869 | | | | ND |
| Arsenic | mg/kg | 6.8 ¹ | 30 | 5.48 | 6.30 | 5.36 | 6.65 | 22.3 | 5.69 | | | | | 2.7 | | | | 2.74 |
| Barium | mg/kg | 15,000 | | 220 | 161 | 135 | 231 | 60.4 | 108 | | | | | 41.5 | | | | 64.1 |
| Beryllium | mg/kg | 160 | | 0.632 | 0.648 | 0.543 | 0.617 | 0.399 | 0.405 | | | | | 0.13 | | | | 0.348 |
| Cadmium | mg/kg | 71 | | 0.616 | 0.508 | 0.602 | 0.774 | ND | 1.06 | | | | | 0.413 | | | | 0.142 |
| Total Chromium | mg/kg | NA | | 16.5 | 21 | 22.2 | 17.4 | 37.1 | 33.6 | | | | | 14.2 | | | | 4.47 |
| Copper | mg/kg | 3,100 | 47,000 | 44.4 | 29 | 28.4 | 42.4 | 170 | 30.8 | | | | | 18.7 | | | | 5.1 |
| Lead | mg/kg | 400 | 800 | 222 | 217 | 226 | 269 | 127 | 156 | | | | | 96.5 | | | | 7.91 |
| Mercury | mg/kg | 11 | | 0.232 | 0.307 | 0.255 | 0.626 | 0.0343 | 0.0566 | | | | | 0.0402 | | | | 0.018 |
| Nickel (salts) | mg/kg | 1,500 | | 11.4 | 11.4 | 12.2 | 12.4 | 52.6 | 14.2 | | | | | 17.8 | | | | 7.51 |
| Selenium | mg/kg | 390 | | ND | 0.655 | 0.694 | ND | ND | ND | | | | | ND | | | | ND |
| Silver | mg/kg | 390 | | 0.543 | 0.208 | 0.184 | 0.656 | 0.124 | 0.146 | | | | | ND | | | | ND |
| Thallium (salts) | mg/kg | 0.78 | | ND | ND | ND | ND | ND | ND | | | | | ND | | | | ND |
| Zinc | mg/kg | 23,000 | | 321 | 282 | 242 | 414 | 103 | 270 | | | | | 154 | | | | 23.5 |
| Aroclors | mg/kg | 1 ² | 1 | - | - | | - | | | | | | | ND | | | | |
| Total TPH | mg/kg | 50 ⁴ | | - | - | ND | - | | | | | | ND | | ND | 272 | 320 | |

Table 6 - Seneca Post-Excavation Soil Sample Analytical Results (1.5-Foot BGS)

| Constituent | Unit | RBSL for Residential Soils | RBSL for Industrial soils | SSA01 | SB02-SS01 | SSA03 | SSB07 | SSB11 | SSA01 DUP |
|-------------------------|-------|----------------------------|---------------------------|---------|-----------|---------|-------|-------|-----------|
| Acenaphthene | mg/kg | 3,600 | | 0.00358 | 0.0135 | 0.00425 | | | 0.00253 |
| Anthracene | mg/kg | 18,000 | 230,000 | 0.0185 | 0.0489 | 0.03 | | | 0.0108 |
| Benz(a)anthracene | mg/kg | 1.1 | 21 | 0.124 | 0.266 | 0.377 | | | 0.0971 |
| Benzo(a)pyrene | mg/kg | 0.11 | 2.1 | 0.134 | 0.315 | 0.493 | | | 0.102 |
| Benzo(b)fluoranthene | mg/kg | 1.1 | 21 | 0.23 | 0.499 | 1.14 | | | 0.17 |
| Benzo(k)fluoranthene | mg/kg | 11 | 210 | 0.0672 | 0.127 | 0.278 | | | 0.051 |
| Chrysene | mg/kg | 110 | | 0.101 | 0.201 | 0.448 | | | 0.0786 |
| Dibenzo(a,h)anthracene | mg/kg | 0.11 | 2.1 | 0.0319 | 0.0711 | 0.184 | | | 0.0215 |
| Fluoranthene | mg/kg | 2,400 | | 0.199 | 0.465 | 0.416 | | | 0.166 |
| Fluorene | mg/kg | 2,400 | | 0.00383 | 0.0137 | ND | | | 0.00235 |
| Indeno(1,2,3-cd) pyrene | mg/kg | 1.1 | 21 | 0.0955 | 0.24 | 0.405 | | | 0.0671 |
| Naphthalene | mg/kg | 3.8 | | 0.0218 | 0.00915 | 0.0168 | | | 0.00373 |
| Pyrene | mg/kg | 1,800 | | 0.184 | 0.404 | 0.445 | | | 0.145 |
| 1-Methylnaphthalene | mg/kg | 18 | | 0.0449 | 0.0109 | 0.0203 | | | 0.00554 |
| 2-Methylnaphthalene | mg/kg | 240 | | 0.0485 | 0.0101 | 0.0285 | | | 0.00546 |
| Antimony | mg/kg | 31 | | 0.831 | 1.17 | 2.72 | | | 1.05 |
| Arsenic | mg/kg | 6.8 ¹ | 30 | 3.12 | 6.63 | 4.31 | | | 3.63 |
| Barium | mg/kg | 15,000 | | 187 | 259 | 47.8 | | | 211 |
| Beryllium | mg/kg | 160 | | 0.759 | 0.7 | 0.344 | | | 0.75 |
| Cadmium | mg/kg | 71 | | 0.406 | 0.994 | 0.467 | | | 0.493 |
| Total Chromium | mg/kg | NA | | 18.4 | 21.3 | 12.4 | | | 18.7 |
| Copper | mg/kg | 3,100 | 47,000 | 21.2 | 46.5 | 28.1 | | | 35.7 |
| Lead | mg/kg | 400 | 800 | 112 | 352 | 169 | | | 236 |
| Mercury | mg/kg | 11 | | 0.177 | 2.7 | 0.0332 | | | 0.123 |
| Nickel (salts) | mg/kg | 1,500 | | 13 | 13.2 | 22.8 | | | 13.2 |
| Selenium | mg/kg | 390 | | ND | ND | ND | | | ND |
| Silver | mg/kg | 390 | | 0.25 | 1.7 | ND | | | 0.226 |
| Thallium (salts) | mg/kg | 0.78 | | ND | ND | ND | | | ND |
| Zinc | mg/kg | 23,000 | | 144 | 599 | 122 | | | 191 |
| Total TPH | mg/kg | 50 ⁴ | | | | | 231 | 435 | ND |

Table 7 - Seneca Post-Excavation Soil Sample Analytical Results (2-Foot BGS)

| Sample ID | | | RBSL for Residential Soils | RBSL for Industrial Soils | SSA01 | SB02-SS01 | SSA03 | SSB07 | SSB11 | SB02-SS01 DUP |
|------------------|------------------------|-------|----------------------------|---------------------------|------------|------------|------------|------------|------------|---------------|
| Date Collected | | | | | 11/05/2018 | 11/05/2018 | 11/05/2018 | 11/05/2018 | 11/05/2018 | 11/05/2018 |
| Method | Analyte | Units | | | Result | Result | Result | Result | Result | Result |
| 6010B | Antimony | mg/kg | 31 | | 0.988 | ND | ND | | | ND |
| 6010B | Arsenic | mg/kg | 6.8 | 30 | 2.73 | 3.86 | 3.6 | | | 4.59 |
| 6010B | Barium | mg/kg | 15,000 | | 136 | 97.6 | 61 | | | 126 |
| 6010B | Beryllium | mg/kg | 160 | | 0.662 | 0.629 | 0.516 | | | 0.635 |
| 6010B | Cadmium | mg/kg | 71 | | 0.165 | 0.073 | 0.221 | | | 0.149 |
| 6010B | Chromium | mg/kg | | | 15.5 | 15.6 | 14.2 | | | 14.9 |
| 6010B | Copper | mg/kg | 3,100 | 47,000 | 13.4 | 7.88 | 17.1 | | | 9.06 |
| 6010B | Lead | mg/kg | 400 | 800 | 35.5 | 15.7 | 38.4 | | | 24.7 |
| 6010B | Nickel | mg/kg | 1,500 | | 14.1 | 12.3 | 21.6 | | | 12.6 |
| 6010B | Selenium | mg/kg | 390 | | ND | ND | ND | | | ND |
| 6010B | Silver | mg/kg | 390 | | ND | ND | ND | | | ND |
| 6010B | Thallium | mg/kg | 0.78 | | ND | ND | ND | | | ND |
| 6010B | Zinc | mg/kg | 23,000 | | 70.9 | 33.4 | 66.1 | | | 48 |
| 7471A | Mercury | mg/kg | 11 | | 0.0371 | 0.0313 | 0.0239 | | | 0.0497 |
| 8270D-SIM | Anthracene | mg/kg | 18,000 | 230,000 | 0.00842 | ND | 0.047 | | | 0.0365 |
| 8270D-SIM | Acenaphthene | mg/kg | 3,600 | | 0.00254 | ND | 0.00411 | | | 0.0166 |
| 8270D-SIM | Benzo(A)Anthracene | mg/kg | 1.1 | 21 | 0.0272 | 0.00115 | 0.207 | | | 0.0844 |
| 8270D-SIM | Benzo(A)Pyrene | mg/kg | 0.11 | 2.1 | 0.0256 | 0.000908 | 0.218 | | | 0.0712 |
| 8270D-SIM | Benzo(B)Fluoranthene | mg/kg | 1.1 | 21 | 0.0344 | 0.00131 | 0.195 | | | 0.0996 |
| 8270D-SIM | Benzo(K)Fluoranthene | mg/kg | 11 | 210 | 0.0141 | 0.000605 | 0.0453 | | | 0.0377 |
| 8270D-SIM | Chrysene | mg/kg | 110 | | 0.0253 | 0.000869 | 0.206 | | | 0.0715 |
| 8270D-SIM | Dibenz(A,H)Anthracene | mg/kg | 0.11 | 2.1 | 0.00505 | ND | 0.0471 | | | 0.0143 |
| 8270D-SIM | Fluoranthene | mg/kg | 2,400 | | 0.0738 | 0.00223 | 0.138 | | | 0.238 |
| 8270D-SIM | Fluorene | mg/kg | 2,400 | | 0.00178 | ND | 0.00358 | | | 0.0119 |
| 8270D-SIM | Indeno(1,2,3-cd)Pyrene | mg/kg | 1.1 | 21 | 0.0163 | 0.000641 | 0.0744 | | | 0.0502 |
| 8270D-SIM | Naphthalene | mg/kg | 3.8 | | ND | 0.00213 | 0.00585 | | | 0.00274 |
| 8270D-SIM | Pyrene | mg/kg | 1,800 | | 0.0467 | 0.00147 | 0.781 | | | 0.149 |
| 8270D-SIM | 1-Methylnaphthalene | mg/kg | 18 | | ND | ND | 0.00694 | | | 0.00318 |
| 8270D-SIM | 2-Methylnaphthalene | mg/kg | 240 | | ND | 0.00217 | 0.0103 | | | 0.00225 |
| TCEQ Method 1005 | TPH C6 - C35 | mg/kg | 50 | | | | | 84.1 | 338 | ND |

Table 8
EWI Pre-Excavation Soil Sampling Results - Priority Pollutant Metals
Former Evans-Fintube Facility
Tulsa, Oklahoma

| Analyte | Units | RBSL for Residential Soils | RBSL for Industrial Soils | SSC14 | Duplicate 6 | SSC15* | Duplicate 2 | SSD10 | SSD11 | SSD14 | SSE16 |
|-----------|-------|----------------------------|---------------------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|
| | | | | 2/21/2019 | (SSC14) | 2/18/2019 | (SSC15) | 2/19/2019 | 2/21/2019 | 2/21/2019 | 2/18/2019 |
| Antimony | mg/kg | 31 | 470 | < 1.1 | 1.0 | < 0.99 | < 0.73 | < 0.79 | < 1.1 | < 1.1 | 0.91 |
| Arsenic | mg/kg | 6.8 | 30 [#] | 1.8 | 2.2 | 10.5 | 12.7 | 3.3 | 5.8 | 5.2 | 15.4 |
| Beryllium | mg/kg | 160 | 2,300 | 0.13 | < 0.10 | 0.21 | 0.16 | 0.36 | 0.99 | 1 | 0.78 |
| Cadmium | mg/kg | 71 | 980 | 2.4 | 1.5 | 1.7 | 1.5 | < 0.40 | < 0.53 | < 0.53 | 1.1 |
| Chromium | mg/kg | NE | NE | 28.3 | 31.9 | 9.8 | 5.2 | 9.8 | 25 | 27.2 | 31 |
| Copper | mg/kg | 3,100 | 47,000 | 7.3 | 13.1 | 21 | 14.3 | 18.5 | 12 | 12.3 | 21.9 |
| Lead | mg/kg | 400 | 800 | 159 | 192 | 140 | 158 | 32.5 | 14.6 | 13.5 | 158 |
| Mercury | mg/kg | 11 | 46 | < 0.049 | < 0.057 | < 0.049 | 0.059 | < 0.046 | < 0.057 | 0.07 | < 0.052 |
| Nickel | mg/kg | 1,500 | 22,000 | 4.5 | 3.5 | 11.6 | 8.4 | 8.0 | 15.9 | 11.6 | 12.6 |
| Selenium | mg/kg | 390 | 5,800 | < 1.6 | < 1.5 | < 1.5 | < 1.1 | < 1.2 | < 1.6 | < 1.6 | 1.2 |
| Silver | mg/kg | 390 | 5,800 | < 0.77 | < 0.70 | < 0.7 | < 0.51 | < 0.55 | < 0.74 | < 0.74 | < 0.53 |
| Thallium | mg/kg | 0.78 | 12 | < 2.2 | < 2.0 | < 2 | < 1.5 | < 1.6 | < 2.1 | < 2.1 | < 1.5 |
| Zinc | mg/kg | 23,000 | 350,000 | 59.3 | 66.0 | 569 | 348 | 44.9 | 30.5 | 30.1 | 720 |

Notes:

RBSL = Risk-Based Screening Level

All samples collected from 0-1 ft below surface

mg/kg = milligrams per kilogram

*Sample collected for waste characterization and not compared to RBSLs

[#]Arsenic RBSL using 1x10⁻⁵ risk

NE = not established

Table 9
EWI Pre-Excavation Soil Sampling Results - Polycyclic Aromatic Hydrocarbons
Former Evans-Fintube Facility
Tulsa, Oklahoma

| Analyte | Units | RBSL for Residential | RBSL for Industrial | SSD10 | Duplicate 5 | SSE16* | Duplicate 1 |
|--------------------------------|-------|----------------------|---------------------|-----------|-------------|-----------|-------------|
| | | Soils | Soils | 2/19/2019 | (SSD10) | 2/18/2019 | (SSE16) |
| Acenaphthene | mg/kg | 3,600 | 45,000 | < 0.39 | < 0.75 | < 9.8 | < 9.5 |
| Anthracene | mg/kg | 18,000 | 230,000 | < 0.39 | < 0.75 | < 9.8 | < 9.5 |
| Benzo(a)anthracene | mg/kg | 1.1 | 21 | < 0.39 | < 0.75 | < 9.8 | < 9.5 |
| Benzo(a)pyrene | mg/kg | 0.11 | 2.1 | < 0.39 | < 0.75 | < 9.8 | < 9.5 |
| Benzo(b)fluoranthene | mg/kg | 1.1 | 21 | < 0.39 | < 0.75 | < 9.8 | < 9.5 |
| Benzo(k)fluoranthene | mg/kg | 11 | 210 | < 0.39 | < 0.75 | < 9.8 | < 9.5 |
| 2-Chloronaphthalene | mg/kg | NE | NE | < 0.39 | < 0.75 | < 9.8 | < 9.5 |
| Chrysene | mg/kg | 110 | 2,100 | < 0.39 | < 0.75 | < 9.8 | < 9.5 |
| Dibenz(a,h)anthracene | mg/kg | 0.11 | 2.1 | < 0.39 | < 0.75 | < 9.8 | < 9.5 |
| 7,12-Dimethylbenz(a)anthracene | mg/kg | 0.00046 | 0.0084 | < 2 | < 3.8 | < 49.6 | < 47.8 |
| Fluoranthene | mg/kg | 2,400 | 30,000 | < 0.39 | < 0.75 | < 9.8 | < 9.5 |
| Fluorene | mg/kg | 2,400 | 30,000 | < 0.39 | < 0.75 | < 9.8 | < 9.5 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 1.1 | 21 | < 0.39 | < 0.75 | < 9.8 | < 9.5 |
| 1-Methylnaphthalene | mg/kg | 18 | 73 | < 0.39 | < 0.75 | < 9.8 | < 9.5 |
| 2-Methylnaphthalene | mg/kg | 240 | 3,000 | < 0.39 | < 0.75 | < 9.8 | < 9.5 |
| Naphthalene | mg/kg | 3.8 | 17 | < 0.39 | < 0.75 | < 9.8 | < 9.5 |
| Pyrene | mg/kg | 1,800 | 23,000 | < 0.39 | < 0.75 | < 9.8 | < 9.5 |

Notes:

RBSL = Risk-Based Screening Level

All samples collected from 0-1 ft below surface

mg/kg = milligrams per kilogram

*sample collected for waste characterization and not compared to RBSLs

NE = not established

Table 10
EWI Pre-Excavation Soil Sampling Results - Total Petroleum Hydrocarbons
Former Evans-Fintube Facility
Tulsa, Oklahoma

| Analyte | Units | RBSL for Residential Soils | RBSL for Industrial Soils | SSC14 | SSD04* | Duplicate 3 | SSD10 | Duplicate 4 | SSD11 | SSD12 | SSD13 | SSD14 | SSE12 | SSE13 | SSE14 | SSF14 |
|---------------------|-------|----------------------------|---------------------------|------------|--------------|--------------|-------------|-------------|-----------|-----------|-------------|---------------|-------------|-----------|-----------|-----------|
| | | | | 2/21/2019 | 2/19/2019 | (SSD04) | 2/19/2019 | (SSD10) | 2/21/2019 | 2/21/2019 | 2/21/2019 | 2/21/2019 | 2/21/2019 | 2/21/2019 | 2/21/2019 | 2/21/2019 |
| TPH (C06-C12) | mg/kg | 50 | 500 | < 21.9 | < 21.5 | < 19.7 | < 19.4 | < 22.5 | < 20 | < 21.1 | < 21 | 486 | < 19.4 | < 19.7 | < 19.8 | < 21.1 |
| TPH (>C12-C28) | mg/kg | 50 | 2,500 | 175 | 861 | 721 | 21.7 | < 22.5 | < 20 | < 21.1 | 54.9 | 8,680 | < 19.4 | < 19.7 | < 19.8 | < 21.1 |
| TPH (>C28-C35) | mg/kg | 50 | 5,000 | 167 | 600 | 469 | 37.4 | < 22.5 | < 20 | < 21.1 | 62.4 | 2,670 | < 19.4 | < 19.7 | < 19.8 | < 21.1 |
| TPH Total (C06-C35) | mg/kg | | | 346 | 1,460 | 1,190 | 61.6 | < 22.5 | < 20 | < 21.1 | 121 | 12,000 | 19.7 | < 19.7 | < 19.8 | < 21.1 |

Notes:

RBSL = Risk-Based Screening Level

All samples collected from 0-1 ft below surface

mg/kg = milligrams per kilogram

*sample collected for waste characterization and not compared to RBSLs

Table 11
EWI Post-Excavation Soil Sampling Results - Priority Pollutant Metals
Former Evans-Fintube Facility
Tulsa, Oklahoma

| Analyte | Units | RBSL for Residential Soils | RBSL for Industrial Soils | Arsenic Background Concentration | SB05-SS01 | Duplicate 7 (SB05-SS01) | SSC15 | SSC15-1.5' | SSC15-2' | SSD15 | SB05-SS01 | SSE07 | SSE15-1' | SSE15-1.5' | SSE15-2' |
|-----------|-------|----------------------------|---------------------------|----------------------------------|-------------|-------------------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|-------------|
| | | | | | 3/11/2019 | | 3/15/2019 | 3/21/2019 | 3/28/2019 | | 3/11/2019 | 3/7/2019 | 3/11/2019 | 3/15/2019 | 3/21/2019 |
| Antimony | mg/kg | 31 | 470 | 17 | 2.1 | 1.5 | < 1.1 | < 0.93 | < 1.2 | < 0.94 | 2.1 | 2.1 | < 1 | < 1.2 | < 0.84 |
| Arsenic | mg/kg | 6.8 | 30 [#] | NA | 4.8 | 6.3 | 7.7 | 9.1 | 5.9 | 6.6 | 4.8 | 21.9 | 126 | 9.4 | 6.9 |
| Beryllium | mg/kg | 160 | 2,300 | NA | 0.32 | 0.31 | 0.99 | 0.99 | 0.96 | 0.71 | 0.32 | 0.43 | 3.4 | 1.3 | 0.73 |
| Cadmium | mg/kg | 71 | 980 | NA | 0.78 | 0.92 | < 0.53 | < 0.46 | < 0.60 | 0.55 | 0.78 | 1.2 | 4.8 | 1.0 | < 0.42 |
| Chromium | mg/kg | NE | NE | NA | 9.3 | 13.7 | 20.0 | 21.0 | 24.3 | 14.7 | 9.3 | 17.2 | 16.7 | 24.7 | 15.2 |
| Copper | mg/kg | 3,100 | 47,000 | NA | 26.6 | 34.8 | 12.2 | 16.1 | 14.7 | 15.6 | 26.6 | 46.8 | 178 | 18.6 | 10.6 |
| Lead | mg/kg | 400 | 800 | NA | 110 | 142 | 14.7 | 24.7 | 8.7 | 29.8 | 110 | 199 | 4,620 | 43.0 | 56.7 |
| Mercury | mg/kg | 11 | 46 | NA | < 0.056 | < 0.052 | < 0.052 | < 0.055 | < 0.049 | < 0.051 | < 0.056 | 0.077 | < 0.048 | < 0.059 | < 0.055 |
| Nickel | mg/kg | 1,500 | 22,000 | NA | 12.8 | 13.4 | 22.0 | 28.6 | 27.7 | 19.5 | 12.8 | 19.5 | 20.5 | 45.6 | 10.3 |
| Selenium | mg/kg | 390 | 5,800 | NA | < 1.6 | 1.6 | < 1.6 | < 1.4 | < 1.8 | < 1.4 | < 1.6 | 4.3 | < 4.6 | 2.2 | < 1.3 |
| Silver | mg/kg | 390 | 5,800 | NA | < 0.74 | < 0.56 | < 0.74 | < 0.65 | < 0.84 | < 0.66 | < 0.74 | < 0.67 | 16.7 | < 0.83 | < 0.59 |
| Thallium | mg/kg | 0.78 | 12 | NA | < 2.1 | < 1.6 | < 2.1 | < 1.9 | < 2.4 | < 1.9 | < 2.1 | < 3.9 | < 6.1 | < 2.4 | < 1.7 |
| Zinc | mg/kg | 23,000 | 350,000 | NA | 206 | 346 | 43.7 | 66.0 | 80.4 | 115 | 206 | 221 | 6,950 | 283 | 123 |

Notes:

RBSL = Risk-Based Screening Level

All samples collected from 0-1 ft below surface, except where noted

mg/kg = milligrams per kilogram

*Sample collected for waste characterization and not compared to RBSLs

[#]Arsenic RBSL using 1x10⁻⁵ risk

NE = No concentration established

Table 12
EWI Post-Excavation Soil Sampling Results - Polychlorinated Biphenyls
Former Evans-Fintube Facility
Tulsa, Oklahoma

| Analyte | Units | RBCL | SSC12-1:1' | SSC12-2:1' | SSC12-3:1' | Duplicate 10 (SSC12-1') | SSC12-1:1.5' | SSC12-2:1.5' | SSC12-3:1.5' | SSC12-1:2' | SSC12-2:2' | SSC12-3:2' | SSC12-4:2' | SSC12-5:2' | Duplicate 11 (SSC11-2') | SSC12-6:2' | SSD05 |
|----------|-------|------|--------------|--------------|-------------|----------------------------|---------------|--------------|---------------|---------------|--------------|-------------|---------------|------------|----------------------------|------------|---------|
| | | | 3/15/2019 | 3/15/2019 | 3/15/2019 | | 3/22/2019 | 3/22/2019 | 3/22/2019 | 4/2/2019 | 4/2/2019 | 4/2/2019 | 4/2/2019 | 4/2/2019 | | 4/10/2019 | |
| PCB-1016 | mg/kg | 1* | < 0.0387 | < 0.0389 | < 0.182 | < 0.0389 | < 0.040 | < 0.0401 | < 0.040 | < 0.0404 | < 0.0822 | < 0.288 | < 0.0772 | < 0.0799 | < 0.0776 | < 0.0854 | < 0.038 |
| PCB-1221 | mg/kg | 1* | < 0.0387 | < 0.0389 | < 0.182 | < 0.0389 | < 0.040 | < 0.0401 | < 0.040 | < 0.0404 | < 0.0822 | < 0.288 | < 0.0772 | < 0.0799 | < 0.0776 | < 0.0854 | < 0.038 |
| PCB-1232 | mg/kg | 1* | < 0.0387 | < 0.0389 | < 0.182 | < 0.0389 | < 0.040 | < 0.0401 | < 0.040 | < 0.0404 | < 0.0822 | < 0.288 | < 0.0772 | < 0.0799 | < 0.0776 | < 0.0854 | < 0.038 |
| PCB-1242 | mg/kg | 1* | < 0.0387 | < 0.0389 | < 0.182 | < 0.0389 | < 0.040 | < 0.0401 | < 0.040 | < 0.0404 | < 0.0822 | < 0.288 | < 0.0772 | < 0.0799 | < 0.0776 | < 0.0854 | < 0.038 |
| PCB-1248 | mg/kg | 1* | < 0.0387 | < 0.0389 | < 0.182 | < 0.0389 | < 0.040 | < 0.0401 | < 0.040 | < 0.0404 | < 0.0822 | < 0.288 | < 0.0772 | < 0.0799 | < 0.0776 | < 0.0854 | < 0.038 |
| PCB-1254 | mg/kg | 1* | < 0.0387 | < 0.0389 | < 0.182 | < 0.0389 | < 0.040 | < 0.0401 | < 0.040 | < 0.0404 | < 0.0822 | < 0.288 | < 0.0772 | < 0.0799 | < 0.0776 | < 0.0854 | < 0.038 |
| PCB-1260 | mg/kg | 1* | 0.233 | 0.223 | 1.17 | 0.261 | 0.0475 | < 0.0401 | 0.0432 | 0.0555 | 0.175 | 1.93 | 0.0968 | < 0.0799 | 0.0885 | < 0.0854 | < 0.038 |

Notes:

RBCL = Risk-Based Cleanup Level

mg/kg = milligrams per kilogram

*40 CFR 761.61 for RBCL for high-occupancy areas

Table 13
EWI Post-Excavation Soil Sampling Results - Total Petroleum Hydrocarbons
Former Evans-Fintube Facility
Tulsa, Oklahoma

| Analyte | Units | RBSL for Residential | RBSL for Industrial | SSD04 | SSD05 | SSD14 | SSE16 | Duplicate 9 (SSE16) | T-Zone:South | T-Zone:North | Drain Sample-West | Drain Sample-East |
|---------------------|-------|----------------------|---------------------|--------------|-------------|--------------|-----------|------------------------|--------------|--------------|-------------------|-------------------|
| | | | | 3/7/2019 | 3/11/2019 | 3/12/2019 | 3/16/2019 | | 3/29/2019 | 3/30/2019 | | |
| TPH (C06-C12) | mg/kg | 50 | 500 | 67.2 | < 18.7 | 23.9 | < 20.9 | < 23.3 | < 19.4 | < 18.8 | < 25.5 | < 24.5 |
| TPH (>C12-C28) | mg/kg | 50 | 2,500 | 630 | 34.5 | 2,150 | < 20.9 | < 23.3 | 92.9 | 487 | 758 | < 24.5 |
| TPH (>C28-C35) | mg/kg | 50 | 5,000 | 597 | 27.2 | 704 | < 20.9 | < 23.3 | 48.2 | 862 | 398 | < 24.5 |
| TPH Total (C06-C35) | mg/kg | | | 1,290 | < 18.7 | 2,870 | < 20.9 | < 23.3 | 150 | 1,360 | 1,160 | < 24.5 |

Notes:

RBSL = Risk-Based Screening Level

All samples collected from 0-1 ft below surface

mg/kg = milligrams per kilogram

Table 14
EWI Post-Excavation Soil Sampling Results - Polycyclic Aromatic Hydrocarbons
Former Evans-Fintube Facility
Tulsa, Oklahoma

| Analyte | Units | RBSL for Residential | RBSL for Industrial | SSE16 | Duplicate 8 (SSE16) |
|--------------------------------|-------|----------------------|---------------------|-----------|---------------------|
| | | | | 3/15/2019 | |
| Acenaphthene | mg/kg | 3,600 | 45,000 | < 0.74 | < 0.77 |
| Anthracene | mg/kg | 18,000 | 230,000 | < 0.74 | < 0.77 |
| Benzo(a)anthracene | mg/kg | 1.1 | 21 | < 0.74 | < 0.77 |
| Benzo(a)pyrene | mg/kg | 0.11 | 2.1 | < 0.74 | < 0.77 |
| Benzo(b)fluoranthene | mg/kg | 1.1 | 21 | < 0.74 | < 0.77 |
| Benzo(k)fluoranthene | mg/kg | 11 | 210 | < 0.74 | < 0.77 |
| 2-Chloronaphthalene | mg/kg | NE | NE | < 0.74 | < 0.77 |
| Chrysene | mg/kg | 110 | 2,100 | < 0.74 | < 0.77 |
| Dibenz(a,h)anthracene | mg/kg | 0.11 | 2.1 | < 0.74 | < 0.77 |
| 7,12-Dimethylbenz(a)anthracene | mg/kg | 0.00046 | 0.0084 | < 3.8 | < 3.9 |
| Fluoranthene | mg/kg | 2,400 | 30,000 | < 0.74 | < 0.77 |
| Fluorene | mg/kg | 2,400 | 30,000 | < 0.74 | < 0.77 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 1.1 | 21 | < 0.74 | < 0.77 |
| 1-Methylnaphthalene | mg/kg | 18 | 73 | < 0.74 | < 0.77 |
| 2-Methylnaphthalene | mg/kg | 240 | 3,000 | < 0.74 | < 0.77 |
| Naphthalene | mg/kg | 3.8 | 17 | < 0.74 | < 0.77 |
| Pyrene | mg/kg | 1,800 | 23,000 | < 0.74 | < 0.77 |

Notes:

RBSL = Risk-Based Screening Level

All samples collected from 0-1 ft below surface

mg/kg = milligrams per kilogram

Table 15
Excavation Summary
Former Evans-Fintube Facility
Tulsa, Oklahoma

| Excavation Date | Location(s) | Tons of Soil Excavated |
|------------------------|--------------|------------------------|
| 9/25/2018 | SB02-SS01 | 12.85 |
| 3/7/2019 | SSE07 | 25.37 |
| 3/7/2019 | SSD04 | 27.25 |
| 3/8/2019 | SSD05 | 45.78 |
| 3/11/2019 | SSD14 | 14.65 |
| 3/11/2019 | SB05-SS01 | 33.11 |
| 3/11/2019 | SSE15 | 17.05 |
| 3/11/2019 ¹ | SSD15, SSE15 | 34.21 |
| 3/12/2019 | SSD14 | 12.34 |
| 3/14/2019 ² | SSC15 | 18.99 |
| 3/15/2019 | SSE16 | 31.07 |
| 3/15/2019 | SSE15 | 15.66 |
| 3/15/2019 ³ | SSC12 | 20.59 |
| 3/21/2019 | SSE15 | 11.93 |
| 3/21/2019 | SSC15 | 13.71 |
| 3/22/2019 ⁴ | SSC12 | 14.49 |
| 3/28/2019 | SSC15 | 13.26 |
| 3/28/2019 ⁵ | SSC12 | 31.66 |
| 4/1/2019 ⁶ | SSC12 | 54.71 |
| 4/10/2019 ⁷ | SSC12 | 22.37 |
| 4/18/2019 | "T" Zone | 1.56 |
| Total | | 472.61 |

Notes:

¹one load was hauled to landfill on 3/12/19

²hauled to the landfill on 3/15/19

³one load was hauled to landfill on 3/18/19

⁴load hauled to landfill on 3/28/19

⁵one load hauled to landfill on 3/29/19

⁶one load hauled to landfill on 4/2/19

⁷one load hauled to landfill on 4/11/19

APPENDIX C
HAND-AUGER SOIL BORING LOGS



Enercon
 5100 E. Skelly Dr., Ste. 450
 Tulsa, OK 74135
 Telephone: 918-665-7693
 Fax: 918-665-7232

BORING NUMBER ESB-1

CLIENT City of Tulsa **PROJECT NAME** Evans-Fintube
PROJECT NUMBER CTYTUL00091 **PROJECT LOCATION** 118/150/186 N. Lansing Ave., Tulsa, Oklahoma
DATE STARTED 8/20/19 **COMPLETED** 8/20/19 **LOGGED BY** Matthew Payne **CHECKED BY** Andrew Foreman
DRILLING CONTRACTOR Enercon Services, Inc. **BORING SIZE (in)** 3 **GROUND WATER LEVELS:**
DRILLING METHOD Hand-Auger **GROUND ELEVATION** --- **AT TIME OF DRILLING** ---
NOTES --- **LATITUDE** 36°9'57.4884" N **AT END OF DRILLING** ---
LONGITUDE 95°58'55.1856" W **AFTER DRILLING** ---

ENERCON LOG - ENERCON BORING LOG TEMPLATE.GDT - 9/3/19 14:16 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\CTYTULO-00091_EVANS-FINTUBE.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | TOTAL DRIVEN (in) | RECOVERY (in) | PID READING | SAMPLE TYPE NUMBER | WELL DIAGRAM |
|------------|-------------|---|-------------------|---------------|-------------|--------------------|--------------|
| 0 | | (ML) Silt with grass and roots. Dark brown (7.5YR 3/2). Dry. Low plasticity. No odor. | 6 | 6 | 3,014 | | |
| 0.5 | | | | | | G GB | |

Bottom of borehole at 0.5 feet.



Enercon
 5100 E. Skelly Dr., Ste. 450
 Tulsa, OK 74135
 Telephone: 918-665-7693
 Fax: 918-665-7232

BORING NUMBER ESB-2

CLIENT City of Tulsa **PROJECT NAME** Evans-Fintube

PROJECT NUMBER CTYTUL00091 **PROJECT LOCATION** 118/150/186 N. Lansing Ave., Tulsa, Oklahoma

DATE STARTED 8/20/19 **COMPLETED** 8/20/19 **LOGGED BY** Matthew Payne **CHECKED BY** Andrew Foreman

DRILLING CONTRACTOR Enercon Services, Inc. **BORING SIZE (in)** 3 **GROUND WATER LEVELS:**

DRILLING METHOD Hand-Auger **GROUND ELEVATION** _____ **AT TIME OF DRILLING** ---

NOTES _____ **LATITUDE** 36°9'51.606" N **AT END OF DRILLING** ---

_____ **LONGITUDE** 95°58'54.4944" W **AFTER DRILLING** ---

ENERCON LOG - ENERCON BORING LOG TEMPLATE.GDT - 9/3/19 14:16 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\CTYTULO-00091_EVANS-FINTUBE.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | TOTAL DRIVEN (in) | RECOVERY (in) | PID READING | SAMPLE TYPE NUMBER | WELL DIAGRAM |
|------------|-------------|---|-------------------|---------------|-------------|--------------------|--------------|
| 0 | | (ML) Silt with gravel. Dark brown (7.5YR 3/2). Dry. No plasticity. No odor. | 6 | 6 | 0.0 | | |
| 0.5 | | | | | | G GB | |

Bottom of borehole at 0.5 feet.



Enercon
 5100 E. Skelly Dr., Ste. 450
 Tulsa, OK 74135
 Telephone: 918-665-7693
 Fax: 918-665-7232

BORING NUMBER ESB-3

CLIENT City of Tulsa **PROJECT NAME** Evans-Fintube
PROJECT NUMBER CTYTUL00091 **PROJECT LOCATION** 118/150/186 N. Lansing Ave., Tulsa, Oklahoma
DATE STARTED 8/20/19 **COMPLETED** 8/20/19 **LOGGED BY** Matthew Payne **CHECKED BY** Andrew Foreman
DRILLING CONTRACTOR Enercon Services, Inc. **BORING SIZE (in)** 3 **GROUND WATER LEVELS:**
DRILLING METHOD Hand-Auger **GROUND ELEVATION** _____ **AT TIME OF DRILLING** ---
NOTES _____ **LATITUDE** 36°9'48.7728" N **AT END OF DRILLING** ---
LONGITUDE 95°58'52.554" W **AFTER DRILLING** ---

ENERCON LOG - ENERCON BORING LOG TEMPLATE.GDT - 9/3/19 14:16 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\CTYTULO-00091_EVANS-FINTUBE.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | TOTAL DRIVEN (in) | RECOVERY (in) | PID READING | SAMPLE TYPE NUMBER | WELL DIAGRAM |
|------------|-------------|--|-------------------|---------------|-------------|--------------------|--------------|
| 0 | | (ML) Silt with grass, roots, and gravel. Dark brown (7.5YR 3/2). Dry. Low plasticity. No odor. | 6 | 6 | 25.6 | | |
| 0.5 | | | | | | G GB | |

Bottom of borehole at 0.5 feet.



Enercon
 5100 E. Skelly Dr., Ste. 450
 Tulsa, OK 74135
 Telephone: 918-665-7693
 Fax: 918-665-7232

BORING NUMBER ESB-4

CLIENT City of Tulsa **PROJECT NAME** Evans-Fintube
PROJECT NUMBER CTYTUL00091 **PROJECT LOCATION** 118/150/186 N. Lansing Ave., Tulsa, Oklahoma
DATE STARTED 8/20/19 **COMPLETED** 8/20/19 **LOGGED BY** Matthew Payne **CHECKED BY** Andrew Foreman
DRILLING CONTRACTOR Enercon Services, Inc. **BORING SIZE (in)** 3 **GROUND WATER LEVELS:**
DRILLING METHOD Hand-Auger **GROUND ELEVATION** _____ **AT TIME OF DRILLING** ---
NOTES _____ **LATITUDE** 36°21'41.8182" N **AT END OF DRILLING** ---
LONGITUDE 95°58'57.3384" W **AFTER DRILLING** ---

ENERCON LOG - ENERCON BORING LOG TEMPLATE.GDT - 9/3/19 14:16 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\CTYTULO-00091_EVANS-FINTUBE.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | TOTAL DRIVEN (in) | RECOVERY (in) | PID READING | SAMPLE TYPE NUMBER | WELL DIAGRAM |
|------------|-------------|---|-------------------|---------------|-------------|--------------------|--------------|
| 0 | | | | | | | |
| | | (ML) Silt with gravel. Dark brown (7.5YR 3/2). Dry. No plasticity. No odor. | 6 | 6 | 15.5 | | |
| | | | | | | G GB | |
| 0.5 | | | | | | | |

Bottom of borehole at 0.5 feet.



Enercon
 5100 E. Skelly Dr., Ste. 450
 Tulsa, OK 74135
 Telephone: 918-665-7693
 Fax: 918-665-7232

BORING NUMBER ESB-5

PAGE 1 OF 1

CLIENT City of Tulsa **PROJECT NAME** Evans-Fintube
PROJECT NUMBER CTYTUL00091 **PROJECT LOCATION** 118/150/186 N. Lansing Ave., Tulsa, Oklahoma
DATE STARTED 8/20/19 **COMPLETED** 8/20/19 **LOGGED BY** Matthew Payne **CHECKED BY** Andrew Foreman
DRILLING CONTRACTOR Enercon Services, Inc. **BORING SIZE (in)** 3 **GROUND WATER LEVELS:**
DRILLING METHOD Hand-Auger **GROUND ELEVATION** _____ **AT TIME OF DRILLING** ---
NOTES _____ **LATITUDE** 36°9'40.842" N **AT END OF DRILLING** ---
LONGITUDE 95°58'55.4304" W **AFTER DRILLING** ---

ENERCON LOG - ENERCON BORING LOG TEMPLATE.GDT - 9/3/19 14:16 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\CTYTULO-00091_EVANS-FINTUBE.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | TOTAL DRIVEN (in) | RECOVERY (in) | PID READING | SAMPLE TYPE NUMBER | WELL DIAGRAM |
|------------|-------------|---|-------------------|---------------|-------------|--------------------|--------------|
| 0 | | (ML) Silt with grass, roots, and gravel. Dark brown (7.5YR 3/2). Dry. No plasticity. No odor. | 6 | 6 | 18.8 | | |
| 0.5 | | | | | | G GB | |

Bottom of borehole at 0.5 feet.



Enercon
 5100 E. Skelly Dr., Ste. 450
 Tulsa, OK 74135
 Telephone: 918-665-7693
 Fax: 918-665-7232

BORING NUMBER ESB-6

CLIENT City of Tulsa **PROJECT NAME** Evans-Fintube
PROJECT NUMBER CTYTUL00091 **PROJECT LOCATION** 118/150/186 N. Lansing Ave., Tulsa, Oklahoma
DATE STARTED 8/20/19 **COMPLETED** 8/20/19 **LOGGED BY** Matthew Payne **CHECKED BY** Andrew Foreman
DRILLING CONTRACTOR Enercon Services, Inc. **BORING SIZE (in)** 3 **GROUND WATER LEVELS:**
DRILLING METHOD Hand-Auger **GROUND ELEVATION** _____ **AT TIME OF DRILLING** ---
NOTES _____ **LATITUDE** 36°9'40.284" N **AT END OF DRILLING** ---
LONGITUDE 95°59'0.5748" W **AFTER DRILLING** ---

ENERCON LOG - ENERCON BORING LOG TEMPLATE.GDT - 9/3/19 14:16 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\CTYTULO-00091_EVANS-FINTUBE.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | TOTAL DRIVEN (in) | RECOVERY (in) | PID READING | SAMPLE TYPE NUMBER | WELL DIAGRAM |
|------------|-------------|--|-------------------|---------------|-------------|--------------------|--------------|
| 0 | | (ML) Silt with grass and roots. Dark brown (7.5YR 3/2). Dry. No plasticity. No odor. | 6 | 6 | 24.0 | | |
| 0.5 | | | | | | G GB | |

Bottom of borehole at 0.5 feet.



Enercon
 5100 E. Skelly Dr., Ste. 450
 Tulsa, OK 74135
 Telephone: 918-665-7693
 Fax: 918-665-7232

BORING NUMBER ESB-7

CLIENT City of Tulsa **PROJECT NAME** Evans-Fintube
PROJECT NUMBER CTYTUL00091 **PROJECT LOCATION** 118/150/186 N. Lansing Ave., Tulsa, Oklahoma
DATE STARTED 8/28/19 **COMPLETED** 8/28/19 **LOGGED BY** Matthew Payne **CHECKED BY** Andrew Foreman
DRILLING CONTRACTOR Enercon Services, Inc. **BORING SIZE (in)** 3 **GROUND WATER LEVELS:**
DRILLING METHOD Hand-Auger **GROUND ELEVATION** _____ **AT TIME OF DRILLING** ---
NOTES _____ **LATITUDE** 36°9'57.4128" N **AT END OF DRILLING** ---
LONGITUDE 95°58'55.1856" W **AFTER DRILLING** ---

ENERCON LOG - ENERCON BORING LOG TEMPLATE.GDT - 9/3/19 14:16 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\CTYTULO-00091_EVANS-FINTUBE.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | TOTAL DRIVEN (in) | RECOVERY (in) | PID READING | SAMPLE TYPE NUMBER | WELL DIAGRAM |
|------------|-------------|---|-------------------|---------------|-------------|--------------------|--------------|
| 0 | | (ML) Silt with grass and roots. Dark brown (7.5YR 3/2). Dry. Low plasticity. No odor. | 6 | 6 | 1,250 | | |
| 0.5 | | | | | | G GB | |

Bottom of borehole at 0.5 feet.



Enercon
 5100 E. Skelly Dr., Ste. 450
 Tulsa, OK 74135
 Telephone: 918-665-7693
 Fax: 918-665-7232

BORING NUMBER ESB-8

CLIENT City of Tulsa **PROJECT NAME** Evans-Fintube

PROJECT NUMBER CTYTUL00091 **PROJECT LOCATION** 118/150/186 N. Lansing Ave., Tulsa, Oklahoma

DATE STARTED 8/28/19 **COMPLETED** 8/28/19 **LOGGED BY** Matthew Payne **CHECKED BY** Andrew Foreman

DRILLING CONTRACTOR Enercon Services, Inc. **BORING SIZE (in)** 3 **GROUND WATER LEVELS:**

DRILLING METHOD Hand-Auger **GROUND ELEVATION** _____ **AT TIME OF DRILLING** ---

NOTES _____ **LATITUDE** 36°9'41.7852" N **AT END OF DRILLING** ---

_____ **LONGITUDE** 95°58'57.7956" W **AFTER DRILLING** ---

ENERCON LOG - ENERCON BORING LOG TEMPLATE.GDT - 9/3/19 14:16 - C:\USERS\PUBLIC\DOCUMENTS\BENTLEY\GINT\PROJECTS\CTYTULO-00091_EVANS-FINTUBE.GPJ

| DEPTH (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION | TOTAL DRIVEN (in) | RECOVERY (in) | PID READING | SAMPLE TYPE NUMBER | WELL DIAGRAM |
|------------|-------------|---|-------------------|---------------|-------------|--------------------|--------------|
| 0 | | (ML) Silt with gravel. Dark brown (7.5YR 3/2). Dry. No plasticity. No odor. | 6 | 6 | 1,001 | | |
| | | | | | | G | GB |
| 0.5 | | | | | | | |

Bottom of borehole at 0.5 feet.

APPENDIX D

LABORATORY ANALYTICAL REPORTS & CHAINS-OF-CUSTODY

Enercon - Tulsa, OK

Sample Delivery Group: L1131124
Samples Received: 08/21/2019
Project Number: CTYTULO~00091
Description: Evans-Fintube - Tulsa, OK
Site: 118/150/186 NORTH LANSING AVE.
Report To: Andrew Foreman
5100 E Skelly Dr, Ste 450
Tulsa, OK 74135

Entire Report Reviewed By:



Jason Romer
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





| | |
|---|-----------|
| Cp: Cover Page | 1 |
| Tc: Table of Contents | 2 |
| Ss: Sample Summary | 3 |
| Cn: Case Narrative | 5 |
| Sr: Sample Results | 6 |
| ESB-1 (0'-0.5') L1131124-01 | 6 |
| ESB-2 (0'-0.5') L1131124-02 | 8 |
| ESB-3 (0'-0.5') L1131124-03 | 10 |
| ESB-4 (0'-0.5') L1131124-04 | 12 |
| ESB-5 (0'-0.5') L1131124-05 | 14 |
| ESB-6 (0'-0.5') L1131124-06 | 16 |
| Qc: Quality Control Summary | 18 |
| Total Solids by Method 2540 G-2011 | 18 |
| Mercury by Method 7471A | 20 |
| Metals (ICP) by Method 6010B | 21 |
| TPH by TCEQ Method 1005 | 23 |
| Polychlorinated Biphenyls (GC) by Method 8082 | 24 |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM | 25 |
| Gl: Glossary of Terms | 29 |
| Al: Accreditations & Locations | 30 |
| Sc: Sample Chain of Custody | 31 |



SAMPLE SUMMARY



ESB-1 (0'-0.5') L1131124-01 Solid

Collected by
Matthew Payne
Collected date/time
08/20/19 12:20
Received date/time
08/21/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Total Solids by Method 2540 G-2011 | WG1333343 | 1 | 08/22/19 17:59 | 08/22/19 18:05 | KBC | Mt. Juliet, TN |
| Mercury by Method 7471A | WG1332744 | 1 | 08/21/19 17:52 | 08/22/19 14:16 | RDS | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1332741 | 1 | 08/21/19 20:28 | 08/22/19 08:39 | CCE | Mt. Juliet, TN |
| TPH by TCEQ Method 1005 | WG1332590 | 1.01 | 08/21/19 20:42 | 08/22/19 13:55 | DMW | Mt. Juliet, TN |
| Polychlorinated Biphenyls (GC) by Method 8082 | WG1332944 | 1 | 08/22/19 10:33 | 08/23/19 02:58 | MTJ | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM | WG1333345 | 1 | 08/22/19 17:48 | 08/23/19 05:38 | AO | Mt. Juliet, TN |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

ESB-2 (0'-0.5') L1131124-02 Solid

Collected by
Matthew Payne
Collected date/time
08/20/19 12:45
Received date/time
08/21/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Total Solids by Method 2540 G-2011 | WG1333348 | 1 | 08/22/19 18:58 | 08/22/19 19:04 | KBC | Mt. Juliet, TN |
| Mercury by Method 7471A | WG1332744 | 1 | 08/21/19 17:52 | 08/22/19 14:18 | RDS | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1332741 | 1 | 08/21/19 20:28 | 08/22/19 08:47 | CCE | Mt. Juliet, TN |
| TPH by TCEQ Method 1005 | WG1332590 | 1 | 08/21/19 20:42 | 08/22/19 12:12 | DMW | Mt. Juliet, TN |
| Polychlorinated Biphenyls (GC) by Method 8082 | WG1332944 | 1 | 08/22/19 10:33 | 08/23/19 03:12 | MTJ | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM | WG1333345 | 1 | 08/22/19 17:48 | 08/23/19 04:54 | AO | Mt. Juliet, TN |

ESB-3 (0'-0.5') L1131124-03 Solid

Collected by
Matthew Payne
Collected date/time
08/20/19 13:15
Received date/time
08/21/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Total Solids by Method 2540 G-2011 | WG1333348 | 1 | 08/22/19 18:58 | 08/22/19 19:04 | KBC | Mt. Juliet, TN |
| Mercury by Method 7471A | WG1332744 | 1 | 08/21/19 17:52 | 08/22/19 14:21 | RDS | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1332741 | 1 | 08/21/19 20:28 | 08/22/19 08:50 | CCE | Mt. Juliet, TN |
| TPH by TCEQ Method 1005 | WG1332590 | 1 | 08/21/19 20:42 | 08/22/19 12:31 | DMW | Mt. Juliet, TN |
| Polychlorinated Biphenyls (GC) by Method 8082 | WG1332944 | 1 | 08/22/19 10:33 | 08/23/19 03:26 | MTJ | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM | WG1333345 | 10 | 08/22/19 17:48 | 08/23/19 08:33 | AO | Mt. Juliet, TN |

ESB-4 (0'-0.5') L1131124-04 Solid

Collected by
Matthew Payne
Collected date/time
08/20/19 13:40
Received date/time
08/21/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Total Solids by Method 2540 G-2011 | WG1333348 | 1 | 08/22/19 18:58 | 08/22/19 19:04 | KBC | Mt. Juliet, TN |
| Mercury by Method 7471A | WG1332744 | 1 | 08/21/19 17:52 | 08/22/19 14:24 | RDS | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1332741 | 1 | 08/21/19 20:28 | 08/22/19 08:53 | CCE | Mt. Juliet, TN |
| TPH by TCEQ Method 1005 | WG1332590 | 1 | 08/21/19 20:42 | 08/22/19 12:59 | DMW | Mt. Juliet, TN |
| Polychlorinated Biphenyls (GC) by Method 8082 | WG1332944 | 1 | 08/22/19 10:33 | 08/23/19 03:40 | MTJ | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM | WG1333345 | 1 | 08/22/19 17:48 | 08/23/19 08:11 | AO | Mt. Juliet, TN |

ESB-5 (0'-0.5') L1131124-05 Solid

Collected by
Matthew Payne
Collected date/time
08/20/19 14:10
Received date/time
08/21/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Total Solids by Method 2540 G-2011 | WG1333348 | 1 | 08/22/19 18:58 | 08/22/19 19:04 | KBC | Mt. Juliet, TN |
| Mercury by Method 7471A | WG1332744 | 1 | 08/21/19 17:52 | 08/22/19 14:26 | RDS | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1332741 | 1 | 08/21/19 20:28 | 08/22/19 08:56 | CCE | Mt. Juliet, TN |
| TPH by TCEQ Method 1005 | WG1332590 | 1 | 08/21/19 20:42 | 08/22/19 14:10 | DMW | Mt. Juliet, TN |
| Polychlorinated Biphenyls (GC) by Method 8082 | WG1332944 | 1 | 08/22/19 10:33 | 08/25/19 13:05 | MTJ | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM | WG1333345 | 10 | 08/22/19 17:48 | 08/23/19 08:55 | AO | Mt. Juliet, TN |

SAMPLE SUMMARY



ESB-6 (0'-0.5') L1131124-06 Solid

| | | |
|-------------------------------|---------------------------------------|--------------------------------------|
| Collected by Matthew Payne | Collected date/time 08/20/19 14:30 | Received date/time 08/21/19 08:45 |
|-------------------------------|---------------------------------------|--------------------------------------|

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Total Solids by Method 2540 G-2011 | WG1333348 | 1 | 08/22/19 18:58 | 08/22/19 19:04 | KBC | Mt. Juliet, TN |
| Mercury by Method 7471A | WG1332744 | 1 | 08/21/19 17:52 | 08/22/19 14:31 | RDS | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1332741 | 1 | 08/21/19 20:28 | 08/22/19 08:58 | CCE | Mt. Juliet, TN |
| TPH by TCEQ Method 1005 | WG1332590 | 1 | 08/21/19 20:42 | 08/22/19 12:45 | DMW | Mt. Juliet, TN |
| Polychlorinated Biphenyls (GC) by Method 8082 | WG1332944 | 1 | 08/22/19 10:33 | 08/23/19 03:54 | MTJ | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM | WG1333646 | 1 | 08/23/19 12:33 | 08/24/19 03:37 | AAT | Mt. Juliet, TN |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jason Romer
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|--------------|--------|-----------|----------|------------------|---------------------------|
| | % | | | date / time | |
| Total Solids | 85.2 | | 1 | 08/22/2019 18:05 | WG1333343 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Mercury by Method 7471A

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Mercury | 0.165 | | 0.00328 | 0.0352 | 1 | 08/22/2019 14:16 | WG1332744 |

Metals (ICP) by Method 6010B

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|-----------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Antimony | 8.70 | | 0.880 | 2.35 | 1 | 08/22/2019 08:39 | WG1332741 |
| Arsenic | 12.0 | | 0.540 | 2.35 | 1 | 08/22/2019 08:39 | WG1332741 |
| Beryllium | 0.846 | | 0.0821 | 0.235 | 1 | 08/22/2019 08:39 | WG1332741 |
| Cadmium | 0.389 | J | 0.0821 | 0.587 | 1 | 08/22/2019 08:39 | WG1332741 |
| Chromium | 24.3 | | 0.164 | 1.17 | 1 | 08/22/2019 08:39 | WG1332741 |
| Copper | 24.7 | | 0.622 | 2.35 | 1 | 08/22/2019 08:39 | WG1332741 |
| Lead | 2530 | | 0.223 | 0.587 | 1 | 08/22/2019 08:39 | WG1332741 |
| Nickel | 20.1 | | 0.575 | 2.35 | 1 | 08/22/2019 08:39 | WG1332741 |
| Selenium | U | | 0.727 | 2.35 | 1 | 08/22/2019 08:39 | WG1332741 |
| Silver | U | | 0.141 | 1.17 | 1 | 08/22/2019 08:39 | WG1332741 |
| Thallium | U | | 0.763 | 2.35 | 1 | 08/22/2019 08:39 | WG1332741 |
| Zinc | 154 | | 0.692 | 5.87 | 1 | 08/22/2019 08:39 | WG1332741 |

TPH by TCEQ Method 1005

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|-----------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH C6 - C12 | U | | 17.8 | 59.2 | 1.01 | 08/22/2019 13:55 | WG1332590 |
| TPH C12 - C28 | 37.0 | J | 17.8 | 59.2 | 1.01 | 08/22/2019 13:55 | WG1332590 |
| TPH C28 - C35 | 88.7 | | 17.8 | 59.2 | 1.01 | 08/22/2019 13:55 | WG1332590 |
| TPH C6 - C35 | 126 | | 17.8 | 59.2 | 1.01 | 08/22/2019 13:55 | WG1332590 |
| (S) o-Terphenyl | 96.4 | | | 70.0-130 | | 08/22/2019 13:55 | WG1332590 |

Polychlorinated Biphenyls (GC) by Method 8082

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|--------------------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| PCB 1016 | U | | 0.00411 | 0.0199 | 1 | 08/23/2019 02:58 | WG1332944 |
| PCB 1221 | U | | 0.00630 | 0.0199 | 1 | 08/23/2019 02:58 | WG1332944 |
| PCB 1232 | U | | 0.00489 | 0.0199 | 1 | 08/23/2019 02:58 | WG1332944 |
| PCB 1242 | U | | 0.00373 | 0.0199 | 1 | 08/23/2019 02:58 | WG1332944 |
| PCB 1248 | U | | 0.00370 | 0.0199 | 1 | 08/23/2019 02:58 | WG1332944 |
| PCB 1254 | U | | 0.00554 | 0.0199 | 1 | 08/23/2019 02:58 | WG1332944 |
| PCB 1260 | U | | 0.00580 | 0.0199 | 1 | 08/23/2019 02:58 | WG1332944 |
| (S) Decachlorobiphenyl | 80.1 | | | 10.0-135 | | 08/23/2019 02:58 | WG1332944 |
| (S) Tetrachloro-m-xylene | 80.4 | | | 10.0-139 | | 08/23/2019 02:58 | WG1332944 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|--------------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Anthracene | 0.250 | | 0.000704 | 0.00704 | 1 | 08/23/2019 05:38 | WG1333345 |
| Acenaphthene | 0.153 | | 0.000704 | 0.00704 | 1 | 08/23/2019 05:38 | WG1333345 |
| Acenaphthylene | 0.00203 | J | 0.000704 | 0.00704 | 1 | 08/23/2019 05:38 | WG1333345 |
| Benzo(a)anthracene | 0.729 | | 0.000704 | 0.00704 | 1 | 08/23/2019 05:38 | WG1333345 |
| Benzo(a)pyrene | 0.685 | | 0.000704 | 0.00704 | 1 | 08/23/2019 05:38 | WG1333345 |



Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

| Analyte | Result (dry) mg/kg | Qualifier | MDL (dry) mg/kg | RDL (dry) mg/kg | Dilution | Analysis date / time | Batch |
|-----------------------------|-----------------------|-----------|--------------------|--------------------|----------|-------------------------|---------------------------|
| Benzo(b)fluoranthene | 0.868 | | 0.000704 | 0.00704 | 1 | 08/23/2019 05:38 | WG1333345 |
| Benzo(g,h,i)perylene | 0.472 | | 0.000704 | 0.00704 | 1 | 08/23/2019 05:38 | WG1333345 |
| Benzo(k)fluoranthene | 0.312 | | 0.000704 | 0.00704 | 1 | 08/23/2019 05:38 | WG1333345 |
| Chrysene | 0.598 | | 0.000704 | 0.00704 | 1 | 08/23/2019 05:38 | WG1333345 |
| Dibenz(a,h)anthracene | 0.127 | | 0.000704 | 0.00704 | 1 | 08/23/2019 05:38 | WG1333345 |
| Fluoranthene | 1.64 | | 0.000704 | 0.00704 | 1 | 08/23/2019 05:38 | WG1333345 |
| Fluorene | 0.111 | | 0.000704 | 0.00704 | 1 | 08/23/2019 05:38 | WG1333345 |
| Indeno(1,2,3-cd)pyrene | 0.392 | | 0.000704 | 0.00704 | 1 | 08/23/2019 05:38 | WG1333345 |
| Naphthalene | 0.141 | | 0.00235 | 0.0235 | 1 | 08/23/2019 05:38 | WG1333345 |
| Phenanthrene | 1.58 | | 0.000704 | 0.00704 | 1 | 08/23/2019 05:38 | WG1333345 |
| Pyrene | 1.47 | | 0.000704 | 0.00704 | 1 | 08/23/2019 05:38 | WG1333345 |
| 1-Methylnaphthalene | 0.0653 | | 0.00235 | 0.0235 | 1 | 08/23/2019 05:38 | WG1333345 |
| 2-Methylnaphthalene | 0.0680 | | 0.00235 | 0.0235 | 1 | 08/23/2019 05:38 | WG1333345 |
| 2-Chloronaphthalene | U | | 0.00235 | 0.0235 | 1 | 08/23/2019 05:38 | WG1333345 |
| <i>(S)</i> Nitrobenzene-d5 | 67.6 | | | 14.0-149 | | 08/23/2019 05:38 | WG1333345 |
| <i>(S)</i> 2-Fluorobiphenyl | 66.5 | | | 34.0-125 | | 08/23/2019 05:38 | WG1333345 |
| <i>(S)</i> p-Terphenyl-d14 | 78.7 | | | 23.0-120 | | 08/23/2019 05:38 | WG1333345 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|--------------|--------|-----------|----------|------------------|---------------------------|
| | % | | | date / time | |
| Total Solids | 93.2 | | 1 | 08/22/2019 19:04 | WG1333348 |

1 Cp

2 Tc

Mercury by Method 7471A

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Mercury | 0.0323 | | 0.00300 | 0.0322 | 1 | 08/22/2019 14:18 | WG1332744 |

3 Ss

4 Cn

Metals (ICP) by Method 6010B

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|-----------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Antimony | U | | 0.805 | 2.15 | 1 | 08/22/2019 08:47 | WG1332741 |
| Arsenic | 16.0 | | 0.494 | 2.15 | 1 | 08/22/2019 08:47 | WG1332741 |
| Beryllium | 2.46 | | 0.0751 | 0.215 | 1 | 08/22/2019 08:47 | WG1332741 |
| Cadmium | 0.671 | | 0.0751 | 0.537 | 1 | 08/22/2019 08:47 | WG1332741 |
| Chromium | 24.6 | | 0.150 | 1.07 | 1 | 08/22/2019 08:47 | WG1332741 |
| Copper | 22.4 | | 0.569 | 2.15 | 1 | 08/22/2019 08:47 | WG1332741 |
| Lead | 110 | | 0.204 | 0.537 | 1 | 08/22/2019 08:47 | WG1332741 |
| Nickel | 54.9 | | 0.526 | 2.15 | 1 | 08/22/2019 08:47 | WG1332741 |
| Selenium | 1.90 | J | 0.665 | 2.15 | 1 | 08/22/2019 08:47 | WG1332741 |
| Silver | U | | 0.129 | 1.07 | 1 | 08/22/2019 08:47 | WG1332741 |
| Thallium | U | | 0.697 | 2.15 | 1 | 08/22/2019 08:47 | WG1332741 |
| Zinc | 116 | | 0.633 | 5.37 | 1 | 08/22/2019 08:47 | WG1332741 |

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

TPH by TCEQ Method 1005

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|-----------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH C6 - C12 | U | | 16.1 | 53.7 | 1 | 08/22/2019 12:12 | WG1332590 |
| TPH C12 - C28 | U | | 16.1 | 53.7 | 1 | 08/22/2019 12:12 | WG1332590 |
| TPH C28 - C35 | U | | 16.1 | 53.7 | 1 | 08/22/2019 12:12 | WG1332590 |
| TPH C6 - C35 | U | | 16.1 | 53.7 | 1 | 08/22/2019 12:12 | WG1332590 |
| (S) o-Terphenyl | 90.9 | | | 70.0-130 | | 08/22/2019 12:12 | WG1332590 |

Polychlorinated Biphenyls (GC) by Method 8082

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|--------------------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| PCB 1016 | U | | 0.00376 | 0.0182 | 1 | 08/23/2019 03:12 | WG1332944 |
| PCB 1221 | U | | 0.00576 | 0.0182 | 1 | 08/23/2019 03:12 | WG1332944 |
| PCB 1232 | U | | 0.00447 | 0.0182 | 1 | 08/23/2019 03:12 | WG1332944 |
| PCB 1242 | U | | 0.00341 | 0.0182 | 1 | 08/23/2019 03:12 | WG1332944 |
| PCB 1248 | U | | 0.00338 | 0.0182 | 1 | 08/23/2019 03:12 | WG1332944 |
| PCB 1254 | U | | 0.00506 | 0.0182 | 1 | 08/23/2019 03:12 | WG1332944 |
| PCB 1260 | U | | 0.00530 | 0.0182 | 1 | 08/23/2019 03:12 | WG1332944 |
| (S) Decachlorobiphenyl | 84.7 | | | 10.0-135 | | 08/23/2019 03:12 | WG1332944 |
| (S) Tetrachloro-m-xylene | 85.6 | | | 10.0-139 | | 08/23/2019 03:12 | WG1332944 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|--------------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Anthracene | 0.00668 | | 0.000644 | 0.00644 | 1 | 08/23/2019 04:54 | WG1333345 |
| Acenaphthene | 0.00207 | J | 0.000644 | 0.00644 | 1 | 08/23/2019 04:54 | WG1333345 |
| Acenaphthylene | U | | 0.000644 | 0.00644 | 1 | 08/23/2019 04:54 | WG1333345 |
| Benzo(a)anthracene | 0.0708 | | 0.000644 | 0.00644 | 1 | 08/23/2019 04:54 | WG1333345 |
| Benzo(a)pyrene | 0.0888 | | 0.000644 | 0.00644 | 1 | 08/23/2019 04:54 | WG1333345 |



Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

| Analyte | Result (dry) mg/kg | Qualifier | MDL (dry) mg/kg | RDL (dry) mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------------|-----------|--------------------|--------------------|----------|-------------------------|---------------------------|
| Benzo(b)fluoranthene | 0.163 | | 0.000644 | 0.00644 | 1 | 08/23/2019 04:54 | WG1333345 |
| Benzo(g,h,i)perylene | 0.0896 | | 0.000644 | 0.00644 | 1 | 08/23/2019 04:54 | WG1333345 |
| Benzo(k)fluoranthene | 0.0372 | | 0.000644 | 0.00644 | 1 | 08/23/2019 04:54 | WG1333345 |
| Chrysene | 0.0748 | | 0.000644 | 0.00644 | 1 | 08/23/2019 04:54 | WG1333345 |
| Dibenz(a,h)anthracene | 0.0220 | | 0.000644 | 0.00644 | 1 | 08/23/2019 04:54 | WG1333345 |
| Fluoranthene | 0.131 | | 0.000644 | 0.00644 | 1 | 08/23/2019 04:54 | WG1333345 |
| Fluorene | 0.00177 | L | 0.000644 | 0.00644 | 1 | 08/23/2019 04:54 | WG1333345 |
| Indeno(1,2,3-cd)pyrene | 0.0709 | | 0.000644 | 0.00644 | 1 | 08/23/2019 04:54 | WG1333345 |
| Naphthalene | 0.00340 | L | 0.00215 | 0.0215 | 1 | 08/23/2019 04:54 | WG1333345 |
| Phenanthrene | 0.0430 | | 0.000644 | 0.00644 | 1 | 08/23/2019 04:54 | WG1333345 |
| Pyrene | 0.122 | | 0.000644 | 0.00644 | 1 | 08/23/2019 04:54 | WG1333345 |
| 1-Methylnaphthalene | 0.00512 | L | 0.00215 | 0.0215 | 1 | 08/23/2019 04:54 | WG1333345 |
| 2-Methylnaphthalene | 0.00573 | L | 0.00215 | 0.0215 | 1 | 08/23/2019 04:54 | WG1333345 |
| 2-Chloronaphthalene | U | | 0.00215 | 0.0215 | 1 | 08/23/2019 04:54 | WG1333345 |
| (S) Nitrobenzene-d5 | 77.7 | | | 14.0-149 | | 08/23/2019 04:54 | WG1333345 |
| (S) 2-Fluorobiphenyl | 78.2 | | | 34.0-125 | | 08/23/2019 04:54 | WG1333345 |
| (S) p-Terphenyl-d14 | 88.1 | | | 23.0-120 | | 08/23/2019 04:54 | WG1333345 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|--------------|--------|-----------|----------|------------------|---------------------------|
| | % | | | date / time | |
| Total Solids | 90.5 | | 1 | 08/22/2019 19:04 | WG1333348 |

Mercury by Method 7471A

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Mercury | 0.0203 | J | 0.00309 | 0.0331 | 1 | 08/22/2019 14:21 | WG1332744 |

Metals (ICP) by Method 6010B

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|-----------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Antimony | U | | 0.829 | 2.21 | 1 | 08/22/2019 08:50 | WG1332741 |
| Arsenic | 2.05 | J | 0.508 | 2.21 | 1 | 08/22/2019 08:50 | WG1332741 |
| Beryllium | 0.364 | | 0.0773 | 0.221 | 1 | 08/22/2019 08:50 | WG1332741 |
| Cadmium | 0.341 | J | 0.0773 | 0.552 | 1 | 08/22/2019 08:50 | WG1332741 |
| Chromium | 16.3 | | 0.155 | 1.10 | 1 | 08/22/2019 08:50 | WG1332741 |
| Copper | 14.9 | | 0.586 | 2.21 | 1 | 08/22/2019 08:50 | WG1332741 |
| Lead | 44.8 | | 0.210 | 0.552 | 1 | 08/22/2019 08:50 | WG1332741 |
| Nickel | 17.4 | | 0.541 | 2.21 | 1 | 08/22/2019 08:50 | WG1332741 |
| Selenium | U | | 0.685 | 2.21 | 1 | 08/22/2019 08:50 | WG1332741 |
| Silver | U | | 0.133 | 1.10 | 1 | 08/22/2019 08:50 | WG1332741 |
| Thallium | U | | 0.718 | 2.21 | 1 | 08/22/2019 08:50 | WG1332741 |
| Zinc | 112 | | 0.652 | 5.52 | 1 | 08/22/2019 08:50 | WG1332741 |

TPH by TCEQ Method 1005

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|-----------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH C6 - C12 | U | | 16.6 | 55.2 | 1 | 08/22/2019 12:31 | WG1332590 |
| TPH C12 - C28 | U | | 16.6 | 55.2 | 1 | 08/22/2019 12:31 | WG1332590 |
| TPH C28 - C35 | U | | 16.6 | 55.2 | 1 | 08/22/2019 12:31 | WG1332590 |
| TPH C6 - C35 | U | | 16.6 | 55.2 | 1 | 08/22/2019 12:31 | WG1332590 |
| (S) o-Terphenyl | 98.0 | | | 70.0-130 | | 08/22/2019 12:31 | WG1332590 |

Polychlorinated Biphenyls (GC) by Method 8082

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|--------------------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| PCB 1016 | U | | 0.00387 | 0.0188 | 1 | 08/23/2019 03:26 | WG1332944 |
| PCB 1221 | U | | 0.00593 | 0.0188 | 1 | 08/23/2019 03:26 | WG1332944 |
| PCB 1232 | U | | 0.00461 | 0.0188 | 1 | 08/23/2019 03:26 | WG1332944 |
| PCB 1242 | U | | 0.00351 | 0.0188 | 1 | 08/23/2019 03:26 | WG1332944 |
| PCB 1248 | U | | 0.00348 | 0.0188 | 1 | 08/23/2019 03:26 | WG1332944 |
| PCB 1254 | U | | 0.00522 | 0.0188 | 1 | 08/23/2019 03:26 | WG1332944 |
| PCB 1260 | U | | 0.00546 | 0.0188 | 1 | 08/23/2019 03:26 | WG1332944 |
| (S) Decachlorobiphenyl | 64.0 | | | 10.0-135 | | 08/23/2019 03:26 | WG1332944 |
| (S) Tetrachloro-m-xylene | 77.4 | | | 10.0-139 | | 08/23/2019 03:26 | WG1332944 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|--------------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Anthracene | 0.0656 | J | 0.00663 | 0.0663 | 10 | 08/23/2019 08:33 | WG1333345 |
| Acenaphthene | 0.0457 | J | 0.00663 | 0.0663 | 10 | 08/23/2019 08:33 | WG1333345 |
| Acenaphthylene | U | | 0.00663 | 0.0663 | 10 | 08/23/2019 08:33 | WG1333345 |
| Benzo(a)anthracene | 0.372 | | 0.00663 | 0.0663 | 10 | 08/23/2019 08:33 | WG1333345 |
| Benzo(a)pyrene | 0.543 | | 0.00663 | 0.0663 | 10 | 08/23/2019 08:33 | WG1333345 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

| Analyte | Result (dry) mg/kg | Qualifier | MDL (dry) mg/kg | RDL (dry) mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------------|-----------|--------------------|--------------------|----------|-------------------------|---------------------------|
| Benzo(b)fluoranthene | 0.798 | | 0.00663 | 0.0663 | 10 | 08/23/2019 08:33 | WG1333345 |
| Benzo(g,h,i)perylene | 0.534 | | 0.00663 | 0.0663 | 10 | 08/23/2019 08:33 | WG1333345 |
| Benzo(k)fluoranthene | 0.260 | | 0.00663 | 0.0663 | 10 | 08/23/2019 08:33 | WG1333345 |
| Chrysene | 0.356 | | 0.00663 | 0.0663 | 10 | 08/23/2019 08:33 | WG1333345 |
| Dibenz(a,h)anthracene | 0.149 | | 0.00663 | 0.0663 | 10 | 08/23/2019 08:33 | WG1333345 |
| Fluoranthene | 0.484 | | 0.00663 | 0.0663 | 10 | 08/23/2019 08:33 | WG1333345 |
| Fluorene | 0.0287 | ↓ | 0.00663 | 0.0663 | 10 | 08/23/2019 08:33 | WG1333345 |
| Indeno(1,2,3-cd)pyrene | 0.454 | | 0.00663 | 0.0663 | 10 | 08/23/2019 08:33 | WG1333345 |
| Naphthalene | 0.0436 | ↓ | 0.0221 | 0.221 | 10 | 08/23/2019 08:33 | WG1333345 |
| Phenanthrene | 0.270 | | 0.00663 | 0.0663 | 10 | 08/23/2019 08:33 | WG1333345 |
| Pyrene | 0.477 | | 0.00663 | 0.0663 | 10 | 08/23/2019 08:33 | WG1333345 |
| 1-Methylnaphthalene | U | | 0.0221 | 0.221 | 10 | 08/23/2019 08:33 | WG1333345 |
| 2-Methylnaphthalene | 0.0238 | ↓ | 0.0221 | 0.221 | 10 | 08/23/2019 08:33 | WG1333345 |
| 2-Chloronaphthalene | U | | 0.0221 | 0.221 | 10 | 08/23/2019 08:33 | WG1333345 |
| (S) Nitrobenzene-d5 | 65.8 | | | 14.0-149 | | 08/23/2019 08:33 | WG1333345 |
| (S) 2-Fluorobiphenyl | 78.6 | | | 34.0-125 | | 08/23/2019 08:33 | WG1333345 |
| (S) p-Terphenyl-d14 | 85.7 | | | 23.0-120 | | 08/23/2019 08:33 | WG1333345 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|--------------|--------|-----------|----------|------------------|---------------------------|
| | % | | | date / time | |
| Total Solids | 99.3 | | 1 | 08/22/2019 19:04 | WG1333348 |

Mercury by Method 7471A

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Mercury | 0.0819 | | 0.00282 | 0.0302 | 1 | 08/22/2019 14:24 | WG1332744 |

Metals (ICP) by Method 6010B

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|-----------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Antimony | U | | 0.755 | 2.01 | 1 | 08/22/2019 08:53 | WG1332741 |
| Arsenic | 1.52 | J | 0.463 | 2.01 | 1 | 08/22/2019 08:53 | WG1332741 |
| Beryllium | 0.191 | J | 0.0705 | 0.201 | 1 | 08/22/2019 08:53 | WG1332741 |
| Cadmium | 0.382 | J | 0.0705 | 0.504 | 1 | 08/22/2019 08:53 | WG1332741 |
| Chromium | 7.53 | | 0.141 | 1.01 | 1 | 08/22/2019 08:53 | WG1332741 |
| Copper | 11.6 | | 0.534 | 2.01 | 1 | 08/22/2019 08:53 | WG1332741 |
| Lead | 16.8 | | 0.191 | 0.504 | 1 | 08/22/2019 08:53 | WG1332741 |
| Nickel | 17.7 | | 0.494 | 2.01 | 1 | 08/22/2019 08:53 | WG1332741 |
| Selenium | U | | 0.624 | 2.01 | 1 | 08/22/2019 08:53 | WG1332741 |
| Silver | U | | 0.121 | 1.01 | 1 | 08/22/2019 08:53 | WG1332741 |
| Thallium | U | | 0.655 | 2.01 | 1 | 08/22/2019 08:53 | WG1332741 |
| Zinc | 104 | | 0.594 | 5.04 | 1 | 08/22/2019 08:53 | WG1332741 |

TPH by TCEQ Method 1005

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|-----------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH C6 - C12 | U | | 15.1 | 50.4 | 1 | 08/22/2019 12:59 | WG1332590 |
| TPH C12 - C28 | 27.8 | J | 15.1 | 50.4 | 1 | 08/22/2019 12:59 | WG1332590 |
| TPH C28 - C35 | 34.3 | J | 15.1 | 50.4 | 1 | 08/22/2019 12:59 | WG1332590 |
| TPH C6 - C35 | 62.1 | | 15.1 | 50.4 | 1 | 08/22/2019 12:59 | WG1332590 |
| (S) o-Terphenyl | 88.7 | | | 70.0-130 | | 08/22/2019 12:59 | WG1332590 |

Polychlorinated Biphenyls (GC) by Method 8082

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|--------------------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| PCB 1016 | U | | 0.00353 | 0.0171 | 1 | 08/23/2019 03:40 | WG1332944 |
| PCB 1221 | U | | 0.00541 | 0.0171 | 1 | 08/23/2019 03:40 | WG1332944 |
| PCB 1232 | U | | 0.00420 | 0.0171 | 1 | 08/23/2019 03:40 | WG1332944 |
| PCB 1242 | U | | 0.00320 | 0.0171 | 1 | 08/23/2019 03:40 | WG1332944 |
| PCB 1248 | U | | 0.00317 | 0.0171 | 1 | 08/23/2019 03:40 | WG1332944 |
| PCB 1254 | U | | 0.00475 | 0.0171 | 1 | 08/23/2019 03:40 | WG1332944 |
| PCB 1260 | U | | 0.00498 | 0.0171 | 1 | 08/23/2019 03:40 | WG1332944 |
| (S) Decachlorobiphenyl | 66.5 | | | 10.0-135 | | 08/23/2019 03:40 | WG1332944 |
| (S) Tetrachloro-m-xylene | 72.2 | | | 10.0-139 | | 08/23/2019 03:40 | WG1332944 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|--------------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Anthracene | 0.00453 | J | 0.000604 | 0.00604 | 1 | 08/23/2019 08:11 | WG1333345 |
| Acenaphthene | 0.00187 | J | 0.000604 | 0.00604 | 1 | 08/23/2019 08:11 | WG1333345 |
| Acenaphthylene | U | | 0.000604 | 0.00604 | 1 | 08/23/2019 08:11 | WG1333345 |
| Benzo(a)anthracene | 0.0230 | | 0.000604 | 0.00604 | 1 | 08/23/2019 08:11 | WG1333345 |
| Benzo(a)pyrene | 0.0317 | | 0.000604 | 0.00604 | 1 | 08/23/2019 08:11 | WG1333345 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

| Analyte | Result (dry) mg/kg | Qualifier | MDL (dry) mg/kg | RDL (dry) mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------------|-----------|--------------------|--------------------|----------|-------------------------|---------------------------|
| Benzo(b)fluoranthene | 0.0608 | | 0.000604 | 0.00604 | 1 | 08/23/2019 08:11 | WG1333345 |
| Benzo(g,h,i)perylene | 0.0423 | | 0.000604 | 0.00604 | 1 | 08/23/2019 08:11 | WG1333345 |
| Benzo(k)fluoranthene | 0.0160 | | 0.000604 | 0.00604 | 1 | 08/23/2019 08:11 | WG1333345 |
| Chrysene | 0.0287 | | 0.000604 | 0.00604 | 1 | 08/23/2019 08:11 | WG1333345 |
| Dibenz(a,h)anthracene | 0.00761 | | 0.000604 | 0.00604 | 1 | 08/23/2019 08:11 | WG1333345 |
| Fluoranthene | 0.0620 | | 0.000604 | 0.00604 | 1 | 08/23/2019 08:11 | WG1333345 |
| Fluorene | 0.00190 | L | 0.000604 | 0.00604 | 1 | 08/23/2019 08:11 | WG1333345 |
| Indeno(1,2,3-cd)pyrene | 0.0225 | | 0.000604 | 0.00604 | 1 | 08/23/2019 08:11 | WG1333345 |
| Naphthalene | 0.00330 | L | 0.00201 | 0.0201 | 1 | 08/23/2019 08:11 | WG1333345 |
| Phenanthrene | 0.0331 | | 0.000604 | 0.00604 | 1 | 08/23/2019 08:11 | WG1333345 |
| Pyrene | 0.0555 | | 0.000604 | 0.00604 | 1 | 08/23/2019 08:11 | WG1333345 |
| 1-Methylnaphthalene | 0.00539 | L | 0.00201 | 0.0201 | 1 | 08/23/2019 08:11 | WG1333345 |
| 2-Methylnaphthalene | 0.00594 | L | 0.00201 | 0.0201 | 1 | 08/23/2019 08:11 | WG1333345 |
| 2-Chloronaphthalene | U | | 0.00201 | 0.0201 | 1 | 08/23/2019 08:11 | WG1333345 |
| (S) Nitrobenzene-d5 | 75.8 | | | 14.0-149 | | 08/23/2019 08:11 | WG1333345 |
| (S) 2-Fluorobiphenyl | 76.9 | | | 34.0-125 | | 08/23/2019 08:11 | WG1333345 |
| (S) p-Terphenyl-d14 | 77.8 | | | 23.0-120 | | 08/23/2019 08:11 | WG1333345 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|--------------|--------|-----------|----------|------------------|---------------------------|
| | % | | | date / time | |
| Total Solids | 96.8 | | 1 | 08/22/2019 19:04 | WG1333348 |

Mercury by Method 7471A

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Mercury | 0.0212 | J | 0.00289 | 0.0310 | 1 | 08/22/2019 14:26 | WG1332744 |

Metals (ICP) by Method 6010B

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|-----------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Antimony | U | | 0.775 | 2.07 | 1 | 08/22/2019 08:56 | WG1332741 |
| Arsenic | 1.85 | J | 0.475 | 2.07 | 1 | 08/22/2019 08:56 | WG1332741 |
| Beryllium | 0.197 | J | 0.0723 | 0.207 | 1 | 08/22/2019 08:56 | WG1332741 |
| Cadmium | 0.731 | | 0.0723 | 0.517 | 1 | 08/22/2019 08:56 | WG1332741 |
| Chromium | 10.7 | | 0.145 | 1.03 | 1 | 08/22/2019 08:56 | WG1332741 |
| Copper | 24.5 | | 0.548 | 2.07 | 1 | 08/22/2019 08:56 | WG1332741 |
| Lead | 86.3 | | 0.196 | 0.517 | 1 | 08/22/2019 08:56 | WG1332741 |
| Nickel | 15.4 | | 0.506 | 2.07 | 1 | 08/22/2019 08:56 | WG1332741 |
| Selenium | U | | 0.641 | 2.07 | 1 | 08/22/2019 08:56 | WG1332741 |
| Silver | U | | 0.124 | 1.03 | 1 | 08/22/2019 08:56 | WG1332741 |
| Thallium | U | | 0.672 | 2.07 | 1 | 08/22/2019 08:56 | WG1332741 |
| Zinc | 250 | | 0.610 | 5.17 | 1 | 08/22/2019 08:56 | WG1332741 |

TPH by TCEQ Method 1005

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|-----------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH C6 - C12 | U | | 15.5 | 51.7 | 1 | 08/22/2019 14:10 | WG1332590 |
| TPH C12 - C28 | U | | 15.5 | 51.7 | 1 | 08/22/2019 14:10 | WG1332590 |
| TPH C28 - C35 | 30.7 | J | 15.5 | 51.7 | 1 | 08/22/2019 14:10 | WG1332590 |
| TPH C6 - C35 | 30.7 | J | 15.5 | 51.7 | 1 | 08/22/2019 14:10 | WG1332590 |
| (S) o-Terphenyl | 94.4 | | | 70.0-130 | | 08/22/2019 14:10 | WG1332590 |

Polychlorinated Biphenyls (GC) by Method 8082

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|------------------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| PCB 1016 | U | | 0.00362 | 0.0176 | 1 | 08/25/2019 13:05 | WG1332944 |
| PCB 1221 | U | | 0.00555 | 0.0176 | 1 | 08/25/2019 13:05 | WG1332944 |
| PCB 1232 | U | | 0.00431 | 0.0176 | 1 | 08/25/2019 13:05 | WG1332944 |
| PCB 1242 | U | | 0.00329 | 0.0176 | 1 | 08/25/2019 13:05 | WG1332944 |
| PCB 1248 | U | | 0.00326 | 0.0176 | 1 | 08/25/2019 13:05 | WG1332944 |
| PCB 1254 | U | | 0.00488 | 0.0176 | 1 | 08/25/2019 13:05 | WG1332944 |
| PCB 1260 | 0.172 | | 0.00511 | 0.0176 | 1 | 08/25/2019 13:05 | WG1332944 |
| (S) Decachlorobiphenyl | 72.4 | | | 10.0-135 | | 08/25/2019 13:05 | WG1332944 |
| (S) Decachlorobiphenyl | 97.2 | | | 10.0-135 | | 08/25/2019 13:05 | WG1332944 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|--------------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Anthracene | 0.0117 | J | 0.00620 | 0.0620 | 10 | 08/23/2019 08:55 | WG1333345 |
| Acenaphthene | 0.00723 | J | 0.00620 | 0.0620 | 10 | 08/23/2019 08:55 | WG1333345 |
| Acenaphthylene | U | | 0.00620 | 0.0620 | 10 | 08/23/2019 08:55 | WG1333345 |
| Benzo(a)anthracene | 0.0921 | | 0.00620 | 0.0620 | 10 | 08/23/2019 08:55 | WG1333345 |
| Benzo(a)pyrene | 0.115 | | 0.00620 | 0.0620 | 10 | 08/23/2019 08:55 | WG1333345 |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc



Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

| Analyte | Result (dry) mg/kg | Qualifier | MDL (dry) mg/kg | RDL (dry) mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------------|-----------|--------------------|--------------------|----------|-------------------------|---------------------------|
| Benzo(b)fluoranthene | 0.217 | | 0.00620 | 0.0620 | 10 | 08/23/2019 08:55 | WG1333345 |
| Benzo(g,h,i)perylene | 0.141 | | 0.00620 | 0.0620 | 10 | 08/23/2019 08:55 | WG1333345 |
| Benzo(k)fluoranthene | 0.0591 | J | 0.00620 | 0.0620 | 10 | 08/23/2019 08:55 | WG1333345 |
| Chrysene | 0.103 | | 0.00620 | 0.0620 | 10 | 08/23/2019 08:55 | WG1333345 |
| Dibenz(a,h)anthracene | 0.0304 | J | 0.00620 | 0.0620 | 10 | 08/23/2019 08:55 | WG1333345 |
| Fluoranthene | 0.194 | | 0.00620 | 0.0620 | 10 | 08/23/2019 08:55 | WG1333345 |
| Fluorene | U | | 0.00620 | 0.0620 | 10 | 08/23/2019 08:55 | WG1333345 |
| Indeno(1,2,3-cd)pyrene | 0.0898 | | 0.00620 | 0.0620 | 10 | 08/23/2019 08:55 | WG1333345 |
| Naphthalene | U | | 0.0207 | 0.207 | 10 | 08/23/2019 08:55 | WG1333345 |
| Phenanthrene | 0.0728 | | 0.00620 | 0.0620 | 10 | 08/23/2019 08:55 | WG1333345 |
| Pyrene | 0.191 | | 0.00620 | 0.0620 | 10 | 08/23/2019 08:55 | WG1333345 |
| 1-Methylnaphthalene | U | | 0.0207 | 0.207 | 10 | 08/23/2019 08:55 | WG1333345 |
| 2-Methylnaphthalene | U | | 0.0207 | 0.207 | 10 | 08/23/2019 08:55 | WG1333345 |
| 2-Chloronaphthalene | U | | 0.0207 | 0.207 | 10 | 08/23/2019 08:55 | WG1333345 |
| (S) Nitrobenzene-d5 | 67.9 | | | 14.0-149 | | 08/23/2019 08:55 | WG1333345 |
| (S) 2-Fluorobiphenyl | 73.4 | | | 34.0-125 | | 08/23/2019 08:55 | WG1333345 |
| (S) p-Terphenyl-d14 | 81.7 | | | 23.0-120 | | 08/23/2019 08:55 | WG1333345 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|--------------|--------|-----------|----------|------------------|---------------------------|
| | % | | | date / time | |
| Total Solids | 76.8 | | 1 | 08/22/2019 19:04 | WG1333348 |

Mercury by Method 7471A

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Mercury | 0.162 | | 0.00365 | 0.0391 | 1 | 08/22/2019 14:31 | WG1332744 |

Metals (ICP) by Method 6010B

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|-----------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Antimony | U | | 0.977 | 2.60 | 1 | 08/22/2019 08:58 | WG1332741 |
| Arsenic | 7.07 | | 0.599 | 2.60 | 1 | 08/22/2019 08:58 | WG1332741 |
| Beryllium | 0.870 | | 0.0912 | 0.260 | 1 | 08/22/2019 08:58 | WG1332741 |
| Cadmium | 0.439 | J | 0.0912 | 0.651 | 1 | 08/22/2019 08:58 | WG1332741 |
| Chromium | 27.1 | | 0.182 | 1.30 | 1 | 08/22/2019 08:58 | WG1332741 |
| Copper | 28.0 | | 0.690 | 2.60 | 1 | 08/22/2019 08:58 | WG1332741 |
| Lead | 110 | | 0.247 | 0.651 | 1 | 08/22/2019 08:58 | WG1332741 |
| Nickel | 26.5 | | 0.638 | 2.60 | 1 | 08/22/2019 08:58 | WG1332741 |
| Selenium | 0.941 | J | 0.807 | 2.60 | 1 | 08/22/2019 08:58 | WG1332741 |
| Silver | U | | 0.156 | 1.30 | 1 | 08/22/2019 08:58 | WG1332741 |
| Thallium | U | | 0.846 | 2.60 | 1 | 08/22/2019 08:58 | WG1332741 |
| Zinc | 243 | | 0.768 | 6.51 | 1 | 08/22/2019 08:58 | WG1332741 |

TPH by TCEQ Method 1005

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|-----------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH C6 - C12 | U | | 19.5 | 65.1 | 1 | 08/22/2019 12:45 | WG1332590 |
| TPH C12 - C28 | U | | 19.5 | 65.1 | 1 | 08/22/2019 12:45 | WG1332590 |
| TPH C28 - C35 | U | | 19.5 | 65.1 | 1 | 08/22/2019 12:45 | WG1332590 |
| TPH C6 - C35 | U | | 19.5 | 65.1 | 1 | 08/22/2019 12:45 | WG1332590 |
| (S) o-Terphenyl | 99.6 | | | 70.0-130 | | 08/22/2019 12:45 | WG1332590 |

Polychlorinated Biphenyls (GC) by Method 8082

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|--------------------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| PCB 1016 | U | | 0.00456 | 0.0221 | 1 | 08/23/2019 03:54 | WG1332944 |
| PCB 1221 | U | | 0.00699 | 0.0221 | 1 | 08/23/2019 03:54 | WG1332944 |
| PCB 1232 | U | | 0.00543 | 0.0221 | 1 | 08/23/2019 03:54 | WG1332944 |
| PCB 1242 | U | | 0.00414 | 0.0221 | 1 | 08/23/2019 03:54 | WG1332944 |
| PCB 1248 | U | | 0.00410 | 0.0221 | 1 | 08/23/2019 03:54 | WG1332944 |
| PCB 1254 | U | | 0.00615 | 0.0221 | 1 | 08/23/2019 03:54 | WG1332944 |
| PCB 1260 | U | | 0.00643 | 0.0221 | 1 | 08/23/2019 03:54 | WG1332944 |
| (S) Decachlorobiphenyl | 64.5 | | | 10.0-135 | | 08/23/2019 03:54 | WG1332944 |
| (S) Tetrachloro-m-xylene | 79.8 | | | 10.0-139 | | 08/23/2019 03:54 | WG1332944 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|--------------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Anthracene | 0.238 | | 0.000781 | 0.00781 | 1 | 08/24/2019 03:37 | WG1333646 |
| Acenaphthene | 0.142 | | 0.000781 | 0.00781 | 1 | 08/24/2019 03:37 | WG1333646 |
| Acenaphthylene | U | | 0.000781 | 0.00781 | 1 | 08/24/2019 03:37 | WG1333646 |
| Benzo(a)anthracene | 0.747 | | 0.000781 | 0.00781 | 1 | 08/24/2019 03:37 | WG1333646 |
| Benzo(a)pyrene | 0.633 | | 0.000781 | 0.00781 | 1 | 08/24/2019 03:37 | WG1333646 |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc



Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

| Analyte | Result (dry) mg/kg | Qualifier | MDL (dry) mg/kg | RDL (dry) mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------------|-----------|--------------------|--------------------|----------|-------------------------|---------------------------|
| Benzo(b)fluoranthene | 0.889 | | 0.000781 | 0.00781 | 1 | 08/24/2019 03:37 | WG1333646 |
| Benzo(g,h,i)perylene | 0.412 | | 0.000781 | 0.00781 | 1 | 08/24/2019 03:37 | WG1333646 |
| Benzo(k)fluoranthene | 0.270 | | 0.000781 | 0.00781 | 1 | 08/24/2019 03:37 | WG1333646 |
| Chrysene | 0.691 | | 0.000781 | 0.00781 | 1 | 08/24/2019 03:37 | WG1333646 |
| Dibenz(a,h)anthracene | 0.120 | | 0.000781 | 0.00781 | 1 | 08/24/2019 03:37 | WG1333646 |
| Fluoranthene | 1.61 | | 0.000781 | 0.00781 | 1 | 08/24/2019 03:37 | WG1333646 |
| Fluorene | 0.105 | | 0.000781 | 0.00781 | 1 | 08/24/2019 03:37 | WG1333646 |
| Indeno(1,2,3-cd)pyrene | 0.359 | | 0.000781 | 0.00781 | 1 | 08/24/2019 03:37 | WG1333646 |
| Naphthalene | 0.0719 | | 0.00260 | 0.0260 | 1 | 08/24/2019 03:37 | WG1333646 |
| Phenanthrene | 1.13 | | 0.000781 | 0.00781 | 1 | 08/24/2019 03:37 | WG1333646 |
| Pyrene | 1.37 | | 0.000781 | 0.00781 | 1 | 08/24/2019 03:37 | WG1333646 |
| 1-Methylnaphthalene | 0.0471 | | 0.00260 | 0.0260 | 1 | 08/24/2019 03:37 | WG1333646 |
| 2-Methylnaphthalene | 0.0945 | | 0.00260 | 0.0260 | 1 | 08/24/2019 03:37 | WG1333646 |
| 2-Chloronaphthalene | U | | 0.00260 | 0.0260 | 1 | 08/24/2019 03:37 | WG1333646 |
| (S) Nitrobenzene-d5 | 75.9 | | | 14.0-149 | | 08/24/2019 03:37 | WG1333646 |
| (S) 2-Fluorobiphenyl | 74.3 | | | 34.0-125 | | 08/24/2019 03:37 | WG1333646 |
| (S) p-Terphenyl-d14 | 87.4 | | | 23.0-120 | | 08/24/2019 03:37 | WG1333646 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3443588-1 08/22/19 18:05

| Analyte | MB Result | <u>MB Qualifier</u> | MB MDL | MB RDL |
|--------------|-----------|---------------------|--------|--------|
| | % | | % | % |
| Total Solids | 0.00100 | | | |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1131123-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1131123-07 08/22/19 18:05 • (DUP) R3443588-3 08/22/19 18:05

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | <u>DUP Qualifier</u> | DUP RPD Limits |
|--------------|-----------------|------------|----------|---------|----------------------|----------------|
| | % | % | | % | | % |
| Total Solids | 86.6 | 86.3 | 1 | 0.346 | | 10 |

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3443588-2 08/22/19 18:05

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | <u>LCS Qualifier</u> |
|--------------|--------------|------------|----------|-------------|----------------------|
| | % | % | % | % | |
| Total Solids | 50.0 | 50.0 | 100 | 85.0-115 | |



Method Blank (MB)

(MB) R3443607-1 08/22/19 19:04

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|--------------|-----------|--------------|--------|--------|
| | % | | % | % |
| Total Solids | 0.000 | | | |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1131138-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1131138-01 08/22/19 19:04 • (DUP) R3443607-3 08/22/19 19:04

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|--------------|-----------------|------------|----------|---------|---------------|----------------|
| | % | % | | % | | % |
| Total Solids | 91.5 | 90.4 | 1 | 1.15 | | 10 |

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3443607-2 08/22/19 19:04

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|--------------|--------------|------------|----------|-------------|---------------|
| | % | % | % | % | |
| Total Solids | 50.0 | 50.0 | 100 | 85.0-115 | |



Method Blank (MB)

(MB) R3443467-1 08/22/19 13:17

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|---------|--------|
| Mercury | U | | 0.00280 | 0.0300 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3443467-5 08/22/19 14:41 • (LCSD) R3443467-2 08/22/19 13:22

| Analyte | Spike Amount | LCS Result | LCSD Result | LCS Rec. | LCSD Rec. | Rec. Limits | LCS Qualifier | LCSD Qualifier | RPD | RPD Limits |
|---------|--------------|------------|-------------|----------|-----------|-------------|---------------|----------------|------|------------|
| Mercury | 0.500 | 0.508 | 0.549 | 102 | 110 | 80.0-120 | | | 7.82 | 20 |

L1130003-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1130003-01 08/22/19 13:24 • (MS) R3443467-3 08/22/19 13:27 • (MSD) R3443467-4 08/22/19 13:29

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Mercury | 0.500 | U | 0.536 | 0.529 | 107 | 106 | 1 | 75.0-125 | | | 1.32 | 20 |

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3443260-1 08/22/19 07:44

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-----------|--------------------|--------------|-----------------|-----------------|
| Antimony | U | | 0.750 | 2.00 |
| Arsenic | U | | 0.460 | 2.00 |
| Beryllium | U | | 0.0700 | 0.200 |
| Cadmium | U | | 0.0700 | 0.500 |
| Chromium | U | | 0.140 | 1.00 |
| Copper | U | | 0.530 | 2.00 |
| Lead | U | | 0.190 | 0.500 |
| Nickel | U | | 0.490 | 2.00 |
| Selenium | U | | 0.620 | 2.00 |
| Silver | U | | 0.120 | 1.00 |
| Thallium | U | | 0.650 | 2.00 |
| Zinc | U | | 0.590 | 5.00 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3443260-2 08/22/19 07:47 • (LCSD) R3443260-3 08/22/19 07:49

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|-----------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Antimony | 100 | 96.5 | 96.6 | 96.5 | 96.6 | 80.0-120 | | | 0.117 | 20 |
| Arsenic | 100 | 94.1 | 95.2 | 94.1 | 95.2 | 80.0-120 | | | 1.16 | 20 |
| Beryllium | 100 | 97.7 | 99.0 | 97.7 | 99.0 | 80.0-120 | | | 1.33 | 20 |
| Cadmium | 100 | 94.5 | 95.7 | 94.5 | 95.7 | 80.0-120 | | | 1.22 | 20 |
| Chromium | 100 | 97.4 | 99.3 | 97.4 | 99.3 | 80.0-120 | | | 1.93 | 20 |
| Copper | 100 | 96.3 | 98.1 | 96.3 | 98.1 | 80.0-120 | | | 1.80 | 20 |
| Lead | 100 | 96.0 | 97.6 | 96.0 | 97.6 | 80.0-120 | | | 1.64 | 20 |
| Nickel | 100 | 98.5 | 99.5 | 98.5 | 99.5 | 80.0-120 | | | 1.00 | 20 |
| Selenium | 100 | 94.7 | 94.8 | 94.7 | 94.8 | 80.0-120 | | | 0.183 | 20 |
| Silver | 20.0 | 17.9 | 18.3 | 89.4 | 91.5 | 80.0-120 | | | 2.37 | 20 |
| Thallium | 100 | 93.8 | 95.5 | 93.8 | 95.5 | 80.0-120 | | | 1.81 | 20 |
| Zinc | 100 | 95.9 | 97.5 | 95.9 | 97.5 | 80.0-120 | | | 1.62 | 20 |

L1130815-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1130815-01 08/22/19 07:52 • (MS) R3443260-6 08/22/19 08:00 • (MSD) R3443260-7 08/22/19 08:02

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|-----------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Antimony | 100 | ND | 66.8 | 65.0 | 66.8 | 65.0 | 1 | 75.0-125 | <u>J6</u> | <u>J6</u> | 2.63 | 20 |
| Arsenic | 100 | ND | 81.3 | 90.9 | 79.8 | 89.4 | 1 | 75.0-125 | | | 11.2 | 20 |
| Beryllium | 100 | 0.341 | 83.1 | 93.2 | 82.8 | 92.8 | 1 | 75.0-125 | | | 11.4 | 20 |



L1130815-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1130815-01 08/22/19 07:52 • (MS) R3443260-6 08/22/19 08:00 • (MSD) R3443260-7 08/22/19 08:02

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cadmium | 100 | ND | 81.1 | 90.4 | 80.7 | 90.0 | 1 | 75.0-125 | | | 10.8 | 20 |
| Chromium | 100 | 9.76 | 95.3 | 102 | 85.5 | 92.0 | 1 | 75.0-125 | | | 6.58 | 20 |
| Copper | 100 | 42.7 | 124 | 305 | 81.2 | 262 | 1 | 75.0-125 | | J3 J5 | 84.3 | 20 |
| Lead | 100 | 89.9 | 264 | 211 | 174 | 121 | 1 | 75.0-125 | J5 | J3 | 22.3 | 20 |
| Nickel | 100 | 7.32 | 93.1 | 107 | 85.8 | 99.4 | 1 | 75.0-125 | | | 13.7 | 20 |
| Selenium | 100 | ND | 78.7 | 87.7 | 78.7 | 87.7 | 1 | 75.0-125 | | | 10.8 | 20 |
| Silver | 20.0 | ND | 15.4 | 17.3 | 77.1 | 86.5 | 1 | 75.0-125 | | | 11.5 | 20 |
| Thallium | 100 | ND | 79.4 | 89.4 | 79.4 | 89.4 | 1 | 75.0-125 | | | 11.8 | 20 |
| Zinc | 100 | 103 | 200 | 190 | 96.6 | 86.9 | 1 | 75.0-125 | | | 5.00 | 20 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3443194-1 08/22/19 10:27

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-----------------|--------------------|--------------|-----------------|-----------------|
| TPH C6 - C12 | U | | 15.0 | 50.0 |
| TPH C12 - C28 | U | | 15.0 | 50.0 |
| TPH C28 - C35 | U | | 15.0 | 50.0 |
| TPH C6 - C35 | U | | 15.0 | 50.0 |
| (S) o-Terphenyl | 94.0 | | | 70.0-130 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3443194-2 08/22/19 10:41 • (LCSD) R3443194-3 08/22/19 10:54

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|-----------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| TPH C6 - C12 | 248 | 248 | 250 | 100 | 101 | 75.0-125 | | | 0.803 | 20 |
| TPH C12 - C28 | 248 | 224 | 226 | 90.3 | 91.1 | 75.0-125 | | | 0.889 | 20 |
| TPH C6 - C35 | 496 | 472 | 476 | 95.2 | 96.2 | 75.0-125 | | | 0.844 | 20 |
| (S) o-Terphenyl | | | | 101 | 99.6 | 70.0-130 | | | | |

⁶ Qc

⁷ Gl

⁸ Al

L1130029-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1130029-01 08/22/19 11:08 • (MS) R3443194-4 08/22/19 11:21 • (MSD) R3443194-5 08/22/19 11:34

| Analyte | Spike Amount (dry) mg/kg | Original Result (dry) mg/kg | MS Result (dry) mg/kg | MSD Result (dry) mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|-----------------|-----------------------------|--------------------------------|--------------------------|---------------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| TPH C6 - C12 | 250 | U | 253 | 250 | 101 | 99.6 | 1 | 75.0-125 | | | 1.20 | 20 |
| TPH C12 - C28 | 250 | 298 | 547 | 574 | 99.6 | 110 | 1 | 75.0-125 | | | 4.85 | 20 |
| TPH C6 - C35 | 501 | 436 | 800 | 824 | 72.6 | 77.5 | 1 | 75.0-125 | J6 | | 2.98 | 20 |
| (S) o-Terphenyl | | | | | 102 | 99.2 | | 70.0-130 | | | | |

⁹ Sc



Method Blank (MB)

(MB) R3443842-1 08/23/19 01:21

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|--------------------------|-----------|--------------|---------|----------|
| | mg/kg | | mg/kg | mg/kg |
| PCB 1016 | U | | 0.00350 | 0.0170 |
| PCB 1221 | U | | 0.00537 | 0.0170 |
| PCB 1232 | U | | 0.00417 | 0.0170 |
| PCB 1242 | U | | 0.00318 | 0.0170 |
| PCB 1248 | U | | 0.00315 | 0.0170 |
| PCB 1254 | U | | 0.00472 | 0.0170 |
| PCB 1260 | U | | 0.00494 | 0.0170 |
| (S) Decachlorobiphenyl | 80.0 | | | 10.0-135 |
| (S) Tetrachloro-m-xylene | 78.5 | | | 10.0-139 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS)

(LCS) R3443842-2 08/23/19 01:35

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|--------------------------|--------------|------------|----------|-------------|---------------|
| | mg/kg | mg/kg | % | % | |
| PCB 1260 | 0.167 | 0.137 | 82.0 | 37.0-145 | |
| PCB 1016 | 0.167 | 0.128 | 76.6 | 36.0-141 | |
| (S) Decachlorobiphenyl | | | 89.3 | 10.0-135 | |
| (S) Tetrachloro-m-xylene | | | 87.8 | 10.0-139 | |

7 Gl

8 Al

9 Sc

L1130981-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1130981-08 08/23/19 02:17 • (MS) R3443842-3 08/23/19 02:31 • (MSD) R3443842-4 08/23/19 02:45

| Analyte | Spike Amount (dry) | Original Result (dry) | MS Result (dry) | MSD Result (dry) | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|--------------------------|--------------------|-----------------------|-----------------|------------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| | mg/kg | mg/kg | mg/kg | mg/kg | % | % | | % | | | % | % |
| PCB 1260 | 0.197 | ND | 0.148 | 0.178 | 75.4 | 90.4 | 1 | 10.0-160 | | | 18.1 | 38 |
| PCB 1016 | 0.197 | ND | 0.144 | 0.171 | 73.1 | 86.8 | 1 | 10.0-160 | | | 17.2 | 37 |
| (S) Decachlorobiphenyl | | | | | 87.8 | 109 | | 10.0-135 | | | | |
| (S) Tetrachloro-m-xylene | | | | | 75.8 | 86.2 | | 10.0-139 | | | | |



Method Blank (MB)

(MB) R3443498-2 08/22/19 23:03

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Anthracene | U | | 0.00600 | 0.00600 |
| Acenaphthene | U | | 0.00600 | 0.00600 |
| Acenaphthylene | U | | 0.00600 | 0.00600 |
| Benzo(a)anthracene | U | | 0.00600 | 0.00600 |
| Benzo(a)pyrene | U | | 0.00600 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.00600 | 0.00600 |
| Benzo(g,h,i)perylene | U | | 0.00600 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.00600 | 0.00600 |
| Chrysene | U | | 0.00600 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.00600 | 0.00600 |
| Fluoranthene | U | | 0.00600 | 0.00600 |
| Fluorene | U | | 0.00600 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00600 | 0.00600 |
| Naphthalene | U | | 0.00200 | 0.0200 |
| Phenanthrene | U | | 0.00600 | 0.00600 |
| Pyrene | U | | 0.00600 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 |
| (S) Nitrobenzene-d5 | 79.7 | | | 14.0-149 |
| (S) 2-Fluorobiphenyl | 83.0 | | | 34.0-125 |
| (S) p-Terphenyl-d14 | 91.1 | | | 23.0-120 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3443498-1 08/22/19 22:41

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|-----------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Anthracene | 0.0800 | 0.0577 | 72.1 | 50.0-126 | |
| Acenaphthene | 0.0800 | 0.0579 | 72.4 | 50.0-120 | |
| Acenaphthylene | 0.0800 | 0.0605 | 75.6 | 50.0-120 | |
| Benzo(a)anthracene | 0.0800 | 0.0627 | 78.4 | 45.0-120 | |
| Benzo(a)pyrene | 0.0800 | 0.0653 | 81.6 | 42.0-120 | |
| Benzo(b)fluoranthene | 0.0800 | 0.0727 | 90.9 | 42.0-121 | |
| Benzo(g,h,i)perylene | 0.0800 | 0.0704 | 88.0 | 45.0-125 | |
| Benzo(k)fluoranthene | 0.0800 | 0.0623 | 77.9 | 49.0-125 | |
| Chrysene | 0.0800 | 0.0627 | 78.4 | 49.0-122 | |
| Dibenz(a,h)anthracene | 0.0800 | 0.0658 | 82.3 | 47.0-125 | |
| Fluoranthene | 0.0800 | 0.0598 | 74.8 | 49.0-129 | |



Laboratory Control Sample (LCS)

(LCS) R3443498-1 08/22/19 22:41

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Fluorene | 0.0800 | 0.0570 | 71.3 | 49.0-120 | |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.0682 | 85.3 | 46.0-125 | |
| Naphthalene | 0.0800 | 0.0625 | 78.1 | 50.0-120 | |
| Phenanthrene | 0.0800 | 0.0595 | 74.4 | 47.0-120 | |
| Pyrene | 0.0800 | 0.0618 | 77.3 | 43.0-123 | |
| 1-Methylnaphthalene | 0.0800 | 0.0610 | 76.3 | 51.0-121 | |
| 2-Methylnaphthalene | 0.0800 | 0.0581 | 72.6 | 50.0-120 | |
| 2-Chloronaphthalene | 0.0800 | 0.0544 | 68.0 | 50.0-120 | |
| (S) Nitrobenzene-d5 | | | 79.6 | 14.0-149 | |
| (S) 2-Fluorobiphenyl | | | 77.6 | 34.0-125 | |
| (S) p-Terphenyl-d14 | | | 83.2 | 23.0-120 | |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1130801-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1130801-02 08/23/19 02:20 • (MS) R3443498-3 08/23/19 02:42 • (MSD) R3443498-4 08/23/19 03:04

| Analyte | Spike Amount (dry) mg/kg | Original Result (dry) mg/kg | MS Result (dry) mg/kg | MSD Result (dry) mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|------------------------|--------------------------------|-----------------------------------|--------------------------|------------------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Anthracene | 0.0963 | 0.0991 | 0.522 | 0.331 | 440 | 241 | 1 | 10.0-145 | J5 | J3 J5 | 44.9 | 30 |
| Acenaphthene | 0.0963 | 0.0379 | 0.313 | 0.136 | 286 | 102 | 1 | 14.0-127 | J5 | J3 | 78.8 | 27 |
| Acenaphthylene | 0.0963 | U | 0.0671 | 0.0646 | 69.8 | 67.1 | 1 | 21.0-124 | | | 3.84 | 25 |
| Benzo(a)anthracene | 0.0963 | 0.534 | 1.49 | 1.12 | 995 | 606 | 1 | 10.0-139 | V | V | 28.7 | 30 |
| Benzo(a)pyrene | 0.0963 | 0.462 | 1.26 | 0.942 | 832 | 499 | 1 | 10.0-141 | V | V | 29.1 | 31 |
| Benzo(b)fluoranthene | 0.0963 | 0.662 | 1.61 | 1.32 | 988 | 688 | 1 | 10.0-140 | V | V | 19.7 | 36 |
| Benzo(g,h,i)perylene | 0.0963 | 0.341 | 0.824 | 0.662 | 503 | 334 | 1 | 10.0-140 | J5 | J5 | 21.9 | 33 |
| Benzo(k)fluoranthene | 0.0963 | 0.237 | 0.689 | 0.403 | 470 | 173 | 1 | 10.0-137 | J5 | J3 J5 | 52.4 | 31 |
| Chrysene | 0.0963 | 0.426 | 1.37 | 1.05 | 983 | 648 | 1 | 10.0-145 | V | V | 26.6 | 30 |
| Dibenz(a,h)anthracene | 0.0963 | 0.0898 | 0.273 | 0.232 | 191 | 148 | 1 | 10.0-132 | J5 | J5 | 16.2 | 31 |
| Fluoranthene | 0.0963 | 0.999 | 2.98 | 2.08 | 2060 | 1130 | 1 | 10.0-153 | V | J3 V | 35.6 | 33 |
| Fluorene | 0.0963 | 0.0328 | 0.280 | 0.125 | 257 | 95.9 | 1 | 11.0-130 | J5 | J3 | 76.6 | 29 |
| Indeno(1,2,3-cd)pyrene | 0.0963 | 0.282 | 0.757 | 0.568 | 494 | 298 | 1 | 10.0-137 | J5 | J5 | 28.5 | 32 |
| Naphthalene | 0.0963 | 0.0143 | 0.126 | 0.117 | 116 | 107 | 1 | 10.0-135 | | | 7.61 | 27 |
| Phenanthrene | 0.0963 | 0.464 | 2.05 | 1.06 | 1640 | 615 | 1 | 10.0-144 | V | J3 V | 63.8 | 31 |
| Pyrene | 0.0963 | 0.898 | 2.49 | 1.80 | 1660 | 943 | 1 | 10.0-148 | V | V | 31.9 | 35 |
| 1-Methylnaphthalene | 0.0963 | 0.0107 | 0.108 | 0.108 | 101 | 101 | 1 | 10.0-142 | | | 0.223 | 28 |
| 2-Methylnaphthalene | 0.0963 | 0.0109 | 0.105 | 0.110 | 98.1 | 103 | 1 | 10.0-137 | | | 4.25 | 28 |
| 2-Chloronaphthalene | 0.0963 | U | 0.0574 | 0.0566 | 59.6 | 58.8 | 1 | 29.0-120 | | | 1.48 | 24 |
| (S) Nitrobenzene-d5 | | | | | 74.2 | 70.6 | | 14.0-149 | | | | |
| (S) 2-Fluorobiphenyl | | | | | 74.9 | 70.6 | | 34.0-125 | | | | |
| (S) p-Terphenyl-d14 | | | | | 80.0 | 75.8 | | 23.0-120 | | | | |



Method Blank (MB)

(MB) R3443805-2 08/23/19 20:17

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Anthracene | U | | 0.000600 | 0.00600 |
| Acenaphthene | U | | 0.000600 | 0.00600 |
| Acenaphthylene | U | | 0.000600 | 0.00600 |
| Benzo(a)anthracene | U | | 0.000600 | 0.00600 |
| Benzo(a)pyrene | U | | 0.000600 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.000600 | 0.00600 |
| Benzo(g,h,i)perylene | U | | 0.000600 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.000600 | 0.00600 |
| Chrysene | U | | 0.000600 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.000600 | 0.00600 |
| Fluoranthene | U | | 0.000600 | 0.00600 |
| Fluorene | U | | 0.000600 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.000600 | 0.00600 |
| Naphthalene | U | | 0.00200 | 0.0200 |
| Phenanthrene | U | | 0.000600 | 0.00600 |
| Pyrene | U | | 0.000600 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 |
| (S) Nitrobenzene-d5 | 63.4 | | | 14.0-149 |
| (S) 2-Fluorobiphenyl | 71.0 | | | 34.0-125 |
| (S) p-Terphenyl-d14 | 83.1 | | | 23.0-120 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3443805-1 08/23/19 19:55

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|-----------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Anthracene | 0.0800 | 0.0577 | 72.1 | 50.0-126 | |
| Acenaphthene | 0.0800 | 0.0582 | 72.8 | 50.0-120 | |
| Acenaphthylene | 0.0800 | 0.0624 | 78.0 | 50.0-120 | |
| Benzo(a)anthracene | 0.0800 | 0.0601 | 75.1 | 45.0-120 | |
| Benzo(a)pyrene | 0.0800 | 0.0431 | 53.9 | 42.0-120 | |
| Benzo(b)fluoranthene | 0.0800 | 0.0583 | 72.9 | 42.0-121 | |
| Benzo(g,h,i)perylene | 0.0800 | 0.0610 | 76.3 | 45.0-125 | |
| Benzo(k)fluoranthene | 0.0800 | 0.0671 | 83.9 | 49.0-125 | |
| Chrysene | 0.0800 | 0.0610 | 76.3 | 49.0-122 | |
| Dibenz(a,h)anthracene | 0.0800 | 0.0659 | 82.4 | 47.0-125 | |
| Fluoranthene | 0.0800 | 0.0593 | 74.1 | 49.0-129 | |



Laboratory Control Sample (LCS)

(LCS) R3443805-1 08/23/19 19:55

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Fluorene | 0.0800 | 0.0584 | 73.0 | 49.0-120 | |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.0631 | 78.9 | 46.0-125 | |
| Naphthalene | 0.0800 | 0.0641 | 80.1 | 50.0-120 | |
| Phenanthrene | 0.0800 | 0.0594 | 74.3 | 47.0-120 | |
| Pyrene | 0.0800 | 0.0617 | 77.1 | 43.0-123 | |
| 1-Methylnaphthalene | 0.0800 | 0.0623 | 77.9 | 51.0-121 | |
| 2-Methylnaphthalene | 0.0800 | 0.0593 | 74.1 | 50.0-120 | |
| 2-Chloronaphthalene | 0.0800 | 0.0553 | 69.1 | 50.0-120 | |
| (S) Nitrobenzene-d5 | | | 90.3 | 14.0-149 | |
| (S) 2-Fluorobiphenyl | | | 85.6 | 34.0-125 | |
| (S) p-Terphenyl-d14 | | | 95.2 | 23.0-120 | |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

L1130015-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1130015-03 08/23/19 20:39 • (MS) R3443805-3 08/23/19 21:01 • (MSD) R3443805-4 08/23/19 21:23

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Anthracene | 0.0800 | U | 0.0484 | 0.0443 | 60.5 | 55.4 | 1 | 10.0-145 | | | 8.85 | 30 |
| Acenaphthene | 0.0800 | U | 0.0495 | 0.0385 | 61.9 | 48.1 | 1 | 14.0-127 | | | 25.0 | 27 |
| Acenaphthylene | 0.0800 | U | 0.0532 | 0.0419 | 66.5 | 52.4 | 1 | 21.0-124 | | | 23.8 | 25 |
| Benzo(a)anthracene | 0.0800 | U | 0.0490 | 0.0455 | 61.3 | 56.9 | 1 | 10.0-139 | | | 7.41 | 30 |
| Benzo(a)pyrene | 0.0800 | U | 0.0530 | 0.0507 | 66.3 | 63.4 | 1 | 10.0-141 | | | 4.44 | 31 |
| Benzo(b)fluoranthene | 0.0800 | U | 0.0481 | 0.0451 | 60.1 | 56.4 | 1 | 10.0-140 | | | 6.44 | 36 |
| Benzo(g,h,i)perylene | 0.0800 | U | 0.0541 | 0.0506 | 67.6 | 63.3 | 1 | 10.0-140 | | | 6.69 | 33 |
| Benzo(k)fluoranthene | 0.0800 | U | 0.0548 | 0.0520 | 68.5 | 65.0 | 1 | 10.0-137 | | | 5.24 | 31 |
| Chrysene | 0.0800 | U | 0.0503 | 0.0493 | 62.9 | 61.6 | 1 | 10.0-145 | | | 2.01 | 30 |
| Dibenz(a,h)anthracene | 0.0800 | U | 0.0574 | 0.0538 | 71.8 | 67.3 | 1 | 10.0-132 | | | 6.47 | 31 |
| Fluoranthene | 0.0800 | U | 0.0470 | 0.0416 | 58.8 | 52.0 | 1 | 10.0-153 | | | 12.2 | 33 |
| Fluorene | 0.0800 | U | 0.0489 | 0.0406 | 61.1 | 50.8 | 1 | 11.0-130 | | | 18.5 | 29 |
| Indeno(1,2,3-cd)pyrene | 0.0800 | U | 0.0542 | 0.0507 | 67.8 | 63.4 | 1 | 10.0-137 | | | 6.67 | 32 |
| Naphthalene | 0.0800 | U | 0.0546 | 0.0437 | 68.3 | 54.6 | 1 | 10.0-135 | | | 22.2 | 27 |
| Phenanthrene | 0.0800 | U | 0.0480 | 0.0414 | 60.0 | 51.8 | 1 | 10.0-144 | | | 14.8 | 31 |
| Pyrene | 0.0800 | U | 0.0509 | 0.0437 | 63.6 | 54.6 | 1 | 10.0-148 | | | 15.2 | 35 |
| 1-Methylnaphthalene | 0.0800 | U | 0.0530 | 0.0413 | 66.3 | 51.6 | 1 | 10.0-142 | | | 24.8 | 28 |
| 2-Methylnaphthalene | 0.0800 | U | 0.0507 | 0.0409 | 63.4 | 51.1 | 1 | 10.0-137 | | | 21.4 | 28 |
| 2-Chloronaphthalene | 0.0800 | U | 0.0462 | 0.0392 | 57.8 | 49.0 | 1 | 29.0-120 | | | 16.4 | 24 |
| (S) Nitrobenzene-d5 | | | | | 71.8 | 71.6 | | 14.0-149 | | | | |
| (S) 2-Fluorobiphenyl | | | | | 69.3 | 57.2 | | 34.0-125 | | | | |
| (S) p-Terphenyl-d14 | | | | | 75.2 | 73.5 | | 23.0-120 | | | | |



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| (dry) | Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils]. |
| MDL | Method Detection Limit. |
| MDL (dry) | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| RDL (dry) | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

| Qualifier | Description |
|-----------|--|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J5 | The sample matrix interfered with the ability to make any accurate determination; spike value is high. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

| | | | |
|-------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey-NELAP | TN002 |
| California | 2932 | New Mexico ¹ | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio-VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | 90010 | South Carolina | 84004 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana ¹ | LA180010 | Texas | T104704245-18-15 |
| Maine | TN0002 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |

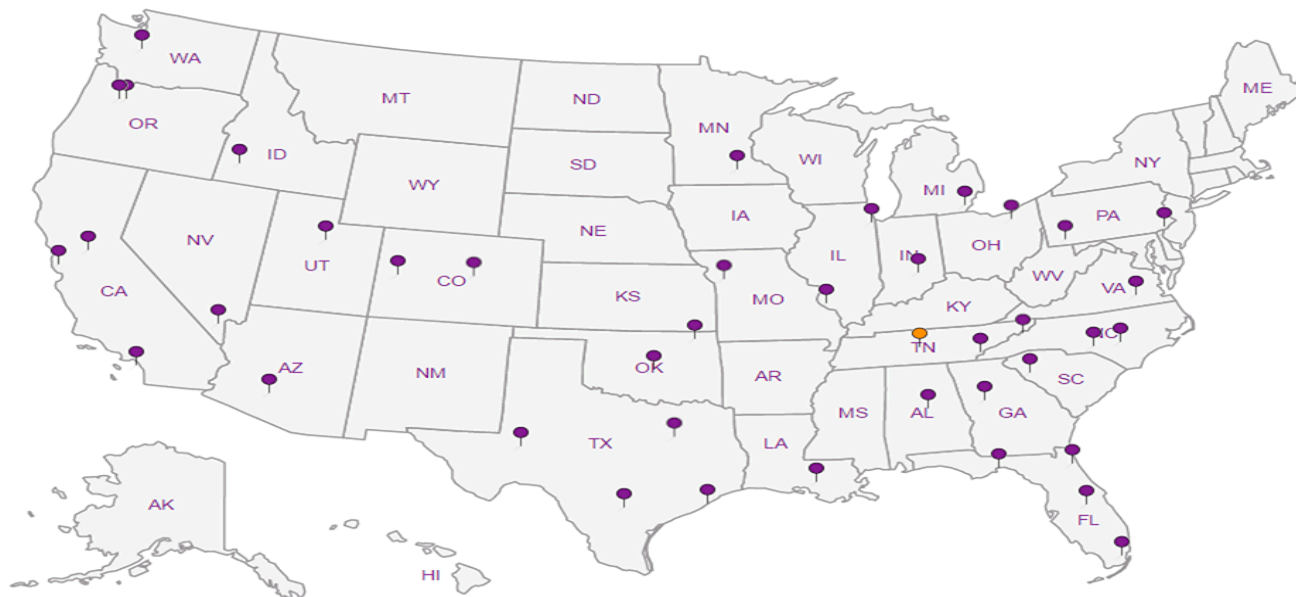
Third Party Federal Accreditations

| | | | |
|-------------------------------|---------|--------------------|---------------|
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA-Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Enercon - Tulsa, OK

5100 E Skelly Dr, Ste 450
Tulsa, OK 74135

Billing Information:
Accounts Payable
5100 E Skelly Dr, Ste 450
Tulsa, OK 74135

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Andrew Foreman

Email To: eforeman@enercon.com;
mpayne@enercon.com; igammon@enercon.com

Project
Description: **Evans-Fintube - Tulsa, OK**

City/State
Collected: **Tulsa, OK**

Please Circle:
PT MT **CT** ET

Phone: **918-665-7693**
Fax: **918-665-7232**

Client Project #
CTYTULO~00091

Lab Project #
ENERCTOK-CTYTULO00091

Collected by (print):
Matthew Payne

Site/Facility ID #
118/150/186 NORTH LANSING

P.O. #
CTYTULO~00091

Collected by (signature):
Matthew Payne

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #
Date Results Needed

No.
of
Cntrs

| Sample ID | Comp/Grab | Matrix * | Depth | Date | Time | No. of Cntrs |
|-----------------|-----------|----------|---------|---------|------|--------------|
| ESB-1 (0'-0.5') | Comp | SS | 0'-0.5' | 8/20/19 | 1220 | 4 |
| ESB-2 (0'-0.5') | Comp | SS | 0'-0.5' | | 1245 | 4 |
| ESB-3 (0'-0.5') | Comp | SS | 0'-0.5' | | 1315 | 4 |
| ESB-4 (0'-0.5') | Comp | SS | 0'-0.5' | | 1340 | 4 |
| ESB-5 (0'-0.5') | Comp | SS | 0'-0.5' | | 1410 | 4 |
| ESB-6 (0'-0.5') | Comp | SS | 0'-0.5' | | 1430 | 4 |
| | | SS | | | | 4 |
| | | SS | | | | 4 |

| Analysis / Container / Preservative | PP Metals 2ozClr-NoPres | SV8082 4ozClr-NoPres | SV8270PAHSIM 4ozClr-NoPres | TPHTX,TS 4ozClr-NoPres |
|-------------------------------------|-------------------------|----------------------|----------------------------|------------------------|
| | X | X | X | X |
| | X | X | X | X |
| | X | X | X | X |
| | X | X | X | X |
| | X | X | X | X |
| | X | X | X | X |
| | X | X | X | X |

SDG # **L1131124**
D033
Acctnum: **ENERCTOK**
Template: **T154531**
Prelogin: **P724897**
PM: **104 - Jason Romer**
PB:
Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks: **2 Day Rush per Jason Romer**

pH _____ Temp _____
Flow _____ Other _____

Sample Receipt Checklist

| | | | |
|-------------------------------|----|---------------------------------------|----------------------------|
| COC Seal Present/Intact: | NP | <input checked="" type="checkbox"/> Y | <input type="checkbox"/> N |
| COC Signed/Accurate: | | <input checked="" type="checkbox"/> Y | <input type="checkbox"/> N |
| Bottles arrive intact: | | <input checked="" type="checkbox"/> Y | <input type="checkbox"/> N |
| Correct bottles used: | | <input checked="" type="checkbox"/> Y | <input type="checkbox"/> N |
| Sufficient volume sent: | | <input checked="" type="checkbox"/> Y | <input type="checkbox"/> N |
| If Applicable | | | |
| VOA Zero Headspace: | | <input type="checkbox"/> Y | <input type="checkbox"/> N |
| Preservation Correct/Checked: | | <input checked="" type="checkbox"/> Y | <input type="checkbox"/> N |
| RAD Screen <0.5 mR/hr: | | <input checked="" type="checkbox"/> Y | <input type="checkbox"/> N |

Samples returned via:
 UPS FedEx Courier

Tracking # **4510 1653 1520**

Relinquished by: (Signature)
Matthew Payne

Date: **8/20/19**

Time: **3:22pm**

Received by: (Signature)
E. Davis

Trip Blank Received: Yes/(No)
HCL/MeOH
TBR

Relinquished by: (Signature)
E. Davis

Date: **8/20/19**

Time: **5:00pm**

Received by: (Signature)
E. Davis

Temp: **A38F °C**
0.8+3=1.1 Bottles Received: **24**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)
OK Fair

Date: **8/21/19** Time: **0845**

Hold: Condition: **NCF / OK**

September 03, 2019

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Enercon - Tulsa, OK

Sample Delivery Group: L1134028
Samples Received: 08/29/2019
Project Number: CTYTULO~00091
Description: Evans-Fintube - Tulsa, OK
Site: 118/150/186 NORTH LANSING AVE.
Report To: Andrew Foreman
5100 E Skelly Dr, Ste 450
Tulsa, OK 74135

Entire Report Reviewed By:



Jason Romer
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.





| | | |
|--|-----------|-------------|
| Cp: Cover Page | 1 | 1 Cp |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | 2 Tc |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | 3 Ss |
| ESB-7 (0'-0.5') L1134028-01 | 5 | |
| ESB-8 (0'-0.5') L1134028-02 | 7 | 4 Cn |
| Qc: Quality Control Summary | 9 | 5 Sr |
| Total Solids by Method 2540 G-2011 | 9 | |
| Mercury by Method 7471A | 10 | 6 Qc |
| Metals (ICP) by Method 6010B | 11 | |
| TPH by TCEQ Method 1005 | 13 | 7 Gl |
| Polychlorinated Biphenyls (GC) by Method 8082 | 14 | |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM | 15 | 8 Al |
| Gl: Glossary of Terms | 17 | 9 Sc |
| Al: Accreditations & Locations | 18 | |
| Sc: Sample Chain of Custody | 19 | |

SAMPLE SUMMARY

ESB-7 (0'-0.5') L1134028-01 Solid

Collected by
Ines Gammon
Collected date/time
08/28/19 13:50
Received date/time
08/29/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Total Solids by Method 2540 G-2011 | WG1338040 | 1 | 08/31/19 08:00 | 08/31/19 08:10 | KBC | Mt. Juliet, TN |
| Mercury by Method 7471A | WG1337315 | 1 | 08/29/19 15:56 | 08/29/19 19:32 | TCT | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1337552 | 1 | 08/30/19 09:03 | 08/30/19 12:51 | TRB | Mt. Juliet, TN |
| TPH by TCEQ Method 1005 | WG1337201 | 1 | 08/29/19 19:26 | 08/30/19 03:47 | DMW | Mt. Juliet, TN |
| Polychlorinated Biphenyls (GC) by Method 8082 | WG1337162 | 1 | 08/30/19 08:52 | 08/30/19 22:20 | MTJ | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM | WG1337813 | 1 | 08/30/19 17:14 | 08/31/19 01:30 | DMG | Mt. Juliet, TN |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

ESB-8 (0'-0.5') L1134028-02 Solid

Collected by
Ines Gammon
Collected date/time
08/28/19 14:20
Received date/time
08/29/19 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|-----------|----------|-----------------------|--------------------|---------|----------------|
| Total Solids by Method 2540 G-2011 | WG1338040 | 1 | 08/31/19 08:00 | 08/31/19 08:10 | KBC | Mt. Juliet, TN |
| Mercury by Method 7471A | WG1337315 | 1 | 08/29/19 15:56 | 08/29/19 19:35 | TCT | Mt. Juliet, TN |
| Metals (ICP) by Method 6010B | WG1337552 | 1 | 08/30/19 09:03 | 08/30/19 12:54 | TRB | Mt. Juliet, TN |
| TPH by TCEQ Method 1005 | WG1337201 | 1 | 08/29/19 19:26 | 08/30/19 04:01 | DMW | Mt. Juliet, TN |
| Polychlorinated Biphenyls (GC) by Method 8082 | WG1337162 | 1 | 08/30/19 08:52 | 08/30/19 22:34 | MTJ | Mt. Juliet, TN |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM | WG1337813 | 1 | 08/30/19 17:14 | 08/31/19 01:52 | DMG | Mt. Juliet, TN |



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jason Romer
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|--------------|--------|-----------|----------|------------------|---------------------------|
| | % | | | date / time | |
| Total Solids | 74.6 | | 1 | 08/31/2019 08:10 | WG1338040 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn

Mercury by Method 7471A

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Mercury | 0.156 | | 0.00375 | 0.0402 | 1 | 08/29/2019 19:32 | WG1337315 |

- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Metals (ICP) by Method 6010B

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|-----------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Antimony | 3.87 | | 1.00 | 2.68 | 1 | 08/30/2019 12:51 | WG1337552 |
| Arsenic | 7.83 | | 0.616 | 2.68 | 1 | 08/30/2019 12:51 | WG1337552 |
| Beryllium | 0.721 | | 0.0938 | 0.268 | 1 | 08/30/2019 12:51 | WG1337552 |
| Cadmium | 0.601 | J | 0.0938 | 0.670 | 1 | 08/30/2019 12:51 | WG1337552 |
| Chromium | 19.3 | | 0.188 | 1.34 | 1 | 08/30/2019 12:51 | WG1337552 |
| Copper | 21.2 | | 0.710 | 2.68 | 1 | 08/30/2019 12:51 | WG1337552 |
| Lead | 182 | | 0.255 | 0.670 | 1 | 08/30/2019 12:51 | WG1337552 |
| Nickel | 13.9 | | 0.656 | 2.68 | 1 | 08/30/2019 12:51 | WG1337552 |
| Selenium | U | | 0.831 | 2.68 | 1 | 08/30/2019 12:51 | WG1337552 |
| Silver | U | | 0.161 | 1.34 | 1 | 08/30/2019 12:51 | WG1337552 |
| Thallium | U | | 0.871 | 2.68 | 1 | 08/30/2019 12:51 | WG1337552 |
| Zinc | 178 | | 0.790 | 6.70 | 1 | 08/30/2019 12:51 | WG1337552 |

TPH by TCEQ Method 1005

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|-----------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH C6 - C12 | U | | 20.1 | 67.0 | 1 | 08/30/2019 03:47 | WG1337201 |
| TPH C12 - C28 | U | | 20.1 | 67.0 | 1 | 08/30/2019 03:47 | WG1337201 |
| TPH C28 - C35 | U | | 20.1 | 67.0 | 1 | 08/30/2019 03:47 | WG1337201 |
| TPH C6 - C35 | U | | 20.1 | 67.0 | 1 | 08/30/2019 03:47 | WG1337201 |
| (S) o-Terphenyl | 115 | | | 70.0-130 | | 08/30/2019 03:47 | WG1337201 |

Polychlorinated Biphenyls (GC) by Method 8082

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|--------------------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| PCB 1016 | U | | 0.00469 | 0.0228 | 1 | 08/30/2019 22:20 | WG1337162 |
| PCB 1221 | U | | 0.00719 | 0.0228 | 1 | 08/30/2019 22:20 | WG1337162 |
| PCB 1232 | U | | 0.00559 | 0.0228 | 1 | 08/30/2019 22:20 | WG1337162 |
| PCB 1242 | U | | 0.00426 | 0.0228 | 1 | 08/30/2019 22:20 | WG1337162 |
| PCB 1248 | U | | 0.00422 | 0.0228 | 1 | 08/30/2019 22:20 | WG1337162 |
| PCB 1254 | U | | 0.00632 | 0.0228 | 1 | 08/30/2019 22:20 | WG1337162 |
| PCB 1260 | U | | 0.00662 | 0.0228 | 1 | 08/30/2019 22:20 | WG1337162 |
| (S) Decachlorobiphenyl | 61.8 | | | 10.0-135 | | 08/30/2019 22:20 | WG1337162 |
| (S) Tetrachloro-m-xylene | 78.3 | | | 10.0-139 | | 08/30/2019 22:20 | WG1337162 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|--------------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Anthracene | 0.00265 | J | 0.000804 | 0.00804 | 1 | 08/31/2019 01:30 | WG1337813 |
| Acenaphthene | 0.00100 | J | 0.000804 | 0.00804 | 1 | 08/31/2019 01:30 | WG1337813 |
| Acenaphthylene | U | | 0.000804 | 0.00804 | 1 | 08/31/2019 01:30 | WG1337813 |
| Benzo(a)anthracene | 0.0173 | | 0.000804 | 0.00804 | 1 | 08/31/2019 01:30 | WG1337813 |
| Benzo(a)pyrene | 0.0193 | | 0.000804 | 0.00804 | 1 | 08/31/2019 01:30 | WG1337813 |



Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

| Analyte | Result (dry) mg/kg | Qualifier | MDL (dry) mg/kg | RDL (dry) mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------------|-----------|--------------------|--------------------|----------|-------------------------|---------------------------|
| Benzo(b)fluoranthene | 0.0284 | | 0.000804 | 0.00804 | 1 | 08/31/2019 01:30 | WG1337813 |
| Benzo(g,h,i)perylene | 0.0162 | | 0.000804 | 0.00804 | 1 | 08/31/2019 01:30 | WG1337813 |
| Benzo(k)fluoranthene | 0.00995 | | 0.000804 | 0.00804 | 1 | 08/31/2019 01:30 | WG1337813 |
| Chrysene | 0.0181 | | 0.000804 | 0.00804 | 1 | 08/31/2019 01:30 | WG1337813 |
| Dibenz(a,h)anthracene | U | | 0.000804 | 0.00804 | 1 | 08/31/2019 01:30 | WG1337813 |
| Fluoranthene | 0.0347 | | 0.000804 | 0.00804 | 1 | 08/31/2019 01:30 | WG1337813 |
| Fluorene | U | | 0.000804 | 0.00804 | 1 | 08/31/2019 01:30 | WG1337813 |
| Indeno(1,2,3-cd)pyrene | 0.0135 | | 0.000804 | 0.00804 | 1 | 08/31/2019 01:30 | WG1337813 |
| Naphthalene | U | | 0.00268 | 0.0268 | 1 | 08/31/2019 01:30 | WG1337813 |
| Phenanthrene | 0.0150 | | 0.000804 | 0.00804 | 1 | 08/31/2019 01:30 | WG1337813 |
| Pyrene | 0.0275 | | 0.000804 | 0.00804 | 1 | 08/31/2019 01:30 | WG1337813 |
| 1-Methylnaphthalene | U | | 0.00268 | 0.0268 | 1 | 08/31/2019 01:30 | WG1337813 |
| 2-Methylnaphthalene | U | | 0.00268 | 0.0268 | 1 | 08/31/2019 01:30 | WG1337813 |
| 2-Chloronaphthalene | U | | 0.00268 | 0.0268 | 1 | 08/31/2019 01:30 | WG1337813 |
| (S) Nitrobenzene-d5 | 88.4 | | | 14.0-149 | | 08/31/2019 01:30 | WG1337813 |
| (S) 2-Fluorobiphenyl | 76.4 | | | 34.0-125 | | 08/31/2019 01:30 | WG1337813 |
| (S) p-Terphenyl-d14 | 75.9 | | | 23.0-120 | | 08/31/2019 01:30 | WG1337813 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

| Analyte | Result | Qualifier | Dilution | Analysis | Batch |
|--------------|--------|-----------|----------|------------------|---------------------------|
| | % | | | date / time | |
| Total Solids | 95.7 | | 1 | 08/31/2019 08:10 | WG1338040 |

Mercury by Method 7471A

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|---------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Mercury | 0.0186 | J | 0.00292 | 0.0313 | 1 | 08/29/2019 19:35 | WG1337315 |

Metals (ICP) by Method 6010B

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|-----------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Antimony | 1.02 | J | 0.783 | 2.09 | 1 | 08/30/2019 12:54 | WG1337552 |
| Arsenic | 2.75 | | 0.480 | 2.09 | 1 | 08/30/2019 12:54 | WG1337552 |
| Beryllium | 0.265 | | 0.0731 | 0.209 | 1 | 08/30/2019 12:54 | WG1337552 |
| Cadmium | 0.684 | | 0.0731 | 0.522 | 1 | 08/30/2019 12:54 | WG1337552 |
| Chromium | 7.20 | | 0.146 | 1.04 | 1 | 08/30/2019 12:54 | WG1337552 |
| Copper | 13.7 | | 0.554 | 2.09 | 1 | 08/30/2019 12:54 | WG1337552 |
| Lead | 10.0 | | 0.198 | 0.522 | 1 | 08/30/2019 12:54 | WG1337552 |
| Nickel | 25.0 | | 0.512 | 2.09 | 1 | 08/30/2019 12:54 | WG1337552 |
| Selenium | U | | 0.648 | 2.09 | 1 | 08/30/2019 12:54 | WG1337552 |
| Silver | U | | 0.125 | 1.04 | 1 | 08/30/2019 12:54 | WG1337552 |
| Thallium | U | | 0.679 | 2.09 | 1 | 08/30/2019 12:54 | WG1337552 |
| Zinc | 39.8 | | 0.616 | 5.22 | 1 | 08/30/2019 12:54 | WG1337552 |

TPH by TCEQ Method 1005

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|-----------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| TPH C6 - C12 | U | | 15.7 | 52.2 | 1 | 08/30/2019 04:01 | WG1337201 |
| TPH C12 - C28 | U | | 15.7 | 52.2 | 1 | 08/30/2019 04:01 | WG1337201 |
| TPH C28 - C35 | U | | 15.7 | 52.2 | 1 | 08/30/2019 04:01 | WG1337201 |
| TPH C6 - C35 | U | | 15.7 | 52.2 | 1 | 08/30/2019 04:01 | WG1337201 |
| (S) o-Terphenyl | 113 | | | 70.0-130 | | 08/30/2019 04:01 | WG1337201 |

Polychlorinated Biphenyls (GC) by Method 8082

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|--------------------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| PCB 1016 | U | | 0.00366 | 0.0178 | 1 | 08/30/2019 22:34 | WG1337162 |
| PCB 1221 | U | | 0.00561 | 0.0178 | 1 | 08/30/2019 22:34 | WG1337162 |
| PCB 1232 | U | | 0.00436 | 0.0178 | 1 | 08/30/2019 22:34 | WG1337162 |
| PCB 1242 | U | | 0.00332 | 0.0178 | 1 | 08/30/2019 22:34 | WG1337162 |
| PCB 1248 | U | | 0.00329 | 0.0178 | 1 | 08/30/2019 22:34 | WG1337162 |
| PCB 1254 | U | | 0.00493 | 0.0178 | 1 | 08/30/2019 22:34 | WG1337162 |
| PCB 1260 | U | | 0.00516 | 0.0178 | 1 | 08/30/2019 22:34 | WG1337162 |
| (S) Decachlorobiphenyl | 69.2 | | | 10.0-135 | | 08/30/2019 22:34 | WG1337162 |
| (S) Tetrachloro-m-xylene | 79.2 | | | 10.0-139 | | 08/30/2019 22:34 | WG1337162 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

| Analyte | Result (dry) | Qualifier | MDL (dry) | RDL (dry) | Dilution | Analysis | Batch |
|--------------------|--------------|-----------|-----------|-----------|----------|------------------|---------------------------|
| | mg/kg | | mg/kg | mg/kg | | date / time | |
| Anthracene | U | | 0.000627 | 0.00627 | 1 | 08/31/2019 01:52 | WG1337813 |
| Acenaphthene | U | | 0.000627 | 0.00627 | 1 | 08/31/2019 01:52 | WG1337813 |
| Acenaphthylene | U | | 0.000627 | 0.00627 | 1 | 08/31/2019 01:52 | WG1337813 |
| Benzo(a)anthracene | 0.00254 | J | 0.000627 | 0.00627 | 1 | 08/31/2019 01:52 | WG1337813 |
| Benzo(a)pyrene | 0.00320 | J | 0.000627 | 0.00627 | 1 | 08/31/2019 01:52 | WG1337813 |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

| Analyte | Result (dry) mg/kg | Qualifier | MDL (dry) mg/kg | RDL (dry) mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------------|-----------|--------------------|--------------------|----------|-------------------------|-----------|
| Benzo(b)fluoranthene | 0.00922 | | 0.000627 | 0.00627 | 1 | 08/31/2019 01:52 | WG1337813 |
| Benzo(g,h,i)perylene | 0.0101 | | 0.000627 | 0.00627 | 1 | 08/31/2019 01:52 | WG1337813 |
| Benzo(k)fluoranthene | 0.00179 | L | 0.000627 | 0.00627 | 1 | 08/31/2019 01:52 | WG1337813 |
| Chrysene | 0.00407 | L | 0.000627 | 0.00627 | 1 | 08/31/2019 01:52 | WG1337813 |
| Dibenz(a,h)anthracene | U | | 0.000627 | 0.00627 | 1 | 08/31/2019 01:52 | WG1337813 |
| Fluoranthene | 0.00759 | | 0.000627 | 0.00627 | 1 | 08/31/2019 01:52 | WG1337813 |
| Fluorene | U | | 0.000627 | 0.00627 | 1 | 08/31/2019 01:52 | WG1337813 |
| Indeno(1,2,3-cd)pyrene | 0.00316 | L | 0.000627 | 0.00627 | 1 | 08/31/2019 01:52 | WG1337813 |
| Naphthalene | U | | 0.00209 | 0.0209 | 1 | 08/31/2019 01:52 | WG1337813 |
| Phenanthrene | 0.00557 | L | 0.000627 | 0.00627 | 1 | 08/31/2019 01:52 | WG1337813 |
| Pyrene | 0.0102 | | 0.000627 | 0.00627 | 1 | 08/31/2019 01:52 | WG1337813 |
| 1-Methylnaphthalene | U | | 0.00209 | 0.0209 | 1 | 08/31/2019 01:52 | WG1337813 |
| 2-Methylnaphthalene | U | | 0.00209 | 0.0209 | 1 | 08/31/2019 01:52 | WG1337813 |
| 2-Chloronaphthalene | U | | 0.00209 | 0.0209 | 1 | 08/31/2019 01:52 | WG1337813 |
| (S) Nitrobenzene-d5 | 96.1 | | | 14.0-149 | | 08/31/2019 01:52 | WG1337813 |
| (S) 2-Fluorobiphenyl | 81.7 | | | 34.0-125 | | 08/31/2019 01:52 | WG1337813 |
| (S) p-Terphenyl-d14 | 85.8 | | | 23.0-120 | | 08/31/2019 01:52 | WG1337813 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3446688-1 08/31/19 08:10

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|--------------|-----------|--------------|--------|--------|
| | % | | % | % |
| Total Solids | 0.000 | | | |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

L1134032-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1134032-02 08/31/19 08:10 • (DUP) R3446688-3 08/31/19 08:10

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|--------------|-----------------|------------|----------|---------|---------------|----------------|
| | % | % | | % | | % |
| Total Solids | 80.1 | 80.5 | 1 | 0.406 | | 10 |

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3446688-2 08/31/19 08:10

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|--------------|--------------|------------|----------|-------------|---------------|
| | % | % | % | % | |
| Total Solids | 50.0 | 50.0 | 100 | 85.0-115 | |



Method Blank (MB)

(MB) R3445757-1 08/29/19 18:23

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|---------|--------|
| Mercury | U | | 0.00280 | 0.0300 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3445757-2 08/29/19 18:26 • (LCSD) R3445757-3 08/29/19 18:28

| Analyte | Spike Amount | LCS Result | LCSD Result | LCS Rec. | LCSD Rec. | Rec. Limits | LCS Qualifier | LCSD Qualifier | RPD | RPD Limits |
|---------|--------------|------------|-------------|----------|-----------|-------------|---------------|----------------|-------|------------|
| Mercury | 0.500 | 0.477 | 0.474 | 95.3 | 94.8 | 80.0-120 | | | 0.550 | 20 |

L1133670-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1133670-21 08/29/19 18:31 • (MS) R3445757-4 08/29/19 18:34 • (MSD) R3445757-5 08/29/19 18:41

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Mercury | 0.500 | 0.0227 | 0.520 | 0.492 | 99.5 | 94.0 | 1 | 75.0-125 | | | 5.44 | 20 |

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3446195-1 08/30/19 11:34

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-----------|--------------------|--------------|-----------------|-----------------|
| Antimony | U | | 0.750 | 2.00 |
| Arsenic | U | | 0.460 | 2.00 |
| Beryllium | U | | 0.0700 | 0.200 |
| Cadmium | U | | 0.0700 | 0.500 |
| Chromium | U | | 0.140 | 1.00 |
| Copper | U | | 0.530 | 2.00 |
| Lead | U | | 0.190 | 0.500 |
| Nickel | U | | 0.490 | 2.00 |
| Selenium | U | | 0.620 | 2.00 |
| Silver | U | | 0.120 | 1.00 |
| Thallium | U | | 0.650 | 2.00 |
| Zinc | U | | 0.590 | 5.00 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3446195-2 08/30/19 11:37 • (LCSD) R3446195-3 08/30/19 11:39

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|-----------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Antimony | 100 | 102 | 99.6 | 102 | 99.6 | 80.0-120 | | | 2.68 | 20 |
| Arsenic | 100 | 98.2 | 95.4 | 98.2 | 95.4 | 80.0-120 | | | 2.81 | 20 |
| Beryllium | 100 | 100 | 99.0 | 100 | 99.0 | 80.0-120 | | | 1.22 | 20 |
| Cadmium | 100 | 99.1 | 96.3 | 99.1 | 96.3 | 80.0-120 | | | 2.87 | 20 |
| Chromium | 100 | 102 | 98.7 | 102 | 98.7 | 80.0-120 | | | 3.10 | 20 |
| Copper | 100 | 97.2 | 95.1 | 97.2 | 95.1 | 80.0-120 | | | 2.22 | 20 |
| Lead | 100 | 99.3 | 96.5 | 99.3 | 96.5 | 80.0-120 | | | 2.93 | 20 |
| Nickel | 100 | 104 | 102 | 104 | 102 | 80.0-120 | | | 2.27 | 20 |
| Selenium | 100 | 97.6 | 94.7 | 97.6 | 94.7 | 80.0-120 | | | 3.03 | 20 |
| Silver | 20.0 | 19.1 | 18.6 | 95.6 | 92.9 | 80.0-120 | | | 2.83 | 20 |
| Thallium | 100 | 98.2 | 95.5 | 98.2 | 95.5 | 80.0-120 | | | 2.77 | 20 |
| Zinc | 100 | 99.4 | 97.2 | 99.4 | 97.2 | 80.0-120 | | | 2.31 | 20 |

L1133572-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1133572-03 08/30/19 11:42 • (MS) R3446195-6 08/30/19 11:50 • (MSD) R3446195-7 08/30/19 11:53

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|-----------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Antimony | 100 | U | 86.5 | 85.8 | 86.5 | 85.8 | 1 | 75.0-125 | | | 0.787 | 20 |
| Arsenic | 100 | 5.49 | 105 | 103 | 100 | 97.5 | 1 | 75.0-125 | | | 2.38 | 20 |
| Beryllium | 100 | 0.388 | 101 | 99.1 | 101 | 98.7 | 1 | 75.0-125 | | | 1.90 | 20 |



L1133572-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1133572-03 08/30/19 11:42 • (MS) R3446195-6 08/30/19 11:50 • (MSD) R3446195-7 08/30/19 11:53

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cadmium | 100 | 0.621 | 101 | 99.4 | 100 | 98.8 | 1 | 75.0-125 | | | 1.26 | 20 |
| Chromium | 100 | 5.46 | 102 | 100 | 96.1 | 94.7 | 1 | 75.0-125 | | | 1.44 | 20 |
| Copper | 100 | 5.49 | 103 | 101 | 97.0 | 95.3 | 1 | 75.0-125 | | | 1.74 | 20 |
| Lead | 100 | 2.69 | 103 | 100 | 100 | 97.4 | 1 | 75.0-125 | | | 2.89 | 20 |
| Nickel | 100 | 7.82 | 112 | 110 | 104 | 103 | 1 | 75.0-125 | | | 1.61 | 20 |
| Selenium | 100 | U | 98.5 | 95.9 | 98.5 | 95.9 | 1 | 75.0-125 | | | 2.72 | 20 |
| Silver | 20.0 | U | 19.3 | 18.9 | 96.6 | 94.7 | 1 | 75.0-125 | | | 1.91 | 20 |
| Thallium | 100 | U | 96.6 | 93.9 | 96.6 | 93.9 | 1 | 75.0-125 | | | 2.90 | 20 |
| Zinc | 100 | 36.4 | 121 | 118 | 85.0 | 81.9 | 1 | 75.0-125 | | | 2.56 | 20 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Method Blank (MB)

(MB) R3445878-1 08/29/19 23:59

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-----------------|--------------------|--------------|-----------------|-----------------|
| TPH C6 - C12 | U | | 15.0 | 50.0 |
| TPH C12 - C28 | U | | 15.0 | 50.0 |
| TPH C28 - C35 | U | | 15.0 | 50.0 |
| TPH C6 - C35 | U | | 15.0 | 50.0 |
| (S) o-Terphenyl | 100 | | | 70.0-130 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3445878-2 08/30/19 00:12 • (LCSD) R3445878-3 08/30/19 00:25

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|-----------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| TPH C6 - C12 | 250 | 259 | 266 | 104 | 106 | 75.0-125 | | | 2.67 | 20 |
| TPH C12 - C28 | 250 | 252 | 255 | 101 | 102 | 75.0-125 | | | 1.18 | 20 |
| TPH C6 - C35 | 500 | 511 | 521 | 102 | 104 | 75.0-125 | | | 1.94 | 20 |
| (S) o-Terphenyl | | | | 99.2 | 104 | 70.0-130 | | | | |

⁶ Qc

⁷ Gl

⁸ Al

L1132568-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132568-01 08/30/19 04:54 • (MS) R3445878-4 08/30/19 05:07 • (MSD) R3445878-5 08/30/19 05:20

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|-----------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| TPH C6 - C12 | 250 | 3390 | 3140 | 2980 | 0.000 | 0.000 | 5 | 75.0-125 | V | V | 5.23 | 20 |
| TPH C12 - C28 | 250 | 18100 | 14600 | 13900 | 0.000 | 0.000 | 5 | 75.0-125 | E V | E V | 4.91 | 20 |
| TPH C6 - C35 | 500 | 25600 | 17700 | 16900 | 0.000 | 0.000 | 5 | 75.0-125 | V | V | 4.62 | 20 |
| (S) o-Terphenyl | | | | | 136 | 130 | | 70.0-130 | J1 | | | |

⁹ Sc

Sample Narrative:

OS: Surrogate recovery impacted by matrix



Method Blank (MB)

(MB) R3446384-1 08/30/19 17:01

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|--------------------------|-----------|--------------|---------|----------|
| | mg/kg | | mg/kg | mg/kg |
| PCB 1016 | U | | 0.00350 | 0.0170 |
| PCB 1221 | U | | 0.00537 | 0.0170 |
| PCB 1232 | U | | 0.00417 | 0.0170 |
| PCB 1242 | U | | 0.00318 | 0.0170 |
| PCB 1248 | U | | 0.00315 | 0.0170 |
| PCB 1254 | U | | 0.00472 | 0.0170 |
| PCB 1260 | U | | 0.00494 | 0.0170 |
| (S) Decachlorobiphenyl | 67.6 | | | 10.0-135 |
| (S) Tetrachloro-m-xylene | 70.6 | | | 10.0-139 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS)

(LCS) R3446384-2 08/30/19 17:15

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|--------------------------|--------------|------------|----------|-------------|---------------|
| | mg/kg | mg/kg | % | % | |
| PCB 1260 | 0.167 | 0.113 | 67.7 | 37.0-145 | |
| PCB 1016 | 0.167 | 0.107 | 64.1 | 36.0-141 | |
| (S) Decachlorobiphenyl | | | 55.0 | 10.0-135 | |
| (S) Tetrachloro-m-xylene | | | 58.3 | 10.0-139 | |

7 Gl

8 Al

9 Sc

L1133599-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1133599-12 08/30/19 20:57 • (MS) R3446384-3 08/30/19 21:11 • (MSD) R3446384-4 08/30/19 21:25

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|--------------------------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| | mg/kg | mg/kg | mg/kg | mg/kg | % | % | | % | | | % | % |
| PCB 1260 | 0.167 | ND | 0.126 | 0.120 | 75.4 | 71.9 | 1 | 10.0-160 | | | 4.88 | 38 |
| PCB 1016 | 0.167 | ND | 0.140 | 0.130 | 83.8 | 77.8 | 1 | 10.0-160 | | | 7.41 | 37 |
| (S) Decachlorobiphenyl | | | | | 82.6 | 81.4 | | 10.0-135 | | | | |
| (S) Tetrachloro-m-xylene | | | | | 95.3 | 88.0 | | 10.0-139 | | | | |



Method Blank (MB)

(MB) R3446316-2 08/30/19 20:00

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Anthracene | U | | 0.00600 | 0.00600 |
| Acenaphthene | U | | 0.00600 | 0.00600 |
| Acenaphthylene | U | | 0.00600 | 0.00600 |
| Benzo(a)anthracene | U | | 0.00600 | 0.00600 |
| Benzo(a)pyrene | U | | 0.00600 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.00600 | 0.00600 |
| Benzo(g,h,i)perylene | U | | 0.00600 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.00600 | 0.00600 |
| Chrysene | U | | 0.00600 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.00600 | 0.00600 |
| Fluoranthene | U | | 0.00600 | 0.00600 |
| Fluorene | U | | 0.00600 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00600 | 0.00600 |
| Naphthalene | U | | 0.00200 | 0.0200 |
| Phenanthrene | U | | 0.00600 | 0.00600 |
| Pyrene | U | | 0.00600 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 |
| (S) Nitrobenzene-d5 | 102 | | | 14.0-149 |
| (S) 2-Fluorobiphenyl | 87.8 | | | 34.0-125 |
| (S) p-Terphenyl-d14 | 97.1 | | | 23.0-120 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3446316-1 08/30/19 19:38

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|-----------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Anthracene | 0.0800 | 0.0703 | 87.9 | 50.0-126 | |
| Acenaphthene | 0.0800 | 0.0770 | 96.3 | 50.0-120 | |
| Acenaphthylene | 0.0800 | 0.0815 | 102 | 50.0-120 | |
| Benzo(a)anthracene | 0.0800 | 0.0719 | 89.9 | 45.0-120 | |
| Benzo(a)pyrene | 0.0800 | 0.0757 | 94.6 | 42.0-120 | |
| Benzo(b)fluoranthene | 0.0800 | 0.0734 | 91.8 | 42.0-121 | |
| Benzo(g,h,i)perylene | 0.0800 | 0.0818 | 102 | 45.0-125 | |
| Benzo(k)fluoranthene | 0.0800 | 0.0855 | 107 | 49.0-125 | |
| Chrysene | 0.0800 | 0.0781 | 97.6 | 49.0-122 | |
| Dibenz(a,h)anthracene | 0.0800 | 0.0872 | 109 | 47.0-125 | |
| Fluoranthene | 0.0800 | 0.0679 | 84.9 | 49.0-129 | |



Laboratory Control Sample (LCS)

(LCS) R3446316-1 08/30/19 19:38

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|------------------------|-----------------------|---------------------|---------------|------------------|---------------|
| Fluorene | 0.0800 | 0.0732 | 91.5 | 49.0-120 | |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.0850 | 106 | 46.0-125 | |
| Naphthalene | 0.0800 | 0.0831 | 104 | 50.0-120 | |
| Phenanthrene | 0.0800 | 0.0682 | 85.3 | 47.0-120 | |
| Pyrene | 0.0800 | 0.0782 | 97.8 | 43.0-123 | |
| 1-Methylnaphthalene | 0.0800 | 0.0814 | 102 | 51.0-121 | |
| 2-Methylnaphthalene | 0.0800 | 0.0784 | 98.0 | 50.0-120 | |
| 2-Chloronaphthalene | 0.0800 | 0.0727 | 90.9 | 50.0-120 | |
| (S) Nitrobenzene-d5 | | | 126 | 14.0-149 | |
| (S) 2-Fluorobiphenyl | | | 105 | 34.0-125 | |
| (S) p-Terphenyl-d14 | | | 122 | 23.0-120 | <u>J1</u> |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1132535-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1132535-01 08/30/19 20:22 • (MS) R3446316-3 08/30/19 20:44 • (MSD) R3446316-4 08/30/19 21:06

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Anthracene | 0.0800 | 0.0996 | 0.0922 | 0.0789 | 0.000 | 0.000 | 1 | 10.0-145 | <u>J6</u> | <u>J6</u> | 15.5 | 30 |
| Acenaphthene | 0.0800 | 0.0553 | 0.111 | 0.116 | 69.6 | 75.9 | 1 | 14.0-127 | | | 4.41 | 27 |
| Acenaphthylene | 0.0800 | ND | 0.0949 | 0.107 | 119 | 134 | 1 | 21.0-124 | | <u>J5</u> | 12.0 | 25 |
| Benzo(a)anthracene | 0.0800 | ND | 0.0583 | 0.0652 | 71.4 | 80.1 | 1 | 10.0-139 | | | 11.2 | 30 |
| Benzo(a)pyrene | 0.0800 | ND | 0.0586 | 0.0684 | 73.3 | 85.5 | 1 | 10.0-141 | | | 15.4 | 31 |
| Benzo(b)fluoranthene | 0.0800 | ND | 0.0625 | 0.0693 | 76.1 | 84.6 | 1 | 10.0-140 | | | 10.3 | 36 |
| Benzo(g,h,i)perylene | 0.0800 | ND | 0.0560 | 0.0639 | 68.2 | 78.1 | 1 | 10.0-140 | | | 13.2 | 33 |
| Benzo(k)fluoranthene | 0.0800 | ND | 0.0582 | 0.0678 | 69.9 | 81.9 | 1 | 10.0-137 | | | 15.2 | 31 |
| Chrysene | 0.0800 | 0.00621 | 0.0677 | 0.0745 | 76.9 | 85.4 | 1 | 10.0-145 | | | 9.56 | 30 |
| Dibenz(a,h)anthracene | 0.0800 | ND | 0.0578 | 0.0661 | 72.3 | 82.6 | 1 | 10.0-132 | | | 13.4 | 31 |
| Fluoranthene | 0.0800 | ND | 0.0653 | 0.0721 | 81.6 | 90.1 | 1 | 10.0-153 | | | 9.90 | 33 |
| Fluorene | 0.0800 | 0.251 | 0.303 | 0.304 | 65.0 | 66.3 | 1 | 11.0-130 | | | 0.329 | 29 |
| Indeno(1,2,3-cd)pyrene | 0.0800 | ND | 0.0578 | 0.0658 | 72.3 | 82.3 | 1 | 10.0-137 | | | 12.9 | 32 |
| Naphthalene | 0.0800 | ND | 0.0736 | 0.0827 | 75.5 | 86.9 | 1 | 10.0-135 | | | 11.6 | 27 |
| Phenanthrene | 0.0800 | 0.360 | 0.440 | 0.417 | 100 | 71.2 | 1 | 10.0-144 | | | 5.37 | 31 |
| Pyrene | 0.0800 | 0.0227 | 0.0762 | 0.0817 | 66.9 | 73.8 | 1 | 10.0-148 | | | 6.97 | 35 |
| 1-Methylnaphthalene | 0.0800 | 0.0786 | 0.143 | 0.156 | 80.5 | 96.8 | 1 | 10.0-142 | | | 8.70 | 28 |
| 2-Methylnaphthalene | 0.0800 | 0.132 | 0.206 | 0.212 | 92.5 | 100 | 1 | 10.0-137 | | | 2.87 | 28 |
| 2-Chloronaphthalene | 0.0800 | ND | 0.0410 | 0.0465 | 51.3 | 58.1 | 1 | 29.0-120 | | | 12.6 | 24 |
| (S) Nitrobenzene-d5 | | | | | 113 | 113 | | 14.0-149 | | | | |
| (S) 2-Fluorobiphenyl | | | | | 65.7 | 65.7 | | 34.0-125 | | | | |
| (S) p-Terphenyl-d14 | | | | | 95.7 | 94.2 | | 23.0-120 | | | | |



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| (dry) | Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils]. |
| MDL | Method Detection Limit. |
| MDL (dry) | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| RDL (dry) | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| E | The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL). |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J1 | Surrogate recovery limits have been exceeded; values are outside upper control limits. |
| J5 | The sample matrix interfered with the ability to make any accurate determination; spike value is high. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

| | | | |
|-------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey-NELAP | TN002 |
| California | 2932 | New Mexico ¹ | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio-VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | 90010 | South Carolina | 84004 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana ¹ | LA180010 | Texas | T104704245-18-15 |
| Maine | TN0002 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |

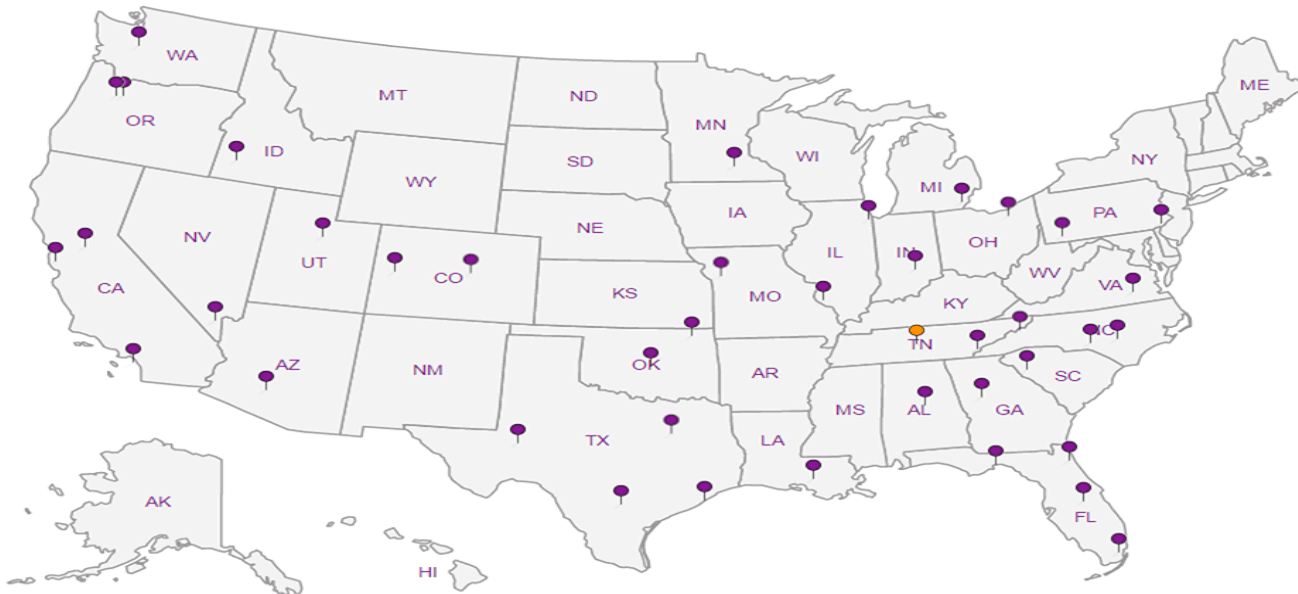
Third Party Federal Accreditations

| | | | |
|-------------------------------|---------|--------------------|---------------|
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA-Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Enercon - Tulsa, OK

5100 E Skelly Dr, Ste 450
Tulsa, OK 74135

Billing Information:

Accounts Payable
5100 E Skelly Dr, Ste 450
Tulsa, OK 74135

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page 3 of 3



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Andrew Foreman

Email To: aforeman@enercon.com;
mpayne@enercon.com; igammon@enercon.com

Project
Description: **Evans-Fintube - Tulsa, OK**

City/State
Collected: **Tulsa/OK**

Please Circle:
PT MT **CT** ET

Phone: **918-665-7693**
Fax: **918-665-7232**

Client Project #
CTYTULO~00091

Lab Project #
ENERCTOK-CTYTUL00091

Collected by (print):
Ines Gammon

Site/Facility ID #
118/150/186 NORTH LANSING

P.O. #
CTYTULO~00091

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Quote #

Date Results Needed

Immediately Packed on Ice N Y

| Sample ID | Comp/Grab | Matrix * | Depth | Date | Time | No. of Cntrs | PP Metals 2ozClir-NoPres | SV8082 4ozClir-NoPres | SV8270PAHSIM 4ozClir-NoPres | TPHTX, TS 4ozClir-NoPres |
|-----------------|-----------|----------|---------|----------|-------|--------------|--------------------------|-----------------------|-----------------------------|--------------------------|
| ESB-7 (0'-0.5') | Comp. | SS | 0'-0.5' | 08/28/19 | 13:50 | 4 | X | X | X | X |
| ESB-8 (0'-0.5') | Comp. | SS | 0'-0.5' | 08/28/19 | 14:20 | 4 | X | X | X | X |

SDG # **1134028**

A024

Acctnum: **ENERCTOK**

Template: **T154531**

Prelogin: **P726685**

PM: **104 - Jason Romer**

PB:

Shipped Via: **FedEX Ground**

Remarks Sample # (lab only)

- 1
- 2

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks: **2 day Rush per Jason Romer**

pH _____ Temp _____
Flow _____ Other _____

Sample Receipt Checklist
 COC Seal Present/Intact: NP Y N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
If Applicable
 VOA Zero Headspace: Y N
 Preservation Correct/Checked: Y N
 RAD Screen <0.5 mR/hr: Y N

Samples returned via:
 UPS FedEx Courier

Tracking # **5W**

Relinquished by: (Signature)

Date: **08/28/2019**
Time: **3:02 pm**

Date: **08/28/19**
Time: **5:00 pm**

Received by: (Signature)

Received by: (Signature)

Trip Blank Received: Yes No
 HCL/MeOH TBR

Temp: **ASDF °C**
0.5 ± 0 = 0.5 Bottles Received: **8**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Relinquished by: (Signature)

Received for lab by: (Signature)

Date: **08/28** Time: **08:15**

Hold:

Condition:
NCF 1, OK

APPENDIX E
MEETS AND BOUNDS SURVEY



EXHIBIT "A"
LEGAL DESCRIPTIONS

PARENT TRACT

A TRACT OF LAND THAT IS PART OF LOT TWO (2), SECTION ONE (1), TOWNSHIP NINETEEN (19) NORTH, RANGE TWELVE (12) EAST OF THE INDIAN BASE AND MERIDIAN, AND A PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER (SW/4 SE/4) OF SECTION THIRTY-SIX (36), TOWNSHIP TWENTY (20) NORTH, RANGE TWELVE (12) EAST OF THE INDIAN BASE AND MERIDIAN, ALL IN TULSA COUNTY, STATE OF OKLAHOMA, ACCORDING TO THE UNITED STATES GOVERNMENT SURVEY THEREOF, AND PART OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER (NW/4 NE/4) OF SECTION ONE (1), NINETEEN (19) NORTH, RANGE TWELVE (12) EAST, OF THE INDIAN BASE AND MERIDIAN, ALL IN TULSA COUNTY, STATE OF OKLAHOMA, ACCORDING TO THE UNITED STATES GOVERNMENT SURVEY THEREOF; SAID TRACT OF LAND BEING DESCRIBED AS FOLLOWS TO-WIT:

BEGINNING AT A POINT ON THE SOUTHERLY LINE OF BLOCK FORTY-NINE (49) OF THE ORIGINAL TOWNSITE OF TULSA SAID POINT BEING 34.94 FEET EASTERLY OF THE SOUTHWEST CORNER OF LOT TWO (2), BLOCK FORTY-NINE (49), SAID POINT ALSO BEING ON THE EASTERLY ATCHISON, TOPEKA & SANTA FE RAILROAD RIGHT-OF-WAY LINE; THENCE N00°27'51"W AND ALONG THE EASTERLY RAILROAD RIGHT-OF-WAY LINE FOR A DISTANCE OF 511.37 FEET; THENCE N05°24'22"E AND ALONG THE EASTERLY RAILROAD RIGHT-OF-WAY LINE FOR A DISTANCE OF 610.55 FEET; THENCE, N06°11'18"E AND ALONG THE EASTERLY RAILROAD RIGHT-OF-WAY LINE FOR A DISTANCE OF 803.65 FEET; THENCE N88°58'50"E FOR A DISTANCE OF 180.00 FEET; THENCE S00°58'20"E FOR A DISTANCE OF 30.00 FEET TO A POINT ON A LINE. THENCE N88°58'50"E FOR A DISTANCE OF 255.00 FEET; THENCE S45°59'49"E FOR A DISTANCE OF 70.68 FEET; THENCE S00°58'20"E FOR A DISTANCE OF 611.94 FEET; THENCE N88°54'41"E FOR A DISTANCE OF 11.03 FEET; THENCE S01°11'17"E FOR A DISTANCE OF 282.47 FEET; THENCE S12°14'47"W FOR A DISTANCE OF 332.52 FEET; THENCE S89°08'39"W FOR A DISTANCE OF 15.00 FEET; THENCE S01°11'17"E FOR A DISTANCE OF 10.11 FEET TO THE BEGINNING OF A NON-TANGENTIAL CURVE, SAID CURVE TURNING TO THE LEFT THROUGH AN ANGLE OF 47°38'16", HAVING A RADIUS OF 125.40 FEET, A LENGTH OF 104.26 AND WHOSE LONG CHORD BEARS S39°17'42"W FOR A DISTANCE OF 101.28 FEET TO A POINT OF INTERSECTION WITH A NON-TANGENTIAL LINE. THENCE S01°11'14"E FOR A DISTANCE OF 189.63 FEET; THENCE S27°47'12"W FOR A DISTANCE OF 169.78 FEET; THENCE S55°38'34"W FOR A DISTANCE OF 25.00 FEET; THENCE S65°09'17"W FOR A DISTANCE OF 35.71 FEET; THENCE S79°46'16"W FOR A DISTANCE OF 4.92 FEET; THENCE S65°28'16"W A DISTANCE OF 407.79 FEET TO THE POINT OF BEGINNING; SAID TRACT CONTAINS 973,072 SQUARE FEET OR 22.39 ACRES MORE OR LESS.

FILE: 192381 LG-1A

PAGE 1 OF 5

TRACT 1

A TRACT OF LAND THAT IS PART OF LOT TWO (2), SECTION ONE (1), TOWNSHIP NINETEEN (19) NORTH, RANGE TWELVE (12) EAST OF THE INDIAN BASE AND MERIDIAN, AND A PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER (SW/4 SE/4) OF SECTION THIRTY-SIX (36), TOWNSHIP TWENTY (20) NORTH, RANGE TWELVE (12) EAST OF THE INDIAN BASE AND MERIDIAN, ALL IN TULSA COUNTY, STATE OF OKLAHOMA, ACCORDING TO THE UNITED STATES GOVERNMENT SURVEY THEREOF, AND PART OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER (NW/4 NE/4) OF SECTION ONE (1), NINETEEN (19) NORTH, RANGE TWELVE (12) EAST, OF THE INDIAN BASE AND MERIDIAN, ALL IN TULSA COUNTY, STATE OF OKLAHOMA, ACCORDING TO THE UNITED STATES GOVERNMENT SURVEY THEREOF; SAID TRACT OF LAND BEING DESCRIBED AS FOLLOWS TO-WIT:

COMMENCING AT A POINT ON THE SOUTHERLY LINE OF BLOCK FORTY-NINE (49) OF THE ORIGINAL TOWNSITE OF TULSA SAID POINT BEING 34.94 FEET EASTERLY OF THE SOUTHWEST CORNER OF LOT TWO (2), BLOCK FORTY-NINE (49), SAID POINT ALSO BEING ON THE EASTERLY ATCHISON, TOPEKA & SANTA FE RAILROAD RIGHT-OF-WAY LINE; THENCE N00°27'51"W FOR A DISTANCE OF 232.06 FEET TO THE **POINT OF BEGINNING**; THENCE N00°27'51"W FOR A DISTANCE OF 279.31 FEET; THENCE N05°24'22"E FOR A DISTANCE OF 610.55 FEET; THENCE N06°11'18"E FOR A DISTANCE OF 803.65 FEET; THENCE N88°58'50"E FOR A DISTANCE OF 180.00 FEET; THENCE S00°58'20"E FOR A DISTANCE OF 30.00 FEET; THENCE S00°48'12"W FOR A DISTANCE OF 711.39 FEET; THENCE S00°47'24"E FOR A DISTANCE OF 582.16 FEET; THENCE N88°54'26"E FOR A DISTANCE OF 226.53 FEET TO THE BEGINNING OF A NON-TANGENTIAL CURVE, SAID CURVE TURNING TO THE LEFT THROUGH AN ANGLE OF 34°56'17", HAVING A RADIUS OF 125.40 FEET, A LENGTH OF 76.46 FEET AND WHOSE LONG CHORD BEARS S32°56'42"W FOR A DISTANCE OF 75.29 FEET TO A POINT OF INTERSECTION WITH A NON-TANGENTIAL LINE. THENCE S01°11'14"E FOR A DISTANCE OF 189.63 FEET TO A POINT ON A LINE. THENCE S27°47'12"W FOR A DISTANCE OF 44.16 FEET; THENCE S88°51'35"W FOR A DISTANCE OF 164.91 FEET; THENCE, S69°12'34"W FOR A DISTANCE OF 204.04 FEET; THENCE S88°51'35"W A DISTANCE OF 133.71 FEET TO THE POINT OF BEGINNING; **POINT OF BEGINNING**; SAID TRACT CONTAINS 489,331 SQUARE FEET OR 11.23 ACRES MORE OR LESS.

TRACT 2

A TRACT OF LAND THAT IS PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER (SW/4 SE/4) OF SECTION THIRTY-SIX (36), TOWNSHIP TWENTY (20) NORTH, RANGE TWELVE (12) EAST OF THE INDIAN BASE AND MERIDIAN, ALL IN TULSA COUNTY, STATE OF OKLAHOMA, ACCORDING TO THE UNITED STATES GOVERNMENT SURVEY THEREOF, AND PART OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER (NW/4 NE/4) OF SECTION ONE (1), NINETEEN (19) NORTH, RANGE TWELVE (12) EAST, OF THE INDIAN BASE AND MERIDIAN, ALL IN TULSA COUNTY, STATE OF OKLAHOMA, ACCORDING TO THE UNITED STATES GOVERNMENT SURVEY THEREOF; SAID TRACT OF LAND BEING DESCRIBED AS FOLLOWS TO-WIT:

FILE: 192381 LG-1A

PAGE 2 OF 5

COMMENCING AT A POINT ON THE SOUTHERLY LINE OF BLOCK FORTY-NINE (49) OF THE ORIGINAL TOWNSITE OF TULSA SAID POINT BEING 34.94 FEET EASTERLY OF THE SOUTHWEST CORNER OF LOT TWO (2), BLOCK FORTY-NINE (49), SAID POINT ALSO BEING ON THE EASTERLY ATCHISON, TOPEKA & SANTA FE RAILROAD RIGHT-OF-WAY LINE; THENCE N00°27'51"W FOR A DISTANCE OF

511.37; THENCE N05°24'22"E FOR A DISTANCE OF 80.93 FEET; THENCE N88°54'26"E FOR A DISTANCE OF 315.12 FEET TO THE **POINT OF BEGINNING**; THENCE N00°47'24"W FOR A DISTANCE OF 582.16; THENCE N00°48'12"E FOR A DISTANCE OF 711.39 FEET; THENCE N88°58'50"E FOR A DISTANCE OF 255.00 FEET; THENCE S45°59'49"E FOR A DISTANCE OF 70.68 FEET; THENCE S00°58'20"E FOR A DISTANCE OF 611.94 FEET; THENCE N88°54'41"E FOR A DISTANCE OF 11.03 FEET; THENCE S01°11'17"E FOR A DISTANCE OF 282.47 FEET; THENCE S12°14'47"W FOR A DISTANCE OF 332.52 FEET; THENCE S89°08'39"W FOR A DISTANCE OF 15.00 FEET; THENCE S01°11'17"E FOR A DISTANCE OF 10.11 FEET TO THE BEGINNING OF A NON-TANGENTIAL CURVE, SAID CURVE TURNING TO THE LEFT THROUGH AN ANGLE OF 12°42'00", HAVING A RADIUS OF 125.40 FEET, A LENGTH OF 27.80 FEET AND WHOSE LONG CHORD BEARS S56°45'51"W FOR A DISTANCE OF 27.74 FEET TO A POINT OF INTERSECTION WITH A NON-TANGENTIAL LINE. THENCE S88°54'26"W A DISTANCE OF 226.53 FEET TO THE **POINT OF BEGINNING**; SAID TRACT CONTAINS 407,043 SQ. FT. OR 9.39 ACRES MORE OR LESS.

TRACT 3

A TRACT OF LAND THAT IS PART OF LOT TWO (2), SECTION ONE (1), TOWNSHIP NINETEEN (19) NORTH, RANGE TWELVE (12) EAST OF THE INDIAN BASE AND PART OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER (NW/4 NE/4) OF SECTION ONE (1), NINETEEN (19) NORTH, RANGE TWELVE (12) EAST, OF THE INDIAN BASE AND MERIDIAN, ALL IN TULSA COUNTY, STATE OF OKLAHOMA, ACCORDING TO THE UNITED STATES GOVERNMENT SURVEY THEREOF; SAID TRACT OF LAND BEING DESCRIBED AS FOLLOWS TO-WIT:

BEGINNING AT A POINT ON THE SOUTHERLY LINE OF BLOCK FORTY-NINE (49) OF THE ORIGINAL TOWNSITE OF TULSA SAID POINT BEING 34.94 FEET EASTERLY OF THE SOUTHWEST CORNER OF LOT TWO (2), BLOCK FORTY-NINE (49), SAID POINT ALSO BEING ON THE EASTERLY ATCHISON, TOPEKA & SANTA FE RAILROAD RIGHT-OF-WAY LINE; THENCE N00°27'51"W 232.06 FEET THENCE N88°51'35"E FOR A DISTANCE OF 133.71 FEET; THENCE N69°12'34"E FOR A DISTANCE OF 204.04 FEET; THENCE N88°51'35"E FOR A DISTANCE OF 164.91 FEET; THENCE S27°47'12"W FOR A DISTANCE OF 125.62 FEET; THENCE S55°38'34"W FOR A DISTANCE OF 25.00 FEET; THENCE S65°09'17"W FOR A DISTANCE OF 35.71 FEET; THENCE S79°46'16"W FOR A DISTANCE OF 4.92 FEET; THENCE S65°28'16"W A DISTANCE OF 407.79 FEET TO THE **POINT OF BEGINNING**; SAID TRACT CONTAINS 76,697 SQUARE FEET OR 1.76 ACRES MORE OR LESS.

LEGAL DESCRIPTION WAS PREPARED ON SEPTEMBER 19, 2019 BY CLIFF BENNETT, PLS #1815 WITH THE BEARINGS BASED ON THE SOUTH LINE OF SECTION 36 AS BEING N88°54'26"E.

FILE: 192381 LG-1A

PAGE 3 OF 5

SURVEYOR'S CERTIFICATE

I, CLIFF BENNETT OF BENNETT SURVEYING, INC., CERTIFY THAT THE REAL PROPERTY HEREON CLOSES IN ACCORDANCE WITH CURRENT TOLERANCES AND IS A TRUE REPRESENTATION OF THE REAL PROPERTY DESCRIBED, AND THAT THE SURVEY OF THE REAL PROPERTY MEETS THE MINIMUM TECHNICAL STANDARDS AS ADOPTED BY THE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS FOR THE STATE OF OKLAHOMA.

WITNESS MY HAND AND SEAL THIS 19TH DAY OF SEPTEMBER, 2019.



Cliff Bennett

CLIFF BENNETT, PLS
OKLAHOMA NO.1815
CERT. OF AUTH. NO. 4502
EXP. DATE JUNE 30, 2020

EXHIBIT "A"
TRACT 1
CLOSURE REPORT

North: 428967.2934' East: 2563710.4992'

Segment #1 : Line

Course: N00°27'51"W Length: 279.31'
North: 429246.5943' East: 2563708.2365'

Segment #2 : Line

Course: N05°24'22"E Length: 610.55'
North: 429854.4285' East: 2563765.7591'

Segment #3 : Line

Course: N06°11'18"E Length: 803.65'
North: 430653.3956' East: 2563852.3901'

Segment #4 : Line

Course: N88°58'50"E Length: 180.00'
North: 430656.5981' East: 2564032.3616'

Segment #5 : Line

Course: S00°43'53"W Length: 741.38'
North: 429915.2785' East: 2564022.8981'

Segment #6 : Line

Course: S00°47'24"E Length: 582.16'
North: 429333.1738' East: 2564030.9247'

Segment #7 : Line

Course: N88°54'26"E Length: 226.53'
North: 429337.4941' East: 2564257.4135'

Segment #8 : Curve

Length: 76.47' Radius: 125.40'
Delta: 034°56'17" Tangent: 39.46'

Chord: 75.29' Course: S32°56'42"W
Course In: S39°35'09"E Course Out: N74°31'26"W
RP North: 429240.8519' East: 2564337.3226'
End North: 429274.3112' East: 2564216.4683'

Segment #9 : Line

Course: S01°11'14"E Length: 189.63'
North: 429084.7219' East: 2564220.3973'

Segment #10 : Line

Course: S27°47'12"W Length: 44.16'
North: 429045.6540' East: 2564199.8107'

Segment #11 : Line

Course: S88°51'35"W Length: 164.91'
North: 429042.3723' East: 2564034.9334'

Segment #12 : Line

Course: S69°12'34"W Length: 204.04'
North: 428969.9477' East: 2563844.1796'

Segment #13 : Line

Course: S88°51'35"W Length: 133.71'
North: 428967.2868' East: 2563710.4961'

Perimeter: 4236.50' Area: 11.23acres
Error Closure: 0.0073 Course: S25°08'28"W
Error North: -0.00659 East: -0.00309

Precision 1: 580180.82

EXHIBIT "A"
TRACT 2
CLOSURE REPORT

North: 429333.1760' East: 2564030.9222'

Segment #1 : Line

Course: N00°47'24"W Length: 582.16'
North: 429915.2807' East: 2564022.8956'

Segment #2 : Line

Course: N00°48'12"E Length: 711.39'
North: 430626.6007' East: 2564032.8695'

Segment #3 : Line

Course: N88°58'50"E Length: 255.00'
North: 430631.1376' East: 2564287.8291'

Segment #4 : Line

Course: S45°59'49"E Length: 70.68'
North: 430582.0365' East: 2564338.6694'

Segment #5 : Line

Course: S01°44'49"E Length: 894.47'
North: 429687.9822' East: 2564365.9376'

Segment #6 : Line

Course: S12°14'47"W Length: 332.52'
North: 429363.0289' East: 2564295.4047'

Segment #7 : Line

Course: S89°08'39"W Length: 15.00'
North: 429362.8048' East: 2564280.4064'

Segment #8 : Line

Course: S01°11'17"E Length: 10.11'
North: 429352.6970' East: 2564280.6160'

Segment #9 : Curve

Length: 27.80' Radius: 125.40'
Delta: 012°42'00" Tangent: 13.95'
Chord: 27.74' Course: S56°45'51"W
Course In: S26°53'10"E Course Out: N39°35'09"W
RP North: 429240.8518' East: 2564337.3242'
End North: 429337.4931' East: 2564257.4137'

Segment #10 : Line

Course: S88°54'26"W Length: 226.53'
North: 429333.1728' East: 2564030.9249'

Perimeter: 3125.66' Area: 9.39acres
Error Closure: 0.0042 Course: S40°16'00"E
Error North: -0.00317 East: 0.00269

Precision 1: 744190.48

EXHIBIT "A"
TRACT 3
CLOSURE REPORT

North: 428735.2422' East: 2563712.3791'

Segment #1 : Line

Course: N00°27'51"W Length: 232.06'
North: 428967.2946' East: 2563710.4992'

Segment #2 : Line

Course: N88°51'35"E Length: 133.71'
North: 428969.9554' East: 2563844.1827'

Segment #3 : Line

Course: N69°12'34"E Length: 204.04'
North: 429042.3800' East: 2564034.9365'

Segment #4 : Line

Course: N88°51'35"E Length: 164.91'
North: 429045.6618' East: 2564199.8138'

Segment #5 : Line

Course: S27°47'12"W Length: 125.62'
North: 428934.5271' East: 2564141.2522'

Segment #6 : Line

Course: S55°38'34"W Length: 25.00'
North: 428920.4183' East: 2564120.6138'

Segment #7 : Line

Course: S65°09'17"W Length: 35.71'
North: 428905.4141' East: 2564088.2089'

Segment #8 : Line

Course: S79°46'16"W Length: 4.92'
North: 428904.5404' East: 2564083.3671'

Segment #9 : Line

Course: S65°28'16"W Length: 407.79'
North: 428735.2455' East: 2563712.3793'

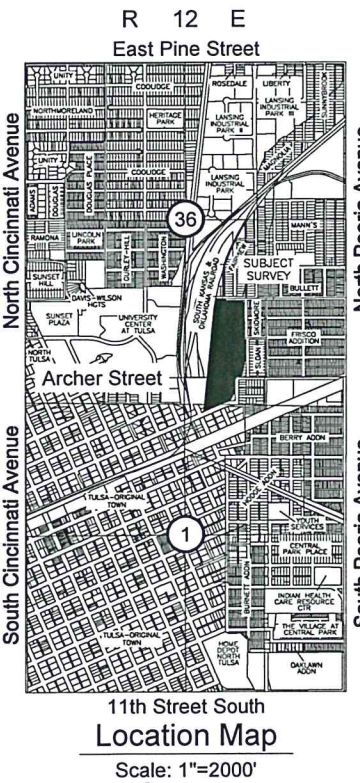
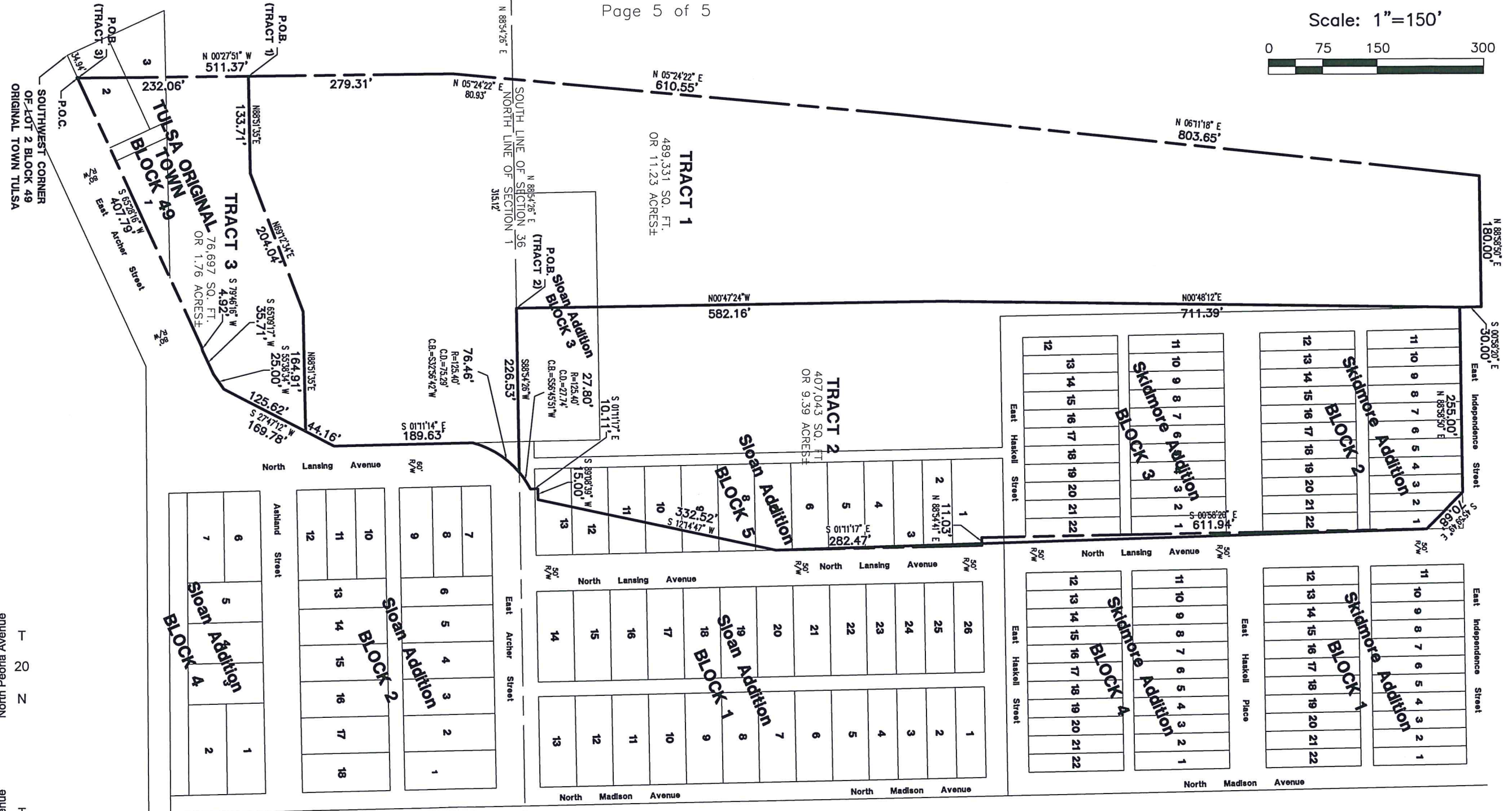
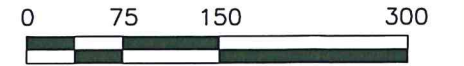
Perimeter: 1333.76' Area: 1.76acres
Error Closure: 0.0034 Course: N03°18'43"E
Error North: 0.00335 East: 0.00019

Precision 1: 392282.35

EXHIBIT "A"



Scale: 1"=150'



FILE: 185041 LG-A

Notes

1. THE BEARING BASE FOR THIS EXHIBIT IS BASED ON THE SOUTH LINE OF SECTION 36 AS N88°54'26"E.
2. SEE EXHIBIT "A" PAGE 1 FOR LEGAL DESCRIPTION AND SURVEYOR'S CERTIFICATE.

BENNETT
SURVEYING, INC.

P.O. BOX 848, CHOUTEAU, OK 74337
PHONE: (918) 476-7484 FAX: (918) 476-7485
C.A. NO.: 4502 EXP. DATE: 6/30/20

APPENDIX F
ODEQ TBA & CONTRACTOR REPORTS

TARGETED BROWNFIELDS ASSESSMENT

Limited Phase II Investigation

For

Former Evans Fintube Facility
Tulsa, OK

Prepared by:



May 4, 2018

Table of Contents

1.0 INTRODUCTION 1
2.0 SITE DESCRIPTION AND HISTORY 1
3.0 FIELD ACTIVITIES 1
4.0 RESULTS 2
5.0 DEVIATIONS FROM FIELD SAMPLING PLAN 3
6.0 SUMMARY AND CONCLUSIONS4
APPENDICES 5

APPENDIX A – SITE MAP

APPENDIX B – BORING LOGS

APPENDIX C – ANALYTICAL RESULTS

APPENDIX D – PHOTOS OF DRILLING

APPENDIX E – LOG BOOKS

1.0 Introduction

The Department of Environmental Quality (DEQ) is able to provide assistance to Oklahoma municipalities through DEQ's Targeted Brownfields Assessment (TBA) Program, which is funded by a 128a grant provided by the United States EPA (RP-00F70401). As part of this program, DEQ performed a Limited Phase II Environmental Site Assessment (ESA) for the City of Tulsa to address polychlorinated biphenyl (PCB) contamination at the Evans-Fintube site. This TBA only investigated the PCB contamination at the site with the intentions to provide the City necessary information to move forward with remediation and development.

2.0 Site Description and History

The Evans-Fintube site is located at 186 N. Lansing Avenue in Tulsa, Oklahoma and consists of two building complexes (the Evans Complex to the south and Fintube Complex to the north) on approximately 22 acres of land. The Evans Complex had previously been used as a steel manufacturing facility, complete with an on-site foundry, prior to being used to manufacture transformers and generators. The Fintube Complex was used to manufacture metal heat exchangers and had on-site welding shops and a forge. The Fintube Complex was also used as a staging area for gravel and aggregate concrete for highway construction. Both lots are currently vacant and the buildings were assessed and abated for asbestos containing materials (ACM) and lead-based paint (LBP) as part of the 2010 Phase II ESA.

3.0 Field Activities

DEQ personnel were on-site May 15 - 17, 2017 conducting field activities associated with this investigation. The timeline for field activities is as follows:

- May 15 – DEQ personnel Samuel Hooker and Trenton Wilhelm marked the site for well and sampling locations
- May 16 – Amy Brittain and Chanh Le oversaw drilling, monitoring well installation, and subsurface soil sampling while Mr. Hooker and Mr. Wilhelm collected surface soil samples
- May 17 – Katrina Pollard joined Mr. Wilhelm in collecting subslab soil samples while Mr. Hooker and Mr. Le collected groundwater samples using low-flow sample technology

Five monitoring wells were advanced using an air-rotary drilling rig using hollow-stem augers dedicated to use at each well. Sample locations were determined by reviewing two Phase I ESAs (2009 and 2011), a 2010 Phase II ESA, and reported spill history provided by the City of Tulsa.

This investigation included collecting 6 surface soil, 6 subslab soil (treated as surface soil samples), 4 subsurface soil, and 6 groundwater samples. The subslab samples were collected by removing a small portion of the concrete slab with a concrete corer connected to the drilling rig and sampling the soil found directly beneath. The subslab soil sample locations were determined by a visual inspection of the concrete floor and areas which exhibited cracks and avenues for contamination to penetrate were selected. Other surface soil sample locations were determined by reviewing results from previous investigations with the intent to delineate PCB contamination in accordance with 40 CFR Part 761, Subpart N PCB Characterization.

Groundwater well locations were selected to determine if PCBs were present in the groundwater and, if present, whether or not migration was occurring. One groundwater well (MW-1) was selected to

represent background levels at the site. Groundwater wells were advanced to the following depths in feet below ground surface (bgs):

- MW-1 – 30'
- MW-2 – 20'
- MW-3 – 20'
- MW-4 – 20'
- MW-5 – 20'

Groundwater samples were lab filtered to remove any sediment which could skew the results.

Subsurface soil samples were collected from the core of the hollow-stem augers during drilling of the monitoring wells to see if PCB contamination was found in the subsurface. Subsurface samples CS-1 through CS-4 correlate to the following wells:

- CS-1 – MW-1
- CS-2 – MW-2
- CS-3 and CS-4 – MW-3

The locations of the wells and sampling locations can be found in Appendix A and boring logs can be found in Appendix B.

4.0 Results

There were 22 samples submitted for analysis in this investigation. Of those 22, 4 samples detected PCBs above the detection limits.

PCB detections in the samples SS-6, -7, and -8 were collected from soil in an area that was selected to provide further delineation of a spill at a former storage shed which contained material designated as PCB cleanup waste that had not been properly disposed of during a 1989 PCB spill response. The fourth PCB detection was found at SS-4, a subslab soil sample, where contamination is believed to have originated from vandalized transformers. A previous cleanup effort in this area was performed in 1991-1992, which saw the removal of contaminated sediments atop the slab.

During field activities, a set of labels were mismatched causing the need for laboratory ID numbers to be recorded for their corresponding sample. This resulted in one soil sample (SS-12) being mislabeled as groundwater sample MW-2.

PCBs were not detected in groundwater.

Table 1 details the analytical results produced from this investigation. The analytical results can be found in Appendix B.

Table 1: Sample Results

| Sample Location ID | DEQ SELS Sample ID | Sample Media | Results (mg/kg) |
|-----------------------|--------------------|-------------------|---|
| MW-1 | 1155846 | Groundwater | ND |
| MW-2 | 1159293 | Groundwater | ND |
| MW-3 | 1155848 | Groundwater | ND |
| MW-4 | 1155844 | Groundwater | ND |
| MW-5 | 1155845 | Groundwater | ND |
| MW-6/MW-5 Duplicate | 1155847 | Groundwater | ND |
| SS-1 | 1155852 | Surface Soil | ND |
| SS-2 | 1155853 | Surface Soil | ND |
| SS-3 | 1155854 | Surface Soil | ND |
| SS-4 | 1155861 | Subslab Soil | 0.0411 Aroclor 1254 0.137 Aroclor 1260 |
| SS-5 | 1155862 | Subslab Soil | ND |
| SS-6 | 1155855 | Surface Soil | 0.165 Aroclor 1260 |
| SS-7 | 1155856 | Surface Soil | 0.108 J Aroclor 1260 |
| SS-8 | 1155857 | Surface Soil | 0.488 Aroclor 1260 |
| SS-9* | Not Collected | Subslab Soil | Not Collected* |
| SS-10 | 1155858 | Subslab Soil | ND |
| SS-11 | 1155860 | Subslab Soil | ND |
| SS-12/SS-10 Duplicate | 1157834 | Subslab Soil | ND |
| CS-1 (MW-1) | 1157836 | Subsurface Soil | ND |
| CS-2 (MW-2) | 1157839 | Subsurface Soil | ND |
| CS-3 (MW-3) | 1157835 | Subsurface Soil | ND |
| CS-4/CS-3 Duplicate | 1157838 | Subsurface Soil | ND |
| Equipment Rinsate | 1155843 | Equipment Rinsate | ND |

* Sample not collected due to site conditions

5.0 Deviations from Field Sampling Plan

The following were deviations from the approved Field Sampling Plan (FSP). These deviations are not considered to have any effect on the results of this investigation.

- Amy Brittain and Katrina Pollard were added to the sampling team to replace Hal Cantwell due to scheduling conflicts.
- Subslab soil sample SS-9 was not collected. After the concrete was cored and removed, water located under the slab moved in to the sample area. Efforts were made to clear the water but the speed at which it recharged to the sample area was too quick. This sample was deemed unsuitable to collect.

- The duplicate surface soil sample was collected from SS-10 instead of SS-11. There is no indication this change effected the outcome of the sampling event.
- The FSP stated that a hammer drill would be used to penetrate the concrete for the subslab sample points. The drilling contractor opted to use a concrete coring device for a safer and more expedient outcome.
- During the drilling of MW-1, the groundwater interface was not readily evident; the decision was made to advance an additional 5' (to a total depth of 30' bgs) to ensure groundwater was reached. The remaining wells (MW-2 – MW-5) were advanced 20-25' bgs as stated in the FSP.

6.0 Summary & Conclusions

The results of this Phase II TBA ESA indicate elevated levels of PCBs in four surface soil locations: SS-4 (0.0411 mg/kg Aroclor 1254 and 0.137 Aroclor 1260), SS-6 (0.165 Aroclor 1260), SS -7 (0.108 J Aroclor 1260), and SS-8 (0.488 Aroclor 1260). These levels of PCBs are below the 1.0 mg/kg cleanup level for high occupancy areas.

PCBs were not detected in groundwater or subsurface soil sample analysis.

Appendix A – Site Map

0.0411 Aroclor 1254
0.137 Aroclor 1260

0.165 Aroclor 1260

0.108J Aroclor 1260

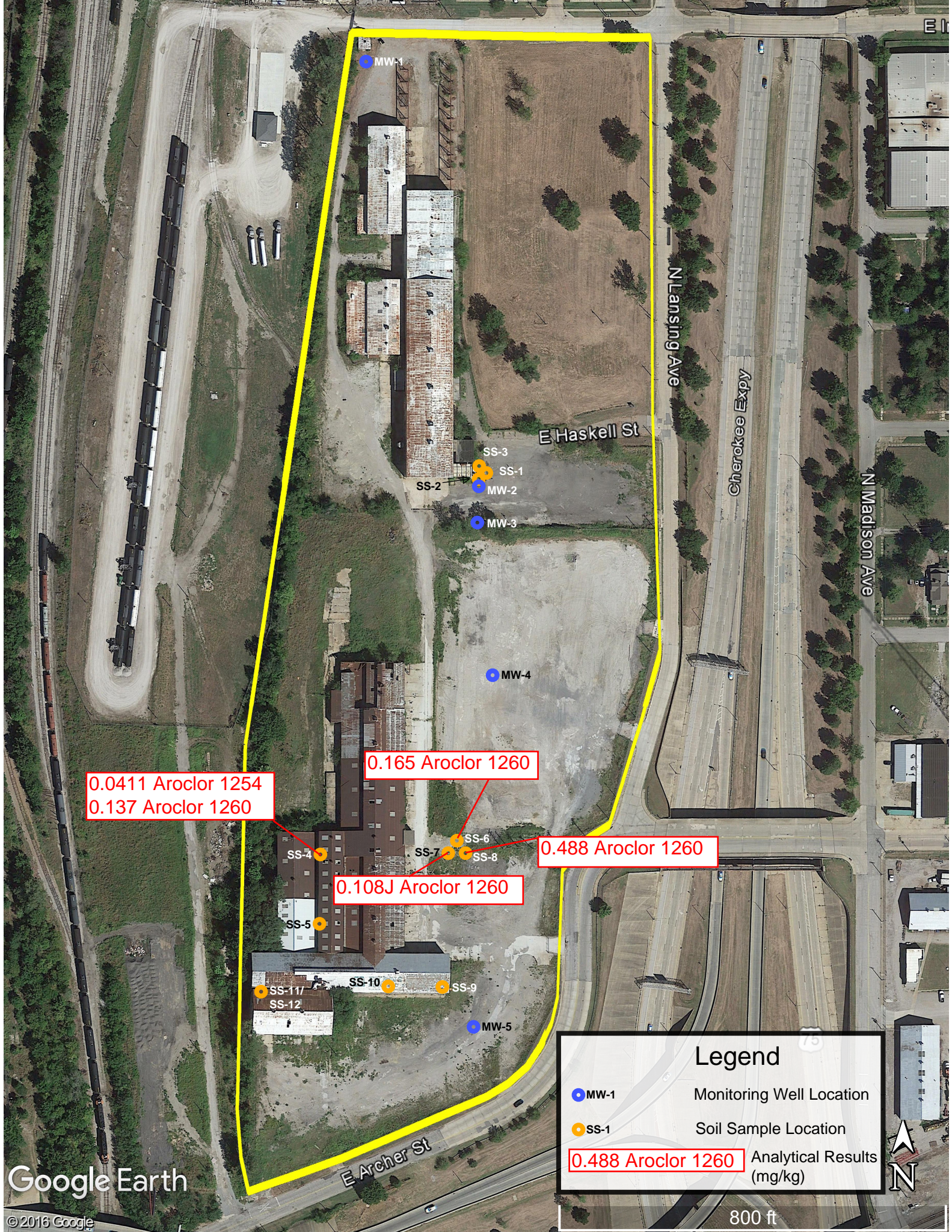
0.488 Aroclor 1260

Legend

- MW-1 Monitoring Well Location
- SS-1 Soil Sample Location


0.488 Aroclor 1260 Analytical Results (mg/kg)

800 ft



Appendix B – Boring Logs

DRILLING/SAMPLING ACTIVITY RECORD

| | | |
|--|---|--|
| PROJECT CODE 1342 | SAMPLING PERSONNEL Amy Brittain, Chanh Le | Date 5/16/2017 |
| SAMPLING STATION MW-1 | COORDINATES Long -95.982833 Lat 36.165920 | SHEET NO. 1 |
| HOLE SIZE 2 inch | DRILLING CONTRACTOR/DRILLER'S NAME Wes Foster, AEI | |
| SKETCH (LOCATION, ORIENTATION, FACILITIES, OTHER NOTES) | | |
|  | | |
| GROUTING (Mix Design, Method) sand pack 3 to 20 feet, bentonite chips 3 to 1 feet, grout 1 to 0 feet below surface. Sand 20-30 feet | | DECONTAMINATION (Method) Alconox with high pressure spray |

SITE Former Evans-Fintube, Tulsa

DRILLING METHOD/EQUIPMENT
Continuous rotary auger

CHRONOLOGICAL RECORD

| TIME | ACTIVITY |
|-------|-----------------------|
| 9:33 | post hole down 2 feet |
| 9:35 | Start drilling |
| 10:57 | stop drilling |

| GROUND EL. | T/CASING EL. | DEPT H H2O | TIME/ DATE |
|------------|--------------|------------|------------|
| | | | |

BORING LOG

| DEPTH BELOW SURFACE | GRAPHIC LOG | SOIL CLASSIFICATION | DESCRIPTION / CLASSIFICATION | % CORE RECOV. | SAMPLE LOG | TIME OF SAMPLE RECOVERY | FIELD VAPOR TEST READINGS | WELL CONSTRUCTION |
|---------------------|-------------|---------------------|---|---------------|------------|-------------------------|---------------------------|-------------------|
| 0' | | | gravel parking lot | 0 | | | | |
| 1' | | | | | | | | |
| 2' | | SM | dark grayish brown (4/3 10YR) fine grained sand | 33 | | | 0 ppm | |
| 3' | | | | | | | | |
| 4' | | CH | very dark grayish brown (3/2 10YR) fine grained fat clay | | | | 0 ppm | |
| 5' | | CH | dark brown (3/3 10YR) fine grained fat clay | 55 | | | | |
| 6' | | | black (2/1 10YR) coal, wet brown (4/3 10YR) fine grained siltstone | | CS-1 | 9:58 | 0 ppm | |
| 7' | | | | | | | | |
| 8' | | | | | | | | |
| 9' | | | | | | | | |
| 10' | | | brown (4/3 10YR) fine grained siltstone | 91 | | | 0 | |
| 11' | | | | | | | | |
| 12' | | | | | | | | |
| 13' | | | | | | | | |
| 14' | | | | | | | | |
| 15' | | | 15- 30' dark gray (4/1 10YR) fine grained siltstone | 100 | | | 0 | |
| 16' | | | | | | | | |
| 17' | | | | | | | | |
| 18' | | | | | | | | |
| 19' | | | | | | | | |
| 20' | | | | | | | | |



SIGNATURE OF SAMPLE TEAM LEADER

Amy Brittain

FIGURE NO.

DRILLING/SAMPLING ACTIVITY RECORD

| | | |
|--|---|--|
| PROJECT CODE 1342 | SAMPLING PERSONNEL Amy Brittain, Chanh Le | Date 5/16/2017 |
| SAMPLING STATION MW-2 | COORDINATES Long -95.982256 Lat 36.164013 | SHEET NO. 1 |
| HOLE SIZE 2 inch | DRILLING CONTRACTOR/DRILLER'S NAME Wes Foster, AEI | |
| SKETCH (LOCATION, ORIENTATION, FACILITIES, OTHER NOTES) | | |
| | | |
| GROUTING (Mix Design, Method) sand pack 3 to 20 feet, bentonite chips 3 to 1 feet, grout 1 to 0 feet below surface. | | DECONTAMINATION (Method) Alconox with high pressure spray |

SITE Former Evans-Fintube, Tulsa

DRILLING METHOD/EQUIPMENT
Continuous rotary auger

| TIME | ACTIVITY |
|-------|-----------------------|
| 14:40 | post hole down 2 feet |
| 14:44 | Start drilling |
| 15:05 | stop drilling |

| GROUND EL. | T/CASING EL. | DEPT H H2O | TIME/ DATE |
|------------|--------------|------------|------------|
| | | | |

BORING LOG

| DEPTH BELOW SURFACE | GRAPHIC LOG | SOIL CLASSIFICATION | DESCRIPTION / CLASSIFICATION | % CORE RECOV. | SAMPLE LOG | TIME OF SAMPLE RECOVERY | FIELD VAPOR TEST READINGS | WELL CONSTRUCTION |
|---------------------|-------------|---------------------|--|---------------|------------|-------------------------|---------------------------|-------------------|
| 0' | | SM | 0 to 1.5' very dark brown (2/2 10YR) fine grained sand with gravel | 92 | | | | |
| 1' | | CH | 1.5-10' dark yellowish brown (4/4 10YR) fine grained fat clay with some silt | | | | 0 ppm | |
| 2' | | | | | | | | |
| 3' | | | | | | | | |
| 4' | | | | | | | | |
| 5' | | | | 100 | | | 0 | |
| 6' | | | | | | | | |
| 7' | | | | | | | | |
| 8' | | | | | | | | |
| 9' | | | | | | | | |
| 10' | | CL | dark grayish brown (4/2 10YR) fine grained silt with some clay | 100 | | | 0 | |
| 11' | | | | | | | | |
| 12' | | | | | | | | |
| 13' | | | | | | | | |
| 14' | | | | | | | | |
| 15' | | | gray (5/1 10YR) thinly bedded siltstone | 100 | | | 0 | |
| 16' | | | | | | | | |
| 17' | | | | | | | | |
| 18' | | | | | | | | |
| 19' | | | 19-20' gray (5/1 10YR) fine grained siltstone | | GS-2 | 15:03 | | |
| 20' | | | | | | | | |



SIGNATURE OF SAMPLE TEAM LEADER

AJ Brittain

FIGURE NO.

| | | | | | | |
|---|--|-----------------------|--|---|---|--|
| DRILLING/SAMPLING ACTIVITY RECORD | | | | PROJECT CODE 1342 | SAMPLING PERSONNEL Amy Brittain, Chanh Le | Date 5/16/2017 |
| SITE Former Evans-Fintube, Tulsa | | | | SAMPLING STATION MW-3 | COORDINATES Long -95.982246 Lat 36.163846 | SHEET NO. 1 |
| DRILLING METHOD/EQUIPMENT Continuous rotary auger | | | | HOLE SIZE 2 inch | DRILLING CONTRACTOR/DRILLER'S NAME Wes Foster, AEI | |
| CHRONOLOGICAL RECORD | | | | | | |
| TIME | | ACTIVITY | | | | |
| 13:35 | | post hole down 2 feet | | | | |
| 13:38 | | Start drilling | | | | |
| 14:00 | | stop drilling | | | | |
| SKETCH (LOCATION, ORIENTATION, FACILITIES, OTHER NOTES) | | | | | | |
| | | | | | | |
| GROUND EL. | | | | T/CASING EL. | DEPT H H2O | TIME/DATE |
| | | | | GROUTING (Mix Design, Method) sand pack 3 to 20 feet, bentonite chips 3 to 1 feet, grout 1 to 0 feet below surface. | | DECONTAMINATION (Method) Alconox with high pressure spray |

BORING LOG

| DEPTH BELOW SURFACE | GRAPHIC LOG | SOIL CLASSIFICATION | DESCRIPTION / CLASSIFICATION | % CORE RECOV. | SAMPLE LOG | TIME OF SAMPLE RECOVERY | FIELD VAPOR TEST READINGS | WELL CONSTRUCTION |
|---------------------|-------------|---------------------|---|---------------|---------------|-------------------------|---------------------------|-------------------|
| 0' | | CH | black (2/1 10YR) fine grained fat clay | 70 | | | | |
| 1' | | CH | very dark grayish brown (3/2 10YR) fine grained fat clay with some silt | | | | 0 ppm | |
| 2' | | | | | | | | |
| 3' | | | | | | | | |
| 4' | | | | | | | | |
| 5' | | CH | dark yellowish brown (4/4 10YR) fine grained fat clay | 100 | | | 0 | |
| 6' | | | dark yellowish brown (4/4 10YR) fine grained fat clay | | | | | |
| 7' | | | | | | | | |
| 8' | | | | | | | | |
| 9' | | | | | | | | |
| 10' | | | dark brown (3/3 7.5YR) thinly bedded siltstone | 100 | | | 0 | |
| 11' | | | | | | | | |
| 12' | | | | | | | | |
| 13' | | | dark brown (3/3 10YR) fine grained siltstone | | | | | |
| 14' | | | | | | | | |
| 15' | | CH | dark gray (4/1 7.5YR) fine grained fat clay, wet dark gray (4/1 10YR) fine grained siltstone | 66 | CS-3/ CS-4 | 14:03 | 0 | |
| 16' | | | | | | | | |
| 17' | | | | | | | | |
| 18' | | | | | | | | |
| 19' | | | | | | | | |
| 20' | | | | | | | | |



SIGNATURE OF SAMPLE TEAM LEADER

Aj Brittain

FIGURE NO.

| | | | | | | |
|---|--|-----------------------|--|---|------------------------------------|--------------------------|
| DRILLING/SAMPLING ACTIVITY RECORD | | | | PROJECT CODE | SAMPLING PERSONNEL | Date |
| | | | | 1342 | Amy Brittain, Chanh Le | 5/16/2017 |
| SITE Former Evans-Fintube, Tulsa | | | | SAMPLING STATION | COORDINATES | SHEET NO. |
| | | | | MW-4 | Long -95.982231 Lat 36.163170 | 1 |
| DRILLING METHOD/EQUIPMENT | | | | HOLE SIZE | DRILLING CONTRACTOR/DRILLER'S NAME | |
| Continuous rotary auger | | | | 2 inch | Wes Foster, AEI | |
| CHRONOLOGICAL RECORD | | | | | | |
| TIME | | ACTIVITY | | | | |
| 12:29 | | post hole down 2 feet | | | | |
| 12:32 | | start drilling | | | | |
| 12:55 | | stop drilling | | | | |
| SKETCH (LOCATION, ORIENTATION, FACILITIES, OTHER NOTES) | | | | | | |
| | | | | | | |
| GROUND EL. | | | | T/CASING EL. | DEPT H H2O | TIME/ DATE |
| | | | | sand pack 3 to 20 feet, bentonite chips 3 to 1 feet, grout 1 to 0 feet below surface. | | DECONTAMINATION (Method) |
| | | | | Alconox with high pressure spray | | |

BORING LOG

| DEPTH BELOW SURFACE | GRAPHIC LOG | SOIL CLASSIFICATION | DESCRIPTION / CLASSIFICATION | % CORE RECOV. | SAMPLE LOG | TIME OF SAMPLE RECOVERY | FIELD VAPOR TEST READINGS | WELL CONSTRUCTION |
|---------------------|-------------|---------------------|--|---------------|------------|-------------------------|---------------------------|-------------------|
| 0' | | | gravel, asphalt, and brick fill | 80 | | | | |
| 1' | | | | | | | 0 ppm | |
| 2' | | | | | | | | |
| 3' | | CH | dark brown (3/3 10YR) fine grained fat clay | | | | | |
| 4' | | | | | | | | |
| 5' | | CH | black (2.5/1 2.5YR) fine grained fat clay | 90 | | | 0 | |
| 6' | | | | | | | | |
| 7' | | | | | | | | |
| 8' | | | | | | | | |
| 9' | | | | | | | | |
| 10' | | CH | very dark brown (2/2 10YR) fine grained fat clay yellowish brown (5/6 10YR) fine grained siltstone | 100 | | | 0 | |
| 11' | | | | | | | | |
| 12' | | | | | | | | |
| 13' | | | | | | | | |
| 14' | | | | | | | | |
| 15' | | | dark yellowish brown (3/6 10YR) thinly bedded fine grained siltstone | 100 | | | 0 | |
| 16' | | CH | dark yellowish brown (3/6 10YR) fat clay, moist dark yellowish brown (3/6 10YR) fine grained silt stone | | | | | |
| 17' | | | | | | | | |
| 18' | | | | | | | | |
| 19' | | | | | | | | |
| 20' | | | | | | | | |

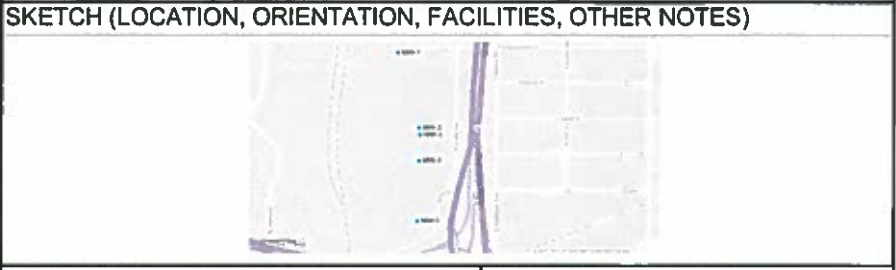


SIGNATURE OF SAMPLE TEAM LEADER

Amy Brittain

FIGURE NO.

| | | | | | | |
|--|--|-----------------------|--|---|------------------------------------|--------------------------|
| DRILLING/SAMPLING ACTIVITY RECORD | | | | PROJECT CODE | SAMPLING PERSONNEL | Date |
| | | | | 1342 | Amy Brittain, Chanh Le | 5/16/2017 |
| SITE Former Evans-Fintube, Tulsa | | | | SAMPLING STATION | COORDINATES | SHEET NO. |
| | | | | MW-5 | Long -95.982275 Lat 36.161642 | 1 |
| DRILLING METHOD/EQUIPMENT | | | | HOLE SIZE | DRILLING CONTRACTOR/DRILLER'S NAME | |
| Continuous rotary auger | | | | 2 inch | Wes Foster, AEI | |
| CHRONOLOGICAL RECORD | | | | | | |
| TIME | | ACTIVITY | | | | |
| 11:44 | | post hole down 2 feet | | | | |
| 11:46 | | start drilling | | | | |
| 12:05 | | stop drilling | | | | |
| GROUND EL. | | | | T/CASING EL. | DEPT H H2O | TIME/DATE |
| | | | | sand pack 3 to 20 feet, bentonite chips 3 to 1 feet, grout 1 to 0 feet below surface. | | DECONTAMINATION (Method) |
| | | | | Alconox with high pressure spray | | |



BORING LOG

| DEPTH BELOW SURFACE | GRAPHIC LOG | SOIL CLASSIFICATION | DESCRIPTION / CLASSIFICATION | % CORE RECOV. | SAMPLE LOG | TIME OF SAMPLE RECOVERY | FIELD VAPOR TEST READINGS | WELL CONSTRUCTION | |
|---------------------|-------------|---------------------|---|--|------------|-------------------------|---------------------------|-------------------|---|
| 0' | | CH | brown (4/4 7.5YR) fine grained fat clay | 86 | | | 0 ppm | | |
| 1' | | | | | | | | | |
| 2' | | | | | | | | | |
| 3' | | | | | | | | | |
| 4' | | | CH | grayish brown (5/2 10YR) fine grained fat clay | | | | | |
| 5' | | | CH | dark yellowish brown (4/6 10YR) fine grained fat clay with some sand | 100 | | | | 0 |
| 6' | | | | | | | | | |
| 7' | | | | | | | | | |
| 8' | | | | | | | | | |
| 9' | | | | | | | | | |
| 10' | | | | yellowish brown (5/6 10YR) fine grained siltstone | 100 | | | | 0 |
| 11' | | | | | | | | | |
| 12' | | | | | | | | | |
| 13' | | | | | | | | | |
| 14' | | | | | | | | | |
| 15' | | | | dark yellowish brown (4/6 10YR) thinly bedded fine grained siltstone | 100 | | | | 0 |
| 16' | | | | | | | | | |
| 17' | | | | | | | | | |
| 18' | | | | dark gray (4/1 10YR) fine grained siltstone | | | | | |
| 19' | | | | | | | | | |
| 20' | | | | | | | | | |



SIGNATURE OF SAMPLE TEAM LEADER

Amy Brittain

FIGURE NO.

Appendix C – Analytical Data



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

| | |
|---------------------------------------|------------------------------------|
| Sample Number: OTHR-1155846-03 | Collected By: SH, TW, KP |
| EVANS FINTUBE | Collected: 5/17/17 11:05 am |
| MW-1 | Received: 5/18/17 8:22 am |
| | Receipt Temp: 3.0 °C |

TEST RESULTS

Analysis Method: EPA 608

Analysis: EPA608 Chlorinated Pesticides and PCBs

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|------|------------|----------|-------------|
| Aroclor 1016 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1221 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1232 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1242 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1248 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1254 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1260 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1262 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1268 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Polychlorinated Biphenyls | <0.25 | µg/L | | PJ | 05/24/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) setsd@deq.ok.gov

SAMPLE INFORMATION

| | |
|---------------------------------------|-------------------------------------|
| Sample Number: OTHR-1157836-01 | Collected By: SH, TW, AB, CL |
| | Collected: 5/16/17 9:58 am |
| CS1 | Received: 5/17/17 10:57 am |
| | Receipt Temp: 2.8 °C |

TEST RESULTS

Analysis Method: EPA CLP SOW Exhibit D **Analysis:** EPA CLP SOW EXH D Percent Solids/Moisture

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|------------------|--------|------|------------|----------|-------------|
| Percent Moisture | 20.6 | % | | TKF | 05/26/2017 |
| Percent Solids | 79.4 | % | | TKF | 05/26/2017 |

Analysis Method: EPA 8082A **Analysis:** EPA 8082A Polychlorinated Biphenyls (PCB)

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|-------|------------|----------|-------------|
| Aroclor 1016 | <12.1 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1221 | <12.1 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1232 | <12.1 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1242 | <12.1 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1248 | <12.1 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1254 | <12.1 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1260 | <12.1 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1262 | <12.1 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1268 | <12.1 | µg/kg | | RLS | 06/21/2017 |
| Polychlorinated Biphenyls | <12.1 | µg/kg | | RLS | 06/21/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

| | |
|---------------------------------------|-------------------------------------|
| Sample Number: OTHR-1159293-03 | Collected By: SH, TW, AB, CL |
| EVANS FINTUBE | Collected: 5/17/17 5:31 pm |
| MW-2 | Received: 5/18/17 8:41 am |
| | Receipt Temp: 3.0 °C |

TEST RESULTS

Analysis Method: EPA 608

Analysis: EPA608 Chlorinated Pesticides and PCBs

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|------|------------|----------|-------------|
| Aroclor 1016 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1221 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1232 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1242 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1248 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1254 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1260 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1262 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1268 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Polychlorinated Biphenyls | <0.25 | µg/L | | PJ | 05/24/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

| | |
|---------------------------------------|-----------------------------------|
| Sample Number: OTHR-1157839-01 | Collected By: SH,TW,AB,CL |
| CS2 | Collected: 5/16/17 3:03 pm |
| | Received: 5/17/17 10:57 am |
| | Receipt Temp: 2.8 °C |

TEST RESULTS

Analysis Method: EPA CLP SOW Exhibit D **Analysis:** EPA CLP SOW EXH D Percent Solids/Moisture

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|------------------|--------|------|------------|----------|-------------|
| Percent Moisture | 8.4 | % | | TKF | 05/26/2017 |
| Percent Solids | 91.6 | % | | TKF | 05/26/2017 |

Analysis Method: EPA 8082A **Analysis:** EPA8082A Polychlorinated Biphenyls (PCB)

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|-------|------------|----------|-------------|
| Aroclor 1016 | <11.0 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1221 | <11.0 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1232 | <11.0 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1242 | <11.0 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1248 | <11.0 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1254 | <11.0 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1260 | <11.0 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1262 | <11.0 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1268 | <11.0 | µg/kg | | RLS | 06/21/2017 |
| Polychlorinated Biphenyls | <11.0 | µg/kg | | RLS | 06/21/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

| | |
|---------------------------------------|-----------------------------------|
| Sample Number: OTHR-1155848-03 | Collected By: SH, TW, KP |
| EVANS FINTUBE | Collected: 5/17/17 3:56 pm |
| MW-3 | Received: 5/18/17 8:34 am |
| | Receipt Temp: 3.0 °C |

TEST RESULTS

Analysis Method: EPA 608

Analysis: EPA608 Chlorinated Pesticides and PCBs

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|------|------------|----------|-------------|
| Aroclor 1016 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1221 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1232 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1242 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1248 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1254 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1260 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1262 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1268 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Polychlorinated Biphenyls | <0.25 | µg/L | | PJ | 05/24/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

Sample Number: OTHR-1157835-01

Collected By: SH, TW, AB, CL

CS3

Collected: 5/16/17 2:03 pm

Received: 5/17/17 10:57 am

Receipt Temp: 2.8 °C

TEST RESULTS

Analysis Method: EPA CLP SOW Exhibit D

Analysis: EPA CLP SOW EXH D Percent Solids/Moisture

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|------------------|--------|------|------------|----------|-------------|
| Percent Moisture | 14.7 | % | | TKF | 05/26/2017 |
| Percent Solids | 85.3 | % | | TKF | 05/26/2017 |

Analysis Method: EPA 8082A

Analysis: EPA 8082A Polychlorinated Biphenyls (PCB)

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|-------|------------|----------|-------------|
| Aroclor 1016 | <11.5 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1221 | <11.5 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1232 | <11.5 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1242 | <11.5 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1248 | <11.5 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1254 | <11.5 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1260 | <11.5 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1262 | <11.5 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1268 | <11.5 | µg/kg | | RLS | 06/21/2017 |
| Polychlorinated Biphenyls | <11.5 | µg/kg | | RLS | 06/21/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

Sample Number: OTHR-1157838-01
CS4
Collected By: SH, TW, AB, CL
Collected: 5/16/17 3:00 pm
Received: 5/17/17 10:57 am
Receipt Temp: 2.8 °C

TEST RESULTS

Analysis Method: EPA CLP SOW Exhibit D Analysis: EPA CLP SOW EXH D Percent Solids/Moisture

Table with 6 columns: Component Name, Result, Unit, Qualifiers, Reviewer, Analyzed On. Rows include Percent Moisture (22.8%) and Percent Solids (77.2%).

Analysis Method: EPA 8082A Analysis: EPA 8082A Polychlorinated Biphenyls (PCB)

Table with 6 columns: Component Name, Result, Unit, Qualifiers, Reviewer, Analyzed On. Rows list various Aroclor compounds and Polychlorinated Biphenyls, all with results <11.5 µg/kg.

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

| | |
|---------------------------------------|-----------------------------------|
| Sample Number: OTHR-1155844-03 | Collected By: SH, TW, KP |
| EVANS FINTUBE | Collected: 5/17/17 1:54 pm |
| MW-4 | Received: 5/18/17 8:22 am |
| | Receipt Temp: 3.0 °C |

TEST RESULTS

Analysis Method: EPA 608

Analysis: EPA608 Chlorinated Pesticides and PCBs

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|------|------------|----------|-------------|
| Aroclor 1016 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1221 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1232 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1242 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1248 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1254 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1260 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1262 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1268 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Polychlorinated Biphenyls | <0.25 | µg/L | | PJ | 05/24/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

| | |
|---------------------------------------|------------------------------------|
| Sample Number: OTHR-1155845-03 | Collected By: SH, TW, KP |
| EVANS FINTUBE | Collected: 5/17/17 12:29 pm |
| MW-5 | Received: 5/18/17 8:22 am |
| | Receipt Temp: 3.0 °C |

TEST RESULTS

Analysis Method: EPA 608

Analysis: EPA608 Chlorinated Pesticides and PCBs

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|------|------------|----------|-------------|
| Aroclor 1016 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1221 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1232 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1242 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1248 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1254 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1260 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1262 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1268 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Polychlorinated Biphenyls | <0.25 | µg/L | | PJ | 05/24/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

| | |
|---------------------------------------|-----------------------------------|
| Sample Number: OTHR-1155847-03 | Collected By: SH, TW, KP |
| EVANS FINTUBE | Collected: 5/17/17 2:43 pm |
| MW-6 | Received: 5/18/17 8:22 am |
| | Receipt Temp: 3.0 °C |

TEST RESULTS

Analysis Method: EPA 608

Analysis: EPA608 Chlorinated Pesticides and PCBs

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|------|------------|----------|-------------|
| Aroclor 1016 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1221 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1232 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1242 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1248 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1254 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1260 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1262 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1268 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Polychlorinated Biphenyls | <0.25 | µg/L | | PJ | 05/24/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

| | |
|---------------------------------------|-----------------------------------|
| Sample Number: OTHR-1155852-01 | Collected By: SH,TW,AB,CL |
| EVANS FINTUBE | Collected: 5/16/17 1:29 pm |
| SS1 | Received: 5/17/17 10:57 am |
| | Receipt Temp: 2.8 °C |

TEST RESULTS

Analysis Method: EPA CLP SOW Exhibit D **Analysis:** EPA CLP SOW EXH D Percent Solids/Moisture

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|------------------|--------|------|------------|----------|-------------|
| Percent Moisture | 7.1 | % | | TKF | 05/26/2017 |
| Percent Solids | 92.9 | % | | TKF | 05/26/2017 |

Analysis Method: EPA 8082A **Analysis:** EPA8082A Polychlorinated Biphenyls (PCB)

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|-------|------------|----------|-------------|
| Aroclor 1016 | <212 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1221 | <212 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1232 | <212 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1242 | <212 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1248 | <212 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1254 | <212 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1260 | <212 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1262 | <212 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1268 | <212 | µg/kg | | RLS | 06/21/2017 |
| Polychlorinated Biphenyls | <212 | µg/kg | | RLS | 06/21/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selstd@deq.ok.gov

SAMPLE INFORMATION

| | |
|---------------------------------------|-----------------------------------|
| Sample Number: OTHR-1155853-01 | Collected By: SH,TW,AB,CL |
| EVANS FINTUBE | Collected: 5/16/17 1:40 pm |
| SS2 | Received: 5/17/17 10:57 am |
| | Receipt Temp: 2.8 °C |

TEST RESULTS

| | |
|---|--|
| Analysis Method: EPA CLP SOW Exhibit D | Analysis: EPA CLP SOW EXH D Percent Solids/Moisture |
|---|--|

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|------------------|--------|------|------------|----------|-------------|
| Percent Moisture | 12.0 | % | | TKF | 05/26/2017 |
| Percent Solids | 88.0 | % | | TKF | 05/26/2017 |

| | |
|-----------------------------------|--|
| Analysis Method: EPA 8082A | Analysis: EPA 8082A Polychlorinated Biphenyls (PCB) |
|-----------------------------------|--|

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|-------|------------|----------|-------------|
| Aroclor 1016 | <223 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1221 | <223 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1232 | <223 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1242 | <223 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1248 | <223 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1254 | <223 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1260 | <223 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1262 | <223 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1268 | <223 | µg/kg | | RLS | 06/21/2017 |
| Polychlorinated Biphenyls | <223 | µg/kg | | RLS | 06/21/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

| | |
|---------------------------------------|-----------------------------------|
| Sample Number: OTHR-1155854-01 | Collected By: SH,TW,AB,CL |
| EVANS FINTUBE | Collected: 5/16/17 1:21 pm |
| SS3 | Received: 5/17/17 10:57 am |
| | Receipt Temp: 2.8 °C |

TEST RESULTS

| | |
|---|--|
| Analysis Method: EPA CLP SOW Exhibit D | Analysis: EPA CLP SOW EXH D Percent Solids/Moisture |
|---|--|

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|------------------|--------|------|------------|----------|-------------|
| Percent Moisture | 9.2 | % | | TKF | 05/26/2017 |
| Percent Solids | 90.8 | % | | TKF | 05/26/2017 |

| | |
|-----------------------------------|--|
| Analysis Method: EPA 8082A | Analysis: EPA 8082A Polychlorinated Biphenyls (PCB) |
|-----------------------------------|--|

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|-------|------------|----------|-------------|
| Aroclor 1016 | <108 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1221 | <108 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1232 | <108 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1242 | <108 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1248 | <108 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1254 | <108 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1260 | <108 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1262 | <108 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1268 | <108 | µg/kg | | RLS | 06/21/2017 |
| Polychlorinated Biphenyls | <108 | µg/kg | | RLS | 06/21/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

Sample Number: OTHR-1155861-01
EVANS FINTUBE
SS-4

Collected By: SH, TW, KP
Collected: 5/17/17 2:50 pm
Received: 5/18/17 8:32 am
Receipt Temp: 3.0 °C

TEST RESULTS

Analysis Method: EPA CLP SOW Exhibit D

Analysis: EPA CLP SOW EXH D Percent Solids/Moisture

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|------------------|--------|------|------------|----------|-------------|
| Percent Moisture | 15.5 | % | | TKF | 05/26/2017 |
| Percent Solids | 84.5 | % | | TKF | 05/26/2017 |

Analysis Method: EPA 8082A

Analysis: EPA 8082A Polychlorinated Biphenyls (PCB)

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|-------|------------|----------|-------------|
| Aroclor 1016 | <23.7 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1221 | <23.7 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1232 | <23.7 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1242 | <23.7 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1248 | <23.7 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1254 | 41.1 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1260 | 137 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1262 | <23.7 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1268 | <23.7 | µg/kg | | RLS | 06/21/2017 |
| Polychlorinated Biphenyls | 178 | µg/kg | | RLS | 06/21/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

Sample Number: OTHR-1155862-01
EVANS FINTUBE
SS-5

Collected By: SH, TW, KP
Collected: 5/17/17 2:45 pm
Received: 5/18/17 8:22 am
Receipt Temp: 3.0 °C

TEST RESULTS

Analysis Method: EPA CLP SOW Exhibit D

Analysis: EPA CLP SOW EXH D Percent Solids/Moisture

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|------------------|--------|------|------------|----------|-------------|
| Percent Moisture | 15.8 | % | | TKF | 05/26/2017 |
| Percent Solids | 84.2 | % | | TKF | 05/26/2017 |

Analysis Method: EPA 8082A

Analysis: EPA 8082A Polychlorinated Biphenyls (PCB)

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|-------|------------|----------|-------------|
| Aroclor 1016 | <22.8 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1221 | <22.8 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1232 | <22.8 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1242 | <22.8 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1248 | <22.8 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1254 | <22.8 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1260 | <22.8 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1262 | <22.8 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1268 | <22.8 | µg/kg | | RLS | 06/21/2017 |
| Polychlorinated Biphenyls | <22.8 | µg/kg | | RLS | 06/21/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

| | |
|---------------------------------------|-----------------------------------|
| Sample Number: OTHR-1155855-01 | Collected By: SH, TW, KP |
| EVANS FINTUBE | Collected: 5/17/17 1:46 pm |
| SS-6 | Received: 5/18/17 8:32 am |
| | Receipt Temp: 3.0 °C |

TEST RESULTS

Analysis Method: EPA CLP SOW Exhibit D **Analysis:** EPA CLP SOW EXH D Percent Solids/Moisture

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|------------------|--------|------|------------|----------|-------------|
| Percent Moisture | 25.1 | % | | TKF | 05/26/2017 |
| Percent Solids | 74.9 | % | | TKF | 05/26/2017 |

Analysis Method: EPA 8082A **Analysis:** EPA 8082A Polychlorinated Biphenyls (PCB)

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|-------|------------|----------|-------------|
| Aroclor 1016 | <66.2 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1221 | <66.2 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1232 | <66.2 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1242 | <66.2 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1248 | <66.2 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1254 | <66.2 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1260 | 165 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1262 | <66.2 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1268 | <66.2 | µg/kg | | RLS | 06/21/2017 |
| Polychlorinated Biphenyls | 165 | µg/kg | | RLS | 06/21/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

Sample Number: OTHR-1155856-01
EVANS FINTUBE
SS-7

Collected By: SH, TW, KP
Collected: 5/17/17 1:54 pm
Received: 5/18/17 8:32 am
Receipt Temp: 3.0 °C

TEST RESULTS

Analysis Method: EPA CLP SOW Exhibit D

Analysis: EPACLP SOW EXH D Percent Solids/Moisture

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|------------------|--------|------|------------|----------|-------------|
| Percent Moisture | 11.6 | % | | TKF | 05/26/2017 |
| Percent Solids | 88.3 | % | | TKF | 05/26/2017 |

Analysis Method: EPA 8082A

Analysis: EPA8082A Polychlorinated Biphenyls (PCB)

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|-------|------------|----------|-------------|
| Aroclor 1016 | <212 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1221 | <212 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1232 | <212 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1242 | <212 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1248 | <212 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1254 | <212 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1260 | 108 | µg/kg | J | RLS | 06/21/2017 |
| Aroclor 1262 | <212 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1268 | <212 | µg/kg | | RLS | 06/21/2017 |
| Polychlorinated Biphenyls | <212 | µg/kg | | RLS | 06/21/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

| | |
|---------------------------------------|-----------------------------------|
| Sample Number: OTHR-1155857-01 | Collected By: SH, TW, KP |
| EVANS FINTUBE | Collected: 5/17/17 2:00 pm |
| SS-8 | Received: 5/18/17 8:32 am |
| | Receipt Temp: 3.0 °C |

TEST RESULTS

Analysis Method: EPA CLP SOW Exhibit D **Analysis:** EPA CLP SOW EXH D Percent Solids/Moisture

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|------------------|--------|------|------------|----------|-------------|
| Percent Moisture | 9.5 | % | | TKF | 05/26/2017 |
| Percent Solids | 90.5 | % | | TKF | 05/26/2017 |

Analysis Method: EPA 8082A **Analysis:** EPA 8082A Polychlorinated Biphenyls (PCB)

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|-------|------------|----------|-------------|
| Aroclor 1016 | <110 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1221 | <110 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1232 | <110 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1242 | <110 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1248 | <110 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1254 | <110 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1260 | 488 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1262 | <110 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1268 | <110 | µg/kg | | RLS | 06/21/2017 |
| Polychlorinated Biphenyls | 488 | µg/kg | | RLS | 06/21/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.

SS-9

was not taken
(it was under water)



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

| | |
|---------------------------------------|-----------------------------------|
| Sample Number: OTHR-1155858-01 | Collected By: SH, TW, KP |
| EVANS FINTUBE | Collected: 5/17/17 2:12 pm |
| SS-10 | Received: 5/18/17 8:32 am |
| | Receipt Temp: 3.0 °C |

TEST RESULTS

| | |
|---|--|
| Analysis Method: EPA CLP SOW Exhibit D | Analysis: EPA CLP SOW EXH D Percent Solids/Moisture |
|---|--|

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|------------------|--------|------|------------|----------|-------------|
| Percent Moisture | 13.6 | % | | TKF | 05/26/2017 |
| Percent Solids | 86.4 | % | | TKF | 05/26/2017 |

| | |
|-----------------------------------|--|
| Analysis Method: EPA 8082A | Analysis: EPA 8082A Polychlorinated Biphenyls (PCB) |
|-----------------------------------|--|

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|-------|------------|----------|-------------|
| Aroclor 1016 | <57.4 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1221 | <57.4 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1232 | <57.4 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1242 | <57.4 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1248 | <57.4 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1254 | <57.4 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1260 | <57.4 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1262 | <57.4 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1268 | <57.4 | µg/kg | | RLS | 06/21/2017 |
| Polychlorinated Biphenyls | <57.4 | µg/kg | | RLS | 06/21/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

Sample Number: OTHR-1155860-01
EVANS FINTUBE
SS-11

Collected By: SH, TW, KP
Collected: 5/17/17 2:22 pm
Received: 5/18/17 8:32 am
Receipt Temp: 3.0 °C

TEST RESULTS

Analysis Method: EPA CLP SOW Exhibit D Analysis: EPACLP SOW EXH D Percent Solids/Moisture

Table with 6 columns: Component Name, Result, Unit, Qualifiers, Reviewer, Analyzed On. Rows include Percent Moisture (13.0%) and Percent Solids (87.0%).

Analysis Method: EPA 8082A Analysis: EPA8082A Polychlorinated Biphenyls (PCB)

Table with 6 columns: Component Name, Result, Unit, Qualifiers, Reviewer, Analyzed On. Rows list various Aroclor and Polychlorinated Biphenyls with results <11.2 µg/kg.

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selstd@deq.ok.gov

SAMPLE INFORMATION

Sample Number: OTHR-1157834-01

EVANS FINTUBE

MWA-2 *SS-12*

Collected By: SH, TW, KP

Collected: 5/17/17 2:14 pm

Received: 5/18/17 8:30 am

Receipt Temp: 3.0 °C

TEST RESULTS

Analysis Method: EPA CLP SOW Exhibit D

Analysis: EPA CLP SOW EXH D Percent Solids/Moisture

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|------------------|--------|------|------------|----------|-------------|
| Percent Moisture | 14.1 | % | | TKF | 05/26/2017 |
| Percent Solids | 85.9 | % | | TKF | 05/26/2017 |

Analysis Method: EPA 8082A

Analysis: EPA 8082A Polychlorinated Biphenyls (PCB)

| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|-------|------------|----------|-------------|
| Aroclor 1016 | <57.6 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1221 | <57.6 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1232 | <57.6 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1242 | <57.6 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1248 | <57.6 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1254 | <57.6 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1260 | <57.6 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1262 | <57.6 | µg/kg | | RLS | 06/21/2017 |
| Aroclor 1268 | <57.6 | µg/kg | | RLS | 06/21/2017 |
| Polychlorinated Biphenyls | <57.6 | µg/kg | | RLS | 06/21/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.



State Environmental Laboratory Services Division

EPA DRINKING WATER CERTIFICATION #OK00013
NH ELAP ACCREDITATION #2338 FOR METHOD EPA 1623.1

Report of Analysis

General Inquiries: (Toll-Free) 1-866-412-3057 (E-mail) selsd@deq.ok.gov

SAMPLE INFORMATION

| | |
|---------------------------------------|-----------------------------------|
| Sample Number: OTHR-1155843-03 | Collected By: SH, TW, KP |
| EVANS FINTUBE | Collected: 5/17/17 4:07 pm |
| EQUIP. RINSATE | Received: 5/18/17 8:22 am |
| | Receipt Temp: 3.0 °C |

TEST RESULTS

Analysis Method: EPA 608

Analysis: EPA608 Chlorinated Pesticides and PCBs

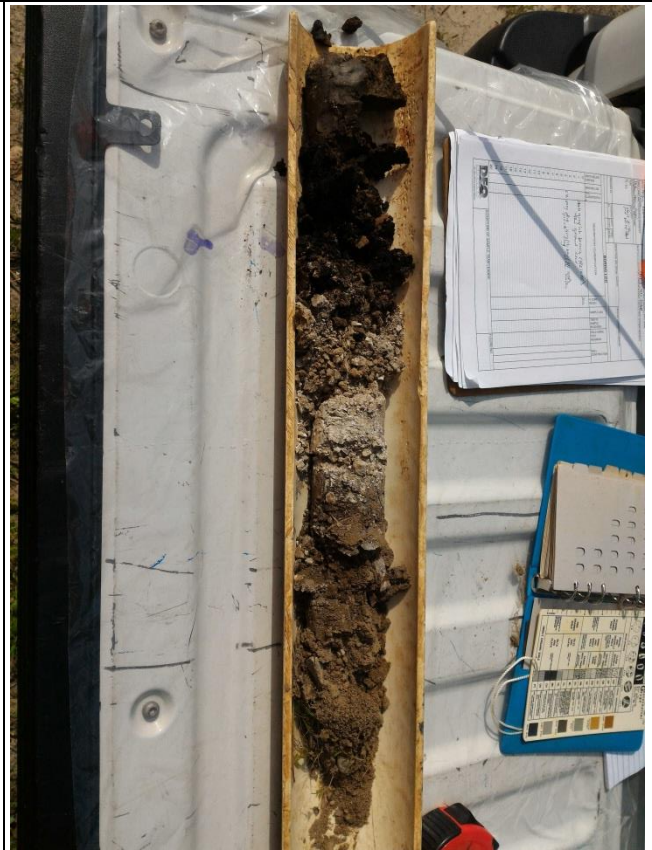
| Component Name | Result | Unit | Qualifiers | Reviewer | Analyzed On |
|---------------------------|--------|------|------------|----------|-------------|
| Aroclor 1016 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1221 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1232 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1242 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1248 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1254 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1260 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1262 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Aroclor 1268 | <0.25 | µg/L | | PJ | 05/24/2017 |
| Polychlorinated Biphenyls | <0.25 | µg/L | | PJ | 05/24/2017 |

All rights reserved. Report may not be reproduced, except in full, without the written approval of the SELSD. Results relate only to the specific sample aliquots tested.

Appendix D – Photos of Drilling



View of the core recovered from MW1 – 0-5'



Close-up view of the core recovered from MW1 – 0-5'



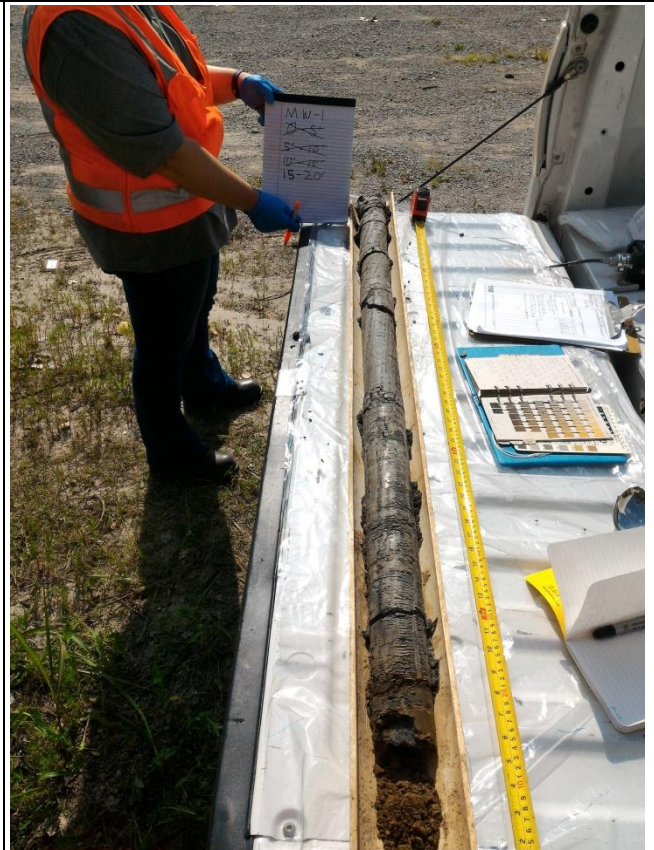
View of the core recovered from MW1 – 5-10'



Close-up view of the core recovered from MW1 – 5-10'



View of the core recovered from MW1 – 10-15'



View of the core recovered from MW1 – 15-20'



View of the core recovered from MW1 – 20-25''



View of the core recovered from MW1 – 25-30''



View of the core recovered from MW5 – 0-5'



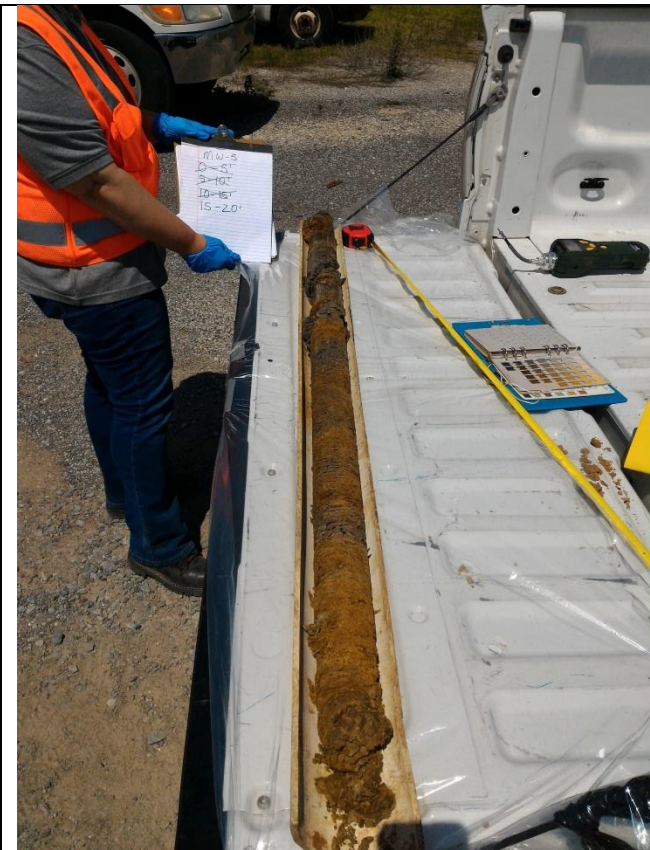
Close-up view of the core recovered from MW5 – 0-5'



View of the core recovered from MW5 – 5-10'



View of the core recovered from MW5 – 10-15'



View of the core recovered from MW5 – 15-20'



View of the core recovered from MW4 – 0-5'



View of the core recovered from MW4 – 5-10'



Close-up view of the core recovered from MW4 – 5-10'



View of the core recovered from MW4 – 10-15'



View of the core recovered from MW4 – 15-20'



View of the core recovered from MW3 – 0-5'



View of the core recovered from MW3 – 5-10'



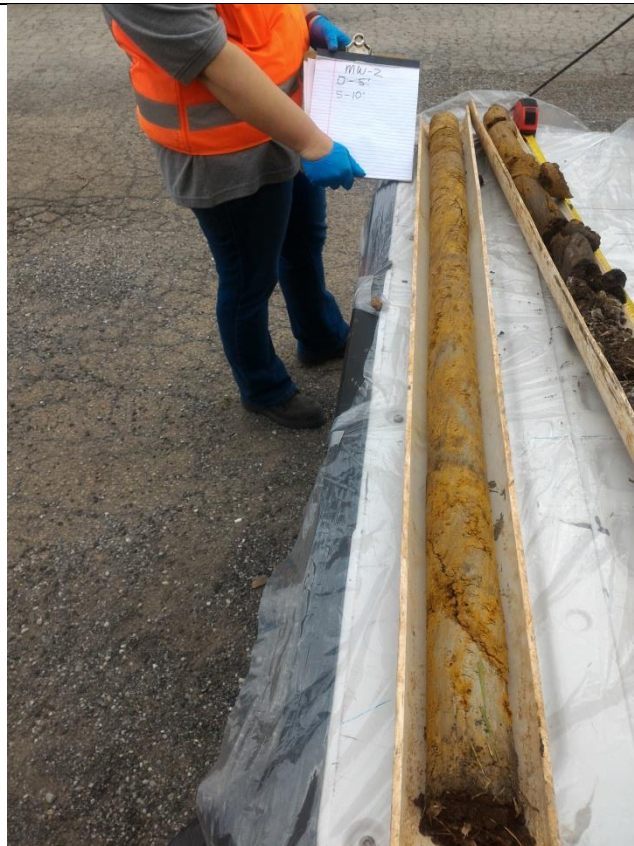
View of the core recovered from MW3 – 10-15'



View of the core recovered from MW3 – 15-20'



View of the core recovered from MW2 – 0-5'



View of the core recovered from MW2 – 5-10'



View of the core recovered from MW2 – 10-15'



View of the core recovered from MW2 – 15-20'

Appendix E – Log Books

Evans Firth & soil sampling
start @ 1314 @ 55-3
Windy from NW

80 partly cloudy

553 @ 1321 - 1155 854 - D1
551 @ 1329 - 1155 852 - 01
552 @ 1340 - 1155 853 - 01

556 @ - 1155 855
557 @ - 1155 856
558 @ - 1155 857

postpond until haul auger
is brought

MW-5 development - set-up
@ 5:30pm - run dry @ 545

MW-4 - started pumping @ 547

- run dry @ 5:50 - sediment (brown)
visible in tubing (still turbid; meter
to black sediment visible - run dry @

MW-3 - started pumping @ 5:59 - dark brown
to black sediment visible - run dry @

"over range"

MW-3 cont'd - meter unable to read
@ 617, 619

- 949 NTUs @ 624
- 362 @ 629
- 243 @ 631
- 226 @ 633
- 164 @ 635
- 130 @ 638
- 110 @ 640
- 88.1 @ 643

- run dry @ 645

MW-2 - started pumping @ 649

- over @ 705
- 541 @ 709
- 338 @ 711
- 220 @ 715
- 96.9 @ 718

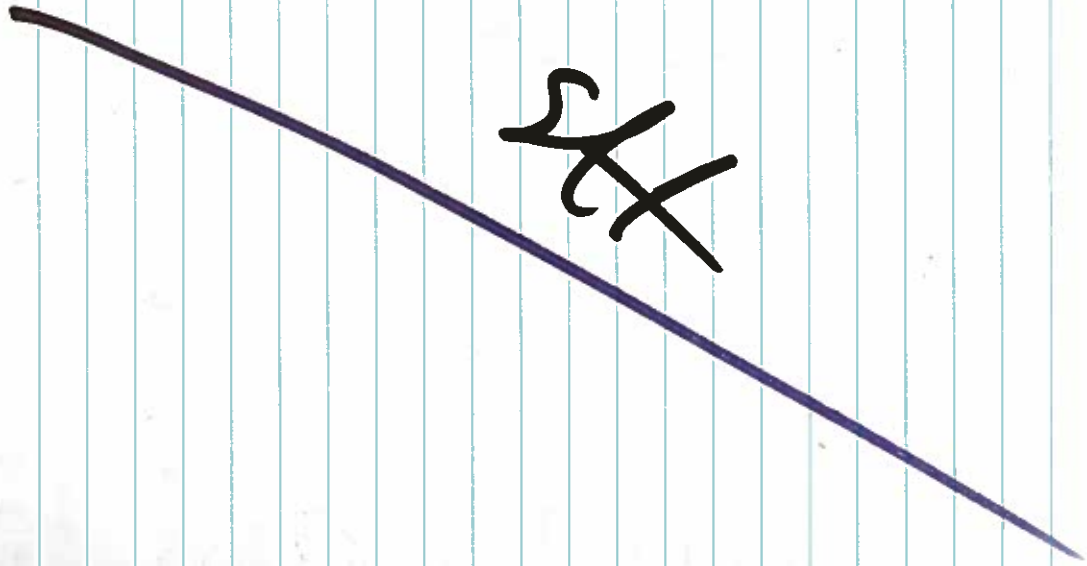


MW-1 - started @ 728

- 432 @ 732
Dry @ 733

Left side @ 8:02

NY



EVANS Fintwe Soil Sampling
S17/17 13:28

continuing outside SIS w/ hard
avg from S16/17

Sunny 81°

Christina Rollrod
Trenton Wilhelm extremely windy

| | | | |
|-----|---|-------|------------|
| S56 | @ | 13:46 | 115585501 |
| S57 | @ | 13:54 | 1155856-01 |
| S58 | @ | 14:00 | 1155857-01 |

| | | | |
|------------------------|--------------|------------------|-----------------------|
| S59 | @ | 14:12 | 1155858-01 |
| inside soil | @ | 14:12 | 1155858-01 |
| chop S512 | @ | 14:14 | 1157834-01 |
| inside soil | @ | 14:22 | 1155860-01 |
| inside soil | @ | 14:22 | 1155861-01 |
| inside soil | @ | 14:22 | 1155862-01 |

| | | | |
|------|---|-------------------|------------|
| S54 | @ | 14:50 | 1155861-01 |
| S55 | @ | 14:45 | 1155862-01 |
| S59 | @ | see notes next pg | 1155859-01 |
| S510 | @ | 14:12 | 1155858-01 |
| S511 | @ | 14:22 | 1155866-01 |
| S512 | @ | 14:14 | 1157834-01 |

↳ dup of S510

Return to Roll

6
SS9 had concrete pushed back
in and was filling back up
with water as fast as we
could get water out & ~~concrete~~
~~was~~ we were unable to
collect an acceptable sample

TW + KP left site
at 15:25

KP

MW-1

Start drill: 09:33 Finish: 10:57
Rot hole top 2'

Gravel: parking lot

D-5'
0-10"

- fine grain sand
- dark grayish brown
- 4/2 10yr
- ~~black clay~~ @ bottom 4"
- ↳ very dark grayish brown
- ↳ 3/2 10yr
- ↳ CH
- ↳

5-10'

• 33'

• dark brown

• 3/3 10yr

• fine sand c.c. grain plastic dry

• Sample taken @ 9:58 am 1197836-01

• fine grain silt sh. brown 4/3 10yr

10-13'

- 55"
- fine grain silt stone
- brown 4/3 10yr

15-20'

- 100%
- dark gray ~~silt~~ ^{c.c.} 4/1, 10yr, fine.
- graded silt stone

20-25'

- same as above
- 100%

25-30'

- same as above

Net @ 12' and 14' when pulled up
 Well for ~~5'-15'~~ ^{c.c.} - 0' PVC
 5'-20' screen PVC
 20-30 sand

MW-5

Start 11:46

Set screen 18-20'

Actual depth 20'

0-3'

- gravel @ top (pebbly (st))
- brown 4/4 ~~to~~ cc 7.5 yr
- plastic clay
- 5 2"

• CIH

• grayish brown s/2 10yr
 better clay
 • CIH

S-10'

- dark yellowish brown 4/6 10yr
- fine grain sandy clay
- 150%

10-15'

- yellowish brown s/6 10yr
- fine grain silt stone
- 150%

15-20'

- 180%
- fine grain silt stone
- thinly bedded
↳ top 2'
- dark yellowish brown 4/6 10yr
- bottom 2' not bedded

18-20'

- ↳ dark gray 4/1 10yr
- ↳ fine grain silt stone
- ↳ not bedded

MW-4

Start 12:32 Finish 13:00

0-5'

- 4' recovery
- gravel, asphalt & brick fill
↳ top 3'
- dark brown 3/3 10yr

5-10'

- .54"
- black 2.5 / 2.5yr
- plastic clay

10-15'

- first 6" ~~same as above~~ ^{CL}
- ↳ 52/2 10yr
- ↳ clay
- hark above silt stone (fine grain)
- ↳ yellowish brown
- ↳ 5/6 10 yr
- 100%

15-20'

• 100%

- first 1' thinbedded fine gravel
silt stone
- ↳ dark yellowish brown 3/6 10yr
- 16'-16.5' moist plastic clay
↳ ~~same~~ same color as above
- 16.5'-20'
↳ same color
↳ fine grain silt stone

MW-3

Start: 13:35

0-5'

.42%

MS block 2/1 10yr
 fine grain plastic clay

• Very dark grayish brown

3/2 10yr

• Fine grain plastic clay
 ↳ some silt

5-10'

.185%

• top 1.5'

↳ dark yellowish brown

4/4 10yr

fine grain plastic clay

• after

↳ dark yellowish brown

4/4 10yr

fine grain silt stone

10-15'

.156%

• top 3'

↳ thin bed silt stone

↳ dark brown 3/4 7.5yr

• bottom

↳ dark brown 3/3 10yr

↳ fine grain silt stone

15-20'

• 4D inches

• wet

• CS3-1157835-01

14:03

CS4-1157830-01

15:00

(duplicate)

.5%

• fine grain plastic

↳ dark gray 4/1 7.5yr

• 1505'-20'

↳ fine grain silt stone

↳ dk gray 4/1 10yr

NW-2
14:44 start

D-5'
-46'

- Very dark brown
- sandy w/ gravel
- 24-2 10yr
- ~~fine grain silty clay~~

- fine grain silty clay
- dk yellowish brown
- 4/4 10yr

S-1B'
-150%

- Same as above

10-15'
-100%

- dark gray brown 4/2 10yr
- fine grain silt w/ some clay

K-20'

• Sample 2-3.6'
1154839-01 (18.5')

- gray s/l 10yr
- 1/4 inky bedded

- 19-20'
- gray s/l
- fine grain silt stone

8/17/14

10:09 on-site

Weather

windy, sunny

MW-1

Depth to H₂O: 4.7'

Depth to bot: 19.9'

Start time pump: 10:35

Pump c/c: 11:13

| Time | Temp °C | D/D _{max} % | Conductivity $\mu S/cm$ | Turbid (ntu) | pH | ORP |
|-------|---------|----------------------|-------------------------|-----------------|------|-------|
| 10:35 | 19.2 | 8.43 | 1440 | 182 | 7.11 | -32.4 |
| 10:38 | 18.8 | 7.76 | 1420 | 124 | 7.14 | -40.5 |
| 10:41 | 18.7 | 8.91 | 1445 | 114 | 7.09 | -42 |
| 10:44 | 18.4 | 8.03 | 1429 | 70.3 | 7.06 | -53.5 |
| 10:47 | 18.4 | 7.66 | 1437 | 36.0 | 7.09 | -62.8 |
| 10:50 | 18.7 | 6.89 | 1450 | 26.3 | 7.07 | -61.6 |
| 10:53 | 18.9 | 7.07 | 1461 | 21.1 | 7.06 | -62.6 |
| 10:56 | 18.7 | 4.23 | 1460 | 19.4 | 7.07 | -64.8 |
| 11:00 | 19.6 | 4.15 | 1415 | 7.08 | 7.08 | -64.6 |
| 11:02 | 18.8 | 4.28 | 1456 | 218.4 | | |

Sample time: 11:05

Sample Comments:

11558416-01 @ 11:05

" " 11:02

" " 11:03

NO comments

MW-5

Depth to Hzs: 13.7

Depth to bot: 20.27

Start pump: ~~12:49~~ 12:32

End pump: 12:53

| Time | Temp °C | DS mg/l | Conductivity $\mu S/cm$ | pH | ORP | Turbidity ntu |
|-------|---------|---------|-------------------------|------|------|---------------|
| 12:15 | 19.7 | 6.82 | 677 | 5.37 | 2619 | 562 |
| 12:18 | 19.5 | 6.11 | 692 | 5.53 | 2377 | 164 |
| 12:21 | 19.4 | 5.96 | 705 | 5.61 | 2192 | 129 |
| 12:24 | 19.4 | 5.85 | 704 | 5.71 | 2107 | 261 |
| 12:27 | 19.4 | 5.83 | 697 | 5.73 | 2116 | 509 |

Sample time: 12:29

11553

Sample comments:

1155 P45 - 61

" " 02

" " 03

NO comment

MW-4

Depth to H₂O: 11.2

Depth to bot: 20.06

Start pump: 13:25

End pump: 14:03

| Time | Temp °C | DO mg/L | Conductivity µS/cm | pH | ORP | Turbidity npt |
|-------|---------|---------|--------------------|------|-------|---------------|
| 13:27 | 19.5 | 5.67 | 947 | 6.64 | 289.5 | 1/2 |
| 13:30 | 18.7 | 6.11 | 926 | 6.67 | 233.9 | 1/2 |
| 13:38 | - | - | - | - | - | - |
| 13:39 | 18.3 | 4.68 | 923 | 6.74 | 187.2 | 572 |
| 13:42 | 18.2 | 5.42 | 925 | 6.75 | 169.6 | 128 |
| 13:45 | 18.0 | 6.37 | 918 | 6.82 | 158.4 | 121 |
| 13:48 | 17.8 | 6.33 | 912 | 6.82 | 149.0 | 115 |
| 13:53 | 18.1 | 6.12 | 917 | 6.81 | 143.8 | 285 |

Sample time: 13:54

Sample comments:

no H2O pumped @ 13:33
changed pump battery @ 13:29

NW-3

Depth to H2O: 2.9
Depth to bot: 19.8
Start pump : 15:39
end pump : 16:12

| Time | Temp °C | DO mg/L | conductivity $\mu S/cm$ | pH | ORP | Turbidity (ntu) |
|-------|---------|---------|-------------------------|------|-------|-----------------|
| 15:39 | 19.9 | 8.06 | 1001 | 6.57 | 178.9 | 342 |
| 15:41 | 18.6 | 6.92 | 975 | 6.59 | 125.5 | 262 |
| 15:45 | 18.6 | 6.24 | 982 | 6.6 | 105.6 | 143 |
| 15:48 | 18.4 | 6.05 | 967 | 6.62 | 95.8 | 69.8 |
| 15:52 | 18.4 | 5.88 | 958 | 6.62 | 88.4 | 47.6 |
| 15:55 | 18.7 | 5.44 | 957 | 6.63 | 84.9 | 54.8 |

Sample time:

Sample comments:

" 1155848" 01
" " -02
" " -03

duplicate }
" 1155847 -01
" " -02
" " -03

Pinstate taken here
" 1155848 -01
" " -02
" " -03

NW-2

Depth to H₂O: 21.3
Depth to bot: 19.9

Start pump 17:56
End pump

| Time | Temp of | DD mg/L | Conductivity µS/cm | pH | ORP | Turbidity ntu |
|-------|---------|------------|-----------------------|------|-------|------------------|
| 17:08 | 20.2 | 1.17 | 2076 2657 | 6.65 | 20.7 | 470 |
| 17:11 | 19.8 | 0.63 | 2387 | 6.66 | 0.9 | 389 |
| 17:14 | 19.9 | 6.55 | 2254 | 6.66 | -13.1 | 197 |
| 17:17 | 19.8 | 4.5 | 2198 | 6.66 | -22 | 106 |
| 17:20 | 19.7 | 4.4 | 2199 | 6.67 | -24.1 | 58 |
| 17:23 | 19.9 | 4.7 | 2193 | 6.66 | -28.8 | 78.7 |
| 17:26 | 20.5 | 5.1 | 2211 | 6.68 | -31.1 | 93.4 |
| 17:29 | 20.9 | 5.5 | 2204 | 6.68 | -32.9 | |

Return to Pump

Sample comments

Samples taken using unlabeled jars

EVANS-FINTUBE PROPERTY RENOVATION – PHASE 1 REPORT
EVANS-FINTUBE PROPERTY
150 NORTH LANSING AVENUE
TULSA, OK

PREPARED FOR:

Michelle Barnett
Deputy Chief of Economic Development
City of Tulsa
175 East 2nd Street
Tulsa, OK 74103
(918) 596-7457
mbarnett@cityoftulsa.org

PREPARED BY:

P. Michael Fitter, Jr.
Seneca Companies, Inc.
6947 East 13th Street
Tulsa, OK 74112
(918) 838-0494
mfitter@senecaco.com

December 10, 2018

TABLE OF CONTENTS

| | |
|---|----------|
| 1.0 EXECUTIVE SUMMARY | 1 |
| 2.0 BACKGROUND | 2 |
| 2.1 Site Description and Features | 2 |
| 2.2 Physical Setting..... | 2 |
| 2.2.1 Regional Geology | 2 |
| 2.2.2 Regional Hydrogeology | 2 |
| 2.2.3 Site-Specific Soils..... | 3 |
| 3.0 SCOPE OF WORK PERFORMED..... | 3 |
| 3.1 Scope of Work Summary | 3 |
| 3.1.1 Pre-Excavation Sampling..... | 5 |
| 3.1.2 Monitoring Well Gauging, Purging and Sampling..... | 9 |
| 3.1.3 Monitoring Well Plugging | 11 |
| 3.1.4 Grubbing & Excavation | 12 |
| 3.1.5 Post-Excavation Sampling/Excavation/Post-Excavation Sampling | 14 |
| 3.2 Quality Control Procedures | 20 |
| 3.2.1 Groundwater Sampling Methods | 20 |
| 3.2.2 Soil Sampling Methods | 20 |
| 3.2.3 Waste Sampling Methods..... | 20 |
| 3.2.4 Sample Handling and Chain-of-Custody | 20 |
| 3.2.5 Field Instrument/Equipment Testing, Inspection and Maintenance..... | 21 |

TABLES

| |
|---|
| Table 1 – Pre-Excavation Analytical Results |
| Table 2 – Monitoring Well Gauging Data |
| Table 3 – Monitoring Well Purge Data |
| Table 4 – Groundwater Analytical Results |
| Table 5 – Backfill 250 Cubic Yards Analytical Results |
| Table 6 – Backfill 250-500 Cubic Yards Analytical Results |
| Table 7 – Composite Drum Sample-Water |
| Table 8 – Post-Excavation Sample Results-First Round |
| Table 9 – Post-Excavation Sample Results-Second Round |
| Table 10 – Post-Excavation Sample Results-Final |

APPENDICES

- A. Waste Manifests
- B. Site Health and Safety Plan with Sign-In Logs
- C. Storm Water Pollution Prevention Plan and Earth Change Permit
- D. Laboratory Analysis of Samples/Chain-of-Custody Forms
- E. OWRB Multi-Purpose Well Completion and Plugging Reports

1.0 EXECUTIVE SUMMARY

Seneca Companies, Inc. (Seneca) was contracted by the City of Tulsa (City) to perform site renovation services in accordance with the scope of work requirements of Competitive Sealed Proposal 18-702 Evans-Fintube Property Renovation – Phase I. Seneca utilized the services of O6 Environmental Services (O6), a Service Disabled Veteran-Owned Small Business (SDVOSB), for the excavation and hauling of contaminated material at the site. Seneca utilized the services of Razek Environmental, a Woman-Owned Small Business (WOSB), for permanent closure of the five (5) onsite monitoring wells.

This project began with a kick off meeting held at City Hall and a site walk on August 13, 2018. Seneca prepared a Stormwater Pollution Prevention Plan and filed a Notice of Intent for stormwater discharge with the State of Oklahoma Department of Environmental Quality on August 29, 2018. Seneca received authorization for stormwater discharge No. OKR1029446 on September 7, 2018. Seneca also filed the application for a City Earth Change Permit on September 5, 2018 and received Permit No. WSD-010912-2018. Seneca marked each of the excavation areas onsite using a Trimble Global Positioning System (GPS) utilizing the GPS coordinates provided by the City. Seneca prepared and submitted a soil transportation route plan to the City for approval. This plan indicated the route the dump trucks would follow from the excavation areas to the soil staging area. The soil staging area was eventually moved by the City from south of Evans building to the southeast corner of the property.

Site work began on September 4, 2018 with the pre-excavation composite sampling of all thirteen (13) excavation sites on the project site. These composite soil samples were submitted under chain-of custody to a state certified laboratory for the analysis specified by the City. Monitoring wells MW-1 and MW-5 were gauged, purged and sampled on September 5, 2018. All five (5) monitoring wells were permanently closed on September 24, 2018 by Razek Environmental. Seneca collected for laboratory analysis, a composite sample of the first 250 cubic yards of backfill to be use on the site. These analytical results were presented to the City and the material was approved for use on the project site. Seneca notified OKIE811 for utility location marking at least 48 hours prior to starting excavation. Seneca and O6 mobilized to the site and started excavation at 7:30 am on September 25, 2018 in location SB02-SS01. Due to a misunderstanding concerning the handling of the excavated soil, fourteen (14) cubic yards of soil excavated from area SB02-SS01 was directly loaded on to a dump truck and hauled to American Environmental Landfill for disposal under a non-hazardous waste manifest. Work was shut down until an archaeological monitor could be present to oversee excavation. Seneca and O6 demobilized from the site. Based on pre-excavation laboratory results, the soil from all excavations was to be stockpiled onsite. Seneca and O6 mobilized to the site and excavation resumed on September 26, 2018 at 7:30 am in area SSB11 and continued to the other areas throughout the day. As each area was excavated to one (1) foot below ground surface, Seneca collected composite soil samples. Excavation and composite soil sampling were completed at 4:00 pm and Seneca demobilized from the site.

It was determined from the laboratory analysis of the composite soil samples that five (5) areas required additional excavation and composite soil sampling (SB02-SS01, SSA01, SSA03, SSB07 and SSB11). Seneca notified the Enercon Services project manager and archaeologist the excavation work would begin on October 5, 2018. Seneca and O6 remobilized to the site on October 5, 2018 to start excavation and composite soil sampling of an additional six (6) inches of soil from the five (5) areas mentioned above. This work was completed by 10:55 am on October 5, 2018. Composite soil samples were submitted to the laboratory for analysis on a 48-hour turnaround basis. Soil sample analytical results indicated that an additional six (6) inches needed to be removed from all five (5) areas. Due to heavy rainfall, the decision was made to delay additional excavation until the site had dried out enough to mobilize the equipment. Seneca again notified the Enercon Services project manager and archaeologist that they would be

back onsite to excavate on October 18, 2018. Seneca and O6 remobilized to the site on October 18, 2018 and completed re-excavation of the five (5) areas by 3:30 pm. Seneca mobilized a vacuum truck to the site and removed stormwater that had collected in area SSB07 and SSB11 and removed 2,000 gallons of stormwater prior to excavation in these areas. This stormwater was hauled under manifest to Environmental Remediation Specialists Inc. (ERS), 1105 N. Peoria Avenue, Tulsa, OK. Seneca collected an additional composite sample of the next 250 cubic yards of backfill material at that time. Each of the excavated areas were backfilled and compacted. Seneca notified the Enercon Services project manager that they would be back onsite to collect the final composite soil samples from the five (5) re-excavated areas on November 5, 2018. Final composite soil samples were collected from each of the re-excavated areas on November 5, 2018. Composite samples were also collected from the five (5) onsite drums of soil waste and the one (1) drum of waste water for landfill profiling. The drummed waste was hauled to American Environmental Landfill on November 9, 2018.

2.0 BACKGROUND

2.1 Site Description and Features

The Evans-Fintube site consists of two building complexes and two vacant lots. The southern complex, identified as the Evans Building Complex, consists of three (3) north-south oriented buildings to the north connected to two (2) east-west oriented buildings to the south. The northern complex, identified as the Fintube Building Complex, consists of four (4) north-south oriented buildings connected to one (1) smaller building to the southeast that is oriented east-west.

According to the historical Sanborn Maps for the Site reviewed during the prior Phase I ESA prepared by ALL Consulting, the Evans Building Complex was formerly a steel manufacturing facility that contained a foundry on the southern end. The vacant lot located east of the Evans Building Complex was formerly used as a paper recycling facility. The Fintube Building Complex was formerly used as a metal manufacturing facility and a producer of heat exchangers that consisted of a concrete reservoir, a forge, and welding and fabrication shops. The vacant lot east of the Fintube Building Complex was formerly a residential area.

2.2 Physical Setting

2.2.1 Regional Geology

The Geologic Map of Oklahoma shows the geologic units underlying subject area to consist of the Upper Pennsylvanian-age Seminole Formation, comprised mainly of shale with interbedded siltstone and sandstone. Regionally, the site lies within the Central Lowland which stretches from the northern border of Minnesota to central Texas. The Central Lowlands are characterized by gently rolling plains with occasional steep bluffs and a number of valleys. Elevations range from 300 to 2,000 feet and the area consists of some nearly flat portions and other areas of rounded hills.

2.2.2 Regional Hydrogeology

The Vamoosa Formation is a member of the Vamoosa-Ada aquifer of east-central Oklahoma, an important source of water underlying parts of Osage, Pawnee, Payne, Creek, Lincoln, Okfuskee, and Seminole Counties. The aquifer consists of very fine-grained sandstone, siltstone, shale, and conglomerate interbedded with very thin limestones.

The nearest surface water feature to the site is the Arkansas River which is located approximately 1.75 miles southwest of the site. Site topography indicates surface drainage generally toward an unnamed creek along the western border of the site.

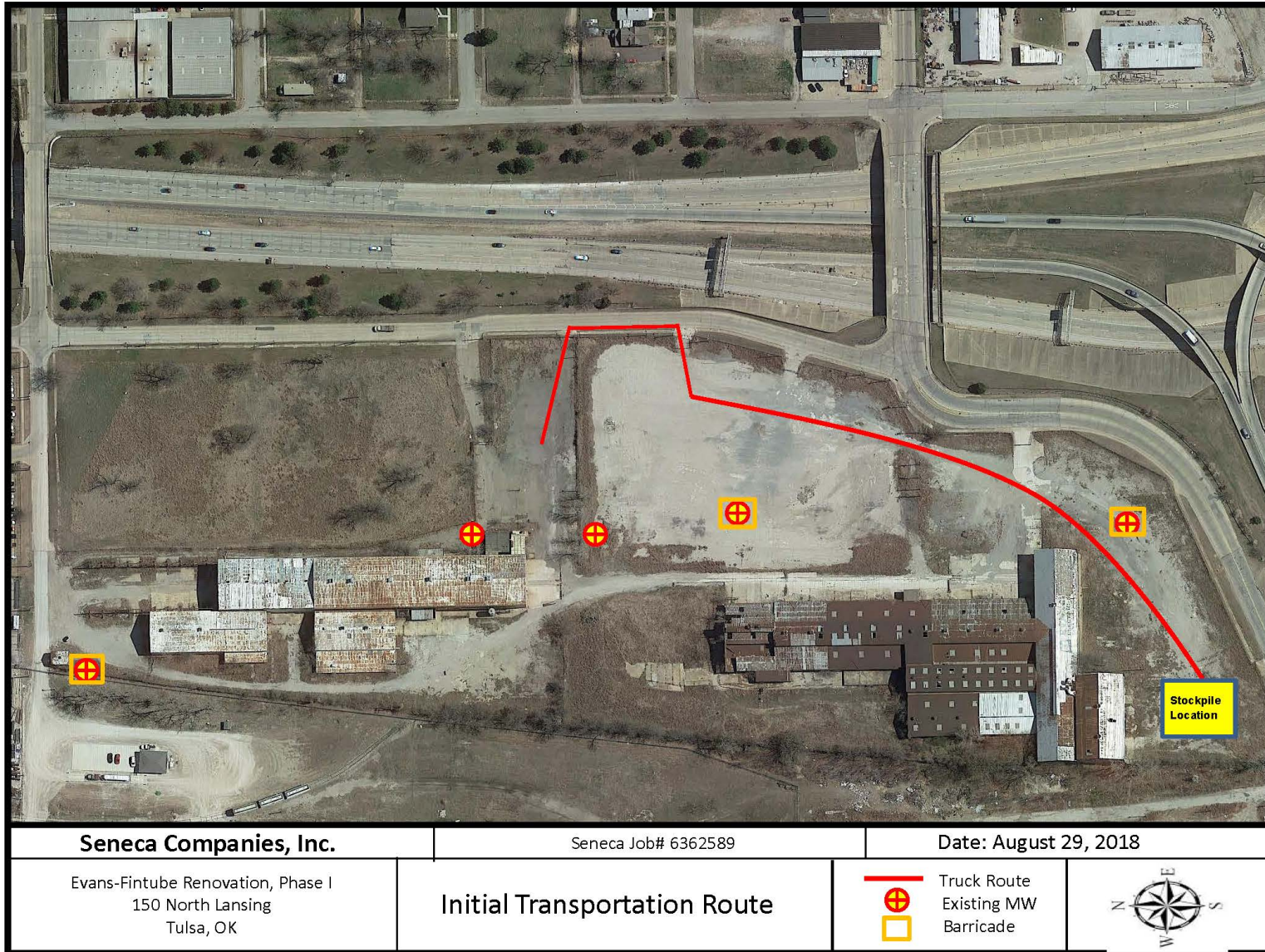
2.2.3 Site-Specific Soils

According to the United States Department of Agriculture - Natural Resources Conservation Service Soil Map the soil at the Site consists mostly of Urban Land (NRCS 2000). Urban Land typically has 0 to 8% slopes, a very high runoff rate, and is not typically subject to flooding or ponding. Urban Land's land capability classification is 8s and is not assigned as an ecological site. The Urban Land at the site is the result of intermingling native soil with fill material introduced during the prior development of site and surrounding properties, which makes it impractical to distinguish the native soil types. Often, the development of a site involves the stripping of the top soil horizon and placement of fill material on top.

3.0 SCOPE OF WORK PERFORMED

3.1 Scope of Work Summary

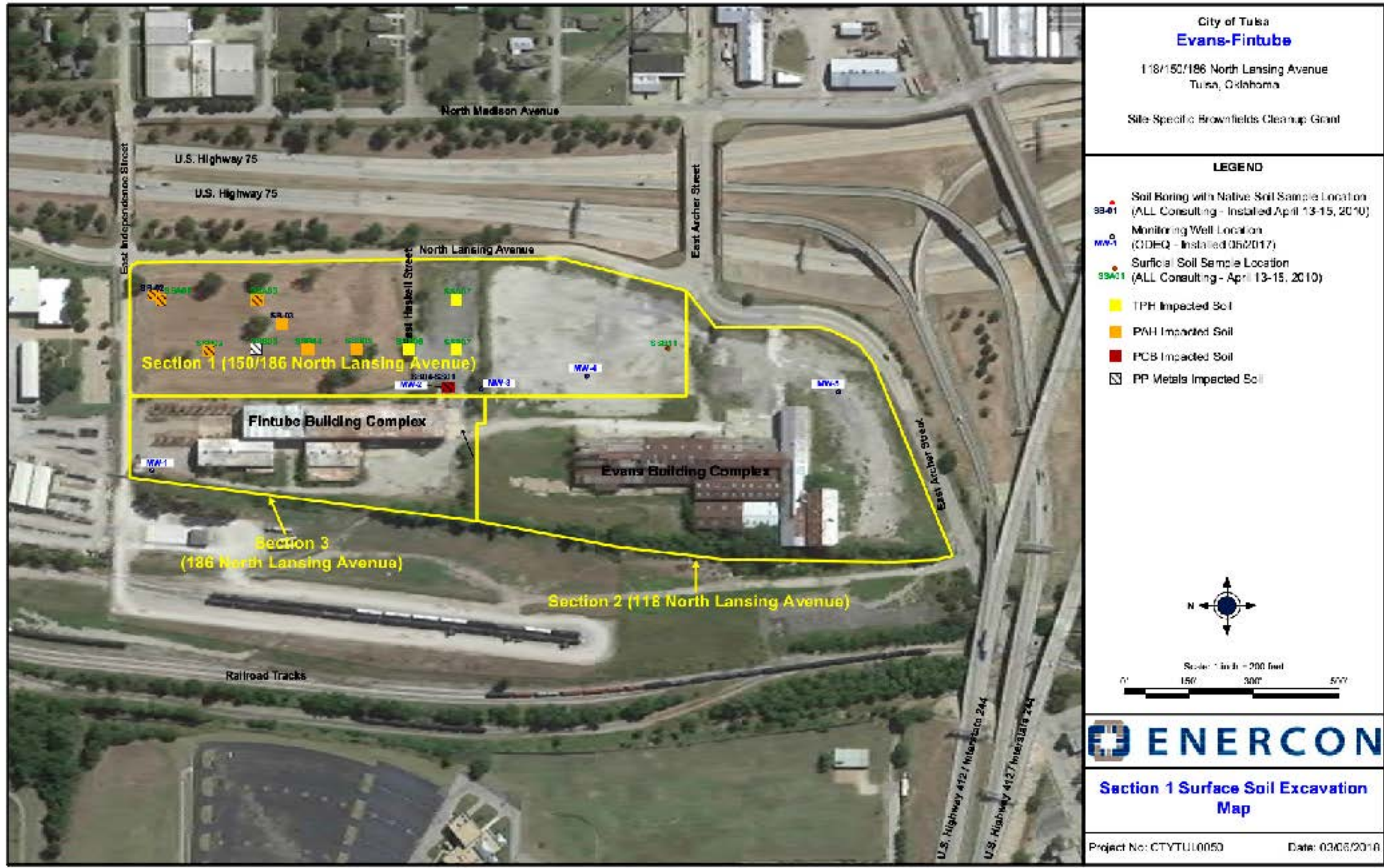
Seneca provided pre-excavation soil sampling, monitoring well sampling, monitoring well closure, soil excavation and post-excavation soil sampling and backfilling of the excavations. Prior to starting field activities, Seneca and O6 met with the City and the City's consultant, Enercon Services to kick off the project and to visit the site on August 13, 2018. Also prior to start of onsite work, Seneca prepared a Stormwater Pollution Prevention Plan and filed a Notice of Intent for stormwater discharge with the State of Oklahoma Department of Environmental Quality on August 29, 2018. Seneca received authorization for stormwater discharge No. OKR1029446 on September 7, 2018. Additionally, Seneca filed the application for a City of Tulsa Earth Change Permit on September 5, 2018 and received Permit No. WSD-010912-2018. Please refer to **Appendix C** for copies of these permits. Seneca marked each of the excavation areas onsite using a Trimble Global Positioning System (GPS) utilizing the GPS coordinates provided by the City. Seneca prepared and submitted a soil transportation route plan to the City for approval. This plan indicated the route the dump trucks would follow from the excavation areas to the soil stockpile staging area. The soil stockpile staging area was eventually moved by the City from south of Evans building to the southeast corner of the property.



3.1.1 Pre-Excavation Sampling

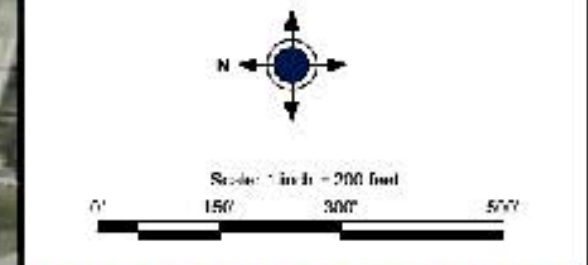
Seneca notified the Enercon Services project manager that they would be onsite to accomplish pre-excavation composite soil sampling on September 4, 2018. Seneca mobilized to the site to begin pre-excavation composite soil sampling on September 4, 2018 at 9:15 am. Mr. Doug Wilson and Ms. Maggie Fehn both of Seneca reviewed and signed the Site Specific Health and Safety Plan (HASP) (refer to **Appendix B**). They began by 5-point composite sampling in area SB02-SS01 (refer to sample location map below). Seneca personnel followed the quality control procedures as outlined in the site Quality Assurance Project Plan (QAPP) and described in **Section 3.2 Quality Control Procedures**, below. Mr. Matthew Payne of Enercon Services arrived onsite to observe the sampling at 11:30 am. Mr. Payne read and signed the HASP. Sampling work progressed to each area until all thirteen (13) composite soil samples had been collected. Seneca personnel also collected a field duplicate sample and all soil samples were labeled, recorded on the chain-of-custody and placed on ice for preservation. These samples were shipped for analysis to Pace Analytical National Center for Testing & Innovation Laboratory, 12065 Lebanon Road, Mt. Juliet, TN 37122.

The soil sample analytical results were received and presented to the City. These analytical results are presented in **Table 1** below and in **Appendix D**. In order for the landfill to accept any soils for disposal, they require TCLP Extraction lead analysis. Therefore, soil samples from areas SSA01, SB02-SS01, and SS03 were analyzed for TCLP Extraction lead concentration. These results are also presented in **Table 1** below and **Appendix D**.



City of Tulsa
Evans-Fintube
118/150/186 North Lansing Avenue
Tulsa, Oklahoma
Site Specific Brownfields Cleanup Grant

- LEGEND**
- Soil Boring with Native Soil Sample Location (ALL Consulting - Installed April 13-15, 2010)
 - Monitoring Well Location (CDEQ - Installed 06/2017)
 - Surface Soil Sample Location (ALL Consulting - April 13-15, 2010)
 - TPH Impacted Soil
 - PAH Impacted Soil
 - PCB Impacted Soil
 - PP Metals Impacted Soil



Section 1 Surface Soil Excavation Map

Project No: CTYTUL0050 Date: 03/06/2018

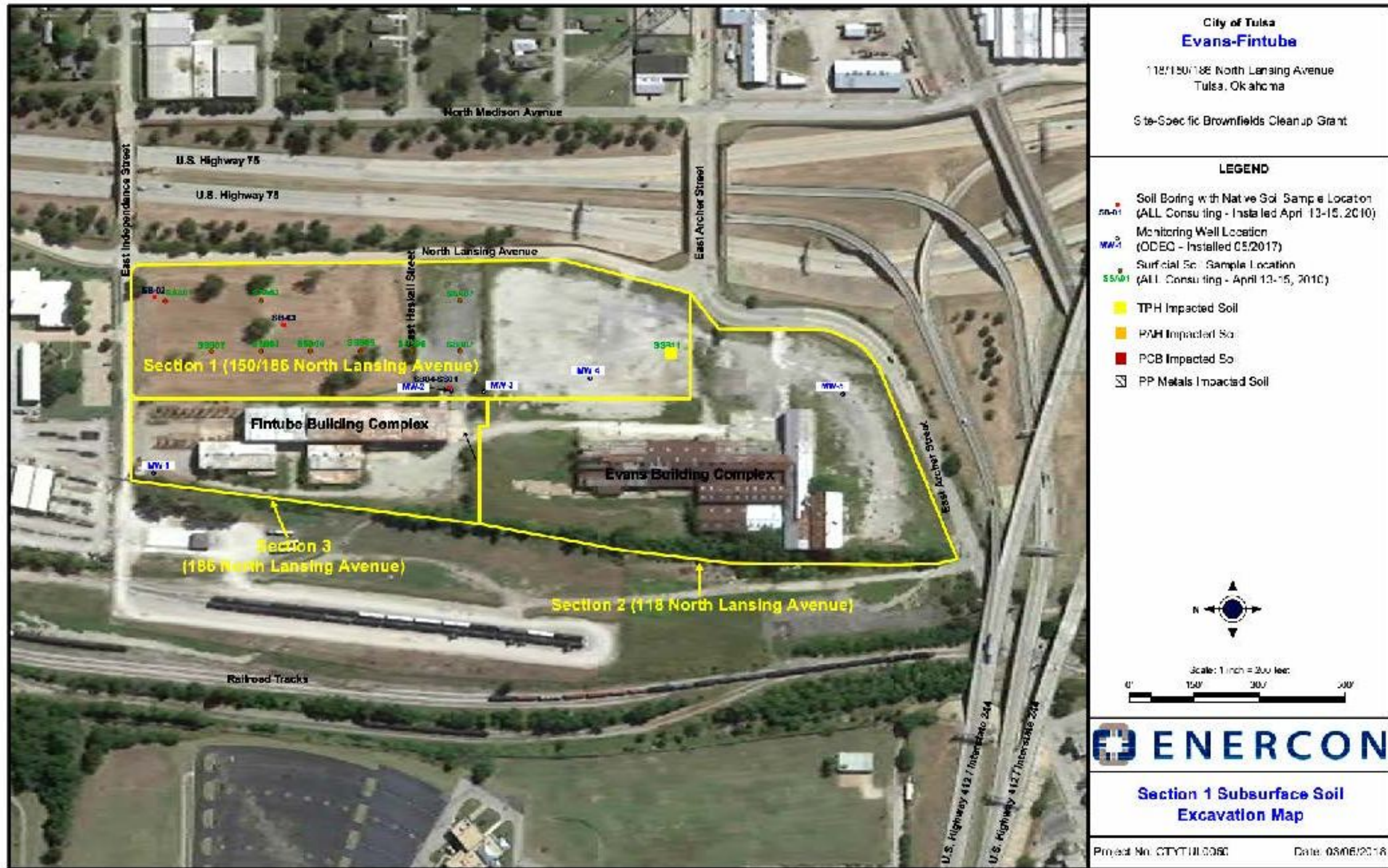


Table 1-Pre-Excavation Sample Results

| Sample ID | | | RBSL for Residential Soils | RBSL for Industrial Soils | SSA01 | SSB02 | SB02-SS01 | SSA03 | SSB03 | SB03-SS01 | SSB04 | SSB05 | SSB06 | SB04-SS01 | SSA07 | SSB07 | SSB11 | SB03-SS01DUP |
|----------------|------------------------|-------|----------------------------|---------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--------------|
| Date Collected | | | | | 09/04/2018 | 09/04/2018 | 09/04/2018 | 09/04/2018 | 09/04/2018 | 09/04/2018 | 09/04/2018 | 09/04/2018 | 09/04/2018 | 09/04/2018 | 09/05/2018 | 09/04/2018 | 09/05/2018 | 09/04/2018 |
| Method | Analyte | Units | | | Result | Result | Result | Result | Result | Result | Result | Result | Result | Result | Result | Result | Result | Result |
| 6010B | ANTIMONY | mg/kg | 31 | | 0.845 | 1.56 | 0.937 | 1.5 | 1.25 | | | | | <2.00 | | | | <2.00 |
| 6010B | ARSENIC | mg/kg | 6.8 | 30 | 5 | 5.83 | 6.8 | 5.37 | 4.68 | | | | | 1.58 | | | | 3.51 |
| 6010B | BARIUM | mg/kg | 15,000 | | 208 | 159 | 260 | 52.7 | 109 | | | | | 39.6 | | | | 126 |
| 6010B | BERYLLIUM | mg/kg | 160 | | 0.588 | 0.575 | 0.619 | 0.367 | 0.292 | | | | | 0.11 | | | | 0.446 |
| 6010B | CADMIUM | mg/kg | 71 | | 0.755 | 0.616 | 0.969 | 0.388 | 0.569 | | | | | 0.329 | | | | 0.157 |
| 6010B | CHROMIUM | mg/kg | | | 16.7 | 21.9 | 17.8 | 13.8 | 11.9 | | | | | 6.35 | | | | 15.1 |
| 6010B | COPPER | mg/kg | 3,100 | 47,000 | 35.5 | 25.7 | 39 | 27.8 | 28.9 | | | | | 11.1 | | | | 15.4 |
| 6010B | LEAD | mg/kg | 400 | 800 | 221 | 168 | 263 | 165 | 152 | | | | | 27.5 | | | | 43.7 |
| 6010B | NICKEL | mg/kg | 1,500 | | 14.9 | 15 | 16.1 | 25.3 | 17.2 | | | | | 6.91 | | | | 13.9 |
| 6010B | SELENIUM | mg/kg | 390 | | 0.907 | 0.992 | <2.00 | <2.00 | <2.00 | | | | | <2.00 | | | | 0.839 |
| 6010B | SILVER | mg/kg | 390 | | 0.136 | <1.00 | <1.00 | <1.00 | <1.00 | | | | | <1.00 | | | | <1.00 |
| 6010B | THALLIUM | mg/kg | 0.78 | | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | | | | | <2.00 | | | | <2.00 |
| 6010B | ZINC | mg/kg | 23,000 | | 289 | 217 | 425 | 138 | 175 | | | | | 125 | | | | 82.6 |
| 7471A | MERCURY | mg/kg | 11 | | 0.281 | <0.0200 | 0.517 | 0.156 | 0.0462 | | | | | 0.00821 | | | | 0.06 |
| 0.0035 | PCB 1016 | mg/kg | 1 | | | | | | | | | | | <0.0170 | | | | <0.0170 |
| 8082 | PCB 1221 | mg/kg | 1 | | | | | | | | | | | <0.0170 | | | | <0.0170 |
| 8082 | PCB 1232 | mg/kg | 1 | | | | | | | | | | | <0.0170 | | | | <0.0170 |
| 8082 | PCB 1242 | mg/kg | 1 | | | | | | | | | | | <0.0170 | | | | <0.0170 |
| 8082 | PCB 1248 | mg/kg | 1 | 1 | | | | | | | | | | <0.0170 | | | | <0.0170 |
| 8082 | PCB 1254 | mg/kg | 1 | 1 | | | | | | | | | | <0.0170 | | | | <0.0170 |
| 8082 | PCB 1260 | mg/kg | 1 | 1 | | | | | | | | | | 0.119 | | | | <0.0170 |
| 8270D-SIM | ANTHRACENE | mg/kg | 18,000 | 230,000 | 0.0243 | 0.0107 | 0.238 | 0.0202 | | 0.0111 | 0.0194 | 0.305 | | | | | | 0.0296 |
| 8270D-SIM | ACENAPHTHENE | mg/kg | 3,600 | | 0.00819 | 0.00285 | 0.169 | 0.00461 | | 0.00349 | 0.00773 | 0.216 | | | | | | 0.0144 |
| 8270D-SIM | BENZO(A)ANTHRACENE | mg/kg | 1.1 | 21 | 0.13 | 0.0493 | 0.62 | 0.387 | | 0.0593 | 0.0951 | 0.713 | | | | | | 0.0588 |
| 8270D-SIM | BENZO(A)PYRENE | mg/kg | 0.11 | 2.1 | 0.141 | 0.0571 | 0.535 | 0.555 | | 0.0705 | 0.0991 | 0.782 | | | | | | 0.0473 |
| 8270D-SIM | BENZO(B)FLUORANTHENE | mg/kg | 1.1 | 21 | 0.204 | 0.0898 | 0.768 | 1.2 | | 0.109 | 0.149 | 0.966 | | | | | | 0.0625 |
| 8270D-SIM | BENZO(K)FLUORANTHENE | mg/kg | 11 | 210 | 0.0742 | 0.025 | 0.282 | 0.273 | | 0.0301 | 0.0372 | 0.34 | | | | | | 0.0172 |
| 8270D-SIM | CHRYSENE | mg/kg | 110 | | 0.112 | 0.053 | 0.515 | 0.46 | | 0.0562 | 0.0916 | 0.712 | | | | | | 0.0575 |
| 8270D-SIM | DIBENZ(A,H)ANTHRACENE | mg/kg | 0.11 | 2.1 | 0.0316 | 0.0145 | 0.113 | 0.222 | | 0.0177 | 0.0219 | 0.122 | | | | | | 0.00311 |
| 8270D-SIM | FLUORANTHENE | mg/kg | 2,400 | | 0.249 | 0.104 | 1.68 | 0.442 | | 0.129 | 0.214 | 2.53 | | | | | | 0.133 |
| 8270D-SIM | FLUORENE | mg/kg | 2,400 | | 0.00645 | 0.00254 | 0.147 | 0.00432 | | 0.00257 | 0.00555 | 0.225 | | | | | | 0.0145 |
| 8270D-SIM | INDENO(1,2,3-CD)PYRENE | mg/kg | 1.1 | 21 | 0.0974 | 0.0393 | 0.36 | 0.565 | | 0.0521 | 0.0647 | 0.472 | | | | | | 0.0256 |
| 8270D-SIM | NAPHTHALENE | mg/kg | 3.8 | | 0.0128 | 0.006 | 0.0562 | 0.021 | | 0.00377 | 0.00604 | 0.505 | | | | | | 0.00527 |
| 8270D-SIM | PYRENE | mg/kg | 1,800 | | 0.199 | 0.088 | 1.17 | 0.382 | | 0.0982 | 0.187 | 2.12 | | | | | | 0.106 |
| 8270D-SIM | 1-METHYLNAPHTHALENE | mg/kg | 18 | | 0.0288 | 0.00944 | 0.04 | 0.0302 | | 0.00508 | 0.00984 | 0.253 | | | | | | 0.00642 |
| 8270D-SIM | 2-METHYLNAPHTHALENE | mg/kg | 240 | | 0.0244 | 0.0091 | 0.0383 | 0.0412 | | 0.00565 | 0.00972 | 0.287 | | | | | | 0.00424 |
| TX 1005 | TPH C6 - C12 | mg/kg | 50 | 500 | | | | | | | | | <50.0 | | <50.0 | <50.0 | <50.0 | <50.0 |
| TX 1005 | TPH C12 - C28 | mg/kg | 50 | 2,500 | | | | | | | | | 25.4 | | 18.2 | 43.7 | 47.9 | <50.0 |
| TX 1005 | TPH C28 - C35 | mg/kg | 50 | 5000 | | | | | | | | | 61.1 | | 47.8 | 86.5 | 81.9 | <50.0 |
| TX 1005 | TPH C6 - C35 | mg/kg | 50 | | | | | | | | | | 86.5 | | 66 | 130 | 130 | <50.0 |
| 6010B | TCLP Extraction Lead | mg/l | | | <5 | | <5 | <5 | | | | | | | | | | |

3.1.2 Monitoring Well Gauging, Purging and Sampling

Seneca notified the Enercon Services project manager that they would be back on site to gauge, purge and sample monitoring wells at the site on the following day September 5th. Seneca personnel arrived onsite at 12:20 pm September 5, 2018. Monitoring well MW-1 and MW-5 were gauged using an oil-water interface probe. The oil-water interface probe was decontaminated in accordance with **Section 3.2 Quality Control Procedures** below. Seneca personnel utilized a Horiba Model U-5000 Multi-Parameter Water Quality Meter to measure temperature, pH, conductivity and turbidity. The multi-parameter unit was calibrated and then utilized to obtain readings as monitoring wells MW-1 and MW-5 were purged of at least three well volumes using a new plastic bailer for each monitoring well. Gauging and purge data are presented in **Tables 2 and 3** below.

Table 2-Monitoring Well Gauging Data

| Well | Depth to Water (ft) | Total Depth (ft) | Water Column (ft) | Well Multiplier | Volume to Purge (gal) | Volume Purged (gal) |
|------|---------------------|------------------|-------------------|-----------------|-----------------------|---------------------|
| MW-1 | 7.27 | 19.95 | 12.68 | 0.16 | 6.09 | 6.09 |
| MW-5 | 17.33 | 20.12 | 2.79 | 0.16 | 1.34 | 1.34 |

Table 3-Monitoring Well Purge Data

| Well | Purge Increments (gal) | Temperature (°C) | pH | Conductivity (µS/cm) | Turbidity (NTU) |
|------|------------------------|------------------|------|----------------------|-----------------|
| MW-1 | | | | | |
| | Initial | 24.40 | 7.44 | 0.722 | 10.7 |
| | 1 | 25.67 | 7.43 | 0.252 | 363 |
| | 2 | 24.36 | 7.51 | 0.684 | 975 |
| | 3 | 23.90 | 7.50 | 0.689 | 829 |
| | 4 | 23.26 | 7.49 | 0.691 | 965 |
| | 5 | 22.86 | 7.48 | 0.689 | 0.0 |
| MW-5 | | | | | |
| | Initial | 22.99 | 5.54 | 0.861 | 58.8 |
| | 1 | 22.74 | 5.61 | 0.867 | 0.0 |
| | 2 | 22.96 | 5.60 | 0.869 | 0.0 |

Monitoring wells MW-1 and MW-5 were then sampled utilizing a new plastic bailer for each. Groundwater samples were labeled, recorded on the chain-of-custody and placed on ice for preservation. Seneca also collected for laboratory analysis, a composite sample of the first 250 cubic yards of backfill to be use on the site. These analytical results were presented to the City and the material was approved for use on the project site. Samples were shipped for analysis to Pace Analytical National Center for Testing & Innovation Laboratory, 12065 Lebanon Road, Mt. Juliet, TN 37122.

Groundwater sample analytical results are presented in **Table 4** below and in **Appendix D**. Analytical results for the backfill soil are presented below in **Table 5** and in **Appendix D**.

Table 4-Groundwater Analytical Results

| Sample ID | | | MW-1 | MW-5 |
|----------------|-----------|-------|------------|------------|
| Date Collected | | | 09/05/2018 | 09/05/2018 |
| Method | Analyte | Units | Result | Result |
| 6010B | BARIUM | mg/l | 0.491 | 0.0606 |
| 6010B | BERYLLIUM | mg/l | ND | ND |
| 6010B | CADMIUM | mg/l | ND | ND |
| 6010B | CHROMIUM | mg/l | 0.00447 | 0.0178 |
| 6010B | COPPER | mg/l | ND | ND |
| 6010B | NICKEL | mg/l | ND | ND |
| 6010B | SELENIUM | mg/l | ND | ND |
| 6010B | SILVER | mg/l | ND | ND |
| 6010B | ZINC | mg/l | 0.0117 | ND |
| 6020 | ANTIMONY | mg/l | ND | ND |
| 6020 | ARSENIC | mg/l | 0.00433 | 0.000916 |
| 6020 | LEAD | mg/l | 0.00359 | 0.00208 |
| 6020 | THALLIUM | mg/l | ND | ND |
| 7470A | MERCURY | mg/l | ND | ND |
| | | | | |

Table 5-Backfill Analytical Results

| Sample ID | | | BACKFILL 250YD ³ |
|----------------|-------------------------|-------|-----------------------------|
| Date Collected | | | 09/18/2018 |
| Method | Analyte | Units | Result |
| 6010B | ANTIMONY | mg/kg | ND |
| 6010B | ARSENIC | mg/kg | 6.46 |
| 6010B | BARIUM | mg/kg | 159 |
| 6010B | BERYLLIUM | mg/kg | 0.694 |
| 6010B | CADMIUM | mg/kg | ND |
| 6010B | CHROMIUM | mg/kg | 70 |
| 6010B | COPPER | mg/kg | 94 |
| 6010B | LEAD | mg/kg | 45.6 |
| 6010B | NICKEL | mg/kg | 64.4 |
| 6010B | SELENIUM | mg/kg | 0.766 |
| 6010B | SILVER | mg/kg | ND |
| 6010B | THALLIUM | mg/kg | ND |
| 6010B | ZINC | mg/kg | 130 |
| 7471A | MERCURY | mg/kg | 0.0449 |
| 8270D-SIM | ANTHRACENE | mg/kg | 0.0125 |
| 8270D-SIM | ACENAPHTHENE | mg/kg | 0.00415 |
| 8270D-SIM | ACENAPHTHYLENE | mg/kg | ND |
| 8270D-SIM | BENZO(A)ANTHRACENE | mg/kg | 0.0569 |
| 8270D-SIM | BENZO(A)PYRENE | mg/kg | 0.0537 |
| 8270D-SIM | BENZO(B)FLUORANTHENE | mg/kg | 0.0781 |
| 8270D-SIM | BENZO(G,H,I)PERYLENE | mg/kg | 0.0386 |
| 8270D-SIM | BENZO(K)FLUORANTHENE | mg/kg | 0.0255 |
| 8270D-SIM | CHRYSENE | mg/kg | 0.0499 |
| 8270D-SIM | DIBENZ(A,H)ANTHRACENE | mg/kg | 0.00897 |
| 8270D-SIM | FLUORANTHENE | mg/kg | 0.111 |
| 8270D-SIM | FLUORENE | mg/kg | 0.00377 |
| 8270D-SIM | INDENO(1,2,3-CD) PYRENE | mg/kg | 0.025 |
| 8270D-SIM | NAPHTHALENE | mg/kg | 0.00634 |
| 8270D-SIM | PHENANTHRENE | mg/kg | 0.0565 |
| 8270D-SIM | PYRENE | mg/kg | 0.107 |
| 8270D-SIM | 1-METHYLNAPHTHALENE | mg/kg | 0.00457 |
| 8270D-SIM | 2-METHYLNAPHTHALENE | mg/kg | 0.00522 |
| 8270D-SIM | 2-CHLORONAPHTHALENE | mg/kg | ND |
| TX 1005 | TPH C6 - C35 | mg/kg | ND |

3.1.3 Monitoring Well Plugging

Seneca notified Enercon Services that they would be onsite September 24, 2018 to plug monitoring wells MW-1, MW-2, MW-3, MW-4 and MW-5. Seneca met Razek Environmental onsite at 11:30 am September 24th. Seneca contracted with Razek to permanently close the five (5) monitoring wells as a State-licensed driller. Seneca reviewed the HASP with Razek personnel prior to start of the well closures. All five (5) wells were plugged by first pulling the well manway cover and the well casing from the ground. The annular space and filter pack were then drilled out and all cuttings were placed in drums for storage and subsequent disposal. Cement grout was placed from the

bottom of the well to land surface. Total waste generated was five (5) soil drums and one (1) drum of purge water. Oklahoma Water Resources Board (OWRB) Multi-Purpose Well Completion and Plugging Reports for the plugging of all five (5) wells are located in **Appendix E**.

3.1.4 Grubbing & Excavation

Grubbing was not performed prior to the start of excavation. Each excavation area was cleared before excavation began.

Seneca notified OKIE811 for utility location marking at least 48 hours prior to starting excavation. Seneca notified Enercon Services that excavation would begin on September 25, 2018. Seneca met O6, ERS and Enercon Services onsite at 8:00 am. Seneca held a safety meeting and reviewed the HASP with all present. Excavation began in area SB02-SS01 shortly thereafter. Due to a misunderstanding concerning the disposal of excavated soil, fourteen (14) cubic yards of soil from area SB02-SS01 was directly loaded on to an ERS dump truck and transported under a non-hazardous waste manifest to American Environmental Landfill, 212 N. 177th W. Avenue, Sand Springs, OK for disposal. The manifest and waste profile are located in **Appendix A**. ERS had completed excavating area SB02-SS01 to the required depth of one (1) foot below surface grade and was completing the excavation of area SSA01 when work was shut down until an archaeologist monitor could be present to oversee excavation. Seneca, O6 and ERS demobilized from the site at 10:30 am to await the availability of the Enercon Services archaeologist. Seneca was noticed at that time that soil was not to go to American Environmental Landfill, but all soil would be stockpiled on site.

Enercon Services arranged for the archaeologist to be onsite on September 26, 2018. Seneca, O6 and ERS remobilized to the site at 7:30 am. The Enercon Services archaeologist, Mr. Cody Kiker, arrived onsite at 8:30 am. Seneca held a safety meeting and reviewed the HASP at 9:15 am. Excavation began in area SSB11 at 9:20 am and continued to the other eleven (11) areas throughout the day. All excavated soil was moved according to the above route and stockpiled near the southeast corner of the Evans property (new area designated by the City). The only delay throughout the day was due to a bone found in area SB03-SS01 which the archaeologist determined to be animal in nature. All excavation and stockpiling were completed by 4:00 pm.

Seneca personnel followed the quality control procedures as outlined in the site Quality Assurance Project Plan (QAPP) and described in **Section 3.2 Quality Control Procedures**, below. Five-point composite sampling at a depth of one (1) foot below surface grade progressed to each area until all thirteen (13) soil samples had been collected. Seneca personnel also collected a field duplicate sample and a composite of the drummed soil, backfill stockpile for 250-500 yards³ and the drummed water. All soil samples were labeled, recorded on the chain-of-custody and placed on ice for preservation and shipped for analysis to Pace Analytical National Center for Testing & Innovation Laboratory, 12065 Lebanon Road, Mt. Juliet, TN 37122.

Analytical results of the Backfill 250-500 yards³ and drummed water are provided below in **Tables 6 & 7** below and the laboratory reports are in **Appendix D**.

Table 6-Backfill 250-500 Yards³

| Sample ID | | | BACKFILL 250-500 |
|------------------|------------------------|-------|------------------|
| Date Collected | | | 10/26/2018 |
| Method | Analyte | Units | Result |
| 6010B | ANTIMONY | mg/kg | ND |
| 6010B | ARSENIC | mg/kg | 2.49 |
| 6010B | BARIUM | mg/kg | 225 |
| 6010B | BERYLLIUM | mg/kg | 0.705 |
| 6010B | CADMIUM | mg/kg | 0.104 |
| 6010B | CHROMIUM | mg/kg | 17.3 |
| 6010B | COPPER | mg/kg | 11.3 |
| 6010B | LEAD | mg/kg | 30 |
| 6010B | NICKEL | mg/kg | 13.2 |
| 6010B | SELENIUM | mg/kg | ND |
| 6010B | SILVER | mg/kg | ND |
| 6010B | THALLIUM | mg/kg | ND |
| 6010B | ZINC | mg/kg | 53.9 |
| 7471A | MERCURY | mg/kg | 0.0334 |
| 8270D-SIM | ANTHRACENE | mg/kg | 0.000785 |
| 8270D-SIM | ACENAPHTHENE | mg/kg | ND |
| 8270D-SIM | ACENAPHTHYLENE | mg/kg | ND |
| 8270D-SIM | BENZO(A)ANTHRACENE | mg/kg | 0.00813 |
| 8270D-SIM | BENZO(A)PYRENE | mg/kg | 0.00872 |
| 8270D-SIM | BENZO(B)FLUORANTHENE | mg/kg | 0.0137 |
| 8270D-SIM | BENZO(G,H,I)PERYLENE | mg/kg | 0.0103 |
| 8270D-SIM | BENZO(K)FLUORANTHENE | mg/kg | 0.00383 |
| 8270D-SIM | CHRYSENE | mg/kg | 0.0103 |
| 8270D-SIM | DIBENZ(A,H)ANTHRACENE | mg/kg | ND |
| 8270D-SIM | FLUORANTHENE | mg/kg | 0.018 |
| 8270D-SIM | FLUORENE | mg/kg | ND |
| 8270D-SIM | INDENO(1,2,3-CD)PYRENE | mg/kg | 0.00634 |
| 8270D-SIM | NAPHTHALENE | mg/kg | ND |
| 8270D-SIM | PHENANTHRENE | mg/kg | 0.00522 |
| 8270D-SIM | PYRENE | mg/kg | 0.0127 |
| 8270D-SIM | 1-METHYLNAPHTHALENE | mg/kg | ND |
| 8270D-SIM | 2-METHYLNAPHTHALENE | mg/kg | ND |
| 8270D-SIM | 2-CHLORONAPHTHALENE | mg/kg | ND |
| TCEQ Method 1005 | TPH C6 - C35 | mg/kg | ND |

Table 7-Composite Drum Sample-Water

| Analytical Method | Date Collected | Analyte | Result |
|-------------------|----------------|-------------------|------------|
| 4500 CN E-2011 | 10/26/2018 | REACTIVE CYANIDE | ND |
| 9034-9030B | 10/26/2018 | REACTIVE SULFIDE | ND |
| 9040C | 10/26/2018 | CORROSIVITY BY pH | 12.1 |
| D93/1010A | 10/26/2018 | FLASHPOINT | DNF at 170 |

3.1.5 Post-Excavation Sampling/Excavation/Post-Excavation Sampling

Laboratory analytical results from the post-excavation, first round sampling accomplished September 26, 2018 indicated five (5) areas (SB02-SS01, SSA01, SSA03, SSB07 and SSB11) that exceeded the RBSL for residential soil. Laboratory analytical results are provided in **Appendix D** and **Table 8** below. The City therefore authorized Seneca to remobilize to the site to complete excavation of an additional 6 inches of soil in these five (5) areas. Seneca notified Enercon Services that they would be back onsite to excavate on October 5, 2018. Seneca and O6 arrived onsite at 7:50 am. Seneca personnel held a safety meeting and went over the site HASP. Cody Kiker represented Enercon Services as the archaeologist on site. O6 began excavation of area SB02-SS01 at 8:45 am and continued throughout the day. Seneca personnel performed 5-point composite sampling in each area following excavation of 6 inches of soil. Seneca personnel followed the quality control procedures as outlined in the site Quality Assurance Project Plan (QAPP) and described in **Section 3.2 Quality Control Procedures** below. Seneca personnel collected a field duplicate sample and all soil samples were labeled, recorded on the chain-of-custody and placed on ice for preservation. These samples were shipped for analysis to Pace Analytical National Center for Testing & Innovation Laboratory, 12065 Lebanon Road, Mt. Juliet, TN 37122. Excavation and sampling activities were completed and Seneca and O6 demobilized from the site at 10:55 am.

Table 8-Post-Excavation Sample Results-First Round

| Constituent | Unit | RBSL for Residential Soils | RBSL for Industrial soils | SSA01 | SSB02 | SSB02-DUP | SB02-SS01 | SSA03 | SSB03 | SB03-SS01 | SSB04 | SSB05 | SSB06 | SB04-SS016 | SSA07 | SSB07 | SSB11 | Drum Composite |
|-------------------------|-------|----------------------------|---------------------------|--------|---------|-----------|-----------|---------|--------|-----------|---------|---------|-------|------------|-------|-------|-------|----------------|
| Acenaphthene | mg/kg | 3,600 | | 0.0849 | 0.00519 | 0.0011 | 0.14 | 0.00347 | | 0.00721 | 0.00571 | 0.00593 | | | | | | |
| Anthracene | mg/kg | 18,000 | 230,000 | 0.220 | 0.0364 | 0.00638 | 0.297 | 0.0212 | | 0.0207 | 0.0188 | 0.0298 | | | | | | |
| Benz(a)anthracene | mg/kg | 1.1 | 21 | 0.586 | 0.0883 | 0.0184 | 0.872 | 0.368 | | 0.0734 | 0.0762 | 0.101 | | | | | | |
| Benzo(a)pyrene | mg/kg | 0.11 | 2.1 | 0.508 | 0.0913 | 0.0238 | 0.832 | 0.47 | | 0.0847 | 0.0822 | 0.0924 | | | | | | |
| Benzo(b)fluoranthene | mg/kg | 1.1 | 21 | 0.695 | 0.136 | 0.0347 | 1.13 | 0.907 | | 0.109 | 0.114 | 0.120 | | | | | | |
| Benzo(k)fluoranthene | mg/kg | 11 | 210 | 0.249 | 0.0421 | 0.00949 | 0.348 | 0.289 | | 0.0310 | 0.0324 | 0.0391 | | | | | | |
| Chrysene | mg/kg | 110 | | 0.561 | 0.112 | 0.0241 | 0.877 | 0.517 | | 0.0777 | 0.0833 | 0.108 | | | | | | |
| Dibenzo(a,h)anthracene | mg/kg | 0.11 | 2.1 | 0.0874 | 0.0171 | 0.00471 | 0.139 | 0.152 | | 0.0152 | 0.0149 | 0.0159 | | | | | | |
| Fluoranthene | mg/kg | 2,400 | | 1.29 | 0.159 | 0.0374 | 1.87 | 0.33 | | 0.14 | 0.15 | 0.219 | | | | | | |
| Fluorene | mg/kg | 2,400 | | 0.0820 | 0.00626 | 0.00133 | 0.13 | 0.00409 | | 0.00706 | 0.00484 | 0.00645 | | | | | | |
| Indeno(1,2,3-cd) pyrene | mg/kg | 1.1 | 21 | 0.316 | 0.565 | 0.0155 | 0.511 | 0.427 | | 0.0513 | 0.0527 | 0.0503 | | | | | | |
| Naphthalene | mg/kg | 3.8 | | 0.0191 | 0.0118 | 0.00320 | 0.0284 | 0.017 | | 0.00451 | 0.00446 | 0.00299 | | | | | | |
| Pyrene | mg/kg | 1,800 | | 1.03 | 0.158 | 0.0332 | 1.56 | 0.322 | | 0.121 | 0.129 | 0.172 | | | | | | |
| 1-Methylnaphthalene | mg/kg | 18 | | 0.0273 | 0.012 | 0.00292 | 0.0279 | 0.0196 | | 0.0048 | 0.00511 | 0.00241 | | | | | | |
| 2-Methylnaphthalene | mg/kg | 240 | | 0.0296 | 0.0137 | 0.00311 | 0.0221 | 0.0274 | | 0.00398 | 0.00501 | 0.00276 | | | | | | |
| Antimony | mg/kg | 31 | | 1.63 | 2.19 | 1.77 | 1.29 | 4.89 | 2.14 | | | | | 0.869 | | | | ND |
| Arsenic | mg/kg | 6.8 ¹ | 30 | 5.48 | 6.30 | 5.36 | 6.65 | 22.3 | 5.69 | | | | | 2.7 | | | | 2.74 |
| Barium | mg/kg | 15,000 | | 220 | 161 | 135 | 231 | 60.4 | 108 | | | | | 41.5 | | | | 64.1 |
| Beryllium | mg/kg | 160 | | 0.632 | 0.648 | 0.543 | 0.617 | 0.399 | 0.405 | | | | | 0.13 | | | | 0.348 |
| Cadmium | mg/kg | 71 | | 0.616 | 0.508 | 0.602 | 0.774 | ND | 1.06 | | | | | 0.413 | | | | 0.142 |
| Total Chromium | mg/kg | NA | | 16.5 | 21 | 22.2 | 17.4 | 37.1 | 33.6 | | | | | 14.2 | | | | 4.47 |
| Copper | mg/kg | 3,100 | 47,000 | 44.4 | 29 | 28.4 | 42.4 | 170 | 30.8 | | | | | 18.7 | | | | 5.1 |
| Lead | mg/kg | 400 | 800 | 222 | 217 | 226 | 269 | 127 | 156 | | | | | 96.5 | | | | 7.91 |
| Mercury | mg/kg | 11 | | 0.232 | 0.307 | 0.255 | 0.626 | 0.0343 | 0.0566 | | | | | 0.0402 | | | | 0.018 |
| Nickel (salts) | mg/kg | 1,500 | | 11.4 | 11.4 | 12.2 | 12.4 | 52.6 | 14.2 | | | | | 17.8 | | | | 7.51 |
| Selenium | mg/kg | 390 | | ND | 0.655 | 0.694 | ND | ND | ND | | | | | ND | | | | ND |
| Silver | mg/kg | 390 | | 0.543 | 0.208 | 0.184 | 0.656 | 0.124 | 0.146 | | | | | ND | | | | ND |
| Thallium (salts) | mg/kg | 0.78 | | ND | ND | ND | ND | ND | ND | | | | | ND | | | | ND |
| Zinc | mg/kg | 23,000 | | 321 | 282 | 242 | 414 | 103 | 270 | | | | | 154 | | | | 23.5 |
| Aroclors | mg/kg | 1 ² | 1 | - | - | | - | | | | | | | ND | | | | |
| Total TPH | mg/kg | 50 ⁴ | | - | - | ND | - | | | | | | ND | | ND | 272 | 320 | |

Laboratory analytical results from the post-excavation, second round sampling accomplished October 5, 2018, of the five (5) areas (SB02-SS01, SSA01, SSA03, SSB07 and SSB11) indicated concentrations exceeding the RBSL for residential soil in all five (5) areas. Laboratory analytical results are provided in **Appendix D** and **Table 9** below. The City therefore authorized Seneca to remobilize to the site to complete excavation of the final 6 inches of soil in these five (5) areas. Due to excessive rainfall, the decision was made to let the site dry out for a period of time before remobilizing to the site to complete the final excavation. Seneca notified Enercon Services that they would be back onsite to excavate on October 18, 2018. Seneca and O6 arrived onsite at 8:10 am. Seneca personnel held a safety meeting and went over the site HASP. Cody Kiker represented Enercon Services as the archaeologist on site. O6 began hauling in backfill material to the site and started backfilling areas SSB02, SSB03, SSB03-SSA01, SSB04, SSB05, SSA07 and SSB06. O6 then excavated areas SB02-SSA01, SSA01 and SSA03. Seneca mobilized a vacuum truck to the site and removed stormwater that had collected in area SSB07 and SSB11. O6 excavated SSB07 and SSB11 after removal of 2,000 gallons of stormwater. This stormwater was hauled under manifest to Environmental Remediation Specialists Inc. (ERS), 1105 N. Peoria Avenue, Tulsa, OK. O6 smoothed the excavated soil pile and covered it with plastic sheeting. O6 completed backfilling all remaining excavated areas and Seneca and O6 demobilized from the site at 3:30 pm.

As excavation was completed in each of the five (5) areas, Seneca personnel performed 5-point composite sampling in each area following excavation of 6 inches of soil. Seneca personnel followed the quality control procedures as outlined in the site Quality Assurance Project Plan (QAPP) and described in **Section 3.2 Quality Control Procedures** below. Seneca personnel collected a field duplicate sample and all soil samples were labeled, recorded on the chain-of-custody and placed on ice for preservation. These samples were shipped for analysis to Pace Analytical National Center for Testing & Innovation Laboratory, 12065 Lebanon Road, Mt. Juliet, TN 37122.

Table 9-Post-Excavation Sample Results-Second Round

| Constituent | Unit | RBSL for Residential Soils | RBSL for Industrial soils | SSA01 | SB02-SS01 | SSA03 | SSB07 | SSB11 | SSA01 DUP |
|-------------------------|-------|----------------------------|---------------------------|---------|-----------|---------|-------|-------|-----------|
| Acenaphthene | mg/kg | 3,600 | | 0.00358 | 0.0135 | 0.00425 | | | 0.00253 |
| Anthracene | mg/kg | 18,000 | 230,000 | 0.0185 | 0.0489 | 0.03 | | | 0.0108 |
| Benz(a)anthracene | mg/kg | 1.1 | 21 | 0.124 | 0.266 | 0.377 | | | 0.0971 |
| Benzo(a)pyrene | mg/kg | 0.11 | 2.1 | 0.134 | 0.315 | 0.493 | | | 0.102 |
| Benzo(b)fluoranthene | mg/kg | 1.1 | 21 | 0.23 | 0.499 | 1.14 | | | 0.17 |
| Benzo(k)fluoranthene | mg/kg | 11 | 210 | 0.0672 | 0.127 | 0.278 | | | 0.051 |
| Chrysene | mg/kg | 110 | | 0.101 | 0.201 | 0.448 | | | 0.0786 |
| Dibenzo(a,h)anthracene | mg/kg | 0.11 | 2.1 | 0.0319 | 0.0711 | 0.184 | | | 0.0215 |
| Fluoranthene | mg/kg | 2,400 | | 0.199 | 0.465 | 0.416 | | | 0.166 |
| Fluorene | mg/kg | 2,400 | | 0.00383 | 0.0137 | ND | | | 0.00235 |
| Indeno(1,2,3-cd) pyrene | mg/kg | 1.1 | 21 | 0.0955 | 0.24 | 0.405 | | | 0.0671 |
| Naphthalene | mg/kg | 3.8 | | 0.0218 | 0.00915 | 0.0168 | | | 0.00373 |
| Pyrene | mg/kg | 1,800 | | 0.184 | 0.404 | 0.445 | | | 0.145 |
| 1-Methylnaphthalene | mg/kg | 18 | | 0.0449 | 0.0109 | 0.0203 | | | 0.00554 |
| 2-Methylnaphthalene | mg/kg | 240 | | 0.0485 | 0.0101 | 0.0285 | | | 0.00546 |
| Antimony | mg/kg | 31 | | 0.831 | 1.17 | 2.72 | | | 1.05 |
| Arsenic | mg/kg | 6.8 ¹ | 30 | 3.12 | 6.63 | 4.31 | | | 3.63 |
| Barium | mg/kg | 15,000 | | 187 | 259 | 47.8 | | | 211 |
| Beryllium | mg/kg | 160 | | 0.759 | 0.7 | 0.344 | | | 0.75 |
| Cadmium | mg/kg | 71 | | 0.406 | 0.994 | 0.467 | | | 0.493 |
| Total Chromium | mg/kg | NA | | 18.4 | 21.3 | 12.4 | | | 18.7 |
| Copper | mg/kg | 3,100 | 47,000 | 21.2 | 46.5 | 28.1 | | | 35.7 |
| Lead | mg/kg | 400 | 800 | 112 | 352 | 169 | | | 236 |
| Mercury | mg/kg | 11 | | 0.177 | 2.7 | 0.0332 | | | 0.123 |
| Nickel (salts) | mg/kg | 1,500 | | 13 | 13.2 | 22.8 | | | 13.2 |
| Selenium | mg/kg | 390 | | ND | ND | ND | | | ND |
| Silver | mg/kg | 390 | | 0.25 | 1.7 | ND | | | 0.226 |
| Thallium (salts) | mg/kg | 0.78 | | ND | ND | ND | | | ND |
| Zinc | mg/kg | 23,000 | | 144 | 599 | 122 | | | 191 |
| Total TPH | mg/kg | 50 ⁴ | | | | | 231 | 435 | ND |

Following the final excavation and backfilling of the five (5) areas (SB02-SS01, SSA01, SSA03, SSB07 and SSB11), Seneca notified Enercon Services that they would be back onsite to collect the final 5-point composite soil samples from these five (5) areas on November 5, 2018. Seneca met Andrew Foreman of Enercon Services onsite at 8:45 on November 5th to begin sampling. Seneca collected the samples by digging each sample point with a shovel to a depth of two (2) feet below ground surface. Seneca followed the quality control procedures as outlined in the site Quality Assurance Project Plan (QAPP) and described in **Section 3.2 Quality Control Procedures** below. Seneca personnel collected a field duplicate sample and all soil samples were labeled, recorded on the chain-of-custody and placed on ice for preservation. These samples were shipped for analysis to Pace Analytical National Center for Testing & Innovation Laboratory, 12065 Lebanon Road, Mt. Juliet, TN 37122. Seneca was offsite at 11:45 am.

Soil sample analytical results are presented in **Table 10** below and in **Appendix D**.

Table 10-Post-Excavation Sample Results-Final

| Sample ID | | | RBSL for Residential Soils | RBSL for Industrial Soils | SSA01 | SB02-SS01 | SSA03 | SSB07 | SSB11 | SB02-SS01 DUP |
|------------------|------------------------|-------|----------------------------|---------------------------|------------|------------|------------|------------|------------|---------------|
| Date Collected | | | | | 11/05/2018 | 11/05/2018 | 11/05/2018 | 11/05/2018 | 11/05/2018 | 11/05/2018 |
| Method | Analyte | Units | | | Result | Result | Result | Result | Result | Result |
| 6010B | Antimony | mg/kg | 31 | | 0.988 | ND | ND | | | ND |
| 6010B | Arsenic | mg/kg | 6.8 | 30 | 2.73 | 3.86 | 3.6 | | | 4.59 |
| 6010B | Barium | mg/kg | 15,000 | | 136 | 97.6 | 61 | | | 126 |
| 6010B | Beryllium | mg/kg | 160 | | 0.662 | 0.629 | 0.516 | | | 0.635 |
| 6010B | Cadmium | mg/kg | 71 | | 0.165 | 0.073 | 0.221 | | | 0.149 |
| 6010B | Chromium | mg/kg | | | 15.5 | 15.6 | 14.2 | | | 14.9 |
| 6010B | Copper | mg/kg | 3,100 | 47,000 | 13.4 | 7.88 | 17.1 | | | 9.06 |
| 6010B | Lead | mg/kg | 400 | 800 | 35.5 | 15.7 | 38.4 | | | 24.7 |
| 6010B | Nickel | mg/kg | 1,500 | | 14.1 | 12.3 | 21.6 | | | 12.6 |
| 6010B | Selenium | mg/kg | 390 | | ND | ND | ND | | | ND |
| 6010B | Silver | mg/kg | 390 | | ND | ND | ND | | | ND |
| 6010B | Thallium | mg/kg | 0.78 | | ND | ND | ND | | | ND |
| 6010B | Zinc | mg/kg | 23,000 | | 70.9 | 33.4 | 66.1 | | | 48 |
| 7471A | Mercury | mg/kg | 11 | | 0.0371 | 0.0313 | 0.0239 | | | 0.0497 |
| 8270D-SIM | Anthracene | mg/kg | 18,000 | 230,000 | 0.00842 | ND | 0.047 | | | 0.0365 |
| 8270D-SIM | Acenaphthene | mg/kg | 3,600 | | 0.00254 | ND | 0.00411 | | | 0.0166 |
| 8270D-SIM | Benzo(A)Anthracene | mg/kg | 1.1 | 21 | 0.0272 | 0.00115 | 0.207 | | | 0.0844 |
| 8270D-SIM | Benzo(A)Pyrene | mg/kg | 0.11 | 2.1 | 0.0256 | 0.000908 | 0.218 | | | 0.0712 |
| 8270D-SIM | Benzo(B)Fluoranthene | mg/kg | 1.1 | 21 | 0.0344 | 0.00131 | 0.195 | | | 0.0996 |
| 8270D-SIM | Benzo(K)Fluoranthene | mg/kg | 11 | 210 | 0.0141 | 0.000605 | 0.0453 | | | 0.0377 |
| 8270D-SIM | Chrysene | mg/kg | 110 | | 0.0253 | 0.000869 | 0.206 | | | 0.0715 |
| 8270D-SIM | Dibenz(A,H)Anthracene | mg/kg | 0.11 | 2.1 | 0.00505 | ND | 0.0471 | | | 0.0143 |
| 8270D-SIM | Fluoranthene | mg/kg | 2,400 | | 0.0738 | 0.00223 | 0.138 | | | 0.238 |
| 8270D-SIM | Fluorene | mg/kg | 2,400 | | 0.00178 | ND | 0.00358 | | | 0.0119 |
| 8270D-SIM | Indeno(1,2,3-cd)Pyrene | mg/kg | 1.1 | 21 | 0.0163 | 0.000641 | 0.0744 | | | 0.0502 |
| 8270D-SIM | Naphthalene | mg/kg | 3.8 | | ND | 0.00213 | 0.00585 | | | 0.00274 |
| 8270D-SIM | Pyrene | mg/kg | 1,800 | | 0.0467 | 0.00147 | 0.781 | | | 0.149 |
| 8270D-SIM | 1-Methylnaphthalene | mg/kg | 18 | | ND | ND | 0.00694 | | | 0.00318 |
| 8270D-SIM | 2-Methylnaphthalene | mg/kg | 240 | | ND | 0.00217 | 0.0103 | | | 0.00225 |
| TCEQ Method 1005 | TPH C6 - C35 | mg/kg | 50 | | | | | 84.1 | 338 | ND |

3.2 Quality Control Procedures

3.2.1 Groundwater Sampling Methods

Quality control measures were implemented during groundwater sampling to minimize the potential for cross-contamination. All non-disposable sampling equipment was thoroughly cleaned by removing visible contamination with a metal or nylon brush and/or high-pressure water spray, washing with a non-phosphate detergent solution such as Liquinox or an equivalent, rinsing with tap water, and finally rinsing with deionized/distilled water prior to field screening and between each monitoring well location. Field personnel wore new disposable nitrile gloves while collecting representative groundwater samples. To maintain sample integrity and prevent chemical degradation, collected groundwater for analysis was containerized into laboratory provided containers. The time, date, and sample identification were written on the container's label. Groundwater samples were immediately placed on ice for delivery to the ODEQ-certified analytical laboratory under strict Chain-of-Custody control.

3.2.2 Soil Sampling Methods

Quality control measures were implemented during soil sampling to minimize the potential for cross contamination. All non-disposable sampling equipment was thoroughly cleaned by removing visible contamination with a metal or nylon brush and/or high-pressure water spray, washing with a non-phosphate detergent solution such as Liquinox or an equivalent, rinsing with tap water, and finally rinsing with deionized/distilled water prior to field screening and between each sampling location. Field personnel wore new disposable nitrile gloves while collecting representative soil samples. To maintain sample integrity and prevent chemical degradation, collected soil for analysis was containerized into laboratory provided containers. The time, date, and sample identification were written on the container's label. Soil samples were immediately placed on ice for delivery to the ODEQ-certified analytical laboratory under strict Chain-of-Custody control.

3.2.3 Waste Sampling Methods

Investigation-derived wastes (IDW) generated included: groundwater, soil, disposable sampling equipment, and personal protective equipment (PPE). Purge/decontamination water generated from activities on the Site was containerized and disposed of offsite under manifest at American Environmental Landfill. All other IDW generated, including all PPE, tubing, paper towels, empty water bottles, etc., was placed in trash bags. The trash bags were placed in an appropriate municipal solid waste receptacle. Samples collected to characterize the generated purge/decontamination water for waste disposal was analyzed appropriately by USEPA Methods pending disposal facility approval.

3.2.4 Sample Handling and Chain-of-Custody

Sample containers, preservatives, and holding times were appropriate and consistent with the analysis and analytical methods used. Strict chain-of-custody control and field documentation accompanied the samples to the contract laboratory, as described as follows:

- Samples were maintained under custody, in the actual physical possession of field personnel until shipped to the laboratory. The laboratory maintained custody.
- To track the handling of the samples, a Chain-of-Custody form was filled out and kept with the samples at all times. The form was filled out with ink. Chain-of-Custody forms became the permanent record of all sample handling and shipping.
- Separate Chain-of-Custody forms were completed for each different sampling event to be submitted for analyses.

-
- Sample collector signs the Chain-of-Custody form and includes the date samples were collected and the date samples were relinquished. Any corrections to the Chain-of-Custody are made to the record with a single line ink strike-out mark and initialed.
 - Sample shipping documents were completed and filed.
 - Write name of laboratory to perform analyses was at the top of the page.
 - Rush turnaround time was provided in the appropriate section of the Chain-of-Custody form.
 - The Project Manager's name was placed in the section marked "Report To:"
 - If appropriate, each transferee in the chain-of-custody and recipient dated, signed and noted the time on the Chain-of-Custody form.
 - Sample ID number, Comp/Grab, sample matrix (the sample media placed in the appropriate box under Matrix, e.g., SS – soil/solid, GW – groundwater, WW – waste water, DW – drinking water, OT -other), date the sample was collected, time the sample was collected, number of containers, and analyses requested was recorded for EACH sample.
 - The completed Chain-of-Custody form(s) was included inside the shipping container sent to the laboratory. A copy of the form(s) was given to the Project Manager.
 - Each cooler was sealed with one custody seal with sampler's initials and date, and clear tape was placed over the custody seal, so tampering could be detected.
 - When the samples were received by the laboratory, the Chain-of-Custody form was dated, signed, and the sample condition (cooler temperature, sample bottle breakage, etc.) was recorded by a laboratory representative. A copy of this form was retained in the laboratory files and the original was returned with the sample results.

3.2.5 Field Instrument/Equipment Testing, Inspection and Maintenance

For groundwater sampling, a pH/conductivity water quality meter and field turbidimeter was used and was calibrated prior to use. The water quality meters/turbidimeter was calibrated and operated in accordance with manufacturer specifications. A photoionization meter (PID) was not used on this project. All field instruments used during the project were inspected for proper function prior to deployment to the site and proper maintenance protocols were followed during the duration of the project.

APPENDIX A
WASTE MANIFESTS



American Environmental Landfill, Inc.
"Leading the Industry in Environmental Compliance"

(MUST BE FILLED OUT COMPLETELY)

For more information, please call American Environmental Landfill, Inc. at (918)245-7786

A. GENERATOR INFORMATION

1. Generator Name City of Tulsa
 2. Site Location 186 N Lansing
 3. City Tulsa
 State OK Zip Code _____
 4. Phone 918-596-7457
 5. Fax _____
 6. State Waste Code _____

B. CUSTOMER BILLING INFORMATION

1. Billed to Name O6 Environmental
 2. Address 6311 Bartmer Industrial Drive
 3. City St Louis
 State MO Zip Code 63130
 4. Phone 314-862-6671
 5. Fax 314-862-6672
 6. Contact Dan Giesler
 7. Title President

C. WASTE STREAM INFORMATION

1. Common Name of Waste non-Hazardous dirt from Evan Fin Tube Brown Field Project
 2. Detailed Description of Process Generating Waste and Material Description dirt removal from Evan-Fin Tube Brown Field project

3. Industrial Generator Yes No
 4. Municipal Generator Yes No
 5. Physical State at 70° Solid Semisolid Liquid Powder Combination
 6. Odor Yes No Describe N/A
 7. Color brown 8. pH Range N/A
 9. Flash Point N/A 10. Reactive Yes No With: N/A
 11. Free Liquid Yes No 12. Water content % by volume N/A 13. Viscosity N/A
 14. Is the analytical attached derived from testing a representative sample IAW 40 CFR 261? Yes No
 15. Does the waste contain radioactive or U.S.D.O.T. hazardous waste materials? Yes No

D. SUPPLEMENTAL INFORMATION

None MSDS Analytical Data Process Knowledge Number of pages attached 49 pages

E. SHIPPING INFORMATION

1. Packaging Bulk Liquid Bulk Solid Drum Other
 2. Estimated Volume 254 Gallons Yards Drums Shipping Frequency one time
 Other N/A

F. GENERATOR / CUSTOMER CERTIFICATION

I hereby certify that all information submitted and all attached documents contain true and accurate descriptions of this waste. No deliberate or willful omissions of composition or properties exist, and all known or suspected hazards have been disclosed. I further certify that the waste is not designated a Hazardous Waste as defined by the USEPA in 40 CFR 261, nor does it contain PCBs regulated under TSCA 40 CFR 761.

I, K. Michelle Barnett am employed by the City of Tulsa and am authorized to sign this request for City of Tulsa
 (Company Name) K. Michelle Barnett (Signature) 9/24/18 (Date)
 (Company Name) (Signature) (Date)

LANDFILL USE ONLY (DO NOT WRITE IN THIS SPACE)

Compliance Officer [Signature]
 Date 9-25-18 Approved Rejected
 Additional Information NONE

Current WDA on file Yes No
 Job # MN427COT01



NHIW CERTIFICATION

Please read instructions prior to completing this form.

Generator Name: City of Tulsa

Mailing Address: 175 East 2nd Street City Tulsa State OK Zip 74103

Point of Generation Address: 186 N Lansing City Tulsa State OK Zip _____

Generator Contact: Michelle Barnett Title Deputy Chief of Economic Development Telephone 918-595-7457

DETAILED WASTE DESCRIPTION

Waste Name: dirt removal from Evan - Fin Tube Brown Fields project

If waste was generated out-of-state, is it classified as hazardous in the state of origin? Yes No NA- Okla. waste

Approximate amount of waste to be disposed:

Disposal frequency: Physical characteristics:

254 Tons Pounds One-time Weekly Solid Liquid

Cubic yards Drum Monthly Annually Sludge Combination

Other _____

Method used to determine waste is non-hazardous: Analysis Generator knowledge Both

Process generating waste (be specific and use additional sheets if necessary):
Brown field project dirt removal

DESIGNATED RECEIVING LANDFILL

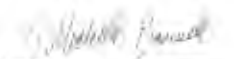
Name: American Environmental Landfill Permit #: 3557021

GENERATOR CERTIFICATION

I understand this form must be signed by the original waste generator or other persons authorized by 27A O.S. §2-10-501(H).

To the best of my knowledge, I certify:

- The information contained herein is accurate, complete, and representative of the waste to be disposed;
- The waste identified above is not a characteristically hazardous waste as identified by 40 CFR 261, Subpart C, is not a listed hazardous waste as identified by 40 CFR 261, Subpart D or contaminated with a listed hazardous waste, and is not otherwise identified as a hazardous waste by the Department of Environmental Quality; and
- This waste will be managed in accordance with all applicable statutes and rules of the Department of Environmental Quality.


Generator Signature

K. Michelle Barnett

Deputy Chief of Economic Development 9/24/18

Printed name
Adopted June 2003

Title

Date
DEQ Form # 515-860



American Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Non-Hazardous Waste Manifest

Generator

Generator's Name: City of Tulsa
 Mailing Address: 175 E 2nd Street
Tulsa OK 74103
City State Zip
 Point of Generation Address: 186 N Lansing
Tulsa OK
City State Zip
 Contact: Micki King 918-245-7774
Name Phone

Manifest Job No. MN427COT01
 Bill to Name: O6 Environmental
 Address: 6311 Bartmer Industrial Drive
St. Louis MO 63130
City State Zip
 Contact: Micki King 918-245-7774
Name Phone

| Common Name of Waste Material | Container No. | Type | Total Quantity | Unit |
|-------------------------------|---------------|------------------|----------------|------|
| <u>Impacted Soil</u> | <u>688</u> | <u>SB02-SS01</u> | <u>19 yds</u> | |
| | | | <u>12.85T</u> | |

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Micki King Micki King
 Generator Authorized Agent Name Signature Shipment Date

Transporter

Transporter Name: ERS
 Address: 1108 N. Peoria Ave
 City, State Zip: Tulsa OK

Driver Name (Print): Carl Randall
 Tag No. OK7377V State: OK
 USDOT No. 825510

I hereby certify that the above material was picked up at the generator site listed above.

I hereby certify that the above named material was delivered without incident to the destination listed below.

Micki King 9-25-18 Carl Randall 9-25-18
 Driver Signature Ship Date Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
 212 N. 177th W Ave.
 Sand Springs, OK 74063

Phone: (918) 245-7786
 Fax: (918) 245-7774
 Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt Micki King 9-25-18
 Name of Authorized Agent Signature Receipt Date



American Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Non-Hazardous Waste Manifest

White

1060323

Generator

Generator's Name: City of Tulsa
 Mailing Address: 175 E 2nd Street
Tulsa OK 74103
 City State Zip
 Point of Generation Address: 186 N Lansing
Tulsa, OK
 City State Zip
 Contact: Michelle Barnett 918-596-7454
 Name Phone

Manifest Job No. MN 42760103
 Bill to Name: U.S. Environmental
 Address: 6311 Bartmer Industrial Drive
St. Louis MO 63130
 City State Zip
 Contact: Tom Hayes
 Name Phone

Customer Name of Waste Material

Auger Wash Water

| Container No. | Type | Total Quantity | Unit |
|---------------|--------------|----------------|------------|
| <u>1</u> | <u>Drums</u> | <u>35</u> | <u>gal</u> |

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Michelle Barnett for
 Generator's Authorized Agent Name:
City of Tulsa

Michelle Pitts
 Signature

11/8/18
 Date

Transporter

Transporter Name: Seneca Companies, Inc.
 Address: 6947 E 13th Street
 City, State Zip: Tulsa, OK 74112

Driver Name (Print): Douglas Wilson
 Tag No. DD26715 State: IA
 USDOT No.

I hereby certify that the above material was picked up at the generator as listed above.

Douglas Wilson
 Driver Signature

11-9-18
 Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Douglas Wilson
 Driver Signature

11-9-18
 Delivery Date

Destination

American Environmental Landfill, Inc.
 212 N. 177th W Ave.
 Sand Springs, OK 74063

Phone: (918) 245-7786
 Fax: (918) 245-7774
 Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
 Name of Authorized Agent

Signature

[Signature]

11-9-18
 Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain



American Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Non-Hazardous Waste Manifest

Generator

WHE

Generator's Name: City of Tulsa
 Mailing Address: 175 E 2nd Street
Tulsa OK 74103
 Point of Generation Address: 186 N Lansing
Tulsa, OK
 Contact: Michelle Barnett 918-596-7454

Manifest Job No. MM 42160102
 Bill to Name: City of Tulsa
 Address: 6311 Paritawee Industrial Drive
St. Louis MO 63180
 Contact: Tom Hayes

| Common Name of Waste Material | Container No. | Container Type | Total Quantity | Unit |
|-------------------------------|---------------|----------------|----------------|-------------|
| <u>Soil Cuttings</u> | <u>15</u> | <u>Drum</u> | <u>5</u> | <u>Drum</u> |

I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Michelle Barnett for
 Generator Authorized Agent Name
City of Tulsa

Michelle Barnett
 Signature

4/8/18
 Shipper Date

Transporter

Transporter Name: Seneca Companies, Inc.
 Address: 6947 E 13th Street
 City, State Zip: Tulsa, OK 74112

Driver Name (Print): Douglas Wilson
 Tag No. DD6795 State: IA
 USDOT No. _____

I hereby certify that the above material was picked up at the generator site listed above.
Douglas Wilson
 Driver Signature

11-9-18
 Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.
Douglas Wilson
 Driver Signature

11-9-18
 Delivery Date

Destination

American Environmental Landfill, Inc.
 212 N. 177th W Ave.
 Sand Springs, OK 74063

Phone: (918) 245-7786
 Fax: (918) 245-7774
 Permit No: 3357021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
 Name of Authorized Agent

[Signature]
 Signature

11-9-18
 Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number
 2. Page 1 of
 3. Emergency Response Phone
 4. Waste Tracking Number **6362581**

5. Generator's Name and Mailing Address: **City of Tulsa**
 Generator's Site Address (if different than mailing address): **City of Tulsa - Evans Field**

Generator's Phone:
 6. Transporter 1 Company Name: **ERS** U.S. EPA ID Number
 7. Transporter 2 Company Name: U.S. EPA ID Number

8. Designated Facility Name and Site Address: **ERS 1105 N Perma Ave Tulsa, OK 74148** U.S. EPA ID Number
 Facility's Phone: **74148**

| 9. Waste Shipping Name and Description | 10. Containers | | 11. Total Quantity | 12. Unit WL/Vol. |
|--|----------------|-----------|--------------------|------------------|
| | No. | Type | | |
| 1. Storm water | | TT | 2000 | gal |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |

13. Special Handling Instructions and Additional Information
Send to base tank

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: **Douglas Wilson for City of Tulsa** Signature: **Douglas Wilson** Month: **10** Day: **19** Year: **2011**

15. International Shipments Import to U.S. Export from U.S. Port of entry/exit: Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
 Transporter Signature (for exports only):
 Transporter 1 Printed/Typed Name: **John Starks** Signature: **John Starks** Month: **10** Day: **19** Year: **2011**

Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

17. Discrepancy
 17a. Discrepancy Indication Space Quantity Type Residue Partial Rejection Full Rejection

17b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number:

Facility's Phone:
 17c. Signature of Alternate Facility (or Generator) Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a

Printed/Typed Name: Signature: Month: Day: Year:

GENERATOR

TRANSPORTER INTL

DESIGNATED FACILITY

APPENDIX B

SITE HEALTH AND SAFETY PLAN WITH SIGN-IN LOGS



SITE SAFETY PLAN

The Complete Solution

Seneca Companies, Inc.
4140 NE 14th Street
Des Moines, IA 50313
515-262-3500

A. GENERAL INFORMATION

Project Name: City of Tulsa - Brownfield - Evans Fintube
Location: 118/150/186 N Lan Tulsa, OK 74120
Project Number 6362589

Plan Objectives: This Site Safety Plan has been developed to fulfill significant requirements outlined in OSHA regulations 29 CFR 1910.120 et.seq. The plan is intended to outline the safety procedures to be utilized during activities at the above referenced facility.

Project Manager: Mike Fitter 918-838-0494/918-740-6559

Date: 9/4-5/2018
Field Activity: Groundwater and Soil Sampling
Site Safety Coordinator Douglas Wilson

Date: 9/17-28/2018
Field Activity: Dig and Haul
Site Safety Coordinator Douglas Wilson

Date: 9/24/2018
Field Activity: Plugging of Monitoring Wells
Site Safety Coordinator Douglas Wilson

Background Review: The Evans-Fintube property was used as a steel foundry and forge from 1939 through 1962 and potentially has hydrocarbon and metal contamination of surface soils, according to the Tulsa Development Authority's Brownfield Grant application. The property later was used to produce heat exchangers and had a concrete reservoir, a forge, and welding and fabrication shops.

B. EMERGENCY INFORMATION

In the event of an accident resulting in physical injury, first aid will be administered and the injured worker will be transported to the nearest hospital or emergency medical clinic for emergency treatment. A physician's attention is required regardless of the severity of the injury.

Is 911 the local emergency number YES

Hospital: Oklahoma State University Medical Center
744 W 9th Street
Tulsa, OK
918-599-1000

Directions to Hospital:

A 147 N Lansing Ave, Tulsa, OK 74108 12 miles, 2.8 mi
B Oklahoma State University Medical Center Indirizzo nella G sub-urbanistica
Via E. A. Archer, S. Houston Ave

How your route starts here

A 147 N Lansing Ave, Tulsa, OK 74108

| | | |
|---------------------|---|---------|
| ↑ 1 | Change E Archer St toward N Greenwood Ave | 0.0 mi |
| ↑ 2 | Route changes to W Archer St | 0.2 mi |
| ↶ 3 | Turn left onto N Danmar Ave | 0.2 mi |
| ↑ 4 | Route again changes to S Danmar Ave | 0.2 mi |
| ↷ 5 | Turn right onto W 1st St S | 0.2 mi |
| ↶ 6 | Turn left onto W Henry Traffic Way | 0.1 mi |
| ↶ 7 | Turn left onto S Henshaw Ave | 0.6 mi |
| ↷ 8 | Turn right onto W 19th St S | 0.2 mi |
| ↷ 9 | Turn right onto road | 11.0 ft |
| ↷ 10 | Turn right onto road | 1.2 ft |
| Arrive on the right | | |
| On the left | | |



B Oklahoma State University Medical Center

NON-911 Emergency Numbers:

| | Phone # | Name | address |
|-------------------|---------------------|-----------------|------------------------------|
| Ambulance: | <u>918-596-3100</u> | EMSA | 1417 N Lansing Ave Tulsa, OK |
| Fire | <u>918-596-8444</u> | Fire Department | 2 W 2nd Street Tulsa, OK |
| Police | <u>918-596-8222</u> | Police Dept. | 600 Civic Ctr Tulsa, OK |

Emergency Response:

| | |
|--|-----------------------|
| National Response Center: | <u>1-800-424-8802</u> |
| Oklahoma Department of Environmental Quality | <u>1-405-702-6100</u> |
| CHEMTREC (24-hr emergency response) | <u>1-800-424-8802</u> |
| Chemical Emergency Preparedness Hotline | <u>1-800-535-0202</u> |

In case of an incident notify: Mike Fitter 918-838-0494/918-740-6559
 (office/cell) Douglas Wilson 918-838-0494/918-210-0181

Other Pertinent Information / Notes:

C. SITE / WASTE CHARACTERISTICS

Overall Hazard Potential: Serious _____ Moderate _____ Low **X** (assumed low) _____

Facility Description: Former foundry and metal working facility

Unusual Features
 (terrain, underground structures, surrounding use): The site terrain is generally flat. The surrounding land uses include both residential and commercial areas. Oklahoma One-Call has identified multiple service providers who may have utility, communication or power lines in the site vicinity. All service lines and utilities will be located prior to subsurface drilling, boring or excavating.

Facility Status
 (active/inactive/unknown) Inactive

History of Facility The Evans-Fintube property was used as a steel foundry and forge from 1939 through 1982 and potentially has hydrocarbon and metal contamination of surface soils, according to the Tulsa Development Authority's Brownfield Grant application. The property later was used to produce heat exchangers and had a concrete reservoir, a forge, and welding and fabrication shops.

Waste Type Soil and Groundwater

| Exposure Limits (PPM) | TWA | STEL | PEL | IDLH |
|-----------------------|-----|------|-----|------|
| benzene | 10 | 50 | 10 | 500 |
| toluene | 100 | 150 | 100 | 500 |
| ethylbenzene | 100 | 125 | 100 | 800 |
| total xylenes | 80 | 150 | 100 | 900 |
| naphthalene | 10 | 15 | - | - |
| gasoline | 300 | 500 | - | - |
| Diesel | 100 | - | - | - |

Other: TWA - 8 hour time weighted average
 STEL - short term exposure limit (usually 10 minutes)

Confined Space Yes _____ No **x** _____

D. JOB SPECIFIC / GENERAL HAZARD EVALUATION

NO CHANGES TO THE SPECIFIED LEVELS OF PROTECTION SHALL BE MADE WITHOUT THE APPROVAL OF THE SITE SAFETY COORDINATOR

Task: Groundwater and Soil Sampling

Level of Protection A _____ B _____ C _____ D X

Hazards and appropriate precautions:

Seneca personnel will be on site working outdoors and in close proximity to tools and machinery, which poses potential physical hazards such as:

- Getting cut or struck by moving or falling equipment/machinery
- Trips, slips, or falls
- Explosive and/or electrical injury due to buried or overhead utilities

Task: Excavation and Hauling of Soils

Level of Protection A _____ B _____ C _____ D X

Hazards and appropriate precautions:

Seneca personnel will be working outdoors and in close proximity to tools and machinery, which poses potential physical hazards such as:

- Trips, slips, or falls
- Excessive noise
- Explosive and/or electrical injury due to buried or overhead utilities
- Site is under construction, heavy equipment moving onsite

Task: Plugging of Monitoring Wells

Level of Protection A _____ B _____ C _____ D X

Hazards and appropriate precautions:

A License OWRB Driller has been contacted to complete the plugging and closure of 5 monitoring wells on site, however Seneca personnel will be working outdoors and in close proximity to tools and machinery, which poses potential physical hazards such as:

- Trips, slips, or falls
- Excessive noise
- Explosive and/or electrical injury due to buried or overhead utilities
- Site is under construction, heavy equipment moving onsite

General Precautions for all tasks / jobs:

All workers will take basic precautions to ensure that activities are conducted in the safest manner possible. Workers will not be allowed to conduct activities while using tobacco products or under the influence of drugs or alcohol. Workers will not be allowed to work during severe electrical storms, or under other severe weather conditions without appropriate precautions. Each worker will watch out for co-workers to ensure their safety. A minimum of two individuals must remain on-site while conducting activities unless otherwise specified by the on-site safety coordinator.

Safety precautions to be taken during field activities include the wearing of appropriate outer garments including long pants, shirt, boots, gloves, and earplugs, where necessary. Workers may be exposed to chemical hazards that include dermal exposure to chemicals in groundwater, as well as, exposure to organic vapors while conducting activities. Specific to this job-site, all personnel will be required to wear, steel toe boots, safety glasses and nitrile gloves.

General Project Safety Requirements:

The project operations shall be conducted with the following minimum safety requirements:

- * Eating, drinking and smoking will be restricted to appropriate areas.
- * Gross decontamination and removal of all personal protective equipment shall be performed prior to exiting the site. Contaminated clothing will be removed and collected in a drum for disposal as
- * The Project Manager or Staff Geologist will be responsible to take necessary steps to ensure that employees are protected from physical hazards, which could include:
 - Falling objects such as tools or equipment
 - Falls from elevations
 - Tripping over hoses, pipes, tools, or equipment
 - Slipping on wet or oily surfaces
 - Insufficient or faulty protective equipment
 - Insufficient or faulty operations, equipment, or tools
 - Heat exhaustion
- * All personnel shall be required to conduct appropriate personal hygiene before and after eating, drinking or smoking.
- * Field operations personnel shall be cautioned to inform each other if they are experiencing non-visual effects of the presence of toxics, such as:
 - Headaches
 - Dizziness
 - Nausea
 - Blurred vision
 - Cramps
 - Excessive Salivation
 - Irritation of eyes, skin, or respiratory tract
 - Changes in complexion or skin discoloration
 - Changes in apparent motor coordination
 - Changes in personality or demeanor
 - Changes in speech ability or pattern
 - Changes in papillary response

Perimeter Control:

Only authorized personnel will be allowed in the immediate area of operations of Seneca Companies, Inc. All individuals allowed in this area must be familiar with this site safety plan. Workers will attempt to ensure that unauthorized vehicles and personnel are kept out of the area through the use of caution cones, barriers and warning signs.

Obstruction and Fire Hazards:

All power lines and other utilities will be located prior to conducting any activities. Potential for fire hazards is minimal, except fires associated with equipment operation. Each vehicle will carry fire extinguisher, as required by IDOT.

E. DECONTAMINATION PROCEDURES

Personnel Decontamination Procedures:

Personnel will remove all disposable outer garments on-site and dispose of them in a designated manner prior to leaving the site. Personnel will conduct appropriate personal hygiene prior to eating and leaving the site. Field personnel are advised to shower as soon as possible after leaving the site.

Equipment Decontamination Procedures:

A specific area will be established for decontamination of heavy equipment. Augers and similar drilling accessories will be decontaminated before drilling begins and between each boring location, as necessary. The decontamination process will include:

- water wash / rinse as appropriate
- detergent water wash (alconox or equivalent)
- water rinse

Smaller sampling equipment (i.e. split spoon, product/water interface probe, stainless steel bowls, spoons, etc.) will be decontaminated between sampling events by:

- detergent water wash (alconox or equivalent)
- tap water rinse
- de-ionized water rinse

F. MONITORING EQUIPMENT

Organic vapor monitoring will be conducted using a photo-ionization detector. The direct breathing space will be evaluated.

If concentrations of organic vapors exceed 25 ppm above background, half mask respirators with organic cartridges should be worn until air concentrations diminish.

DAILY SAFETY MEETING



The Complete Solution

Project Name: City of Tulsa - Brownfield - Evans Flintube

Date: 9-4-2018

Project #: 6362589

Presented by: D. Wilson

Check the Topics/Information Reviewed:

- | | | |
|---|---|--|
| <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Safety is everyone's responsibility <input checked="" type="checkbox"/> Site-Specific health and safety plan reviewed <input checked="" type="checkbox"/> Safety glasses, hard hat, safety boots <input checked="" type="checkbox"/> Employee Right-To-Know/MSDS location <input checked="" type="checkbox"/> Vehicle Safety and driving/road conditions <input checked="" type="checkbox"/> Equipment and machinery familiarization <input checked="" type="checkbox"/> Portable tool safety and awareness <input type="checkbox"/> Emphasis on unusual tasks or new technology <input type="checkbox"/> First aid, safety and PPE location <input type="checkbox"/> Sharp object, rebar and scrap metal hazards <input type="checkbox"/> Excavation/trenching inspections/documentation <input type="checkbox"/> Full-face respirators with proper cartridges <input type="checkbox"/> Upgrade to Level C at: PID (___ eV) > ___ ppm <input type="checkbox"/> Work stoppage at: PID (___ eV) > ___ ppm, % LEL > 10% | <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Slips, trips and falls <input checked="" type="checkbox"/> Strains and sprains <input checked="" type="checkbox"/> Anticipated visitors <input checked="" type="checkbox"/> Electrical ground fault <input checked="" type="checkbox"/> Public safety and fences <input type="checkbox"/> Excavator swing and loading <input checked="" type="checkbox"/> Orderly site and housekeeping <input checked="" type="checkbox"/> Smoking in designated areas <input type="checkbox"/> Leather gloves for protection <input checked="" type="checkbox"/> Weather effects of the night before? <input type="checkbox"/> Vibration related injuries <input type="checkbox"/> Noise hazards <input type="checkbox"/> Confined space entry <input type="checkbox"/> Hot work permits <input type="checkbox"/> Overhead utility locations cleared? | <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Daily work scope reviewed <input checked="" type="checkbox"/> Fire extinguisher locations <input checked="" type="checkbox"/> Eyewash station locations <input checked="" type="checkbox"/> Directions to nearest hospital <input checked="" type="checkbox"/> Heat and cold stress <input checked="" type="checkbox"/> Decontamination steps <input checked="" type="checkbox"/> Review emergency protocol <input checked="" type="checkbox"/> Parking and laydown area <input checked="" type="checkbox"/> Vehicle backing up hazards <input checked="" type="checkbox"/> Accidents can be costly <input checked="" type="checkbox"/> No horseplay <input type="checkbox"/> Dust and vapor control <input type="checkbox"/> Refueling procedures <input type="checkbox"/> Flying debris hazards <input type="checkbox"/> Poison Ivy/oak/sumac <input type="checkbox"/> Flex-N-Stretch performed |
|---|---|--|

Other Discussion Items/Comments/Follow-Up Actions:

| Name | Signature | Company | Date |
|----------------|-----------|---------|----------|
| Douglas Wilson | | Seneca | 9-4-2018 |
| Margaret Fehri | | Seneca | 9-4-2018 |
| Matthew Payne | | Seneca | 9/4/18 |

Instructions:

- Conduct a daily safety meeting prior to beginning each day's site activities.
- Complete form, obtain signatures and file with the field notes.
- Follow-up on any noted items and document the resolution of any action items.

DAILY SAFETY MEETING



The Complete Solution

Project Name: City of Tulsa - Brownfield - Evans Flintube

Date: 9-5-2018

Project #: 6362589

Presented by: D. Wilson

Check the Topics/Information Reviewed:

- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> Safety is everyone's responsibility | <input checked="" type="checkbox"/> Slips, trips and falls | <input checked="" type="checkbox"/> Daily work scope reviewed |
| <input checked="" type="checkbox"/> Site-Specific health and safety plan reviewed | <input checked="" type="checkbox"/> Strains and sprains | <input checked="" type="checkbox"/> Fire extinguisher locations |
| <input checked="" type="checkbox"/> Safety glasses, hard hat, safety boots | <input type="checkbox"/> Anticipated visitors | <input checked="" type="checkbox"/> Eyewash station locations |
| <input checked="" type="checkbox"/> Employee Right-To-Know/MSDS location | <input type="checkbox"/> Electrical ground fault | <input checked="" type="checkbox"/> Directions to nearest hospital |
| <input checked="" type="checkbox"/> Vehicle Safety and driving/road conditions | <input checked="" type="checkbox"/> Public safety and fences | <input checked="" type="checkbox"/> Heat and cold stress |
| <input type="checkbox"/> Equipment and machinery familiarization | <input type="checkbox"/> Excavator swing and loading | <input checked="" type="checkbox"/> Decontamination steps |
| <input type="checkbox"/> Portable tool safety and awareness | <input checked="" type="checkbox"/> Orderly site and housekeeping | <input checked="" type="checkbox"/> Review emergency protocol |
| <input type="checkbox"/> Emphasis on unusual tasks or new technology | <input checked="" type="checkbox"/> Smoking in designated areas | <input checked="" type="checkbox"/> Parking and laydown area |
| <input checked="" type="checkbox"/> First aid, safety and PPE location | <input checked="" type="checkbox"/> Leather gloves for protection | <input checked="" type="checkbox"/> Vehicle backing up hazards |
| <input type="checkbox"/> Sharp object, rebar and scrap metal hazards | <input type="checkbox"/> Weather effects of the night before? | <input checked="" type="checkbox"/> Accidents can be costly |
| <input type="checkbox"/> Excavation/trenching inspections/documentation | <input type="checkbox"/> Vibration related injuries | <input checked="" type="checkbox"/> No horseplay |
| <input type="checkbox"/> Full-face respirators with proper cartridges | <input type="checkbox"/> Noise hazards | <input type="checkbox"/> Dust and vapor control |
| <input type="checkbox"/> Upgrade to Level C at: PID (<u> </u> eV) > <u> </u> ppm | <input type="checkbox"/> Confined space entry | <input type="checkbox"/> Refueling procedures |
| <input type="checkbox"/> Work stoppage at: PID (<u> </u> eV) > <u> </u> ppm, % LEL > 10% | <input type="checkbox"/> Hot work permits | <input type="checkbox"/> Flying debris hazards |
| | <input checked="" type="checkbox"/> Overhead utility locations cleared? | <input type="checkbox"/> Poison Ivy/oak/sumac |
| | | <input type="checkbox"/> Flex-N-Stretch performed |

Other Discussion Items/Comments/Follow-Up Actions:

| Name | Signature | Company | Date |
|----------------|-----------|---------|----------|
| Douglas Wilson | | Seneca | 9-5-2018 |
| Margaret Echn | | Seneca | 9-5-2018 |

Instructions:

- Conduct a daily safety meeting prior to beginning each day's site activities.
- Complete form, obtain signatures and file with the field notes.
- Follow-up on any noted items and document the resolution of any action items.

DAILY SAFETY MEETING



The Complete Solution

Project Name: City of Tulsa - Brownfield - Evans Flintube

Date: 9-24-2018

Project #: 6362589

Presented by: D Wilson

Check the Topics/Information Reviewed:

- Safety is everyone's responsibility
- Site-Specific health and safety plan reviewed
- Safety glasses, hard hat, safety boots
- Employee Right-To-Know/MSDS location
- Vehicle Safety and driving/road conditions
- Equipment and machinery familiarization
- Portable tool safety and awareness
- Emphasis on unusual tasks or new technology
- First aid, safety and PPE location
- Sharp object, rebar and scrap metal hazards
- Excavation/trenching inspections/documentation
- Full-face respirators with proper cartridges
- Upgrade to Level C at: PID (eV) > ppm
- Work stoppage at: PID (eV) > ppm, % LEL > 10%

- Slips, trips and falls
- Strains and sprains
- Anticipated visitors
- Electrical ground fault
- Public safety and fences
- Excavator swing and loading
- Orderly site and housekeeping
- Smoking in designated areas
- Leather gloves for protection
- Weather effects of the night before?
- Vibration related injuries
- Noise hazards
- Confined space entry
- Hot work permits
- Overhead utility locations cleared?

- Daily work scope reviewed
- Fire extinguisher locations
- Eyewash station locations
- Directions to nearest hospital
- Heat and cold stress
- Decontamination steps
- Review emergency protocol
- Parking and laydown area
- Vehicle backing up hazards
- Accidents can be costly
- No horseplay
- Dust and vapor control
- Refueling procedures
- Flying debris hazards
- Poison ivy/oak/sumac
- Flex-N-Stretch performed

Other Discussion Items/Comments/Follow-Up Actions:

| Name | Signature | Company | Date |
|----------------|-----------------------|---------|---------|
| Douglas Wilson | <i>Douglas Wilson</i> | | |
| Tommy Poulter | <i>Tommy Poulter</i> | RAREX | 9-24-18 |
| Greg Wood | <i>Greg Wood</i> | RAREX | 9-24-18 |
| | | | |
| | | | |

Instructions:

- Conduct a daily safety meeting prior to beginning each day's site activities.
- Complete form, obtain signatures and file with the field notes.
- Follow-up on any noted items and document the resolution of any action items.

DAILY SAFETY MEETING



The Complete Solution

Project Name: City of Tulsa - Brownfield - Evans Flintube

Date: 9-25-18

Project #: 6362589

Presented by: D Wilson

Check the Topics/Information Reviewed:

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> Safety is everyone's responsibility | <input checked="" type="checkbox"/> Slips, trips and falls | <input checked="" type="checkbox"/> Daily work scope reviewed |
| <input checked="" type="checkbox"/> Site-Specific health and safety plan reviewed | <input checked="" type="checkbox"/> Strains and sprains | <input checked="" type="checkbox"/> Fire extinguisher locations |
| <input checked="" type="checkbox"/> Safety glasses, hard hat, safety boots | <input checked="" type="checkbox"/> Anticipated visitors | <input checked="" type="checkbox"/> Eyewash station locations |
| <input checked="" type="checkbox"/> Employee Right-To-Know/MSDS location | <input checked="" type="checkbox"/> Electrical ground fault | <input checked="" type="checkbox"/> Directions to nearest hospital |
| <input checked="" type="checkbox"/> Vehicle Safety and driving/road conditions | <input checked="" type="checkbox"/> Public safety and fences | <input checked="" type="checkbox"/> Heat and cold stress |
| <input checked="" type="checkbox"/> Equipment and machinery familiarization | <input checked="" type="checkbox"/> Excavator swing and loading | <input checked="" type="checkbox"/> Decontamination steps |
| <input checked="" type="checkbox"/> Portable tool safety and awareness | <input checked="" type="checkbox"/> Orderly site and housekeeping | <input checked="" type="checkbox"/> Review emergency protocol |
| <input checked="" type="checkbox"/> Emphasis on unusual tasks or new technology | <input checked="" type="checkbox"/> Smoking in designated areas | <input checked="" type="checkbox"/> Parking and laydown area |
| <input checked="" type="checkbox"/> First aid, safety and PPE location | <input checked="" type="checkbox"/> Leather gloves for protection | <input checked="" type="checkbox"/> Vehicle backing up hazards |
| <input type="checkbox"/> Sharp object, rebar and scrap metal hazards | <input checked="" type="checkbox"/> Weather effects of the night before? | <input checked="" type="checkbox"/> Accidents can be costly |
| <input checked="" type="checkbox"/> Excavation/trenching inspections/documentation | <input checked="" type="checkbox"/> Vibration related injuries | <input checked="" type="checkbox"/> No horseplay |
| <input type="checkbox"/> Full-face respirators with proper cartridges | <input checked="" type="checkbox"/> Noise hazards | <input checked="" type="checkbox"/> Dust and vapor control |
| <input type="checkbox"/> Upgrade to Level C at: PID (eV) > __ ppm | <input type="checkbox"/> Confined space entry | <input checked="" type="checkbox"/> Refueling procedures |
| <input type="checkbox"/> Work stoppage at: PID (eV) > __ ppm, % LEL > 10% | <input checked="" type="checkbox"/> Hot work permits | <input checked="" type="checkbox"/> Flying debris hazards |
| | <input checked="" type="checkbox"/> Overhead utility locations cleared? | <input checked="" type="checkbox"/> Poison Ivy/oak/sumac |
| | | <input checked="" type="checkbox"/> Flex-N-Stretch performed |

Other Discussion Items/Comments/Follow-Up Actions:

| Name | Signature | Company | Date |
|----------------|--------------------|---------|-----------|
| Douglas Wilson | <i>[Signature]</i> | Seneca | 9-25-2018 |
| David E Yeatt | <i>[Signature]</i> | ERS | 9/25/2018 |
| RICK ALBERTSON | <i>[Signature]</i> | ERS | 9-25-18 |
| James Beckland | <i>[Signature]</i> | ERS | 9-25-18 |
| Art Pangel | <i>[Signature]</i> | ERS | 9-25-18 |

Instructions:

- Conduct a daily safety meeting prior to beginning each day's site activities.
- Complete form, obtain signatures and file with the field notes.
- Follow-up on any noted items and document the resolution of any action items.

Shaun Dickerson *[Signature]* ERS 9-25-18
 Jim Alvarado *[Signature]* ERS 9-25-18
[Signature] ERS 9-25-18

DAILY SAFETY MEETING



The Complete Solution

Project Name: City of Tulsa - Brownfield - Evans Fintube

Date: 9-26-2018

Project #: 6362589

Presented by: Doug Wilson

Check the Topics/Information Reviewed:

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> Safety is everyone's responsibility | <input checked="" type="checkbox"/> Slips, trips and falls | <input type="checkbox"/> Daily work scope reviewed |
| <input checked="" type="checkbox"/> Site-Specific health and safety plan reviewed | <input checked="" type="checkbox"/> Strains and sprains | <input checked="" type="checkbox"/> Fire extinguisher locations |
| <input checked="" type="checkbox"/> Safety glasses, hard hat, safety boots | <input checked="" type="checkbox"/> Anticipated visitors | <input checked="" type="checkbox"/> Eyewash station locations |
| <input checked="" type="checkbox"/> Employee Right-To-Know/MSDS location | <input checked="" type="checkbox"/> Electrical ground fault | <input checked="" type="checkbox"/> Directions to nearest hospital |
| <input checked="" type="checkbox"/> Vehicle Safety and driving/road conditions | <input checked="" type="checkbox"/> Public safety and fences | <input checked="" type="checkbox"/> Heat and cold stress |
| <input checked="" type="checkbox"/> Equipment and machinery familiarization | <input checked="" type="checkbox"/> Excavator swing and loading | <input checked="" type="checkbox"/> Decontamination steps |
| <input checked="" type="checkbox"/> Portable tool safety and awareness | <input checked="" type="checkbox"/> Orderly site and housekeeping | <input checked="" type="checkbox"/> Review emergency protocol |
| <input checked="" type="checkbox"/> Emphasis on unusual tasks or new technology | <input checked="" type="checkbox"/> Smoking in designated areas | <input checked="" type="checkbox"/> Parking and laydown area |
| <input checked="" type="checkbox"/> First aid, safety and PPE location | <input checked="" type="checkbox"/> Leather gloves for protection | <input checked="" type="checkbox"/> Vehicle backing up hazards |
| <input checked="" type="checkbox"/> Sharp object, rebar and scrap metal hazards | <input checked="" type="checkbox"/> Weather effects of the night before? | <input checked="" type="checkbox"/> Accidents can be costly |
| <input type="checkbox"/> Excavation/trenching inspections/documentation | <input checked="" type="checkbox"/> Vibration related injuries | <input checked="" type="checkbox"/> No horseplay |
| <input type="checkbox"/> Full-face respirators with proper cartridges | <input checked="" type="checkbox"/> Noise hazards | <input checked="" type="checkbox"/> Dust and vapor control |
| <input type="checkbox"/> Upgrade to Level C at: PID (eV) > __ ppm | <input type="checkbox"/> Confined space entry | <input checked="" type="checkbox"/> Refueling procedures |
| <input type="checkbox"/> Work stoppage at: PID (eV) > __ ppm, % LEL > 10% | <input type="checkbox"/> Hot work permits | <input checked="" type="checkbox"/> Flying debris hazards |
| | <input checked="" type="checkbox"/> Overhead utility locations cleared? | <input checked="" type="checkbox"/> Poison ivy/oak/sumac |
| | | <input checked="" type="checkbox"/> Flex-N-Stretch performed |

Other Discussion Items/Comments/Follow-Up Actions:

| Name | Signature | Company | Date |
|----------------|-----------------------|----------|---------------|
| Douglas Wilson | <i>Douglas Wilson</i> | Seneca | 9-26-2018 |
| Rich Albritton | <i>Rich Albritton</i> | ERS | 9-26-18 |
| Cody Kiker | <i>Cody Kiker</i> | Energcon | 26 Sept. 2018 |
| Sam Dickson | <i>Sam Dickson</i> | ERS | 9-26-18 |
| David Beath | <i>David Beath</i> | ERS | 9/26/18 |
| Instructions: | <i>Mr. Dodder</i> | ERS | 9-26/18 |

- Conduct a daily safety meeting prior to beginning each day's site activities.
- Complete form, obtain signatures and file with the field notes.
- Follow-up on any noted items and document the resolution of any action items.

DAILY SAFETY MEETING



The Complete Solution

Project Name: City of Tulsa - Brownfield - Evans Flintube

Date: 10-5-2018

Project #: 6362589

Presented by: D Wilson

Check the Topics/Information Reviewed:

- | | | |
|---|---|---|
| <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Safety is everyone's responsibility <input checked="" type="checkbox"/> Site-Specific health and safety plan reviewed <input checked="" type="checkbox"/> Safety glasses, hard hat, safety boots <input checked="" type="checkbox"/> Employee Right-To-Know/MSDS location <input checked="" type="checkbox"/> Vehicle Safety and driving/road conditions <input checked="" type="checkbox"/> Equipment and machinery familiarization <input checked="" type="checkbox"/> Portable tool safety and awareness <input checked="" type="checkbox"/> Emphasis on unusual tasks or new technology <input checked="" type="checkbox"/> First aid, safety and PPE location <input checked="" type="checkbox"/> Sharp object, rebar and scrap metal hazards <input checked="" type="checkbox"/> Excavation/trenching inspections/documentation <input type="checkbox"/> Full-face respirators with proper cartridges <input type="checkbox"/> Upgrade to Level C at: PID (<u> </u> eV) > <u> </u> ppm <input type="checkbox"/> Work stoppage at: PID (<u> </u> eV) > <u> </u> ppm, % LEL > 10% | <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Slips, trips and falls <input checked="" type="checkbox"/> Strains and sprains <input checked="" type="checkbox"/> Anticipated visitors <input checked="" type="checkbox"/> Electrical ground fault <input checked="" type="checkbox"/> Public safety and fences <input checked="" type="checkbox"/> Excavator swing and loading <input checked="" type="checkbox"/> Orderly site and housekeeping <input checked="" type="checkbox"/> Smoking in designated areas <input checked="" type="checkbox"/> Leather gloves for protection <input type="checkbox"/> Weather effects of the night before? <input type="checkbox"/> Vibration related injuries <input type="checkbox"/> Noise hazards <input type="checkbox"/> Confined space entry <input type="checkbox"/> Hot work permits <input checked="" type="checkbox"/> Overhead utility locations cleared? | <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Daily work scope reviewed <input checked="" type="checkbox"/> Fire extinguisher locations <input checked="" type="checkbox"/> Eyewash station locations <input checked="" type="checkbox"/> Directions to nearest hospital <input checked="" type="checkbox"/> Heat and cold stress <input checked="" type="checkbox"/> Decontamination steps <input checked="" type="checkbox"/> Review emergency protocol <input checked="" type="checkbox"/> Parking and laydown area <input checked="" type="checkbox"/> Vehicle backing up hazards <input checked="" type="checkbox"/> Accidents can be costly <input checked="" type="checkbox"/> No horseplay <input checked="" type="checkbox"/> Dust and vapor control <input checked="" type="checkbox"/> Refueling procedures <input checked="" type="checkbox"/> Flying debris hazards <input checked="" type="checkbox"/> Poison ivy/oak/sumac <input checked="" type="checkbox"/> Flex-N-Stretch performed |
|---|---|---|

Other Discussion Items/Comments/Follow-Up Actions:

| Name | Signature | Company | Date |
|----------------|--------------------|---------|-------------|
| Douglas Wilson | <i>[Signature]</i> | Seneca | 10-5-2018 |
| Kend Duellwork | <i>[Signature]</i> | ERS | 10-5-2018 |
| Scott Pangel | <i>[Signature]</i> | ERS | 10.5.18 |
| David Pycard | <i>[Signature]</i> | ERS | 10/5/18 |
| Cody Kiker | <i>[Signature]</i> | Enercon | 05 Oct 2018 |

Instructions:

- Conduct a daily safety meeting prior to beginning each day's site activities.
- Complete form, obtain signatures and file with the field notes.
- Follow-up on any noted items and document the resolution of any action items.

DAILY SAFETY MEETING



The Complete Solution

Project Name: City of Tulsa - Brownfield - Evans Flintube

Date: 10-18-2018

Project #: 6362589

Presented by: D Wilson

Check the Topics/Information Reviewed:

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> Safety is everyone's responsibility | <input checked="" type="checkbox"/> Slips, trips and falls | <input checked="" type="checkbox"/> Daily work scope reviewed |
| <input checked="" type="checkbox"/> Site-Specific health and safety plan reviewed | <input checked="" type="checkbox"/> Strains and sprains | <input checked="" type="checkbox"/> Fire extinguisher locations |
| <input checked="" type="checkbox"/> Safety glasses, hard hat, safety boots | <input checked="" type="checkbox"/> Anticipated visitors | <input checked="" type="checkbox"/> Eyewash station locations |
| <input checked="" type="checkbox"/> Employee Right-To-Know/MSDS location | <input checked="" type="checkbox"/> Electrical ground fault | <input checked="" type="checkbox"/> Directions to nearest hospital |
| <input checked="" type="checkbox"/> Vehicle Safety and driving/road conditions | <input checked="" type="checkbox"/> Public safety and fences | <input checked="" type="checkbox"/> Heat and cold stress |
| <input checked="" type="checkbox"/> Equipment and machinery familiarization | <input checked="" type="checkbox"/> Excavator swing and loading | <input checked="" type="checkbox"/> Decontamination steps |
| <input checked="" type="checkbox"/> Portable tool safety and awareness | <input checked="" type="checkbox"/> Orderly site and housekeeping | <input checked="" type="checkbox"/> Review emergency protocol |
| <input checked="" type="checkbox"/> Emphasis on unusual tasks or new technology | <input checked="" type="checkbox"/> Smoking in designated areas | <input checked="" type="checkbox"/> Parking and laydown area |
| <input checked="" type="checkbox"/> First aid, safety and PPE location | <input checked="" type="checkbox"/> Leather gloves for protection | <input checked="" type="checkbox"/> Vehicle backing up hazards |
| <input checked="" type="checkbox"/> Sharp object, rebar and scrap metal hazards | <input checked="" type="checkbox"/> Weather effects of the night before? | <input checked="" type="checkbox"/> Accidents can be costly |
| <input checked="" type="checkbox"/> Excavation/trenching inspections/documentation | <input checked="" type="checkbox"/> Vibration related injuries | <input checked="" type="checkbox"/> No horseplay |
| <input type="checkbox"/> Full-face respirators with proper cartridges | <input checked="" type="checkbox"/> Noise hazards | <input type="checkbox"/> Dust and vapor control |
| <input type="checkbox"/> Upgrade to Level C at: PID (eV) >__ ppm | <input type="checkbox"/> Confined space entry | <input type="checkbox"/> Refueling procedures |
| <input type="checkbox"/> Work stoppage at: PID (eV) >__ ppm, % LEL > 10% | <input type="checkbox"/> Hot work permits | <input type="checkbox"/> Flying debris hazards |
| | <input type="checkbox"/> Overhead utility locations cleared? | <input type="checkbox"/> Polson Ivy/oak/sumac |
| | | <input type="checkbox"/> Flex-N-Stretch performed |

Other Discussion Items/Comments/Follow-Up Actions:

| Name | Signature | Company | Date |
|----------------|-----------------------|---------|-------------|
| Doug Wilson | <i>Doug Wilson</i> | Seneca | 10-18-18 |
| Rick Albertson | <i>Rick Albertson</i> | ERS | 10-18-18 |
| Lance Buckland | <i>Lance Buckland</i> | ERS | 10-19-18 |
| Sammy Grace | <i>Sammy Grace</i> | ERS | 10-18-18 |
| Cody Kiker | <i>Cody Kiker</i> | Encon | 18 Oct 2018 |

Instructions:

- Conduct a daily safety meeting prior to beginning each day's site activities.
- Complete form, obtain signatures and file with the field notes.
- Follow-up on any noted items and document the resolution of any action items.

APPENDIX C

STORM WATER POLLUTION PREVENTION PLAN AND EARTH CHANGE PERMIT



City of Tulsa
 175 E 2nd St., Suite #450
 Tulsa, OK 74103
 (918) 596-9456

Permit NO: **WSD-010912-2018**
 Permit Type: **Watershed**
 Work Classification: **Commercial**
 Permit Status: **Issued**

Permit

Issue Date: 10/03/2018

Expiration: 04/01/2019

| | |
|---|-----------------------|
| Location Address | Parcel Number |
| 812 E INDEPENDENCE ST N, Tulsa, OK 74120 | 38425023623720 |

Contacts

| | |
|---|--|
| Seneca Companies, Inc 6947 E East 13TH S, Tulsa, OK 74112 (918)838-0494 | Applicant mfitter@senecaco.com |
|---|--|

| | | |
|----------------------------------|--|---|
| Description: Earth change | Valuation: \$0.00 Total Sq Feet: 0.00 | Inspection Requests: (918) 596-9656 |
|----------------------------------|--|---|

| Fees | Amount |
|---|-----------------|
| Application Fee (Watershed) | \$50.00 |
| Permit and Licensing System Maintenance Fee | \$4.00 |
| Record Retention Fee | \$109.50 |
| Stormwater Impact Review Fee | \$250.00 |
| System Development Fee | \$26.00 |
| Total: | \$439.50 |

| Payments | Amt Paid |
|--------------------|-----------------|
| Total Fees | \$439.50 |
| Check # | \$389.50 |
| so4WbN3hcGvy | |
| Credit Card | \$50.00 |
| Amount Due: | \$0.00 |

| Available Inspections: | |
|------------------------------|------|
| Inspection Type | IVR |
| Placement of Erosion Control | 1015 |
| Final Watershed | 2101 |

Additional Information

Work Type: Earth Change
Describe Proposed Scope of Work in Detail: Earth change
SP3 Required: No
Floodplain: No

WSD Permit Notes: Only excavations at locations as shown on Figure 2 Section 1 Surface Soil Excavation Map to be allowed. Erosion control measures shall be implemented during excavations.

 Issued By: Braden Cole

 Authorized Signature

October 03, 2018

 Date

 Date



SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

MARY FALLIN
Governor

September 7, 2018

P Michael Fitter Jr
Seneca Companies Inc
6947 E 13th St
Tulsa, OK 74112

Re: Authorization for Stormwater Discharge from Construction or Land Disturbing Activity
Authorization Number: OKR1029446

Dear P Michael Fitter Jr:

The new Notice of Intent (NOI) for the facility listed below was received on August 29, 2018 and processed by the Oklahoma Department of Environmental Quality. Enclosed is an authorization allowing you to discharge stormwater associated with construction or land disturbing activities under the terms and conditions in accordance with Oklahoma Pollutant Discharge Elimination System Act (OPDES) Storm Water General Permit OKR10 for the following site located in Tulsa County.

Facility:

**Evans Fintube - Phase 1
118-150-186 N Lansing Ave
Tulsa, OK 74120**

Sites that remain active one year from the effective date of the authorization will be invoiced for the next full permit year.

Please note: Once this project is complete and stabilized, you may terminate this permit by submitting a Notice of Termination (NOT) form to the Oklahoma Department of Environmental Quality.

If you have any questions regarding this permit or the Stormwater Program, please call Keri Jernigan of the Environmental Complaints and Local Services Division at (405)702-6100.

Sincerely,

Keri Jernigan
Environmental Complaints and Local Services

Enclosures



Oklahoma Department of Environmental Quality
**Authorization to Discharge Under the OPDES Stormwater Construction
General Permit OKR10**

AUTHORIZATION NO. OKR1029446

In compliance with the Oklahoma Pollution Discharge Elimination System (OPDES) Act 27A O.S. §2-6-201, the Rules of the Department of Environmental Quality (DEQ), and in reliance on the certified statements and representations heretofore made in its application,

**Seneca Companies Inc
6947 E 13th St
Tulsa, OK 74112**

is authorized to discharge stormwater from a construction site located in Tulsa County at

**Evans Fintube - Phase 1
118-150-186 N Lansing Ave
Tulsa, OK 74120**

The receiving body of water is an unnamed tributary to Dirty Butter Creek

The OPDES requires permittees to have a Stormwater Pollution Prevention Plan (SWP3) which includes a description of appropriate sediment control measures. These are applicable to your construction site, which is subject to inspection. Proof of this authorization must be available at the construction site.

The Authorization shall become effective **September 7, 2018** and will expire at midnight October 17, 2022.

All terms and conditions of the modified OPDES Stormwater Construction General Permit OKR10, as published on October 18, 2017, shall apply to the recipient of this authorization.



**Matt Pace, Environmental Programs Manager
Environmental Complaints and Local Services Division**

Stormwater Pollution Prevention Plan (SWP3)

Authorization No. OKR1029446

For Construction Activities At:

**City of Tulsa, Evans Fintube Phase 1
118/150/186/ North Lansing Avenue
Tulsa, Oklahoma 74120**

SWP3 Prepared For:

**City of Tulsa
K. Michelle Barnett, P.E.
175 East 2nd Street, Suite 15-036
Tulsa, Oklahoma 74103
918-596-7457**

SWP3 Prepared By:

**Seneca Companies, Inc.
Douglas Wilson
6947 East 13th Street
Tulsa, Oklahoma 74112
918-838-0494 Ext. 6110**

SWP3 Preparation Date:

08/ 24 / 2018

Estimated Project Dates:

**Project Start Date: 09 / 17 / 2018
Project Completion Date: 09 / 28 / 2018**

This Page is Intentionally Left Blank

Table of Contents

| | | |
|-------------------|---|------------|
| Section 1: | Stormwater Team and Project/Site Information | 1-3 |
| 1.1 | Stormwater Team | 1-3 |
| 1.2 | Nature of Construction Activity and Project Information | 1-4 |
| 1.3 | Operators and Contactor's Contact Information | 1-6 |
| 1.4 | Construction Support Activities <i>(If applicable)</i> | 1-7 |
| 1.5 | Sequence of Construction Activities | 1-8 |
| 1.6 | Allowable Non-Stormwater Discharges | 1-9 |
| Section 2: | Site Description and Site Map | 2-1 |
| 2.1 | Receiving Waters/Discharge Information | 2-1 |
| 2.2 | General Location Map | 2-2 |
| 2.3 | Site Map | 2-2 |
| Section 3: | Construction Site Pollutants | 3-1 |
| 3.1 | Pollutant-Generating Activities | 3-1 |
| 3.2 | List of Potential Pollutants | 3-1 |
| Section 4: | Compliance with Federal and State Requirements | 4-1 |
| 4.1 | Endangered or Threatened Species Protection | 4-1 |
| 4.2 | Federal, State, or Local Historic Preservation Laws | 4-2 |
| 4.3 | TMDL Requirements | 4-2 |
| Section 5: | Stormwater Control Measures | 5-1 |
| 5.1 | Stabilization Practices | 5-1 |
| 5.2 | Natural Buffers and/or Equivalent Sediment Controls | 5-2 |
| 5.3 | Structural Controls/Best Management Practices (BMPs) | 5-4 |
| 5.3.1 | Perimeter Control | 5-5 |
| 5.3.2 | Sediment Track-Out | 5-5 |
| 5.3.3 | Stockpiled Sediment or Soil | 5-6 |
| 5.3.4 | Minimize Dust | 5-6 |
| 5.3.5 | Minimize the Disturbance of Steep Slopes | 5-6 |
| 5.3.6 | Preserve Topsoil | 5-7 |
| 5.3.7 | Minimize Soil Compaction | 5-7 |
| 5.3.8 | Protection of Storm Drain Inlets | 5-7 |
| 5.3.9 | Constructed Stormwater Conveyance Channels | 5-8 |
| 5.3.10 | Sediment Basins | 5-8 |
| 5.3.11 | Dewatering Practices | 5-9 |
| 5.3.12 | Other Stormwater Controls | 5-9 |

| | | |
|--------------------|--|-------------|
| Section 6: | Pollution Prevention Controls..... | 6-1 |
| | 6.1 Spill Prevention and Responses..... | 6-1 |
| | 6.2 Waste Management Procedures..... | 6-1 |
| | 6.3 Prohibited Discharges..... | 6-3 |
| Section 7: | Procedures and Documentations..... | 7-1 |
| | 7.1 Maintenance and Repair..... | 7-1 |
| | 7.2 Approval from Local Office..... | 7-1 |
| | 7.3 Inspections..... | 7-2 |
| | 7.4 Corrective Action..... | 7-3 |
| | 7.5 Employee Training..... | 7-4 |
| | 7.6 Notification of Change of Ownership (NCO) for Individual Lots..... | 7-4 |
| | 7.7 Sub-contractor Certifications..... | 7-4 |
| | 7.8 Record Keeping and Record Retention..... | 7-5 |
| | 7.9 Posting a Notice..... | 7-5 |
| Section 8: | Additional Monitoring (if applicable)..... | 8-1 |
| | 8.1 Support Activity Covered by this Plan..... | 8-1 |
| | 8.2 Representative Outfall(s)..... | 8-1 |
| | 8.3 Structural & Non-Structural BMPs..... | 8-1 |
| | 8.4 Quarterly Visual Monitoring..... | 8-1 |
| | 8.5 Comprehensive Site Compliance Evaluation..... | 8-1 |
| | 8.6 Numeric Effluent Limitation Monitoring for Asphalt Plant..... | 8-2 |
| | 8.7 Additional Procedures for Concrete Batch Plant..... | 8-3 |
| Section 9: | SWP3 Certification..... | 9-1 |
| Section 10: | SWP3 Modifications..... | 10-1 |
| Section 11: | SWP3 Attachments & Additional Documentation..... | 11-1 |

Section 1: Stormwater Team and Project/Site Information

1.1 Stormwater Team

Stormwater team is responsible for overseeing development of the SWP3, making any modifications to it, implementing and maintaining control measures, taking corrective actions when required, performing site inspection and monitoring, supervising pollution prevention and waste management activities, providing staff training, and communicating changes in the SWP3 to the people working on the site. The following personnel, along with their role and responsibility, will be part of the stormwater team for my construction site:

| Team Leader (Name/Title/Telephone) | Roles & Responsibilities |
|--|-------------------------------------|
| Mike Fitter | Project Manager: oversee SWPPP |
| Branch Operations Manager | |
| 918-740-6559 | |

| Team Member # 1 (Name/Title/Telephone) | Roles & Responsibilities |
|--|--|
| Douglas Wilson | Onsite project coordinator: oversee implementation and carry out SWPPP |
| Environmental Project Manager | |
| 918-210-0181 | |

| Team Member # 2 (Name/Title/Telephone) | Roles & Responsibilities |
|--|--|
| Maggie Fehn | Onsite project assistant: oversee implementation and carry out SWPPP |
| Environmental Scientist | |
| 515-201-9343 | |

| Team Member # 3 (Name/Title/Telephone) | Roles & Responsibilities |
|--|---|
| Tom Hayes | Subcontractor Project Manager: oversee implementation and carry out SWPPP |
| Subcontractor Lead | |
| 918-219-4575 | |

| Team Member # 4 (Name/Title/Telephone) | Roles & Responsibilities |
|--|--|
| Rodney Bolle | Equipment Operator: oversee implementation and carry out SWPPP |
| Equipment Operator | |
| 618-567-7755 | |

[Repeat as necessary]

1.2 Nature of Construction Activity and Project Information

| | |
|--|-----------------|
| Project/Site Name and Address | |
| Project/Site Name: City of Tulsa, Evans Fintube Phase 1 | |
| Project/Site Street/Location: 118/150/186 North Lansing Avenue | |
| City: Tulsa | County: Tulsa |
| State: Oklahoma | ZIP Code: 74120 |

General Description of the Project/Site: Dig and haul of soils to staging area and landfill

| |
|---|
| Estimated project start date: September 17, 2018 |
| Estimated project end date: September 28, 2018 |
| Total area of the construction site: 22.75 (acres) |
| Estimated area to be disturbed: 0.12 (acres) |
| Estimated current impervious area at the site: 15.5 (acres) |
| Estimated impervious area after construction: 15.5 (acres) |
| Pre-construction runoff coefficient of the site: 1ft drop : 75 linear feet |
| Post-construction runoff coefficient of the site: 1ft drop : 75 linear feet |
| Purpose of the Construction Project/Site: <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Wind Farm <input type="checkbox"/> Road/Bridge <input type="checkbox"/> Other(s), please specify: Click here to enter text. |

| Project Latitude/Longitude (for linear project, include latitude/longitude of start and end points) | | | |
|---|--|---|---|
| Latitude: | Longitude: | | |
| 1. 36° 09' 53.37" N (degrees, minutes, seconds) | 1. 95° 58' 54.55" W (degrees, minutes, seconds) | | |
| 2. ___ . ___ ° N (decimal) | 2. ___ . ___ ° W (decimal) | | |
| Latitude: | Longitude: | | |
| 1. ___ ° ___ ' ___ " N (degrees, minutes, seconds) | 1. ___ ° ___ ' ___ " W (degrees, minutes, seconds) | | |
| 2. ___ . ___ ° N (decimal) | 2. ___ . ___ ° W (decimal) | | |
| Method for determining latitude/longitude: | | | |
| <input type="checkbox"/> DEQ Flex-viewer | <input type="checkbox"/> EPA Website | <input type="checkbox"/> USGS topographic map | <input checked="" type="checkbox"/> GPS |

| |
|---|
| Description of soil type(s) and fill materials: |
| The site is comprised of 80% Urban land soils and 20% Urban Land-Dennis Complex |
| Description of slopes (describe existing slopes and note any changes due to grading or fill activities): |
| Slope is 0-5% |
| Description of drainage patterns (describe existing drainage patterns and note any changes due to grading or fill activities): |
| Surface Drainage is the north northeast, drainage patterns will not change during construction activities |
| Description of existing or baseline vegetation on or immediately surrounding the project area: |
| Existing vegetation consists of mostly grasses and trees |
| Climate/Rainfall Patterns - check the box that applies: |
| <input type="checkbox"/> (0-20" annual rainfall) <input type="checkbox"/> (20" -30" annual rainfall) |
| <input checked="" type="checkbox"/> (30"-40" annual rainfall) <input type="checkbox"/> (40" -50" annual rainfall) |
| <i>(Note: Annual rainfall data can be found at the following link: https://www.mesonet.org/index.php/weather/category/rainfall)</i> |

1.3 Operators and Contactor's Contact Information

| | | |
|---|-----------------|-----------------|
| Operator(s) Information: | | |
| Name: City of Tulsa | | |
| Address: 175 East 2 nd Street, Suite 15-036 | | |
| City: Tulsa | State: Oklahoma | Zip Code: 74103 |
| Operator's Point of Contact: Michelle Barnett, P.E. | | |
| Telephone Number: 918-596-7457 | | |
| Email address: mbarnett@cityoftulsa.org | Fax number: | |

(Repeat for multiple operators by copying and pasting the above rows)

| | | |
|---|-----------------|-----------------|
| Contractor's Information: | | |
| Name: Seneca Companies, Inc. | | |
| Address: 6947 East 13 th Street | | |
| City: Tulsa | State: Oklahoma | Zip Code: 74112 |
| Telephone Number: 918-838-0494 | | |
| Email address: mfitter@senecaco.com | Fax number: | |

(If owner is a separate entity)

| | | |
|---|--------------------------|-----------------|
| Sub-Contractor's Information: | | |
| Name: O6 Environmental | | |
| Address: 6311 Bartmer Industrial Drive | | |
| City: St. Louis | State: Missouri | Zip Code: 63130 |
| Telephone Number: 314-862-6671 | | |
| Email address: tom.hayes@o6env.com | Fax number: 314-862-6672 | |

(If owner is a separate entity)

| | |
|---|-------------|
| SWP3 Contact(s): | |
| SWP3 Contact Name (Primary): Mike Fitter | |
| Telephone number: 918-740-6559 | |
| Email address: mfitter@senecaco.com | Fax number: |
| SWP3 Contact Name (Backup): Douglas Wilson | |
| Telephone number: 918-210-0181 | |
| Email address: dwilson@senecaco.com | Fax number: |

1.4 Construction Support Activities (if applicable)

List of construction support activities that will be available at the construction project/site:

| Type of Construction Support Activities ¹ | Will be Present at the Construction Site? |
|--|---|
| Equipment Staging Yards | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Material Storage Areas | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Excavated Material Disposal Areas | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Borrow Areas | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Concrete Batch Plant ² | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Asphalt Plant ² | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

(Note-1: Locate all the construction support activities on the site map. Appropriate/additional controls & measures are required for construction support activities. Support activities should not be located within the watershed of an Outstanding Resources Water (ORW).)

Note-2: Include Section 8 if you have Concrete Batch Plant and/or Asphalt Plant as construction support activities at your construction site. Exclude/delete Section 8 if you don't have Concrete Batch Plant and/or Asphalt Plant at your construction site.)

1.6 Allowable Non-Stormwater Discharges

List of allowable non-stormwater discharges that will be present at the construction site:

| No. | Type of Allowable Non-Stormwater Discharge | Likely to be Present at Construction Site? |
|-----|---|---|
| 1. | Fire hydrant flushing | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2. | Waters used to wash vehicles and equipment | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 3. | Water used to control dust | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 4. | Potable water including uncontaminated water line flushing | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 5. | Routine external building wash down | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 6. | Pavement washing waters | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 7. | Uncontaminated air conditioning or compressor condensate | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 8. | Uncontaminated, non-turbid discharges of ground water or spring water | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 9. | Foundation or footing drains | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 10. | Landscape Irrigation | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 11. | Discharges from emergency fire-fighting activities | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 12. | Uncontaminated construction dewatering water | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

(Note: You are required to identify the likely locations of these allowable non-stormwater discharges on your site maps.)

Section 2: Site Description and Site Map

2.1 Receiving Waters/Discharge Information

Receiving Water body's Information: Stormwater discharges from this construction project will flow to the following receiving water body(ies).

| No. | Name of the Receiving Waters | Is this surface water listed as impaired? | Cause of Impairment ¹ | Has a TMDL ² been completed? | TMDL Pollutant(s) |
|-----|------------------------------|---|----------------------------------|--|-------------------|
| 1. | Dirty Butter Creek | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| 2. | | <input type="checkbox"/> Yes <input type="checkbox"/> No | | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| 3. | | <input type="checkbox"/> Yes <input type="checkbox"/> No | | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| 4. | | <input type="checkbox"/> Yes <input type="checkbox"/> No | | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| 5. | | <input type="checkbox"/> Yes <input type="checkbox"/> No | | <input type="checkbox"/> Yes <input type="checkbox"/> No | |

(Note: Name of the receiving waters can be found at the DEQ website using the following link: <http://gls.deq.ok.gov/flexviewer/>. Cause of Impairment and TMDL information can be found at the DEQ website using the following link: <http://www.deq.state.ok.us/WQDnew/waprogrms.html>)

¹ If you discharge to impaired water that is impaired for Sediment and/or Turbidity and located within 1 mile, you are required to comply with the additional requirements in Part 3.5.1 of OKR10 permit.

² Total Maximum Daily Load (TMDL)

Does the project/site discharge stormwater to an Aquatic Resource of Concern (ARC) or an Outstanding Resource Water (ORW)?

Yes No, If yes, I must comply with specific buffer requirements (see Part 3.5.2 of OKR10 permit) and stabilization deadlines requirements (see Part 3.5.2 of OKR10 permit).

Does the project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)?

Yes No

If yes, what is the name of the MS4 operator? City of Tulsa

Note: See Table R-5 in the MS4 Permit's Factsheet for the MS4s information.

2.2 General Location Map

Provide a general location map (e.g., DEQ GIS Data Viewer or U.S. Geological Survey (USGS) quadrangle map or aerial image from the Internet) with enough detail to identify the location of your facility and all receiving waters for your stormwater discharges within one mile of the construction site (see Part 4.3.5.D of the OKR10 permit).

A general location map is included in Attachment A of this SWP3.

2.3 Site Map

SWP3 includes a legible site map or series of site maps/erosion and sediment control plans showing all the features (see also Part 4.3.5 of OKR10 permit) listed below:

- Pre-construction topographic view including vegetation, showing the location of
 - ✓ all surface water bodies within one mile of the site (including wetlands); and
 - ✓ direction of stormwater flow across the construction site (i.e., use arrows to show which direction stormwater will flow);
- Boundaries of property and identify the location(s) of:
 - ✓ Earth-disturbing activities;
 - ✓ boundary lines of any natural buffers;
 - ✓ approximate slopes before and after major grading activities,
 - ✓ areas of steep slopes, surface water crossings, Structures and other impervious surfaces upon completion of construction
- Locations of all structural and nonstructural controls/BMPs identified in the plan including showing the location of:
 - ✓ construction entrance/exit,
 - ✓ concrete wash-out area,
 - ✓ construction support activity areas such as locations of off-site materials, waste, borrow area, or equipment storage area;
 - ✓ stockpiled materials (sediment, topsoil, etc.), and
 - ✓ locations of all potential pollutant-generating activities;
- Locations where stormwater and allowable non-stormwater will be discharged off-site (should be continuously updated); sampling locations if project is subject to numeric limitations due to presence of an asphalt batch plant;
- Location where stabilization practices are expected to occur; Areas where final stabilization will be accomplished and no further construction phase permit requirements apply.

The site map or series of maps for this facility can be found in Attachment B of this SWP3 showing all the above-mentioned features in Part 2.3 of this SWP3.

Section 3: Construction Site Pollutants

3.1 Pollutant-Generating Activities

Potential sources of sediment to stormwater runoff:

Clearing and grubbing operations, grading and site excavation operations, vehicle tracking, topsoil stripping and stockpiling, landscaping operations

Potential sources of pollutants, other than sediment, to stormwater runoff:

- Combined Staging Area - small fuelling activities, minor equipment maintenance, sanitary facilities, and hazardous waste storage.
- Materials Storage Area - general building materials, solvents, adhesives, paving materials, paints, aggregates, trash, etc.
- Construction Activity - paving, curb/gutter installation, concrete pouring/mortar/stucco, and building construction
- Concrete Washout Area

3.2 List of Potential Pollutants

List of Pollutants that can be present at the construction site:

(Note: Check all the boxes applicable to your project site; include additional pollutants, if necessary, in the space below)

| Check | Materials/ Chemicals | Stormwater Pollutants | Location at the Site |
|-------------------------------------|---|---|--------------------------------|
| <input checked="" type="checkbox"/> | Dirt from land disturbed area | Sediment | Excavation and Stockpile Areas |
| <input type="checkbox"/> | Pesticides (insecticides, fungicides, herbicides, rodenticides) | Chlorinated hydrocarbons, organophosphates, carbonates, arsenic | |
| <input type="checkbox"/> | Fertilizer and dirt/soil | Nitrogen, phosphorous | |
| <input type="checkbox"/> | Plaster | Calcium sulphate, calcium carbonate, sulfuric acid | |
| <input type="checkbox"/> | Cleaning solvents | Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates | |
| <input type="checkbox"/> | Asphalt | Oil, petroleum distillates | |
| <input type="checkbox"/> | Concrete | Limestone, sand, pH, chromium | |
| <input type="checkbox"/> | Glue, adhesives | Polymers, epoxies | |
| <input type="checkbox"/> | Paints | Metal oxides, Stoddard solvent, talc, calcium carbonate, arsenic | |
| <input type="checkbox"/> | Curing compounds | Naphtha | |

| | | | |
|--------------------------|-----------------------------|---|--|
| <input type="checkbox"/> | Wood preservatives | Stoddard solvent, petroleum distillates, arsenic, copper, chromium | |
| <input type="checkbox"/> | Hydraulic oil/fluids | Mineral oil | |
| <input type="checkbox"/> | Gasoline | Benzene, ethyl benzene, toluene, xylene, MTBE | |
| <input type="checkbox"/> | Diesel Fuel | Petroleum distillate, oil & grease, naphthalene, xylenes | |
| <input type="checkbox"/> | Antifreeze/coolant | Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc) | |
| <input type="checkbox"/> | Sanitary toilets | Bacteria, parasites, and viruses | |
| <input type="checkbox"/> | | | |
| <input type="checkbox"/> | | | |
| <input type="checkbox"/> | | | |
| <input type="checkbox"/> | | | |

Section 4: Compliance with Federal and State Requirements

4.1 Endangered or Threatened Species Protection

Eligibility Criterion

Under which criterion listed in NOI is the construction project/site eligible for coverage under the OKR10 permit?

A B C D E

For reference purposes, the eligibility criteria listed in Part 1.2.2.E.2 of OKR10 permit are as follows:

- Criterion A.** The proposed construction site or land disturbing activity is not located within any of the corridors of the Federal or State Identified Aquatic Resources of Concern, and further investigation is not required.
- Criterion B.** The proposed construction site or land disturbing activity is located within a corridor of a Federal or State Identified Aquatic Resources of Concern. The SWP3 describes this area in relation to the identified water or watershed and specifies the measures to be employed to protect the endangered or threatened species or their critical habitat (see Parts 3.5.2 and 10 and Addendum A).
- Criterion C.** If one of those eligibility criteria under Part 1.2.2.E.2.b, d, or e cannot be met, applicants may use Addendum I Buffer Guidance to evaluate alternatives of buffer requirements and select equivalent sediment controls or contact DEQ for further consultation.
- Criterion D.** The applicant's federally approved construction activities are authorized by the appropriate Federal or State agency and that authorization addresses the Endangered Species Act Section 7 consultation for the applicant's stormwater discharge or stormwater discharge-related activities. Applicants selecting option d must include documentation from USFWS (U.S. Fish and Wildlife Service) or a qualified biologist that demonstrates Section 7 consultation has been completed. The SWP3 must comply with any conditions resulting from that consultation.
- Criterion E.** The applicant's stormwater discharges and stormwater discharge-related activities were already addressed in another operator's certification of eligibility under Part 1.2.2.E.2.a, b, c, or d. that included the applicant's project area. By certifying eligibility under Part 1.2.2.E.2.e, the applicant agrees to comply with applicable measures or controls upon which the other operator's certification under Part 1.2.2.E.2.b, c, or d. was based.

Note: For Criterion B, C, D, or E, you may subject to comply with additional requirements.

4.2 Federal, State, or Local Historic Preservation Laws

Will stormwater discharges or stormwater discharge-related activities (e.g., catch basin, pond, culver, etc.) affect a property that is protected by Federal, State, or local historic preservation laws? Yes No

If yes, describe any actions taken to mitigate those effects:

Describe how this determination was made: Checked Tulsa Preservation Commission Database and properties are listed on the website. Will have archeologist onsite during excavation procedures.

4.3 TMDL Requirements

If a TMDL or watershed plan or local compliance plan has been approved for the waterbody, SWP3 must include all the applicable requirements in consistent with the TMDL or watershed plan or local compliance plan that are applicable to the stormwater discharges from the construction site.

Does the construction project/site discharge stormwater into a receiving stream that has an approved TMDL or watershed plan or local compliance plan?

Yes No

If yes, is there any waste load allocations (WLAs) and/or the TMDL's associated implementation plan requirements applicable to stormwater discharges from the construction activity?

Yes No

If yes, SWP3 must incorporate any limitations, conditions, or requirements applicable to permittee's discharges to ensure that the waste load allocations (WLAs) and/or the TMDL's associated implementation plan will be met within any timeframe established in the TMDL report or watershed plan. Monitoring and reporting of the discharges may also be required as appropriate to ensure compliance with the TMDL or watershed plan.

Note: Approved TMDL reports or watershed plans can be downloaded from DEQ's website at <http://www.deq.state.ok.us/wqdnew/tmdl/index.html>

Does the construction project/site discharge stormwater to the Lake Thunderbird watershed?

Yes No

If yes, the following control measures will be used to meet the Lake Thunderbird TMDL requirements:

- Additional Pollutant Prevention or Discharge Monitoring** - You must comply with any additional requirements established by the local MS4 municipalities;
- Sites of Five Acres or Larger** - You must submit a copy of SWP3 to DEQ for review;
- Vegetated Buffer** - You must ensure that a vegetated buffer of at least 100 feet is retained or successfully established or planted between the area disturbed and all receiving streams. If the nature of the construction activity or the construction site makes a buffer impossible, you must provide equivalent controls. There are exceptions from this requirement for water crossings, limited water access, and stream restoration authorized under a CWA Section 404 permit;
- Sediment Basins** - For all drainage locations serving 5 or more acres disturbed at one time, you must use a temporary or permanent sediment basin and/or sediment traps to minimize sediment discharges;
- Site Inspection** - You must conduct site inspections once every 7 calendar days at a minimum, and within 24 hours of a storm event of 0.5 inches or greater and within 24 hours of a discharge caused by snowmelt;
- Corrective Actions** - You must implement corrective actions (e.g., repair, modify, or replace any stormwater control used at the site, clean up and dispose of spills, releases, or other deposits, or remedy a permit violation) by no later than 7 calendar days from the time of discovery. If it is infeasible to complete the installation or repair within 7 calendar days, you must document in your records why it is infeasible to complete the installation or repair within the 7 calendar days timeframe and document your schedule for installing the stormwater controls and making them operational as soon as practicable after the 7 days timeframe;
- Stabilization** - You must initiate stabilization measures immediately whenever earth-disturbing activities have permanently or temporary ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. You are required to complete the stabilization activities within 7 calendar days after the permanent or temporary cessation;
- Soil Nutrient Testing** - You are required to conduct a soil nutrient test to determine actual nutrient needs before applying fertilizer on your site. Fertilizer application must be limited to that necessary to meet actual needs on the site.
- Describe any additional measures or controls you will implement to comply with the Lake Thunderbird TMDL requirements: [Click here to enter text.](#)

Section 5: Stormwater Control Measures

The purpose of the implementation of different stormwater pollution controls is to reduce pollutants in the stormwater and the volume of stormwater leaving the construction site. All pollution control measures will be selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices.

5.1 Stabilization Practices

Type of Site Stabilization Practice(s) that will be implementing at the construction project/site (select all that apply):

- Temporary Permanent Vegetative Non-Vegetative

Deadline to Initiate Stabilization: I shall initiate stabilization measures immediately whenever earth-disturbing activities have permanently or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days.

Deadline to Complete Stabilization:

- I shall complete stabilization measures as soon as practicable but no later than 14 calendar days after the initiation of soil stabilization.
- My project/site is located in ARC/discharge to ORW; I shall complete stabilization measures as soon as practicable but no later than 7 calendar days after the initiation of soil stabilization.

Temporary Non-Vegetative Stabilization: The following non-vegetative controls/BMPs will be used to temporarily stabilize exposed portions of the construction site (select all that apply):

- Rolled erosion control products such as geotextiles, blankets or plastic cover Soil binders
- Straw mulch Wood mulch Compost Blanket Other, _____

If any of the above-referenced controls is used to temporarily protect areas that are being vegetative stabilized, one of the effective non-vegetative cover will be used to stabilize any such exposed portions of our site.

Temporary Vegetative Stabilization: The following vegetative controls will be used to temporarily stabilize the exposed portions of the construction site (select all that apply):

- Hydroseeding with mulch Sod Other, _____

Permanent Vegetative Stabilization: The following vegetative controls will be used to permanently stabilize the exposed portions of the construction site (select all that apply):

- Hydroseeding with mulch Sod Planted vegetation Other, _____

One of the following criteria will be used for vegetative cover:

- Provide a vegetative cover which covers 70% or more of the vegetation prior to commencing earth-disturbing activities and no large bare areas (10 square feet).

- Immediately after seeding, you must select, design, and install non-vegetative erosion controls that provide cover (such as *straw mulch, jute matting, and straw blankets*) to the area while vegetation is being established.

Stabilization Practices Record: A record of the dates when grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be included with the plan. Yes No

If No, explain: _____

A record of the dates when grading activities occur will be documented using the Grading & Stabilization Activity logs in Attachment-I of this SWP3.

5.2 Natural Buffers and/or Equivalent Sediment Controls

Buffer Compliance Alternatives

Are there any waters of the State that are located within 50 feet (or 100 feet if the construction site is located in ARC or ORW or Lake Thunderbird Watershed) of your construction disturbances as measured from the top of the bank to the disturbed portions of your site? Yes No

(Note: Waters of the State means all named/unnamed stream, creeks, rivers, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, storm sewers and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private located within the boundary of Oklahoma State.)

Construction Project/Site Location (check one only):

- My construction project/site isn't located in ARC or discharge to ORW
- My construction project/site is located in ARC or ORW
- My construction project/site is located in Lake Thunderbird Watershed or in a watershed with established TMDL that has Wasteload Allocation (WLA) for Construction Project

Check the compliance alternative that you have chosen:

- I will provide and maintain a 50 feet (or 100 feet if the construction site is located in ARC or ORW or Lake Thunderbird Watershed) undisturbed natural buffer.

(Note (1): You must show the boundary line of the natural buffer on your site map.)

(Note (2): You must show on your site map how all discharges from your construction disturbances through the natural buffer area will first be treated by the site's erosion and sediment controls.)

- I will provide and maintain an undisturbed natural buffer that is less than 50 feet (or 100 feet if the construction site is located in ARC or ORW or Lake Thunderbird Watershed) and is supplemented by additional erosion and sediment controls, which in combination achieves the sediment load reduction equivalent to required undisturbed natural buffer.

(Note (1): You must show the boundary line of the natural buffer on your site map.)

(Note (2): You must show on your site map how all discharges from your construction disturbances through the natural buffer area will first be treated by the site's erosion and sediment controls.)

- i. Width of natural buffer to be retained: _____
- ii. Method used to determine equivalent sediment load reduction: _____

- Addendum-I: Buffer Guidance in OKR10 permit
 - a. Soil Type: _____
 - b. Buffer Vegetation: _____

OR

- Site-specific calculation
 - a. Model or other tool used to estimate sediment load reductions:

 - b. Results of calculations: _____

 - c. Description of additional erosion and sediment controls used:

- It is infeasible to provide and maintain an undisturbed natural buffer of any size; therefore, I will implement erosion and sediment controls that will achieve the sediment load reduction equivalent to a 50 feet (or 100 feet if the construction site is located in ARC or ORW or Lake Thunderbird Watershed) undisturbed natural buffer.

- i. Rationale for concluding that it is infeasible to provide and maintain a natural buffer of any size:

- ii. Method used to determine equivalent sediment load reduction:

- Addendum-I: Buffer Guidance in OKR10 permit
 - a. Soil Type: _____
 - b. Buffer Vegetation: _____

OR

- Site-specific calculation
 - a. Model or other tool used to estimate sediment load reductions:

 - b. Results of calculations: _____

 - c. Description of additional erosion and sediment controls used:

- I qualify for one of the following exceptions (*select one that applies to your project/site*):

- There is no discharge of stormwater to the surface water that is located 50 feet from my construction disturbances.
- No natural buffer exists due to preexisting development disturbances that occurred prior to the initiation of planning for this project.
- Buffer disturbances are authorized under a CWA Section 404 permit.
- Buffer disturbances will occur for the construction of a water-dependent structure or water access area (e.g., pier, boat ramp, and trail).

5.3 Structural Controls/Best Management Practices (BMPs)

The table below listed Structural and Non-Structural Stormwater Controls/Best Management Practices (BMPs) that should be considered for every construction project/site to meet the non-numeric technology-based effluent limitations, water-based effluent limitations and applicable numeric technology-based effluent limitations.

The following BMPs will be used or implemented at the construction project/site (select all that apply):

| Erosion Controls | | Sediment Controls | |
|-------------------------------------|---------------------------------------|-------------------------------------|--|
| <input checked="" type="checkbox"/> | Preservation of Existing Vegetation | <input type="checkbox"/> | Silt Fence |
| <input type="checkbox"/> | Vegetative Swales | <input type="checkbox"/> | Silt Dikes |
| <input type="checkbox"/> | Hydroseeding with Mulch | <input type="checkbox"/> | Compost Sock |
| <input type="checkbox"/> | Hydraulic Mulch | <input type="checkbox"/> | Check Dam |
| <input type="checkbox"/> | Wood Mulching | <input type="checkbox"/> | Fiber Rolls |
| <input type="checkbox"/> | Straw Mulching | <input checked="" type="checkbox"/> | Storm Drain Inlet Protection |
| <input type="checkbox"/> | Compost Blankets | <input type="checkbox"/> | Outlet Protection/Velocity Dissipation Devices |
| <input type="checkbox"/> | Soil Binders | <input type="checkbox"/> | Earth Berms and Drainage Swales |
| <input checked="" type="checkbox"/> | Geotextiles and Mats | <input type="checkbox"/> | Sand Bag Barrier |
| <input type="checkbox"/> | Soil Preparation/Roughening | <input type="checkbox"/> | Gravel Bag Berm/Barrier |
| <input type="checkbox"/> | Sod | <input type="checkbox"/> | Sediment Basin |
| <input type="checkbox"/> | Streambank Stabilization | <input type="checkbox"/> | Sediment Trap |
| Tracking Controls | | <input type="checkbox"/> | Rip-rap |
| <input type="checkbox"/> | Stabilized Construction Entrance/Exit | <input type="checkbox"/> | Gabions |
| <input type="checkbox"/> | Stabilized Construction Roadway | Non-Structural Controls | |
| <input type="checkbox"/> | Entrance/Exit Tire Wash | <input type="checkbox"/> | Phasing and Scheduling |
| <input checked="" type="checkbox"/> | Street Sweeping and Vacuuming | <input type="checkbox"/> | Dust Suppression |
| Other Structural Controls | | <input type="checkbox"/> | Dust Suppression |
| <input type="checkbox"/> | Vegetative Buffers | <input checked="" type="checkbox"/> | Good Housekeeping |
| <input type="checkbox"/> | Non-Vegetative Stabilization | <input type="checkbox"/> | Preventive Maintenance |
| <input type="checkbox"/> | Concrete Waste Management | <input type="checkbox"/> | Preservation of Top Soil |
| <input checked="" type="checkbox"/> | Dewatering Controls | <input type="checkbox"/> | Minimizing Soil Compaction |
| <input type="checkbox"/> | | <input type="checkbox"/> | Fertilizer Application Management |
| <input type="checkbox"/> | | <input type="checkbox"/> | |

Did you include specifications of all the selected structural BMPs with the SWP3?

Yes No, if no, explain the reason: [Click here to enter text.](#)

5.3.1 Perimeter Control

Permit requirement: *You must install controls along the perimeter of your site that will receive stormwater from your construction activities. (Examples of perimeter controls include, but are not limited to, silt fences, fiber rolls, filter berms, and temporary diversion dikes.)*

To comply with Part 3.3.1.C of OKR10 permit, I shall use the following type of perimeter control(s) at my construction site:

Perimeter Control Description: _____

Installation Date(s): _____

Maintenance Requirements: I shall remove sediment before it has accumulated to one-half of the above-ground height of any perimeter control. Silt fence will be inspected for rips or tears in the fabric, areas where the fence has been knocked down and areas where the fence has been undermined.

5.3.2 Sediment Track-Out

Permit requirement: *You must minimize the track-out of sediment onto off-site streets, other paved areas, and sidewalks from vehicles exiting your construction site. (Note: you may use most recent ODOT or OKC specifications for construction entrance/exit - use of aggregate stone with an underlying geotextile or non-woven filter fabric, or turf mats.)*

To comply with the Part 3.3.1.D of OKR10 permit, I shall use the following type of sediment track-out control at my construction site:

Track-Out Control/Construction Entrance/Exit Description: _____

Installation Date(s): _____

Maintenance Requirements: I shall minimize the track-out of sediment onto off-site streets, other paved areas, and sidewalks from vehicles exiting our construction site.

Track-out Removal/Cleaning:

- I shall remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal.
- I shall remove the deposited sediment by the **end of the same work day** in which the track-out occurs or by the end of the next work day if track-out occurs on a non-work day where sediment has been tracked-out from my construction site onto the surface of off-site streets, other paved areas, and sidewalks.
- I am prohibited from hosing or sweeping tracked-out sediment into any stormwater conveyance (unless it is connected to a sediment basin, sediment trap, or similarly effective control).

5.3.3 Stockpiled Sediment or Soil

Permit requirement: *You must control discharge of stormwater from Stockpiled Sediment or Soil.*

To comply with the Part 3.3.1.E of OKR10 permit, I shall use temporary perimeter sediment barrier such as *berms, dikes, fiber rolls, silt fences, sandbag, or gravel bags* to protect from contact with stormwater (including run-on).

I shall use appropriate cover or temporary stabilization such as *mulching or hydro-mulching* to avoid direct contact with precipitation or to minimize sediment discharge.

Installation Date(s): _____

Maintenance Requirements: I shall not hose down or sweep soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance (unless connected to a sediment basin, sediment trap, or similarly effective control), storm drain inlet, and/or surface water.

5.3.4 Minimize Dust

Permit requirement: *You must minimize the generation of dust to avoid pollutant discharges to the extent feasible through application of water or other dust suppression techniques.*

Dust Control Description: To comply with the permit requirement and to avoid any pollutants, particularly soil/sediment, from being discharged into surface waters, I shall apply/spray water using spray truck or sprinklers to minimize the generation of dust from my construction site.

5.3.5 Minimize the Disturbance of Steep Slopes

Permit requirement: *You must minimize the disturbance of steep slopes (i.e., slopes of 40% or greater).*

Steep Slope Control Description: _____

Installation Date(s): _____

Maintenance Requirements: [Click here to enter text.](#)

5.3.6 Preserve Topsoil

Permit requirement: *You must preserve native topsoil on your site, unless infeasible; you must stockpile and reuse it in areas that will be stabilized with vegetation.*

Topsoil Control Description: I shall preserve native topsoil on our site as much as possible and practicable.

Maintenance Requirements: I shall stockpile and reuse preserved top soil in areas that will be stabilized with vegetation.

5.3.7 Minimize Soil Compaction

Permit requirement: *In areas of your site where final vegetative stabilization will occur or where infiltration practices will be installed, you must minimize soil compaction.*

Soil Compaction Control Description: In areas of your site where final vegetative stabilization will occur or where infiltration practices will be installed, I shall restrict vehicle and/or equipment use in these areas to avoid or minimize soil compaction.

5.3.8 Protection of Storm Drain Inlets

Permit requirement: *If you discharge to a storm drain inlet that you have access to, you must install protection measures that remove sediment from your stormwater discharge. (Examples of inlet protection measures include fabric filters, sandbags, or gravel barriers -- Install inlet protection measures that remove sediment from your discharge prior to entry into the storm drain inlet.)*

Storm Drain Inlet Control Description: Fabric Filters

Installation Date(s): 9/17/2018

Maintenance Requirements: I shall clean, or remove and replace the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, I shall remove the deposited sediment by the end of the same work day in which it is found or by the end of the following work day if removal by the same work day is not feasible.

5.3.9 Constructed Stormwater Conveyance Channels

(Note: Examples of velocity dissipation devices include check dams, sediment traps, riprap, or grouted riprap at outlets, include design specifications)

Stormwater Conveyance Channel Control Description: Click here to enter text.

- If Silt dikes/Check dams are used in series, I shall space them at appropriate interval so that **the base of the upstream dike is at the same elevation as the top of the next downstream dike**. Spacing of silt dikes/check dams is indicated on the site plans of SWP3.

Installation Date(s): _____

Maintenance Requirements: all check dams/rip-rap will be inspected during facility inspection for erosion, undermining or breaches. Any damage will be repaired immediately.

5.3.10 Sediment Basins

Permit requirement: *For common drainage locations that serve an area of 10 or more acres disturbed at one time (or 5 acres if it is located in ARC), a temporary (or permanent) sediment basin shall be provided where attainable until final stabilization of the site.*

Are 10 or more (or 5 or more if site discharges to an ORW/ARC) acres draining to a common point?

- Yes No

Is a sediment basin included in the project? Yes No

If yes, what is the designed capacity for the storage?

- 3600 cubic feet per acre: _____

OR

- 2-year, 24 hour storm: _____

OR

- Other criteria were used to design basin: _____

If no, explain why no sedimentation basin was included and describe required natural buffer areas and other controls implemented instead: _____

Maintenance Requirements: I shall keep the sediment basin in effective operating condition and remove accumulated sediment to maintain at least ½ of the design capacity of the sediment basin at all times.

5.3.11 Dewatering Practices

Permit requirement: *You are prohibited from discharging stormwater that is removed from excavations, trenches, foundations, vaults, or other similar points of accumulation associated with a construction activity, unless such waters are first effectively managed by appropriate controls.*

Dewatering Practice Description: Vacuum Truck Operation

Installation Date(s): 9/17/2018

Maintenance Requirements: Any excavation which fills with stormwater shall be dewatered by vacuum truck and taken to appropriate off-site disposal facility

5.3.12 Other Stormwater Controls

Stormwater Control Practice # 1

Description: Click here to enter text.

Installation Date(s): _____

Maintenance Requirements: Click here to enter text.

Stormwater Control Practice # 2

Description: Click here to enter text.

Installation Date(s): _____

Maintenance Requirements: Click here to enter text.

Section 6: Pollution Prevention Controls

6.1 Spill Prevention and Responses

Spill Prevention

Is there an existing Spill Prevention Control and Countermeasure (SPCC) plan developed for the site?

Yes No, if yes, keep a copy of the SPCC plan onsite with this SWP3.

If No, describe procedures for quickly stopping, containing, and cleaning up spills, leaks, and other releases:

Stop leak at source, contain spill with appropriate materials for spilled material, clean up spill to point where it will not cause harm to the environment, and dispose of spill material at approved landfill.

Emergency Spill Notification

| In case of a toxic or hazardous material spill, notify: | Phone Numbers |
|---|-----------------------------|
| Project Manager/Team Leader | Douglas Wilson/918-210-0181 |
| Emergency – Fire, Police | 911 |
| County Local Emergency Planning Committee (LEPC) | |
| DEQ Spill Reporting Hotline (24-hr) | 800-522-0206 |
| NRC (National Response Center) | 800-424-8802 |

6.2 Waste Management Procedures

All wastes generated at the construction site, including, but not limited to, clearing and demolition debris, sediment removed from the site, construction and domestic waste, hazardous or toxic waste, and sanitary waste, shall be prevented from being discharged to Waters of the State. The following BMP measures will be used to handle trash disposal, hazardous or toxic waste, sanitary waste, recycling, and proper material handling:

- Trash Dumpsters:** dumpsters will have a secure watertight lid, will be closed during precipitation or not in use, and will be placed away from stormwater conveyances and drains, and meet all federal, state, and municipal regulations. Only trash and construction debris from the site will be deposited in the dumpster. No construction materials will be buried on site.

- Hazardous Waste Containment:** hazardous waste materials will be stored in appropriate and clearly marked containers and segregated from other non-waste materials.
- Portable Toilets:** portable toilets will be secured to prevent tipping, located away from stormwater inlets and conveyances. These toilets will be anchored with the ground to prevent any tipped or knocked over and/or sand bags around to ensure wastewater doesn't mix with the stormwater.
- Recycling Bins/Dumpsters:** wood pallets, cardboard boxes, and other recyclable construction scraps will be disposed of in a designated dumpster for recycling. The dumpster will have a secure watertight lid, will be closed during precipitation or not in use, and will be placed away from stormwater conveyances and drains and meet all local and state solid-waste management regulations.
- Proper Material Handling:** containers will be tightly sealed when not in use, and excess paint shall be disposed of according to Oklahoma requirements and manufacturer's recommendations. Minimum amounts of fertilizer, as recommended by the manufacturer, will be used. Upon application the fertilizer will be worked into the soil to limit exposure to stormwater. Contents of partially used bags will be transferred to a sealable plastic bin, and then stored in a covered area.
- Good housekeeping:** construction debris, trash, and other floatable material will be collected and prevented from becoming a pollutant source on the following schedule:
Daily during excavation operations
- Minimizing exposure:** construction products, materials, chemicals, and wastes will be stored in such a way that they are prevented from coming into contact with stormwater (e.g., plastic sheeting or temporary roofs).
- Designated concrete washout:** all concrete washwater will be directed into a leak-proof container or pit. The container or pit will be designed so that no overflows can occur due to inadequate sizing or precipitation and located as far away as possible from surface waters and stormwater inlets or conveyances. I shall use *compacted clay liner, 20 mil synthetic liners or similar equivalent liners* to make the pit leak proof.
- Other:** Click here to enter text.

6.3 Prohibited Discharges

The following discharges from the construction project/site are prohibited under the permit, and are considered a violation should any occur.

- Wastewater from the washout of concrete, unless managed by an appropriate control as described in Part 3.3.3.B.4 of OKR10 permit;
- Wastewater from the washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials, unless managed by an appropriate control as described in Part 3.3.3.B.4 of OKR10 permit;
- Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
- Soaps, detergents or solvents used in vehicle and equipment washing; and
- Toxic or hazardous substances from a spill or other release.

In the event that one of these above-mentioned discharges occurs, I will take corrective action consistent with Part 7.4 of this SWP3.

Section 7: Procedures and Documentations

7.1 Maintenance and Repair

I shall ensure that all pollution prevention controls installed in accordance with the requirements of OPDES Construction General Permit OKR10 and remain in effective operating condition and are protected from activities that would reduce their effectiveness. All structural BMPs (i.e. all the Erosion & Sediment Controls) that require a repair of any kind (due to normal wear and tear, or as a result of damage) or require maintenance in order for the control to continue operating effectively shall be required/maintained in accordance with the OPDES Construction General Permit requirements. At a minimum, maintenance will be performed in the following specific instances:

- for perimeter controls, whenever sediment has accumulated to $\frac{1}{2}$ or more the above-ground height of the control (Part 3.3.1.C of OKR10 permit);
- where sediment has been tracked-out onto the surface of off-site streets or other paved areas (Part 3.3.1.D of OKR10 permit);
- for inlet protection measures, when sediment accumulates, the filter becomes clogged, and/or performance is compromised (Part 3.3.1.J of OKR10 permit); and
- for sediment basins, as necessary to maintain at least $\frac{1}{2}$ of the design capacity of the basin (Part 3.3.1.L of OKR10 permit).
- for all structural BMPs, repair of any kind (due to normal wear and tear, or as a result of damage) or maintenance will be performed in order for the BMPs to continue operating effectively.

7.2 Approval from Local Office

- I shall check/already checked local offices (city and county offices) to ensure SWP3 for my construction activities is consistent with requirements of the City and/or County Offices.
- I shall update the SWP3, if necessary, to make consistent with any changes applicable to protecting surface water resources in sediment erosion site plans or site permits, or stormwater management site plans or site permits approved by local officials for which I received written notice.

7.3 Inspections

(Note: An inspector must be knowledgeable in the principles and practices of erosion and sediment controls and pollution prevention to assess conditions at the construction site that could impact stormwater quality, and the effectiveness of any stormwater controls.)

Person Responsible for Inspections: Douglas Wilson

General Procedures: During each inspection, the following areas of the construction site will be inspected:

- Cleared, graded, or excavated areas of the site;
- Stormwater controls (e.g., perimeter controls, silt dykes, check dams, sediment basins, inlets, exit points etc.) and pollution prevention practices (e.g., pollution prevention practices for vehicle fueling/maintenance and washing, construction product storage, handling, and disposal, etc.) at the site;
- Material, waste, or borrow areas covered by the permit, and equipment storage and maintenance areas;
- Evidence of a spill, leak, or other type of pollutant discharge, or failure to have properly cleaned up a previous spill, leak, or other type of pollutant discharge;
- Areas where stormwater flows within the site, stormwater discharge points;
- Identify any other incidents of non-compliances observed; and
- Areas where stabilization has been implemented.

Inspection Frequency:

- Once every 7 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater, since my project is located in ARC or discharge to an impaired water.
- Once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.

Reductions in Inspection Frequency (if applicable):

- For the reduction in inspections resulting from stabilization: Once per month for the portion of the site that was stabilized per Part 3.3.2 of OKR10 permit.

Rain Gauge to Measure Qualified Storm Event of 0.5 Inches or greater:

Location of the Rain Gauge: Tulsa Mesonet Site

Inspection Report Forms:

Inspection Report Form has been prepared in accordance with the requirements of Part 4.3.13 of OKR10 permit. A copy of the Inspection Report Form that will be used during construction of this project included in Attachment E of this SWP3.

7.4 Corrective Action

General: Corrective actions are actions taken to modify, replace, or reinstall any stormwater control used at the site; clean up and dispose of spills, releases, or other deposits; or remedy a permit violation.

Corrective actions are triggered only for specific, more serious conditions. For any of the following conditions, a new or modified control shall be installed no later than 7 calendar days from the discovery:

- A required stormwater control was never installed or was installed incorrectly, or not in accordance with the corresponding OKR10 permit requirement;
- A stormwater control needs to be repaired or replaced (beyond routine maintenance required in Part 4.3.12 of OKR10 permit);
- A stormwater control is not effective enough for the discharge to meet applicable water quality standards;
- A prohibited discharge (Parts 3.1 and 3.3.3.A of OKR10 permit) is occurring or has occurred; or
- DEQ or MS4 Operator requires corrective action as a result of permit violations found during an inspection.

I shall immediately take all reasonable steps to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational, including cleaning up any contaminated surfaces so that the material will not discharge in subsequent storm events. I shall conduct corrective action(s) for each of the above-mentioned triggering conditions should they occur at my construction site.

Person Responsible for Corrective Actions: [Click here to enter text.](#)

Corrective Action Schedule/Specific Action Frequency:

I shall perform all Corrective Actions (modify, replace, or reinstall), if identified, no later than 7 calendar days from the time of discovery.

Corrective Action Forms:

Corrective Action Report Form has been prepared in accordance with the requirements of Part 4.3.14 of OKR10 permit. A copy of the Corrective Action Report Form that will be used during construction of this project included in Attachment F of this SWP3.

7.5 Employee Training

Person Responsible for Staff Training

Name: Douglas Wilson

Title: Environmental Project Manager

Staff Training Requirements

Prior to the start of earth-disturbing activities, personnel with the following responsibilities shall be trained to understand all the requirements of this SWP3:

- Proper design, installation, and maintenance/repair of stormwater controls.
- The proper application and storage of chemicals.
- Proper inspection and corrective actions.

At minimum, all Personnel must be trained to understand:

- The location of all stormwater controls and the maintenance requirements for each of the control.
- The pollution prevention requirements outlined in this SWP3.
- When and how to conduct inspections, record applicable findings and take necessary corrective actions.

Frequency/Schedule of Employee Training: Annually

(Note: Employee training shall be conducted at least annually or more often if employee turnover is high).

Employee training records and documentations shall be maintained using the **Employee Training Report** located in **Attachment G** of this SWP3.

7.6 Notification of Change of Ownership (NCO) for Individual Lots

- SWP3 will include documents if lots are sold and transfer to other new operator(s), (see Part 2.2.3 of OKR10 permit). Documents will be included under Attachment M of this SWP3.
- NCO is not applicable to my project/site.

7.7 Sub-contractor Certifications

- Sub-contractor certification forms will not be used for this project.
- DEQ's sub-contractor certification form (Attachment M) will be used and kept onsite with the SWP3.
- A form other than DEQ's form will be used and kept onsite with the SWP3.

7.8 Record Keeping and Record Retention

- I shall retain copies of the SWP3 and all reports required by the 2017 OKR10 permit, and records of all data used to complete the NOI to be covered by this permit, for a period of at least 3 years from the date that the site is finally stabilized.

7.9 Posting a Notice

- I shall post a notice near the main entrance of the construction site with the following information:
- The OPDES permit number for the project or a copy of the NOI if a permit number has not yet been assigned;
 - The name and telephone number of a local contact person;
 - A brief description of the project; and
 - Location of the SWP3

A sample copy of the Notice is included in Attachment M of this SWP3.

Section 8: Additional Monitoring (if applicable)

(Note: Only applicable if you have Concrete Batch Plant and/or Asphalt Plant that is covered under your OKR10 authorization)

8.1 Support Activity Covered by this Plan

Concrete Batch Plant Asphalt Plant Both Not Applicable

8.2 Representative Outfall(s)

Are there substantially identical outfalls? Yes No

If yes, which outfalls are substantially identical? _____

Which outfall(s) will be sampled? _____

8.3 Structural & Non-Structural BMPs

Perimeter control and retention/detention pond will be installed. All exposed areas will be kept clean and orderly manner to minimize exposure. Structural controls will be maintained to keep these effective and operational.

8.4 Quarterly Visual Monitoring

In addition to routine site inspection, quarterly visual monitoring, qualified facility inspector will perform quarterly visual monitoring:

1. Quarterly visual monitoring assessments will be conducted using the form in Attachment J of this SWP3. Each drainage point will be visually inspected on a quarterly basis. If no qualifying storm event occurs during a monitoring quarter, this will be noted on the quarterly visual monitoring report for that quarter.
2. Samples will be collected from each outfall, will be examined and documented observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollution using the quarterly visual monitoring form and will occur during daylight hours (e.g., normal working hours).
3. Completed quarterly visual monitoring forms will be kept with the SWP3.

8.5 Comprehensive Site Compliance Evaluation

1. A comprehensive site compliance evaluation will be conducted at least once annually. If the project is less than one year, at least one inspection will be conducted, which will include all areas where industrial materials or activities are exposed to stormwater and areas where spills and leaks have occurred within the past 3 years.

2. A report resulting from this inspection will be submitted to DEQ by **March 1** of the year following the monitoring period using the form in Attachment K of this SWP3.

8.6 Numeric Effluent Limitation Monitoring for Asphalt Plant

1. Stormwater discharges from asphalt plants must comply with the limitations and monitoring requirements listed below.

| Parameter | Limitation | Monitoring Frequency | Sample Type |
|------------------------|---|----------------------|-------------|
| Total Suspended Solids | 23 mg/L, dally max. 15 mg/L, 30-day avg. | 1/year | Grab |
| Oil and Grease | 15 mg/L, dally max. 10 mg/L, 30-day avg. | 1/year | Grab |
| pH | 6.5 - 9.0, min. and max. | 1/year | Grab |

2. Annual monitoring period is from **January 1 to December 31**. If the project is less than one year, at least one sample must be collected.
3. Laboratory analyses for the parameters specified above must be performed by a laboratory certified by DEQ for those parameters.
4. Monitoring will be performed on a storm event that results in an actual discharge from the construction site (at least **0.1 inch** of stormwater event defined as a measurable storm event) that follows the preceding measurable storm event by at least **72 hours (3 days)**.
5. A minimum of one grab sample will be collected within the first 30 minutes of the discharge resulting from a measurable storm event. If it is not practicable to take the sample during the first 30 minutes, the sample must be collected as soon as practicable after the first 30 minutes and document why it was not possible to take samples within 30 minutes.
6. Monitoring information will be submitted on a discharge monitoring report (DMR) form (see Attachment L) by **March 1** of the year following the monitoring period.
7. If an exceedance of a numeric effluent limit occurs, follow-up monitoring will be conducted within 30 calendar days, or during the next qualifying storm event, of implementing corrective actions.

Person(s) and positions of person(s) responsible for monitoring: Click here to enter text.

Sample location(s): Click here to enter text.

Monitoring Schedules: Click here to enter text.

8.7 Additional Procedures for Concrete Batch Plant

Is there a mobile batch plant associated with this construction project/site?

No Yes, If yes, permit number: OKG11_____

How long will the batch plant be utilized?

Less than 180 days
 Greater than 180 days

Will wastewater be used for dust suppression?

No Yes, If yes, the following requirements must be met:

- a. The wastewater to be land applied shall be free from visible sheen of oil or globules of oil or grease and shall have a pH of between 6.5 s.u. and 9.0 s.u.
- b. The wastewater to be land applied for dust suppression shall be visually inspected prior to land application. An inspection log shall be maintained at the site and made available to DEQ personnel upon request.
- c. There shall be no land application of wastewater in areas where the depth to maximum seasonal groundwater level is less than 2 feet in accordance with OAC 252:616-5-1(b)(2)(E).
- d. There shall be no land application of wastewater during periods of precipitation or when soil is saturated or frozen.
- e. There shall be no runoff of wastewater from the land application site(s).
- f. The permittee shall keep a logbook which records the time and date, the source and the volume of wastewater used, and the area to which the wastewater .

Describe the liner used for any surface impoundments: Click here to enter text.

Is the bottom of all surface impoundments at least 15 feet above groundwater levels?

No Yes

The following berm/dike slope requirement will be followed:

- For sites utilized less than 180 days, a 1:2 (1 vertical to 2 horizontal) slope
- For sites utilized more than 180 days, a 1:3 (1 vertical to 3 horizontal) slope

Section 9: SWP3 Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____ **Title:** _____

Signature: _____ **Date:** _____

Section 10: SWP3 Modifications

I shall maintain records of modifications that will be made per Part 4.3.19 of OKR10 permit, and other reasons in Attachment H of this SWP3:

Click here to enter text.

Section 11: SWP3 Attachments & Additional Documentation

The following documentations are attached to the SWP3:

Attachment A – General Location Map

A copy of general location map is included in Attachment A.

Attachment B – Site Map(s)

Copy of the site map(s) is/are included in Attachment B.

Attachment C – 2017 OKR10

Note: It is helpful to keep a printed-out copy of the 2017 OKR10 so that it is accessible to you for easy reference. However, you do not need to formally incorporate the entire 2017 OKR10 into your SWP3. As an alternative, you can include a reference to the permit and where it is kept at the site.

Attachment D – Notice of Intent (NOI)

A copy of your NOI is included in Attachment D.

Attachment E – Inspection Report

A copy of the Routine Facility Inspection Report Form is included in Attachment E.

Attachment F – Corrective Action Report

A copy of Corrective Action Report Form is included in Attachment F.

Attachment G – Employee Training Report

A copy of Employee Training Log is included in Attachment G.

Attachment H – SWP3 Modifications Log

A copy of Report on SWP3 Modifications/Amendments Log is included in Attachment H.

Attachment I – Site Stabilization Log

A copy of Site Stabilization Log is included in Attachment I.

Attachment J – Quarterly Visual Monitoring Report

A copy of Quarterly Visual Monitoring Report Form is included in Attachment J.

Attachment K – Annual Site Evaluation Report

A copy of Annual Comprehensive Site Compliance Evaluation Report (ACSCER) form is included in Attachment K.

Attachment L – Discharge Monitoring Report (DMR)

A copy of Discharge Monitoring Report (DMR) is included in Attachment L.

Attachment M – NCOs and Other Documentations

Any other Documentation required by this Permit is included in Attachment M.

Evans Fintube SWPPP

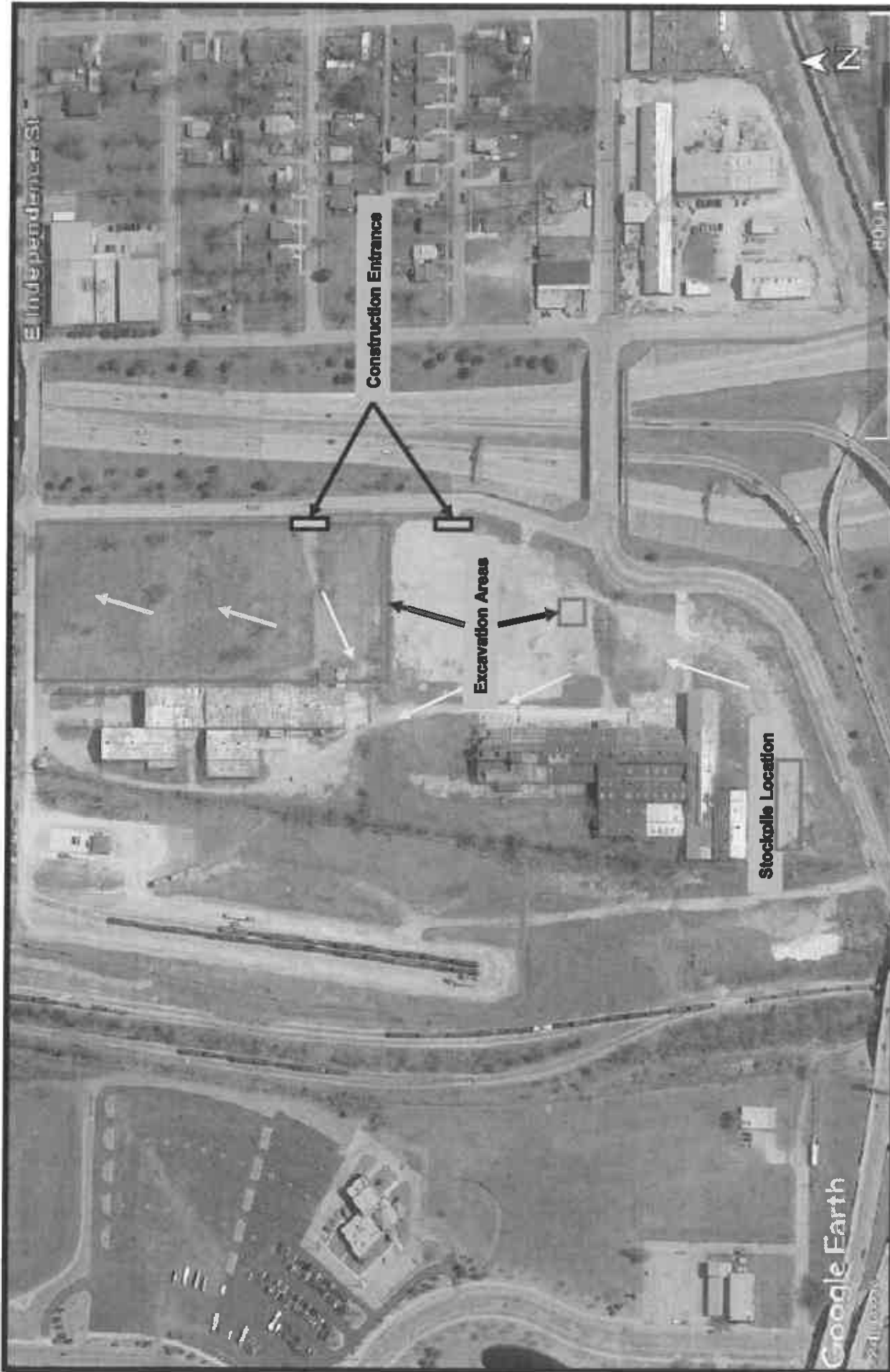


Date: 8/27/2018

We make every effort to provide and maintain accurate, complete, usable, and timely information. However, some data and information on this map may be preliminary or out of date and is provided with the understanding that it is not guaranteed to be correct or complete. Conclusions drawn from, or actions undertaken on the basis of, such data and information are the sole responsibility of the user.



This is a preliminary map. It is not intended to be used for legal purposes. It is not a warranty, representation, or contract. It is provided for informational purposes only. The user assumes all responsibility for the use of this map. The user agrees to hold the Department of Environmental Quality harmless for any and all claims, damages, or liabilities, including reasonable attorneys' fees, arising from the use of this map.



Seneca Environmental Services

City of Tulsa – Evans Fintube
118/150/186 North Lansing Avenue
Tulsa, Oklahoma 74120

Seneca Job# 6362589

Site Map

Approx. Scale:
Shown in Google
Earth



Date: August 27, 2018

**GENERAL PERMIT
OKR10**

**FOR STORMWATER DISCHARGES
FROM CONSTRUCTION ACTIVITIES
WITHIN THE STATE OF OKLAHOMA**

**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY DIVISION**

October 18, 2017



Stormwater General Permit for Construction Activities within the State of Oklahoma

Permit No. OKR10

Authorization to Discharge Under the Oklahoma Pollutant Discharge Elimination System (OPDES) Act

In compliance with the Clean Water Act, as amended, (33 U.S.C. §1251 *et seq.*) and the provisions in 40 Code of Federal Regulations (CFR) § 122.26, adopted and incorporated by reference in Oklahoma Administrative Code (OAC) 252:606-1-3(b)(3)(L), and under the OPDES Act, 27A O.S. 2-6-201 *et seq.*, as amended, except as provided in Part 1.2.2 of this permit, Operators of stormwater discharges from construction activities (as defined in Part 8 of this permit), located in an area specified in Part 1.1, are authorized to discharge in accordance with the conditions and requirements set forth herein. Only those Operators of stormwater discharges from construction activities in the general permit area who submit a Notice of Intent (NOI) and receive an authorization to discharge in accordance with Part 2 of this permit are authorized under this permit.

This permit is a reissuance by the Oklahoma Department of Environmental Quality (DEQ) and shall become effective on October 18, 2017. This Permit replaces the Permit issued on September 11, 2012. This permit and the authorizations issued under the permit shall expire at midnight, October 17, 2022.

Signed and issued this 18th day of September, 2017


Shollie R. Chard, Director
Water Quality Division


Micheal Jordan, P.E., Engineering Manager
Water Quality Division

**GENERAL PERMIT OKR10 FOR STORMWATER DISCHARGES
FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA**

Table of Contents

| Subject | Page No. |
|--|-----------------|
| Part 1 Coverage Under This Permit | 1 |
| 1.1 Permitting Authority..... | 1 |
| 1.1.1 Area of Coverage where EPA/Other Agency is the Permitting Authority..... | 1 |
| 1.1.2 EPA & Oklahoma Department of Agriculture, Food & Forestry (ODAFF) are the Permitting Authorities | 1 |
| 1.2 Authorized Discharges | 1 |
| 1.2.1 Authorized Discharges | 1 |
| 1.2.2 Limitations on Coverage..... | 2 |
| 1.3 Obtaining Authorization..... | 4 |
| 1.4 Terminating Coverage..... | 5 |
| Part 2 NOI and NOT Requirements | 5 |
| 2.1 NOI Requirements..... | 5 |
| 2.1.1 Operators | 5 |
| 2.1.2 Operator changed..... | 5 |
| 2.1.3 Late NOIs..... | 5 |
| 2.1.4 Operators of on-going construction projects | 5 |
| 2.1.5 Operators without the permitting coverage under the CGP issued on September 13, 2012 | 6 |
| 2.1.6 Contents of NOI..... | 6 |
| 2.1.7 Modification of an NOI..... | 7 |
| 2.2 NOT Requirements..... | 7 |
| 2.2.1 Contents of NOT | 7 |
| 2.2.2 Elimination of Stormwater Discharged | 8 |
| 2.2.3 Notification of Change of Ownership (NCO) | 8 |
| 2.3 Where to Submit..... | 8 |
| 2.4 SWP3 Submittal | 8 |
| 2.5 Electronic Reporting Deadline | 8 |
| Part 3 Special Conditions and Effluent Limitations | 8 |
| 3.1 Non-Stormwater Discharges | 8 |
| 3.2 Releases in Excess of Reportable Quantities | 9 |
| 3.3 Non-Numeric Technology-Based Effluent Limitations..... | 9 |
| 3.4 Numeric Technology-Based Effluent Limitation..... | 16 |
| 3.5 Water Quality-Based Effluent Limitations..... | 17 |
| 3.5.1 Discharges to Waters Identified as Impaired Waters | 17 |
| 3.5.2 Discharges to Waters Identified as an ORW or ARC | 17 |
| 3.6 Responsibilities of Operators | 18 |
| 3.6.1 Operational Control over Construction Plans and Specifications | 18 |
| 3.6.2 Operational Control over Day-to-Day Activities | 19 |
| 3.6.3 Responsibilities of Operators at a Larger Common Plan of Development | 19 |
| 3.6.4 Responsibilities of the Operator of Utility Installation | 20 |
| Part 4 Stormwater Pollution Prevention Plans (SWP3)..... | 20 |
| 4.1 General Requirements | 20 |
| 4.2 Signature, Posting a Notice, Making Plans Available, and DEQ's Notification | 21 |
| 4.3 Contents of SWP3 | 22 |
| 4.3.1 Stormwater Team..... | 22 |
| 4.3.2 Nature of Construction Activities..... | 22 |
| 4.3.3 Other Site Operators | 22 |
| 4.3.4 Sequence and Estimated Schedule of Construction Activities:..... | 22 |
| 4.3.5 Site Map..... | 22 |
| 4.3.6 Construction Site Pollutants | 23 |
| 4.3.7 A Copy of the Permit Requirements..... | 23 |
| 4.3.8 Measures to Protect ARC and ORW | 23 |
| 4.3.9 Federal, State or Local Historic Properties | 23 |

| | | |
|---------|--|----|
| 4.3.10 | Water Quality Impaired Water and TMDL Requirements | 24 |
| 4.3.11 | Stormwater Controls Description | 24 |
| 4.3.12 | Maintenance..... | 26 |
| 4.3.13 | Inspections | 26 |
| 4.3.14 | Corrective Actions | 28 |
| 4.3.15 | Non-Stormwater Discharges..... | 29 |
| 4.3.16 | Staff Training Requirements | 29 |
| 4.3.17 | NCOs for Individual Lots | 30 |
| 4.3.18 | SWP3 Certification..... | 30 |
| 4.3.19 | SWP3 Modification | 30 |
| 4.3.20 | On-Site Availability of the SWP3 | 30 |
| 4.4 | Contractor Certifications | 30 |
| Part 5 | Retention of Records | 31 |
| 5.1 | Documents..... | 31 |
| 5.2 | Accessibility | 31 |
| 5.3 | Addresses..... | 31 |
| Part 6 | Standard Permit Conditions..... | 31 |
| 6.1 | Duty to Comply | 31 |
| 6.2 | Continuation of the Expired General Permit..... | 32 |
| 6.3 | Need to Halt or Reduce Activity Not a Defense | 32 |
| 6.4 | Duty to Mitigate | 32 |
| 6.5 | Duty to Provide Information | 32 |
| 6.6 | Other Information | 32 |
| 6.7 | Signatory Requirements | 33 |
| 6.8 | Oil and Hazardous Substance Liability | 33 |
| 6.9 | Property Rights..... | 34 |
| 6.10 | Severability | 34 |
| 6.11 | Requiring an Individual Permit or an Alternative General Permit | 34 |
| 6.12 | State/Tribal Environmental Laws | 34 |
| 6.13 | Proper Operation and Maintenance | 35 |
| 6.14 | Inspection and Entry | 35 |
| 6.15 | Permit Actions | 35 |
| Part 7 | Re-opener Clause..... | 35 |
| 7.1 | Potential to Cause or Contribute to a Violation | 35 |
| 7.2 | Permit Modification or Revocation..... | 35 |
| Part 8 | Definitions | 35 |
| Part 9 | Historic Preservation | 39 |
| Part 10 | Endangered Species | 40 |
| | ADDENDUM A – OKLAHOMA AQUATIC RESOURCES OF CONCERN (ARC)..... | 43 |
| | ADDENDUM B –NOTICE OF INTENT | 47 |
| | ADDENDUM C – NOTICE OF TERMINATION..... | 51 |
| | ADDENDUM D – CONTRACTOR CERTIFICATION..... | 53 |
| | ADDENDUM E – OUTSTANDING RESOURCE WATERS (ORW) | 54 |
| | ADDENDUM F – ADDITIONAL REQUIREMENTS FOR CONCRETE AND ASPHALT BATCH PLANTS | 55 |
| | ADDENDUM G – ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION REPORT | 61 |
| | ADDENDUM H – BUFFER REQUIRMENTS | 66 |
| | ADDENDUM I – STORMWATER RUNOFF COEFFICIENTS | 75 |
| | ADDENDUM J – NOTIFICATION OF CHANGE OF OWNERSHIP | 76 |

Part 1 Coverage Under This Permit

1.1 Permitting Authority

Under the Environmental Protection Agency (EPA)'s approval of the OPDES program, DEQ has had stormwater permitting and enforcement responsibility for large and small construction activities since November 19, 1996, except for construction activities associated with oil & gas extraction and agricultural activity, or those construction activities located on Indian Country Lands.

1.1.1 Area of Coverage where EPA or Another Agency is the Permitting Authority:

- A. Any Construction Activity on Indian Country Lands in Oklahoma;
- B. Construction activity associated with oil and gas extraction under the Standard Industrial Classification (SIC) Group 13, (Note: The DEQ has authority over the natural gas liquid extraction plants identified under SIC code 1321, and service company base operating stations identified under SIC code 1389. Any construction activities associated with facilities identified under SIC codes 1321 and 1389 are required to be covered under this permit); Pipelines under SIC Group 46, except pipelines within certain facilities regulated by DEQ; Natural gas transmission under SIC Group 492, except that the DEQ has jurisdiction over natural gas liquid extraction plants; and
- C. Construction activities associated with Agricultural production and services under SIC Groups 01, 02 and 07; Forestry under SIC Group 08; Fishing, hunting and trapping under SIC Group 09, except DEQ shall have jurisdiction over industry group number 092 (fish hatcheries and preserves).

1.1.2 EPA & Oklahoma Department of Agriculture, Food & Forestry (ODAFF) are the Permitting Authorities:

- A. If you¹ desire an authorization to discharge stormwater from a construction activity associated with oil and gas extraction under the SIC Group 13, or pipelines under SIC Group 46, or natural gas transmission under SIC Group 492, you must apply for a permit through the EPA National Pollutant Discharge Elimination System (NPDES) eReporting Tool for its Construction General Permit (CGP); and
- B. If you are looking for permit coverage from construction activities associated with Agricultural and Forestry, Fishing production and services under SIC Groups 01, 02, 07, 08 and 09, you must contact ODAFF at (405)522-5493 and ask for AgPDES programs.

1.2 Authorized Discharges

1.2.1 Authorized Discharges

- A. Permittees are authorized to discharge pollutants in stormwater runoff associated with construction activities as defined in 40 CFR § 122.26 (b)(14)(x) for construction sites of 5 or more acres, and 40 CFR §122.26 (b)(15)(i) for construction sites of more than one acre but less than 5 acres, including the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb land equal to or greater than one acre, and those construction site discharges designated by DEQ as needing a stormwater permit under 40 CFR §122.26 (a)(1)(v), or under 122.26 (a)(9) and 122.26 (g)(1)(i). Discharges identified under Part 1.2.2 are excluded from coverage. Any discharge authorized by a different OPDES permit may be commingled with discharges authorized by this permit.

¹ Terms like "you and/or "your" are used in this permit to refer to the party or parties that are facility, site or project owners/operators, applicants, Permittees, etc.

- B. This permit also authorizes stormwater discharges from construction support activities (e.g., concrete or asphalt batch plants², equipment staging yards, material storage areas, excavated material disposal areas, and borrow areas) provided:
1. The support activity is directly related to a construction site that is required to have this permit coverage for discharges of stormwater associated with construction activity;
 2. The support activity is not a commercial operation serving multiple unrelated construction projects by different operators, and does not operate beyond the completion of the construction activity at the last construction project it supports;
 3. Appropriate controls and measures are identified in a Stormwater Pollution Prevention Plan (SWP3) covering the discharges from the support activity areas; and
 4. The support activity is not located within the watershed of an Outstanding Resource Water (as defined in Part 8.25 and Addendum E of this permit).
- C. The following allowable non-stormwater discharges associated with construction activity are authorized by this permit:
1. Fire hydrant flushing;
 2. Waters used to wash vehicles and equipment where soaps, solvents or detergents are not used;
 3. Water used to control dust;
 4. Potable water, including uncontaminated waterline flushing;
 5. Routine external building wash-down that does not use soaps, solvents and/or detergents and/or building wash-down from external surfaces that does not contain leachable hazardous substances (e.g., paint or caulk containing polychlorinated biphenyls (PCBs));
 6. Pavement washing waters, provided spills or leaks of toxic or hazardous substances, have not occurred (unless all spilled material has been removed) and where soaps, solvents and detergents are not used;
 7. Uncontaminated air conditioning or compressor condensate;
 8. Uncontaminated ground water or spring water;
 9. Foundation or footing drains where flows are not contaminated with process materials such as solvents or contaminated ground water;
 10. Landscape irrigation;
 11. Discharge or flows from emergency firefighting activities will be allowed. Measures shall be taken by the permittee or site/facility, as soon as practicable, to reduce any such pollutant releases to avoid or minimize the impacts on water quality and to ensure public health and safety;
 12. Uncontaminated flows from excavation dewatering activities will be allowed if operational and structural controls are used to reduce any pollutant releases in order to avoid or minimize the impacts on water quality (see Part 3.3.1.M of this permit). These controls must be included in your SWP3.
- D. This permit authorizes stormwater discharges associated with any construction activities from the facilities that are currently regulated under OPDES Act, such as Natural Gas Liquid Extraction Plans (SIC code 1321) and Oil and Gas Field Services for Company Base Operating Stations (SIC code 1389).

1.2.2 Limitations on Coverage

- A. *Post Construction Discharges*: This permit does not authorize stormwater discharges that originate from the site after construction activities have been completed and the site, including any temporary support activity site, has undergone final stabilization and has an approved NOT. Industrial post-construction stormwater discharges may need to be covered by a separate OPDES permit.
- B. *Discharges Mixed with Non-Stormwater*: This permit does not authorize discharges that are mixed with sources of non-stormwater, other than those discharges that are identified in Part 1.2.1.C and are in compliance with Part 4.3.15 of this permit.

² Discharges subject to a numeric effluent limitation guideline in Part 3.4 "Numeric Limitation and Sampling Requirements" and Addendum F "Additional Requirements for Concrete and Asphalt Batch Plants" of this permit.

- C. *Discharges Covered by Another Permit*: This permit does not authorize stormwater discharges associated with construction and/or construction support activity that have been covered under an individual permit or which require coverage under an alternative general permit in accordance with Part 6.11, except stormwater discharges from concrete and asphalt batch plants specified in Part 1.2.1.B of this permit.
- D. *Discharges Threatening Water Quality*: This permit does not authorize stormwater discharges from construction sites that DEQ determines will cause, or have reasonable potential to cause or contribute to violations of water quality standards, including anti-degradation policy. Where such determinations have been made, DEQ may notify the operator(s) that an individual permit application is necessary in accordance with Part 6.11. However, DEQ may authorize coverage under this permit after appropriate controls and implementation procedures designed to bring the discharges into compliance with water quality standards have been included in the SWP3.
- E. *Discharges Not Protective of Listed Endangered Species*: This permit does not authorize stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities that are not protective of Federal and State listed endangered and threatened species or designated critical habitat. See Part 10 for more information.
1. For the purposes of complying with Part 1.2.1.B, stormwater discharge-related activities (as defined in Part 8.34 of this permit) include:
 - a. Activities that cause, contribute to, or result in point source stormwater pollutant discharges, including but are not limited to excavation, site development, grading, and other land disturbing activities; and
 - b. Measures to control stormwater including the siting, construction, and operation of Best Management Practices (BMPs) to control, reduce, or prevent stormwater pollution.
 2. Coverage under this permit is available only if the applicant certifies that it meets at least one of the criteria in paragraphs a, b, c, d, or e below. Failure to continue to meet one of these criteria during the term of the permit will render an applicant ineligible for coverage under this permit.
 - a. The proposed construction site or land disturbing activity is not located within any of the corridors of the Federal or State identified Aquatic Resources of Concern (ARC), and further investigation is not required.
 - b. The proposed construction site or land disturbing activity is located within a corridor of a Federal or State identified ARC. Operators must implement an SWP3 that specifies the measures to be employed to protect the endangered or threatened species or their critical habitat (see Parts 3.5.2 and 10.2 Step 2).
 - c. If one of those eligibility criteria under part 1.2.2.E.2.b, d, or e cannot be met, applicants may use Addendum H of this permit to evaluate alternatives of buffer requirements and select equivalent sediment controls or contact DEQ for further consultation; or
 - d. The applicant's federally approved construction activities are authorized by the appropriate Federal or State agency and that authorization addresses the Endangered Species Act Section 7 consultation for the stormwater discharge or stormwater discharge-related activities. Applicants selecting option d must include documentation from U.S. Fish and Wildlife Service (USFWS) or a qualified biologist that demonstrates Section 7 consultation has been completed. The SWP3 must comply with any conditions resulting from that consultation.
 - e. The applicant's stormwater discharges and stormwater discharge-related activities were already addressed in another operator's certification of eligibility under Part 1.2.2.E.2.b, c, or d. that included the applicant's project area. By certifying eligibility under Part 1.2.2.E.2.e, the applicant agrees to comply with applicable measures or controls upon which the other operator's certification under Part 1.2.2.E.2.b, c, or d. was based.
 3. The applicant must comply with any applicable terms, conditions, or other requirements developed in the process of meeting the requirements of Part 1.2.2.E.2.b, c, d, or e above to remain eligible for coverage under this permit. Such terms and conditions must be incorporated in the applicant's SWP3.

4. This permit does not authorize any stormwater discharges where the discharges or stormwater discharge-related activities cause a prohibited "take" (as defined in Part 8.35) of endangered or threatened species.
 5. This permit does not authorize any stormwater discharges where the discharges or stormwater discharge-related activities are likely to jeopardize the continued existence of any species that are listed or proposed to be listed as endangered or threatened or result in the adverse modification or destruction of habitat that is designated or proposed to be designated as critical.
- F. *New Sources or New Discharges:* New sources or new discharges of constituents of concern to impaired waters are not authorized by this permit unless otherwise allowable under OAC 252:606 and applicable state law. Impaired waters are those that do not meet applicable water quality standards and are listed on the Clean Water Act Section 303(d) list. Pollutants of concern are those constituents for which the waterbody is listed as impaired. The 303(d) list of Impaired Waters can be found in Appendix C of Oklahoma's Integrated Report on the DEQ web site at http://www.deq.state.ok.us/WQDnew/305b_303d/index.html, or the DEQ GIS Map and Data Viewer at <http://deq.maps.arcgis.com/home/index.html>.
- G. *Discharges to Total Maximum Daily Load (TMDL) Watersheds:* Discharges of pollutants of concern to impaired waterbodies for which there is an approved TMDL or a watershed plan incorporated in Oklahoma's Water Quality Management Plan in lieu of a TMDL are not eligible for coverage under this permit unless they are consistent with the approved TMDL or watershed plan or local compliance plan. Applicants must comply with the requirements in Part 4.1.5 of this permit.

1.3 Obtaining Authorization

- 1.3.1 In order for stormwater discharges from construction activities to be authorized under this permit, an operator must:
- A. Meet the authorized discharge requirements in Part 1.2 of this permit;
 - B. Except as provided in Part 2.1.4 of this permit, prior to NOI submittal, develop a SWP3 covering either the entire site or all portions of the site where they are operators (as defined in Part 8.23) according to the requirements in this permit. A "joint" SWP3 may be developed and implemented as a cooperative effort where there is more than one operator at a site. You are required to submit a copy of your complete SWP3 to DEQ for review if your discharges meet the special conditions listed in Part 2.4 of the permit. If your discharges do not meet the special conditions listed in Part 2.4 of the permit, you are not required to submit a copy of the SWP3 when you submit your NOL. However, you may be required to submit an SWP3 for review upon request by DEQ.
 - C. Submit a Notice of Intent (NOI) available in Addendum B of this permit. Only one NOI need be submitted to cover all of the Operator's activities on a common plan of development or sale (e.g., you do not need to submit a separate NOI for each separate lot in a residential subdivision or for two separate buildings being constructed at a manufacturing facility, provided the SWP3 covers each area for which you are an operator). The SWP3 must be implemented upon commencement of construction activities.
 - D. Pay the applicable application fee and annual permit fee established in OAC 252:606 OPDES Standards. An invoice of the permit fee due will be sent to you if the fee is not included with the NOI or upon your request.
 - E. Receive an authorization from DEQ. The fee must be received before the Operator's authorization can be issued.
- 1.3.2 Any new operator on site, including those who replace an operator who has previously obtained permit coverage, must submit an NOI to obtain permit coverage.
- 1.3.3 Once authorization is issued by DEQ, you are authorized to discharge stormwater from construction activities under the terms and conditions of this permit. DEQ may deny coverage under this permit and requires submittal of an application for an individual OPDES permit based on a review of the NOI or other information (see Part 6.11 of this permit).

1.4 Terminating Coverage

- 1.4.1 Permittees wishing to terminate coverage under this permit must submit a Notice of Termination (NOT) available in Addendum C of the permit. The permittee's authorization to discharge under this permit will be terminated when DEQ's termination letter has been issued. (see Part 2.2 of the Permit)
- 1.4.2 All permittees must submit an NOT within 30 days after one or more of the following conditions have been met:
- A. Final stabilization (as defined in Part 8.31 of this Permit) has been achieved on all portions of the site for which the permittee is responsible (including, if applicable, returning agricultural land to its pre-construction agricultural use);
 - B. For residential subdivision only: final stabilization has been completed and the ownership of all lots has been transferred to new owners and the permittee is no longer responsible for the construction activities for the subdivision. A Notification of Change of Ownership (NCO) has been signed, and included in the SWP3 (see also Parts 2.2 of this Permit); and
 - C. When another operator has assumed control according to Part 6.7.3 over all areas of the site that have not been finally stabilized. The NOT must be submitted with the new operator's NOI;
- 1.4.3 DEQ will review NOTs for completeness and accuracy and inspect the site for which the NOT was submitted within 30 days of receipt of the NOT.

Upon completing the inspection, DEQ will notify the permittee of any needed changes to the site conditions, or that the site has met the termination requirements under this permit. Only one NOT Form can be submitted to DEQ within a 90-day period. Additional compliance inspections may occur within this 90-day period at the discretion of DEQ.

Part 2 NOI and NOT Requirements

2.1 NOI Requirements

2.1.1 Operators

Parties defined as operators (as defined in Part 8.23 of this Permit) due to their operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications and/or operators with day-to-day operational control over construction activities at a project, must ensure that they are in compliance with all permit conditions, including their SWP3s and receive authorization from DEQ prior to the commencement of construction activities (i.e., the initial disturbance of soils associated with clearing, grading, excavation activities, or other construction activities).

2.1.2 Operator changed

For stormwater discharges from construction projects where the operator changes, including instances where an operator is added after an NOI has been submitted under Part 2.1.1 of this permit, the new operator must submit an NOI at least 2 days before assuming operational control over site specifications or commencing work on-site.

2.1.3 Late NOIs

Operators are not prohibited from submitting late NOIs. When a late NOI is submitted, authorization is only for discharges that occur after permit coverage is granted. DEQ reserves the right to take appropriate enforcement action for any unpermitted activities that may have occurred between the time construction commenced and authorization of future discharges is granted.

2.1.4 Operators of on-going construction projects

Operators of on-going construction projects as of the effective date of this permit that received authorization for stormwater discharges under the CGP OKR10 issued on September 13, 2012, must:

- A. Submit an NOI within 90 days of the effective date of this permit. If the permittee is eligible to submit an NOT (e.g., construction is finished and final stabilization has been achieved) before the 90th day, a new NOI is not required to be submitted. Operators must remain in compliance with the requirements of the CGP OKR10, issued on September 13, 2012, until a new authorization is received or an NOT is submitted;
- B. Update the SWP3 to comply and implement with the requirements of this permit prior to NOI submittal within 90 days after the effective date of this permit; and
- C. Pay the applicable application fee and annual permit fee established in OAC 252:606 (also see Part 1.3.1.D of this permit).

2.1.5 Operators without the permitting coverage under the CGP issued on September 13, 2012

Operators of on-going construction projects as of the effective date of this permit that did not receive authorization to discharge under the CGP issued on September 13, 2012, who wish to discharge under this permit, must submit an NOI and obtain authorization under this permit. Prior to NOI submittal, an SWP3 must be developed and implemented to comply with the requirements of this permit. However, DEQ reserves the right to take appropriate enforcement action for any unpermitted activities that may have occurred between the time construction commenced and authorization of future discharges is granted.

2.1.6 Contents of NOI

The NOI form shall include the following information:

- A. Indicate whether this is a new application or modification or renewal of your NOI, including your authorization number if this is a modification or renewal;
- B. Provide the legal name, mailing address, and phone number of the company/firm, public organization, or any other entity operator filing the NOI for permit coverage;
- C. Provide name, title, phone number and email address for the Operator's point of contact;
- D. Provide the site/project's official name, phone number and street address or general location information (e.g., intersection of State Highway 61 and 34);
- E. Provide the name, title, phone number, and email address for the site/project's point of contact;
- F. Indicate the purpose of the project (i.e. residential subdivision, commercial building, road and/or bridges, wind farm, etc.);
- G. Provide Latitude and Longitude of the construction project or site at the center of the site (or latitude and longitude at the starting and ending points if it is a linear construction site). Latitude and longitude can be obtained from DEQ, and USGS's websites or other mapping tools;
- H. Provide estimated construction project starting date and ending date. The dates must be provided in MM-DD-YYYY where MM is the month, DD is the date and YYYY is the year;
- I. Provide total area of construction site and estimated area to be disturbed in acres;
- J. Provide total impervious area (pre-construction) and total impervious area construction completed (post-construction) in acres;
- K. Provide post-construction runoff coefficient of the site. Operator may use recommended runoff coefficients in Addendum I of this permit. Average coefficients for composites area may be calculated on an area weighted basis from $C = \frac{\sum C_i A_i}{\sum A_i}$ where C_i is the coefficient applicable to the area A_i ;
- L. Describe the nature of fill material and existing data describing soils (i.e., coarse-grained soils: gravels, sands, or fine-grained soils: silts and clays, silts and clays, and highly organic soils etc.) Operator may use soil classification chart in Attachment A of Addendum H to determine the types of the soils on the site;
- M. Indicate whether this site/project is part of common plan of development or sale;
- N. Based on the instructions in Part 10 and Addendum A of this permit, operators must determine whether the construction site or land disturbing activity is within the specified corridor of a Federal or State ARC by selecting a, b, c, d, or e of Part 1.2.2.E.2;

- O. Indicate whether the site/project discharges stormwater to a Municipal Separate Storm Sewer System (MS4);
- P. Identify all the receiving waterbodies from the sites that discharge stormwater, including names of the waterbodies;
- Q. Indicate whether the receiving waterbodies are included on DEQ's 303(d) list of impaired waterbodies, including the pollutant(s) for which the waterbody is impaired;
- R. Indicate whether the stormwater discharges drain to a waterbody or watershed with an approved or established TMDLs, or watershed plan, or local compliance plan. Additional site specific requirements may be applicable if the site is located in such waterbody or watershed;
- S. Indicate whether the SWP3 has been prepared and is available on site;
- T. Indicate whether this operator is registered with the Secretary of State of Oklahoma;
- U. Describe the proposed measures, including BMPs, to control pollutants in stormwater discharges during construction, including a brief description of applicable erosion and sediment control requirements; and
- V. Describe the proposed measures to control pollutants in stormwater discharges that will occur after construction operations have been completed, including a brief description of applicable erosion and sediment control requirements.

2.1.7 Modification of an NOI

After issuance of an authorization, an amended NOI shall be submitted by a permittee if circumstances change (e.g. the area to be disturbed has increased from 20 acres to 40 acres). However, an amended NOI should not be submitted if the area to be disturbed has decreased (e.g., changed from 40 acres to 20 acres). The amended NOI shall include the facility's assigned permit number and a description of the requested change.

The original authorization number will be retained. DEQ will provide an acknowledgement by mail or email that the amended NOI has been received and processed. Permittees must update their SWP3s to reflect the modification.

2.2 NOT Requirements

Permittees must submit a completed NOT that is signed in accordance with Part 6.7 of this permit when one or more of the conditions contained in Part 1.4.2 of this permit have been met at a construction site. The permittee must use the NOT form found in Addendum C of this permit.

2.2.1 Contents of NOT

- A. Identify the OKR10 permit number for the stormwater discharge on the site;
- B. Indicate whether the construction activities on the site have been terminated and final stabilization has been completed or the permittee is no longer an operator at the site;
- C. Provide the legal name, mailing address, phone number and email address of the operator submitting the NOT;
- D. Provide the legal name of the site or project and address (or a description of the general location if no street address is available) of the construction site;
- E. Provide latitude and longitude of the construction site (at center of the site). Latitude and longitude can be obtained online at DEQ's, and/or USGS's websites and/or from other mapping tools;
- F. Include a copy of the updated site map showing all completed and final plans and projects (i.e., aerial images or general site maps with project extents marked, including stabilized areas of concrete or asphalt batch plants, equipment staging yards, stockpile, borrow areas, wash-out areas, previously disturbed areas, etc.); and
- G. Provide a copy of NCO (see Part 2.2.3 of this permit) for each new owner/operator to whom you have sold a portion of the site. Where indicated on your NOT and NCO forms, you must include the new

owner/operator's contact information, including their name, street address, phone number and email address. Each new owner/operator is also required to prepare and submit an NOI to DEQ for review. If applicable, you must submit all NCOs to DEQ prior to submittal of the NOT or submit the NOT along with all NCOs that have been prepared during the ownership transition.

2.2.2 Elimination of Stormwater Discharged

Elimination of stormwater discharges associated with construction activity means that all disturbed soils at the portion of the construction site where the operator had control have been finally stabilized (as defined in Part 8.31 of this permit) and temporary erosion and sediment control measures have been removed, or that all stormwater discharges associated with construction activities from the identified site that are authorized by this permit have otherwise been eliminated from the portion of the construction site where the operator had control.

2.2.3 Notification of Change of Ownership (NCO)

The permittee shall not terminate their permit coverage until the new owners/operators of the individual lots within the larger common plan of development or sale are notified of their permitting requirements. The permittee must sign a NCO in Addendum J of this permit. The signed NCO shall be documented in the permittee's SWP3 and submitted to DEQ in accordance with Part 2.2.1.G of this permit.

2.3 Where to Submit

All NOI, NOTs, and other documents required by this permit must be signed in accordance with Part 6.7, and sent to the following address: Stormwater Unit of Environmental Complaints and Local Services (ECLS), Department of Environmental Quality (DEQ), 707 North Robinson Ave., P.O. Box 1677, Oklahoma City, OK 73101-1677, or Fax them to (405) 702-6226, or email them to ECLS-StormwaterPermitting@deq.ok.gov.

2.4 SWP3 Submittal

You must submit a copy of your SWP3 along with your signed NOI if any of the following conditions apply:

- 2.4.1 Any area of your construction site or support activity is located within the watershed of an Outstanding Resource Water (as defined in Part 8.25 and Addendum E of this permit);
- 2.4.2 Any area of your construction site or support activity is located within an ARC area identified in Addendum A of this permit;
- 2.4.3 The area which is subject to approved TMDL or watershed plan or local compliance plan. For example, construction activities authorized after EPA approval of the TMDL which are located in the Lake Thunderbird watershed and required to (1) comply with any additional pollutant prevention of discharge monitoring requirements established by the local MS4 municipalities; (2) submit to the DEQ all Stormwater Pollution Prevention Plans (SWP3) for sites of 5 acres or larger.
- 2.4.4 The area to be disturbed in your construction site is 40 acres or more.

2.5 Electronic Reporting Deadline

Commencing December 21, 2020, NOI/SWP3 and other documents must be electronically submitted to DEQ. Instructions on how to access and use the appropriate electronic reporting tool will be made available on DEQ's website prior to the December 21, 2020 compliance deadline.

Part 3 Special Conditions and Effluent Limitations

3.1 Non-Stormwater Discharges

- 3.1.1. Except as provided in Parts 1.2.1.B and C or 1.3.2 and 3.1.2 or 3.1.3, all discharges covered by this permit shall be composed entirely of stormwater associated with construction activity;

- 3.1.2 Discharges of material other than stormwater that are in compliance with an OPDES permit (other than this permit) issued for that discharge may be discharged or mixed with discharges authorized by this permit.
- 3.1.3 The non-stormwater discharges listed in Part 1.2.1.C of the permit are authorized by this permit provided the non-stormwater component of the discharge is in compliance with Part 3.15 of this permit.
- 3.1.4 This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

3.2 Releases in Excess of Reportable Quantities

The discharge of hazardous substances or oil in the stormwater discharge(s) from a facility shall be prevented or minimized in accordance with the applicable SWP3 for the facility. This permit does not relieve the permittee of the reporting requirements of 40 CFR Parts 110, 117 and 302.

Where a release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Parts 110, 117 or 302, occurs during a 24 hour period:

3.2.1 Reporting a Reportable Spill

The permittee is required to notify the National Response Center (NRC) at 800-424-8802 in accordance with the requirements of 40 CFR Parts 110, 117 and 302, and the DEQ Hotline at 800-522-0206 as soon as the discharge is discovered.

3.2.2 SWP3 Requirements

The SWP3 required under this permit must be modified within 14 calendar days of knowledge of the release to provide a description of the release, the circumstances leading to the release, and the date of the release. In addition, the plan must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

3.3 Non-Numeric Technology Based Effluent Limitations

The stormwater control requirements in this part are the non-numeric technology-based effluent limitations that apply to all discharges from construction sites eligible for coverage under this permit. These requirements apply the national effluent limitations guidelines and new source performance standards found at 40 CFR Part 450.21

3.3.1 Erosion and Sediment Control Requirements

You must design, install and maintain effective erosion and sediment controls that minimize the discharge of pollutants from construction activities. To meet this requirement, you must comply with the following requirements:

- *Area of Disturbance.* You are required to minimize the amount of soil exposed during construction activities. You are also subject to the deadlines for temporarily and/or permanently stabilizing exposed portions of your site pursuant to Part 3.3.2 of this permit.
- *Design Requirements.* You must address the following factors in designing your stormwater controls:
 - i. The expected amount, frequency, intensity, and duration of precipitation;
 - ii. Stormwater volume and velocity must be controlled to minimize soil erosion and pollutant discharges;
 - iii. The nature of stormwater runoff and run-on at the site, including factors such as expected flow from impervious surfaces, slopes, and site drainage features. You must design stormwater controls to control both peak flowrates and total stormwater volume to minimize channel and streambank erosion and scour in the immediate vicinity of outlets; and
 - iv. Soil characteristics, including the range of soil particle sizes expected to be present on the site.

You must also meet the following requirements of erosion and sediment controls:

- A. *Direct discharges from your stormwater controls to vegetated areas.* Direct discharges from your stormwater controls to vegetated areas of your site to increase sediment removal and maximize stormwater

infiltration to reduce pollutant discharges, including any natural buffers established under Parts 1.2.2.E and 3.3.1.B, unless infeasible. Use velocity dissipation devices if necessary to prevent erosion when directing stormwater to vegetated areas.

- B. *Provide and Maintain Natural Buffers and Equivalent Erosion and Sediment Controls.*** When any waters of the State are located on or immediately adjacent to the site, you must maintain at least 50 feet of natural buffer zone, as measured from the top of the bank to disturbed portions of your site, from any named or unnamed receiving streams, creeks, rivers, lakes or other water bodies unless 100 feet of natural buffer is required by Part 1.2.2.E. There are exceptions from this requirement for water crossings, limited water access, and stream restoration authorized under a CWA Section 404 permit. Where no natural buffer exists due to preexisting development disturbances (e.g., structures, impervious surfaces) that occurred prior to the initiation of planning for the current development of the site, you are not required to comply with the requirements in this part, unless you will remove portions of the preexisting development (for exceptions also see Part H.3 of Addendum H).

Where some natural buffer exists but portions of the area within 50 feet of the surface water are occupied by preexisting development disturbances, you may refer to Addendum H for sediment control alternatives. Additionally, this requirement is not intended to interfere with any other ordinance, or regulation, statute or other provision of the law.

- C. *Install Perimeter Controls.*** Install sediment controls along those perimeter areas of your site that will receive stormwater from earth-disturbing activities. Examples of perimeter controls include, but are not limited to filter berms, silt fences, fiber rolls, compost socks, silt dikes, vegetative strips and temporary diversion dikes.

For linear construction sites where perimeter controls are infeasible (e.g., due to a limited or restricted rights-of-way), you must maximize the use of other controls as necessary to minimize pollutant discharges to perimeter areas of the site and document in your SWP3 why it is impracticable in other areas of the project.

Remove sediment before it has accumulated to one-half of the above-ground height of any perimeter control.

- D. *Minimize Sediment Track-Out.*** You must minimize the sediment track-out onto streets, other paved areas, and sidewalks from vehicles exiting your construction site. To comply with this requirement, you must:

1. Restrict vehicle use to properly designated exit points
2. Use appropriate stabilization techniques at all points that exit onto paved roads. Example of appropriate stabilization techniques include, but are not limited to, use of aggregate stone with an underlying geotextile or non-woven filter fabric, and turf mats.
3. Stabilization is not required for exit points at linear utility construction sites if other controls at the exit point are provided to minimize sediment track-out. Example of other exit controls include, but are not limited to, preventing the use of exit points during wet periods; minimizing exit point use by keeping vehicles on site to the extent possible; limiting exit size to the width needed for vehicle and equipment usage; using scarifying and compaction techniques on the soil; and avoiding establishing exit points in environmentally sensitive areas;
4. Implement additional track-out controls as necessary to ensure that sediment removal occurs prior to vehicle exit; examples of additional track-out controls include, but are not limited to, use of wheel washing, rumble strips, and rattle plates and
5. Where sediment has been tracked-out from your site onto the surface of paved street, sidewalks or other paved areas outside of your site, you must remove the deposited sediment by the end of the same work day in which the track-out occurs or by the end of the next work day if track-out occurs on a non-work day. You must remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. You are prohibited from hosing or sweeping tracked-out sediment into any stormwater conveyance (unless it is connected to a sediment basin, sediment trap, or similarly effective control), storm drain inlet, or surface waters of the State.

- E. *Control Discharges from Stockpiled Sediment or Soil.*** For any stockpiles or land clearing debris composed in whole of sediment or soil, you must comply with the following requirements:

1. Locate the piles outside of any natural buffers established under Parts 1.2.2.E or 3.3.1.B and physically separated from any stormwater conveyances, drain inlets, and area where stormwater flow is concentrated;
 2. Install a sediment barrier along all downgradient perimeter areas. Examples of sediment barriers include, but are not limited to, berms, dikes, fiber rolls, silt fences, sandbags, and gravel bags;
 3. Provide cover or appropriate temporary stabilization to avoid direct contact with precipitation or to minimize sediment discharge in accordance with Part 3.3.2 of this permit. Examples of cover include tarps, blown straw and hydro-seeding;
 4. Do not hose down or sweep soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance (unless connected to a sediment basin, sediment trap, or similarly effective control), storm drain inlet, or surface water; and
 5. Unless infeasible, contain and securely protect from wind.
- F. *Minimize Dust.* In order to avoid pollutants from being discharged into surface waters, to the extent feasible, you must minimize the generation of dust through the appropriate application of water or other dust suppression techniques.
- G. *Minimize the Disturbance of Steep Slopes.* You must minimize the disturbance of steep slopes (i.e., slopes of 40% or greater). If it is not feasible to avoid disturbance of steep slopes, you must:
1. Divert concentrated or channelized flows of stormwater away from and around areas of disturbance on steep slopes;
 2. Use specialized erosion and sediment controls for steep slopes, such as temporary and permanent seeding with soil binders, erosion control blankets, surface roughening, reducing the continuous slope length with terracing or diversions, gradient terraces, interceptor dikes and swales, grass-lined channels, pipe slope drains, subsurface drains, level spreaders, check dams, seep berms, and triangular silt dikes; and
 3. Use stabilization practices designed to be used on steep slopes. You must comply with the stabilization requirements as required in Part 3.3.2 of this permit.
- H. *Preserve Topsoil.* You must preserve native topsoil on your site, unless infeasible; you must stockpile and reuse it in areas that will be stabilized with vegetation if applicable.
- I. *Minimize Soil Compaction.* In areas of your site where final vegetative stabilization will occur or where infiltration practices will be installed, you must either:
1. Restrict vehicle and equipment use in these locations to avoid soil compaction; or
 2. Prior to seeding or planting areas of exposed soil that have been compacted, use techniques that condition the soils to support vegetative growth, if necessary.
- J. *Protect Storm Drain Inlets.* If you discharge to any storm drain inlet that carries stormwater flow from your site directly to surface water (and it is not first directed to a sediment basin, sediment trap, or similarly effective control), and you have the authority to access the storm drain inlet, you must comply with the following requirements:
1. Install inlet protection measures that remove sediment from your discharge prior to entry into the storm drain inlet.
 2. Clean, or remove and replace, the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised. Where there is evidence of sediment accumulation adjacent to the inlet protection measure, you must remove the deposited sediment by the end of the same work day in which it is found or by the end of the following work day if removal by the same work day is not feasible.
- K. *Constructed Stormwater Conveyance Channels.* Design channels to avoid unstabilized areas on the site and to reduce erosion, unless infeasible, and minimize erosion of channels and their embankments, outlets, adjacent streambanks, slopes, and downstream waters during discharge conditions through the use of erosion

controls and velocity dissipation devices within and along the length of any constructed stormwater conveyance channel, and at any outlet to provide a non-erosive flow velocity. Examples of velocity dissipation devices include, but are not limited to, silt dikes, check dams, gravel bags, sediment traps, riprap, and grouted riprap at outlets.

L. *Installed sediment basins.* If you install a sediment basin, you must comply with the following:

1. Provide storage for either the calculated volume of runoff from a 2-year, 24-hour storm, or 3,600 cubic feet per acre drained;
2. When discharging from the sediment basin and impoundment, utilize outlet structures that withdraw water from the surface of the sediment basins in order to minimize the discharge of pollutants, unless infeasible;
3. Prevent erosion of the sediment basin using stabilization controls (e.g., erosion control blankets), and the inlet/outlet using erosion controls and velocity dissipation devices;
4. Sediment basins must be situated outside of surface waters and any natural buffers established under Parts 1.2.2.E and 3.3.1.B and
5. Remove accumulated sediment to maintain at least 1/2 the design capacity and conduct all other appropriate maintenance to ensure the basin or impoundment remains in effective operating condition.

M. *Dewatering Practices.* You are prohibited from discharging groundwater or accumulated stormwater that is removed from excavations, trenches, foundations, vaults, or other similar points of accumulation associated with a construction activity, unless such waters are first effectively managed by appropriate controls. Examples of appropriate controls include, but are not limited to, sediment basins or sediment traps, sediment socks, dewatering tanks, tube settlers, weir tanks, filtration systems (e.g., bag or sand filters), and passive treatment systems that are designed to remove sediment. Appropriate controls to use downstream of dewatering controls to minimize erosion include, but are not limited to, vegetated buffers, check dams, riprap, and grouted riprap at outlets. Uncontaminated clear dewatering water can be discharged without being routed to a control. You must also meet the following requirements for dewatering activities:

1. Do not discharge visible floating solids or foam;
2. Use an oil-water separator or suitable filtration device (such as a cartridge filter) that is designed to remove oil, grease, or other products if dewatering wastewater is found to contain these materials;
3. To the extent feasible, utilize vegetated, upland areas of the site to infiltrate dewatering water before discharge. In no case will surface waters be considered part of the treatment area;
4. At all points where dewatering water is discharged, comply with the velocity dissipation requirements of Part 3.3.1.K;
5. With backwash water, either haul away for disposal or return it to the beginning of the treatment process; and
6. Replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.

3.3.2 Stabilization Requirements

Implement and maintain stabilization measures to minimize erosion from exposed portions of your site in accordance with Part 3.3.2.A of this part.

A. Stabilization Deadlines

1. Initiate the installation of stabilization measures immediately in any disturbed areas where construction activities have permanently ceased on any portion of the site or will be temporarily inactive for 14 or more calendar days on any portion of the site.

The term "immediately" is used to define the deadline for initiating stabilization measures. In the context of this provision, "immediately" means as soon as practicable, but no later than the end of the

next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased.

2. Complete the installation of stabilization measures as soon as practicable, but no later than 14 calendar days after stabilization measures has been initiated, or 7 calendar days if you discharge to an impaired water, or ORW, or ARC (see Part 3.3.2.A.2.c.):
 - a. For vegetative stabilization, all activities necessary to initially seed or plant the area to be stabilized; and/or
 - b. For non-vegetative stabilization, the installation or application of all such non-vegetative measures to provide effective cover.
 - c. If you discharge to an impaired water, or Outstanding Resource Water (ORW), or ARC, you are required to complete the stabilization activities specified in Parts 3.3.2.A.2.a and b within 7 calendar days after the temporarily or permanent cessation of earth-disturbing activities.

B. Stabilization Criteria

1. If you use vegetative cover to stabilize an exposed portion of your site for temporary and final stabilization (also see Part 8.31 Definitions of Temporary and Final Stabilization), you must comply with one of the following criteria:
 - a. Established uniform perennial vegetation (i.e., evenly distributed without large bare areas³), that provides 70% or more of the cover that is provided by vegetation native to local undisturbed areas. When background vegetation covered less than 100% of the ground prior to commencing earth-disturbing activities, the 70% coverage criteria is adjusted as in following example: if vegetation covered 50% of the ground prior to construction, then the requirement would be to provide a total vegetative cover at final stabilization of 70% of 50% ($0.70 \times 0.50 = 0.35$), or 35% of the site.
 - b. Immediately after seeding or planting the area to be stabilized, to the extent necessary to prevent erosion on the seeded or planted area, you must select, design, and install non-vegetative stabilization measures to provide effective cover to the area while vegetation is becoming established. Examples of non-vegetative stabilization measures include, but are not limited to riprap and gravel.
2. If you are using non-vegetative controls (e.g., hydro-mulch, erosion control blankets, riprap, geotextiles, and gabions) to stabilize exposed portions of your site, or if you are using such controls to temporarily protect areas that are being seeded and planted, you must provide effective non-vegetative cover to stabilize such exposed portions of your site.

3.3.3 Pollution Prevention Requirements

You are required to design, install, implement and maintain effective pollution prevention measures in order to minimize or prevent the discharge of pollutants. To meet this requirement, you must:

- Eliminate certain pollutant discharges from your site (see Part 3.3.3.A of this part);
- Properly maintain all pollution prevention controls (see Part 3.3.3.B of this part); and
- Comply with pollution prevention standards for pollutant-generating activities that occur at your site (see Part 3.3.3.B of this part).

A. *Prohibited Discharges.* You are prohibited from discharging the following from your construction site:

1. Wastewater from the washout of concrete, unless managed by an appropriate control as described in Part 3.3.3.B.4;
2. Wastewater from the washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials, unless managed by an appropriate control as described in Part 3.3.3.B.4;

³ Large bare area is defined as an area with 10 ft² or more with no perennial vegetative cover established

3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
 4. Soaps, detergents or solvents used in vehicle and equipment washing; and
 5. Toxic or hazardous substances from a spill or other release.
- B. Maintenance Requirements.** You must ensure that all pollution prevention controls installed in accordance with this part remain in effective operating condition and are protected from activities that would reduce their effectiveness. You must inspect all pollutant-generating activities and pollution prevention controls in accordance with your inspection frequency requirements (see Part 4.3.13.B) and document your findings in accordance with Part 4.3.13.E. If you find that controls need to be replaced, repaired, or maintained, you must make the necessary repairs or modifications in accordance with the following:
1. **General Maintenance Requirements:** You must initiate work to fix the problem immediately after discovering the problem, and complete such work by the close of the next work day, if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance.
 2. **Washing of Equipment or Vehicles**
 - a. You must provide an effective means of minimizing the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other types of washing prior to discharges. Examples of "effective means" include, but are not limited to, locating activities away from waters of the State and stormwater inlets or conveyances and directing wash waters to a sediment basin or sediment trap, using filtration devices, such as filter bags or sand filters, or using other similarly effective controls;
 - b. Ensure there is no discharge of soaps, detergents, or solvents in equipment and vehicle wash water. For storage of soaps, detergents or solvents, you must provide either cover (e.g., plastic sheeting or temporary roofs) to prevent these materials from coming into contact with rainwater, or a similarly effective means designed to prevent the discharge of pollutants from these areas.
 3. **Storage, Handling, and Disposal of Construction Products, Materials and Wastes.** You must minimize the exposure to precipitation and stormwater of any of the products, materials, or wastes specified below that are present at your site by complying with the requirements in this Part. To ensure you meet this requirement, you must:
 - a. **For building products:** In storage areas, provide either cover (e.g., plastic sheeting or temporary roofs) to prevent these products from coming into contact with rainwater, or a similarly effective means designed to prevent the discharge of pollutants from these areas.
 - b. **For pesticides, herbicides, insecticides, fertilizers, and landscape materials:**
 - (1) In storage areas, provide either cover (e.g., plastic sheeting or temporary roofs) to prevent these chemicals from coming into contact with rainwater, or a similarly effective means designed to prevent the discharge of pollutants from these areas; and
 - (2) Comply with all application and disposal requirements included on the registered pesticide, herbicide, insecticide, and fertilizer label.
 - c. **For diesel fuel, oil, hydraulic fluids, other petroleum products, and other chemicals:**
 - (1) To comply with the prohibition in Part 3.3.3.A.3 store chemicals in water-tight containers, and provide either cover (e.g., plastic sheeting or temporary roofs) to prevent these containers from coming into contact with rainwater, or a similarly effective means designed to prevent the discharge of pollutants from these areas (e.g., spill kits), or provide secondary containment (e.g., spill berms, decks, spill containment pallets); and
 - (2) Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly. Do not clean surfaces or spills by hosing the area down. Eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.

- d. For hazardous or toxic waste (e.g., paints, caulks, sealants, fluorescent light ballasts, solvents, petroleum-based products, wood preservatives, additives, curing compounds, and acids):
 - (1) Separate hazardous or toxic waste from construction and domestic waste;
 - (2) Store waste in sealed containers, which are constructed of suitable materials to prevent leakage and corrosion, and which are labeled in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable federal, state, or local requirements;
 - (3) Store all containers that will be stored outside within appropriately-sized secondary containment (e.g., spill berms, decks, spill containment pallets) to prevent spills from being discharged, or provide a similarly effective means designed to prevent the discharge of pollutants from these areas (e.g., storing chemicals in covered areas or having a spill kit available on site);
 - (4) Dispose of hazardous or toxic waste in accordance with the manufacturer's recommended methods of disposal and in compliance with federal, state, and local requirements; and
 - (5) Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly. Do not clean surfaces or spills by hosing the area down. Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.
 - e. For construction and domestic waste (e.g., packaging materials, scrap construction materials, masonry products, timber, pipe and electrical cuttings, plastics, styrofoam, concrete, and other trash or building materials): Provide waste containers (e.g., dumpster or trash receptacle) of sufficient size and number to contain construction and domestic wastes. In addition, you must:
 - (1) Keep waste container lids closed during precipitation event when not in use, when there is a significant chance of precipitation (forecasted), and/or the site is inactive or work is not in progress. Waste containers must be covered at the end of daily work shifts and when workers are not present. For waste containers that do not have lids and could leak, provide either (a) cover (e.g., a tarp, plastic sheeting, temporary roof) to minimize exposure of wastes to precipitation, or (b) a similarly effective means designed to minimize the discharge of pollutants (e.g., secondary containment);
 - (2) On work days, clean up and dispose of waste in designated waste containers; and
 - (3) Clean up immediately if containers overflow.
 - f. For sanitary waste: Position portable toilets so that they are secure and will not be tipped or knocked over and located away from water of the State and stormwater inlets or conveyances.
4. Washing of Applicators and Containers Used for Paint, Concrete, or Other Materials. To comply with the prohibition in Parts 3.3.3.A.1 and 2, you must provide an effective means of eliminating the discharge of water from the washout and cleanout of stucco, paint, concrete, form release oils, curing compounds, and other construction materials. To comply with this requirement, you must:
- a. Direct all wash water into a leak-proof container or leak-proof pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation;
 - b. Handle washout or cleanout wastes as follows:
 - (1) Do not dump liquid wastes in storm sewers;
 - (2) Dispose of liquid wastes in accordance with applicable requirements in Part 3.3.3.B.3; and
 - (3) Remove and dispose of hardened concrete waste consistent with your handling of other construction wastes in Part 3.3.3.B.3;
 - (4) Clean up immediately if there is an overflow or if a discharge occurs outside of the leak-proof container or pit; and

- c. Locate any washout or cleanout activities as far away as possible from surface waters and stormwater inlets or conveyances, and, to the extent practicable, designate areas to be used for these activities and conduct such activities only in these areas.
- C. **Emergency Spill Notification.** You are prohibited from discharging toxic or hazardous substances from a spill or other release, consistent with Part 3.3.3.A.5 of this part. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Parts 110, 117, or 302 occurs during a 24-hour period, you must notify the NRC at (800) 424-8802 or, in the areas of Oklahoma, call the DEQ's Hotline at (800)522-0206 as soon as you have knowledge of the discharge. You must also, within 7 calendar days of knowledge of the release, provide a description of the release, the circumstances leading to the release, and the date of the release. Local requirements may necessitate additional reporting of spills or discharges to local emergency response, public health, or drinking water supply agencies.
- D. **Fertilizer Discharge Restrictions.** You are required to minimize discharges of fertilizers containing nitrogen or phosphorus. To meet this requirement, you must comply with the following requirements:
1. Apply at a rate and in amounts consistent with manufacturer's specifications, or document departures from the manufacturer's specifications;
 2. Apply at the appropriate time of year for your location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth;
 3. Avoid applying before heavy rains that could cause excess nutrients to be discharged;
 4. Never apply to frozen ground;
 5. Never apply to stormwater conveyance channels with standing or flowing water; and
 6. Follow all other federal, state, tribal and local requirements regarding fertilizer application.

3.4 Numeric Technology-Based Effluent Limitation

3.4.1. Numeric Effluent Limitation and Monitoring Requirements for Asphalt Batch Plants

If you have discharges of stormwater from asphalt batch plants, you must comply with the limitations and monitoring requirements required in Addendum F of this permit. The numeric effluent limitations in following Table 3.1 apply to stormwater discharges associated with any activities for asphalt batch plants, not for concrete batch plants.

TABLE 3.1 NUMERIC EFFLUENT LIMITATIONS FOR ASPHALT BATCH PLANTS

| Parameter | Limitation | Monitoring Frequency | Sample Type |
|------------------------------|---|----------------------|-------------|
| Total Suspended Solids (TSS) | 23 mg/l, daily max. 15 mg/l, 30-day avg. | 1/year | Grab |
| Oil and Grease | 15 mg/l, daily max. 10 mg/l, 30-day avg. | 1/year | Grab |
| pH | 6.5-9.0 s.u. | 1/year | Grab |

If the project lasts less than one year, you must collect at least one sample. Also you must comply with quarterly visual monitoring and annual numeric effluent limitation monitoring and document those results as specified in your SWP3 (see Addendum F of this permit).

Monitoring for compliance with the above numeric effluent limitations must be conducted in accordance with test procedures approved in 40 CFR Part 136, and samples must be analyzed by an accredited laboratory in accordance with OAC 252:301. Where more than one test procedure is approved for the analysis of a pollutant or pollutant parameter, the test procedure must be sufficiently sensitive to meet the minimum quantification levels (MQLs) established in OAC 252:690 or, where an MQL has not been established in OAC 252:690, to quantify the amount of pollutant present at or below the level of the above numeric effluent limitations.

3.5 Water Quality-Based Effluent Limitations

Your stormwater discharges must be controlled as necessary to meet applicable water quality standards. Operators seeking coverage under this permit shall not cause or have the reasonable potential to cause or contribute to a violation of a water quality standard. Where a discharge is already authorized under this permit and is later determined to cause or have the reasonable potential to cause or contribute to the violation of an applicable water quality standard, DEQ will notify the operator of such violation(s). The permittee shall take all necessary actions to ensure future discharges do not cause, have the reasonable potential to cause, or contribute to the violation of a water quality standard and document these actions in the SWP3. If violations remain or re-occur, then coverage under this permit may be terminated by DEQ, and an alternative general permit or individual permit may be issued. Compliance with this requirement does not preclude any enforcement activity as provided by the Clean Water Act (CWA) for the underlying violation. If such violation is determined, DEQ may require you to:

- Develop a supplemental BMP action plan describing SWP3 modifications in accordance with Part 4.1.4 to address adequately the identified water quality concerns;
- Submit valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is attaining water quality standards; or
- Cease discharges of pollutants from construction activity and submit an alternative general permit or individual permit application.

3.5.1 Discharges to Waters Identified as Impaired Waters

If you discharge to impaired water that is impaired for Sediment and/or Turbidity within 1 mile, you are required to comply with the additional requirements in this part.

A. *Identify whether you discharge to one or more waterbodies impaired for sediment and/or turbidity.* If you discharge to impaired waters, you must indicate so in your NOI and comply with the following requirements in Parts 3.5.1.B, C, and D of this part. If you indicate in your NOI that you do not discharge to impaired water, DEQ may determine, based on additional information, that you are considered to be discharging to an impaired water. If this is the case, you will be notified of DEQ's determination, and be provided with an opportunity to comply with additional requirements as a condition of your permit coverage, consistent with Part 3.5.1.

B. *Site inspection requirements.* You are required to comply with the following modified inspection requirements:

You must conduct site inspections once every 7 calendar days at a minimum, and within 24 hours of a storm event of 0.5 inches or greater or within 24 hours of a discharge caused by snowmelt;

C. *Corrective actions.* If the inspection or visual examination results indicate any permit violations, you must implement the corrective actions required in Part 4.3.14. However, a violation would result if you fail to implement the required corrective actions. If you are subject to the numeric limit in Part 3.4 (Table 3.1 for asphalt batch plant) you must implement the monitoring requirement according to Addendum F of this permit. If your sample results indicate that you have exceeded the numeric limit, you must implement the corrective actions according to Part 4.3.14.

D. *Stabilization requirements.* You are required to comply with the following modified stabilization requirements:

You are required to comply with the stabilization requirements as specified in Parts 3.3.2.A.1 and 2 within 7 calendar days after the temporary or permanent cessation of earth-disturbing activities.

3.5.2 Discharges to waters identified as an ORW or ARC

If you discharge to waters identified as ORW (see Addendum E of this permit) or your sites are located within areas identified as an ARC and you are relying on option b in Part 1.2.2.E.2 (see Part 10 and Addendum A of this permit), you must implement inspections, corrective actions and stabilization requirements provided in Part 3.5.1 above. Also you must comply with the following additional requirements:

- A. In order to minimize sediment discharges, if any ORW or ARC is located on or immediately adjacent to your site, you must ensure that a vegetated buffer zone of at least 100 feet is retained or successfully established/planted between the area disturbed and all perennial or intermittent streams. A vegetated buffer zone of at least 50 feet must be retained or successfully established/planted between the areas disturbed during construction and all ephemeral streams or drainages. If the nature of the construction activity or the construction site makes a buffer impossible, you must provide equivalent controls. See Addendum H of this permit for information to assist you in developing equivalent controls.
- B. For drainage locations serving 5 or more acres disturbed at one time, a temporary (or permanent) sediment basin and/or sediment traps shall be used to minimize sediment discharges within the areas of the ORW or ARC. You may use the information in Parts 3.3.1.L and 4.3.11.A.4 to assist you in complying with this requirement.

For common drainage locations that serve an area with 5 or more acres disturbed at one time, a temporary (or permanent) sediment basin(s) that provides overall storage for a calculated volume of runoff from a 2-year, 24-hour storm from each disturbed acre drained, or equivalent control measures, shall be provided where attainable until final stabilization of the site. Where no such calculation has been performed, a temporary (or permanent) sediment basin(s) providing overall storage of 3,600 cubic feet of storage per acre drained, or equivalent control measures, shall be provided where attainable until final stabilization of the site. When computing the number of acres draining into a common location, it is not necessary to include flows from off-site areas and flows from onsite areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin(s).

In determining whether installing a sediment basin(s) is attainable, you may consider factors such as site soils, slope, available area on site, etc. In any event, you must consider public safety, especially as it relates to children, as a design factor for the sediment basin(s) and alternative sediment controls shall be used where site limitations would preclude a safe design. For drainage locations that serve 5 or more disturbed acres at one time and where a temporary sediment basin(s) or equivalent controls are not attainable, smaller sediment basins and/or sediment traps should be used. Where neither the sediment basin(s) nor equivalent controls are attainable due to site limitations, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down-slope boundaries of the construction area and for those side slope boundaries deemed appropriate as dictated by individual site conditions. DEQ encourages the use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal.

- C. For any portion of the site that discharges to an ORW or ARC, instead of the inspection frequency specified in Part 4.3.13.B, you must conduct inspections within 7 calendar days and within 24 hours of the occurrence of a storm event of 0.5 inches or greater.
- D. For initiating and completing stabilization, you are required to complete the stabilization activities within 7 calendar days after the temporary or permanent cessation of earth-disturbing activities.

3.6 Responsibilities of Operators

Permittees may meet one or both of the operational control components in the definition of "operator" found in Part 8.23 of this permit. Either Parts 3.6.1 or 2 or both will apply depending on the type of operational controls exerted by an individual permittee.

3.6.1 Operational Control over Construction Plans and Specifications

If you have operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications (e.g., developer, owner, or operator), you must ensure that:

- A. The project specifications meet the minimum requirements of Part 4 and all other applicable permit conditions of this permit;
- B. The SWP3 indicates the areas of the project where you have operational control over project specifications (including the ability to make modifications in specifications), and ensure all other permittees implementing portions of the SWP3 who may be impacted by any changes to the plan are notified of such modifications in a timely manner; and

- C. The SWP3 for portions of the project where you are the operator indicates the name and DEQ permit number for parties with day-to-day operational control of those activities necessary to ensure compliance with the SWP3 or other permit conditions. If these parties have not been identified at the time the SWP3 is initially developed, the permittee with operational control over project specifications shall be considered to be the responsible party until such time as the authority is transferred to another party (e.g., general contractor) and the plan updated.

3.6.2 Operational Control over Day-to-Day Activities

If you have operational control over day-to-day activities, you must ensure that:

- A. The SWP3 for portions of the project where you are the operator meets the minimum requirements of Part 4 of this permit and identifies the parties responsible for implementation of control measures;
- B. The SWP3 indicates areas of the project where you have operational control over day-to-day activities; and.
- C. The SWP3 for portions of the project where you are the operator indicates the names and their permit numbers of the parties with operational control over project specifications (including the ability to make modifications in specifications).

3.6.3 Responsibilities of Operators at a Larger Common Plan of Development

The criteria within the definition of “Operator” allow for more than one entity to be active at a construction site that is considered a larger common plan of development. For example, the developer and one or more builders may be engaged in construction activity within a residential subdivision at the same time, and any or all may be considered operators as defined by this permit. Where it is determined to be more efficient or desirable, this permit allows for all construction activities at a larger common plan of development to be covered by a single permit and the SWP3 held by a “Primary Operator”, usually the developer.

For the purposes of this provision, “Primary Operator” for a construction project that has more than one operator means an operator who has chosen to obtain coverage under this permit for all discharges from all earth-disturbing activities at a construction site that is considered to be a larger common plan of development even if such discharges originate from portions of the site operated by another entity, such as a builder or utility contractor.

For the purposes of this provision, “Secondary Operator” for a construction project that has more than one operator means an operator who has elected to have the discharges from earth-disturbing activities on a portion of a larger common plan of development to which he/she has operational control covered by the permit and SWP3 held by the Primary Operator rather than obtaining separate permit coverage for those discharges. If an operator who may be considered a Secondary Operator under this provision elects not to have their discharges from earth-disturbing activities covered by the Primary Operator’s permit, this operator must obtain separate permit coverage.

- A. *Responsibilities of the Primary Operator.* The Primary Operator is ultimately responsible for the runoff from the perimeter of the development. Regardless of the reason for the runoff, the Primary Operator is responsible for ensuring sufficient overall controls for the development. The Primary Operator is responsible for obtaining permit coverage for the development and for developing and maintaining an SWP3 for the development. The Primary Operator shall identify all Secondary Operators in the SWP3 and identify the specific areas of the development where they will be active. The Primary Operator shall ensure that Secondary Operators are aware of all SWP3 requirements, BMPs and other control measures that apply to their operations. Contractor Certifications (Part 4.4 of this permit) or similar written instruments should be used to document this notification. The Primary Operator shall not terminate permit coverage until at least one of the following conditions has been met:
 1. All construction, including landscaping and lot development, has been completed, and final stabilization has been achieved.
 2. All lots are sold and developed, and there are no temporary common controls for subdivision outfalls, i.e. sediment basins, large sediment traps, check dams, etc.

3. All construction activity by the Primary Operator is completed, final stabilization has been achieved on all areas under the control of the Primary Operator, and the remaining undeveloped lots have been sold to other new operator(s) and NCOs (see Part 2.2.3 of this permit) for the new operator(s) have been prepared and signed, or to operators that have obtained separate permit coverage.

B. Responsibilities of Secondary Operators

Secondary Operators must be thoroughly familiar with and adhere to provisions of the permit, the NOI, the SWP3 and all BMPs and control measures which apply to their areas of activity. Secondary Operators must notify the Primary Operator prior to beginning any earth-disturbing activity and execute any written notification required by the Primary Operator. Secondary Operators must avoid damaging or interfering with the effectiveness of any control measure on the construction site or notify the Primary Operator if such occurs.

3.6.4 Responsibilities of the Operator of Utility Installation

If you have operational control over utility installation (e.g., telephone, electric, gas, cable TV, etc.), your activities must be covered under an SWP3, either a "joint SWP3" for the larger common plan of development or sale, or your own SWP3. You are responsible for maintenance of the SWP3 on the areas disturbed by your activities. You must ensure the protection of endangered species, implementation of BMPs, and final stabilization requirements. This applies to utility companies and their subcontractors. If you are a contractor and do not meet the definition of "Operator" (see Part 8.23 of this permit), you are not required to submit an NOI for the Permit coverage. You may be covered as specified under Part 3.6.3, by a "contractor certification" or similar arrangement (see Addendum D of this permit).

Part 4 Stormwater Pollution Prevention Plans (SWP3)

4.1 General Requirements

- 4.1.1 An SWP3 must be prepared according to the requirements in Part 4 prior to submission of an NOI. The SWP3 must be kept up-to-date throughout coverage under this permit.

If a SWP3 was prepared under the 2012 permit, operator must review and update the SWP3 to ensure that requirements of this permit are addressed prior to submitting an NOI for coverage under this permit.

- 4.1.2 SWP3s shall be prepared in accordance with good engineering practices. Use of a licensed professional engineer (PE) for SWP3 preparation is not required by the permit. However, if any part of the SWP3 involves the practice of engineering⁴, then those engineering practices and designs are required to be prepared by a licensed professional engineer. The SWP3 shall identify potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges from the construction site. The SWP3 shall describe and ensure the implementation of practices that will be used to reduce the pollutants in stormwater discharges associated with construction activity at the construction site and assure compliance with the terms and conditions of this permit.
- 4.1.3 When developing SWP3s, applicants must follow the procedures in Part 10 of this permit to determine whether listed endangered or threatened species or critical habitat would be affected by the applicant's stormwater discharges or stormwater discharge-related activities. Any information on whether listed species or critical habitats are found in proximity to the construction site must be included in the SWP3. Any terms

⁴ Statutes and Rules of Oklahoma State Board of Licensure for Professional Engineers & Land Surveyors, Section 472.2 "Definitions" states "practice of engineering means any service or creative work, the adequate performance of which requires engineering education, training and experience in the application of special knowledge of the mathematical, physical and engineering sciences to such services or creative work as consultation, investigation, evaluation, planning and design of engineering works and systems, planning the engineering use of land and water, teaching of advanced engineering subjects or courses related thereto, engineering research, engineering surveys, engineering studies, and the inspection or review of construction for the purposes of assuring compliance with drawings and specifications; any of which embraces such services or work, either public or private, in connection with any utilities, structures, buildings, machines, equipment, processes, work systems, projects, and industrial or consumer products or equipment of a mechanical, electrical, chemical, environmental, hydraulic, pneumatic or thermal nature, insofar as they involve safeguarding life, health or property, and including such other professional services as may be necessary to the design review and integration of a multidiscipline work, planning, progress and completion of any engineering services."

or conditions that are imposed under the eligibility requirements of Parts 1.2.2.E, 3.5.2 and 10 of this permit to protect listed species or critical habitat from stormwater discharges or stormwater discharge-related activity must be incorporated into the SWP3. Permittees must implement the applicable provisions of the SWP3 required under this part as a condition of this permit.

- 4.1.4 If your construction site discharges into a receiving water (within 1 mile) which has been listed on the Clean Water Act 303(d) list of impaired waters, and your discharges contain the pollutant(s) for which the waterbody is impaired, you must document in your SWP3 how the BMPs and other controls selected for your site will control the discharge of the pollutant(s) of concern. If Part 3.5.1 applies to your discharge, you must include in your SWP3 the additional requirements specified in that part.

The 303(d) list of Impaired Waters in Oklahoma can be found in Appendix C of the Integrated Report on the DEQ's webpage at http://www.deq.state.ok.us/WQDnew/305b_303d/index.html, or the DEQ GIS Map and Data Viewer at <http://deq.maps.arcgis.com/home/index.html>

- 4.1.5 If a TMDL or watershed plan or local compliance plan has been approved for the waterbody, you must also describe how your SWP3 is consistent with any TMDL or watershed plan or local compliance plan applicable to your discharge. Permittees must incorporate any limitations, conditions, or requirements applicable to their discharges into the SWP3 to ensure that the waste load allocations (WLAs) or load allocations (LAs) and/or the TMDL's associated implementation plan will be met within any timeframe established in the TMDL report or watershed plan. Monitoring and reporting of the discharges may also be required as appropriate to ensure compliance with the TMDL or watershed plan.

Approved TMDL reports or watershed plans can be downloaded from DEQ's website at <http://www.deq.state.ok.us/wqdnew/tmdl/index.html>

- 4.1.6 If the industrial activities associated with a concrete or asphalt batch plant are directly related to your construction site and are covered under this permit, you must develop the SWP3 for such industrial activities according to Addendum F of this permit.

4.2 Signature, Posting a Notice, Making Plans Available, and DEQ's Notification

- 4.2.1 The SWP3 shall be signed in accordance with Part 6.7, and be retained on-site in accordance with Part 5 of this permit.

- 4.2.2 The Permittee shall post a notice near the main entrance of the construction site with the following information:

- A. The OPDES permit number for the project or a copy of the NOI if a permit number has not yet been assigned;
- B. The name and telephone number of a local contact person;
- C. A brief description of the project; and
- D. The location of the SWP3 if the site is inactive or does not have an on-site location to store the plan.

If posting this information near a main entrance is infeasible due to safety concerns, the notice shall be posted in a local public building. If the construction project is a linear construction project (e.g., pipeline, highway, etc.), the notice must be placed in a publicly accessible location near where construction is actively underway and moved as necessary. This permit does not provide the public with any right to trespass on a construction site for any reason, including inspection of a site; nor does this permit require that permittees allow members of the public access to a construction site.

- 4.2.3 The permittee shall make SWP3s available upon request to: DEQ and/or any State, Federal, or local agency approving sediment and erosion plans, grading plans or stormwater management plans; the U.S. Fish and Wildlife Service or the Oklahoma Department of Wildlife Conservation; local government officials; or the operator of a municipal separate storm sewer receiving discharges from the site. The copy of the SWP3 that is required to be kept on-site or locally available must be made available to DEQ for review at the time of an on-site inspection. Also, in the interest of public involvement, DEQ encourages permittees to make their SWP3s available to the public for viewing during normal business hours.

- 4.2.4 DEQ may notify the permittee at any time that the SWP3 does not meet one or more of the minimum requirements of this Part. Such notification shall identify those provisions of this permit that are not being met by the SWP3 as well as those requiring modification in order to meet the minimum requirements of this Part. Within 7 calendar days of receipt of such notification from DEQ (or as otherwise provided by DEQ), the permittee shall make the required changes to the SWP3 and shall submit to DEQ a written certification that the requested changes have been made. DEQ may take appropriate enforcement action for the period of time the permittee was operating under a plan that did not meet the minimum requirements of this permit.

4.3 Contents of SWP3

The SWP3 must include the following information, at a minimum:

4.3.1 Stormwater Team

Identify the personnel (by name or position) that are part of the stormwater team, as well as their individual responsibilities, including which members are responsible for implementation of the SWP3 and compliance with permit requirements. Each member of the stormwater team must have ready access to an electronic or paper copy of applicable portions of this permit, the most updated copy of your SWP3, and other relevant documents or information that must be kept with the SWP3.

4.3.2 Nature of Construction Activities

Describe the nature of the construction activity, including the size of the property in acres (or length in miles if it is a linear construction sit), latitude and longitude at the center of construction site (latitude and longitude at the starting and ending points if it is a linear construction site), the total area expected to be disturbed by the construction activities (in acres), on-site and off-site construction support activities covered by this permit, post-construction runoff coefficient, pre-construction and post-construction total impervious area (in acres), the maximum area expected to be disturbed at any one time and types of soil and fill materials.

4.3.3 Other Site Operators

Include a list of all other operators who will be engaged in construction activities at your site, and the areas of the site over which each operator has control.

4.3.4 Sequence and Estimated schedule of construction activities:

The SWP3 must include a description of the intended sequence of major construction activities, including a schedule of the estimated start dates and the duration of the activity, for the following activities:

- A. Installation of stormwater control measures, and when they will be made operational, including an explanation of how the sequence and schedule for installation of stormwater control measures complies with Part 3.3.3 and of any departures from manufacturer specifications;
- B. Commencement and duration of earth-disturbing activities in each portion of the site, including clearing and grubbing, mass grading, site preparation (i.e., excavating, cutting and filling), final grading, and creation of soil and vegetation stockpiles requiring stabilization;
- C. Temporary or permanent cessation of construction activities in each portions of the site;
- D. Temporary or final stabilization of disturbed areas for each portion of the site; and
- E. Removal of temporary stormwater control measures and construction equipment or vehicles, and the cessation of construction-related pollutant-generating activities.

4.3.5 Site Map

Include a legible map, or series of maps showing the following features of your site:

- A. Boundaries of the property;
- B. Locations where construction activities will occur, including:
 1. Locations where earth-disturbing activities will occur, noting any phasing of construction activities;

2. Approximate slopes before and after major grading activities. Note areas of steep slopes (i.e., greater than 40 percent);
 3. Locations where sediment, soil, or other construction materials will be stockpiled;
 4. Locations of crossings of any waters of the State;
 5. Designated points where vehicles will exit onto paved roads;
 6. Locations of structures and other impervious surfaces upon completion of construction; and
 7. Locations of on-site or off-site construction support activity areas covered by this permit.
- C. Locations of all waters of the State within and one mile of the site, including wetlands that exist within or in the immediate vicinity of the site. Indicate which waterbodies are listed as impaired, which lie within a watershed with approved TMDL, and which are identified by the State as ARC or ORW;
- D. Type and extent of pre-construction cover on the site (e.g., vegetative cover, forest, pasture, pavement, and structures);
- E. Drainage pattern(s) of stormwater run-on or runoff and authorized non-stormwater before and after major grading activities;
- F. Stormwater and allowable non-stormwater discharge locations, including:
1. Locations where stormwater and/or allowable non-stormwater will be discharged to storm drain inlets on the site and in the immediate vicinity of the site; and
 2. Locations where stormwater or allowable non-stormwater will be discharged directly to waters of the State on or near the site.
- G. Locations of all potential pollutant-generating activities identified in Part 4.3.6 below;
- H. Locations of stormwater control measures, including natural buffer areas (i.e., either the 100 feet or 50 feet buffer retained on site to be consistent with Parts 3.3.1.A and 3.5.2.A); and
- I. If applicable, sampling locations if the project is subject to the Part 3.4.1 numeric technology-based limitations for asphalt batch plants. Also indicate the sampling location(s) and all discharge points, and indicate which discharge points are considered "substantially identical".

4.3.6 Construction Site Pollutants

Identify and list all pollutants (e.g., sediment, fertilizers, pesticides, paints, caulks, sealants, fluorescent light ballasts, contaminated substrates, solvents, fuels) and all pollutant-generating activities associated with those pollutants. You must take into account where potential spills and leaks could occur that contribute pollutants to stormwater discharges, and any known hazardous or toxic substances, such as PCBs and asbestos, which will be disturbed or removed during construction.

4.3.7 A Copy of the Permit Requirements

Include a copy of this permit and signed NOI in your SWP3. Do not submit it to DEQ if you are required to submit your SWP3 for DEQ's review (see Part 2.4 of this permit).

4.3.8 Measures to Protect ARC and ORW

Include information on whether listed endangered or threatened species or critical habitat are found in proximity to the construction activity, and whether such species may be affected by the stormwater discharges or stormwater discharge-related activities (see Addendum A and Parts 1.2.2.E and 10 of this permit) and on whether discharge to waters identified as ORW (see Addendum E). If your site discharges into the area identified as ARC and ORW, you must describe and implement the measures specified in Part 3.5.2 necessary to protect these endangered species and threatened habitat and resource waters in the SWP3, including any equivalent sediment controls specified in Addendum H (Buffer Requirements).

4.3.9 Federal, State or Local Historic Properties

Include documentation required in Part 9 of this permit.

4.3.10 Water Quality Impaired Water and TMDL Requirements

Include information on whether stormwater discharges or stormwater discharge-related activities would have an effect on water quality impaired receiving waters. The permittee must describe how the BMPs and other controls selected for the site will reduce and avoid the discharges of pollutants of concern into any 303(d) impaired waters, including requirements of Parts 4.1.4 and 3.5.1 of this permit. The permittee must describe and implement any measures necessary to meet the requirements of an approved TMDL or watershed plan and/or associated implementation schedule established in the TMDL or watershed plan. Monitoring and reporting of discharge quality may also be required if necessary to ensure compliance with an approved TMDL or watershed plan (see Part 4.1.5 of this permit).

4.3.11 Stormwater Controls Description

Include a description of all control measures (i.e., structural and non-structural BMPs) required in Parts 3.3, 3.4 (if applicable) and 3.5 of this permit. The description and implementation of control measures must include the following:

A. Erosion and Sediment Controls

1. Utilize EPA's national BMP menu and/or other references to select appropriate control measures, and provide the descriptions of the selected control measures for your site. The selected control measures must meet the following requirements, as well as being in compliance with state and local regulations for your site, including:
 - a. The construction-phase erosion and sediment controls should be designed to retain sediment on site to the extent practicable;
 - b. All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the Permittee must replace or modify the control for site situations;
 - c. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize off-site impact (e.g., fugitive sediment in streets could be washed into storm sewers by the next rain and/or pose a safety hazard to users of public streets);
 - d. Sediment must be removed from sediment traps or sedimentation ponds when design capacity has been reduced by 50%;
 - e. Litter, construction debris, and construction chemicals (e.g., fuel, hydraulic fluids, etc.) exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., by screening outfalls or picking up daily);
 - f. Off-site construction storage areas (also including overburden and stockpiles of dirt, borrow areas, etc.) used solely by the permitted project are considered a part of the project and shall be addressed in the SWP3; and
 - g. Many applications of straw and hay bales for erosion and sediment control are proving ineffective, maintenance-intensive and expensive. Therefore, straw or hay bales as BMP controls within the State are not allowed. Alternatives to straw or hay bales can be silt fence, rock check dams, fiber rolls, geotextiles, compost blankets, filter fabric, gravel bags and other designs.
2. Include natural buffers and/or equivalent sediment controls required in Part 3.3.1.B of this permit.
3. Describe the specific vegetative and/or non-vegetative stabilization practices that will be used to achieve temporary and final stabilization on the exposed portions of your site as required in Part 3.3.2 of this permit.
4. Include a description of structural practices to divert flows from exposed soils, retain flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable. Structural practices may include but are not limited to: silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment

basins (also see Part 3.3.1.L of this permit). Placement of structural practices in floodplains should be avoided to the degree attainable. The installation of these devices may be subject to Section 404 of the CWA. If you install a sediment basin or similar impoundment, you must meet the following requirements:

- a. For common drainage locations that serve an area with 10 or more acres disturbed at one time (or 5 acres if required by Part 3.5.2), a temporary (or permanent) sediment basin(s) that provides overall storage for a calculated volume of runoff from a 2-year, 24-hour storm from each disturbed acre drained, or equivalent control measures, shall be provided where attainable until final stabilization of the site. Where no such calculation has been performed, a temporary (or permanent) sediment basin(s) providing 3,600 cubic feet of overall storage per acre drained, or equivalent control measures, shall be provided where attainable until final stabilization of the site. When computing the number of acres draining into a common location, it is not necessary to include flows from off-site areas and flows from onsite areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin.

In determining whether installing sediment basin(s) is attainable, the Permittee may consider factors such as site soils, slope, available area on site, etc. In any event, the Permittee must consider public safety, especially as it relates to children, as a design factor for the sediment basin(s) and alternative sediment controls shall be used where site limitations would preclude a safe design. For drainage locations that serve 10 or more disturbed acres at one time and where a temporary sediment basin or equivalent controls is not attainable, smaller sediment basins and/or sediment traps should be used. Where neither the sediment basin nor equivalent controls are attainable due to site limitations, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries of the construction area and for those side slope boundaries deemed appropriate as dictated by individual site conditions. DEQ encourages the use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal.

- b. For drainage locations serving less than 10 acres, smaller sediment basins and/or sediment traps should be used. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down-slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the construction area unless sediment basin(s) providing overall storage for a calculated volume of runoff from a 2-year, 24-hour storm or 3,600 cubic feet of storage per acre drained is provided. DEQ encourages the use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal.
- c. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide a non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. no significant changes in the hydrological regime of the receiving water).

B. Pollution Prevention

1. Describe procedures that you will follow to prevent and respond to spills and leaks (also see Parts 3.2.2 and 3.3.3.C of this permit), including:
 - a. Procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases. Identify the name or position of the employee(s) responsible for the detection and response to spills or leaks; and
 - b. Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity consistent with Part 3.2 and established under either 40 CFR Parts 110, 117, or 302, occurs during a 24-hour period. Contact information must be in locations that are readily accessible and available.

You may also reference the existence of Spill Prevention Control and Countermeasure (SPCC) plans developed for the construction activity under Part 311 of the CWA, or spill control programs otherwise required by an OPDES permit for the construction activity, provided that you keep a copy of that other plan onsite.

2. Describe waste management procedures for how you will handle and dispose of all wastes generated at your site, including, but are not limited to, clearing and demolition debris, sediment removed from the site, construction and domestic waste, hazardous or toxic waste, and sanitary waste.
3. For application of fertilizers, document any departures from the manufacturer specifications where appropriate (also see Part 3.3.3.D of this permit).

C. Monitoring (if applicable)

If the discharges from the facilities are subject to the numeric limitations in Part 3.4.1 and Addendum F of this permit, the SWP3 must document the procedures you will follow for taking samples or observation consistent with Addendum F, including:

1. Locations where samples will be collected. For linear projects, document which locations are considered substantially identical and why they are substantially identical;
2. Personnel responsible for taking and handling samples, analyzing samples, and recording the results;
3. The normal working hours associated with the project (see Addendum F of this permit);
4. Equipment to be used for taking samples and for analysis;
5. Procedures to be followed for ensuring that samples are taken (see Addendum F of this permit); and
6. Procedures for notifying and activating your sampling team when a discharge is occurring or is expected to occur.

D. Approved Local Plans

Permittees which discharge stormwater associated with construction activities must ensure their SWP3 is consistent with requirements specified in applicable sediment and erosion site plans of site permits, or stormwater management site plans, or site permits approved by local officials. The SWP3 must be updated as necessary to remain consistent with any changes applicable to protecting surface water resources in sediment erosion site plans or site permits, or stormwater management site plans or site permits approved by local officials for whom the Permittee receives written notice.

4.3.12 Maintenance

All erosion and sediment control measures and other protective measures identified in the SWP3 must be maintained in effective operating condition. If site inspections required by Part 4.2.13 identify BMPs that are not operating effectively, maintenance shall be performed before the next anticipated storm event, or as necessary to maintain the continued effectiveness of stormwater controls. If existing BMPs need to be modified or if additional BMPs are necessary for any reason, implementation must be completed before the next storm event whenever practicable. If maintenance prior to the next anticipated storm event is impracticable, the situation must be documented in the SWP3 and maintenance must be scheduled and accomplished as soon as possible. Any maintenance checklists or other forms that will be used must be included in the SWP3.

4.3.13 Inspections

A. Person(s) Responsible for Inspecting Site

The person(s) inspecting your site may be a person on your staff or a third party you hire to conduct such inspections. You are responsible for ensuring that the person who conducts inspections is a "qualified person." A "qualified person" is a person knowledgeable in the principles and practice of erosion and sediment controls and pollution prevention, who possesses the skills to assess conditions at the construction site that could impact stormwater quality, and the skills to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of this permit. An inspection form shall be developed and included in your SWP3.

B. Frequency of Inspections

At a minimum, you must conduct a site inspection once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater and within 24 hours of a discharge generated by snowmelt,

unless you are subject to Parts 3.5.1.B or 3.5.2.C. If a storm event of 0.5 inches or greater, or snowmelt, causes your site to discharge, within 24 hours of the end of the storm event or the beginning of the snowmelt discharge you must conduct a site inspection when the discharge is occurring and comply with the requirements of Part 4.3.13.D.

C. Reductions in Inspection Frequency.

You may reduce the frequency of inspections to once per month in areas of your site where you have initiated vegetative stabilization that meets the criteria in Part 3.3.2.A, once you have completed the initial seeding or planting, and provided protection with non-vegetative cover pursuant to Part 3.3.2.B.2, or you have installed temporary, non-vegetative stabilization that meet the criteria in Part 3.3.2.B.2. If construction activity resumes at a later date, the inspection frequency shall immediately increase to that is required in Part 4.3.13.B.

D. Requirements for Inspections.

1. Areas that need to be inspected. During your site inspection, you must at a minimum inspect the following areas of your site:
 - a. All areas that have been cleared, graded, or excavated and that have not yet completed stabilization consistent with Part 3.3.2;
 - b. All stormwater controls (including pollution prevention measures) installed at the site to comply with this permit;
 - c. Material, waste, borrow, or equipment storage and maintenance areas that are covered by this permit;
 - d. All areas where stormwater typically flows within the site, including drainage ways designed to divert, convey, and/or treat stormwater;
 - e. All points of discharge from the site, including exit points that sediment that has been tracked out from the site; and
 - f. All locations where stabilization measures have been implemented.

2. Inspection Requirements

During your site inspection, you must at a minimum:

- a. Check whether all erosion and sediment controls and pollution prevention controls are properly installed, appear to be operational, and are working as intended to minimize pollutants discharges. Determine if any controls need to be replaced, repaired, or maintained in accordance with Part 4.3.12;
- b. Check for the presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on the site;
- c. Identify any locations where new or modified stormwater controls are necessary to meet the requirements of Parts 3.3, and/or 3.4 (if applicable);
- d. At point of discharge and, if applicable, the banks of any surface waters flowing within your property boundaries or immediately adjacent to your property, check for signs of visible erosion and sedimentation (i.e., sediment deposits) that have occurred and are attributable to your discharge. If not accessible, nearby downstream locations must be inspected to the extent practicable;
- e. Identify any incidents of noncompliance observed;
- f. If a discharge is occurring during your inspection, you are required, in addition to Part 4.3.13.D.1 and 2 above, to:
 - (1) Identify all points of the property from which there is a discharge;
 - (2) Observe and document the visual quality of the discharge, and take note of the characteristics of the stormwater discharge, including color, odor, floating, settled, or suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollutants; and

(3) Document whether your stormwater controls are operating effectively, and describe any such controls that are clearly not operating as intended or are in need of maintenance.

- g. Based on the results of your inspection and necessary maintenance required in Part 4.3.12 initiate corrective action under Part 4.3.14 of this permit.

E. Inspection Report

1. **Requirement to Complete Inspection Report.** You must complete an inspection report within 24 hours of completing any site inspection. Each inspection report must include the following:
 - a. The inspection date;
 - b. Names and titles of personnel making the inspection;
 - c. A summary of your inspection findings, covering at a minimum the observations you made in accordance with Part 4.3.13.D;
 - d. If you are inspecting your site at the frequency specified in Parts 4.3.13.B, C and 3.5.1.B and conducted an inspection because of rainfall measuring 0.5 inches or greater, you must include the applicable rain gauge or weather station readings that triggered the inspection; and
 - e. If you have determined that it is unsafe to inspect a portion of your site, you must describe the reason you found it to be unsafe and specify the locations to which this condition applies.
2. **Signature Requirements.** Each inspection report must be signed in accordance with Part 6.7 of this permit.
3. **Recordkeeping Requirements.** You are required to keep a current, copies of all inspection reports at the site or at an easily accessible location, so that they can be made available at the time of an on-site inspection or upon request by DEQ.

4.3.14 Corrective Actions

A. Requirements for Taking Corrective Action

You must complete the following corrective actions in accordance with Part 8.8 of this permit. In all circumstances, you must immediately take all reasonable steps to minimize or prevent the discharge of pollutants until a permanent solution is installed and made operational, including cleaning up any contaminated surfaces so that the material will not discharge in subsequent storm events.

1. For any of the following conditions on your site, you must install a new or modified control and make it operational, or complete the repair, by no later than 7 calendar days from the time of discovery. If it is infeasible to complete the installation or repair within 7 calendar days, you must document in your records why it is infeasible to complete the installation or repair within the 7 calendar day timeframe and document your schedule for installing the stormwater controls and making it operational as soon as practicable after the 7-day timeframe.
 - a. A required stormwater control was never installed, was installed incorrectly or not in accordance with the requirements in Parts 3 and/or 4; or
 - b. A stormwater controls needs to be repaired or replaced (beyond routine maintenance required in Part 4.3.12 of this permit); or
 - c. You become aware that the controls you have installed and are maintaining are not effective enough for the discharge to meet applicable water quality standards or applicable requirements in Part 3.5; or
 - d. One of the prohibited discharges in Parts 3.1 and 3.3.3.A is occurring or has occurred; or
 - e. If you are subject to the monitoring requirements in Part 3.4.1 and Addendum F of this permit, samples indicate that you have a discharge that exceeds the applicable effluent limitation.

2. Where your corrective actions result in changes to any of the stormwater controls or procedures documented in your SWP3, you must modify your SWP3 accordingly within 7 calendar days of completing corrective action work.

B. Corrective Action Report

For each corrective action taken in accordance with this Part, you must complete a corrective action report, which includes the applicable information in this Part.

1. Within 24 hours of discovering the occurrence of one of the triggering conditions in Part 4.3.14.A.1 at your site, you must provide a record of the following:
 - a. Which triggering condition identified at your site;
 - b. The nature of the condition identified; and
 - c. The date and time of the condition identified and how it was identified.
2. Within 7 days of discovering the occurrence of one of the triggering conditions in Part 4.3.14.A.1 at your site, you must complete a record of the following:
 - a. Any follow-up actions taken to review the design, installation, and maintenance of stormwater controls, including the dates such actions occurred;
 - b. A summary of stormwater control modifications taken or to be taken, including a schedule of activities necessary to implement changes, and the date the modifications are completed or expected to be completed;
 - c. Notice of whether SWP3 modifications are required as a result of the condition identified or corrective action; and
 - d. Signed in accordance with Part 6.7 of this permit.

C. Recordkeeping Requirements

You are required to keep current copies of all corrective action reports at the site or at an easily accessible location, so that they can be made available at the time of an onsite inspection or upon request by DEQ.

4.3.15 Non-Stormwater Discharges

Identify all allowable non-stormwater discharges in Part 1.2.1.C that will or may occur. You must document in your SWP3 of all non-stormwater discharges from the site.

4.3.16 Staff Training Requirements

- A. Prior to the commencement of earth-disturbing activities or pollutant-generating activities, whichever occurs first, Permittee must ensure that the following personnel understand the requirements of this permit and their specific responsibilities with respect to those requirements:
 1. Personnel who are responsible for the design, installation, maintenance, and/or repair of stormwater controls, including pollution prevention measures;
 2. Personnel responsible for the application and storage of chemicals (if applicable);
 3. Personnel responsible for the inspection as required in Part 4.3.13 of this permit; and
 4. Personnel who are responsible for taking corrective actions as required in Part 4.3.14 of this permit.
- B. At a minimum, personnel must be trained to understand the following if related to the scope of their job duties (e.g., only personnel responsible for conducting inspections need to understand how to conduct inspection):
 1. The location of all stormwater controls on the site required by this permit, and how they are to be maintained;
 2. The proper procedures to follow with respect to the permit's pollution prevention requirements; and
 3. When and how to conduct inspections, record applicable findings, and take corrective actions

4.3.17 NCOs for Individual Lots

You must document in the SWP3 if any lots are sold and transfer to other new owners. Copies of NCOs for Individual Lots shall be included in the SWP3 (also see Part 2.2.3 of this permit).

4.3.18 SWP3 Certification

The SWP3 must be signed and dated in accordance with Part 6.7 of this permit.

4.3.19 SWP3 Modification

A. Modify the SWP3, including the site map(s), within 7 days of any of the following conditions:

1. Whenever new operators become active in construction activities on the site, or the construction plans, stormwater controls, or other activities have been changed at the site that are no longer accurately reflected in the SWP3, including the changes in Part 4.3.14 of this permit;
2. To reflect areas on the site map where operational control has been transferred since initiating permit coverage;
3. If inspections or investigations determines that SWP3 modifications are necessary for compliance with this permit;
4. Where an inspector or investigator determines it is necessary to install and/or implement additional controls at the site in order to meet the requirements of this permit (e.g., an approved TMDL report applies to the site);
5. To reflect any revision to applicable federal, state and local requirements that affect the stormwater controls implemented at the site; or

B. Maintain records showing the dates of all SWP3 modifications, including the name of person authorizing each change; and

C. Upon determining that a modification to the SWP3 is required, if there are multiple Operators (or subcontractors) covered under this permit, the Permittee must immediately notify any operators who may be impacted by the change to the SWP3.

4.3.20 On-Site Availability of the SWP3

A current copy of the SWP3 must be kept at the site or at an easily accessible location so that it can be made available at the time of an on-site inspection or upon request by DEQ.

4.4 Contractor Certifications

This procedure is initiated only at the discretion of the permittee with the cooperation and agreement of the contractor. The Contractor Certification form, Addendum D of this permit should be rewritten by the permittee to fit their specific objectives. Contractor Certification is recommended but is not a requirement of DEQ.

4.4.1 Contractors, subcontractors, builders, installers, regular suppliers, support service companies or others who are not the permittee (hereinafter referred as "contractor") but are involved in construction activity, and have not been issued a construction general permit authorization, should execute a Contractor Certification, at the discretion of the permittee, which places the responsibility of complying with and abiding by the intent and purpose of the permit with the contractor for work performed under the authority and direction of the contractor. Contractors must ensure that activities regulated by the CGP are protective of endangered and threatened species and critical habitat according to Part 10 of this permit.

4.4.2 Contractors must ensure that any additional regulations and requirements specified by approved TMDL reports, watershed plans or local TMDL compliance plans applied to the sites (also see Part 4.1.5 of this permit).

4.4.3 Contractors must be thoroughly familiar with and adhere to NOI, SWP3, and BMPs. The SWP3 must clearly identify, for each control measure identified in the plan, the party which will implement the measure. The Permittee(s) must ensure that all contractors or others involved in construction activity are identified in the plan as being responsible for implementing stormwater control measures, and sign a copy of the Contractor

Certification, before performing any work in the area covered by the SWP3. All Contractor Certifications must be included with the SWP3.

- 4.4.4 The Contractor Certification must include the name and title of the person providing the signature, the name, address, and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification is made. An example of Contractor Certification can be found in Addendum D of the permit.

Part 5 Retention of Records

5.1 Documents

The permittee shall retain copies of the SWP3 and all reports required by this permit, and records of all data used to complete the NOI to be covered by this permit, for a period of at least three years from the date that the site is finally stabilized. This period may be extended by request of DEQ at any time.

5.2 Accessibility

The permittee shall retain a copy of the SWP3 required by this permit (including a copy of the permit language) at the construction site (or other local location accessible to DEQ; a State or local agency approving sediment and erosion plans, grading plans, or stormwater management plans; local government officials; or the operator of a municipal separate storm sewer receiving discharges from the site) from the date of project initiation to the date of final stabilization. Permittees with day-to-day operational control over SWP3 implementation shall have a copy of the SWP3 available at a central location on-site for the use of all operators and those identified as having responsibilities under the SWP3 whenever they are on the construction site.

5.3 Addresses

All written correspondence concerning this permit, including the submittal of NOIs and NOTs, and SWPs shall be sent to the following address: Stormwater Unit of Environmental Complaints and Local Services (ECLS), Department of Environmental Quality (DEQ), 707 North Robinson Ave., P.O. Box 1677, Oklahoma City, OK 73101-1677 or email to ECLS-StormwaterPermitting@deq.ok.gov.

Part 6 Standard Permit Conditions

6.1 Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissue, or modification, or for denial of a permit renewal application. Penalties for violations of permit conditions are provided below:

6.1.1 Criminal Penalties

- A. *Negligent Violations*: The OPDES Act provides that any person who negligently violates permit conditions is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or both (27A O.S. § 2-6-206 (G) (1)).
- B. *Knowing Violations*: The OPDES Act provides that any person who knowingly violates permit conditions is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both (27A O.S. § 2-6-206 (G) (2)).
- C. *Knowing Endangerment*: The OPDES Act provides that any person who knowingly violates permit conditions, and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury, is subject to a fine of not more than \$250,000, or by imprisonment for not more than 15 years, or both (27A O.S. § 2-6-206 (G) (3)).

D. *False Statement:* The OPDES Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the OPDES, or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the OPDES, shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than two years, or by both. If a conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or by both (27A O.S. § 2-6-206 (G) (4)).

6.1.2 *Civil Penalties:* The OPDES Act provides that any person who violates a permit condition is subject to a civil penalty not to exceed \$10,000 per day for each violation (27A O.S. § 2-6-206 (F)).

6.1.3 *Administrative Penalties:* The OPDES Act provides that any person who violates a permit condition is subject to an administrative penalty, not to exceed \$10,000 per day of violation nor shall the maximum amount exceed \$125,000 per violation [see 27A O.S. § 2-6-206 (E)].

6.2 Continuation of the Expired General Permit

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued and remain in full force and effect. Any permittee who was granted permit coverage prior to the expiration date will automatically remain covered by the continued permit until the earlier of:

- 6.2.1 Reissue or replacement of this permit, at which time the permittee must comply with the Notice of Intent conditions of the new permit to maintain the authorization to discharge; or
- 6.2.2 The permittee's submittal of a Notice of Termination; or
- 6.2.3 Issuance of an individual permit for the permittee's discharges; or
- 6.2.4 A formal permit decision by DEQ not to reissue this general permit, at which time the permittee must seek coverage under an alternative general permit or an individual permit.

Any new applicant who applies for coverage after the expiration date of this general permit will not be granted permit coverage until this general permit is reissued.

6.3 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

6.4 Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

6.5 Duty to Provide Information

The permittee shall furnish to DEQ, or an authorized representative of DEQ, any information that is requested to determine compliance with this permit or other information.

6.6 Other Information

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the NOI or in any other report to DEQ, he or she shall promptly submit such facts or information.

6.7 Signatory Requirements

All Notices of Intent, Notices of Termination, reports, certifications (except the Contractor Certification under Part 4.6.) or information either submitted to DEQ or the operator of an MS4, or that this permit requires be maintained by the permittee, shall be signed as follows:

6.7.1 All Notices of Intent and Notices of Termination shall be signed as follows:

- A. For a corporation: by a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
- B. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively (For Limited Liability Company (LLC): by one of its owners, called managing members/partners of the LLC); or
- C. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this Section, a principal executive officer of a Federal agency includes (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g. Regional Administrator of the EPA).

6.7.2 All reports required by this permit and other information requested by DEQ or authorized representative of DEQ shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- A. The authorization is made in writing by a person described above and submitted to DEQ;
- B. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator, superintendent, or position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
- C. The signed and dated written authorization must be included in the SWP3.

6.7.3 Changes to Authorization: If an authorization under Part 2.1 is no longer accurate because a different operator has responsibility for the overall operation of the construction site, a new NOI satisfying the requirements of Part 2.1 must be submitted to DEQ prior to or together with any reports, information, or applications to be signed by an authorized representative. The change in authorization must be submitted within the time frame specified in Part 2.1.2 and sent to the address specified in Part 2.3.

6.7.4 Any person signing documents under Part 6.7 shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

6.8 Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the

Clean Water Act (CWA) or Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") of 1980, 42 USC § 9601 et. seq.

6.9 Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

6.10 Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

6.11 Requiring an Individual Permit or an Alternative General Permit

6.11.1 DEQ may require any person authorized by this permit to apply for and/or obtain either an individual OPDES permit or an alternative OPDES general permit. Any interested person may petition DEQ to take action under this paragraph. Where DEQ requires a permittee authorized to discharge under this permit to apply for an individual OPDES permit, DEQ shall notify the permittee in writing that a permit application is required. This notification shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the permittee to file the application, and a statement that on the effective date of issuance or denial of the individual OPDES permit or the alternative general permit as it applies to the individual permittee, coverage under this general permit shall automatically terminate. Applications shall be submitted to the address in Part 2.3 of this permit. DEQ may grant additional time to submit the application upon request of the applicant. If a permittee fails to submit in a timely manner an individual OPDES permit application as required by DEQ under this paragraph, then the applicability of this permit to the individual OPDES permittee is automatically terminated at the end of the day specified by DEQ for application submittal.

6.11.2 Any permittee authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. In such cases, the permittee shall submit an individual application in accordance with the requirements of 40 CFR 122.26 (c) (1) (ii), with reasons supporting the request, to DEQ at the address in Part 2.3 of this permit. The request may be granted by issuance of any individual permit or an alternative general permit if the reasons cited by the permittee are adequate to support the request.

6.11.3 When an individual OPDES permit is issued to a permittee otherwise subject to this permit, or the permittee is authorized to discharge under an alternative OPDES general permit, the applicability of this permit to the individual OPDES permittee is automatically terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual OPDES permit is denied to an operator otherwise subject to this permit or the operator is denied coverage under an alternative OPDES general permit, the applicability of this permit to the individual OPDES permittee is automatically terminated on the date of such denial, unless otherwise specified by DEQ.

6.12 State/Tribal Environmental Laws

6.13.1 Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State/Tribal law or regulation under authority preserved by Section 510 of the Clean Water Act.

6.13.2 No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

6.13.3 Construction activities on Indian Country lands are regulated by the EPA Region 6 office located in Dallas, Texas. Applicants seeking coverage for construction or surface disturbing activities located on Indian Country land should contact the EPA Region 6 office.

6.13 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions and requirements of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of this permit.

6.14 Inspection and Entry

The permittee shall allow DEQ or an authorized representative of DEQ, or in the case of a construction site that discharges through a municipal separate storm sewer, an authorized representative of the municipal operator of the separate storm sewer receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

- 6.15.1 Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
- 6.15.2 Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and
- 6.15.3 Inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

6.15 Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Part 7 Re-opener Clause

7.1 Potential to Cause or Contribute to a Violation

If there is evidence indicating that the stormwater discharges authorized by this permit cause, or have the reasonable potential to cause, or contribute to, a violation of a water quality standard, the permittee may be required to obtain an individual permit or an alternative general permit in accordance with Part 6.11 of this permit, or the permit may be modified to include different limitations and/or requirements.

7.2 Permit Modification or Revocation

Permit modification will be conducted according to the Oklahoma Uniform Environmental Permitting Act at Oklahoma Statutes, Title 27A, O.S., 2-14-101 et. seq., OAC, 252:4-7 and 252:606, and 40 CFR 122.62, 122.63, 122.64, and 124.5, incorporated and adopted reference in OAC 252:606-1-3(b).

Part 8 Definitions

1. **Applicant** means any person who is contemplating or planning to submit an NOI for approval, or has submitted an NOI for approval and is waiting for authorization to discharge stormwater under the provisions of this permit.
2. **Best Management Practices (BMPs)** means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the State. BMPs also include treatment requirements, operating procedures, and practice to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
3. **Commencement of Construction** means the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities.

4. **Control Measure** as used in this permit refers to any BMP or other method used to prevent or reduce the discharge of pollutants to waters of the State.
5. **Construction Activities** means earth-disturbing activities, such as the clearing, grading, and excavation of land, and other construction-related activities (e.g., stockpiling of fill material; placement of raw materials at the site) that could lead to the generation of pollutants. Some of the types of pollutants that are typically found at construction sites are:
 - a. Sediment;
 - b. Nutrients;
 - c. Heavy metals;
 - d. Pesticides and herbicides;
 - e. Oil and grease;
 - f. Bacteria and viruses;
 - g. Trash, debris, and solids;
 - h. Treatment polymers; or
 - i. Any other toxic chemicals.
6. **Construction Site or Site or Development or Project or Construction** means the land or water area where construction activities will occur and where stormwater controls will be installed and maintained. The construction site or development or project includes construction support activities, which may be located at a different part of the property from where the primary construction activity will take place, or on a different piece of property altogether.
7. **Construction Support Activity** means a construction-related activity that specifically supports the construction activity and involves earth disturbance or pollutant-generating activities of its own, and can include activities associated with concrete or asphalt batch plants, equipment staging yards, materials storage areas, excavated material disposal areas, and borrow areas.
8. **Corrective Actions** are actions that Permittees take in compliance with this permit to:
 - a. Repair, modify, or replace any stormwater control used at the site;
 - b. Clean up and dispose of spills, releases, or other deposits; or
 - c. Remedy a permit violation.
9. **CWA** means the Clean Water Act or the Federal Water Pollution Control Act, 33 U.S.C. Section 1251 et seq.
10. **Dewatering Activities** means the act of draining rainwater and/or ground water from building foundations, vaults, trenches and other construction structures.
11. **Discharge** when used without qualification means the “discharge of a pollutant.”
12. **Discharge of Stormwater Associated with Construction Activity** as used in this permit, refers to a discharge of pollutants in stormwater runoff from areas where soil disturbing activities (e.g., clearing, grading, or excavation), construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck washout, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located.
13. **Ephemeral Stream** means an entire stream which flows only during or immediately after a rainfall event, and contains no refuge pools capable of sustaining a viable community of aquatic organisms.
14. **Facility or Activity** means any OPDES “point source” or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the OPDES program.
15. **Hazardous Substances or Hazardous or Toxic Waste** means any liquid, solid, or contained gas that contain properties that are dangerous or potentially harmful to human health or the environment. See also 40 CFR §261.3.

16. **Impaired Water (or Water Quality Impaired Water)** is the water identified by the State, or EPA as not meeting applicable State water quality standards and (1) requires development of a TMDLs (pursuant to Section 303(d) of the CWA; or (2) is addressed by an EPA/State approved or established TMDL; (3) is not in either of the above categories but the waterbody is covered by a pollution control program that meets the requirements of 40 CFR 130.7(b)(1).
17. **Large Common Plan of Development or Sale** means an area where multiple separate and distinct land disturbing activities may be taking place at different times, on different schedules, but under one proposed plan. This plan consists of many small construction projects that collectively add up to one or more acres of total disturbed land. For example, an original common plan of development of a residential subdivision might lay out the streets, house lots, and areas for parks, schools and commercial development that the developer plans to build or sell to others for development. All these areas would remain part of the common plan of development or sale until the intended construction is completed.
18. **Leachable Hazardous Substance** refers that those hazardous substances are naturally extracted from material during rain or routine external building wash events.
19. **Municipal Separate Storm Sewer System or MS4** is defined at 40 CFR §122.26(b)(8) to mean a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):
- Owned and operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
 - Designed or used for collecting or conveying stormwater;
 - Which is not a combined sewer; and
 - Which is not part of a Public Owned Treatment Works (POTW) as defined at 40 CFR §122.2.
- Note: A Phase II MS4 can also be owned or operated by Federal and State government, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. [see 40 CFR §122.26(b)(16)]
20. **Non-Process Water** means utility wastewaters (e.g., water treatment residuals, boiler blowdown, and air pollution control wastewaters from heat recovery equipment); treated or untreated wastewaters from groundwater remediation systems; dewatering water for building foundations; and other wastewater streams not associated with a production process.
21. **NOI** means Notice of Intent, (DEQ Form 606-002A, and see Part 2 of this permit.)
22. **NOT** means Notice of Termination (DEQ Form 606-003, and see Part 2 of this permit).
23. **Operator** for the purpose of this permit and in the context of stormwater associated with construction activity, means any party defined in 20.a or b, associated with a construction project that meets either of the following two criteria:
- The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications (e.g. in most cases this is the owner of the site); or
 - The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a Stormwater Pollution Prevention Plan (SWP3) for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions; in most cases this is the general contractor of the project).

In addition, "owner" refers to the party that owns the structure being built. Ownership of the land where construction is occurring does not necessarily imply the property owner is an operator (e.g., a landowner whose property is being disturbed by construction of a gas pipeline or a landowner who allows a mining company to remove dirt, shale, clay, sand, gravel, etc. from a portion of his property).

This definition is provided to inform permittees of DEQ's interpretation of how the regulatory definitions of "operator" and "facility or activity" are applied to discharges of stormwater associated with construction activity.

24. **OPDES** means the Oklahoma Pollutant Discharge Elimination System.
25. **Outstanding Resource Waters** means those waters of the State which are designated as such in Oklahoma's Water Quality Standards OAC 785:45-5-25, Addendum A of this permit.
26. **Permit** means the General Permit OKR10 for Stormwater Discharges from Construction Activities within the State of Oklahoma.
27. **Permittee** means a person who has submitted an NOI and has received authorization to discharge stormwater from construction or land disturbing activities under this permit.
28. **Point Source** means any discernible, confined, and discrete conveyance, including but are not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, landfill leachate collection system, or vessel or other floating craft, from which pollutants or wastes are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.
29. **Pollutant** means any material, substance, or property which may cause pollution (e.g., dredged spoil, solid waste, sewage, garbage, sewage sludge, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial or municipal waste).
30. **Runoff Coefficient** means the fraction of total rainfall that will appear at the conveyance as runoff.
31. **Stabilization** is the process of covering exposed ground surfaces with vegetative or non-vegetative practices that reduce erosion and prevent sediment discharge from occurring.
 - "Temporary stabilization" refers to the stabilization of exposed portions of the site in order to provide temporary cover (1) during the establishment and growth of vegetation, and/or (2) in areas where earth-disturbing activities will occur again in the future.
 - "Final stabilization" refers to the stabilization of exposed portions of the site using practices that provide permanent cover and qualify the permittee for permit termination.
- 30.1. All soil disturbing activities at the site have been completed and either of the two following criteria is met:
 - A. A uniform (e.g., evenly distributed, without large bare areas⁶) perennial vegetative cover with a 70% or more of the cover that is provided by vegetation native to local undisturbed areas; and/or
 - B. Equivalent permanent non-vegetative stabilization measures to provide effective cover (such as the use of riprap and gravel).
- 30.2. For individual lots in residential construction, either of the following criteria is met:
 - A. The homebuilder has completed final stabilization as specified above; or
 - B. The homebuilder has established temporary stabilization for an individual lot prior to occupation of the home by the homeowner and informed the homeowner of the need for, and benefits of, final stabilization. (Homeowners typically have an incentive to put in the landscaping functionally equivalent to final stabilization as quickly as possible to keep mud out of their homes and off sidewalks and driveways.); or
- 30.3. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to "waters of the State," and areas that are not being returned to their pre-construction agricultural use must meet the final stabilization criteria 30.1 or 2 above.
32. **Stormwater** means rainwater runoff, snowmelt runoff, and surface runoff and drainage.

⁶ Large bare area is defined as an area with 10 ft² or more with no perennial vegetative cover established

33. **Stormwater Associated with Industrial Activity** is defined at 40 CFR 122.26 (b) (14) & (15) and incorporated here by reference. Most relevant to this permit is 40 CFR 122.26 (b) (14) (x) and 40 CFR 122.26 (b) (15) (i), that relates to construction activity including clearing, grading, and excavation activities that result in the disturbance of one or more acres of total land area, or less than one acre if part of a larger common plan of development or sale.
34. **Stormwater Discharge-Related Activity** is defined as disturbance activities that cause, contribute to, or result in point source stormwater pollutant discharges, including but are not limited to excavation, site development, grading, and other land disturbing activities; and control measures to control stormwater discharges including the siting, construction, and operation of best management practices (BMPs) to control, reduce, or prevent stormwater pollution.
35. **Takes or Taking** means any action that would “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect” any threatened or endangered species. Harm may include significant habitat modification that actually injures a species.
36. **Total Maximum Daily Load or TMDL** means the sum of the individual waste load allocations (WLAs) for point sources, safety, reserves, and loads from nonpoint sources and natural background.
37. **Waters of the State** means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, storm sewers and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion thereof, and shall include under all circumstances the waters of the United States which are contained within the boundaries of, flow through, or border upon this state or any portion thereof. Provided, waste treatment systems, including treatment ponds or lagoons designed to meet federal and state requirement other than cooling ponds as defined in the Clean Water Act or rules promulgated thereto and prior converted cropland are not waters of the State. (as defined in Oklahoma Statutes § 27A O.S. §1-1-201).

Part 9 Historic Preservation

The EPA has determined that DEQ’s NPDES permitting activities are not Federal undertakings and, therefore, are not subject to review under Section 106 of the National Historic Preservation Act. However, applicants and permittees must comply with the State Antiquities Act (Title 53, Chapter 20, Section 361) where applicable and the Burial Desecration Law (Title 21, Chapter 47, Section 1168.0-1168.6), as well as with any applicable local laws concerning the identification and protection of historic properties.

Applicants and permittees who may receive Federal funding or other Federal assistance in the completion of their projects must be aware that compliance with Section 106 of the Act may apply. For information about the Section 106 review process in Oklahoma, Oklahoma properties listed on or eligible for the National Register of Historic Places, and related topics, contact:

State Historic Preservation Office
 Oklahoma Historical Society
 800 Nazih Zuhdi Drive
 Oklahoma City, OK 73105
 (405)521-6249
www.okhistory.org/shpo/shpom.htm

Oklahoma Archeological Survey
 111 East Chesapeake
 Norman, OK 73019
 405/325-7211
www.ou.edu/cas/archsur

Part 10 Endangered Species

Addendum A is a Registry of Federally Identified Aquatic Resources of Concern (ARC) and State Identified ARC.

10.1 Background

DEQ is seeking to ensure the activities regulated by the Permit are protective of endangered and threatened species and critical habitat. To ensure that those goals are met, operators seeking permit coverage are required under Part 1.2.2.E to assess the impacts of their stormwater discharges and stormwater discharge-related activities on identified endangered and threatened species and designated critical habitat. This may be accomplished by following Steps 1 and 2 listed below in Part 10.2. It is not necessary to contact DEQ if you can comply with the provisions listed in Step 2. DEQ strongly recommends that applicants follow these steps at the earliest possible stage to ensure that measures to protect identified species are incorporated early in the planning process. At minimum, the procedures should be followed when developing the SWP3.

Permittees and contractors have an independent obligation to ensure that their activities do not result in any prohibited "take" of identified species. Many of the measures required in the Permit and in these instructions to protect identified species may also assist operators in ensuring that their construction or land disturbing activities do not result in a prohibited take of a species. Operators who plan construction or land disturbing activities within the corridor of a Federally identified ARC or a State identified ARC, (see Addendum A), may meet the requirements of Step 2.

This permit provides for the possibility of multiple operators and contractors at a construction site. Applicants should be aware that in some cases they may meet the permit eligibility requirements by relying on another permittee's certification of eligibility under Part 1.2.2.E.2.a, b, c, or d. This is allowed under Part 1.2.2.E.2.e of the permit, however, the other permittee's certification must apply to the contractor's project area and must address the effects from the Contractor's stormwater discharges and stormwater discharge-related activities on listed species and critical habitat. By certifying eligibility under Part 1.2.2.E.2.e, the applicant agrees to comply with any measures or controls upon which the other operator's certification under Part 1.2.2.E.2.a, b, c, or d. was based. This situation will typically occur where a developer or primary contractor, such as one for construction of a subdivision or industrial park, conducts a comprehensive assessment of effects on listed species for the entire construction project, certifies eligibility under Part 1.2.2.E.2.a, b, c, or d and that certification is relied upon by other operators (i.e., contractors) at the site. However, applicants that consider relying on another operator's certification should carefully review that certification along with any supporting information. If an applicant does not believe that the operator's certification provides adequate coverage for the applicant's stormwater discharges and stormwater discharge-related activities or for the applicant's particular project area, the applicant should provide its own independent certification under Part 1.2.2.E.2.a, b, c, or d.

10.2 Procedures

To receive coverage under the CGP, applicants must assess the potential effects of their stormwater discharges and stormwater discharge-related activities on listed species. To make this assessment, applicants must follow the steps outlined below prior to completing and submitting a NOI form (see Addendum B of this permit).

Step 1: Determine Whether the Project Area Drains to ARC

- A. Refer to Addendum A of this permit, that lists all of the waters of Oklahoma which the U.S. Fish and Wildlife Service and the Oklahoma Department of Wildlife Conservation consider to be sensitive because they harbor populations of federal or state listed species or their designated critical habitat.
- B. If the applicant's proposed construction site is not located within any of these areas, the proposed construction stormwater discharge or stormwater discharge related activities are not likely to significantly affect endangered and threatened species. The applicant may then skip Step 2 and further investigation is unnecessary.
- C. If the applicant's proposed construction site is located within the corridor of any ARC, the applicant must continue on to Step 2.

Step 2: Implementation of Stormwater Control Measures to Protect Endangered and Threatened Species in ARC:

A. Applicants whose proposed construction site is located within an ARC must incorporate the following measures into the SWP3 for this site unless permit coverage is allowed under Parts 1.2.2.E.2.d or e. Other pollutants such as, but are not limited to, oil, grease, solid waste (i.e. building material scrap, and trash), and human and hazardous waste, (e.g., paint and solvents), are not authorized for discharge under this permit. These potential pollutants must be properly managed and their contact with stormwater minimized or eliminated to the greatest extent practicable.

1. Consistent with Parts 3.3 and 3.5 of this permit, sediment, solid waste and human waste must be retained on site to the greatest extent practicable; all control measures must be properly installed and maintained at all times; and off-site accumulations of any escaped sediment must be removed.
2. A vegetated buffer zone of at least 100 feet must be retained or successfully established or planted between the area disturbed during construction and all perennial or intermittent streams on or adjacent to the construction site. A vegetated buffer zone at least 50 feet wide must be retained or successfully established or planted between the areas disturbed during construction and all ephemeral streams or drainages. Buffer zones shall be measured from the top of the first defined bank of the stream and shown on the site map in the SWP3.

If characteristics of the site or the project make it impossible to maintain the required buffer, refer to Addendum H (Buffer Requirements) for information to assist you in developing equivalent sediment controls. You must maintain the buffer or selected alternative throughout your period of coverage under this permit and no construction activities may be conducted in this area. All discharges through the buffer must be non-channelized or non-concentrated, and must first be treated by the site's sediment and erosion controls.

4. Document in your SWP3 the following:
 - a. If the buffer is less than 100 or 50 feet, the width of the buffer vegetation to be retained; and
 - b. Information you relied on to comply with the requirement to achieve the equivalent sediment load reduction as an undisturbed naturally vegetated 100 or 50-foot buffer.
4. For any disturbances within the required 100 or 50-foot buffer area, you must comply with the following stabilization requirements, which replace the corresponding requirements in Part 3.3.2:
 - a. You must immediately initiate stabilization in any disturbed areas of the buffer where earth-disturbing activities have permanently or temporarily ceased on any portion of the site, and will not resume for a period exceeding 7 calendar days. For the purposes of this permit, earth-disturbing activities have temporarily ceased when all construction activities within any area of your construction site will not resume for a period of 14 or more days, and earth-disturbing activities have permanently ceased when clearing and excavation within any area of your construction site has been completed, and final grade has been reached.
 - b. Within 7 calendar days of initiating stabilization, you are required to have completed:
 - i. For vegetative cover, all soil conditioning, seeding, watering, mulching, and any other required activities related to the planting and establishment of vegetation; and/or
 - ii. For non-vegetative cover, the installation or application of all non-vegetative measures.
5. You are not required to comply with this buffer requirement for the following types of construction projects, provided that you limit the area of disturbance to the minimum needed to complete the construction and to access the site, and that you retain the natural vegetation in the buffer outside this area:
 - a. Construction of water crossings authorized under a CWA Section 404 permit (where required) for water lines, sewer lines, utility lines, and roadways;
 - b. Construction of water-dependent structures and water access areas (piers, boat ramps, etc.) approved under a CWA Section 404 permit (where required); or

- c. Development of a site where no naturally vegetated buffer area exists due to prior disturbances.
- 6. You must conduct inspections within 7 calendar days and within 24 hours of a storm event of 0.5 inches or greater instead of the inspection frequency specified in Part 4.3.13.B.
- 7. You must meet any local requirements affecting construction in the buffer.
- B. Consistent with Parts 3.3.2 and 3.5.2.D, an implementation schedule must be included which describes the stabilization practices that will be used to control erosion during construction and when construction has permanently ceased. The preservation of mature vegetation on-site is preferred.
- C. Consistent with Parts 3.3.1 and 4.3.11, structural BMPs must be successfully implemented to divert uphill stormwater flows from crossing disturbed areas, to store flows (e.g., retention ponds) or to otherwise control runoff from disturbed areas during construction. At a minimum this must include silt fencing and vegetated buffer strips on all down slope boundaries of the area disturbed during construction. The construction of temporary or permanent stormwater detention or retention structures (e.g., ponds) is preferred, but these must not be constructed within intermittent or perennial stream channels or within floodplains.
- D. Consistent with Part 3.3.1.K and 4.5.11.A.4.c, velocity dissipation devices must be incorporated into the design of outfall channels and discharge locations. Outfalls must be screened to prevent the discharge of solid materials with stormwater runoff.
- E. Hazardous construction materials and waste must be stored in a manner that minimizes their contact with stormwater. An emergency response must be included which addresses the handling of accidental spills (see Part 3.3.3 of this permit).
- F. The applicant must comply with any terms and conditions imposed under the eligibility requirements of Part 1.2.2.E.2 a, b, c, d, or e to ensure that its stormwater discharges and stormwater discharge-related activities are protective of listed species and/or critical habitat. Such terms and conditions must be incorporated in the project's SWP3. If the eligibility requirements of Part 1.2.2.E.2 a, b, c, d, or e cannot be met, the applicant may seek relief from the appropriate service in the form of an approved take. As an alternative, the applicant may seek coverage under a DEQ individual permit.

ADDENDUM A – OKLAHOMA AQUATIC RESOURCES OF CONCERN (ARC)

A. Aquatic Resources of Concern (ARC) for Federally Listed Species, as Identified by the U.S. Fish & Wildlife Service for the DEQ CGP

Grand (Neosho) River - A two-mile corridor (one mile from each bank) of the main stem of the Grand (Neosho) River above its confluence with Tar Creek. Includes portions of Ottawa and Craig Counties.

Cimarron River - A two-mile corridor (one mile from each bank) of the main stem of the Cimarron River from the US Hwy-77 bridge in Logan County upstream to and including Beaver County. Includes river segments in: Logan, Kingfisher, Major, Woods, Woodward, Harper, and Beaver Counties.

South Canadian River - A two-mile corridor (one mile from each bank) of the main stem from the Eufaula Reservoir flood pool upstream to the northern border of Custer County. Includes river segments in: McIntosh, Pittsburg, Hughes, Pontotoc, Seminole, Pottawatomie, McClain, Cleveland, Canadian, Grady, Caddo, Blaine, and Custer Counties.

Muddy Boggy River - A two-mile corridor (one mile from each bank) of the main stem of the Muddy Boggy River. Includes portions of Choctaw, Atoka, and Coal Counties.

Kiamichi River – The watershed of the Kiamichi River upstream from the Hugo Reservoir. Includes portions of Pushmataha, Atoka, Pittsburg, Latimer, and Leflore Counties.

Little River – The watershed of the Little River. Includes portions of LeFlore, Pushmataha and McCurtain Counties.

Glover River – The watershed of the Glover River. Includes portions of Pushmataha and McCurtain Counties.

Mountain Fork River – The watershed of the Mountain Fork River above Broken Bow Reservoir. Includes portions of Leflore and McCurtain Counties.

Northeast HUC-11 Watersheds – The watersheds identified by the following 11-digit Hydrologic Unit Codes: 11070207190, 11070206060, 11070209030, 11070209050, 11070209060*, 11070209040, 11070209070, 1107020206030, 11070208070, 11070209020, 11070209100, 11070209110 and 11070209120. Includes portions of Ottawa, Craig, Delaware, and Mayes Counties.

* This HUC does not contain a known Ozark cavefish cave. It was included because it is entirely surrounded by 11-digit HUCs with known Ozark cavefish caves, therefore we assume that Ozark cavefishes likely occupy this portion of the aquifer.

Elk River – A two-mile corridor (one mile from each bank) of the Elk River. Includes portions of Delaware and Ottawa Counties.

Spring River – A two-mile corridor (one mile from each bank) of the Spring River. Includes portions of Ottawa County.

Verdigris River – A two-mile corridor of the main stem from the dam of Lake Oologah to the confluence of the Arkansas River. Includes river segments in Rogers, Wagoner and Muskogee counties.

B. ARC for State Listed Species, as Identified by the Oklahoma Department of Wildlife Conservation for the DEQ CGP.

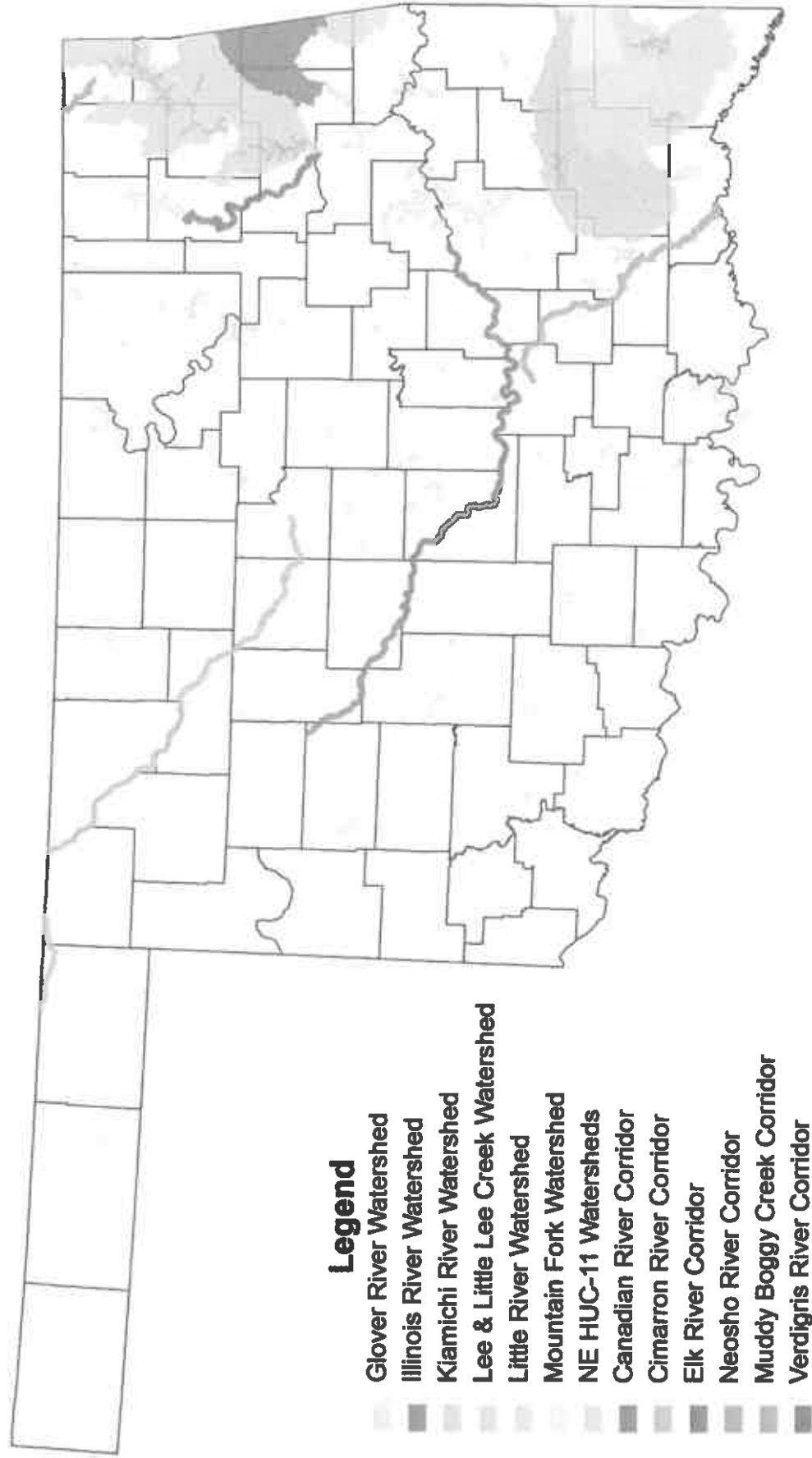
Illinois River – A ten-mile corridor (five miles from each bank within the watershed) of the main stem of the Illinois River above the Tenkiller Reservoir. Includes portions of Cherokee, Delaware and Mayes Counties.

Lee and Little Lee Creeks – The watershed of Lee Creek and Little Lee Creek. Includes portions of Sequoyah and Adair Counties.

Note: No stormwater discharge-sensitive endangered or threatened species occur in the following counties: Cimarron, Texas, Beckham, Greer, Washita, Kiowa, Alfalfa, Comanche, Grant, Garfield, Oklahoma, Garvin, Murray, Stephens, Carter, Lincoln, Johnston, Okfuskee, Okmulgee, Washington, Nowata, and Rogers.


Oklahoma Aquatic Resources of Concern for Federal & State Listed Species

as identified by the U.S. Fish & Wildlife Service and the Oklahoma Department of Wildlife Conservation



This page intentionally left blank

ADDENDUM B –NOTICE OF INTENT

| | | |
|---|---|--|
| DEQ Form 606-002A Oct. 18, 2017 |  | <p align="center">Oklahoma Department of Environmental Quality</p> <p align="center">Notice of Intent (NOI)</p> <p align="center">for Stormwater Discharges Associated with Construction Activity under the OPDES Construction General Permit OKR10</p> |
| <p>Submission of this NOI constitutes notice that the party identified in Section I of this form intends to be authorized by DEQ for stormwater discharges associated with construction activity on land disturbance of equal to or greater than 1 or more acres, or less than 1 acre of total land area that is part of a larger common plan of development or sale in the State of Oklahoma. Becoming a permittee obligates such discharger to comply with the terms and conditions of this permit. To obtain an authorization from DEQ, this form must be complete with all the pertinent information.</p> <p align="center">All associated fees must be submitted with this NOI. See instructions for completing the NOI on pages 3 and 4 of this form.</p> | | |
| <input type="checkbox"/> NEW APPLICATION, <input type="checkbox"/> MODIFICATION or <input type="checkbox"/> RENEWAL of current permit, enter the authorization number: OKR10 | | |
| <p>I. Operator Information</p> | | |
| <p>Operator Name: _____ Phone: _____</p> <p>Mailing Address: _____</p> <p>City: _____ State: _____ Zip Code: _____</p> <p>Operator's Point of Contact : _____ Title: _____</p> <p>Phone: _____ E-mail: _____</p> | | |
| <p>II. Site/Project Information</p> | | |
| <p>Site/Project Name: _____ Phone: _____</p> <p>Site/Project Address: _____</p> <p>City: _____ County: _____ State: _____ Zip Code: _____</p> <p>Site/Project's Point of Contact : _____ Title: _____</p> <p>Phone: _____ E-mail: _____</p> <p>Site/Project's purpose: <input type="checkbox"/> Road/Bridge <input type="checkbox"/> Wind Farm <input type="checkbox"/> Residential Subdivision <input type="checkbox"/> Commercial Building <input type="checkbox"/> Others</p> <p>Latitude: _____ Longitude: _____ at the center of the Site/Project (or starting and ending points for linear project)</p> <p>Estimated construction start date: _____ Estimated construction end date: _____</p> <p>Total area of the construction site: _____ (acres) Estimated area to be disturbed: _____ (acres)</p> <p>Current total impervious area: _____ (acres) Post-construction total impervious area: _____ (acres)</p> <p>Post-construction runoff coefficient of the site: _____ Soil and fill material description: _____</p> <p>Is this site part of the common plan of development or sales? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> | | |
| <p align="center">Endangered Species Eligibility</p> | | |
| <p>a. <input type="checkbox"/> My site/project is not located within any of the corridors of Federal and State identified Aquatic Resources of Concern (ARC);</p> <p>b. <input type="checkbox"/> My site/project is located within a corridor of Federal and State identified ARC and I agree to implement the control measures specified in Step 2 of Part 10.2 of this OKR10 Permit;</p> <p>c. <input type="checkbox"/> If one of eligibility criteria cannot be met, I may use Addendum H for equivalent sediment controls or contact DEQ at (405)702-8100 for further assistance;</p> <p>d. <input type="checkbox"/> I am required to have an Endangered Species Act Section 7 consultation process; or</p> <p>e. <input type="checkbox"/> I am relying on another permittee's certification of eligibility and agree to comply with the conditions of that certification.</p> | | |

III. Site/Project Discharge Information

Does the facility discharge stormwater into a MS4? Yes No, If yes, name of the MS4 Operator: _____

Receiving Water Information Note: use additional sheet of paper if necessary.

| Name of the Receiving Waterbody | Is this waterbody impaired? If so, what are its impairments? | Is there a TMDL for that impairment? |
|---------------------------------|---|--|
| | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No |

IV. Stormwater Pollution Prevention Plan (SWP3) Information

Has the SWP3 been prepared and available on site? Yes No

Is the operator registered for construction activities with the Secretary of State of Oklahoma? Yes No

Proposed Best Management Practices to control pollution in the stormwater discharges, check all that apply:

- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Construction phased | <input type="checkbox"/> Sediment basin/Trap | <input type="checkbox"/> Mulching/Seeding/sodding | <input type="checkbox"/> Vegetated Buffer |
| <input type="checkbox"/> Vehicle/Concrete wash-out | <input type="checkbox"/> Site inspection | <input type="checkbox"/> Diversion dikes | <input type="checkbox"/> Inlet Protection |
| <input type="checkbox"/> Construction entrances | <input type="checkbox"/> Silt fence | <input type="checkbox"/> Waste management | <input type="checkbox"/> Stream Crossings |
| <input type="checkbox"/> Spill prevention/cleanup | <input type="checkbox"/> Employee Training | <input type="checkbox"/> Compost blanket/geotextiles | <input type="checkbox"/> Check dams |
| <input type="checkbox"/> Construction sequencing | <input type="checkbox"/> Riprap | <input type="checkbox"/> Gradient terraces | <input type="checkbox"/> Silt dikes |

Other BMPs: _____

Post-construction Best Management Practices for construction activities, Check all that apply:

- | | | | |
|---|--|---|---|
| <input type="checkbox"/> Narrow street /turnaround | <input type="checkbox"/> Wet/dry pond | <input type="checkbox"/> Protected natural features | <input type="checkbox"/> Vegetated filter trips |
| <input type="checkbox"/> Eliminated curbs & gutters | <input type="checkbox"/> Wetland | <input type="checkbox"/> Infiltration basin/trench | <input type="checkbox"/> Porous pavement |
| <input type="checkbox"/> Bio-retention/rain gardens | <input type="checkbox"/> Riparian | <input type="checkbox"/> Redevelopment/retrofit | <input type="checkbox"/> Grassed swales |
| <input type="checkbox"/> Low impact development | <input type="checkbox"/> Green designs | <input type="checkbox"/> Conservation easements | <input type="checkbox"/> Retrofit |

Other BMPs: _____

V. Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name: _____ Title: _____

Signature: _____ Date: _____

For DEQ use only: Assigned Authorization Number: OKR10 _____



Instructions for Completing NOI Form 606-002A for Stormwater Discharges Associated with Construction Activities on Sites of One or more acres under the OPDES Construction General Permit OKR10

Who Must File an NOI Form

Under Section 402(p) of the Clean Water Act and regulation at 40 CFR § 122.26, adopted and incorporated by reference in Oklahoma Administrative Code (OAC) 252:606-1-3(b)(3)(L), stormwater discharges associated with construction activities are prohibited to waters of Oklahoma State unless authorized under an Oklahoma Pollutant Discharge Elimination System (OPDES) permit from Oklahoma Department of Environmental Quality (DEQ). Operators of construction sites where one or more acres are disturbed, smaller sites that are part of a larger common plan of development or sale where there is a cumulative disturbance of at least one acre must obtain coverage under the OPDES Construction General Permit (CGP) OKR10 by submitting a completed NOI to DEQ. If you have questions regarding permit coverage under the Stormwater Program, you may call the Stormwater Unit of Environmental Complaints and Local Services (ECLS) of DEQ at (405) 702-6100 or email to ecls-stormwaterpermitting@deq.ok.gov.

Completing the NOI Form

To complete an NOI form, type or print in all the appropriate places of the form. Check the appropriate box whether you are filing for a new application or modification or renewal of your current permit. Enter your current authorization number, if you are applying for permit modification or renewal.

Section I. Operator Information

Provide the legal name, mailing address and telephone number of the company/firm, public organization, or any other entity that either individually or together meets the following two criteria: (1) have operational control over construction plans and specifications, including that the ability to make modifications to those plans and specifications (e.g., in most cases this is the owner of the site); and/or (2) have the day-to-day operational control of those activities at the site necessary to ensure compliance with Stormwater Pollution Prevention Plan (SWP3) and/or other permit conditions (e.g., they are authorized to direct worker at a site to carry out activities required by the permit; in most cases this the general contractor of the project).

Also enter the name, title, phone number, and email address for the operator's point of contact.

Section II. Site/Project Information

Provide the site/project's official or legal name, phone number and street address or general location information (e.g., Intersection of State Highways 61 and 34). Also provide the name, title, phone number, and email address for the site/project's point of contact.

Indicate the purpose of the project (i.e., residential subdivision, commercial building, road and/or bridges, wind farm, etc.).

Provide Latitude and Longitude of the construction project or site (at the center of the site). Latitude and Longitude can be obtained online at DEQ and USGS's websites or other mapping tools.

Provide the estimated starting and ending dates of the construction or site or project. The date must be provided in DD-MM-YYYY where MM is the month, DD is the date and YYYY is the year.

Provide total area of construction site, and estimated area to be disturbed in acres.

Provide total impervious area (pre-construction) and total impervious area construction completed (post-construction) in acres.

Provide post-construction runoff coefficient of the site after the construction addressed in the NOI is completed. Operator may use recommended runoff

coefficients in Addendum I of this permit. Average coefficients for composite area may be calculated on an area weighted basis from $C = \frac{\sum C_i A_i}{\sum A_i}$ Where C_i is the coefficient applicable to the area A_i

Describe the nature of fill material and existing soil data describing soils (i.e., coarse-grained soils: gravels, sands, or fine-grained soils: silts and clays, silts and clays, and highly organic soils etc.). Operator may use soil classification chart in Attachment 1 of Addendum H to determine the types of the soils on the sites.

Indicate whether this is the site of the common plan of development or sale.

Complete the section on Endangered Species Eligibility by checking the appropriate box: (a) the site/project is not located within any of the corridors of the Federal or State identified Aquatic Resources of Concern (ARC) and further investigation is not required; or (b) the site/project is located within a corridor of a Federal or State identified ARC. Operator agrees to implement the control measures specified in Step 2 of Part 10.2 of this permit; or (c) If one of those eligibility criteria under Part 1.2.2.E.2.b, d, or e cannot be met, operator may use Addendum H Buffer Requirements to evaluate alternatives of buffer requirements and select equivalent sediment controls or contact DEQ for further consultation; or (d) operator's federally approved construction activities are authorized by the appropriate Federal or State agency and that authorization addresses the Endangered Species Act Section 7 consultation for the operator's stormwater discharge or stormwater-related activities. Operator selecting option d must include documentation from US Fish and Wildlife Service (USFWS) or a qualified biologist that demonstrates Section 7 consultation has been completed. The SWP3 must include any conditions resulting from that consultation; or (e) operator's stormwater discharges and stormwater-related activities were already addressed in another operator's certification of eligibility under Part 1.3.2E.2.d that included the proposed site/project area. Operator agrees to comply with any conditions attached to that certification.

Section III. Site/Project Discharge Information

Indicate whether the site/project discharges stormwater to a Municipal Separate Storm Sewer System (MS4), if yes; enter the name of the MS4 operator. A MS4 is defined as a conveyance or system of conveyances, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains that are owned or operated by a state, city, town, borough, parish, district, association, or other public body which is designed or used for collecting or conveying stormwater.

Identify all the receiving waterbodies from the sites that discharge stormwater, including names of those waterbodies. Check appropriate box if the receiving waterbody is listed in DEQ 303(d) impaired waterbodies or drained to the watershed with approved Total Maximum Daily Loads (TMDL) report. Identified the pollutant(s) for which the waterbody is impaired.



Instructions for Completing NOI Form 606-002A for Stormwater Discharges Associated with Activity of One or More Acres under the OPDES Construction General Permit OKR10

Section IV. Stormwater Pollution Prevention Plan (SWP3) Information

All site/projects eligible for coverage under the CGP OKR10 permit must prepare a SWP3 prior to submitting the NOI to DEQ. The SWP3 is intended to document the selection, design, and installation of different control measures to meet the permit's non-numeric technology based effluent limitations, if applicable, numeric effluent limitations, and water quality based effluent limitations contained in Part 3 of the Permit as well as to document compliance with other permit requirements. The SWP3 must be prepared in accordance with good engineering practices and to industry standards.

Check appropriate box whether the SWP3 has been prepared and is available on site.

Check appropriate box if the operator has registered for construction activities with the Secretary of State of Oklahoma.

List all the proposed Best Management Practices (BMPs) for construction activities. Operator must describe the proposed measures, including BMPs to control pollutants in stormwater discharges during construction. Specify any BMPs to be used if additional erosion and sediment controls are required by local government or due to specific site conditions.

List all the post-construction proposed Best Management Practices (BMPs) for construction activities. Operator must describe the proposed measures to be used to control pollutants in stormwater discharges that will occur after construction operations have been complete, including any BMPs to be used if additional erosion and sediment controls are required by local government or due to specific site conditions.

Section V. Certification

Federal regulations require all permit applications and report shall be signed as follows:

For a corporation: by a responsible corporate officer, which means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental law and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents had been assigned or delegated to the manager in accordance with corporate procedures;

For a partnership or sole proprietorship: by a general partner or the proprietors, respectively (*Note: for limited liability company (LLC) - by one of its owners, called managing members/partners of the company*); or

For a municipality, state, Federal, or other public facility: by either a principal executive or ranking elected official.

Modifying Existing Notice Of Intent (NOI)

After issuance of an authorization, an amended NOI may be submitted by a permittee if circumstances change (e.g., the area to be disturbed has been changed from 20 acres to 40 acres). However, the modification of an NOI cannot be used if the area to be disturbed has been changed from 40 acres to 20 acres. The amended NOI shall include the operator's assigned authorization number and request a change.

The original authorization number will be retained. DEQ will provide an acknowledgement by either mail or email that the amended NOI has been received and processed. Permittees must update their SWP3 to reflect the modification.

Submitting Your NOI Form

Completed NOI form must be submitted to the following address:

Stormwater Unit of ECLS

Oklahoma DEQ

P.O. Box 1677, Oklahoma City, OK 73101-1677

or fax it to: (405)702-6226

or email it to: ecls-stormwaterpermitting@deq.ok.gov

All applicable fees must be submitted with this NOI, including:

- Renewal NOI - \$100 application fee
- New NOI - \$447.71 (\$100 application fee and \$347.71 annual permit fee)

Note: Commencing December 21, 2020, NOI must be electronically submitted to DEQ. Instructions on how to access and use the appropriate electronic reporting tool will be made available on DEQ's website prior to the December 21, 2020 compliance deadline.

Do not submit an SWP3 with the NOI unless the site/project is located (1) within Outstanding Resource Waters (ORW), or (2) within a Federal and State ARC, or (3) within a Watershed that is subject to an approved TMDL, and/or watershed plan and/or local compliance plan and such site to be disturbed is about 5 acres or more, or (4) within a larger site which is disturbing land of 40 or more acres.

ADDENDUM C – NOTICE OF TERMINATION

| | | |
|--|---|--|
| DEQ Form 606-003 Oct. 18, 2017 |  | <p align="center">Oklahoma Department of Environmental Quality Notice of Termination (NOT) for Stormwater Discharges Associated with Industrial or Construction Activity under an OPDES Stormwater General Permit</p> |
| <p align="center">Submission of this NOT form constitutes notice that the operator identified in Section II of this form no longer intends to be authorized to discharge stormwater associated with industrial or construction activity under an OPDES Stormwater General Permit. Authorization to discharge is not terminated until you are notified that all termination requirements have been met and your complete NOT has been processed by DEQ. All necessary information must be provided on this form. See completing instructions on the back of this form.</p> | | |
| <p>I. Permit Information</p> | | |
| <p>DEQ Authorization Number: OKR _____ Reason for Termination (check one only):</p> <p><input type="checkbox"/> A new owner or operator has taken over responsibility for the facility/site/project and has submitted an NOI for permit coverage.</p> <p><input type="checkbox"/> Stormwater discharge from industrial activity is being terminated under OKR05 permit.</p> <p><input type="checkbox"/> All construction activities have been completed and met all other requirements under OKR10 permit, including final stabilization, on all portion of the site.</p> <p><input type="checkbox"/> You obtained coverage under an individual or alternative general permit for all stormwater discharges.</p> | | |
| <p>II. Operator Information</p> | | |
| <p>Operator Name: _____ Phone: _____</p> <p>Mailing Address: _____ City: _____</p> <p>County: _____ State: _____ Zip Code: _____ E-mail: _____</p> | | |
| <p>III. Facility/Site/Project Information</p> | | |
| <p>Facility/Site/Project Name: _____</p> <p>Address: _____</p> <p>City: _____ County: _____ State: _____ Zip Code: _____</p> <p>Latitude: _____ Longitude: _____ at the entrance of the Facility/Site/Project</p> <p align="center"><i>(Note: You must include an updated facility map or site map that shows all final plans have been completed with this form.)</i></p> | | |
| <p>IV. New Operator Information</p> | | |
| <p>New Operator Name: _____ Phone: _____</p> <p>Address: _____ City: _____</p> <p>County: _____ State: _____ Zip Code: _____ E-mail: _____</p> | | |
| <p><i>(Note: Use additional sheets of paper if necessary. Permittee is required to prepare a Notification of Change of Ownership (NCO) for each new operator and submit it to DEQ at the change of ownership or with the NOT (see also Part 2.2.3 of this permit).</i></p> | | |
| <p>V. Certification</p> | | |
| <p><i>I certify under penalty of law that all stormwater discharges associated with industrial or construction activity from the identified facility that was authorized by a general permit have been eliminated or that I am no longer the operator of the facility or construction site. I understand that by submitting this NOT form and upon receiving termination letter from DEQ that the all termination requirements have been met and the complete NOT has been processed, I am no longer authorized to discharge stormwater associated with industrial or construction activity under the General Permit OKR05 or OKR10 to waters of the State. It is unlawful under the Clean Water Act and OAC 252:606-1-3(b)(3)(L) where the discharge is not authorized by an OPDES permit. I also understand that the submittal of this NOT form does not release me as operator from liability for any violations of this Permit or the Clean Water Act.</i></p> | | |
| <p>Print Name: _____ Title: _____</p> | | |
| <p>Signature: _____ Date: _____</p> | | |



Instructions for Completing NOT Form 606-003 for Stormwater Discharges Associated with Industrial or Construction Activity

Who May File a Notice of Termination Form

The Permittee currently covered by the OKR05 (Industrial) or OKR10 (Construction) General Permit for stormwater discharges associated with industrial or construction activity must submit a Notice of Termination (NOT) within 30 days after one or more of the following conditions have been met:

- A new owner or operator has taken over responsibility for the facility or site or project, and has submitted an NOI for permit coverage.
- Stormwater discharge from industrial activity is being terminated under the OKR05 permit.
- All construction activities have completed and met all other requirements under the OKR10 permit, including final stabilization, on all portions of the site (See Part 3.3.2.B of the OKR10 permit for specific requirement on final stabilization).
- You obtained coverage under an individual or alternative general permit for all discharges.

You must meet all of the termination requirements of the general permit prior to submitting the NOT.

Section I. Permit Information

Provide the current OPDES General Permit number assigned to the facility or the site identified in Section II. Indicate your Reason for submitting this NOT by checking the appropriate box.

Section II. Operator Information

Provide the legal name of the company, firm, public organization or any other entity that operates the facility or site described in this NOT. Provide the operator's phone number, mailing address, and email address.

Section III. Facility/Site/Project Information

Provide the legal name of the facility or site or project and complete street address, including city, county, state, and ZIP code of the facility or site. If the facility or site lacks a street address, indicate the general location of the facility (e.g., Intersection of State Highways 74 and 34).

Provide the latitude and longitude at the entrance of the facility or the center of site, or the general location information of the facility or site (e.g., Intersection of State Highways 74 and 34). Latitude and Longitude can be obtained online at DEQ and USGS and other mapping tools.

You must also include an updated facility map or site map that shows all disturbed areas over the course of your construction/project (i.e., aerial images or general site maps with project extents marked, including stabilized areas of concrete or asphalt batch plants, equipment staging yards, stockpile, borrow areas, wash-out area, previously disturbed areas etc.) with this form.

Section IV. New Operator Information

If applicable, provide the legal name of the company, firm, public organization or any other entity that has assumed ownership for the facility or site described in this NOT.

Provide phone number, complete physical address including city, state, ZIP code, and email address. If there is more than one new operator, use additional sheet(s) to include all the new operators' information.

Permittee is required to prepare and submit a Notification of Change of Ownership (NCO) form for each new owner(s) (see Part 2.3.3 of OKR10 for change of ownership requirement). NCO forms may be submitted at the change of ownership or with the NOT.

Section V. Certification

The NOT form must be signed as follows:

For a corporation: by a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

For a partnership or sole proprietorship: by a general partner or the proprietor, respectively (*Note: for limited liability company (LLC) - by one of its owners, called managing members/partners of the company*);

For a municipality, state, Federal, or other public facility: by either a principal executive officer or ranking elected official.

Include the name and title of the person signing the form and the date of signing.

An unsigned or undated NOT form will not be processed for termination of permit coverage.

If you have questions, contact the Stormwater Unit of Environmental Complaints and Local Services Division (ECLS) of DEQ at (405) 702-6100 or email to

ecls-stormwaterpermitting@deq.ok.gov

Where to File an NOT form:

Completed NOT must be submitted to the following address:

Stormwater Unit of ECLS, Oklahoma DEQ
P.O. Box 1677
Oklahoma City, Oklahoma 73101-1677
or fax it to: (405)702-6226

or email it to: ecls-stormwaterpermitting@deq.ok.gov

Note: Commencing December 21, 2020, all NOTs will be required to be submitted electronically to DEQ. Instructions on how to access and use the appropriate electronic reporting tool will be made available prior to the December 21, 2020 compliance deadline.

ADDENDUM D - CONTRACTOR CERTIFICATION

(Optional; sample format)

(Name of Operator)

(Project Name)

Contractors, builders, regular suppliers or others (contractors) involved in construction activity who are not the operator, developer, or general contractor, and have not been issued the Stormwater Construction General Permit's (CGP) authorization to discharge, execute this Contractor Certification which places the responsibility of complying with and abiding by the intent and purpose of the permit with the contractor for any and all work performed under the authority and direction of the contractor. Furthermore, the contractor assumes responsibility to avoid or eliminate any actual or potential adverse effects upon the environment according to the Stormwater Pollution Prevention Plan (SWP3), during all phases of building, construction, or delivery activity on any and all construction sites under the control and responsibility of the contractor as described in the SWP3.

1. Contractor company name: _____

2. Contractor address: _____

3. Project locations: _____

(For additional addresses, attach list to this form)

4. Contractor must be thoroughly familiar with the original Notice of Intent (NOI) filed by _____
_____ with the Oklahoma Department of Environmental Quality (DEQ).

(Operator Name)

Contractor must also be thoroughly familiar with, and adhere to, the Stormwater Pollution Prevention Plan (SWP3) and the Best Management Practices (BMP) on file at the following location:

The Contractor is certifying below that they assume all physical responsibility for any and all construction activities performed by the Contractor or under the direction and control of the Contractor, to avoid or eliminate any actual or potential adverse effects upon the environment pertaining to the properties listed in Item 3 above.

Certification

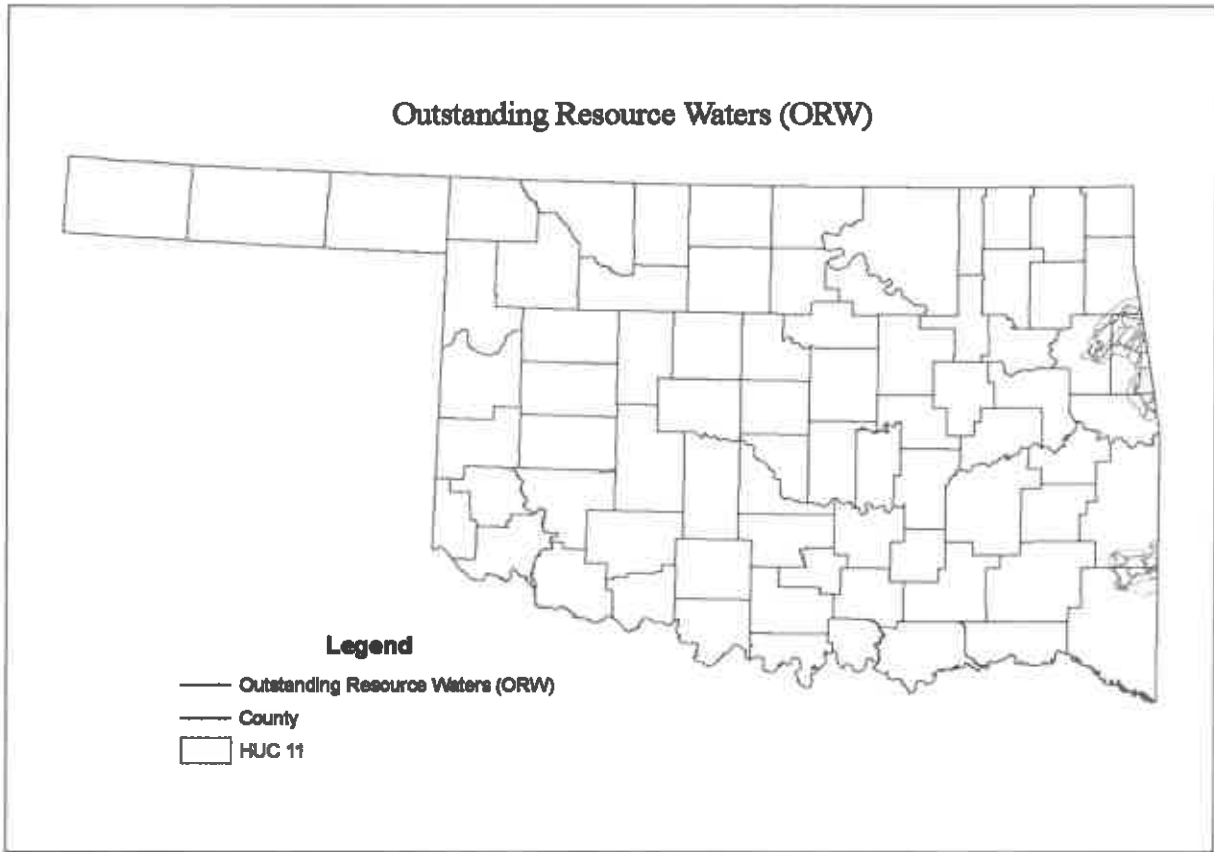
I certify that I understand the terms and conditions of the Oklahoma Pollutant Discharge Elimination System Act (OPDES) General Permit that authorizes stormwater discharges associated with construction activity from the construction site identified as part of this certification. I have read and understand the Operator's NOI and Part 1.2 for coverage under the General Permit for stormwater discharges from construction activities, including those requirements published in the modified OPDES General Permit OKR10 of September 13, 2017, and the SWP3 and BMP described pertaining to the project locations in Item 3 above. I agree that as a contractor, builder, regular supplier, or a support service company, I am responsible for installing and/or maintaining the appropriate pollution prevention measures that I am responsible for according to the agreement I have with the permittee.

I understand that continued coverage under this permit is contingent upon maintaining Part 1.2 of the permit.

Signature: _____ Title: _____

Print Name: _____ Date: _____

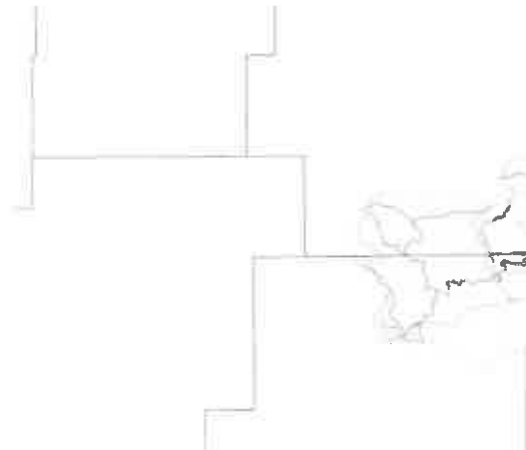
ADDENDUM E – OUTSTANDING RESOURCE WATERS (ORW)



Outstanding Resource Waters Details



Illinois River & Lee Creek Watersheds



Mountain Fork River Watershed

ADDENDUM F – ADDITIONAL REQUIREMENTS FOR CONCRETE AND ASPHALT BATCH PLANTS

F.1 Site Description

Describe the nature of industrial activities at your facility and include a site map. The site map shall specify boundaries of the facility, significant structures and impervious area, the locations of all stormwater monitoring points, if any.

F.2. Summary of Potential Pollutant Sources

Document the area at your facility where industrial materials or activities are exposed to stormwater. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product. (also see Part 4.3.6).

F.3. Sampling Data

Provide a summary of any existing stormwater discharge sampling data taken at your facility. All stormwater sampling data collected during the term of this permit must also be summarized and included in this part of the SWP3. The SWP3 shall document the procedures for conducting the types of analytical monitoring specified by this permit.

F.4. Stormwater Controls

Describe the type and location of existing non-structural and structural BMPs selected for each of the areas where industrial materials or activities are exposed to stormwater. For areas where BMPs are not currently in place, describe appropriate BMPs that you will use to control pollutants in stormwater discharges. Selection of BMPs should take into consideration:

A. Non-Structural BMPs

1. **Good Housekeeping:** You must keep all exposed areas of the facility in a clean, orderly manner where such exposed areas could contribute pollutants to stormwater discharges. Common problem areas include: around trash containers, storage areas and loading docks. Measures must also include: a schedule for regular pickup and disposal of garbage and waste materials, routine inspections for leaks and conditions of drums, tanks and containers.
2. **Minimizing Exposure:** You must minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff by either locating these industrial materials and activities inside or protecting them with storm resistant coverings (although significant enlargement of impervious surface area is not recommended).
3. **Preventive Maintenance:** You must have a preventive maintenance program which includes timely inspection and maintenance of stormwater management devices, (e.g., cleaning oil/water separators, catch basins) as well as inspecting, testing, maintaining and repairing facility equipment, and systems to avoid breakdowns or failures that may result in discharges of pollutants to surface waters.
4. **Routine Facility Inspections (also see Part 4.3.13 of this permit):** In addition to, or as part of the Comprehensive Site Evaluation Report required, you must have qualified facility personnel inspect all areas of the facility where industrial materials or activities are exposed to stormwater. You shall develop the routine facility inspection procedures and document the evaluation of existing stormwater BMPs. You must correct any deficiencies in implementation of your SWP3 you find as soon as practicable, but not later than within 14 days of the inspection. You must document in your SWP3 the results of your inspections and the corrective actions you took in response to any

deficiencies or opportunities for improvement that you identify. You must develop and include an inspection form in your SWP3.

5. Corrective Action

If any of the following conditions occur, you must review and revise the selection, design, installation, and implementation of your control measures to ensure that the condition is eliminated and will not be repeated in the future:

- a. An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this or another OPDES permit) occurs at your facility;
- b. A discharge violates a numeric effluent limit;
- c. You become aware, or DEQ determines, that your control measures are not stringent enough for the discharge to meet applicable water quality standards;
- d. An inspection or evaluation of your facility by a DEQ official, or local MS4, determines that modifications to the control measures are necessary to meet the non-numeric effluent limits in this permit; or
- e. You find in your routine facility inspection, quarterly visual inspection, or comprehensive site inspection that your control measures are not being properly operated and maintained.

Within 14 days of such discovery, you must document any corrective action(s) to be taken to eliminate or further investigate the deficiency, or if no corrective action is needed, the basis for that determination. If you determine that changes are necessary following your review, any modifications to your control measures must be made before the next storm event if possible, or as soon as practicable following that storm event. These time intervals are not grace periods, but are schedules considered reasonable for documenting your findings and for making repairs and improvements. They are included in this permit to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely.

6. Final Stabilization

You must ensure in compliance with final stabilization requirements specified in Part 3.3.2 of the permit. All industrial activities at the mobile concrete batch plant or/and portable asphalt plant have been completed and a uniform (e.g., evenly distributed, without large bare areas⁶) perennial vegetative cover with a 70% or more of the cover that was provided by vegetation to all undisturbed areas or equivalent permanent stabilization measures (such as the use of riprap and gravel) have been employed.

7. **Employee Training:** You must describe a stormwater employee training program for the facility, including spill response, good housekeeping and material management practices, and must identify periodic dates (e.g., every 6 months during the months of July and January) for such training.

8. Spill Prevention

You must identify and document where potential spills and leaks could occur that contribute pollutants to stormwater discharges and corresponding outfall(s) that can be affected by such spills and leaks. Also you must describe the procedures that will be followed for cleaning up spills or leaks.

B. Structural BMPs

You must comply with Part 3.3.1 for sediment and erosion control. Also you could use the following BMPs, which include but are not limited to: stormwater detention structures (including wet ponds); stormwater retention structures; flow attenuation by use of open vegetated swales and natural

⁶ Large bare area is defined as an area with 10 ft² or more with no perennial vegetative cover established

depressions; infiltration of runoff onsite; and sequential systems (which combine several practices). You must maintain all BMPs in effective operating condition. If site inspections indicate BMPs are not operating effectively, maintenance must be performed before the next anticipated storm event, or as necessary to maintain the continued effectiveness of stormwater controls.

F.5 Comprehensive Site Compliance Evaluation

The concrete or asphalt batch plants covered under this permit must conduct an Annual Comprehensive Site Compliance Evaluation and file a report (see Addendum G ACSCER). At a minimum, your documentation of the comprehensive site evaluation must include the scope of the inspections, the name(s) of personnel making the inspections, the date(s) of the inspections, and major observations relating to the implementation of the SWP3. Major observations should include, the location(s) of discharges of pollutants from the site, BMPs that need to be maintained; BMPs that failed to operate as designed or that proved inadequate for a particular location, additional BMPs that are needed to address any conditions requiring corrective action identified during the inspection, previously unidentified discharges from the site, previously unidentified pollutants in existing discharges, evidence of, or the potential for, pollutants entering the drainage system, evidence of pollutants discharging to receiving waters at all facility outfall(s), and the condition of and around the outfall, including flow dissipation measures to prevent scouring; and any required revisions to the SWP3 resulting from the inspection.

A. Frequency of the Comprehensive Site Compliance Evaluation

You must conduct a comprehensive site compliance evaluation at least once a year. The inspections must be conducted by qualified personnel with at least one member of your stormwater pollution prevention team participating in the comprehensive site inspections. The qualified personnel you use may be either your own employees or outside consultants that you have hired, provided they are knowledgeable and possess the skills to assess conditions at your facility that could impact stormwater quality. They must also have the skills to assess the effectiveness of the BMPs you have chosen to use to control the quality of your stormwater discharges. If you decide to conduct more frequent inspections, your SWP3 must specify the frequency of inspections.

B. Scope of the Comprehensive Site Compliance Evaluation

Your inspections must include all areas where industrial materials or activities are exposed to stormwater, as identified in Parts F.1 and areas where spills and leaks have occurred within the past three (3) years.

F.6 Maintaining Updated SWP3

A. Change in Your Physical Operation

You must amend the SWP3 whenever there is a change in design, construction, operation, or maintenance at your facility which has a significant effect on the discharge, or potential for discharge, of pollutants from your facility;

B. Maintaining Your SWP3

You must amend the SWP3 whenever during inspections or investigations by you or by local, State, or Federal officials it is determined the SWP3 is ineffective in eliminating or significantly minimizing pollutants from sources identified under the SWP3 or is otherwise not achieving the general objectives of controlling pollutants in discharges from your facility.

F.7 Monitoring Requirements

All facilities will be subject to quarterly visual monitoring. Also the Numeric Effluent Limitation Monitoring (NELM) is required once per year if your asphalt batch plants are covered under this permit. Also these specific monitoring requirements and limitations are applied to the discharge at facilities with co-located activities. Where stormwater from the co-located activities is co-mingled, the monitoring requirements and limitations are additive.

A. Quarterly Visual Monitoring

The requirements and procedures for quarterly visual monitoring are applicable to all concrete and asphalt batch plants covered under this permit, regardless of your industrial activities.

1. You must perform and document a quarterly visual examination of a stormwater discharge associated with industrial activity from each outfall, except discharges exempted below. If no storm event resulted in runoff from the facility during a monitoring quarter, you are excused from visual monitoring for that quarter provided you document in your monitoring records that no runoff occurred. You must sign and certify the documentation in accordance with Part 6.7 of the permit.
2. Your visual examination must be made during daylight hours (e.g., normal working hours). The visual examinations must be made of samples collected within the first 30 minutes of when the runoff or snowmelt begins discharging from your facility. The examination must document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollution. The examination must be conducted in a well-lighted area. No analytical tests are required to be performed on the samples. All such samples must be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where practicable, the same individual should carry out the collection and examination of discharges for the entire permit term.

The following Table is an example of what you should look for in a visual monitoring sample.

TABLE F-1 VISUAL MONITORING

| Parameter | Method | Results |
|--|--|---|
| Color and Extent | Visual | Clear, yellow, red, blue, green, brown, black, milky, etc. |
| Odor | Smell | None, earthy, sewage, musky, rotten eggs, petroleum, etc. |
| Clarity or Turbidity | Come up with your own test such as: clean off the label from a 1 liter or similar size clear plastic or glass bottle, fill the bottle with the sample, and try to see things through it. | 1) can't see through the bottle 2) can see through but could not read newsprint 3) can see through and can read newsprint 4) pretty clear, but not as clear as bottled water 5) as clear as bottled water |
| Floating solids | Visual | Yes/no - describe what they are. |
| Settled solids | Use same 1 liter or similar size plastic or glass bottle | Tablespoons or cups of material or millimeters of solids on bottom after at least 60 minutes |
| Suspended solids | Look through the container. | Describe what do you see? |
| Foam | Visual | Yes - how thick is the foam? How much of the surface does it cover? What color is the foam? Or No |
| Oil sheen | Visual | Color and extent |
| Other obvious indicators of stormwater pollution | Indicate what you observed that would lead a reasonable person to believe that the stormwater was polluted. | Describe what do you see? |

3. You must maintain your visual examination reports onsite with the SWP3. At a minimum, the report must include the examination date and time, locations, personnel, the nature of the discharge

(i.e., runoff or snow melt), results of observations of the stormwater discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollution), and probable sources of any observed stormwater contamination. If applicable, the report shall include why it was not possible to take samples within the first 30 minutes and signed in accordance with Part 6.7.

B. Numeric Effluent Limitation Monitoring (NELM)

1. If your facility has discharges of stormwater from an asphalt batch plant, you must comply with the limitations and monitoring requirements of Part 3.4.1 (also see Table 3.1) for all discharges containing asphalt batch plant runoff, regardless of your industrial activities.
2. *Monitoring Periods.* If the project takes less than one year to complete, you shall collect at least one sample. otherwise, you must start to collect your grab samples and analyze the samples annually within the following time periods:

The yearly monitoring periods are from January 1st to December 31st.

3. Collection and Analysis of Samples

You must assess your sampling requirements on an outfall by outfall basis.

- a. *When and How to Sample.* All required monitoring must be performed on a storm event that results in an actual discharge from your site (at least 0.1 inch of stormwater event defined as a "measurable storm event") that follows the preceding measurable storm event by at least 72 hours (3 days). The 72 hours (3 days) storm interval does not apply if you are able to document that less than a 72-hour (3 days) interval is representative for local storm events during the sampling period. In the case of snowmelt, the monitoring must be performed at a time when a measurable discharge occurs at your facility.
- b. Take a minimum of one grab sample within the first 30 minutes of the discharge resulting from a measurable storm event. If it is not practicable to take the sample during the first 30 minutes, the sample must be collected as soon as practicable after the first 30 minutes. You must document in your SWP3 why it was not possible to take samples within 30 minutes. If the sampled discharge commingles with process or non-process water, attempt to sample the stormwater discharge before it mixes with the non-stormwater. In the case of snowmelt, samples must be taken during a period with a measurable discharge.

4. Storm Event Data

For each monitoring event, except snowmelt monitoring, you must provide the date and duration (in hours) of the storm event(s); rainfall measurements or estimates (in inches) of the storm event; time (in days) since the previous measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge sample. For snowmelt monitoring, you must identify the date of the sampling event.

5. Follow-up Monitoring Requirements if Discharge Exceeds Numeric Effluent Limit

You must conduct follow-up monitoring within 30 calendar days, or during the next qualifying runoff event of implementing corrective action(s) taken pursuant to Part 4.5.14 in response to an exceedance of a numeric effluent limit contained in this permit.

Monitoring must be performed for any pollutant(s) that exceeds the effluent limit. You must continue to monitor, at least quarterly, until your discharge is in compliance with the effluent limit or until DEQ waives the requirement for additional monitoring. You must include the results of follow-up monitoring in the report.

C. Representative Outfalls - Substantially Identical Discharges.

Applicable monitoring requirements apply to each outfall authorized by this permit, except as otherwise exempt from monitoring as a "substantially identical outfall." If your facility has 2 or more

outfalls that you believe discharge substantially identical effluents, based on similarities of the industrial activities and control measures, exposed materials that may significantly contribute pollutants to stormwater, and runoff coefficients of the outfalls' drainage areas, you may monitor the effluent of just one of the outfalls and report that the results also apply to the substantially identical outfall(s). You may monitor selected substantially identical outfall(s) on a rotating basis. For this to be permissible, you must describe each outfall authorized by this permit and rationale for any substantially identical outfall determinations, including the locations of the outfalls, why the outfalls are expected to discharge substantially identical effluents, estimates of the size of the drainage area (in square feet) for each of the outfalls; and an estimate of the runoff coefficient of the drainage areas (low: under 40 percent; medium: 40 to 65 percent; high: above 65 percent). The allowance for monitoring only one of the substantially identical outfalls is not applicable to any outfalls with numeric effluent limitations. You are required to monitor each outfall covered by a numeric effluent limit as identified in Part 3.4.1 (also see F.7.B.1).

F.8 Reporting

A. Reporting Results of Numeric Effluent Limitation Monitoring (NELM)

You are required to submit the results of your NELM to the DEQ according to the following schedule:

1. Save and submit monitoring results by March 1st of the year following the monitoring period.
2. Visual monitoring results must be retained with the SWP3. Do not submit unless requested to do so by the Executive Director.
3. If required, you must submit NELM results obtained from each outfall associated with industrial activity with electronic Discharge Monitoring Report (eDMR) that started on December 21, 2016. Instructions on how to register as a Preparer or Signatory for eDMR, as well as how to prepare and submit eDMR, can be found on DEQ website at <http://www.deq.state.ok.us/wqdnew/ereporting/index.html> . Assistance is also available by contacting DEQ at (405)702-8100 or deqreporting@deq.ok.gov .

B. Annual Comprehensive Site Compliance Evaluation Reporting Requirement

1. An Annual Comprehensive Site Compliance Evaluation Report using Form 606-006 found in Addendum G must be filed each year. The report must be filed by March 1st of each year beginning in 2018. If your permit becomes effective less than 1 month from the end of the yearly monitoring period, your first monitoring period starts with the next respective annual monitoring period.
2. The report must include requirements specified in Part F.5 of this Addendum and certified by an authorized representative of your facility (see Part 6.7 of this permit)

ADDENDUM G – ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION REPORT

DEQ Form
606-005B
Oct. 18, 2017



Oklahoma Department of Environmental Quality Annual Comprehensive Site Compliance Evaluation Report (ACSCER) for Stormwater Discharges Associated with Construction Supporting Activity under the OPDES General Permit OKR10

Submission of this ACSCER form is required in ADDENDUM G of this permit for Concrete and Asphalt Plants.
All requested information must be provided on this form. See instructions on Page 5 of this form

DEQ Authorization Number: **OKR10**

Part A: Operator Information and Certification

Section I. Operator Information

Operator Name: _____

Mailing Address: _____ City: _____

County: _____ State: _____ Zip Code: _____

Operator's Point of Contact : _____ Title: _____

Phone: _____ Email: _____

Section II. Facility Information

Facility Name: _____ Phone: _____

Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Latitude: _____ Longitude: _____

Facility's Point of Contact : _____ Title: _____

Phone: _____ E-mail: _____

Section III. Certification

I certify under penalty of law that I have read and understand the requirements for filing this Annual Comprehensive Site Compliance Evaluation Report, which is to be filed by March 1st of each year beginning in 2018.

This report is also to be retained as part of the Stormwater Pollution Prevention Plan (SWP3) for at least three (3) years from the date permit coverage expires or is terminated and will be made available to any State or Federal Inspector visiting this facility. All records of actions taken in accordance with Addendum F of this Permit as part of the SWP3 will be retained for at least three (3) years from the date permit coverage expires or is terminated. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly involved in gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name: _____ Title: _____

Signature: _____ Date: _____

Part B: Annual Comprehensive Site Compliance Evaluation

Reporting period: _____

1. Number of routine facility inspections you performed during the reporting period: _____

2. Dates of the Inspection performed: _____

3. Did any of your routine facility inspections find that one or more of your BMPs was not effective in controlling the pollutant source for which it was designed?
 Yes No All BMPs were effective

4. Were all BMPs you indicated you would be using in your SWP3, including good housekeeping practices, actually being implemented at the time of the Annual Comprehensive Site Compliance Evaluation?
 Yes No

5. If you found one or more ineffective BMPs, have they all been replaced with an alternative or modified BMP?
 Yes No All BMPs were being effective

6. Were there additional BMPs needed to address any conditions requiring corrective action?
 Yes No

7. If one or more BMPs were not being implemented, were corrective actions taken after the first inspection to eliminate the problem?
 Yes No All BMPs were being implemented

8. Was/were the same failure(s) to implement a BMP deficiency(ies) noted in more than one inspection?
 Yes No No deficiencies noted in any inspection

9. Document any deficiencies identified and any corrective actions implemented to remove the original violation below. Use additional sheets if necessary.

| Date | Deficiencies | Corrected | | Date of Correction |
|-------|--------------|------------------------------|-----------------------------|--------------------|
| _____ | _____ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | _____ |
| _____ | _____ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | _____ |
| _____ | _____ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | _____ |
| _____ | _____ | <input type="checkbox"/> Yes | <input type="checkbox"/> No | _____ |

10. What must you do to correct the deficiencies that remain uncorrected?

11. Did any conditions require SWP3 review and revision to eliminate design, selection, installation, and/or implementation problem during the past year? If yes, describe the conditions in brief.
 No Yes

| | |
|-----|--|
| 12. | <p>At any time during the reporting period, did you discover any previously unidentified unauthorized non-stormwater discharges from your facility or previously unidentified pollutants in the existing discharges?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> |
| 13. | <p>Have all unauthorized non-stormwater discharges (including any discovered in previous years) been eliminated or permitted?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Permit applied for <input type="checkbox"/> No unauthorized discharges</p> |
| 14. | <p>Have any significant spills or leaks occurred at your facility during the reporting period?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> |
| 15. | <p>If any significant spills or leaks occurred, did they result in either a dry weather discharge or an actual discharge of the spilled or leaked material commingled with stormwater (as opposed to the spilled material being washed away by stormwater?)</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> |
| 16. | <p>If any significant spills or leaks occurred, did they result in more than the minimum amounts of material being discharged in stormwater? Base your answer on your knowledge of the material you spilled or that leaked. The minimum amounts could vary with the nature (toxicity, oxygen demand, pH, etc.) of the spilled or leaked material from amounts left after normal "sweeping" type cleanup to the point at which even trace amounts left after cleanup could cause an environmental problem.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No spills or leaks occurred</p> |
| 17. | <p>Have all known spills or leaks been cleaned up or otherwise prevented from contaminating stormwater that would be discharged under the authority of this permit?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No spills or leaks occurred</p> |
| 18. | <p>How many times did you visually monitor all of your stormwater discharges at all the outfalls during the reporting year?</p> <p>_____</p> |
| 19. | <p>Would the results of your visual monitoring indicate that there are pollutants in your stormwater discharges that are not adequately controlled by your current BMPs?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> |
| 20. | <p>If the results of your visual monitoring indicated a potential problem, was it due to one or more of the following?</p> <p><input type="checkbox"/> New pollutant source (including exposure of previously unexposed material)</p> <p><input type="checkbox"/> Failure to implement or maintain an existing BMP</p> <p><input type="checkbox"/> Less than expected performance from a BMP</p> <p><input type="checkbox"/> No BMP was selected to deal with that problem</p> <p><input type="checkbox"/> N/A (No problems identified)</p> |
| 21. | <p>If your visual monitoring indicated a potential problem, what have you done to resolve the problem?</p> <p><input type="checkbox"/> Eliminated exposure or pollutant source <input type="checkbox"/> Modified existing BMPs</p> |

| | | | | | | |
|-----|--|---|-------------------------|-------|------------|--------------|
| | <input type="checkbox"/> Added a new BMP <input type="checkbox"/> Nothing planned | <input type="checkbox"/> Plan to address problem by end of current reporting year <input type="checkbox"/> N/A (No problems identified) | | | | |
| 22. | Did any monitoring results exceed a numeric effluent limitation contained in Parts 3.4.1 and F.7.B during the past discharge monitoring period? | | | | | |
| | <input type="checkbox"/> Yes <input type="checkbox"/> No | | | | | |
| 23. | If your answer to the previous question was Yes, list the dates, name of the pollutants and the test results that exceeded numeric effluent limitations. Use additional sheets if necessary. | | | | | |
| | Date | Pollutants | Test Results | Date | Pollutants | Test Results |
| | _____ | _____ | _____ | _____ | _____ | _____ |
| | _____ | _____ | _____ | _____ | _____ | _____ |
| 24. | Were there any incidents of noncompliance in the past year or any noncompliance that is currently ongoing? | | | | | |
| | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Compliant with the Permit | | | | | |
| 25. | Were there any required revisions to the SWP3 resulting from the inspection and/or monitoring? | | | | | |
| | <input type="checkbox"/> Yes <input type="checkbox"/> No | | | | | |
| 26. | If your answer to the previous question was Yes, list the dates, reason for revision and brief description of the revision. Use additional sheets if necessary. | | | | | |
| | Date | Reason for Revision | Description of Revision | | | |
| | _____ | _____ | _____ | | | |
| | _____ | _____ | _____ | | | |



**Instructions for Completing
the Annual Comprehensive Site Compliance Evaluation Report (ACSCER)
Form 606-005B for Stormwater Discharges Associated with Construction supporting
Activity for Concrete or Asphalt Batch Plants**

When to File an ACSCER Form

Permittees who are presently covered under OPDES construction general permit OKR10 for stormwater discharges associated with construction supporting activity for concrete or asphalt batch plants must submit an Annual Comprehensive Site Compliance Evaluation Report (ACSCER) form to DEQ by March 1 of each year beginning in 2018. If your authorization becomes effective less than 1 month from the end of the yearly monitoring period, your first monitoring period starts with the next annual monitoring period.

Completing the Form

To complete this form, type or print in the appropriate areas only.

Permit Information

Enter the existing DEQ Authorization assigned to the facility identified in Section I for stormwater discharges from industrial activity.

Part A: Operator Information and Certification

Section I. Operator Information

Provide the legal name of the person, firm, public organization or any other commercial entity that owns or operates the facility described in this application. The name of the operator may or may not be the same name as the facility. An operator is the legal entity that controls the facility's operation, rather than the plant or site manager. Provide complete mailing address including city, county, state, and ZIP code. Include operator's point of contact name, title, telephone number and a valid email address.

Section II. Facility Information:

Enter the facility's official or legal name and complete physical address including city, county, state, and ZIP code. Include facility's point of contact name, telephone number and email address. Indicate the latitude and longitude of the facility to the nearest 15 seconds. . Include facility's point of contact name, title, telephone number and a valid email address.

Section III. Certification

The ACSCER form must be signed by a responsible party - for corporation: by a responsible corporate official, such as: president, vice president, secretary, and treasurer either for a corporation or company; for a partnership or sole proprietorship: by a general partner or the proprietor, respectively. (Note: for limited liability company (LLC): by one of its owners, called managing members/partners of the company); for a municipality, state, Federal, or other public facility: by either a principal executive or ranking elected official.

Part B: Annual Comprehensive Site Compliance Evaluation Report

1. A summary of your past year's routine facility inspection documentation such as control measures' maintenance, repair and/or replacement, any additional control measures needed to comply with the permits;
2. The location(s) of discharges of pollutants from the site, evidence of pollutants discharging to receiving waters at all facility outfall(s), and the condition of and around the outfall(s);
3. A summary of your past year's corrective action documentation;
4. A summary of your past year's quarterly visual monitoring documentation;
5. A summary of your past year's effluent limitation violations if applicable; and
6. Describe any incidents of noncompliance in the past year or currently ongoing, or if none, provide a statement that you are in compliance with the Permit.

Note: Please see Part F.5 of CGP OKR10 for detailed scope of Annual Comprehensive Site Compliance Evaluation

Completed ACSCER form must be submitted to DEQ by March 1 of each year beginning in 2018.

If you need any assistance or have any question, contact the Stormwater Unit of Environmental Complaints and Local Services (ECLS) of DEQ at (405) 702-6100 or email to:

ecls-stormwaterpermitting@deq.ok.gov

Where to file an ACSCER Form

Completed ACSCER form must be submitted to the following address:

Stormwater Unit of ECLS
Oklahoma DEQ
P.O. Box 1677
Oklahoma City, OK 73101-1677

or fax it to: (405)702-6226

or email it to: ecls-stormwaterpermitting@deq.ok.gov

Commencing December 21, 2020, NECs must be electronically submitted to DEQ. Instructions on how to access and use the appropriate electronic reporting tool will be made available on DEQ's website prior to the December 21, 2020 compliance deadline.

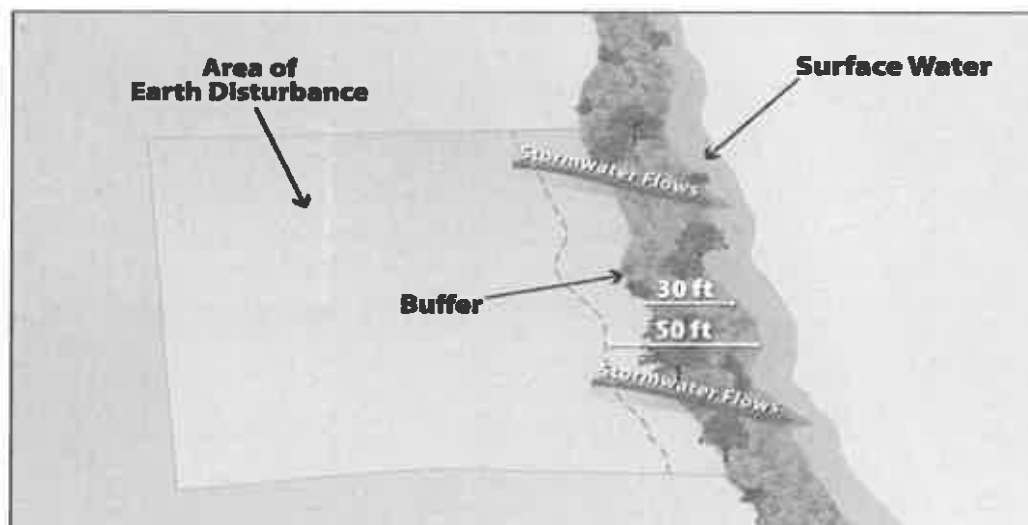
ADDENDUM H – BUFFER REQUIREMENTS

The purpose of this Addendum is to assist you in complying with the requirements in Parts 3.3.1.B and 3.5.2.A of this permit regarding the establishment of natural buffers or equivalent sediment controls.

H.1 Sites that are required to provide and maintain natural buffers and/or equivalent erosion and sediment controls

If the land disturbing activities will occur within the Aquatic Resources of Concern (ARC) which are identified by USFWS and ODWC, a vegetated buffer of at least 100 feet is required between the area disturbed and all perennial or intermittent streams on or adjacent to the construction site, or a vegetated buffer of at least 50 feet is required between the area disturbed and all ephemeral streams. If your disturbing activities will be adjacent to the waters of the State, a vegetated buffer of at least 50 feet is required. Figure H – 1 illustrates when a site would be required to comply with the requirements in Part 3.3.1.D due to their proximity to surface waters. If the surface water is not located within 50 feet of the earth-disturbing activities, Part 3.3.1 does not apply. If you determine that the buffer requirements apply to your site and those buffer requirements cannot be met, you may continue on to Part H. 2 of this Addendum.

Figure H - 1. Example of Earth-Disturbing Activities within 50 feet of surface water.



H.2 Compliance Alternatives to the Buffer Requirements

The following are 3 compliance alternatives from which permittees can choose, unless you qualify for any of the exceptions in Part H.3 of the Addendum:

1. Provide and maintain a 100-foot or 50-foot undisturbed natural buffer; or
2. Provide and maintain an undisturbed natural buffer that is less than 100-feet or 50-feet and is supplemented by additional erosion and sediment controls that achieve the sediment load reduction equivalent to a 100-foot or 50-foot undisturbed natural buffer; or
3. If infeasible to provide and maintain an undisturbed natural buffer of any size, implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 100-foot or 50-foot undisturbed natural buffer.

The compliance alternative selected must be maintained throughout the duration of permit coverage.

H.3 Exceptions to the Compliance Alternatives

The following exceptions apply to the requirement of Parts 3.3.1.B and 3.5.2.A

- Construction approved under a CWA Section 404 permit; or
- Construction of a water-dependent structure or water access areas (e.g., pier, boat ramp, trail); or
- If there is no discharge of stormwater to waters of the State through the area between the disturbed portions of the site and any waters of the State located within 100-feet or 50-feet of the site; or
- Where no natural buffer exists due to preexisting development disturbances (e.g., structures, impervious surfaces) that occurred prior to the initiation of planning for the current development of the site.

You must document in your SWP3 if any disturbances related to any of the above exceptions occurs within the buffer area on your site.

H.4 Requirements for Providing and Maintaining Natural Buffers

This part of the Addendum applies to you if you choose either Compliance Alternative 1 (100-foot or 50-foot buffer) or Compliance Alternative 2 (a buffer of < 100 feet or < 50 feet supplemented by additional erosion and sediment controls that achieve the equivalent sediment load reduction as the 100-foot or 50-foot buffer).

A. Buffer Width Measurement

Where you are retaining a buffer of any size, the buffer should be measured perpendicularly from any of the following points, whichever is further landward from the water:

1. The ordinary high water mark of the water body, defined as the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, and/or the presence of litter and debris; or
2. The edge of the stream or river bank, bluff, or cliff, whichever is applicable.

Refer to Figure H-2 and Figure H-3. You may find that specifically measuring these points is challenging if the flow path of the surface water changes frequently, thereby causing the measurement line for the buffer to fluctuate continuously along the path of the waterbody. Where this is the case, DEQ suggests that rather than measuring each change or deviation along the water's edge, it may be easier to select regular intervals from which to conduct your measurement. For instance, you may elect to conduct your buffer measurement every 5 to 10 feet along the length of the water.

Figure H - 2 Buffer measurements from the ordinary high water mark of the water body, as indicated by a clear natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, and/or the presence of litter/debris.

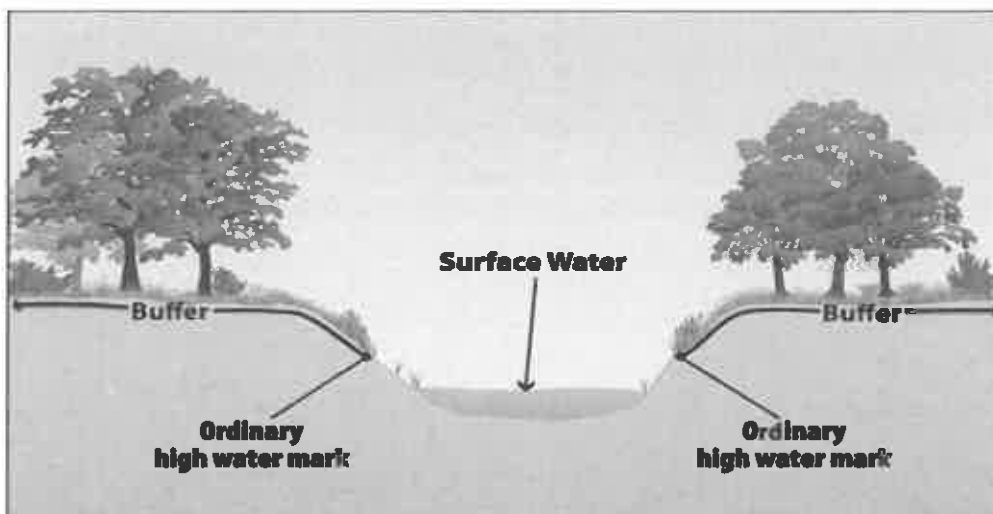
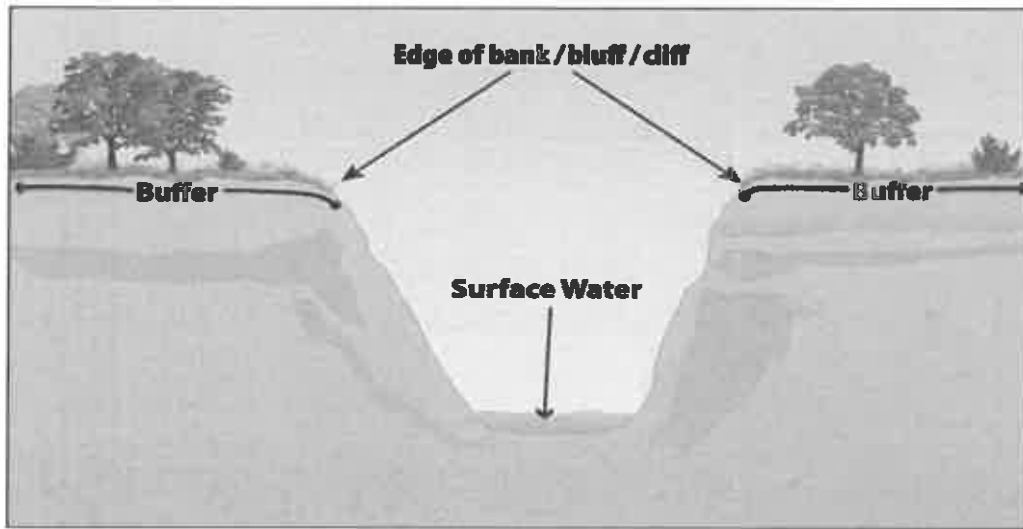


Figure H - 3 Buffer measurements from the edge of the bank, bluff, or cliff, whichever is applicable.



B. Limits to Disturbance within the Buffer

You are considered to be in compliance with this requirement to provide and maintain a natural buffer if you retain and protect from construction activities the natural buffer that existed prior to the commencement of construction. If the buffer area contains no vegetation prior to the commencement of construction (e.g., sand or rocky surface), you are not required to plant vegetation. As noted above, any preexisting structures or impervious surfaces are allowed in the buffer provided you retain and protect from disturbance the vegetation in the buffer outside the preexisting disturbance.

To ensure that the water quality protection benefits of the buffer are retained during construction, you are prohibited from conducting any earth-disturbing activities within the buffer during permit coverage.

C. Discharges to the Buffer

You must ensure that all discharges from the area of earth disturbance to the natural buffer are first treated by the site's erosion and sediment controls (*for example, you must comply with the Part 3.3.1.C requirement to establish sediment controls along any perimeter areas of the site that will receive pollutant discharges*), and if necessary to prevent erosion caused by stormwater flows within the buffer, you must use velocity dissipation devices.

D. SWP3 Documentation

You are required to document in your SWP3 the natural buffer width that is retained. For example, if you are complying with Compliance Alternative 1, you must specify in your SWP3 that you are providing a 100-foot or 50-foot buffer. Or, if you will be complying with Compliance Alternative 2, you must document the reduced width of the buffer you will be retaining (and you must also describe the erosion and sediment controls you will use to achieve an equivalent sediment reduction, as required in Part H.5 below. Note that you must also show any buffers on your site map in your SWP3. Additionally, if any disturbances related to the exceptions in Part H occur within the buffer area, you must document this in the SWP3.

H.5 Guidance for Providing the Equivalent Sediment Reduction as the 100-foot or 50-foot Buffer

If you are selecting Compliance Alternative 2 (provide and maintain a buffer that is less than 100 feet or 50 feet that is supplemented by erosion and sediment controls that achieve the sediment load reduction equivalent to a 100-foot or 50-foot buffer) or Compliance Alternative 3 (implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 100-foot or 50-foot buffer)

A. Determine whether it is Feasible to Provide a Reduced Buffer

DEQ recognizes that there will be a number of situations in which it will be infeasible to provide and maintain a buffer of any width. While some of these situations may exempt you from the buffer requirement entirely (See H.3), if you do not qualify for one of these exemptions, there still may be conditions or circumstances at your site that make it infeasible to provide a natural buffer. For example, there may be sites where a significant portion of the property on which the earth-disturbing activities will occur is located within the buffer area, thereby precluding the retention of natural buffer areas.

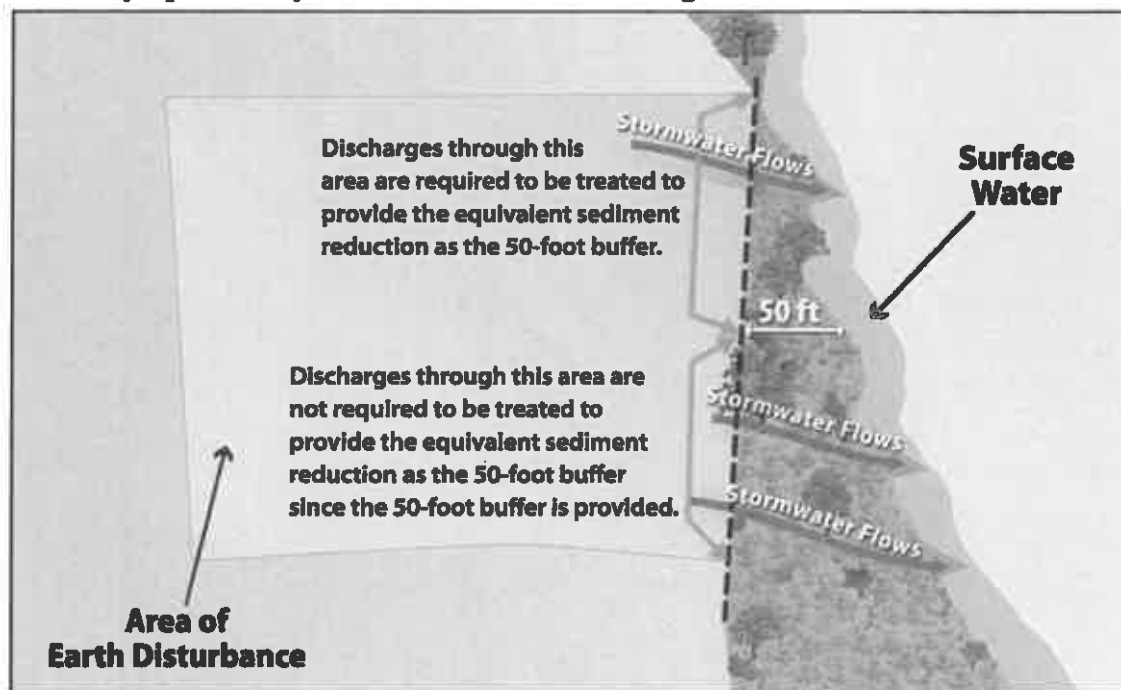
Therefore, you should choose Compliance Alternative 2 if it is feasible for you to retain some natural buffer on your site. (Note: For any buffer width retained, you are required to comply with the requirements in Part H.4, above, concerning the retention of vegetation and restricting earth disturbances.) Similarly, if you determine that it is infeasible to provide a natural buffer of any size during construction, you should choose Compliance Alternative 3.

B. Design Controls That Provide Equivalent Sediment Reduction as 100-foot or 50-foot Buffer

You must next determine what additional controls must be implemented on your site that alone, or in combination with any retained natural buffer, achieve a reduction in sediment equivalent to that achieved by a 100-foot or 50-foot buffer.

Note that if only a portion of the natural buffer is less than 50 feet, you are only required to implement erosion and sediment controls that achieve the sediment load reduction equivalent to the 50-foot buffer for discharges through that area. You would not be required to provide additional treatment of stormwater discharges that flow through 50 feet or more of natural buffer. See Figure H - 4.

Figure H - 4 Example of how to comply with the requirement to provide the equivalent sediment reduction when only a portion of your earth-disturbances discharge to a buffer of less than 50 feet.



Steps to help you meet Compliance Alternative 2 and 3 requirements are provided below:

Step 1 - Estimate the Sediment Reduction from the 100-foot or 50-foot Buffer

In order to design controls that match the sediment removal efficiency of a 100-foot or 50-foot buffer, you first need to know what this efficiency is for your site. The sediment removal efficiencies of natural buffers vary according to a number of site-specific factors, including precipitation, soil type, land cover, slope length, width, steepness, and the types of sediment controls used to reduce the

discharge of sediment prior to the buffer. DEQ has simplified this calculation by developing buffer performance tables covering a range of vegetation and soil types for the areas covered by the permit. See Attachment 1, Tables H - 1 through H - 4.

Note: buffer performance values in Tables H - 1 through H - 4 represent the percent of sediment captured through the use of perimeter controls (e.g., silt fences) and 100-foot or 50-foot buffers at disturbed sites of fixed proportions and slopes. Using Tables H - 1 through H - 4 (see Attachment 1), you can determine the sediment removal efficiency of a 100-foot or 50-foot buffer for your geographic area by matching the vegetative cover type and the type of soils that predominate at your site. For example, if your site is located in Oklahoma City (see Table H - 1), and your buffer vegetation corresponds most closely with that of fescue grass, and the soil type at your site is best typified as sand, your site's sediment removal efficiency would be 90 percent.

In this step, you should choose the vegetation type in the tables that most closely matches the vegetation that would exist naturally in the buffer area on your site regardless of the condition of the buffer. However, because you are not required to plant any additional vegetation in the buffer area, in determining what controls are necessary to meet this sediment removal equivalency in Step 2 below, you will be able to take credit for this area as a fully vegetated "natural buffer."

Similarly, if a portion of the buffer area adjacent to the surface water is owned by another party and is not under your control, you can treat the area of land not under control as having the equivalent vegetative cover and soil type that predominates on the portion of the property on which your construction activities are occurring. *For example, if your earth-disturbances occur within 50 feet of a surface water, but the 10 feet of land immediately adjacent to the surface water is owned by a different party than the land on which your construction activities are taking place and you do not have control over that land, you can treat the 10 foot area adjacent to the stream as having the equivalent soil and vegetation type that predominates in the 40 foot area under your control. You would then make the same assumption in Step 2 for purposes of determining the equivalent sediment removal.*

Alternatively, you may do your own calculation of the effectiveness of the 50-foot buffer based upon your site-specific conditions, and may use this number as your sediment removal equivalency standard to meet instead of using Tables H - 1 through H - 4. This calculation must be documented in your SWP3.

Step 2 - Design Controls That Match the Sediment Removal Efficiency of the 100-foot or 50-foot Buffer

Once you have determined the estimated sediment removal efficiency of a 100-foot or 50-foot buffer for your site in Step 1, you must next select stormwater controls that will provide an equivalent sediment load reductions.

To make the determination that your controls and/or buffer area achieve an equivalent sediment load reduction as the 100-foot or 50-foot buffer, you may use stormwater controls listed in Tables H-1 through H-4 to select a single designed control, such as 12" or 6" wattle, roll material, silt fence or straw mulch or gravel bag berm (see Attachment 1), or you will use a model or other type of calculator. There are a variety of models available that can be used to support your calculation, including USDA's RUSLE-series programs and the WEPP erosion model, SEDCAD, SEDIMOT, or other models.

Alternatively, you may elect to install a combination of stormwater controls and to retain some amount of a buffer. Whichever control(s) you select, you must demonstrate in your SWP3 that the controls will provide at a minimum the same sediment removal capabilities as the 100-foot or 50-foot buffer (Step 1). You are allowed to take credit for the removal efficiencies of your required perimeter controls in your calculation of equivalency, because these were included in calculating the buffer removal efficiencies in Tables H - 1 through H - 4. (Note: You are reminded that the controls must be kept in effective operating condition until you have completed final stabilization on the disturbed portions of the site discharging to the surface water.)

If you are retaining a buffer of less than 100 feet or 50 feet, you may take credit for the removal that will occur from the reduced buffer and only need to provide additional controls to make up the difference between the removal efficiency of a 100-foot or 50-foot buffer and the removal efficiency of the narrower buffer. For example, if you are retaining a 30-foot buffer, you can account for the

sediment removal provided by the 30-foot buffer retained, and you will only need to design controls to make up for the additional removal provided by the 20-foot of buffer that is not being provided. To do this, you would plug the width of the buffer that is retained into RUSLE or another model, along with other stormwater controls that will together achieve a sediment reduction equivalent to a natural 50-foot buffer.

As described in Step 1 above, you can take credit for the area you have retained as a “natural buffer” as being fully vegetated, regardless of the condition of the buffer area.

For example, if your earth-disturbances occur within 30 feet of a surface water, but the 10 feet of land immediately adjacent to the surface water is owned by a different party than the land on which your construction activities are taking place and you do not have control over that land, you can treat the 10-foot area adjacent to the stream as having the equivalent soil and vegetation type a natural buffer, regardless of the activities that are taking place in the area. Therefore, you can assume (for purposes of your equivalency calculation) that your site is providing the sediment removal equivalent of a 30-foot buffer, and you will only need to design controls to make up for the additional removal provided by the 20-foot of buffer that is not being provided.

Step 3 - Document How Site-Specific Controls Will Achieve the Sediment Removal Efficiency of the 100-foot or 50-foot Buffer

In Steps 1 and 2, you determined both the expected sediment removal efficiency of a 100-foot or 50-foot buffer at your site, and you used this number as a performance standard to design controls to be installed at your site, which alone or in combination with any retained natural buffer, achieves the expected sediment removal efficiency of a 100-foot or 50-foot buffer at your site. The final step is to document in your SWP3 the information you relied on to calculate the equivalent sediment reduction as an undisturbed natural buffer. DEQ will consider your documentation to be sufficient if it generally meets the following:

For Step 1: refer to the Table in Attachment 1 that you used to derive your estimated 100-foot or 50-foot buffer sediment removal efficiency performance. Include information about the buffer vegetation and soil type that predominate at your site, which you used to select the sediment load reduction value in Tables H - 1 through H - 4. Or, if you conducted a site-specific calculation for sediment removal efficiency, provide the specific removal efficiency, and the information you relied on to make your site-specific calculation.

For Step 2: (1) Specify a single designed stormwater control (see Table H-1 – H-4) or other stormwater controls that you used to estimate sediment load reductions from your site. Specify a model or other type of calculator that you used to support your calculation if any; and (2) the results of calculations showing how your controls will meet or exceed the sediment removal efficiency from Step 1. If you choose Compliance Alternative 3, you must also include in your SWP3 a description of why it is infeasible for you to provide and maintain an undisturbed natural buffer of any size.

ATTACHMENT 1

Sediment Removal Efficiency Tables: Percent of sediment removal was calculated for a 200-foot runoff area with a 100-foot buffer, and a 100-foot runoff area with a 50-foot buffer. DEQ recognizes that very high removal efficiencies, even where theoretically achievable by a 50-foot or 100-foot buffer, may be very difficult to achieve in practice using alternative controls. Therefore in the tables below, DEQ has limited the removal efficiencies to a maximum of 90%. Efficiencies that were calculated at greater than 90% are shown as 90%, and this is the minimum percent removal that must be achieved by alternative controls. When more than one alternative BMP must be used to compensate for the loss of the buffer strip, this amount should be calculated using the following formula:

$$\text{Removal Rate}_{\text{total}} = \text{Removal Rate}_1 + (1 - \text{Removal Rate}_1)(\text{Removal Rate}_2)$$

For example, if we are installing two BMPs that both have a 70% removal rate, the total removal rate is:

$$0.70 + (1 - 0.70)(0.70) = 0.91 = 91\%$$

Best Management Practices Defined:

- **Fescue:** Buffer strip (100 feet or 50 feet) at the end of the overland flow path of Fescue grass, the area has not been grazed
- **Grama Grass:** Buffer strip (100 feet or 50 feet) at the end of the overland flow path of Grama grass, at least the third year after seeding
- **Range Grass:** Buffer zone (100 feet or 50 feet) at the end of the overland flow path of a generic low production range grass
- **Weeds:** Buffer zone (100 feet or 50 feet) at the end of the overland flow path of at least 5 years of growth of generic weeds started from volunteer germination
- **12" Wattle:** 12 inch straw sock or wattle installed at the base of the runoff area
- **6" Wattle:** 6 inch straw sock or wattle installed at the end of the overland flow path
- **Roll Material:** Erosion control blanket placed over the disturbed area
- **Silt Fence:** Full retardance fabric silt fence installed at the end of the overland flow path
- **Straw Mulch:** Straw mulch applied over the disturbed area, 4000 lbs/acre
- **Gravel Berm:** Gravel bag berm installed on a level contour to intercept sheet flows.

Soils Defined:

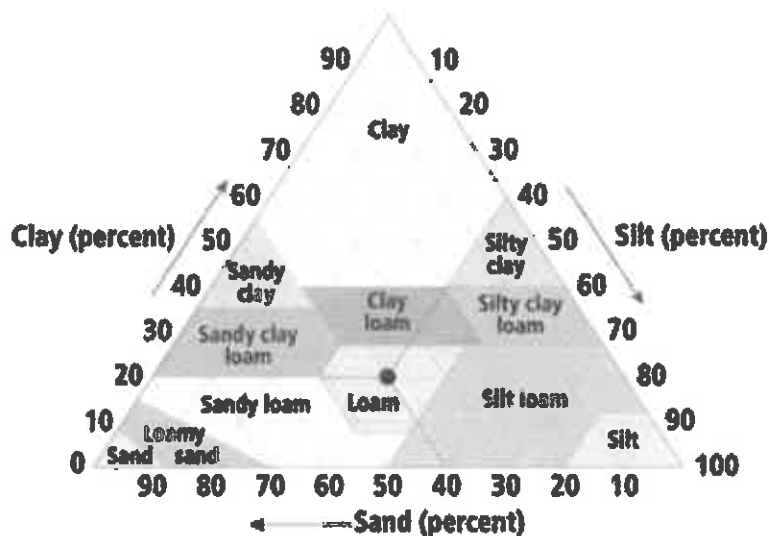


Table H-1 Estimated Buffer Performance of Blade Fill in Oklahoma County, Oklahoma *

| Best Management Practices** | Estimated % Sediment Removal | | | | | | | | | | |
|-----------------------------|------------------------------|------------|-----------------|-----------|-----------|------|------------|------|-----------------|------------|------|
| | Clay | Silty Clay | Silty Clay Loam | Clay Loam | Silt Loam | Loam | Sandy Loam | Silt | Sandy Clay Loam | Loamy Sand | Sand |
| Fescue (100' Buffer) | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Fescue (50' Buffer) | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Grama Grass (100' Buffer) | 80 | 83 | 81 | 82 | 81 | 81 | 80 | 79 | 82 | 85 | 87 |
| Grama Grass (50' Buffer) | 79 | 79 | 82 | 80 | 81 | 80 | 80 | 79 | 80 | 83 | 76 |
| Range Grass (100' Buffer) | 89 | 87 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 89 |
| Range Grass (50' Buffer) | 88 | 86 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 98 | 87 |
| Weeds (100' Buffer) | 68 | 67 | 70 | 71 | 71 | 72 | 73 | 72 | 73 | 73 | 63 |
| Weeds (50' Buffer) | 67 | 65 | 69 | 68 | 70 | 71 | 71 | 70 | 72 | 67 | 53 |
| 12" Wattle | 71 | 61 | 56 | 67 | 45 | 57 | 70 | 20 | 76 | 82 | 73 |
| 6" Wattle | 61 | 52 | 48 | 59 | 41 | 52 | 68 | 20 | 73 | 66 | 29 |
| Roll Material | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Silt Fence | 61 | 52 | 48 | 59 | 41 | 52 | 68 | 20 | 73 | 66 | 66 |
| Straw Mulch | 76 | 75 | 77 | 73 | 78 | 75 | 77 | 81 | 76 | 77 | 88 |
| Gravel Bag Berm | 80 | 68 | 64 | 75 | 50 | 62 | 74 | 27 | 80 | 84 | 86 |

* Applicable for sites less than nine percent slope

** Characterization focuses on the under-story vegetation

Table H-2 Estimated Buffer Performance of Blade Cut in Oklahoma County, Oklahoma *

| Best Management Practices** | Estimated % Sediment Removal | | | | | | | | | | |
|-----------------------------|------------------------------|------------|-----------------|-----------|-----------|------|------------|------|-----------------|------------|------|
| | Clay | Silty Clay | Silty Clay Loam | Clay Loam | Silt Loam | Loam | Sandy Loam | Silt | Sandy Clay Loam | Loamy Sand | Sand |
| Fescue (100' Buffer) | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Fescue (50' Buffer) | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Grama Grass (100' Buffer) | 60 | 58 | 74 | 69 | 78 | 77 | 73 | 74 | 72 | 57 | 16 |
| Grama Grass (50' Buffer) | 59 | 53 | 67 | 62 | 74 | 30 | 69 | 74 | 70 | 38 | 11 |
| Range Grass (100' Buffer) | 87 | 85 | 89 | 90 | 90 | 90 | 90 | 89 | 89 | 86 | 86 |
| Range Grass (50' Buffer) | 85 | 84 | 88 | 89 | 90 | 90 | 90 | 89 | 87 | 84 | 84 |
| Weeds (100' Buffer) | 57 | 52 | 62 | 63 | 64 | 64 | 66 | 62 | 26 | 52 | 43 |
| Weeds (50' Buffer) | 53 | 51 | 58 | 58 | 62 | 64 | 66 | 62 | 58 | 46 | 39 |
| 12" Wattle | 63 | 53 | 55 | 65 | 46 | 62 | 75 | 20 | 77 | 54 | 11 |
| 6" Wattle | 28 | 26 | 45 | 46 | 42 | 58 | 63 | 17 | 38 | 7 | 1 |
| Roll Material | 83 | 84 | 85 | 83 | 86 | 85 | 85 | 90 | 85 | 86 | 86 |
| Silt Fence | 28 | 26 | 45 | 46 | 42 | 58 | 63 | 17 | 38 | 7 | 1 |
| Straw Mulch | 44 | 42 | 45 | 42 | 46 | 44 | 46 | 55 | 43 | 48 | 47 |
| Gravel Bag Berm | 76 | 65 | 61 | 72 | 48 | 62 | 73 | 22 | 77 | 82 | 82 |

* Applicable for sites less than nine percent slope

** Characterization focuses on the under-story vegetation

Table H-3 Estimated Buffer Performance of Blade Fill Tulsa County, Oklahoma *

| Best Management Practices** | Estimated % Sediment Removal | | | | | | | | | | |
|-----------------------------|------------------------------|------------|-----------------|-----------|-----------|------|------------|------|-----------------|------------|------|
| | Clay | Silty Clay | Silty Clay Loam | Clay Loam | Silt Loam | Loam | Sandy Loam | Silt | Sandy Clay Loam | Loamy Sand | Sand |
| Fescue (100' Buffer) | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Fescue (50' Buffer) | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Grama Grass (100' Buffer) | 81 | 82 | 82 | 82 | 81 | 81 | 80 | 79 | 82 | 85 | 87 |
| Grama Grass (50' Buffer) | 79 | 80 | 82 | 82 | 81 | 81 | 80 | 78 | 80 | 84 | 76 |
| Range Grass (100' Buffer) | 90 | 87 | 90 | 90 | 90 | 90 | 90 | 89 | 90 | 90 | 89 |
| Range Grass (50' Buffer) | 88 | 86 | 89 | 90 | 90 | 90 | 90 | 90 | 90 | 88 | 86 |
| Weeds (100' Buffer) | 50 | 50 | 48 | 51 | 50 | 50 | 49 | 47 | 51 | 51 | 48 |
| Weeds (50' Buffer) | 43 | 48 | 47 | 49 | 48 | 47 | 49 | 45 | 49 | 44 | 40 |
| 12" Wattle | 68 | 60 | 53 | 65 | 44 | 57 | 69 | 18 | 73 | 80 | 71 |
| 6" Wattle | 57 | 50 | 47 | 58 | 40 | 53 | 66 | 18 | 71 | 62 | 30 |
| Roll Material | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Silt Fence | 57 | 50 | 47 | 58 | 40 | 53 | 66 | 18 | 71 | 62 | 30 |
| Straw Mulch | 72 | 75 | 75 | 73 | 76 | 74 | 74 | 79 | 92 | 75 | 76 |
| Gravel Bag Berm | 77 | 66 | 60 | 71 | 49 | 62 | 72 | 24 | 77 | 82 | 84 |

* Applicable for sites less than nine percent slope

** Characterization focuses on the under-story vegetation

Table H-4 Estimated Buffer Performance of Blade Cut in Tulsa County, Oklahoma *

| Best Management Practices** | Estimated % Sediment Removal | | | | | | | | | | |
|-----------------------------|------------------------------|------------|-----------------|-----------|-----------|------|------------|------|-----------------|------------|------|
| | Clay | Silty Clay | Silty Clay Loam | Clay Loam | Silt Loam | Loam | Sandy Loam | Silt | Sandy Clay Loam | Loamy Sand | Sand |
| Fescue (100' Buffer) | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Fescue (50' Buffer) | 90 | 89 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Grama Grass (100' Buffer) | 60 | 59 | 73 | 68 | 78 | 77 | 73 | 88 | 72 | 56 | 13 |
| Grama Grass (50' Buffer) | 58 | 55 | 68 | 63 | 76 | 75 | 70 | 73 | 69 | 39 | 11 |
| Range Grass (100' Buffer) | 87 | 85 | 89 | 90 | 90 | 90 | 90 | 87 | 90 | 86 | 85 |
| Range Grass (50' Buffer) | 85 | 84 | 88 | 89 | 90 | 90 | 90 | 88 | 87 | 84 | 84 |
| Weeds (100' Buffer) | 52 | 50 | 58 | 59 | 63 | 64 | 66 | 63 | 56 | 42 | 40 |
| Weeds (50' Buffer) | 49 | 45 | 45 | 56 | 59 | 61 | 59 | 56 | 49 | 41 | 36 |
| 12" Wattle | 62 | 55 | 55 | 63 | 45 | 61 | 75 | 20 | 77 | 55 | 8 |
| 6" Wattle | 25 | 27 | 45 | 50 | 41 | 57 | 63 | 198 | 38 | 6 | 1 |
| Roll Material | 82 | 83 | 84 | 80 | 86 | 90 | 85 | 90 | 84 | 86 | 86 |
| Silt Fence | 40 | 27 | 45 | 50 | 74 | 57 | 63 | 18 | 38 | 6 | 1 |
| Straw Mulch | 35 | 41 | 42 | 27 | 43 | 39 | 40 | 51 | 42 | 43 | 44 |
| Gravel Bag Berm | 73 | 63 | 58 | 69 | 47 | 61 | 70 | 20 | 74 | 79 | 82 |

* Applicable for sites less than nine percent slope

** Characterization focuses on the under-story vegetation

ADDENDUM I – STORMWATER RUNOFF COEFFICIENTS

Typical Runoff Coefficients for 5 to 10 year Frequency Design*

| | Description of Area | Runoff Coefficients |
|--------------------------|--------------------------|---------------------|
| Business | | |
| 1 | Downtown areas | 0.70-0.95 |
| 2 | Neighborhood areas | 0.50-0.70 |
| Residential | | |
| 3 | Single-family areas | 0.30-0.50 |
| 4 | Multi-units, detached | 0.40-0.60 |
| 5 | Multi-units, attached | 0.60-0.75 |
| 6 | Residential (suburban) | 0.25-0.40 |
| 7 | Apartment dwelling areas | 0.50-0.70 |
| Industrial | | |
| 8 | Light areas | 0.50-0.80 |
| 9 | Heavy areas | 0.60-0.90 |
| 10 | Parks, cemeteries | 0.10-0.23 |
| 11 | Playgrounds | 0.20-0.35 |
| 12 | Railroad yard areas | 0.20-0.40 |
| 13 | Unimproved areas | 0.10-0.30 |
| Streets | | |
| 14 | Asphalt | 0.70-0.95 |
| 15 | Concrete | 0.80-0.95 |
| 16 | Brick | 0.70-0.85 |
| 17 | Drives and walks | 0.75-0.85 |
| 18 | Roofs | 0.75-0.95 |
| Lawns, Sandy soil | | |
| 19 | Flat, 2% | 0.05-0.10 |
| 20 | Average, 2-7% | 0.10-0.15 |
| 21 | Steep, 7% | 0.15-0.20 |
| Lawns, Heavy soil | | |
| 22 | Flat, 2% | 0.13-0.17 |
| 23 | Average, 2-7% | 0.18-0.22 |
| 24 | Steep, 7% | 0.25-0.35 |

*Viessman, W., Jr., G. L. Lewis, J. W. Knapp, 1989, *Introduction to Hydrology*, 3rd ed., Harper and Row, New York.

ADDENDUM J – NOTIFICATION OF CHANGE OF OWNERSHIP

(Project Name and permit authorization number #)

I, _____, operator of a larger common plan of development or sale,
(Name of Permittee)

located at _____ and authorized under DEQ's Construction
(Subdivision Name)

General Permit (CGP) OKR10, have notified the new owner/operator, _____,
(Name of New Owner/Operator)

who can be reached at _____ and _____,
(Phone Number) (Email Address)

of an individual lot # _____, Block # _____ of _____,
(Lot Number) (Block Number) (Subdivision Name)

of the stormwater permitting requirements for his/her construction site(s).

DEQ CGP OKR10 requires this new owner/operator to submit a NOI and prepare a SWP3 prior to commencement of any construction activity for this lot(s). I understand that with the sale of this lot to the new owner(s)/operator(s); I must notify the new owner(s)/operator(s) of their obligation to obtain their own permit coverage with DEQ prior to commencement of construction activity.

Signature: _____ Title: _____

Print Name: _____ Date: _____

AUTHORIZATION TO DISCHARGE
OKLAHOMA POLLUTANT DISCHARGE ELIMINATION SYSTEM

Permit Number OKS000201

In compliance with the Oklahoma Pollutant Discharge Elimination System (OPDES) Act, Title 27A O.S. Supp.1999, § 2-6-201 *et seq.*, and the rules of the State of Oklahoma Department of Environmental Quality (DEQ) adopted hereunder {See OAC 252:606}; the Federal Clean Water Act, Public Law 95-217 (33 U.S.C. 1251 *et seq.*), Section 402; and NPDES Regulations (40 CFR Parts 122, 124, 136 and 403),

City of Tulsa
4818 S. Elwood
Tulsa, OK 74107

Oklahoma Turnpike Authority
3500 N. Martin Luther King Ave.
Oklahoma City, OK 73111-4295

Oklahoma Department of
Transportation
200 N.E. 21st Street
Oklahoma City, OK 73105

co-permittees are hereby authorized to discharge storm water from the Tulsa Municipal Separate Storm Sewer System (MS4) to receiving waters:

Arkansas River Basin

Bigheart Creek, Cherry-Red Fork Creek, Vensel Creek, Crow Creek, Downtown Creek, Upper Joe Creek, Elm Creek, Fred Creek, Swan Creek, Fry Ditch No. 2, Garden City, S. Fork, Little Joe Creek, Hager Creek, Haikey Creek, S. Tulsa Drainage Area, Harlow Creek, Lower Basin, Perry Man Ditch, Mooser Creek, Parkview Creek, Nickel Creek, N. Fork Little Joe, and Oak Creek.

Verdigris River Basin

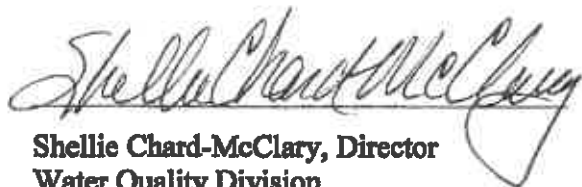
Adams Creek, Center-Rolling Hills Creek, Bird Creek, Coal Creek, Cooley Creek, Dirty Butter Creek, Flat Rock Creek, Lower Middle Mingo Creek, Mingo Creek, Lower Mingo Creek, Reservoir Creek, Spunky - Pond Creeks, Upper Mingo Creek, and Upper Middle Mingo Creek and Knudson Creek.


Also included are tributaries thereto, in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, III, IV, V, VI, and VII hereof.

This permit shall become effective on October 16, 2011. It will replace and/or supersede the permit issued on January 13, 2003.

This permit and the authorization to discharge shall expire at midnight on October 15, 2016.

For The Oklahoma Department of Environmental Quality:


Shellie Chard-McClary, Director
Water Quality Division


Mark Derichsweiler, P.E., Engineering Manager
Water Quality Division

TULSA MUNICIPAL SEPARATE STORM SEWER SYSTEM

| PARAGRAPH | TABLE OF CONTENTS | PAGE |
|------------------|--|-------------|
| PART I. | DISCHARGES AUTHORIZED UNDER THIS PERMIT | 1 |
| A. | Permit Area..... | 1 |
| B. | Authorized Discharges | 1 |
| C. | Permittee Responsibilities | 1 |
| D. | Discharge Goals..... | 2 |
| PART II. | STORM WATER MANAGEMENT PROGRAM | 3 |
| A. | SWMP Requirements | 3 |
| B. | Area-specific SWMP Requirements | 14 |
| C. | Deadlines for Program Implementation | 14 |
| D. | Roles and Responsibilities of Permittee(s) | 14 |
| E. | Legal Authority | 14 |
| F. | SWMP Resources | 15 |
| G. | SWMP Review and Update..... | 15 |
| H. | Retention of Storm Water Management Program Records | 16 |
| PART III. | SCHEDULES FOR IMPLEMENTATION AND COMPLIANCE..... | 17 |
| A. | Implementation and Augmentation of SWMP | 17 |
| C. | Compliance with Effluent Limitations (Reserved) | 18 |
| D. | Updating SWMP..... | 18 |
| PART IV. | MONITORING AND REPORTING REQUIREMENTS | 19 |
| A. | Watershed Characterization Program | 19 |
| B. | Floating Monitoring | 22 |
| C. | Annual Report and Comprehensive Assessment of the Watershed Characterization Program | 22 |
| D. | Certification and Signature of Reports..... | 23 |
| E. | Reporting: Where and When to Submit | 23 |
| PART V. | STANDARD PERMIT CONDITIONS | 24 |
| A. | Duty to Comply | 24 |
| B. | Penalties for Violations of Permit Conditions..... | 24 |
| C. | Duty to Reapply..... | 25 |
| D. | Need to Halt or Reduce Activity Not a Defense..... | 25 |
| E. | Duty to Mitigate | 25 |
| F. | Duty to Provide Information | 25 |

| | | |
|---|--|-----------|
| G. | Other Information | 25 |
| H. | Signatory Requirements..... | 25 |
| I. | Penalties for Falsification of Monitoring Systems..... | 26 |
| J. | Oil and Hazardous Substance Liability..... | 26 |
| K. | Property Rights..... | 26 |
| L. | Severability..... | 26 |
| M. | Requiring a Separate Permit..... | 27 |
| N. | State Environmental Laws | 27 |
| O. | Proper Operation and Maintenance | 27 |
| P. | Monitoring and Records | 27 |
| Q. | Monitoring Methods..... | 28 |
| R. | Inspection and Entry | 28 |
| S. | Permit Actions..... | 28 |
| T. | Additional Monitoring by the Permittee..... | 29 |
| U. | Archeological and Historical Sites (Reserved)..... | 29 |
| PART VI. Permit Modification | | 30 |
| A. | Modification of the Permit | 30 |
| B. | Termination of Coverage for a Single Permittee..... | 30 |
| C. | Modification of the SWMP | 30 |
| D. | Changes in Monitoring Outfalls..... | 30 |
| PART VII. Definitions..... | | 31 |

PART I. DISCHARGES AUTHORIZED UNDER THIS PERMIT

A. Permit Area

This permit covers all areas located within the corporate boundary of the City of Tulsa that are served by municipal separate storm sewers owned or operated by the permittee(s).

B. Authorized Discharges

1. Except for discharges prohibited under Part I.B.2, this permit authorizes all existing or new storm water point source discharges to waters of the State from those portions of the Municipal Separate Storm Sewer System (MS4) owned or operated by the permittee(s).
2. This permit does not authorize the following discharges, whether discharged separately or commingled with municipal storm water:
 - a. *Non-storm Water and Industrial Storm Water:* discharges of non-storm water, any Storm Water Discharge Associated with Industrial Activity, or other storm water discharges required by the Director to obtain an OPDES permit, except where such discharges are identified by and in compliance with Part II.A.6.a. This permit does not transfer liability for discharging without (or in violation of) an OPDES permit from the operator to the permittee(s).
 - b. *Discharges of material resulting from a spill:* This permit does not transfer liability for a spill itself from the party(s) responsible for the spill to the permittee(s), nor relieve the party(s) responsible for a spill from the reporting requirements OAC 252:606-1-3(b)(2) adopting and incorporating by reference 40 CFR Part 117 and OAC 252:606-1-3(b)(10) adopting and incorporating by reference 40 CFR Part 302.

C. Permittee Responsibilities

1. Each permittee is responsible for:
 - a. Compliance with permit conditions relating to discharges from portions of the MS4 where the permittee is the operator;
 - b. Storm Water Management Program (SWMP) implementation on portions of the MS4 where the permittee is the operator;
 - c. Compliance with annual reporting requirements as specified in Part IV.C;
 - d. Collection of representative monitoring data required by Part IV.A according to such agreements as may be established between permittees; and
 - e. A plan of action to assume responsibility for implementation of storm water management and monitoring programs on their portions of the MS4 should inter-jurisdictional agreements allocating responsibility between permittees be dissolved or in default.
2. Permittees are jointly responsible for permit compliance on portions of the MS4 where operational or SWMP implementation authority over portions of the MS4 is shared or has been transferred from one permittee to another in accordance with legally binding agreements.

D. Discharge Goals

The following goals are established for discharges from the MS4:

1. No discharge of toxic pollutants in toxic amounts;
2. No discharge of pollutants in quantities that would cause a violation of Oklahoma's Water Quality Standards;
3. No discharge of floatable debris, oils, scum, foam, or grease in other than trace amounts;
4. No discharge of non-storm water from the MS4 (except as provided in Part II.A.6.a);
5. No impairment or loss of State-designated beneficial uses of receiving waters as a result of storm water discharges from the municipal separate storm sewer. No degradation of receiving waters as a result of storm water discharges from the MS4 except as authorized by the State in accordance with the State's Antidegradation Policy [Title 82 O.S. § 1085.30 (C)(1) and OAC 785:45-5-25]; and
6. Reduction of pollutants discharged to the Maximum Extent Practicable (MEP).

PART II. STORM WATER MANAGEMENT PROGRAM

Each permittee shall contribute to the development, revision and implementation of a comprehensive SWMP, including pollution prevention measures, treatment or removal techniques, monitoring, use of legal authority, and other appropriate means to control the quality of storm water discharged from the Municipal Separate Storm Sewer System (MS4). The Storm Water Management Program (SWMP) shall be implemented in accordance with Section 402(p)(3)(B) of the Act, and the Storm Water Regulations OAC 252.606-1-3(b)(3)(L) adopting and incorporating by reference 40 CFR Part 122.26.

Controls and activities in the SWMP shall identify areas of permittee responsibility on a jurisdiction, applicability, or specific area basis. The SWMP shall include controls necessary to effectively prohibit the discharge of non-storm water into municipal separate storm sewers and reduce the discharge of pollutants from the MS4 to the MEP.

The SWMP shall cover the term of this permit and shall be updated as necessary, or as required by the Director, to ensure compliance with the statutory requirements of Section 402(p)(3)(B) of the Act. Modifications to the SWMP shall be made in accordance with Part II.G of the permit. Compliance with the SWMP and any schedules in Part III shall be deemed compliant with Part II.A and II.B. The SWMP, and all updates made in accordance with Part II.G are hereby incorporated by reference.

Implementation of the SWMP may be achieved through participation with other permittees, public agencies, or private entities in cooperative efforts to satisfy the requirements of Part II in lieu of creating duplicate program elements for each individual permittee. The SWMP, taken as a whole, shall achieve the "effective prohibition on the discharge of non-storm water" and "MEP" standards from Section 402(p)(3)(B) of the Act.

A. SWMP Requirements

1. *Structural Controls and Storm Water Collection System Operation:* The MS4 and any storm water structural controls shall be operated in a manner to reduce the discharge of pollutants to the MEP.
2. *Areas of New Development and Significant Redevelopment:* A comprehensive master planning process (or equivalent) to develop, implement, and enforce controls to minimize the discharge of silt, scrap, trash, and other pollutants from areas of new development and significant re-development after construction is completed shall be implemented. Permittee(s) shall promote low impact development (LID) and other green design strategies as an effective best management practice (BMP) to minimize the impact of urban runoff discharges from those areas on the receiving streams. LID and other green designs which use on-site natural features, such as filtration and infiltration can greatly reduce peak flow and pollutant loads of urban runoff. The goals of such controls shall be:
 - a. *New development:* limiting increases in the discharge of pollutants in storm water as a result of development;
 - b. *Re-development:* reducing the discharge of pollutants in storm water; and
 - c. *Post Construction Runoff Controls:* minimizing increases in the quantity of storm water and the discharge of pollutants in storm water discharges from post construction

runoff.

3. **Roadways:** Public streets, roads, and highways shall be operated and maintained in a manner to minimize discharge of pollutants, including those pollutants related to deicing or sanding activities. Road maintenance and deicing contractors shall be familiar with MS4 regulations and requirements to prevent contamination of the Waters of the State. Contracts shall include appropriate provisions to ensure compliance with the SWMP and this permit.
4. **Flood Control Projects:** Impacts on receiving water quality shall be assessed for all flood management projects. The feasibility of retrofitting existing structural flood control devices to provide additional pollutant removal from storm water shall be evaluated.
5. **Pesticide, Herbicide, and Fertilizer Application:** Each permittee shall implement controls to reduce the discharge of pollutants related to the permittee's storage and application of pesticides, herbicides, and fertilizers. Permittees with jurisdiction over lands not directly owned by that entity (e.g. an incorporated city with authority over activities occurring anywhere within their city limits) shall also implement programs to reduce the discharge of pollutants related to commercial application and distribution of pesticides, herbicides, and fertilizers.
6. **Illicit Discharges and Improper Disposal:** Non-storm water discharges to the MS4 shall be effectively prohibited. For the purpose of this permit, the following discharges need not be addressed as illicit discharges by the permittee(s) nor prohibited from entering the MS4: discharges regulated by a separate OPDES permit, and non-storm water discharges identified by the permittee as specified in item (a) below.
 - a. Permittee(s) shall identify in the SWMP any categories of non-storm water that are not prohibited from being discharged into the MS4, in accordance with conditions described in items (1) and (2) below.
 - (1) Categories of non-storm water discharges that the permittee(s) may exempt from the prohibition on non-storm water entering the MS4 include:
 - (a) Water line flushing;
 - (b) Landscape irrigation;
 - (c) Diverted stream flows;
 - (d) Rising ground waters;
 - (e) Uncontaminated ground water infiltration to separate storm sewers;
 - (f) Uncontaminated pumped ground water;
 - (g) Discharge from potable water sources;
 - (h) Foundation drains;
 - (i) Air conditioning condensation;
 - (j) Irrigation water;
 - (k) Springs;
 - (l) Water from crawl space pumps;

- (m) Footing drains;
 - (n) Lawn watering;
 - (o) Individual residential car washing;
 - (p) Flows from riparian habitats and wetlands;
 - (q) Dechlorinated swimming pool discharges;
 - (r) Street wash water;
 - (s) Discharges from emergency fire fighting activities provided procedures are in place for the Incident Commander, Fire Chief, or other on-scene fire fighting official in charge to make an evaluation regarding potential releases of pollutants from the scene. Measures must be taken to reduce any pollutant releases to the MEP subject to all appropriate actions necessary to ensure public health and safety. These procedures must be documented in the SWMP. Discharges or flows from fire fighting training activities are not authorized by this permit; and
 - (t) Other similar occasional incidental non-storm water discharges (e.g. non-commercial or charity car washes, etc.).
- (2) Categories of non-storm water discharges exempted from the prohibition on non-storm water must not be reasonably expected [based on information available to the permittee(s)] to be significant sources of pollutants to the waters of the State, because of either:
- (a) The nature of the discharges; or
 - (b) Conditions placed on the discharges by the permittee(s).

The SWMP shall describe any local controls or conditions placed on discharges exempted from the prohibition on non-storm water. Permittee(s) shall prohibit any individual non-storm water discharge otherwise exempted under this paragraph from the prohibition on non-storm water that is determined to be contributing significant amounts of pollutants to the MS4.

- b. Each permittee shall prevent (or require the operator of the sanitary sewer to eliminate) unpermitted discharges of dry and wet weather overflows from sanitary sewers into the MS4. Each permittee shall limit the infiltration or seepage from sanitary sewers into the MS4.
- c. The permittee(s) shall ensure the implementation of a program to reduce the discharge of floatables (e.g. litter and other human-generated solid refuse). The floatables control program shall include source controls and, where necessary, structural controls.
- d. The discharge or disposal of used motor vehicle fluids and household hazardous wastes and the intentional disposal of collected quantities of grass clippings, leaf litter, and animal wastes into storm sewers shall be prohibited. The permittee(s) shall ensure the implementation of programs to collect used motor vehicle fluids (at a minimum, oil and antifreeze) for recycle, reuse, or proper disposal and to collect household hazardous waste materials (including paint, solvents, pesticides, herbicides, and other hazardous

- materials) for recycle, reuse, or proper disposal. Such programs shall be readily available to all private residents and shall be publicized and promoted on a regular basis.
- e. A program to locate and eliminate illicit discharges and improper disposal into the MS4 shall be revised, updated as needed and implemented. This program shall include dry weather screening activities to locate portions of the MS4 with suspected illicit discharges and improper disposal. Follow-up activities to eliminate illicit discharges and improper disposal may be prioritized on the basis of magnitude and nature of the suspected discharge; sensitivity of the receiving water; and/or other relevant factors. This program shall establish priorities and schedules for screening the entire MS4 at least once per five years. The permittee(s) shall utilize a consistent method (e.g. by land area, by outfall, etc.) for determining the percentage of the MS4 that has been screened. Facility inspections may be carried out in conjunction with other municipal programs (e.g. pretreatment inspections of industrial users, health inspections, fire inspections, etc.), but must include random inspections for facilities not normally visited by the municipality.
 - f. Each permittee shall require the elimination of illicit discharges and improper disposal practices as expeditiously as reasonably possible. Where elimination of an illicit discharge within thirty (30) days is not possible, the permittee shall require an expeditious schedule for removal of the discharge. In the interim, the permittee shall require the operator of the illicit discharge to take all reasonable and prudent measures to minimize the discharge of pollutants to the MS4.
 - g. The permittee(s) shall maintain, and update as necessary, a list of discharges to municipal separate storm sewers that have been issued an OPDES permit or authorization. The list shall include the name, location and OPDES permit authorization number of the discharger.
7. *Spill Prevention and Response:* A program to prevent, contain, and respond to spills that may discharge into the MS4 shall be implemented. Where discharge of material resulting from a spill is necessary to prevent loss of life, personal injury, or severe property damage, the permittees shall take, or insure the party responsible for the spill takes, all reasonable steps to minimize or prevent any adverse effects on human health or the environment. The spill response program shall be made a part of the SWMP and include a combination of spill response actions by the permittee(s) (and/or another public or private entity), and legal requirements for private entities within the permittee's jurisdiction.
8. *Industrial & High Risk Runoff:* A program to identify and control pollutants in storm water discharges to the MS4 from municipal landfills; other treatment, storage, or disposal facilities for municipal waste (e.g. transfer stations, incinerators, etc.); hazardous waste treatment, storage, disposal and recovery facilities; facilities that are subject to the Emergency Planning and Community Right-to-know Act (EPCRA) Title III, Section 313; and any other industrial or commercial discharge the permittee(s) determines are contributing a substantial pollutant loading to the MS4 shall be implemented. The program shall include:
- a. Priorities and procedures for inspections, monitoring (see also Part II.A.12.c.), and

- establishing and implementing control measures for such discharges; and
- b. A list of industrial storm water sources discharging to the MS4 that shall be maintained and updated as necessary.
9. **Construction Site Runoff:** A program to reduce the discharge of pollutants from construction sites shall be implemented. This program shall include:
 - a. Requirements for the use and maintenance of appropriate structural and nonstructural BMPs to reduce pollutants discharged to the MS4 during the time construction are underway;
 - b. Inspection of construction sites and enforcement of control measures (in accordance with priorities and procedures established in the SWMP);
 - c. Appropriate education and training measures for construction site operators; and
 - d. Notification of appropriate building permit applicants of their potential responsibilities under the OPDES permitting program for construction site runoff.
 10. **Public Education:** A public education program shall be revised and updated as needed, and shall include the following elements:
 - a. A program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or improper disposal of materials, including floatables, into the MS4;
 - b. A program to promote, publicize, and facilitate the proper management and disposal of used motor vehicle fluids and household hazardous wastes; and
 - c. A program to promote, publicize, and facilitate the proper use, application, and disposal of pesticides, herbicides, and fertilizers by the public and commercial and private applicators and distributors.
 11. **Employee Education:** Permittees shall revise and update as needed a program to educate appropriate employees on internal policies and procedures, including education for engineers, specialists, and inspectors on the rules and regulations for permit compliance and municipal ordinances. A program to educate contractors responsible for herbicide, pesticide and fertilizer application, landscape specialists and other lawn care providers specifically on the proper use of chemicals, disposal thereof and spill prevention procedures shall be implemented.
 12. **Monitoring Programs:** The following monitoring programs shall be implemented in addition to the monitoring required by Part IV.
 - a. **Dry Weather Screening Program:** Permittees shall continue ongoing efforts to detect the presence of illicit connections and improper discharges to the MS4. All areas of the MS4 must be screened at least once during the permit term. Screening methodology may be modified based on experience gained during actual field screening activities and need not conform to the protocol at OAC 252:606-1-3(b)(3)(L) adopting and incorporating by reference 40 CFR 122.26(d)(1)(iv)(D). Sample collection and analysis need not conform to the requirements of OAC 252:606-1-3(b)(7) adopting and incorporating by reference 40 CFR Part 136.

However, samples taken to confirm (e.g. in support of possible legal action) a particular illicit connection or improper disposal practice should conform to the requirements of OAC 252:606-1-3(b)(7) [40 CFR Part 136].

b. *Watershed Characterization Program*

(1) *Analytical Monitoring Program:* The permittee(s) shall identify, investigate, and address areas within their jurisdiction that may be contributing excessive levels of pollutants to the MS4. The monitoring program:

(a) Shall screen the MS4, in accordance with the procedures specified in the SWMP.

(b) Shall specify the sampling and non-sampling techniques to be used for initial screening and follow-up purposes. Sample collection and analysis need not conform to the requirements of OAC 252:606-1-3(b)(7) adopting and incorporating by reference 40 CFR Part 136. However, samples taken to confirm (e.g. in support of possible legal action) a particular discharger is a source of significant quantities of pollutants should conform to the requirements of OAC 252:606-1-3(b)(7) [40 CFR Part 136].

(2) *Biological Monitoring Program:* The permittee(s) shall identify in-stream locations that continuously support valid biological communities, and conduct aquatic habitat surveys and assessments of the benthic macroinvertebrate and fish communities. These collections will be conducted during a temporal timeframe of the water quality monitoring aspect of the overall watershed characterization program. Schedules will be aligned to provide a complete assessment, where applicable, of the identified watersheds in the period of five (5) years. When impacts to a watershed are indentified based on the results of the biological monitoring program, a wet weather field investigation shall be undertaken with a goal of determining the extent that stormwater discharges contribute to the impacts. The requirements of this program are specified in Part IV.A.2 of the permit.

c. *Industrial and High Risk Runoff Monitoring Program:* The program shall include monitoring for pollutants in storm water discharges to the MS4 from municipal landfills; other treatment, storage, or disposal facilities for municipal waste (e.g. transfer stations, incinerators, etc.); hazardous waste treatment, storage, disposal and recovery facilities; facilities that are subject to the Emergency Planning and Community Right-to-know Act (EPCRA) Title III, Section 313; and any other industrial or commercial discharge the permittee(s) determines are contributing a substantial pollutant loading to the MS4.

(1) Except as provided in (2) below, the monitoring program shall include the collection of quantitative data on the following constituents:

(a) Any pollutants limited in an existing OPDES permit for a subject facility;

(b) Oil and grease;

(c) Chemical oxygen demand (COD);

- (d) pH;
- (e) Biochemical oxygen demand, five-day (BOD₅);
- (f) Total suspended solids (TSS);
- (g) Total phosphorous;
- (h) Total Kjeldahl nitrogen (TKN);
- (i) Nitrate plus nitrite nitrogen; and
- (j) Any information on discharges required under OAC 252:606-1-3(b)(3)(H) adopting and incorporating by reference 40 CFR 122.21(g)(7)(iii) and (iv).

Data collected by the industrial facility to satisfy the monitoring requirements of an OPDES or State discharge permit may be used to satisfy this requirement. Permittee(s) may require the industrial facility to conduct self-monitoring to satisfy this requirement.

- (2) **Alternative Certification:** In lieu of monitoring, the permittee may accept a certification from a facility that raw and waste materials, final and intermediate products, by-products, material handling equipment or activities, industrial machinery or operations, or significant materials from past industrial activity are not presently exposed to storm water and are not expected to be exposed to storm water for the certification period. Where the permittee(s) accept a "no exposure" certification, the permittee(s) shall conduct at least one site inspection of the facility every five years to verify the "no exposure" certification.

13. *Measurable Goals for Major BMPs:* The permittee(s) will start and fully implement the following measurable goals for each BMP, or frequency of the actions:

| SWMP's COMPONENTS | BMP ACTIONS | RESPONSIBLE PERSON(S) | TARGET DATES or FREQUENCY |
|---|--|--|---|
| 1. Structural Controls and Collection System Operations | a. Maintain and update a list of active drainage and structural control projects and the status of each project b. Continue the maintenance program of both above and below ground structural stormwater controls, including inspection, repair and clean-up for detention/roadside ditches/storm sewer pipe/catch basin/inlets/pump station. | Tulsa All | On going, include in annual report On going, include in annual report |
| 2. New Development and Significant Re-Development | a. Update Stormwater Criteria Manual. b. Review Tulsa's development regulations to identify impediments and to Low Impact Development (LID). c. Propose updates to remove those impediments. d. Conduct public education, especially to developers/contractors, at least 3 events that promotes LID. | Tulsa All Tulsa All | 12 months from effective date of the final permit 6 months from effective date of the final permit 12 months from effective date of the final permit 12 months from effective date of the final permit |
| 3. Roadways | a. Continue the Roadway Sweeping Program through the street sweeping contract, including arterial areas, residential areas and spot areas (as needed). b. Continue controls on deicing or sanding activities, including storage facilities, and truck washing facilities. | Tulsa All | On going, Include in annual report. On going, include annual report |
| 4. Flood Control Projects | a. Review Flood Management Project Designs for compliance with City's Stormwater Management Criteria Manual. | Tulsa | On going, include annual report |
| 5. Pesticides, Herbicides and Fertilizers Application | a. Promote the proper use, application and disposal of pesticides, herbicides and fertilizers through the Master Gardeners Program annually. | Tulsa | Annually |

| SWMP's COMPONENTS | BMP ACTIONS | RESPONSIBLE PERSON(S) | TARGET DATES or FREQUENCY |
|-----------------------|--|-----------------------|---|
| | b. Continue mail outs to commercial applicators at least once per permit term. | Tulsa | Annually |
| | c. Continue annual training/education/certification classes for City's applicators | All | Annually |
| 6. Illicit Discharges | a. Promote the proper disposal of leaves, grass clippings and animal wastes into the storm sewer through utility bill stuffer and children's education events | Tulsa | 2 times/Year |
| | b. Promote the public reporting of illicit discharges or improper disposal of pollutants by distributing brochures and conducting presentations at public events. | All | Annually |
| | c. Co-sponsor storm sewer inlet placarding program. Stamp all new storm sewer inlets with "Don't Dump, Drains to River" or a similar message | Tulsa | On going, include annual report |
| | d. Continue investigation of 100% reported illicit discharges. | Tulsa | On going, include annual report |
| | e. Continue extensive sanitary sewer system inspection, repair and cleaning program to reduce the likelihood of backups and sanitary sewer overflows. | Tulsa | On going, include annual report |
| | f. Continue participation in public events to target litter reduction, including information brochures and displays | All | 2 times/year |
| | g. Conduct Dry Weather Field Screening Program on 20% of the MS4 each fiscal year and the entire MS4 during permit term, and submit field screening summaries in the annual report. | All | Annually |
| | h. Install floatable monitoring structures for capture and categorization at five (5) monitoring locations and continue maintenance at a frequency necessary for the removal structures. | All | 12 months from effective date of the final permit |

| SWMP's COMPONENTS | BMP ACTIONS | RESPONSIBLE PERSON(S) | TARGET DATES or FREQUENCY |
|------------------------------------|---|-----------------------|------------------------------------|
| | i. Report all floatable debris removal quantities in cubic yards and include categorization of constituents for the permit year in the annual report. j. Continue Household Pollutants Collection thru partnership with the Metropolitan Environmental Trust (M.e.t.) by supporting the M.e.t. recycling depots throughout the Tulsa areas. Those depots are open 24 hours per day, seven days per week and are located in areas that are easily accessible to the public. | All | On going, include in annual report |
| 7. Spill Prevention and Response | a. Continue to respond as technical support for the Tulsa Fire Department on hazardous material spills. b. Provide a summary of pollution complaints and spill responses annually. | All | On going, include in annual report |
| 8. Industrial and High Risk Runoff | a. Continue the program to identify, inspect and control pollutants from targeted facilities. b. Continue the program to document monitoring, inspection, compliance and enforcement actions for the targeted facilities. | Tulsa | On going, include in annual report |
| 9. Construction Site Runoff | a. Continue construction site runoff program through education, permitting, inspection and enforcement. b. Continue the program of regulating runoff from construction sites greater than 1 acre c. Continue the program through public outreach and workshops, at least 3 public outreach and workshops implemented. | All | On going, include in annual report |
| 10. Public Education | a. Continue public education program through other agencies and associations, businesses, schools, and the general public. | All | On going, include in annual report |

| SWMP's COMPONENTS | BMP ACTIONS | RESPONSIBLE PERSON(S) | TARGET DATES or FREQUENCY |
|---|--|-----------------------|--|
| 11. Employee Education | Continue annual employee training, including internal policies and procedures for engineers, specialists, and inspectors. | All | Annually |
| 12. Watershed Characterization - Analytical Monitoring Program | <p>a. Submit a monitoring schedule for all sub-basins within the system that will result in characterization of all sub-basins within the 5 year term of the permit at least six (6) monitoring locations each year.</p> <p>b. Conduct monitoring to characterize storm water discharges in accordance with the schedule in 12.a above at representative monitoring locations once per month during each permit year.</p> <p>c. Submit, in the annual report, analytical summary reports detailing constituent loadings from representative storm events during the permit year.</p> | All | 6 months of effective date of the final permit |
| 13. Watershed Characterization - Biological Monitoring Program | <p>a. Complete aquatic habitat surveys in accordance with the schedule in 12.a above at representative locations, including the collections of macroinvertebrates two (2) times each permit year and fish collection once each permit year.</p> <p>b. Provide a summary of relevant biological collections and water quality information, if applicable, collected for each permit year.</p> | All | On going |
| 14. Watershed Characterization -Comprehensive Assessment of the program | <p>a. Based on results of the watershed characterization program, produce an assessment that includes the findings and impacts indentified, response taken , and any modifications recommended to enhance the usefulness or efficiency of the program</p> | All | Include in annual report |

All - City OF Tulsa, ODOT, and OTA.

B. Area-specific SWMP Requirements

1. Receiving Water Limitations

- a. The discharges shall not cause or contribute to a violation of any State water quality standard (WQS) for receiving waters. If different applicable WQSs are approved after the effective date of this permit, the permittees shall revise and update their SWMP as appropriate.
- b. If permittees' discharge to receiving waters listed on the latest 303(d) impaired waters list, the permittee must document the BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce such pollutants in the SWMP.

2. Total Maximum Daily Load (TMDL) Allocations

- a. Discharge of a pollutant into any water for which a TMDL for that pollutant has been either established or approved by the DEQ or the EPA is prohibited, unless the discharges are consistent with that TMDL.
- b. If a TMDL is approved for any receiving water into which permittees discharge after the date that the permit becomes effective, permittees must incorporate any limitations, conditions, and requirements applicable to their discharges into the SWMP to ensure that the waste load allocation, load allocation and/or the TMDL's associated implementation plan will be met within any timeframes established in the TMDL. Monitoring and reporting of the discharges may also be required as appropriate to ensure compliance with the TMDL.

C. Deadlines for Program Implementation

Except as provided in Part III, full implementation of the SWMP shall begin on the effective date of the permit.

D. Roles and Responsibilities of Permittee(s)

The SWMP, together with any attached interagency agreements, shall clearly identify the roles and responsibilities of each permittee.

E. Legal Authority

Each permittee shall ensure legal authority to control discharges to and from those portions of the MS4 over which it has jurisdiction. This legal authority may be a combination of statute, ordinance, permit, contract, order or inter-jurisdictional agreements with permittees with existing legal authority to:

1. Control the contribution of pollutants to the MS4 by Storm Water Discharges Associated with Industrial Activity and the quality of storm water discharged from sites of industrial activity;
2. Prohibit illicit discharges to the MS4;
3. Control the discharge of spills and the dumping or disposal of materials other than storm water (e.g. industrial and commercial wastes, trash, used motor vehicle fluids, leaf litter, grass clippings, animal wastes, etc.) into the MS4;

4. Control through interagency or inter-jurisdictional agreements among permittees the contribution of pollutants from one portion of the MS4 to another;
5. Require compliance with conditions in ordinances, permits, contracts or orders; and
6. Carry out all inspections, surveillance and monitoring procedures necessary to determine compliance with permit conditions.

F. SWMP Resources

Each permittee shall provide adequate finances, staff, equipment, and support capabilities to implement their activities under the SWMP.

G. SWMP Review and Update

1. *SWMP Review:* Each permittee shall participate in an annual review of the current SWMP in conjunction with preparation of the annual report required under Part IV.C.
2. *SWMP Update:* The permittee(s) may change the SWMP during the life of the permit in accordance with the following procedures:
 - a. The approved SWMP shall not be changed by the permittee(s) without the approval of the Director, unless in accordance with Parts II.G.2.b, or c.
 - b. Changes adding (but not subtracting or replacing) components, controls, or requirements to the SWMP may be made by the permittee(s) at any time upon written notification to the Director.
 - c. Changes replacing an ineffective or unfeasible BMP specifically identified in the SWMP with an alternate BMP may be requested at any time. Unless denied by the Director, changes proposed in accordance with the criteria below shall be deemed approved and may be implemented by the permittee(s) 60 days from submittal of the request. If request is denied, the Director will send the permittees a written response giving a reason for the decision. Such requests shall include the following:
 - (1) An analysis of why the BMP to be replaced is ineffective or infeasible (including cost prohibitive),
 - (2) Expectations on the effectiveness and feasibility of the replacement BMP, and
 - (3) An analysis of why the replacement BMP is expected to achieve the goals of the BMP to be replaced.
 - d. Change requests and/or notifications shall be made in writing, signed in accordance with Part V.H. by all directly affected permittees, and include a certification that all permittees were given an opportunity to comment on proposed changes.
3. *Updates Required by the Permitting Authority:* The permitting authority may require changes to the SWMP as needed to:
 - a. Address impacts on receiving water quality caused, or contributed to, by discharges from the MS4;
 - b. Include more stringent requirements necessary to comply with new State or Federal statutory or regulatory requirements;

- c. Include such other conditions deemed necessary by the Director to comply with the goals and requirements of the Act, and
- d. Update and implement changes required by any approved TMDL that addresses storm water pollutants.

Changes requested by the Director shall be made in writing, set forth the time schedule for the permittee(s) to develop the changes, and offer the permittee(s) the opportunity to propose alternative program changes to meet the objective of the requested modification. All changes required by the Director shall be made in accordance with 40 CFR 124.5, 40 CFR 122.62, or as appropriate 40 CFR 122.63.

- 4. *Transfer of Ownership, Operational Authority, or Responsibility for SWMP Implementation:* The permittee(s) shall implement the SWMP on all new areas added to their portion of the MS4 (or for which they become responsible for implementation of storm water quality controls) as expeditiously as practicable, but not later than three years from addition of the new areas. Implementation may be accomplished in a phased manner to allow additional time for controls that cannot be implemented immediately.

Within 90 days of a transfer of ownership, operational authority, or responsibility for SWMP implementation, the permittee(s) shall have a plan for implementation of the SWMP on all affected areas. The plan may include schedules for implementation. Information on all new annexed areas and any resulting updates required to the SWMP shall be submitted in the annual report.

H. Retention of Storm Water Management Program Records

The permittee(s) shall retain the SWMP developed in accordance with Part II and III for at least 3 years after coverage under this permit terminates.

PART III. SCHEDULES FOR IMPLEMENTATION AND COMPLIANCE

A. Implementation and Augmentation of SWMP

The permittee(s) shall comply with the following schedules:

| COMPONENTS | TASKS | RESPONSIBLE PERMITTEE(S) | TARGET DATE |
|---|---|--------------------------|---|
| 1 Revised SWMP as needed | Revise and update current SWMP to reflect final permit | All | 6 months of effective date of the final permit |
| 2. New Development and Significant Re-Development | Provide education for key personnel to learn more about Low Impact Development (LID) and Establish a LID project by incorporating into an upcoming city's project. | All | 2 years from effective date of the final permit |
| 3. Watershed Characterization Program | Develop and implement a Watershed Characterization Program required by the final permit and submit it to the DEQ for review, including a Quality Assurance Project Plan (QAPP). | All | 12 months from effective date of the final permit |

All – City of Tulsa, ODOT, and OTA.

C. Compliance with Effluent Limitations (Reserved)

D. Updating SWMP

The permittee(s) shall update the SWMP as appropriate, in response to changes required by Part III.A. Such updates shall be made in accordance with Part II.G.

PART IV. MONITORING AND REPORTING REQUIREMENTS

A. Watershed Characterization Program

Within the Tulsa area, thirty (30) watersheds have been identified. A minimum of six (6) identified watersheds will be selected and assessed each permit year in accordance with the schedule developed under Part II.A.13. The Watershed Characterization Project will allow a comprehensive assessment of each watershed to be completed on a rotating basis. Habitat and biological components are anticipated to be completed.

1. *Analytical Monitoring Program*: Monitoring shall be conducted on representative outfalls, internal sampling stations, and/or in-stream monitoring locations to characterize the water quality of receiving streams from the MS4.
 - a. Analytical monitoring shall be conducted once per month each permit year. A minimum of one (1) monitoring location shall be selected within each identified watershed.
 - b. **Representative Outfalls**: If permittee has two (2) or more outfalls that permittee believes discharge substantially identical effluents, based on similarities of the industrial activities, significant materials or storm water management practices occurring within the outfalls drainage areas, permittee may examine the effluent of just one of the outfalls and report that the examination also applies to the substantially identical outfall(s). Permittee must describe the following in the SWMP: locations of the outfalls, why the outfalls are expected to discharge substantially identical effluents and estimates of the size of the drainage area for each of the outfalls.
 - c. Quantitative data shall be collected to estimate average and maximum values for each parameter sampled. Records shall be maintained of all analytical results.
 - d. Parameters and the types of samples are listed in Table IV.1. The analytical monitoring requirements include the following:
 - (1) For discharges from holding ponds or other impoundments with a retention period greater than 24 hours, (estimated by dividing the volume of the detention pond by the estimated volume of water discharged during the 24 hours previous to the time that the sample is collected) a minimum of one grab sample may be taken.
 - (2) Grab samples shall be used for the analysis as specified in Table IV.1.

Table IV.1 - Analytical Monitoring Requirements:

| PARAMETER(S) ¹ | REPORT FOR EACH MONITORING PERIOD (each sample type) | | | SAMPLE TYPE(S) | |
|--|---|------|------|----------------|------|
| | Min. | Avg. | Max. | | Grab |
| Biochemical Oxygen Demand (BOD ₅) (mg/L) | | Yes | Yes | | Yes |
| Chemical Oxygen Demand (COD) (mg/L) | | Yes | Yes | | Yes |
| Oil and Grease (mg/L) | | Yes | Yes | | Yes |
| Total Suspended Solids (TSS) (mg/L) | | Yes | Yes | | Yes |
| Total Dissolved Solids (TDS) (mg/L) | | Yes | Yes | | Yes |
| Total Nitrogen (mg/L) | | Yes | Yes | | Yes |
| Total Kjeldahl Nitrogen (TKN) (mg/L) | | Yes | Yes | | Yes |
| Total Phosphorus (mg/L) | | Yes | Yes | | Yes |
| Dissolved Phosphorus (mg/L) | | Yes | Yes | | Yes |
| Total Cadmium (ug/L) (MQL 1 ug/L) ¹ | | Yes | Yes | | Yes |
| Total Copper (ug/L) (MQL 10 ug/L) ¹ | | Yes | Yes | | Yes |
| Total Lead (ug/L) (MQL 5 ug/L) ¹ | | Yes | Yes | | Yes |
| Total Zinc (ug/L) (MQL 20 ug/L) ¹ | | Yes | Yes | | Yes |
| Fecal Coliform (colonies/100 ml) | | Yes | Yes | | Yes |
| E. Coli (colonies/100ml) | | Yes | Yes | | Yes |
| Diazinon | | Yes | Yes | | Yes |
| pH (S.U.) | Yes | | Yes | | Yes |
| Hardness (as CaCO ₃) (mg/L) | Yes | Yes | Yes | | Yes |
| Temperature (°C) | Yes | Yes | Yes | | Yes |

¹ If any individual analytical test result is less than the minimum quantification level (MQL) listed for that parameter then a value of zero (0) may be used for that test result for the calculation and reporting requirements.

2. Biological Monitoring Requirements

- a. The permittee(s) shall obtain all necessary aquatic wildlife collection permits from appropriate State and/or Federal agencies (e.g. U.S. Fish and Wildlife Service, Oklahoma Department of Wildlife Conservation).

- b. The biological monitoring component will be implemented in the identified watersheds that continuously support valid biological communities. These collections will be conducted at an in-stream location within the watershed. Procedures contained in Oklahoma's Standardized Bioassessment Protocol (SBP) will be utilized. The biological aspect will consist of aquatic habitat surveys and assessments of the benthic macroinvertebrate and fish communities. Biological monitoring will be conducted during the temporal timeframe of the water quality monitoring aspect of the overall Watershed Characterization Program. Schedules will be aligned to provide a complete assessment, where applicable, of the identified watersheds for a one year period. Monitoring locations will be selected to include all watersheds within Tulsa.
- c. A minimum of thirty (30) locations within the permit area will be identified. Each monitoring location will be monitored at least once during the permit term at least six (6) locations will be monitored each year. As more information becomes available through data analysis, more locations will be selected within the permit area. A fish collection will be conducted once each year and benthic macroinvertebrates will be collected two (2) times each year at each location if conditions exist for the collection activities. A summary data sheet will be developed for each monitoring location.
- d. When impacts to a watershed are identified based on the results of the biological monitoring program, a wet weather field investigation shall be undertaken with a goal of determining the extent that stormwater discharges contribute to the impacts. The program can use field sampling for the situations where permittees have identified a problem, and are looking for further investigation. The program:
 - (1) Shall screen the MS4, in accordance with the procedures specified in the SWMP;
 - (2) Shall specify the sampling and non-sampling techniques to be used for initial screening and follow-up purpose. Sample collection and analysis need not conform to the requirements of OAC 252:606-1-3(b)(7) adopting and incorporating by reference 40 CFR Part 136. However, samples taken to confirm (e.g. in support of possible legal action) a particular illicit discharge or improper disposal practice should conform to the requirements of OAC 252:606-1-3(b)(7);
 - (3) Quantitative data shall be collected to estimate pollutant loadings and event mean concentrations for each parameter sampled. Records shall be maintained of all analytical results, the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event which generated the sampled runoff; the duration (in hours) between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge sampled. The estimates of pollutant loadings of the watersheds characterized shall be included in the Annual Report.

B. Floatables Monitoring

The permittees shall establish five (5) monitoring locations for removal of floatable material in discharges to or from the MS4. Floatable material shall be collected at the frequency necessary for maintenance of the removal devices, but not less than twice per year. The amount of material collected shall be estimated in cubic yards.

C. Annual Report and Comprehensive Assessment of the Watershed Characterization Program

Each permittee shall contribute to the preparation of an annual system-wide report to be submitted by no later than October 15, 2012 and annually thereafter in accordance with this permit. The report shall cover the previous year from July 1st to June 30th and include the following separate sections, with an overview for the entire MS4 and subsections for each permittee:

1. The status of implementing the SWMP and status of compliance with any schedules established under this permit shall be included in this section);
2. Proposed changes to the SWMP;
3. Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under OAC 252.606-1-3(b)(3)(L) adopting and incorporating by reference 40 CFR 122.26(d)(2)(iv) and (d)(2)(v);
4. A summary of the data, including monitoring data, which is accumulated throughout the reporting year;
5. Annual expenditures for the reporting period, with a breakdown for the major elements of the SWMP, and the budget for the year following each annual report;
6. A summary describing the number and nature of enforcement actions, inspections, and public education programs;
7. Identification of any identified water quality improvements or degradation.
8. By October 15, 2015, permittee(s) must submit a comprehensive assessment of the watershed characterization project. The assessment should include a summary of the watershed characterization program, the findings and impacts, responses taken, and any modifications recommended to enhance the usefulness or efficiency of the program.

Preparation and submittal of the system-wide annual report shall be coordinated by the City of Tulsa. The report shall indicate which, if any, permittees have failed to provide required information on the portions of the MS4 for which they are responsible to the core municipality, the City of Tulsa, 45 days prior to the report due date. Joint responsibility for report submission shall be limited to participation in preparation of the overview for the entire system and inclusion of the identity of any permittee who failed to provide input to the annual report. Each individual permittee shall be individually responsible for content of the report relating to the portions of the MS4 for which they are responsible and for failure to provide information for the system-wide annual report in a timely manner. Each permittee shall sign and certify the annual report in accordance with Part VI.H and include a statement or resolution that the permittee's governing body or agency (or delegated

representative) has reviewed or been appraised of the content of the Annual Report.

D. Certification and Signature of Reports

All reports required by the permit and other information requested by the Director shall be signed and certified in accordance with Part V.H.

E. Reporting: Where and When to Submit

Signed copies of the Annual Report required by Part IV.C., and all other reports and notifications required herein, shall be submitted to:

Oklahoma Department of Environmental Quality
Water Quality Division
707 North Robinson Ave., P.O. Box 1677
Oklahoma City, OK 73101-1677

PART V. STANDARD PERMIT CONDITIONS

A. Duty to Comply

The permittee(s) must comply with all conditions of this permit insofar as those conditions are applicable to each permittee, either individually or jointly. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissue, or modification; or for denial of a permit renewal application.

B. Penalties for Violations of Permit Conditions

Permit violations are subject to the fines and penalties in 27A O.S. § 2-6-206.

1. Administrative penalties

The Act provides that any person who violates a permit condition is subject to an Administrative penalty, as follows:

- a. Class I penalty: Not to exceed \$10,000 per violation nor shall the maximum amount exceed \$60,000.
- b. Class II penalty: Not to exceed \$10,000 per day for each day during which the violation continues nor shall the maximum amount exceed \$125,000.

2. Civil penalties

The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to Civil Penalties. The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed \$25,000 per day for each violation.

3. Criminal penalties

- a. Negligent Violations: The Act provides that any person who negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or both.
- b. Knowing Violations: The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both.
- c. Knowing Endangerment: The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than \$250,000, or by imprisonment for not more than 15 years, or both.
- d. False Statement: The Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who

Part V. Standard Permit Conditions.

knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than 2 years, or by both. If a conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or by both (See Section 309(c)(4) of the Act).

C. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the permit expiration date, the permittee must apply for and obtain a new permit. The application shall be submitted at least 180 days prior to expiration of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be governed by regulations promulgated at 40 CFR 122.6 and any subsequent amendments.

D. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

E. Duty to Mitigate

The permittee(s) shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

F. Duty to Provide Information

The permittee(s) shall furnish to the Director, within a time specified by the Director, any information that the Director may request to determine compliance with this permit. The permittee(s) shall also furnish to the Director upon request copies of records required to be kept by this permit.

G. Other Information

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in any report to the Director, he or she shall promptly submit such facts or information.

H. Signatory Requirements

All Discharge Monitoring Reports, SWMPs, SWP3, reports, certifications or information either submitted to the Director or that this permit requires be maintained by the permittee(s), shall be signed by:

1. A principal executive officer or ranking elected official of a municipality, state, other public agency, or by either a principal executive officer; or
2. A duly authorized representative of that person. A person is a duly authorized

Part V. Standard Permit Conditions.

representative only if:

- a. The authorization is made in writing by a person described above and submitted to the Director;
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters. A duly authorized representative may thus be either a named individual or any individual occupying a named position;
 - c. If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new written authorization satisfying the requirements of this paragraph must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.
3. **Certification:** Any person signing documents under this section shall make the following certification: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

I. Penalties for Falsification of Monitoring Systems

The Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by fines and imprisonment described in Section 309 of the Act.

J. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to the Act or section 106 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

K. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

L. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected

thereby.

M. Requiring a Separate Permit

1. The Director may require any co-permittee authorized by this permit to obtain a separate OPDES permit. Any interested person may petition the Director to take action under this paragraph. The Director may require any co-permittee authorized to discharge under this permit to apply for a separate OPDES permit only if the co-permittee has been notified in writing that a permit application is required. This notice shall include a brief statement of the reasons for this decision, an application form (as necessary), a statement setting a deadline for the co-permittee to file the application, and a statement that on the effective date of the separate OPDES permit, coverage under this permit shall automatically terminate. Separate permit applications shall be submitted to the address shown in Part IV.E. The Director may grant additional time to submit the application upon request of the applicant. If an owner or operator fails to submit in a timely manner a separate OPDES permit application as required by the Director, then the applicability of this permit to the co-permittee is automatically terminated at the end of the day specified for application submittal.
2. Any co-permittee authorized by this permit may request to be excluded from coverage by applying for a separate permit. The co-permittee shall submit a separate application as specified by OAC 252.606-1-3(b)(3)(L) adopting and incorporating by reference 40 CFR 122.26(d) with reasons supporting the request to the Director. Separate permit applications shall be submitted to the address shown in Part IV.E. The request may be granted by the issuance of a separate permit if the reasons cited by the co-permittee are adequate to support the request.

N. State Environmental Laws

1. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under the authority preserved by section 510 of the Act.
2. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

O. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of the SWMPs. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

P. Monitoring and Records

1. Samples and measurements taken for the purpose of monitoring shall be representative of

Part V. Standard Permit Conditions.

the monitored activity.

2. The permittee shall retain records of all monitoring information including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of the reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.
3. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The initials or name(s) of the individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed;
 - d. The time(s) analyses were initiated;
 - e. The initials or name(s) of the individual(s) who performed the analyses;
 - f. References and written procedures, when available, for the analytical techniques or methods used; and
 - g. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results.

Q. Monitoring Methods

Monitoring must be conducted according to test procedures approved under OAC 252.606-1-3(b)(7) adopting and incorporating by reference 40 CFR Part 136, unless other test procedures have been specified in this permit.

R. Inspection and Entry

The permittee shall allow the Director or an authorized representative of the EPA, or the State, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Act, any substance or parameters at any location.

S. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and re issuance, or termination,

Part V. Standard Permit Conditions.

or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

T. Additional Monitoring by the Permittee

If the permittee monitors more frequently than required by this permit, using test procedures approved under OAC 252.606-1-3(b)(7) adopting and incorporating by reference 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the annual report.

U. Archeological and Historical Sites (Reserved)

PART VI. Permit Modification

A. Modification of the Permit

The permit may be reopened and modified during the life of the permit to address:

1. Changes in the State's Water Quality Management Plan, including Water Quality Standards;
2. Changes in the State or Federal statutes or regulations;
3. Addition of a new permittee who is the owner or operator of a portion of the MS4;
4. Changes in portions of the SWMP that are considered permit conditions;
5. Other modifications deemed necessary by the Director to meet the requirements of the Clean Water Act; or
6. Any additional provisions necessary to comply with requirements of an approved TMDL;

All modifications to the permit will be made in accordance with OAC 252:606-1-3(b)(3)(GG), (HH) and (4)(D) adopting and incorporating by reference 40 CFR 122.26, as amended 40 CFR 122.62, 122.63, and 124.5.

B. Termination of Coverage for a Single Permittee

Permit coverage may be terminated, in accordance with OAC 252.606-1-3(b)(3)(II), adopting and incorporating by reference 40 CFR 122.64 and OAC 252.606-1-3(b)(3)(E) adopting and incorporating by reference 40 CFR 122.5, for a single permittee without terminating coverage for other permittees.

C. Modification of the SWMP

Only those portions of the SWMP specifically required as permit conditions shall be subject to the modification requirements of OAC 252:606-1-3(b)(4)(D) adopting and incorporating by reference 40 CFR 124.5. Addition of components, controls, or requirements by the permittee(s); replacement of an ineffective or infeasible BMP implementing a required component of the SWMP with an alternate BMP expected to achieve the goals of the original BMP; changes made under Part II.B that are necessary to comply with the requirements of a TMDL and changes required as a result of schedules contained in Part III shall be considered minor changes to the SWMP and not modifications to the permit. (See also Part II.G)

D. Changes in Monitoring Outfalls

Changes in monitoring outfalls, other than those with specific numeric effluent limitations, shall be considered minor modifications to the permit and will be made in accordance with the procedures at OAC 252:606-1-3(b)(3)(HH) adopting and incorporating by reference 40 CFR 122.63.

PART VII. Definitions

- A. **"Best Management Practices" ("BMPs")** means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of Waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
- B. **"CWA" or "The Act"** means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117, 33 U.S.C. 1251 et. seq.
- C. **"Co-permittee"** is defined at OAC 252.606-1-3(b)(3)(L) adopting and incorporating by reference 40 CFR 122.26 (b)(1).
- D. **"Director"** means the Executive Director of the Oklahoma Department of Environmental Quality or an authorized representative.
- E. **"Discharge"** for the purpose of this permit, unless indicated otherwise, refers to discharges from the Municipal Separate Storm Sewer System (MS4).
- F. **"Illicit connection"** means any human-made conveyance connecting an illicit discharge directly to an MS4.
- G. **"Illicit discharge"** is defined at OAC 252:606-1-3(b)(3)(L) adopting and incorporating by reference 40 CFR 122.26(b)(2).
- H. **"Landfill"** means an area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well, or waste pile.
- I. **"Land application unit"** means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for treatment or disposal.
- J. **"Large or medium Municipal Separate Storm Sewer System"** is defined at OAC 252.606-1-3(b)(3)(L) adopting and incorporating by reference 40 CFR 122.26(b)(4) & (7).
- K. **"MEP"** is an acronym for "Maximum Extent Practicable," the technology-based discharge standard for MS4s established by CWA §402(p).
- L. **"MS4"** is an acronym for "Municipal Separate Storm Sewer System" and is used to refer to either a large or medium Municipal Separate Storm Sewer System (e.g. "the City of Tulsa MS4"). And is also defined at OAC 252.606-1-3(b)(3)(L) adopting and incorporating by reference 40 CFR 122.26(b)(8).
- M. **"Municipal Separate Storm Sewer System"** is defined at OAC 252.606-1-3(b)(3)(L) adopting and incorporating by reference 40 CFR 122.26(b)(8)
- N. **"Permittee"** refers to any "person," as defined at OAC 252.606-1-3(b)(3)(B) adopting and incorporating by reference 40 CFR 122.2, authorized by this OPDES permit to discharge to Waters of the State.

Part VII. Definitions

- O. **"Point Source"** means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.
- P. **"Storm Sewer"**, unless otherwise indicated, refers to a municipal separate storm sewer.
- Q. **"Storm Water"** means storm water runoff, snow melt runoff, and surface runoff and drainage.
- R. **"Storm Water Discharge Associated with Industrial Activity"** is defined at OAC 252.606-1-3(b)(3)(L) adopting and incorporating by reference 40 CFR 122.26(b)(14).
- S. **"Storm Water Management Program"** refers to a comprehensive program to manage the quality of storm water discharged from the municipal separate storm sewer system. For the purposes of this permit, the Storm Water Management Program is considered a single document, but may actually consist of separate programs (e.g. "chapters") for each permittee.
- T. **"SWMP"** is an acronym for "Storm Water Management Program."
- X. **"Waters of the State"** means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, storm sewers, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through or border upon this state or any portion thereof, and shall include under all circumstances the waters of the United States which are contained within the boundaries of, flow through or border upon this state or any portion thereof. Provided waste treatment systems, including treatment ponds or lagoons designed to meet federal and state requirements, other than cooling ponds as defined in the Clean Water Act or rules promulgated thereto, and prior converted cropland are not waters of the State (27A O.S. §1-1-201)

APPENDIX D

**LABORATORY ANALYSIS OF SAMPLES
CHAIN OF CUSTODY FORMS**



ANALYTICAL REPORT

September 14, 2018

Seneca Companies - Tulsa, OK

Sample Delivery Group: L1023516
Samples Received: 09/06/2018
Project Number: 6362589
Description: Evans Fintube - Brownfield - City of Tulsa
Site: 358463
Report To: Douglas Wilson
6947 E. 13th Street
Tulsa, OK 74112

Entire Report Reviewed By: *Christopher J. McCord*

Chris McCord
Project Manager

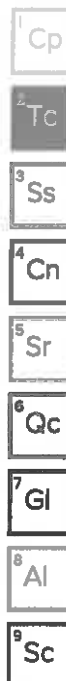
Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



TABLE OF CONTENTS



| | |
|---|-----------|
| Cp: Cover Page | 1 |
| Tc: Table of Contents | 2 |
| Ss: Sample Summary | 3 |
| Cn: Case Narrative | 6 |
| Sr: Sample Results | 7 |
| SSA01 L1023516-01 | 7 |
| SSB02 L1023516-02 | 8 |
| SB02-SS01 L1023516-03 | 9 |
| SSA03 L1023516-04 | 10 |
| SSB03 L1023516-05 | 11 |
| SB03-SS01 L1023516-06 | 12 |
| SSB04 L1023516-07 | 13 |
| SSB05 L1023516-08 | 14 |
| SSB06 L1023516-09 | 15 |
| SB04-SS01 L1023516-10 | 16 |
| SSA07 L1023516-11 | 17 |
| SSB07 L1023516-12 | 18 |
| SSB11 L1023516-13 | 19 |
| SB03-SS01DUP L1023516-14 | 20 |
| MW-1 L1023516-15 | 21 |
| MW-5 L1023516-16 | 22 |
| Qc: Quality Control Summary | 23 |
| Mercury by Method 7470A | 23 |
| Mercury by Method 7471A | 24 |
| Metals (ICP) by Method 6010B | 25 |
| Metals (ICPMS) by Method 6020 | 28 |
| Semi-Volatile Organic Compounds (GC) by Method TX 1005 | 29 |
| Polychlorinated Biphenyls (GC) by Method 8082 | 30 |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | 31 |
| Gl: Glossary of Terms | 33 |
| Al: Accreditations & Locations | 34 |
| Sc: Sample Chain of Custody | 35 |



SAMPLE SUMMARY

ONE LAB. NATIONWIDE



SSA01 L1023516-01 Solid Collected by Douglas Wilson Collected date/time 09/04/18 10:30 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|-----------|----------|-----------------------|--------------------|---------|
| Mercury by Method 7471A | WG1163519 | 1 | 09/09/18 11:39 | 09/10/18 09:30 | TCT |
| Metals (ICP) by Method 6010B | WG1163628 | 1 | 09/09/18 18:09 | 09/11/18 17:49 | JDG |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1163585 | 1 | 09/11/18 12:14 | 09/12/18 00:28 | CJR |

1 Cp

2 Tc

3 Ss

SSB02 L1023516-02 Solid Collected by Douglas Wilson Collected date/time 09/04/18 10:55 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|-----------|----------|-----------------------|--------------------|---------|
| Mercury by Method 7471A | WG1163519 | 1 | 09/09/18 11:39 | 09/10/18 09:32 | TCT |
| Metals (ICP) by Method 6010B | WG1163628 | 1 | 09/09/18 18:09 | 09/11/18 17:51 | JDG |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1163585 | 1 | 09/11/18 12:14 | 09/12/18 00:49 | CJR |

4 Cn

5 Sr

6 Qc

7 Gl

SB02-SS01 L1023516-03 Solid Collected by Douglas Wilson Collected date/time 09/04/18 10:00 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|-----------|----------|-----------------------|--------------------|---------|
| Mercury by Method 7471A | WG1163519 | 1 | 09/09/18 11:39 | 09/10/18 09:35 | TCT |
| Metals (ICP) by Method 6010B | WG1163628 | 1 | 09/09/18 18:09 | 09/11/18 17:54 | JDG |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1163585 | 1 | 09/11/18 12:14 | 09/12/18 01:10 | CJR |

8 Al

9 Sc

SSA03 L1023516-04 Solid Collected by Douglas Wilson Collected date/time 09/04/18 14:00 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|-----------|----------|-----------------------|--------------------|---------|
| Mercury by Method 7471A | WG1163519 | 1 | 09/09/18 11:39 | 09/10/18 09:37 | TCT |
| Metals (ICP) by Method 6010B | WG1163628 | 1 | 09/09/18 18:09 | 09/11/18 17:56 | JDG |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1163585 | 1 | 09/11/18 12:14 | 09/12/18 01:32 | CJR |

SSB03 L1023516-05 Solid Collected by Douglas Wilson Collected date/time 09/04/18 11:30 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|------------------------------|-----------|----------|-----------------------|--------------------|---------|
| Mercury by Method 7471A | WG1163519 | 1 | 09/09/18 11:39 | 09/10/18 09:40 | TCT |
| Metals (ICP) by Method 6010B | WG1163628 | 1 | 09/09/18 18:09 | 09/11/18 17:59 | JDG |

SB03-SS01 L1023516-06 Solid Collected by Douglas Wilson Collected date/time 09/04/18 13:45 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|-----------|----------|-----------------------|--------------------|---------|
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1163585 | 1 | 09/11/18 12:14 | 09/11/18 20:15 | CJR |

SSB04 L1023516-07 Solid Collected by Douglas Wilson Collected date/time 09/04/18 12:00 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|-----------|----------|-----------------------|--------------------|---------|
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1163585 | 1 | 09/11/18 12:14 | 09/12/18 01:53 | CJR |

SAMPLE SUMMARY

ONE LAB. NATIONWIDE



SSB05 L1023516-08 Solid Collected by Douglas Wilson Collected date/time 09/04/18 12:15 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|-----------|----------|-----------------------|--------------------|---------|
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1163585 | 1 | 09/11/18 12:14 | 09/12/18 02:14 | CJR |

1
Cp

2
Tc

3
Ss

SSB06 L1023516-09 Solid Collected by Douglas Wilson Collected date/time 09/04/18 14:45 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|--|-----------|----------|-----------------------|--------------------|---------|
| Semi-Volatile Organic Compounds (GC) by Method TX 1005 | WG1163598 | 1 | 09/11/18 12:49 | 09/11/18 23:17 | MTJ |

4
Cn

5
Sr

SB04-SS01 L1023516-10 Solid Collected by Douglas Wilson Collected date/time 09/04/18 10:30 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|-----------|----------|-----------------------|--------------------|---------|
| Mercury by Method 7471A | WG1163519 | 1 | 09/09/18 11:39 | 09/10/18 09:07 | TCT |
| Metals (ICP) by Method 6010B | WG1163628 | 1 | 09/09/18 18:09 | 09/11/18 16:53 | JDG |
| Polychlorinated Biphenyls (GC) by Method 8082 | WG1163239 | 1 | 09/08/18 17:28 | 09/10/18 16:00 | TD |
| Polychlorinated Biphenyls (GC) by Method 8082 | WG1163239 | 1 | 09/08/18 17:28 | 09/12/18 06:13 | VKS |

6
Qc

7
Gl

8
Al

9
Sc

SSA07 L1023516-11 Solid Collected by Douglas Wilson Collected date/time 09/05/18 10:15 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|--|-----------|----------|-----------------------|--------------------|---------|
| Semi-Volatile Organic Compounds (GC) by Method TX 1005 | WG1163598 | 1 | 09/11/18 12:49 | 09/11/18 23:30 | MTJ |

SSB07 L1023516-12 Solid Collected by Douglas Wilson Collected date/time 09/04/18 15:30 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|--|-----------|----------|-----------------------|--------------------|---------|
| Semi-Volatile Organic Compounds (GC) by Method TX 1005 | WG1163598 | 1 | 09/11/18 12:49 | 09/12/18 00:10 | MTJ |

SSB11 L1023516-13 Solid Collected by Douglas Wilson Collected date/time 09/05/18 10:45 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|--|-----------|----------|-----------------------|--------------------|---------|
| Semi-Volatile Organic Compounds (GC) by Method TX 1005 | WG1163598 | 1 | 09/11/18 12:49 | 09/12/18 00:23 | MTJ |

SB03-SS01DUP L1023516-14 Solid Collected by Douglas Wilson Collected date/time 09/04/18 13:50 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|------------------------------|-----------|----------|-----------------------|--------------------|---------|
| Mercury by Method 7471A | WG1163519 | 1 | 09/09/18 11:39 | 09/10/18 09:42 | TCT |
| Metals (ICP) by Method 6010B | WG1163628 | 1 | 09/09/18 18:09 | 09/11/18 18:02 | JDG |

MW-1 L1023516-15 GW Collected by Douglas Wilson Collected date/time 09/05/18 14:45 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|-------------------------------|-----------|----------|-----------------------|--------------------|---------|
| Mercury by Method 7470A | WG1162623 | 1 | 09/07/18 09:26 | 09/09/18 13:01 | EL |
| Metals (ICP) by Method 6010B | WG1162704 | 1 | 09/07/18 15:46 | 09/08/18 13:39 | JDG |
| Metals (ICPMS) by Method 6020 | WG1162936 | 1 | 09/07/18 15:32 | 09/08/18 14:21 | WBD |

SAMPLE SUMMARY

ONE LAB. NATIONWIDE. 

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|-------------------------------|-----------|----------|--------------------------------|---------------------------------------|--------------------------------------|
| MW-5 L1023516-16 GW | | | | | |
| | | | Collected by Douglas Wilson | Collected date/time 09/05/18 14:50 | Received date/time 09/06/18 08:45 |
| Mercury by Method 7470A | WG1162623 | 1 | 09/07/18 09:26 | 09/09/18 12:35 | EL |
| Metals (ICP) by Method 6010B | WG1162704 | 9 | 09/07/18 15:46 | 09/08/18 13:47 | JDG |
| Metals (ICPMS) by Method 6020 | WG1162936 | 1 | 09/07/18 15:32 | 09/08/18 13:58 | WBD |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.281 | | 0.00280 | 0.0200 | 1 | 09/10/2018 09:30 | WG1163519 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | 0.845 | J | 0.750 | 2.00 | 1 | 09/11/2018 17:49 | WG1163628 |
| Arsenic | 5.00 | | 0.460 | 2.00 | 1 | 09/11/2018 17:49 | WG1163628 |
| Barium | 208 | | 0.170 | 0.500 | 1 | 09/11/2018 17:49 | WG1163628 |
| Beryllium | 0.588 | | 0.0700 | 0.200 | 1 | 09/11/2018 17:49 | WG1163628 |
| Cadmium | 0.755 | | 0.0700 | 0.500 | 1 | 09/11/2018 17:49 | WG1163628 |
| Chromium | 16.7 | | 0.140 | 1.00 | 1 | 09/11/2018 17:49 | WG1163628 |
| Copper | 35.5 | | 0.530 | 2.00 | 1 | 09/11/2018 17:49 | WG1163628 |
| Lead | 221 | | 0.190 | 0.500 | 1 | 09/11/2018 17:49 | WG1163628 |
| Nickel | 14.9 | | 0.490 | 2.00 | 1 | 09/11/2018 17:49 | WG1163628 |
| Selenium | 0.907 | J | 0.620 | 2.00 | 1 | 09/11/2018 17:49 | WG1163628 |
| Silver | 0.136 | J | 0.120 | 1.00 | 1 | 09/11/2018 17:49 | WG1163628 |
| Thallium | U | | 0.650 | 2.00 | 1 | 09/11/2018 17:49 | WG1163628 |
| Zinc | 289 | | 0.590 | 5.00 | 1 | 09/11/2018 17:49 | WG1163628 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.0243 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:28 | WG1163585 |
| Acenaphthene | 0.00819 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:28 | WG1163585 |
| Acenaphthylene | 0.00101 | J | 0.000600 | 0.00600 | 1 | 09/12/2018 00:28 | WG1163585 |
| Benzo(a)anthracene | 0.130 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:28 | WG1163585 |
| Benzo(a)pyrene | 0.141 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:28 | WG1163585 |
| Benzo(b)fluoranthene | 0.204 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:28 | WG1163585 |
| Benzo(g,h,i)perylene | 0.117 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:28 | WG1163585 |
| Benzo(k)fluoranthene | 0.0742 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:28 | WG1163585 |
| Chrysene | 0.112 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:28 | WG1163585 |
| Dibenz(a,h)anthracene | 0.0316 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:28 | WG1163585 |
| Fluoranthene | 0.249 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:28 | WG1163585 |
| Fluorene | 0.00645 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:28 | WG1163585 |
| Indeno(1,2,3-cd)pyrene | 0.0974 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:28 | WG1163585 |
| Naphthalene | 0.0128 | J | 0.00200 | 0.0200 | 1 | 09/12/2018 00:28 | WG1163585 |
| Phenanthrene | 0.117 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:28 | WG1163585 |
| Pyrene | 0.199 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:28 | WG1163585 |
| 1-Methylnaphthalene | 0.0288 | | 0.00200 | 0.0200 | 1 | 09/12/2018 00:28 | WG1163585 |
| 2-Methylnaphthalene | 0.0244 | | 0.00200 | 0.0200 | 1 | 09/12/2018 00:28 | WG1163585 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 09/12/2018 00:28 | WG1163585 |
| (S) Nitrobenzene-d5 | 80.7 | | | 14.0-149 | | 09/12/2018 00:28 | WG1163585 |
| (S) 2-Fluorobiphenyl | 73.6 | | | 34.0-125 | | 09/12/2018 00:28 | WG1163585 |
| (S) p-Terphenyl-d14 | 78.0 | | | 23.0-120 | | 09/12/2018 00:28 | WG1163585 |



Collected date/time: 09/04/18 10:55

L1023516

Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | U | | 0.00280 | 0.0200 | 1 | 09/10/2018 09:32 | WG1163519 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | 1.56 | J | 0.750 | 2.00 | 1 | 09/11/2018 17:51 | WG1163628 |
| Arsenic | 5.83 | | 0.460 | 2.00 | 1 | 09/11/2018 17:51 | WG1163628 |
| Barium | 159 | | 0.170 | 0.500 | 1 | 09/11/2018 17:51 | WG1163628 |
| Beryllium | 0.575 | | 0.0700 | 0.200 | 1 | 09/11/2018 17:51 | WG1163628 |
| Cadmium | 0.616 | | 0.0700 | 0.500 | 1 | 09/11/2018 17:51 | WG1163628 |
| Chromium | 21.9 | | 0.140 | 1.00 | 1 | 09/11/2018 17:51 | WG1163628 |
| Copper | 25.7 | | 0.530 | 2.00 | 1 | 09/11/2018 17:51 | WG1163628 |
| Lead | 168 | | 0.190 | 0.500 | 1 | 09/11/2018 17:51 | WG1163628 |
| Nickel | 15.0 | | 0.490 | 2.00 | 1 | 09/11/2018 17:51 | WG1163628 |
| Selenium | 0.992 | J | 0.620 | 2.00 | 1 | 09/11/2018 17:51 | WG1163628 |
| Silver | U | | 0.120 | 1.00 | 1 | 09/11/2018 17:51 | WG1163628 |
| Thallium | U | | 0.650 | 2.00 | 1 | 09/11/2018 17:51 | WG1163628 |
| Zinc | 217 | | 0.590 | 5.00 | 1 | 09/11/2018 17:51 | WG1163628 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.0107 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:49 | WG1163585 |
| Acenaphthene | 0.00285 | J | 0.000600 | 0.00600 | 1 | 09/12/2018 00:49 | WG1163585 |
| Acenaphthylene | U | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:49 | WG1163585 |
| Benzo(a)anthracene | 0.0493 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:49 | WG1163585 |
| Benzo(a)pyrene | 0.0571 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:49 | WG1163585 |
| Benzo(b)fluoranthene | 0.0898 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:49 | WG1163585 |
| Benzo(g,h,i)perylene | 0.0499 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:49 | WG1163585 |
| Benzo(k)fluoranthene | 0.0250 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:49 | WG1163585 |
| Chrysene | 0.0530 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:49 | WG1163585 |
| Dibenz(a,h)anthracene | 0.0145 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:49 | WG1163585 |
| Fluoranthene | 0.104 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:49 | WG1163585 |
| Fluorene | 0.00254 | J | 0.000600 | 0.00600 | 1 | 09/12/2018 00:49 | WG1163585 |
| Indeno(1,2,3-cd)pyrene | 0.0393 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:49 | WG1163585 |
| Naphthalene | 0.00600 | J | 0.00200 | 0.0200 | 1 | 09/12/2018 00:49 | WG1163585 |
| Phenanthrene | 0.0473 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:49 | WG1163585 |
| Pyrene | 0.0880 | | 0.000600 | 0.00600 | 1 | 09/12/2018 00:49 | WG1163585 |
| 1-Methylnaphthalene | 0.00944 | J | 0.00200 | 0.0200 | 1 | 09/12/2018 00:49 | WG1163585 |
| 2-Methylnaphthalene | 0.00910 | J | 0.00200 | 0.0200 | 1 | 09/12/2018 00:49 | WG1163585 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 09/12/2018 00:49 | WG1163585 |
| (S) Nitrobenzene-d5 | 78.7 | | | 14.0-149 | | 09/12/2018 00:49 | WG1163585 |
| (S) 2-Fluorobiphenyl | 75.0 | | | 34.0-125 | | 09/12/2018 00:49 | WG1163585 |
| (S) p-Terphenyl-d14 | 79.7 | | | 23.0-120 | | 09/12/2018 00:49 | WG1163585 |

1 Cp

2 Tc

3 Ss

4 Cn

Sr

6 Qc

7 Gl

8 Al

9 Sc

SB02-SS01

Collected date/time: 09/04/18 10:00

SAMPLE RESULTS - 03

L1023516

ONE LAB. NATIONWIDE.



Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.517 | | 0.00280 | 0.0200 | 1 | 09/10/2018 09:35 | WG1163519 |

1 Cp

2 Tc

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | 0.937 | J | 0.750 | 2.00 | 1 | 09/11/2018 17:54 | WG1163628 |
| Arsenic | 6.80 | | 0.460 | 2.00 | 1 | 09/11/2018 17:54 | WG1163628 |
| Barium | 260 | | 0.170 | 0.500 | 1 | 09/11/2018 17:54 | WG1163628 |
| Beryllium | 0.619 | | 0.0700 | 0.200 | 1 | 09/11/2018 17:54 | WG1163628 |
| Cadmium | 0.969 | | 0.0700 | 0.500 | 1 | 09/11/2018 17:54 | WG1163628 |
| Chromium | 17.8 | | 0.140 | 1.00 | 1 | 09/11/2018 17:54 | WG1163628 |
| Copper | 39.0 | | 0.530 | 2.00 | 1 | 09/11/2018 17:54 | WG1163628 |
| Lead | 263 | | 0.190 | 0.500 | 1 | 09/11/2018 17:54 | WG1163628 |
| Nickel | 16.1 | | 0.490 | 2.00 | 1 | 09/11/2018 17:54 | WG1163628 |
| Selenium | U | | 0.620 | 2.00 | 1 | 09/11/2018 17:54 | WG1163628 |
| Silver | U | | 0.120 | 1.00 | 1 | 09/11/2018 17:54 | WG1163628 |
| Thallium | U | | 0.650 | 2.00 | 1 | 09/11/2018 17:54 | WG1163628 |
| Zinc | 425 | | 0.590 | 5.00 | 1 | 09/11/2018 17:54 | WG1163628 |

3 Ss

4 Cn

Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.238 | | 0.00600 | 0.00600 | 1 | 09/12/2018 01:10 | WG1163585 |
| Acenaphthene | 0.169 | | 0.00600 | 0.00600 | 1 | 09/12/2018 01:10 | WG1163585 |
| Acenaphthylene | U | | 0.00600 | 0.00600 | 1 | 09/12/2018 01:10 | WG1163585 |
| Benzo(a)anthracene | 0.620 | | 0.00600 | 0.00600 | 1 | 09/12/2018 01:10 | WG1163585 |
| Benzo(a)pyrene | 0.535 | | 0.00600 | 0.00600 | 1 | 09/12/2018 01:10 | WG1163585 |
| Benzo(b)fluoranthene | 0.768 | | 0.00600 | 0.00600 | 1 | 09/12/2018 01:10 | WG1163585 |
| Benzo(g,h,i)perylene | 0.418 | | 0.00600 | 0.00600 | 1 | 09/12/2018 01:10 | WG1163585 |
| Benzo(k)fluoranthene | 0.282 | | 0.00600 | 0.00600 | 1 | 09/12/2018 01:10 | WG1163585 |
| Chrysene | 0.515 | | 0.00600 | 0.00600 | 1 | 09/12/2018 01:10 | WG1163585 |
| Dibenz(a,h)anthracene | 0.113 | | 0.00600 | 0.00600 | 1 | 09/12/2018 01:10 | WG1163585 |
| Fluoranthene | 1.68 | | 0.00600 | 0.00600 | 1 | 09/12/2018 01:10 | WG1163585 |
| Fluorene | 0.147 | | 0.00600 | 0.00600 | 1 | 09/12/2018 01:10 | WG1163585 |
| Indeno(1,2,3-cd)pyrene | 0.360 | | 0.00600 | 0.00600 | 1 | 09/12/2018 01:10 | WG1163585 |
| Naphthalene | 0.0562 | | 0.00200 | 0.0200 | 1 | 09/12/2018 01:10 | WG1163585 |
| Phenanthrene | 1.25 | | 0.00600 | 0.00600 | 1 | 09/12/2018 01:10 | WG1163585 |
| Pyrene | 1.17 | | 0.00600 | 0.00600 | 1 | 09/12/2018 01:10 | WG1163585 |
| 1-Methylnaphthalene | 0.0400 | | 0.00200 | 0.0200 | 1 | 09/12/2018 01:10 | WG1163585 |
| 2-Methylnaphthalene | 0.0383 | | 0.00200 | 0.0200 | 1 | 09/12/2018 01:10 | WG1163585 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 09/12/2018 01:10 | WG1163585 |
| (S) Nitrobenzene-d5 | 80.6 | | | 14.0-149 | | 09/12/2018 01:10 | WG1163585 |
| (S) 2-Fluorobiphenyl | 71.6 | | | 34.0-125 | | 09/12/2018 01:10 | WG1163585 |
| (S) p-Terphenyl-d14 | 77.3 | | | 23.0-120 | | 09/12/2018 01:10 | WG1163585 |

SSA03

Collected date/time: 09/04/18 14:00

SAMPLE RESULTS - 04

L1023516

ONE LAB. NATIONWIDE.



Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.156 | | 0.00280 | 0.0200 | 1 | 09/10/2018 09:37 | WG1163519 |

1 Cp

2 Tc

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | 1.50 | J | 0.750 | 2.00 | 1 | 09/11/2018 17:56 | WG1163628 |
| Arsenic | 5.37 | | 0.460 | 2.00 | 1 | 09/11/2018 17:56 | WG1163628 |
| Barium | 52.7 | | 0.170 | 0.500 | 1 | 09/11/2018 17:56 | WG1163628 |
| Beryllium | 0.367 | | 0.0700 | 0.200 | 1 | 09/11/2018 17:56 | WG1163628 |
| Cadmium | 0.388 | J | 0.0700 | 0.500 | 1 | 09/11/2018 17:56 | WG1163628 |
| Chromium | 13.8 | | 0.140 | 1.00 | 1 | 09/11/2018 17:56 | WG1163628 |
| Copper | 27.8 | | 0.530 | 2.00 | 1 | 09/11/2018 17:56 | WG1163628 |
| Lead | 165 | | 0.190 | 0.500 | 1 | 09/11/2018 17:56 | WG1163628 |
| Nickel | 25.3 | | 0.490 | 2.00 | 1 | 09/11/2018 17:56 | WG1163628 |
| Selenium | U | | 0.620 | 2.00 | 1 | 09/11/2018 17:56 | WG1163628 |
| Silver | U | | 0.120 | 1.00 | 1 | 09/11/2018 17:56 | WG1163628 |
| Thallium | U | | 0.650 | 2.00 | 1 | 09/11/2018 17:56 | WG1163628 |
| Zinc | 138 | | 0.590 | 5.00 | 1 | 09/11/2018 17:56 | WG1163628 |

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.0202 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:32 | WG1163585 |
| Acenaphthene | 0.00461 | J | 0.000600 | 0.00600 | 1 | 09/12/2018 01:32 | WG1163585 |
| Acenaphthylene | U | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:32 | WG1163585 |
| Benzo(a)anthracene | 0.387 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:32 | WG1163585 |
| Benzo(a)pyrene | 0.555 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:32 | WG1163585 |
| Benzo(b)fluoranthene | 1.20 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:32 | WG1163585 |
| Benzo(g,h,i)perylene | 0.701 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:32 | WG1163585 |
| Benzo(k)fluoranthene | 0.273 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:32 | WG1163585 |
| Chrysene | 0.460 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:32 | WG1163585 |
| Dibenz(a,h)anthracene | 0.222 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:32 | WG1163585 |
| Fluoranthene | 0.442 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:32 | WG1163585 |
| Fluorene | 0.00432 | J | 0.000600 | 0.00600 | 1 | 09/12/2018 01:32 | WG1163585 |
| Indeno(1,2,3-cd)pyrene | 0.565 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:32 | WG1163585 |
| Naphthalene | 0.0210 | | 0.00200 | 0.0200 | 1 | 09/12/2018 01:32 | WG1163585 |
| Phenanthrene | 0.106 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:32 | WG1163585 |
| Pyrene | 0.382 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:32 | WG1163585 |
| 1-Methylnaphthalene | 0.0302 | | 0.00200 | 0.0200 | 1 | 09/12/2018 01:32 | WG1163585 |
| 2-Methylnaphthalene | 0.0412 | | 0.00200 | 0.0200 | 1 | 09/12/2018 01:32 | WG1163585 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 09/12/2018 01:32 | WG1163585 |
| (S) Nitrobenzene-d5 | 78.0 | | | 14.0-149 | | 09/12/2018 01:32 | WG1163585 |
| (S) 2-Fluorobiphenyl | 74.2 | | | 34.0-125 | | 09/12/2018 01:32 | WG1163585 |
| (S) p-Terphenyl-d14 | 77.7 | | | 23.0-120 | | 09/12/2018 01:32 | WG1163585 |



Collected date/time: 09/04/18 11:30

L1023516

Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.0462 | | 0.00280 | 0.0200 | 1 | 09/10/2018 09:40 | WG1163519 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | 1.25 | J | 0.750 | 2.00 | 1 | 09/11/2018 17:59 | WG1163628 |
| Arsenic | 4.68 | | 0.460 | 2.00 | 1 | 09/11/2018 17:59 | WG1163628 |
| Barium | 109 | | 0.170 | 0.500 | 1 | 09/11/2018 17:59 | WG1163628 |
| Beryllium | 0.292 | | 0.0700 | 0.200 | 1 | 09/11/2018 17:59 | WG1163628 |
| Cadmium | 0.569 | | 0.0700 | 0.500 | 1 | 09/11/2018 17:59 | WG1163628 |
| Chromium | 11.9 | | 0.140 | 1.00 | 1 | 09/11/2018 17:59 | WG1163628 |
| Copper | 28.9 | | 0.530 | 2.00 | 1 | 09/11/2018 17:59 | WG1163628 |
| Lead | 152 | | 0.190 | 0.500 | 1 | 09/11/2018 17:59 | WG1163628 |
| Nickel | 17.2 | | 0.490 | 2.00 | 1 | 09/11/2018 17:59 | WG1163628 |
| Selenium | U | | 0.620 | 2.00 | 1 | 09/11/2018 17:59 | WG1163628 |
| Silver | U | | 0.120 | 1.00 | 1 | 09/11/2018 17:59 | WG1163628 |
| Thallium | U | | 0.650 | 2.00 | 1 | 09/11/2018 17:59 | WG1163628 |
| Zinc | 175 | | 0.590 | 5.00 | 1 | 09/11/2018 17:59 | WG1163628 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.0111 | J3 J5 | 0.000600 | 0.00600 | 1 | 09/11/2018 20:15 | WG1163585 |
| Acenaphthene | 0.00349 | J J3 | 0.000600 | 0.00600 | 1 | 09/11/2018 20:15 | WG1163585 |
| Acenaphthylene | U | | 0.000600 | 0.00600 | 1 | 09/11/2018 20:15 | WG1163585 |
| Benzo(a)anthracene | 0.0593 | J3 J5 | 0.000600 | 0.00600 | 1 | 09/11/2018 20:15 | WG1163585 |
| Benzo(a)pyrene | 0.0705 | J3 J5 | 0.000600 | 0.00600 | 1 | 09/11/2018 20:15 | WG1163585 |
| Benzo(b)fluoranthene | 0.109 | J3 J5 | 0.000600 | 0.00600 | 1 | 09/11/2018 20:15 | WG1163585 |
| Benzo(g,h,i)perylene | 0.0632 | J3 J5 | 0.000600 | 0.00600 | 1 | 09/11/2018 20:15 | WG1163585 |
| Benzo(k)fluoranthene | 0.0301 | J3 J5 | 0.000600 | 0.00600 | 1 | 09/11/2018 20:15 | WG1163585 |
| Chrysene | 0.0562 | J3 J5 | 0.000600 | 0.00600 | 1 | 09/11/2018 20:15 | WG1163585 |
| Dibenz(a,h)anthracene | 0.0177 | J3 | 0.000600 | 0.00600 | 1 | 09/11/2018 20:15 | WG1163585 |
| Fluoranthene | 0.129 | J3 J5 | 0.000600 | 0.00600 | 1 | 09/11/2018 20:15 | WG1163585 |
| Fluorene | 0.00257 | J J3 | 0.000600 | 0.00600 | 1 | 09/11/2018 20:15 | WG1163585 |
| Indeno(1,2,3-cd)pyrene | 0.0521 | J3 J5 | 0.000600 | 0.00600 | 1 | 09/11/2018 20:15 | WG1163585 |
| Naphthalene | 0.00377 | J | 0.00200 | 0.0200 | 1 | 09/11/2018 20:15 | WG1163585 |
| Phenanthrene | 0.0397 | J3 J5 | 0.000600 | 0.00600 | 1 | 09/11/2018 20:15 | WG1163585 |
| Pyrene | 0.0982 | J3 J5 | 0.000600 | 0.00600 | 1 | 09/11/2018 20:15 | WG1163585 |
| 1-Methylnaphthalene | 0.00508 | J | 0.00200 | 0.0200 | 1 | 09/11/2018 20:15 | WG1163585 |
| 2-Methylnaphthalene | 0.00565 | J | 0.00200 | 0.0200 | 1 | 09/11/2018 20:15 | WG1163585 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 09/11/2018 20:15 | WG1163585 |
| (S) Nitrobenzene-d5 | 82.0 | | | 14.0-149 | | 09/11/2018 20:15 | WG1163585 |
| (S) 2-Fluorobiphenyl | 75.9 | | | 34.0-125 | | 09/11/2018 20:15 | WG1163585 |
| (S) p-Terphenyl-d14 | 77.9 | | | 23.0-120 | | 09/11/2018 20:15 | WG1163585 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Collected date/time: 09/04/18 12:00

L1023516

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.0194 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:53 | WG1163585 |
| Acenaphthene | 0.00773 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:53 | WG1163585 |
| Acenaphthylene | U | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:53 | WG1163585 |
| Benzo(a)anthracene | 0.0951 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:53 | WG1163585 |
| Benzo(a)pyrene | 0.0991 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:53 | WG1163585 |
| Benzo(b)fluoranthene | 0.149 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:53 | WG1163585 |
| Benzo(g,h,i)perylene | 0.0791 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:53 | WG1163585 |
| Benzo(k)fluoranthene | 0.0372 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:53 | WG1163585 |
| Chrysene | 0.0916 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:53 | WG1163585 |
| Dibenz(a,h)anthracene | 0.0219 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:53 | WG1163585 |
| Fluoranthene | 0.214 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:53 | WG1163585 |
| Fluorene | 0.00555 | J | 0.000600 | 0.00600 | 1 | 09/12/2018 01:53 | WG1163585 |
| Indeno(1,2,3-cd)pyrene | 0.0647 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:53 | WG1163585 |
| Naphthalene | 0.00604 | J | 0.00200 | 0.0200 | 1 | 09/12/2018 01:53 | WG1163585 |
| Phenanthrene | 0.111 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:53 | WG1163585 |
| Pyrene | 0.187 | | 0.000600 | 0.00600 | 1 | 09/12/2018 01:53 | WG1163585 |
| 1-Methylnaphthalene | 0.00984 | J | 0.00200 | 0.0200 | 1 | 09/12/2018 01:53 | WG1163585 |
| 2-Methylnaphthalene | 0.00972 | J | 0.00200 | 0.0200 | 1 | 09/12/2018 01:53 | WG1163585 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 09/12/2018 01:53 | WG1163585 |
| (S) Nitrobenzene-d5 | 78.2 | | | 14.0-149 | | 09/12/2018 01:53 | WG1163585 |
| (S) 2-Fluorobiphenyl | 71.0 | | | 34.0-125 | | 09/12/2018 01:53 | WG1163585 |
| (S) p-Terphenyl-d14 | 74.0 | | | 23.0-120 | | 09/12/2018 01:53 | WG1163585 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 09/04/18 12:15

L1023516

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.305 | | 0.00600 | 0.0600 | 1 | 09/12/2018 02:14 | WG1163585 |
| Acenaphthene | 0.216 | | 0.00600 | 0.0600 | 1 | 09/12/2018 02:14 | WG1163585 |
| Acenaphthylene | U | | 0.00600 | 0.0600 | 1 | 09/12/2018 02:14 | WG1163585 |
| Benzo(a)anthracene | 0.713 | | 0.00600 | 0.0600 | 1 | 09/12/2018 02:14 | WG1163585 |
| Benzo(a)pyrene | 0.782 | | 0.00600 | 0.0600 | 1 | 09/12/2018 02:14 | WG1163585 |
| Benzo(b)fluoranthene | 0.966 | | 0.00600 | 0.0600 | 1 | 09/12/2018 02:14 | WG1163585 |
| Benzo(g,h,i)perylene | 0.585 | | 0.00600 | 0.0600 | 1 | 09/12/2018 02:14 | WG1163585 |
| Benzo(k)fluoranthene | 0.340 | | 0.00600 | 0.0600 | 1 | 09/12/2018 02:14 | WG1163585 |
| Chrysene | 0.712 | | 0.00600 | 0.0600 | 1 | 09/12/2018 02:14 | WG1163585 |
| Dibenz(a,h)anthracene | 0.122 | | 0.00600 | 0.0600 | 1 | 09/12/2018 02:14 | WG1163585 |
| Fluoranthene | 2.53 | | 0.00600 | 0.0600 | 1 | 09/12/2018 02:14 | WG1163585 |
| Fluorene | 0.225 | | 0.00600 | 0.0600 | 1 | 09/12/2018 02:14 | WG1163585 |
| Indeno(1,2,3-cd)pyrene | 0.472 | | 0.00600 | 0.0600 | 1 | 09/12/2018 02:14 | WG1163585 |
| Naphthalene | 0.505 | | 0.00200 | 0.0200 | 1 | 09/12/2018 02:14 | WG1163585 |
| Phenanthrene | 2.50 | | 0.00600 | 0.0600 | 1 | 09/12/2018 02:14 | WG1163585 |
| Pyrene | 2.12 | | 0.00600 | 0.0600 | 1 | 09/12/2018 02:14 | WG1163585 |
| 1-Methylnaphthalene | 0.253 | | 0.00200 | 0.0200 | 1 | 09/12/2018 02:14 | WG1163585 |
| 2-Methylnaphthalene | 0.287 | | 0.00200 | 0.0200 | 1 | 09/12/2018 02:14 | WG1163585 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 09/12/2018 02:14 | WG1163585 |
| (S) Nitrobenzene-d5 | 83.8 | | | 14.0-149 | | 09/12/2018 02:14 | WG1163585 |
| (S) 2-Fluorobiphenyl | 73.5 | | | 34.0-125 | | 09/12/2018 02:14 | WG1163585 |
| (S) p-Terphenyl-d14 | 80.4 | | | 23.0-120 | | 09/12/2018 02:14 | WG1163585 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 09/04/18 14:45

L1023516

Semi-Volatile Organic Compounds (GC) by Method TX 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH C6 - C12 | U | | 15.0 | 50.0 | 1 | 09/11/2018 23:17 | WG1163598 |
| TPH C12 - C28 | 25.4 | J | 15.0 | 50.0 | 1 | 09/11/2018 23:17 | WG1163598 |
| TPH C28 - C35 | 61.1 | | 15.0 | 50.0 | 1 | 09/11/2018 23:17 | WG1163598 |
| TPH C6 - C35 | 86.5 | J | 15.0 | 50.0 | 1 | 09/11/2018 23:17 | WG1163598 |
| (S) o-Terphenyl | 96.9 | | | 70.0-130 | | 09/11/2018 23:17 | WG1163598 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

SB04-SS01

Collected date/time: 09/04/18 10:30

SAMPLE RESULTS - 10

L1023516

ONE LAB. NATIONWIDE.



Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.00821 | J | 0.00280 | 0.0200 | 1 | 09/10/2018 09:07 | WG1163519 |

1 Cp

2 Tc

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | U | J6 | 0.750 | 2.00 | 1 | 09/11/2018 16:53 | WG1163628 |
| Arsenic | 1.58 | J | 0.460 | 2.00 | 1 | 09/11/2018 16:53 | WG1163628 |
| Barium | 39.6 | O1 | 0.170 | 0.500 | 1 | 09/11/2018 16:53 | WG1163628 |
| Beryllium | 0.110 | J | 0.0700 | 0.200 | 1 | 09/11/2018 16:53 | WG1163628 |
| Cadmium | 0.329 | J | 0.0700 | 0.500 | 1 | 09/11/2018 16:53 | WG1163628 |
| Chromium | 6.35 | | 0.140 | 1.00 | 1 | 09/11/2018 16:53 | WG1163628 |
| Copper | 11.1 | | 0.530 | 2.00 | 1 | 09/11/2018 16:53 | WG1163628 |
| Lead | 27.5 | O1 | 0.190 | 0.500 | 1 | 09/11/2018 16:53 | WG1163628 |
| Nickel | 6.91 | | 0.490 | 2.00 | 1 | 09/11/2018 16:53 | WG1163628 |
| Selenium | U | | 0.620 | 2.00 | 1 | 09/11/2018 16:53 | WG1163628 |
| Silver | U | | 0.120 | 1.00 | 1 | 09/11/2018 16:53 | WG1163628 |
| Thallium | U | | 0.650 | 2.00 | 1 | 09/11/2018 16:53 | WG1163628 |
| Zinc | 125 | J3 J5 O1 | 0.590 | 5.00 | 1 | 09/11/2018 16:53 | WG1163628 |

3 Ss

4 Cn

5 Si

6 Qc

7 Gl

8 Al

9 Sc

Polychlorinated Biphenyls (GC) by Method 8082

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|--------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| PCB 1016 | U | | 0.00350 | 0.0770 | 1 | 09/10/2018 16:00 | WG1163239 |
| PCB 1221 | U | | 0.00537 | 0.0770 | 1 | 09/10/2018 16:00 | WG1163239 |
| PCB 1232 | U | | 0.00417 | 0.0770 | 1 | 09/10/2018 16:00 | WG1163239 |
| PCB 1242 | U | | 0.00318 | 0.0770 | 1 | 09/10/2018 16:00 | WG1163239 |
| PCB 1248 | U | | 0.00315 | 0.0770 | 1 | 09/10/2018 16:00 | WG1163239 |
| PCB 1254 | U | | 0.00472 | 0.0770 | 1 | 09/10/2018 16:00 | WG1163239 |
| PCB 1260 | 0.119 | | 0.00494 | 0.0770 | 1 | 09/12/2018 06:13 | WG1163239 |
| (S) Decachlorobiphenyl | 63.8 | | | 10.0-135 | | 09/10/2018 16:00 | WG1163239 |
| (S) Decachlorobiphenyl | 66.7 | | | 10.0-135 | | 09/12/2018 06:13 | WG1163239 |
| (S) Tetrachloro-m-xylene | 67.5 | | | 10.0-139 | | 09/10/2018 16:00 | WG1163239 |
| (S) Tetrachloro-m-xylene | 69.8 | | | 10.0-139 | | 09/12/2018 06:13 | WG1163239 |

SSA07

SAMPLE RESULTS - 11

ONE LAB. NATIONWIDE



Collected date/time: 09/05/18 10:15

L1023516

Semi-Volatile Organic Compounds (GC) by Method TX 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------|-----------------|-----------|--------------|--------------|----------|-------------------------|------------------|
| TPH C6 - C12 | U | | 15.0 | 50.0 | 1 | 09/11/2018 23:30 | <u>WG1163598</u> |
| TPH C12 - C28 | 18.2 | U | 15.0 | 50.0 | 1 | 09/11/2018 23:30 | <u>WG1163598</u> |
| TPH C28 - C35 | 47.8 | U | 15.0 | 50.0 | 1 | 09/11/2018 23:30 | <u>WG1163598</u> |
| TPH C6 - C35 | 66.0 | U | 15.0 | 50.0 | 1 | 09/11/2018 23:30 | <u>WG1163598</u> |
| (S) o-Terphenyl | 100 | | | 70.0-130 | | 09/11/2018 23:30 | <u>WG1163598</u> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

SSB07

SAMPLE RESULTS - 12

ONE LAB. NATIONWIDE.



Collected date/time: 09/04/18 15:30

L1023516

Semi-Volatile Organic Compounds (GC) by Method TX 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------|-----------------|-----------|--------------|--------------|----------|-------------------------|------------------|
| TPH C6 - C12 | U | | 15.0 | 50.0 | 1 | 09/12/2018 00:10 | <u>WG1163598</u> |
| TPH C12 - C28 | 43.7 | J | 15.0 | 50.0 | 1 | 09/12/2018 00:10 | <u>WG1163598</u> |
| TPH C28 - C35 | 86.5 | | 15.0 | 50.0 | 1 | 09/12/2018 00:10 | <u>WG1163598</u> |
| TPH C6 - C35 | 130 | J | 15.0 | 50.0 | 1 | 09/12/2018 00:10 | <u>WG1163598</u> |
| (S) o-Terphenyl | 106 | | | 70.0-130 | | 09/12/2018 00:10 | <u>WG1163598</u> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

SSB11

SAMPLE RESULTS - 13

ONE LAB. NATIONWIDE



Collected date/time: 09/05/18 10:45

L1023516

Semi-Volatile Organic Compounds (GC) by Method TX 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------|-----------------|-----------|--------------|--------------|----------|-------------------------|------------------|
| TPH C6 - C12 | U | | 15.0 | 50.0 | 1 | 09/12/2018 00:23 | <u>WG1163598</u> |
| TPH C12 - C28 | 47.9 | J | 15.0 | 50.0 | 1 | 09/12/2018 00:23 | <u>WG1163598</u> |
| TPH C28 - C35 | 81.9 | | 15.0 | 50.0 | 1 | 09/12/2018 00:23 | <u>WG1163598</u> |
| TPH C6 - C35 | 130 | J | 15.0 | 50.0 | 1 | 09/12/2018 00:23 | <u>WG1163598</u> |
| (S) o-Terphenyl | 106 | | | 70.0-130 | | 09/12/2018 00:23 | <u>WG1163598</u> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 09/04/18 13:50

L1023516

Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.0600 | | 0.00280 | 0.0200 | 1 | 09/10/2018 09:42 | WG1163519 |

1 Cp

2 Tc

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | U | | 0.750 | 2.00 | 1 | 09/11/2018 18:02 | WG1163628 |
| Arsenic | 3.51 | | 0.460 | 2.00 | 1 | 09/11/2018 18:02 | WG1163628 |
| Barium | 126 | | 0.170 | 0.500 | 1 | 09/11/2018 18:02 | WG1163628 |
| Beryllium | 0.446 | | 0.0700 | 0.200 | 1 | 09/11/2018 18:02 | WG1163628 |
| Cadmium | 0.157 | L | 0.0700 | 0.500 | 1 | 09/11/2018 18:02 | WG1163628 |
| Chromium | 15.1 | | 0.140 | 1.00 | 1 | 09/11/2018 18:02 | WG1163628 |
| Copper | 15.4 | | 0.530 | 2.00 | 1 | 09/11/2018 18:02 | WG1163628 |
| Lead | 43.7 | | 0.190 | 0.500 | 1 | 09/11/2018 18:02 | WG1163628 |
| Nickel | 13.9 | | 0.490 | 2.00 | 1 | 09/11/2018 18:02 | WG1163628 |
| Selenium | 0.839 | L | 0.620 | 2.00 | 1 | 09/11/2018 18:02 | WG1163628 |
| Silver | U | | 0.120 | 1.00 | 1 | 09/11/2018 18:02 | WG1163628 |
| Thallium | U | | 0.650 | 2.00 | 1 | 09/11/2018 18:02 | WG1163628 |
| Zinc | 82.6 | | 0.590 | 5.00 | 1 | 09/11/2018 18:02 | WG1163628 |

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

MW-1

SAMPLE RESULTS - 15

ONE LAB. NATIONWIDE.



Collected date/time: 09/05/18 14:45

L1023516

Mercury by Method 7470A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|-----------|
| Mercury | U | | 0.0000490 | 0.000200 | 1 | 09/09/2018 13:01 | WG1162623 |

¹ Cp

² Tc

Metals (ICP) by Method 6010B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|-----------|----------------|-----------|-------------|-------------|----------|-------------------------|-----------|
| Barium | 0.491 | | 0.00170 | 0.00500 | 1 | 09/08/2018 13:39 | WG1162704 |
| Beryllium | U | | 0.000700 | 0.00200 | 1 | 09/08/2018 13:39 | WG1162704 |
| Cadmium | U | | 0.000700 | 0.00200 | 1 | 09/08/2018 13:39 | WG1162704 |
| Chromium | 0.00447 | J | 0.00140 | 0.0100 | 1 | 09/08/2018 13:39 | WG1162704 |
| Copper | U | | 0.00530 | 0.0100 | 1 | 09/08/2018 13:39 | WG1162704 |
| Nickel | U | | 0.00490 | 0.0100 | 1 | 09/08/2018 13:39 | WG1162704 |
| Selenium | U | | 0.00740 | 0.0100 | 1 | 09/08/2018 13:39 | WG1162704 |
| Silver | U | | 0.00280 | 0.00500 | 1 | 09/08/2018 13:39 | WG1162704 |
| Zinc | 0.0117 | J | 0.00590 | 0.0500 | 1 | 09/08/2018 13:39 | WG1162704 |

³ Ss

⁴ Cn

Si

⁶ Qc

⁷ Gl

⁸ Al

Metals (ICPMS) by Method 6020

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|-----------|
| Antimony | U | | 0.000754 | 0.00200 | 1 | 09/08/2018 14:21 | WG1162936 |
| Arsenic | 0.00433 | | 0.000250 | 0.00200 | 1 | 09/08/2018 14:21 | WG1162936 |
| Lead | 0.00359 | | 0.000240 | 0.00200 | 1 | 09/08/2018 14:21 | WG1162936 |
| Thallium | U | | 0.000190 | 0.00200 | 1 | 09/08/2018 14:21 | WG1162936 |

⁹ Sc

MW-5

SAMPLE RESULTS - 16

ONE LAB. NATIONWIDE.



Collected date/time: 09/05/18 14:50

L1023516

Mercury by Method 7470A

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|-----------|
| Mercury | U | | 0.0000490 | 0.000200 | 1 | 09/09/2018 12:35 | WG1162623 |

¹ Cp

² Tc

Metals (ICP) by Method 6010B

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|-----------|----------------|-----------|-------------|-------------|----------|-------------------------|-----------|
| Barium | 0.0606 | | 0.0153 | 0.0450 | 9 | 09/08/2018 13:47 | WG1162704 |
| Beryllium | U | | 0.00630 | 0.0180 | 9 | 09/08/2018 13:47 | WG1162704 |
| Cadmium | U | | 0.00630 | 0.0180 | 9 | 09/08/2018 13:47 | WG1162704 |
| Chromium | 0.0178 | J | 0.0126 | 0.0900 | 9 | 09/08/2018 13:47 | WG1162704 |
| Copper | U | | 0.0477 | 0.0900 | 9 | 09/08/2018 13:47 | WG1162704 |
| Nickel | U | | 0.0441 | 0.0900 | 9 | 09/08/2018 13:47 | WG1162704 |
| Selenium | U | | 0.0666 | 0.0900 | 9 | 09/08/2018 13:47 | WG1162704 |
| Silver | U | | 0.0252 | 0.0450 | 9 | 09/08/2018 13:47 | WG1162704 |
| Zinc | U | | 0.0531 | 0.450 | 9 | 09/08/2018 13:47 | WG1162704 |

³ Ss

⁴ Cn

Si

⁶ Qc

⁷ Gl

Metals (ICPMS) by Method 6020

| Analyte | Result mg/l | Qualifier | MDL mg/l | RDL mg/l | Dilution | Analysis date / time | Batch |
|----------|----------------|-----------|-------------|-------------|----------|-------------------------|-----------|
| Antimony | U | | 0.000754 | 0.00200 | 1 | 09/08/2018 13:58 | WG1162936 |
| Arsenic | 0.000916 | J | 0.000250 | 0.00200 | 1 | 09/08/2018 13:58 | WG1162936 |
| Lead | 0.00208 | | 0.000240 | 0.00200 | 1 | 09/08/2018 13:58 | WG1162936 |
| Thallium | U | | 0.000190 | 0.00200 | 1 | 09/08/2018 13:58 | WG1162936 |

⁸ Al

⁹ Sc

WG1162623

Mercury by Method 7470A

QUALITY CONTROL SUMMARY

L1023516-15.16

ONE LAB. NATIONWIDE

Method Blank (MB)

(MB) R3340398-1 09/09/18 12:27

| Analyte | MB Result mg/l | MB MDL mg/l | MB RDL mg/l |
|---------|-------------------|----------------|----------------|
| Mercury | U | 0.0000490 | 0.000200 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCS-D)

(LCS) R3340398-2 09/09/18 12:30 • (LCS-D) R3340398-3 09/09/18 12:32

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCS Rec. % | LCS-D Result mg/l | LCS-D Rec. % | Rec. Limits % | LCS Qualifier | LCS-D Qualifier | RPD % | RPD Limits % |
|---------|----------------------|--------------------|---------------|----------------------|-----------------|------------------|---------------|-----------------|----------|-----------------|
| Mercury | 0.00300 | 0.00275 | 91.8 | 0.00277 | 92.4 | 80.0-120 | | | 0.630 | 20 |

L1023516-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MS-D)

(OS) L1023516-16 09/09/18 12:35 • (MS) R3340398-4 09/09/18 12:37 • (MS-D) R3340398-5 09/09/18 12:39

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MS Rec. % | MS-D Result mg/l | MS-D Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---------|----------------------|-------------------------|-------------------|--------------|---------------------|----------------|----------|------------------|--------------|---------------|----------|-----------------|
| Mercury | 0.00300 | U | 0.00288 | 96.1 | 0.00285 | 95.1 | 1 | 75.0-125 | | 1.08 | 20 | 20 |

WG1163519

Mercury by Method 7471A

QUALITY CONTROL SUMMARY

L1023516-01.02.03.04.05.10.14

ONE LAB. NATIONWIDE

Method Blank (MB)

(MB) R3340532-1 09/10/18 08:59

| Analyte | MB Result mg/kg | MB MDL mg/kg | MB RDL mg/kg |
|---------|--------------------|-----------------|-----------------|
| Mercury | U | 0.00280 | 0.0200 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3340532-2 09/10/18 09:02 • (LCSD) R3340532-3 09/10/18 09:04

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % |
|---------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|
| Mercury | 0.300 | 0.265 | 0.309 | 88.4 | 103 | 80.0-120 |

L1023516-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1023516-10 09/10/18 09:07 • (MS) R3340532-4 09/10/18 09:09 • (MSD) R3340532-5 09/10/18 09:12

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD Limits % |
|---------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|-----------------|
| Mercury | 0.300 | 0.00821 | 0.299 | 0.294 | 97.1 | 95.3 | 1 | 75.0-125 | 1.79 | 1.79 | 20 |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Gg
7 Gl
8 Al
9 Sc

WG1162704

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L1023516-15,16

ONE LAB NATIONWIDE

Method Blank (MB)

(MB) R3340330-1 09/08/18 13:16

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|-----------|-------------------|--------------|----------------|----------------|
| Barium | U | | 0.00170 | 0.00500 |
| Beryllium | U | | 0.000700 | 0.00200 |
| Cadmium | U | | 0.000700 | 0.00200 |
| Chromium | U | | 0.00140 | 0.0100 |
| Copper | U | | 0.00530 | 0.0100 |
| Nickel | U | | 0.00490 | 0.0100 |
| Selenium | 0.00755 | J | 0.00740 | 0.0100 |
| Silver | U | | 0.00280 | 0.00500 |
| Zinc | U | | 0.00590 | 0.0500 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3340330-2 09/08/18 13:19 - (LCSD) R3340330-3 09/08/18 13:21

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|-----------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Barium | 1.00 | 1.00 | 1.01 | 100 | 101 | 80.0-120 | | | 0.625 | 20 |
| Beryllium | 1.00 | 0.983 | 1.00 | 99.3 | 100 | 80.0-120 | | | 0.795 | 20 |
| Cadmium | 1.00 | 0.984 | 0.990 | 98.4 | 99.0 | 80.0-120 | | | 0.576 | 20 |
| Chromium | 1.00 | 0.980 | 0.980 | 98.0 | 98.0 | 80.0-120 | | | 0.0243 | 20 |
| Copper | 1.00 | 1.01 | 1.00 | 101 | 100 | 80.0-120 | | | 1.04 | 20 |
| Nickel | 1.00 | 0.980 | 0.982 | 98.0 | 98.2 | 80.0-120 | | | 0.182 | 20 |
| Selenium | 1.00 | 0.987 | 0.995 | 98.7 | 99.5 | 80.0-120 | | | 0.802 | 20 |
| Silver | 0.200 | 0.189 | 0.190 | 94.5 | 94.8 | 80.0-120 | | | 0.250 | 20 |
| Zinc | 1.00 | 0.977 | 0.983 | 97.7 | 98.3 | 80.0-120 | | | 0.530 | 20 |

L1023617-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1023617-01 09/08/18 13:24 • (MS) R3340330-5 09/08/18 13:29 • (MSD) R3340330-6 09/08/18 13:31

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MSD Result mg/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|-----------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Barium | 1.00 | 0.0307 | 1.04 | 1.05 | 101 | 102 | 1 | 75.0-125 | | | 0.595 | 20 |
| Beryllium | 1.00 | ND | 0.992 | 1.00 | 99.1 | 99.9 | 1 | 75.0-125 | | | 0.790 | 20 |
| Cadmium | 1.00 | ND | 1.00 | 1.01 | 100 | 101 | 1 | 75.0-125 | | | 0.247 | 20 |
| Chromium | 1.00 | 0.0600 | 1.02 | 1.02 | 96.3 | 96.2 | 1 | 75.0-125 | | | 0.0944 | 20 |
| Copper | 1.00 | 0.0835 | 1.11 | 1.12 | 101 | 103 | 1 | 75.0-125 | | | 1.56 | 20 |
| Nickel | 1.00 | ND | 0.987 | 0.992 | 98.7 | 99.2 | 1 | 75.0-125 | | | 0.572 | 20 |
| Selenium | 1.00 | ND | 0.974 | 0.980 | 97.4 | 99.0 | 1 | 75.0-125 | | | 1.60 | 20 |
| Silver | 0.200 | ND | 0.189 | 0.192 | 94.7 | 95.9 | 1 | 75.0-125 | | | 1.27 | 20 |
| Zinc | 1.00 | 0.522 | 1.48 | 1.48 | 95.5 | 96.2 | 1 | 75.0-125 | | | 0.467 | 20 |

Method Blank (MB)

(MB) R3341049-1 09/11/18 16:45

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-----------|--------------------|--------------|-----------------|-----------------|
| Antimony | U | | 0.750 | 2.00 |
| Arsenic | U | | 0.460 | 2.00 |
| Barium | U | | 0.170 | 0.500 |
| Beryllium | U | | 0.0700 | 0.200 |
| Cadmium | U | | 0.0700 | 0.500 |
| Chromium | U | | 0.140 | 1.00 |
| Copper | U | | 0.530 | 2.00 |
| Lead | 0.235 | J | 0.190 | 0.500 |
| Nickel | U | | 0.490 | 2.00 |
| Selenium | U | | 0.620 | 2.00 |
| Silver | U | | 0.120 | 1.00 |
| Thallium | U | | 0.650 | 2.00 |
| Zinc | U | | 0.590 | 5.00 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCS-D)

(LCS) R3341049-2 09/11/18 16:47 • (LCS-D) R3341049-3 09/11/18 16:50

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | LCS-D Result mg/kg | LCS-D Rec. % | Rec. Limits % | LCS Qualifier | LCS-D Qualifier | RPD % | RPD Limits % |
|-----------|-----------------------|---------------------|---------------|-----------------------|-----------------|------------------|---------------|-----------------|----------|-----------------|
| Antimony | 100 | 94.7 | 94.7 | 94.1 | 94.1 | 80.0-120 | | | 0.654 | 20 |
| Arsenic | 100 | 92.7 | 92.7 | 92.0 | 92.0 | 80.0-120 | | | 0.750 | 20 |
| Barium | 100 | 97.8 | 97.8 | 96.9 | 96.9 | 80.0-120 | | | 0.946 | 20 |
| Beryllium | 100 | 97.0 | 97.0 | 95.9 | 95.9 | 80.0-120 | | | 1.14 | 20 |
| Cadmium | 100 | 95.3 | 95.3 | 94.4 | 94.4 | 80.0-120 | | | 0.939 | 20 |
| Chromium | 100 | 95.1 | 95.1 | 94.4 | 94.4 | 80.0-120 | | | 0.803 | 20 |
| Copper | 100 | 97.8 | 97.8 | 97.5 | 97.5 | 80.0-120 | | | 0.304 | 20 |
| Lead | 100 | 93.2 | 93.2 | 92.0 | 92.0 | 80.0-120 | | | 1.23 | 20 |
| Nickel | 100 | 94.0 | 94.0 | 93.1 | 93.1 | 80.0-120 | | | 0.941 | 20 |
| Selenium | 100 | 91.5 | 91.5 | 90.8 | 90.8 | 80.0-120 | | | 0.823 | 20 |
| Silver | 20.0 | 18.0 | 90.1 | 18.0 | 90.1 | 80.0-120 | | | 0.0200 | 20 |
| Thallium | 100 | 94.5 | 94.5 | 92.9 | 92.9 | 80.0-120 | | | 1.76 | 20 |
| Zinc | 100 | 91.8 | 91.8 | 90.7 | 90.7 | 80.0-120 | | | 1.23 | 20 |

WG1163628

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

ONE LAB, NATIONWIDE

L1023516-01.02.03.04.05.10.14

L1023516-10 Original Sample (OS) - Matrix Spike (MS) - Matrix Spike Duplicate (MSD)

(OS) L1023516-10 09/11/18 16:53 • (MS) R3341049-6 09/11/18 17:01 • (MSD) R3341049-7 09/11/18 17:03

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|-----------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Antimony | 100 | U | 77.2 | 72.7 | 77.2 | 72.7 | 1 | 75.0-125 | | J6 | 6.01 | 20 |
| Arsenic | 100 | 1.58 | 93.2 | 92.6 | 91.7 | 91.1 | 1 | 75.0-125 | | | 0.642 | 20 |
| Barium | 100 | 39.6 | 163 | 147 | 123 | 107 | 1 | 75.0-125 | | | 10.3 | 20 |
| Beryllium | 100 | 0.110 | 91.8 | 91.3 | 91.7 | 91.2 | 1 | 75.0-125 | | | 0.560 | 20 |
| Cadmium | 100 | 0.329 | 94.3 | 93.9 | 94.0 | 93.6 | 1 | 75.0-125 | | | 0.406 | 20 |
| Chromium | 100 | 6.35 | 99.0 | 98.3 | 92.7 | 92.0 | 1 | 75.0-125 | | | 0.695 | 20 |
| Copper | 100 | 11.1 | 111 | 110 | 98.6 | 98.6 | 1 | 75.0-125 | | | 0.900 | 20 |
| Lead | 100 | 27.5 | 143 | 126 | 116 | 98.7 | 1 | 75.0-125 | | | 12.9 | 20 |
| Nickel | 100 | 6.91 | 104 | 95.9 | 97.4 | 89.0 | 1 | 75.0-125 | | | 8.47 | 20 |
| Selenium | 100 | U | 89.3 | 88.9 | 89.3 | 88.9 | 1 | 75.0-125 | | | 0.450 | 20 |
| Silver | 20.0 | U | 18.2 | 18.2 | 91.0 | 91.2 | 1 | 75.0-125 | | | 0.134 | 20 |
| Thallium | 100 | U | 90.1 | 89.3 | 90.1 | 89.3 | 1 | 75.0-125 | J5 | J3 | 0.926 | 20 |
| Zinc | 100 | 125 | 333 | 244 | 208 | 119 | 1 | 75.0-125 | | | 30.8 | 20 |

WG1162936

Metals (ICPMS) by Method 6020

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE

L1023516-15, 16

Method Blank (MB)

(MB) R3340315-1 09/08/18 13:43

| Analyte | MB Result mg/l | MB Qualifier | MB MDL mg/l | MB RDL mg/l |
|----------|-------------------|--------------|----------------|----------------|
| Antimony | U | | 0.000754 | 0.00200 |
| Arsenic | U | | 0.000250 | 0.00200 |
| Lead | U | | 0.000240 | 0.00200 |
| Thallium | U | | 0.000190 | 0.00200 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3340315-2 09/08/18 13:48 • (LCSD) R3340315-3 09/08/18 13:53

| Analyte | Spike Amount mg/l | LCS Result mg/l | LCSD Result mg/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|----------|----------------------|--------------------|---------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Antimony | 0.0500 | 0.0523 | 0.0538 | 105 | 108 | 80.0-120 | | | 2.87 | 20 |
| Arsenic | 0.0500 | 0.0494 | 0.0493 | 98.8 | 98.5 | 80.0-120 | | | 0.292 | 20 |
| Lead | 0.0500 | 0.0483 | 0.0490 | 96.6 | 98.1 | 80.0-120 | | | 1.50 | 20 |
| Thallium | 0.0500 | 0.0484 | 0.0491 | 96.7 | 98.1 | 80.0-120 | | | 1.45 | 20 |

L1023516-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1023516-16 09/08/18 13:58 • (MS) R3340315-5 09/08/18 14:07 • (MSD) R3340315-6 09/08/18 14:12

| Analyte | Spike Amount mg/l | Original Result mg/l | MS Result mg/l | MSD Result mg/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|----------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Antimony | 0.0500 | U | 0.0530 | 0.0535 | 106 | 107 | 1 | 75.0-125 | | | 1.02 | 20 |
| Arsenic | 0.0500 | 0.000916 | 0.0472 | 0.0473 | 92.6 | 92.8 | 1 | 75.0-125 | | | 0.185 | 20 |
| Lead | 0.0500 | 0.00208 | 0.0495 | 0.0497 | 94.9 | 95.3 | 1 | 75.0-125 | | | 0.400 | 20 |
| Thallium | 0.0500 | U | 0.0477 | 0.0481 | 95.4 | 96.1 | 1 | 75.0-125 | | | 0.741 | 20 |

Method Blank (MB)

(MB) R3341062-1 09/11/18 15:46

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-----------------|--------------------|--------------|-----------------|-----------------|
| TPH C6 - C12 | U | | 15.2 | 50.5 |
| TPH C12 - C28 | U | | 15.2 | 50.5 |
| TPH C28 - C35 | U | | 15.2 | 50.5 |
| TPH C6 - C35 | U | | 15.2 | 50.5 |
| (S) o-Terphenyl | 91.7 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3341062-2 09/11/18 15:59 • (LCSD) R3341062-3 09/11/18 16:12

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|-----------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| TPH C6 - C12 | 250 | 239 | 248 | 95.6 | 100 | 75.0-125 | | | 3.70 | 20 |
| TPH C12 - C28 | 250 | 219 | 227 | 87.6 | 91.5 | 75.0-125 | | | 3.59 | 20 |
| TPH C6 - C35 | 500 | 458 | 475 | 91.6 | 95.6 | 75.0-125 | | | 3.64 | 20 |
| (S) o-Terphenyl | | | | 102 | 108 | 70.0-130 | | | | |

L1023516-11 Original Sample (OS) • Matrix Spike (MS)

(OS) L1023516-11 09/11/18 18:23 • (MS) R3341062-6 09/11/18 23:44

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MS Rec. % | Dilution | Rec. Limits % | MS Qualifier |
|-----------------|-----------------------|--------------------------|--------------------|--------------|----------|------------------|--------------|
| TPH C6 - C12 | 248 | U | 252 | 102 | 1 | 75.0-125 | |
| TPH C12 - C28 | 248 | U | 237 | 95.6 | 1 | 75.0-125 | |
| TPH C6 - C35 | 496 | U | 489 | 98.6 | 1 | 75.0-125 | |
| (S) o-Terphenyl | | | | 110 | | 70.0-130 | |

WG1163239

Polychlorinated Biphenyls (GC) by Method 8082

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

L1023516-10

Method Blank (MB)

(MB) R3340673-1 09/10/18 10:51

| Analyte | MB Result mg/kg | MB MDL mg/kg | MB RDL mg/kg |
|--------------------------|--------------------|-----------------|-----------------|
| PCB 1016 | U | 0.00350 | 0.070 |
| PCB 1221 | U | 0.00537 | 0.070 |
| PCB 1232 | U | 0.00417 | 0.070 |
| PCB 1242 | U | 0.00318 | 0.070 |
| PCB 1248 | U | 0.00315 | 0.070 |
| PCB 1254 | U | 0.00472 | 0.070 |
| PCB 1260 | U | 0.00494 | 0.070 |
| (S) Decachlorobiphenyl | 82.6 | | 10.0-135 |
| (S) Tetrachloro-m-xylene | 81.2 | | 10.0-139 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3340673-2 09/10/18 11:04 • (LCSD) R3340673-3 09/10/18 11:16

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|--------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| PCB 1260 | 0.167 | 0.110 | 0.114 | 65.9 | 68.3 | 12.0-145 | P | P | 3.57 | 40 |
| PCB 1016 | 0.167 | 0.128 | 0.133 | 76.6 | 79.6 | 13.0-144 | P | P | 3.83 | 40 |
| (S) Decachlorobiphenyl | | | 71.9 | 69.4 | 69.4 | 10.0-135 | | | | |
| (S) Tetrachloro-m-xylene | | | 71.2 | 68.8 | 68.8 | 10.0-139 | | | | |

L1023516-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1023516-10 09/10/18 16:00 • (MS) R3340673-4 09/10/18 16:12 • (MSD) R3340673-5 09/10/18 16:25

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | MSD Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|--------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|---------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| PCB 1260 | 0.167 | 0.0922 | 0.183 | 0.170 | 54.4 | 46.6 | 46.6 | 46.6 | 1 | 10.0-160 | P | P | 7.37 | 38 |
| PCB 1016 | 0.167 | U | 0.152 | 0.168 | 91.0 | 101 | 101 | 101 | 1 | 10.0-160 | P | P | 10.0 | 37 |
| (S) Decachlorobiphenyl | | | | | 64.1 | 75.4 | 75.4 | 75.4 | | 10.0-135 | | | | |
| (S) Tetrachloro-m-xylene | | | | | 70.4 | 82.1 | 82.1 | 82.1 | | 10.0-139 | | | | |

Method Blank (MB)

(MB) R3341116-3 09/11/18 19:53

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Anthracene | U | | 0.000600 | 0.00600 |
| Acenaphthene | U | | 0.000600 | 0.00600 |
| Acenaphthylene | U | | 0.000600 | 0.00600 |
| Benzo(a)anthracene | U | | 0.000600 | 0.00600 |
| Benzo(a)pyrene | U | | 0.000600 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.000600 | 0.00600 |
| Benzo(g,h,i)perylene | U | | 0.000600 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.000600 | 0.00600 |
| Chrysene | U | | 0.000600 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.000600 | 0.00600 |
| Fluoranthene | U | | 0.000600 | 0.00600 |
| Fluorene | U | | 0.000600 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.000600 | 0.00600 |
| Naphthalene | U | | 0.00200 | 0.0200 |
| Phenanthrene | U | | 0.000600 | 0.00600 |
| Pyrene | U | | 0.000600 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 |
| (S) Nitrobenzene-d5 | 83.3 | | | 14.0-149 |
| (S) 2-Fluorobiphenyl | 86.7 | | | 34.0-125 |
| (S) p-Teptenyl-d14 | 81.3 | | | 23.0-120 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Oc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCS)

(LCS) R3341116-1 09/11/18 19:11 • (LCS) R3341116-2 09/11/18 19:32

| Analyte | Spiked Amount mg/kg | LCS Result mg/kg | LCS Rec. % | LCSD Result mg/kg | LCSD Rec. % | Rec. Limits % | LCSD Qualifier | RPD % | RPD Limits % |
|-----------------------|------------------------|---------------------|---------------|----------------------|----------------|------------------|----------------|----------|-----------------|
| Anthracene | 0.0800 | 0.0633 | 79.1 | 0.0650 | 81.3 | 50.0-126 | | 2.65 | 20 |
| Acenaphthene | 0.0800 | 0.0586 | 73.3 | 0.0599 | 74.9 | 50.0-120 | | 2.19 | 20 |
| Acenaphthylene | 0.0800 | 0.0594 | 74.3 | 0.0607 | 75.9 | 50.0-120 | | 2.16 | 20 |
| Benzo(a)anthracene | 0.0800 | 0.0558 | 69.8 | 0.0569 | 71.1 | 45.0-120 | | 1.95 | 20 |
| Benzo(a)pyrene | 0.0800 | 0.0564 | 70.5 | 0.0576 | 72.0 | 42.0-120 | | 2.11 | 20 |
| Benzo(b)fluoranthene | 0.0800 | 0.0580 | 72.5 | 0.0633 | 79.1 | 42.0-121 | | 8.74 | 20 |
| Benzo(g,h,i)perylene | 0.0800 | 0.0632 | 79.0 | 0.0634 | 79.3 | 45.0-125 | | 0.316 | 20 |
| Benzo(k)fluoranthene | 0.0800 | 0.0711 | 88.9 | 0.0684 | 85.5 | 49.0-125 | | 3.87 | 20 |
| Chrysene | 0.0800 | 0.0655 | 81.9 | 0.0647 | 80.9 | 49.0-122 | | 1.23 | 20 |
| Dibenz(a,h)anthracene | 0.0800 | 0.0653 | 81.6 | 0.0664 | 83.0 | 47.0-125 | | 1.67 | 20 |
| Fluoranthene | 0.0800 | 0.0722 | 90.3 | 0.0737 | 92.1 | 49.0-129 | | 2.06 | 20 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R334116-1 09/11/18 19:11 • (LCSD) R334116-2 09/11/18 19:32

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Fluorene | 0.0800 | 0.0588 | 0.0592 | 73.5 | 74.0 | 49.0-120 | | | 0.678 | 20 |
| Indeno[1,2,3-cd]pyrene | 0.0800 | 0.0653 | 0.0661 | 81.6 | 82.6 | 46.0-125 | | | 1.22 | 20 |
| Naphthalene | 0.0800 | 0.0589 | 0.0599 | 73.6 | 74.9 | 50.0-120 | | | 1.68 | 20 |
| Phenanthrene | 0.0800 | 0.0552 | 0.0567 | 69.0 | 70.9 | 47.0-120 | | | 2.68 | 20 |
| Pyrene | 0.0800 | 0.0594 | 0.0602 | 74.3 | 75.3 | 43.0-123 | | | 1.34 | 20 |
| 1-Methylnaphthalene | 0.0800 | 0.0655 | 0.0686 | 81.9 | 85.8 | 51.0-121 | | | 4.62 | 20 |
| 2-Methylnaphthalene | 0.0800 | 0.0637 | 0.0664 | 79.6 | 83.0 | 50.0-120 | | | 4.15 | 20 |
| 2-Chloronaphthalene | 0.0800 | 0.0563 | 0.0582 | 70.4 | 72.8 | 50.0-120 | | | 3.32 | 20 |
| (S) Nitrobenzene-d5 | | | 92.2 | 89.8 | 89.8 | 14.0-149 | | | | |
| (S) 2-Fluorobiphenyl | | | 78.8 | 81.9 | 81.9 | 34.0-125 | | | | |
| (S) p-Terphenyl-d14 | | | 79.4 | 77.0 | 77.0 | 23.0-120 | | | | |

L1023516-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1023516-06 09/11/18 20:15 • (MS) R334116-4 09/11/18 20:36 • (MSD) R334116-5 09/11/18 20:57

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MSD Rec. % | MS Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|------------------------|-----------------------|--------------------------|--------------------|---------------------|---------------|--------------|----------|------------------|--------------|---------------|----------|-----------------|
| Anthracene | 0.0800 | 0.0711 | 0.145 | 0.0785 | 167 | 84.3 | 1 | 10.0-145 | J5 | J3 | 59.5 | 30 |
| Acenaphthene | 0.0800 | 0.00349 | 0.0876 | 0.0642 | 105 | 75.9 | 1 | 14.0-127 | J3 | J3 | 30.8 | 27 |
| Acenaphthylene | 0.0800 | U | 0.0570 | 0.0568 | 71.3 | 71.0 | 1 | 21.0-124 | | | 0.351 | 25 |
| Benzo[a]anthracene | 0.0800 | 0.0593 | 0.336 | 0.139 | 346 | 99.6 | 1 | 10.0-139 | J5 | J3 | 82.9 | 30 |
| Benzo[a]pyrene | 0.0800 | 0.0705 | 0.309 | 0.144 | 298 | 91.9 | 1 | 10.0-141 | J5 | J3 | 72.8 | 31 |
| Benzo[b]fluoranthene | 0.0800 | 0.109 | 0.415 | 0.180 | 383 | 88.8 | 1 | 10.0-140 | J5 | J3 | 79.0 | 36 |
| Benzo[k]fluoranthene | 0.0800 | 0.0632 | 0.232 | 0.129 | 211 | 82.3 | 1 | 10.0-140 | J5 | J3 | 57.1 | 33 |
| Benzo[e]pyrene | 0.0800 | 0.0901 | 0.161 | 0.0978 | 164 | 84.6 | 1 | 10.0-137 | J5 | J3 | 48.8 | 31 |
| Chrysene | 0.0800 | 0.0562 | 0.343 | 0.141 | 359 | 106 | 1 | 10.0-145 | J5 | J3 | 83.5 | 30 |
| Dibenz[a,h]anthracene | 0.0800 | 0.0777 | 0.109 | 0.0790 | 114 | 76.6 | 1 | 10.0-132 | J5 | J3 | 31.9 | 31 |
| Fluoranthene | 0.0800 | 0.129 | 0.742 | 0.255 | 766 | 158 | 1 | 10.0-153 | J5 | J3 J5 | 97.7 | 33 |
| Fluorene | 0.0800 | 0.00257 | 0.0832 | 0.0610 | 101 | 73.0 | 1 | 11.0-130 | J3 | J3 | 30.8 | 29 |
| Indeno[1,2,3-cd]pyrene | 0.0800 | 0.0521 | 0.212 | 0.117 | 200 | 81.1 | 1 | 10.0-137 | J5 | J3 | 57.8 | 32 |
| Naphthalene | 0.0800 | 0.00377 | 0.0607 | 0.0593 | 71.2 | 69.4 | 1 | 10.0-135 | | | 2.33 | 27 |
| Phenanthrene | 0.0800 | 0.0397 | 0.384 | 0.129 | 430 | 112 | 1 | 10.0-144 | J5 | J3 | 99.4 | 31 |
| Pyrene | 0.0800 | 0.0982 | 0.554 | 0.200 | 570 | 127 | 1 | 10.0-148 | J5 | J3 | 93.9 | 35 |
| 1-Methylnaphthalene | 0.0800 | 0.00508 | 0.0721 | 0.0679 | 83.8 | 78.5 | 1 | 10.0-142 | | | 6.00 | 28 |
| 2-Methylnaphthalene | 0.0800 | 0.00565 | 0.0675 | 0.0657 | 71.3 | 75.1 | 1 | 10.0-137 | | | 2.70 | 28 |
| 2-Chloronaphthalene | 0.0800 | U | 0.0550 | 0.0548 | 68.8 | 68.5 | 1 | 29.0-120 | | | 0.364 | 24 |
| (S) Nitrobenzene-d5 | | | 81.1 | 82.0 | 82.0 | 14.0-149 | | | | | | |
| (S) 2-Fluorobiphenyl | | | 75.9 | 74.8 | 74.8 | 34.0-125 | | | | | | |
| (S) p-Terphenyl-d14 | | | 80.3 | 78.8 | 78.8 | 23.0-120 | | | | | | |

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J5 | The sample matrix interfered with the ability to make any accurate determination; spike value is high. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| O1 | The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference. |
| P | RPD between the primary and confirmatory analysis exceeded 40%. |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

GI

8 AI

9 Sc

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ GI

AI

⁸ Sc

State Accreditations

| | | | |
|-------------------------|-------------|-----------------------------|-------------------|
| Alabama | 40660 | Nebraska | NE-05-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey-NELAP | TN002 |
| California | 2932 | New Mexico ¹ | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Em975 |
| Florida | E87487 | North Carolina ¹ | DW2704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio-VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,4} | 90010 | South Carolina | 84004 |
| Kentucky ³ | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana ¹ | LA180010 | Texas | T 104704245-17-14 |
| Maine | TN0002 | Texas ⁸ | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |

Third Party Federal Accreditations

| | | | |
|-------------------------------|---------|---------------------|---------------|
| A2LA - ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA - ISO 17025 ¹ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | F330-15-00234 |
| EPA-Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



ACCOUNT:
Seneca Companies - Tulsa, OK

PROJECT:
6362589

SDG:
L1023516

DATE/TIME:
09/14/18 16:37

PAGE:
34 of 37

Seneca Companies - Tulsa, OK

6947 E. 13th Street
Tulsa, OK 74112

Report to:
Douglas Wilson

Project:
Description: Evans Flintube - Brownfield - City of Tulsa

Phone: 918-838-1434

Fax:

Collected by (print): Douglas Wilson

Site/Facility ID #: 358463

Rush? (Lab MUST be notified)
 Same Day
 Next Day
 Two Day
 Three Day

City/State
Collection: Tulsa, OK

Lab Project #
SENECATOK-6361389

P.O. # 358463

Quote #

Type Results Needed

No. of Conts.

Time

Date

Depth

Meters

Comments

Sample ID

SSA01

SSB02

SSB02-SSD1

SSA02

SSB03

SSB03-SS01

SSB04

SSB05

SSB05

SSB04-SS01

Remarks:

SS Soil
AW Air
AW - Ammonia
GW - Groundwater
WW - Wastewater
DW - Drinking Water
QT - Other

Temp

Urea

Freeze

County

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Signature

Date

Time

Accounts Payable

4140 East 14th Street
Des Moines, IA 50313

Email: dlwilson@senecacompany.com

Billing Information:

Print ON

Analysis / Container / Preservatives

Order of Capacity

Page 9



3200 Lakeside Ave
Mesa, AZ 85204
Phone: 480-948-5554
Phone: 480-948-5555
Fax: 480-948-5555

1025516
F206

ALZHEIMER: SENECAOK

Formplate: T140131

Prepunit: P669597

T18: S28 - Doree McCord

MSI

Shipped Via:

Reference: Sample # Job #/Lot

61

62

63

64

65

66

67

68

69

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

PCB's SW846 606/PTWA
TPHX ADMTW/Syringe/Notes
SVB270FAHSMID 40CL-Notes
MS010PP 40CL-Notes

PH: _____ Temp: _____
Flow: _____ Other: _____

First Blank Received: Yes / No

Tracking #: 8108 9720 0422

Received by (Signature): [Signature]

Received by (Signature): [Signature]

Received for lab by (Signature): [Signature]

Date: 9/16/18

Time: 8:46

Temp: 25

Urea: 25

Freeze: 25

County: 25

Date: 9/16/18

Time: 8:46

Signature: [Signature]

Date: 9/16/18

Time: 8:46

Signature: [Signature]

Accounts Payable

4140 East 14th Street
Des Moines, IA 50313

Email: dlwilson@senecacompany.com

Billing Information:

Print ON

Analysis / Container / Preservatives

Order of Capacity

Page 9



3200 Lakeside Ave
Mesa, AZ 85204
Phone: 480-948-5554
Phone: 480-948-5555
Fax: 480-948-5555

1025516
F206

ALZHEIMER: SENECAOK

Formplate: T140131

Prepunit: P669597

T18: S28 - Doree McCord

MSI

Shipped Via:

Reference: Sample # Job #/Lot

61

62

63

64

65

66

67

68

69

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

MS/MSD

PCB's SW846 606/PTWA
TPHX ADMTW/Syringe/Notes
SVB270FAHSMID 40CL-Notes
MS010PP 40CL-Notes

PH: _____ Temp: _____
Flow: _____ Other: _____

First Blank Received: Yes / No

Tracking #: 8108 9720 0422

Received by (Signature): [Signature]

Received by (Signature): [Signature]

Received for lab by (Signature): [Signature]

Date: 9/16/18

Time: 8:46

Temp: 25

Urea: 25

Freeze: 25

County: 25

Date: 9/16/18

Time: 8:46

Signature: [Signature]

Date: 9/16/18

Time: 8:46

Signature: [Signature]

Seneca Companies - Tulsa, OK

6047 E. 13th Street
Tulsa, OK 74112

Report to:
Douglas Wilson

Project Description: Evans Fintube - Brownfield - City of Tulsa

Phone: 918-838-1494
Fax: 6362588

Collected by (print): Douglas Wilson
Checked by (print): Douglas Wilson
Unimpacted:
Packed on ice:

Site/Facility ID: 658463
RUSH? (Sub MUST be Modified)
 Same Day: First Day
 Next Day: 1 Day (Ear Only)
 Two Day: 2 Day (Ear Only)
 Three Day: 3 Day (Ear Only)

Billing Information:
Accounts Payable
4140 East 14th Street
Des Moines, IA 50313
Email To: bellison@seneca.com

City/State Collected: Tulsa, OK
Lab/Project #: SENECA TOX-6362589
P.O. #: 358463
Quote #

| Sample ID | Comp/Quib | Matrix * | Depth | Date | Time | Date Results Needed | |
|----------------|-----------|----------|-------|----------|------|---------------------|--------|
| | | | | | | No. of | Errors |
| SSA07 | Comp | SS | 1FT | 9-5-2018 | 1015 | 3 | 7 |
| SSB07 | Comp | SS | 1FT | 9-4-2018 | 1530 | 2 | 2 |
| SSB11 | Comp | SS | 1FT | 9-5-2018 | 1045 | 2 | 2 |
| SSB03-SSD1 Dup | Comp | SS | 1FT | 9-4-2018 | 1350 | 1 | 1 |
| | | SS | | | | 4 | 4 |
| | | SS | | | | 4 | 4 |
| | | SS | | | | 4 | 4 |

RAD SCREEN: <0.01 R/hr

Matrix: Air F-Filter F-Filter
 SW - Groundwater B - Biosassy
 WW - Washwater DW - Drinking Water
 OT - Other

Remarks:
 * Matrix: Air F-Filter F-Filter
 SW - Groundwater B - Biosassy
 WW - Washwater DW - Drinking Water
 OT - Other

Temp: _____ °C
 Flow: _____
 Other: _____

Tracking #: 8108 9780 0422
 Received by: (Signature) _____
 Received by: (Signature) _____
 Received for Lab Use (Signature) _____

Temp: _____ °C
 Date: 9/16/18
 Time: 8:45

Condition: HCS 10

Plate of Custody: *MS/MSD*

Seneca Analytical
 12855 Lakewood Rd
 Midwest City, TN 37130
 Phone: 615-796-5078
 Phone: 800-292-5819
 Fax: 615-796-5075

Table #

Additional: SENECA TOX
 Template: T140131
 Protocol: P669597
 TEL: 528 - Chris McCord
 FB

Shipped Via

Priority: *MS/MSD*

Barcode: *11*

Barcode: *12*

Barcode: *13*

Barcode: *14*

| Free Chk | Analyte / Contaminant / Preservative | Plate of Custody |
|----------|--------------------------------------|------------------|
| | M6010PP 40Cr-NOPres | |
| | SV8270PARHIMD 40Cr-NOPres | |
| | TPHX 40MTW/SyringeNOPres | |

Seneca Analytical
 12855 Lakewood Rd
 Midwest City, TN 37130
 Phone: 615-796-5078
 Phone: 800-292-5819
 Fax: 615-796-5075

Table #

Additional: SENECA TOX
 Template: T140131
 Protocol: P669597
 TEL: 528 - Chris McCord
 FB

Shipped Via

Priority: *MS/MSD*

Barcode: *11*

Barcode: *12*

Barcode: *13*

Barcode: *14*

Seneca Companies - Tulsa, OK

6947 E. 13th Street
Tulsa, OK 74112

Report ID:
Douglas Wilson

Project:
Description: Evans Flintube - Brownfield - City of Tul

Phone: 918-838-1494

Fax:

Collected by (print):
Douglas Wilson

Collected by (signature):
Douglas Wilson

Inspected by (signature):
Douglas Wilson

Packed on for (signature):
Douglas Wilson

Sample ID

MAGTOPP 250mlHDPE-HND3

City/State Collected: **Tulsa, OK**

Lab Project #: **SENECATOK-6362589**

P.O. #: **358463**

Quota #

Date Results Received

No. of Entries

Date

Time

Temp

Other

How

Yes / No

HCL / Moist

Temp: **25**

Date: **9/6/18**

Time: **845**

Received for lab by (Signature):
AWM

Received by (Signature):

Received for lab by (Signature):

Received by (Signature):

Received for lab by (Signature):

Received by (Signature):

Received for lab by (Signature):

Received by (Signature):

Received for lab by (Signature):

Received by (Signature):

Received for lab by (Signature):

Received by (Signature):

Analysis / Container / Preservation

Pres
Chk

Chain of Custody

Page 3 of 3



12002 Lakeside Ave
Muskogee, OK 74453
Phone: 918-748-8889
Fax: 918-748-8889
www.seneca-analytical.com

Table #

Account: **SENECATOK**

Temp/Alt: **T140191**

Analysis: **P669672**

TSR: **326 - Chris McCord**

PE

Shipped Via

Number 15

Temp & date today

MS/MSD

16

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks

Lab Use / Remarks



ANALYTICAL REPORT

September 20, 2018

Seneca Companies - Tulsa, OK

Sample Delivery Group: L1026498
Samples Received: 09/06/2018
Project Number: 6362589
Description: Evans Fintube - Brownfield - City of Tulsa
Site: 358463
Report To: Douglas Wilson
6947 E. 13th Street
Tulsa, OK 74112

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS



| | | |
|--------------------------------|----------|-----------------|
| Cp: Cover Page | 1 | ¹ Cp |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | ² Tc |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | ³ Ss |
| SSA01 L1026498-01 | 5 | |
| SB02-SS01 L1026498-03 | 6 | ⁴ Cn |
| SSA03 L1026498-04 | 7 | ⁵ Sr |
| Qc: Quality Control Summary | 8 | |
| Metals (ICP) by Method 6010B | 8 | ⁶ Qc |
| Gl: Glossary of Terms | 9 | ⁷ Gl |
| Al: Accreditations & Locations | 10 | |
| Sc: Sample Chain of Custody | 11 | ⁸ Al |
| | | ⁹ Sc |

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.

SSA01 L1026498-01 Waste Collected by Douglas Wilson Collected date/time 09/04/18 10:30 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|------------------------------|-----------|----------|-----------------------|--------------------|---------|
| Preparation by Method 1311 | WG1168190 | 1 | 09/19/18 10:03 | 09/19/18 10:03 | TM |
| Metals (ICP) by Method 6010B | WG1168711 | 1 | 09/20/18 08:49 | 09/20/18 12:46 | CCE |

SB02-SS01 L1026498-03 Waste Collected by Douglas Wilson Collected date/time 09/04/18 10:00 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|------------------------------|-----------|----------|-----------------------|--------------------|---------|
| Preparation by Method 1311 | WG1168190 | 1 | 09/19/18 10:03 | 09/19/18 10:03 | TM |
| Metals (ICP) by Method 6010B | WG1168711 | 1 | 09/20/18 08:49 | 09/20/18 12:49 | CCE |

SSA03 L1026498-04 Waste Collected by Douglas Wilson Collected date/time 09/04/18 14:00 Received date/time 09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|------------------------------|-----------|----------|-----------------------|--------------------|---------|
| Preparation by Method 1311 | WG1168190 | 1 | 09/19/18 10:03 | 09/19/18 10:03 | TM |
| Metals (ICP) by Method 6010B | WG1168711 | 1 | 09/20/18 08:49 | 09/20/18 12:52 | CCE |

1
Cp

2
Tc

Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cr

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

SSA01

SAMPLE RESULTS - 01

ONE LAB. NATIONWIDE



Collected date/time: 09/04/18 10:30

L1026498

Preparation by Method 1311

| Analyte | Result | Qualifier | Prep date / time | Batch |
|-----------------|--------|-----------|-----------------------|-----------|
| TCLP Extraction | - | | 9/19/2018 10:03:00 AM | WG1168190 |
| Fluid | 1 | | 9/19/2018 10:03:00 AM | WG1168190 |
| Initial pH | 7.47 | | 9/19/2018 10:03:00 AM | WG1168190 |
| Final pH | 5.01 | | 9/19/2018 10:03:00 AM | WG1168190 |

1 Cp

2 Tc

3 Ss

4 Cn

Metals (ICP) by Method 6010B

| Analyte | Result mg/l | Qualifier | RDL mg/l | Limit mg/l | Dilution | Analysis date / time | Batch |
|---------|-------------|-----------|----------|------------|----------|----------------------|-----------|
| Lead | ND | | 0.100 | 5 | 1 | 09/20/2018 12:46 | WG1168711 |

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

SB02-SS01

Collected date/time: 09/04/18 10:00

SAMPLE RESULTS - 03

L1026498

ONE LAB. NATIONWIDE.



Preparation by Method 1311

| Analyte | Result | Qualifier | Prep date / time | Batch |
|-----------------|--------|-----------|-----------------------|-----------|
| TCLP Extraction | - | | 9/19/2018 10:03:00 AM | WG1168190 |
| Fluid | 1 | | 9/19/2018 10:03:00 AM | WG1168190 |
| Initial pH | 7.99 | | 9/19/2018 10:03:00 AM | WG1168190 |
| Final pH | 5.10 | | 9/19/2018 10:03:00 AM | WG1168190 |

1 Cp

2 Tc

3 Ss

4 Cn

Metals (ICP) by Method 6010B

| Analyte | Result mg/l | Qualifier | RDL mg/l | Limit mg/l | Dilution | Analysis date / time | Batch |
|---------|-------------|-----------|----------|------------|----------|----------------------|-----------|
| Lead | ND | | 0.100 | 5 | 1 | 09/20/2018 12:49 | WG1168711 |

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

SSA03

Collected date/time: 09/04/18 14:00

SAMPLE RESULTS - 04

L1026498

ONE LAB. NATIONWIDE.



Preparation by Method 1311

| Analyte | Result | Qualifier | Prep date / time | Batch |
|-----------------|--------|-----------|-----------------------|-----------|
| TCLP Extraction | - | | 9/19/2018 10:03:00 AM | WG1168190 |
| Fluid | 1 | | 9/19/2018 10:03:00 AM | WG1168190 |
| Initial pH | 8.82 | | 9/19/2018 10:03:00 AM | WG1168190 |
| Final pH | 6.01 | | 9/19/2018 10:03:00 AM | WG1168190 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/l | Qualifier | RDL mg/l | Limit mg/l | Dilution | Analysis date / time | Batch |
|---------|-------------|-----------|----------|------------|----------|----------------------|-----------|
| Lead | ND | | 0.100 | 5 | 1 | 09/20/2018 12:52 | WG1168711 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Si

6 Qc

7 GI

8 Al

9 Sc



Method Blank (MB)

| (MB) R3343548-1 | 09/20/18 | 11:41 | MB Result | MB MDL | MB RDL |
|-----------------|----------|-------|-----------|--------|--------|
| Analyte | mg/l | | mg/l | mg/l | mg/l |
| Lead | U | | 0.0333 | 0.100 | |

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCSD)

(LCS) R3343548-2 09/20/18 11:44 • (LCSD) R3343548-3 09/20/18 11:46

| Spike Amount | LCS Result | LCSD Result | LCS Rec. | LCSD Rec. | Rec. Limits | LCS Qualifier | LCSD Qualifier | RPD | RPD Limits |
|--------------|------------|-------------|----------|-----------|-------------|---------------|----------------|-----|------------|
| mg/l | mg/l | mg/l | % | % | % | % | % | % | % |
| 10.0 | 9.75 | 9.79 | 97.5 | 97.9 | 80.0-120 | 0.344 | 0.344 | 20 | 20 |

L1026255-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1026255-01 09/20/18 11:49 • (MS) R3343548-5 09/20/18 11:54 • (MSD) R3343548-6 09/20/18 11:57

| Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-----|------------|
| mg/l | mg/l | mg/l | mg/l | % | % | | % | % | % | % | % |
| 10.0 | ND | 9.70 | 9.87 | 97.0 | 98.7 | 1 | 75.0-125 | 1.79 | 1.79 | 20 | 20 |



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful GC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Gl

⁸ Al

⁹ Sc

| Qualifier | Description |
|-----------|-------------|
|-----------|-------------|

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

| | | | |
|-------------------------|-------------|-----------------------------|-------------------|
| Alabama | 40660 | Nebraska | NE-05-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey-NELAP | TN002 |
| California | 2932 | New Mexico ¹ | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | EM375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ² | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio-VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,4} | 90010 | South Carolina | 84004 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AJ30792 | Tennessee ^{1,4} | 2006 |
| Louisiana ¹ | LA180010 | Texas | T 104704245-17-14 |
| Maine | TN0002 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | CB47 |
| Mississippi | TN00003 | West Virginia | 239 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | AZLA |

Third Party Federal Accreditations

| | | | |
|-------------------------------|---------|---------------------|---------------|
| AZLA - ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| AZLA - ISO 17025 ¹ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA-Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Cp

Tc

Ss

Cn

Sr

Gc

GI

AI

Sc

Seneca Companies - Tulsa, OK

6197 E. 13th Street
Tulsa, OK 74112

Account to:
Douglas Wilton

Project:
Evans Pentstee - Brownfield - City of Tul

Phone: **918-838-1494**

Fax:
6382589

Contracted by (City):
Douglas Wilton

Contracting ID #: **58463**

Must be plan MUST be notified:
 Sub Day
 Full Day
 1 Day (Full Day)
 10 Day (Full Day)
 30 Day

Sample ID

| Sample ID | Container | Matrix * | Depth | Date | Time |
|-------------|-----------|----------|-------|----------|-------|
| SSA01 | Comp | SS | 1ft | 9-4-2018 | 10:30 |
| SSB02 | Comp | SS | 1ft | 9-4-2018 | 10:55 |
| SSB02-SS01 | Comp | SS | 1ft | 9-4-2018 | 10:00 |
| SSA03 | Comp | SS | 1ft | 9-4-2018 | 11:00 |
| SSB03 | Comp | SS | 1ft | 9-4-2018 | 11:30 |
| SSB03-SS01 | Comp | SS | 1ft | 9-4-2018 | 13:45 |
| SSB04 | Comp | SS | 1ft | 9-4-2018 | 12:00 |
| SSB05 | Comp | SS | 1ft | 9-4-2018 | 12:15 |
| SSB06 | Comp | SS | 1ft | 9-4-2018 | 14:45 |
| SSB04-SS010 | Comp | SS | 1ft | 9-5-2018 | 10:30 |

Remarks:

- Matrix
- Sub - Air - Air
- GW - Groundwater
- WSW - Wastewater
- DW - Drinking Water
- OT - Other
- F - Filter
- B - Blottery

Prepared by: **Douglas Wilton**
 Date: **09-24-2018**
 Time: **15:00**

Reviewed by: **Douglas Wilton**
 Date: **09-24-2018**
 Time: **15:00**

Accounts Payable
 4140 East 14th Street
 Des Moines, IA 50313

Send To: accounts@senecacom.com

City/State
Tulsa, OK

Lab Project #
SENECATOR-6382589

PO #
358463

Quote #

Order Receipts Received
 Will Bill

PCB's 50846 608/PA
 TMTX DONUTW/SW/RETROX
 SVR270FAKSHMD KORCF-NOFEX
 M50DIF A04CY-NOFEX

Temp _____
 Hum _____ Other _____

Tracking # **8108 9720 0472**

Received by (Signature): **[Signature]**
 Date: **9/16/18**
 Time: **8:16**

Received by (Signature): **[Signature]**
 Date: **9/16/18**
 Time: **8:16**

Prepared by (Signature): **[Signature]**
 Date: **9/16/18**
 Time: **8:16**

Quantity of County High



1700 S. 10th Street
 Tulsa, OK 74106
 Phone: 918-581-1100
 Fax: 918-581-1100

Lab Project #
F206

Amount: **SENECATOR**
 Template: **TI-40131**
 Protocol: **P6409597**
 Title: **SW - Chris McCord**
 PC

Method No.

Reference

Volume & Unit (vol)

Notes

Lab No.

Client

Project

Sample ID

Container

Matrix

Depth

Date

Time

Remarks

Temp

Hum

Other

Tracking #

Received by

Date

Time

Prepared by

Date

Time

L1026490

Jeremy W. Watkins

From: Chris McCord
Sent: Monday, September 17, 2018 4:40 PM
To: Login; Sample Storage; Due Metals
Subject: L1023516 *SENECATOK* RUSH relog

Importance: High

Please relog L1023516-01 thru -05 for TCLP PBICP. Log as R2 due 9/20.

Thanks,
Christopher McCord
Project Manager

Pace Analytical National Center for Testing & Innovation
12065 Lebanon Road | Mt. Juliet, TN 37122
615.773.3281 | Cell 615.504.3183
cmccord@pacenational.com | pacenational.com

ESC Lab Sciences is now Pace Analytical National Center for Testing & Innovation! Please make note of my new email address and website.

From: Doug Wilson [<mailto:dwilson@senecaco.com>]
Sent: Monday, September 17, 2018 4:29 PM
To: Chris McCord
Cc: Mike Fitter; Tom Hayes
Subject: Reporting for Evans Fintube L1023516

Chris,

Everything looks good on the report. However we are going to need to run TCLP Lead on samples SSA01, SSB02, SBOZ-SSO1, SSA03, and SSB03 for landfill purposes on our dig and haul. How quickly can we get results for that test?

Thanks,

Douglas Wilson
Environmental Project Manager
Seneca Companies, Inc
www.senecaco.com

t: 918-838-0494 | m: 918-210-0181
dwilson@senecaco.com





ANALYTICAL REPORT

September 21, 2018

Seneca Companies - Tulsa, OK

Sample Delivery Group: L1025517
Samples Received: 09/06/2018
Project Number: 6362589
Description: Evans Flintube - Brownfield - City of Tulsa
Site: 358463
Report To: Douglas Wilson
6947 E. 13th Street
Tulsa, OK 74112

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS



| | | |
|---|----------|--|
| Cp: Cover Page | 1 | |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | |
| SB03-SS01DUP L1025517-01 | 5 | |
| Qc: Quality Control Summary | 6 | |
| Semi-Volatile Organic Compounds (GC) by Method TX 1005 | 6 | |
| Polychlorinated Biphenyls (GC) by Method 8082 | 7 | |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | 8 | |
| Gl: Glossary of Terms | 10 | |
| Al: Accreditations & Locations | 11 | |
| Sc: Sample Chain of Custody | 12 | |
| | | |

SAMPLE SUMMARY

ONE LAB. NATIONWIDE. 

SB03-SS01DUP L1025517-01 Solid

Collected by
Douglas Wilson

Collected date/time
09/04/18 13:50

Received date/time
09/06/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|-----------|----------|-----------------------|--------------------|---------|
| Semi-Volatile Organic Compounds (GC) by Method TX1005 | WG1167430 | 1 | 09/18/18 14:47 | 09/18/18 22:43 | DMW |
| Polychlorinated Biphenyls (GC) by Method 8082 | WG1167127 | 1 | 09/17/18 11:54 | 09/18/18 15:09 | TD |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1167133 | 1 | 09/18/18 14:37 | 09/19/18 06:20 | DMG |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cr

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

SB03-SS01DUP

Collected date/time: 09/04/18 13:50

SAMPLE RESULTS - 01

L1025517

ONE LAB. NATIONWIDE.



Semi-Volatile Organic Compounds (GC) by Method TX 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| TPH C6 - C12 | U | | 15.0 | 50.0 | 1 | 09/18/2018 22:43 | WG1167430 |
| TPH C12 - C28 | U | | 15.0 | 50.0 | 1 | 09/18/2018 22:43 | WG1167430 |
| TPH C28 - C35 | U | | 15.0 | 50.0 | 1 | 09/18/2018 22:43 | WG1167430 |
| TPH C6 - C35 | U | | 15.0 | 50.0 | 1 | 09/18/2018 22:43 | WG1167430 |
| (S) o-Terphenyl | 107 | | | 70.0-130 | | 09/18/2018 22:43 | WG1167430 |

1 Cp

2 Tc

3 Ss

4 Cn

Polychlorinated Biphenyls (GC) by Method 8082

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|--------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| PCB 1016 | U | | 0.00350 | 0.0170 | 1 | 09/18/2018 15:09 | WG1167127 |
| PCB 1221 | U | | 0.00537 | 0.0170 | 1 | 09/18/2018 15:09 | WG1167127 |
| PCB 1232 | U | | 0.00417 | 0.0170 | 1 | 09/18/2018 15:09 | WG1167127 |
| PCB 1242 | U | | 0.00318 | 0.0170 | 1 | 09/18/2018 15:09 | WG1167127 |
| PCB 1248 | U | | 0.00315 | 0.0170 | 1 | 09/18/2018 15:09 | WG1167127 |
| PCB 1254 | U | | 0.00472 | 0.0170 | 1 | 09/18/2018 15:09 | WG1167127 |
| PCB 1260 | U | | 0.00494 | 0.0170 | 1 | 09/18/2018 15:09 | WG1167127 |
| (S) Decachlorobiphenyl | 55.3 | | | 10.0-135 | | 09/18/2018 15:09 | WG1167127 |
| (S) Tetrachloro-m-xylene | 67.0 | | | 10.0-139 | | 09/18/2018 15:09 | WG1167127 |

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.0296 | | 0.000600 | 0.00600 | 1 | 09/19/2018 06:20 | WG1167133 |
| Acenaphthene | 0.0144 | | 0.000600 | 0.00600 | 1 | 09/19/2018 06:20 | WG1167133 |
| Acenaphthylene | U | | 0.000600 | 0.00600 | 1 | 09/19/2018 06:20 | WG1167133 |
| Benzo[a]anthracene | 0.0588 | | 0.000600 | 0.00600 | 1 | 09/19/2018 06:20 | WG1167133 |
| Benzo[a]pyrene | 0.0473 | | 0.000600 | 0.00600 | 1 | 09/19/2018 06:20 | WG1167133 |
| Benzo[b]fluoranthene | 0.0625 | | 0.000600 | 0.00600 | 1 | 09/19/2018 06:20 | WG1167133 |
| Benzo[g,h,i]perylene | 0.0290 | | 0.000600 | 0.00600 | 1 | 09/19/2018 06:20 | WG1167133 |
| Benzo[k]fluoranthene | 0.0172 | | 0.000600 | 0.00600 | 1 | 09/19/2018 06:20 | WG1167133 |
| Chrysene | 0.0575 | | 0.000600 | 0.00600 | 1 | 09/19/2018 06:20 | WG1167133 |
| Dibenz[a,h]anthracene | 0.00311 | U | 0.000600 | 0.00600 | 1 | 09/19/2018 06:20 | WG1167133 |
| Fluoranthene | 0.133 | | 0.000600 | 0.00600 | 1 | 09/19/2018 06:20 | WG1167133 |
| Fluorene | 0.0145 | | 0.000600 | 0.00600 | 1 | 09/19/2018 06:20 | WG1167133 |
| Indeno[1,2,3-cd]pyrene | 0.0256 | | 0.000600 | 0.00600 | 1 | 09/19/2018 06:20 | WG1167133 |
| Naphthalene | 0.00527 | U | 0.00200 | 0.0200 | 1 | 09/19/2018 06:20 | WG1167133 |
| Phenanthrene | 0.113 | | 0.000600 | 0.00600 | 1 | 09/19/2018 06:20 | WG1167133 |
| Pyrene | 0.106 | | 0.000600 | 0.00600 | 1 | 09/19/2018 06:20 | WG1167133 |
| 1-Methylnaphthalene | 0.00642 | U | 0.00200 | 0.0200 | 1 | 09/19/2018 06:20 | WG1167133 |
| 2-Methylnaphthalene | 0.00424 | U | 0.00200 | 0.0200 | 1 | 09/19/2018 06:20 | WG1167133 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 09/19/2018 06:20 | WG1167133 |
| (S) Nitrobenzene-d5 | 111 | | | 14.0-149 | | 09/19/2018 06:20 | WG1167133 |
| (S) 2-Fluorobiphenyl | 80.3 | | | 34.0-125 | | 09/19/2018 06:20 | WG1167133 |
| (S) p-Terphenyl-d14 | 77.0 | | | 23.0-120 | | 09/19/2018 06:20 | WG1167133 |

L1025517-01

Method Blank (MB)

(MB) R3342975-1 09/18/18 17:46

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-----------------|--------------------|--------------|-----------------|-----------------|
| TPH C6 - C12 | U | | 15.0 | 50.0 |
| TPH C12 - C28 | U | | 15.0 | 50.0 |
| TPH C28 - C35 | U | | 15.0 | 50.0 |
| TPH C6 - C35 | U | | 15.0 | 50.0 |
| (S) o-Terphenyl | 96.4 | | | 70.0-130 |

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCSD)

(LCS) R3342975-2 09/18/18 17:59 • (LCSD) R3342975-3 09/18/18 18:13

| Analyte | Spike Amount mg/kg | LCS Result | | LCSD Result | | LCS Rec. % | Rec. Limits % | LCS Qualifier | RPD % | RPD Limits % |
|-----------------|-----------------------|------------|------|-------------|------|---------------|------------------|---------------|----------|-----------------|
| | | mg/kg | % | mg/kg | % | | | | | |
| TPH C6 - C12 | 250 | 269 | 108 | 279 | 112 | 108 | 75.0-125 | | 3.65 | 20 |
| TPH C12 - C28 | 250 | 229 | 91.6 | 238 | 95.2 | 91.6 | 75.0-125 | | 3.85 | 20 |
| TPH C6 - C35 | 500 | 498 | 99.6 | 517 | 103 | 99.6 | 75.0-125 | | 3.74 | 20 |
| (S) o-Terphenyl | | | 105 | | 108 | 105 | 70.0-130 | | | |

L1025517-01 Original Sample (OS) - Matrix Spike (MS) - Matrix Spike Duplicate (MSD)

(OS) L1025517-01 09/18/18 22:43 • (MS) R3342975-4 09/18/18 22:56 • (MSD) R3342975-5 09/18/18 23:09

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | Dilution | Rec. Limits % | MSD Rec. % | MSD Rec. | MS Qualifier | RPD % | RPD Limits % |
|-----------------|-----------------------|--------------------------|--------------------|---------------------|----------|------------------|---------------|----------|--------------|----------|-----------------|
| | | | | | | | | | | | |
| TPH C6 - C12 | 250 | U | 279 | 280 | 1 | 75.0-125 | 112 | 112 | | 0.358 | 20 |
| TPH C12 - C28 | 250 | U | 246 | 247 | 1 | 75.0-125 | 98.8 | 98.4 | | 0.406 | 20 |
| TPH C6 - C35 | 500 | U | 525 | 527 | 1 | 75.0-125 | 105 | 105 | | 0.380 | 20 |
| (S) o-Terphenyl | | | | | | 70.0-130 | 113 | 112 | | | |

Method Blank (MB)

(MB) R3342764-1 09/18/18 11:30

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|--------------------------|--------------------|--------------|-----------------|-----------------|
| PCB 1016 | U | | 0.00350 | 0.0770 |
| PCB 1221 | U | | 0.00537 | 0.0770 |
| PCB 1232 | U | | 0.00417 | 0.0770 |
| PCB 1242 | U | | 0.00318 | 0.0770 |
| PCB 1248 | U | | 0.00315 | 0.0770 |
| PCB 1254 | U | | 0.00472 | 0.0770 |
| PCB 1260 | U | | 0.00494 | 0.0770 |
| (S) Decachlorobiphenyl | 87.7 | | | 10.0-135 |
| (S) Tetrachloro-m-xylene | 84.2 | | | 10.0-139 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3342764-2 09/18/18 11:43 • (LCSD) R3342764-3 09/18/18 11:57

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|--------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| PCB 1260 | 0.167 | 0.151 | 0.131 | 90.4 | 78.4 | 37.0-145 | | | 14.2 | 37 |
| PCB 1016 | 0.167 | 0.163 | 0.140 | 97.6 | 83.8 | 36.0-141 | | | 15.2 | 35 |
| (S) Decachlorobiphenyl | | | | 94.9 | 88.9 | 10.0-135 | | | | |
| (S) Tetrachloro-m-xylene | | | | 88.4 | 82.1 | 10.0-139 | | | | |

L1025149-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1025149-06 09/18/18 13:19 • (MS) R3342764-4 09/18/18 13:33 • (MSD) R3342764-5 09/18/18 13:47

| Analyte | Spike Amount mg/kg | Original Result (dry) mg/kg | MS Result (dry) mg/kg | MSD Result (dry) mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|--------------------------|-----------------------|-----------------------------------|-----------------------------|------------------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| PCB 1260 | 0.169 | U | 0.134 | 0.134 | 79.0 | 79.0 | 1 | 10.0-160 | | 0.000 | | 38 |
| PCB 1016 | 0.169 | U | 0.155 | 0.153 | 91.6 | 90.4 | 1 | 10.0-160 | | 1.32 | | 37 |
| (S) Decachlorobiphenyl | | | | | 83.8 | 84.4 | | 10.0-135 | | | | |
| (S) Tetrachloro-m-xylene | | | | | 86.9 | 85.9 | | 10.0-139 | | | | |

Method Blank (MB)

(MB) R3342994-3 09/18/18 22:39

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Anthracene | U | | 0.000600 | 0.00600 |
| Acenaphthene | U | | 0.000600 | 0.00600 |
| Acenaphthylene | U | | 0.000600 | 0.00600 |
| Benzo(a)anthracene | U | | 0.000600 | 0.00600 |
| Benzo(a)pyrene | U | | 0.000600 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.000600 | 0.00600 |
| Benzo(g,h,i)perylene | U | | 0.000600 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.000600 | 0.00600 |
| Chrysene | U | | 0.000600 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.000600 | 0.00600 |
| Fluoranthene | U | | 0.000600 | 0.00600 |
| Fluorene | U | | 0.000600 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00200 | 0.0200 |
| Naphthalene | U | | 0.000600 | 0.00600 |
| Phenanthrene | U | | 0.000600 | 0.00600 |
| Pyrene | U | | 0.00200 | 0.0200 |
| 1-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 |
| (S) Nitrobenzene-d5 | 150 | J1 | | 14.0-149 |
| (S) 2-Fluorobiphenyl | 109 | | | 34.0-125 |
| (S) p-Terphenyl-d14 | 113 | | | 23.0-120 |

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCS-D)

(LCS) R3342994-1 09/18/18 21:55 • (LCS-D) R3342994-2 09/18/18 22:17

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCSD Qualifier | RPD % | RPD Limits % |
|-----------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|----------------|----------|-----------------|
| Anthracene | 0.0800 | 0.0788 | 0.0776 | 98.5 | 97.0 | 50.0-126 | | 1.53 | 20 |
| Acenaphthene | 0.0800 | 0.0809 | 0.0793 | 101 | 99.1 | 50.0-120 | | 2.00 | 20 |
| Acenaphthylene | 0.0800 | 0.0829 | 0.0811 | 104 | 101 | 50.0-120 | | 2.20 | 20 |
| Benzo(a)anthracene | 0.0800 | 0.0804 | 0.0791 | 101 | 98.9 | 45.0-120 | | 1.63 | 20 |
| Benzo(a)pyrene | 0.0800 | 0.0780 | 0.0772 | 97.5 | 96.5 | 42.0-120 | | 1.03 | 20 |
| Benzo(b)fluoranthene | 0.0800 | 0.0804 | 0.0813 | 101 | 102 | 42.0-121 | | 1.11 | 20 |
| Benzo(g,h,i)perylene | 0.0800 | 0.0751 | 0.0721 | 93.9 | 90.1 | 45.0-125 | | 4.08 | 20 |
| Benzo(k)fluoranthene | 0.0800 | 0.0782 | 0.0750 | 97.8 | 93.8 | 49.0-125 | | 4.18 | 20 |
| Chrysene | 0.0800 | 0.0832 | 0.0803 | 104 | 100 | 49.0-122 | | 3.55 | 20 |
| Dibenz(a,h)anthracene | 0.0800 | 0.0836 | 0.0793 | 105 | 99.1 | 47.0-125 | | 5.28 | 20 |
| Fluoranthene | 0.0800 | 0.0916 | 0.0890 | 115 | 111 | 49.0-129 | | 2.88 | 20 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3342994-1 09/18/18 21:55 • (LCSD) R3342994-2 09/18/18 22:17

| Analyte | Spike Amount | | LCS Result | | LCSD Result | | LCS Rec. | | LCSD Rec. | | Rec. Limits | | LCS Qualifier | | LCSD Qualifier | | RPD | | RPD Limits | |
|------------------------|--------------|--------|------------|------|-------------|------|----------|----|-----------|---|-------------|------|---------------|---|----------------|---|-------|---|------------|---|
| | mg/kg | mg/kg | mg/kg | % | mg/kg | % | mg/kg | % | mg/kg | % | mg/kg | % | mg/kg | % | mg/kg | % | mg/kg | % | mg/kg | % |
| Fluorene | 0.0800 | 0.0830 | 0.0815 | 104 | 0.0815 | 102 | 49.0-120 | | | | 1.82 | 20 | | | | | | | | |
| Indeno[1,2,3-cd]pyrene | 0.0800 | 0.0821 | 0.0776 | 103 | 0.0776 | 97.0 | 46.0-125 | | | | | 5.64 | 20 | | | | | | | |
| Naphthalene | 0.0800 | 0.0788 | 0.0757 | 98.5 | 0.0788 | 94.6 | 50.0-120 | | | | | 4.01 | 20 | | | | | | | |
| Phenanthrene | 0.0800 | 0.0791 | 0.0780 | 98.9 | 0.0780 | 97.5 | 47.0-120 | | | | | 1.40 | 20 | | | | | | | |
| Pyrene | 0.0800 | 0.0753 | 0.0733 | 94.1 | 0.0733 | 91.6 | 43.0-123 | | | | | 2.69 | 20 | | | | | | | |
| 1-Methylnaphthalene | 0.0800 | 0.0838 | 0.0822 | 105 | 0.0822 | 103 | 51.0-121 | | | | | 1.93 | 20 | | | | | | | |
| 2-Methylnaphthalene | 0.0800 | 0.0781 | 0.0756 | 97.6 | 0.0756 | 94.5 | 50.0-120 | | | | | 3.25 | 20 | | | | | | | |
| 2-Chloronaphthalene | 0.0800 | 0.0818 | 0.0809 | 102 | 0.0809 | 101 | 50.0-120 | | | | | 1.11 | 20 | | | | | | | |
| (S) Nitrobenzene-d5 | | | | 163 | | 159 | 14.0-149 | J1 | | | | J1 | | | | | | | | |
| (S) 2-Fluorobiphenyl | | | | 177 | | 175 | 34.0-125 | | | | | | | | | | | | | |
| (S) p-Terphenyl-d14 | | | | 110 | | 107 | 23.0-120 | | | | | | | | | | | | | |

L1025809-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1025809-01 09/19/18 05:14 • (MS) R3342994-4 09/19/18 05:36 • (MSD) R3342994-5 09/19/18 05:58

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | | MS Qualifier | MSD Qualifier | RPD | | RPD Limits |
|------------------------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|----|--------------|---------------|-------|------|------------|
| | | | | | | | | mg/kg | % | | | mg/kg | % | |
| Anthracene | 0.0800 | ND | 0.0916 | 0.0741 | 115 | 92.6 | 1 | 10.0-145 | | | | | 21.1 | 30 |
| Acenaphthene | 0.0800 | ND | 0.0591 | 0.0619 | 72.7 | 76.2 | 1 | 14.0-127 | | | | | 4.63 | 27 |
| Acenaphthylene | 0.0800 | ND | 0.0640 | 0.0618 | 80.0 | 77.3 | 1 | 21.0-124 | | | | | 3.50 | 25 |
| Benzo[a]anthracene | 0.0800 | 0.0180 | 0.176 | 0.135 | 206 | 155 | 1 | 10.0-139 | J5 | J5 | | | 26.4 | 30 |
| Benzo[b]fluoranthene | 0.0800 | 0.0134 | 0.235 | 0.137 | 277 | 155 | 1 | 10.0-141 | J5 | J3 J5 | | | 52.7 | 31 |
| Benzo[k]fluoranthene | 0.0800 | 0.0196 | 0.311 | 0.172 | 364 | 191 | 1 | 10.0-140 | J5 | J3 J5 | | | 57.6 | 36 |
| Benzo[ghi]perylene | 0.0800 | 0.0152 | 0.221 | 0.118 | 257 | 129 | 1 | 10.0-140 | J5 | J3 J5 | | | 60.8 | 33 |
| Benzo[ghi]perylene | 0.0800 | 0.00836 | 0.118 | 0.0992 | 137 | 114 | 1 | 10.0-137 | J5 | J3 | | | 17.3 | 31 |
| Chrysene | 0.0800 | 0.0102 | 0.161 | 0.143 | 189 | 166 | 1 | 10.0-145 | J5 | J5 | | | 11.8 | 30 |
| Dibenz[a,h]anthracene | 0.0800 | ND | 0.102 | 0.0753 | 126 | 92.8 | 1 | 10.0-132 | J5 | J5 | | | 30.1 | 31 |
| Fluoranthene | 0.0800 | 0.0211 | 0.257 | 0.196 | 295 | 219 | 1 | 10.0-153 | J5 | J5 | | | 26.9 | 33 |
| Fluorene | 0.0800 | ND | 0.0728 | 0.0674 | 88.4 | 82.7 | 1 | 11.0-130 | J5 | J3 | | | 7.70 | 29 |
| Indeno[1,2,3-cd]pyrene | 0.0800 | 0.0105 | 0.192 | 0.109 | 227 | 123 | 1 | 10.0-137 | J5 | J3 | | | 55.1 | 32 |
| Naphthalene | 0.0800 | ND | 0.0987 | 0.107 | 105 | 115 | 1 | 10.0-135 | J5 | J5 | | | 8.07 | 27 |
| Phenanthrene | 0.0800 | 0.00917 | 0.137 | 0.105 | 160 | 120 | 1 | 10.0-144 | J5 | J5 | | | 26.4 | 31 |
| Pyrene | 0.0800 | 0.0166 | 0.177 | 0.146 | 201 | 162 | 1 | 10.0-148 | J5 | J5 | | | 19.2 | 35 |
| 1-Methylnaphthalene | 0.0800 | ND | 0.132 | 0.113 | 141 | 117 | 1 | 10.0-142 | J5 | J5 | | | 15.5 | 28 |
| 2-Methylnaphthalene | 0.0800 | 0.0302 | 0.165 | 0.134 | 169 | 130 | 1 | 10.0-137 | J5 | J5 | | | 20.7 | 28 |
| 2-Chloronaphthalene | 0.0800 | ND | 0.0594 | 0.0616 | 74.3 | 77.0 | 1 | 29.0-120 | | J1 | | | 3.64 | 24 |
| (S) Nitrobenzene-d5 | | | | 146 | | 155 | | 14.0-149 | | | | | | |
| (S) 2-Fluorobiphenyl | | | | 83.8 | | 87.6 | | 34.0-125 | | | | | | |
| (S) p-Terphenyl-d14 | | | | 71.0 | | 76.9 | | 23.0-120 | | | | | | |



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

| | |
|------------------------------|--|
| (dry) | Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils]. |
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|--|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J1 | Surrogate recovery limits have been exceeded; values are outside upper control limits. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J5 | The sample matrix interfered with the ability to make any accurate determination; spike value is high. |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

GI

8 AI

9 Sc

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

| | | | |
|------------------------|-------------|-----------------------------|-------------------|
| Alabama | 40660 | Nebraska | NE-05-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey-NELAP | TN002 |
| California | 2932 | New Mexico ¹ | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio-VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LAD00356 |
| Kentucky ¹ | 90010 | South Carolina | 84004 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana ¹ | LA180010 | Texas | T 104704245-17-14 |
| Maine | TN0002 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 480132 |
| Minnesota | 047-989-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9880939910 |
| Montana | CERT0086 | Wyoming | AZLA |

Third Party Federal Accreditations

| | | | |
|-------------------------------|---------|---------------------|---------------|
| AZLA - ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| AZLA - ISO 17025 ¹ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | F330-15-00234 |
| EPA-Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

AI

⁹ Sc

Andy Vann

From: Chris McCord
Sent: Thursday, September 13, 2018 4:24 PM
To: Login; Sample Storage
Subject: L1023516 *SENECATOK* relog

Please relog L1023516 14 for SVB270PAHSIMD, TPHTX, and SV8082. Log as RS due 9/21.

Thanks,
Christopher McCord
Project Manager

Pace Analytical National Center for Testing & Innovation
12065 Lebanon Road | Mt. Juliet, TN 37122
615.773.3281 | Cell 615.504.3183
cmccord@pacenational.com | pacenational.com

ESC Lab Sciences is now Pace Analytical National Center for Testing & Innovation! Please make note of my new email address and website.

From: Doug Wilson [mailto:dwilson@senecapco.com]
Sent: Thursday, September 13, 2018 4:21 PM
To: Chris McCord
Cc: Mike Fitter
Subject: RE: Pace National Report for 6362589 Evans Fintube - Brownfield - City of Tulsa L1023516

Please run S803-SS01 Dup for PAH, TX1005 and PCB's.

Thank you so much Chris,

Doug



ANALYTICAL REPORT

September 27, 2018

Seneca Companies - Tulsa, OK

Sample Delivery Group: L1027511
Samples Received: 09/20/2018
Project Number: 6362589
Description: Evans Flintube - Brownfield - City of Tulsa

Report To: Douglas Wilson
6947 E. 13th Street
Tulsa, OK 74112

Entire Report Reviewed By: 

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS



| | | |
|--|----|-----------------|
| Cp: Cover Page | 1 | ¹ Cp |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | ² Tc |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | ³ Ss |
| BACKFILL 250YD3 L1027511-01 | 5 | |
| Qc: Quality Control Summary | 6 | ⁴ Cn |
| Mercury by Method 7471A | 6 | |
| Metals (ICP) by Method 6010B | 7 | ⁵ Sr |
| Semi-Volatile Organic Compounds (GC) by Method TX 1005 | 9 | |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | 10 | ⁶ Qc |
| Gl: Glossary of Terms | 12 | ⁷ Gl |
| Al: Accreditations & Locations | 13 | |
| Sc: Sample Chain of Custody | 14 | ⁸ Al |
| | | ⁹ Sc |

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.



BACKFILL 250YD3 L1027511-01 Solid
Collected by Douglas Wilson
Collected date/time 09/18/18 13:00
Received date/time 09/20/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|-----------|----------|-----------------------|--------------------|---------|
| Mercury by Method 7471A | WG1170439 | 1 | 09/24/18 05:03 | 09/25/18 14:15 | TCT |
| Metals (ICP) by Method 6010B | WG1170275 | 1 | 09/24/18 09:50 | 09/25/18 01:45 | TRB |
| Semi-Volatile Organic Compounds (GC) by Method TX 1005 | WG1169332 | 1.92 | 09/25/18 07:29 | 09/25/18 23:41 | DMW |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1170711 | 1 | 09/26/18 06:12 | 09/27/18 09:24 | DMG |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

8 Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cr

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

BACKFILL 250YD3

Collected date/time: 09/18/18 13:00

SAMPLE RESULTS - 01

L1027511

ONE LAB. NATIONWIDE.



Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.0449 | | 0.00280 | 0.0200 | 1 | 09/25/2018 14:15 | WG1170439 |

1 Cp

2 Tc

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | U | | 0.750 | 2.00 | 1 | 09/25/2018 01:45 | WG1170275 |
| Arsenic | 6.46 | | 0.460 | 2.00 | 1 | 09/25/2018 01:45 | WG1170275 |
| Barium | 159 | | 0.170 | 0.500 | 1 | 09/25/2018 01:45 | WG1170275 |
| Beryllium | 0.694 | | 0.0700 | 0.200 | 1 | 09/25/2018 01:45 | WG1170275 |
| Cadmium | U | | 0.0700 | 0.500 | 1 | 09/25/2018 01:45 | WG1170275 |
| Chromium | 70.0 | | 0.140 | 1.00 | 1 | 09/25/2018 01:45 | WG1170275 |
| Copper | 94.0 | | 0.530 | 2.00 | 1 | 09/25/2018 01:45 | WG1170275 |
| Lead | 45.6 | | 0.190 | 0.500 | 1 | 09/25/2018 01:45 | WG1170275 |
| Nickel | 64.4 | | 0.490 | 2.00 | 1 | 09/25/2018 01:45 | WG1170275 |
| Selenium | 0.766 | J | 0.620 | 2.00 | 1 | 09/25/2018 01:45 | WG1170275 |
| Silver | U | | 0.120 | 1.00 | 1 | 09/25/2018 01:45 | WG1170275 |
| Thallium | U | | 0.650 | 2.00 | 1 | 09/25/2018 01:45 | WG1170275 |
| Zinc | 130 | | 0.590 | 5.00 | 1 | 09/25/2018 01:45 | WG1170275 |

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

Semi-Volatile Organic Compounds (GC) by Method TX 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| TPH C6 - C12 | U | | 28.8 | 96.0 | 1.92 | 09/25/2018 23:41 | WG1169332 |
| TPH C12 - C28 | U | | 28.8 | 96.0 | 1.92 | 09/25/2018 23:41 | WG1169332 |
| TPH C28 - C35 | U | | 28.8 | 96.0 | 1.92 | 09/25/2018 23:41 | WG1169332 |
| TPH C6 - C35 | U | | 28.8 | 96.0 | 1.92 | 09/25/2018 23:41 | WG1169332 |
| (S) o-Terphenyl | 108 | | | 70.0-130 | | 09/25/2018 23:41 | WG1169332 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.0125 | | 0.000600 | 0.00600 | 1 | 09/27/2018 09:24 | WG1170711 |
| Acenaphthene | 0.00415 | J | 0.000600 | 0.00600 | 1 | 09/27/2018 09:24 | WG1170711 |
| Acenaphthylene | U | | 0.000600 | 0.00600 | 1 | 09/27/2018 09:24 | WG1170711 |
| Benzo(a)anthracene | 0.0569 | | 0.000600 | 0.00600 | 1 | 09/27/2018 09:24 | WG1170711 |
| Benzo(a)pyrene | 0.0537 | | 0.000600 | 0.00600 | 1 | 09/27/2018 09:24 | WG1170711 |
| Benzo(b)fluoranthene | 0.0781 | | 0.000600 | 0.00600 | 1 | 09/27/2018 09:24 | WG1170711 |
| Benzo(g,h,i)perylene | 0.0386 | | 0.000600 | 0.00600 | 1 | 09/27/2018 09:24 | WG1170711 |
| Benzo(k)fluoranthene | 0.0255 | | 0.000600 | 0.00600 | 1 | 09/27/2018 09:24 | WG1170711 |
| Chrysene | 0.0499 | | 0.000600 | 0.00600 | 1 | 09/27/2018 09:24 | WG1170711 |
| Dibenz(a,h)anthracene | 0.00897 | | 0.000600 | 0.00600 | 1 | 09/27/2018 09:24 | WG1170711 |
| Fluoranthene | 0.111 | | 0.000600 | 0.00600 | 1 | 09/27/2018 09:24 | WG1170711 |
| Fluorene | 0.00377 | J | 0.000600 | 0.00600 | 1 | 09/27/2018 09:24 | WG1170711 |
| Indeno(1,2,3-cd)pyrene | 0.0250 | | 0.000600 | 0.00600 | 1 | 09/27/2018 09:24 | WG1170711 |
| Naphthalene | 0.00634 | J | 0.00200 | 0.0200 | 1 | 09/27/2018 09:24 | WG1170711 |
| Phenanthrene | 0.0565 | | 0.000600 | 0.00600 | 1 | 09/27/2018 09:24 | WG1170711 |
| Pyrene | 0.107 | | 0.000600 | 0.00600 | 1 | 09/27/2018 09:24 | WG1170711 |
| 1-Methylnaphthalene | 0.00457 | J | 0.00200 | 0.0200 | 1 | 09/27/2018 09:24 | WG1170711 |
| 2-Methylnaphthalene | 0.00522 | J | 0.00200 | 0.0200 | 1 | 09/27/2018 09:24 | WG1170711 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 09/27/2018 09:24 | WG1170711 |
| (S) Nitrobenzene-d5 | 117 | | | 14.0-149 | | 09/27/2018 09:24 | WG1170711 |
| (S) 2-Fluorobiphenyl | 77.8 | | | 34.0-125 | | 09/27/2018 09:24 | WG1170711 |
| (S) p-Terphenyl-d14 | 69.1 | | | 23.0-120 | | 09/27/2018 09:24 | WG1170711 |

WG1170439

Mercury by Method 7471A

QUALITY CONTROL SUMMARY

L1027511-01

ONE LAB. NATIONWIDE

Method Blank (MB)

(MB) R3344909-1 09/25/18 13:28

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---------|--------------------|--------------|-----------------|-----------------|
| Mercury | U | | 0.00280 | 0.0200 |

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCSD)

(LCS) R3344909-2 09/25/18 13:30 - (LCSD) R3344909-3 09/25/18 13:33

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Mercury | 0.300 | 0.293 | 0.289 | 97.8 | 96.3 | 80.0-120 | | | 1.52 | 20 |

L1028289-04 Original Sample (OS) - Matrix Spike (MS) - Matrix Spike Duplicate (MSD)

(OS) L1028289-04 09/25/18 13:36 - (MS) R3344909-4 09/25/18 13:38 - (MSD) R3344909-5 09/25/18 13:41

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Mercury | 0.300 | 0.00653 | 0.308 | 0.254 | 101 | 82.5 | 1 | 75.0-125 | | | 19.3 | 20 |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
QC
7 GI
8 AI
9 Sc

Method Blank (MB)

(MB) R3344668-1 09/25/18 01:02

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-----------|--------------------|--------------|-----------------|-----------------|
| Antimony | U | | 0.750 | 2.00 |
| Arsenic | U | | 0.460 | 2.00 |
| Barium | U | | 0.170 | 0.500 |
| Beryllium | U | | 0.0700 | 0.200 |
| Cadmium | U | | 0.0700 | 0.500 |
| Chromium | U | | 0.140 | 1.00 |
| Copper | U | | 0.530 | 2.00 |
| Lead | U | | 0.190 | 0.500 |
| Nickel | U | | 0.490 | 2.00 |
| Selenium | U | | 0.620 | 2.00 |
| Silver | U | | 0.120 | 1.00 |
| Thallium | U | | 0.650 | 2.00 |
| Zinc | 0.667 | J | 0.590 | 5.00 |

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCSD)

(LCS) R3344668-2 09/25/18 01:05 - (LCSD) R3344668-3 09/25/18 01:07

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|-----------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Antimony | 100 | 97.9 | 98.1 | 97.9 | 98.1 | 80.0-120 | | | 0.189 | 20 |
| Arsenic | 100 | 95.9 | 95.5 | 95.9 | 95.5 | 80.0-120 | | | 0.402 | 20 |
| Barium | 100 | 100 | 100 | 100 | 100 | 80.0-120 | | | 0.151 | 20 |
| Beryllium | 100 | 99.2 | 99.1 | 99.2 | 99.1 | 80.0-120 | | | 0.119 | 20 |
| Cadmium | 100 | 98.0 | 97.9 | 98.0 | 97.9 | 80.0-120 | | | 0.120 | 20 |
| Chromium | 100 | 98.7 | 98.4 | 98.7 | 98.4 | 80.0-120 | | | 0.277 | 20 |
| Copper | 100 | 103 | 103 | 103 | 103 | 80.0-120 | | | 0.385 | 20 |
| Lead | 100 | 98.1 | 97.4 | 98.1 | 97.4 | 80.0-120 | | | 0.737 | 20 |
| Nickel | 100 | 97.4 | 97.7 | 97.4 | 97.7 | 80.0-120 | | | 0.281 | 20 |
| Selenium | 100 | 95.7 | 94.2 | 95.7 | 94.2 | 80.0-120 | | | 1.67 | 20 |
| Silver | 20.0 | 19.0 | 18.8 | 95.2 | 94.2 | 80.0-120 | | | 1.06 | 20 |
| Thallium | 100 | 97.2 | 96.9 | 97.2 | 96.9 | 80.0-120 | | | 0.263 | 20 |
| Zinc | 100 | 96.8 | 96.8 | 96.8 | 96.8 | 80.0-120 | | | 0.00145 | 20 |

L1027511-01

L1027423-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1027423-01 09/25/18 01:09 • (MS) R3344668-6 09/25/18 01:17 • (MSD) R3344668-7 09/25/18 01:19

| Analyte | Spike Amount (dry) | | Original Result (dry) | | MS Result (dry) | | MSD Result (dry) | | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | | MSD Qualifier | | RPD Limits % |
|-----------|--------------------|-------|-----------------------|-------|-----------------|-------|------------------|----------|-----------|------------|----------|---------------|--------------|---|---------------|---|--------------|
| | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | | | | | % | % | % | % | |
| Antimony | 112 | ND | 70.3 | 77.0 | 62.7 | 68.7 | 1 | 75.0-125 | J6 | J6 | 9.10 | 20 | | | | | |
| Arsenic | 112 | 6.38 | 103 | 106 | 86.3 | 88.8 | 1 | 75.0-125 | J6 | J6 | 2.71 | 20 | | | | | |
| Barium | 112 | 59.3 | 189 | 190 | 116 | 116 | 1 | 75.0-125 | J6 | J6 | 0.0951 | 20 | | | | | |
| Beryllium | 112 | ND | 102 | 105 | 91.4 | 94.1 | 1 | 75.0-125 | J6 | J6 | 2.85 | 20 | | | | | |
| Cadmium | 112 | ND | 103 | 105 | 91.9 | 94.0 | 1 | 75.0-125 | J6 | J6 | 2.30 | 20 | | | | | |
| Chromium | 112 | 89.2 | 198 | 184 | 97.2 | 84.6 | 1 | 75.0-125 | J6 | J6 | 7.38 | 20 | | | | | |
| Copper | 112 | 42.7 | 141 | 142 | 88.1 | 88.6 | 1 | 75.0-125 | J6 | J6 | 0.404 | 20 | | | | | |
| Lead | 112 | 11.1 | 117 | 121 | 94.4 | 98.0 | 1 | 75.0-125 | J6 | J6 | 3.43 | 20 | | | | | |
| Nickel | 112 | 148 | 249 | 224 | 90.0 | 67.1 | 1 | 75.0-125 | J6 | J6 | 10.9 | 20 | | | | | |
| Selenium | 112 | ND | 97.0 | 99.2 | 86.5 | 88.5 | 1 | 75.0-125 | J6 | J6 | 2.30 | 20 | | | | | |
| Silver | 22.4 | ND | 19.6 | 20.0 | 87.3 | 89.4 | 1 | 75.0-125 | J6 | J6 | 2.38 | 20 | | | | | |
| Thallium | 112 | ND | 103 | 106 | 91.9 | 94.5 | 1 | 75.0-125 | J6 | J6 | 2.80 | 20 | | | | | |
| Zinc | 112 | 70.3 | 149 | 154 | 70.4 | 75.0 | 1 | 75.0-125 | J6 | J6 | 3.45 | 20 | | | | | |

L1027511-01

Method Blank (MB)

(MB) R334497-1 09/25/18 15:00

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-----------------|--------------------|--------------|-----------------|-----------------|
| TPH C6 - C12 | U | | 15.0 | 50.0 |
| TPH C12 - C28 | U | | 15.0 | 50.0 |
| TPH C28 - C35 | U | | 15.0 | 50.0 |
| TPH C6 - C35 | U | | 15.0 | 50.0 |
| (S) o-Terphenyl | 106 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R334497-2 09/25/18 15:14 • (LCSD) R334497-3 09/25/18 15:27

| Analyte | Spike Amount mg/kg | LCS Result | | LCSD Result | | LCS Rec. | | LCSD Rec. | | LCS Qualifier | | LCSD Qualifier | | RPD | |
|-----------------|-----------------------|------------|------|-------------|------|----------|----------|-----------|----------|---------------|----|----------------|----|-------|---|
| | | mg/kg | % | mg/kg | % | mg/kg | % | mg/kg | % | mg/kg | % | mg/kg | % | mg/kg | % |
| TPH C6 - C12 | 250 | 250 | 100 | 245 | 98.0 | 100 | 75.0-125 | 98.0 | 75.0-125 | 2.02 | 20 | 2.02 | 20 | | |
| TPH C12 - C28 | 250 | 231 | 92.4 | 221 | 88.4 | 92.4 | 75.0-125 | 88.4 | 75.0-125 | 4.42 | 20 | 4.42 | 20 | | |
| TPH C6 - C35 | 500 | 481 | 96.2 | 466 | 93.2 | 96.2 | 75.0-125 | 93.2 | 75.0-125 | 3.17 | 20 | 3.17 | 20 | | |
| (S) o-Terphenyl | | | 113 | | 110 | 113 | 70.0-130 | 110 | 70.0-130 | | | | | | |

L1026982-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1026982-03 09/25/18 22:35 • (MS) R334497-4 09/25/18 22:48 • (MSD) R334497-5 09/25/18 23:02

| Analyte | Spike Amount (dry) mg/kg | Original Result | | MSD Result | | Dilution | Rec. Limits | | MS Qualifier | | RPD | | |
|-----------------|--------------------------------|-----------------|---|------------|------|----------|-------------|------|--------------|------|-------|------|----|
| | | mg/kg | % | mg/kg | % | | mg/kg | % | mg/kg | % | mg/kg | % | |
| TPH C6 - C12 | 269 | U | | 251 | 93.2 | 1 | 75.0-125 | 94.8 | 75.0-125 | 1.70 | 20 | 1.70 | 20 |
| TPH C12 - C28 | 269 | U | | 231 | 86.0 | 1 | 75.0-125 | 88.0 | 75.0-125 | 2.30 | 20 | 2.30 | 20 |
| TPH C6 - C35 | 538 | U | | 482 | 89.6 | 1 | 75.0-125 | 91.4 | 75.0-125 | 1.99 | 20 | 1.99 | 20 |
| (S) o-Terphenyl | | | | | 104 | | 70.0-130 | 104 | 70.0-130 | | | | |

Method Blank (MB)

(MB) R3345378-3 09/26/18 10:10

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Anthracene | U | | 0.00600 | 0.00600 |
| Acenaphthene | U | | 0.00600 | 0.00600 |
| Acenaphthylene | U | | 0.00600 | 0.00600 |
| Benzo[a]anthracene | U | | 0.00600 | 0.00600 |
| Benzo[e]pyrene | U | | 0.00600 | 0.00600 |
| Benzo[b]fluoranthene | U | | 0.00600 | 0.00600 |
| Benzo[g,h,i]perylene | U | | 0.00600 | 0.00600 |
| Benzo[k]fluoranthene | U | | 0.00600 | 0.00600 |
| Chrysene | U | | 0.00600 | 0.00600 |
| Dibenz[a,h]anthracene | U | | 0.00600 | 0.00600 |
| Fluoranthene | U | | 0.00600 | 0.00600 |
| Fluorene | U | | 0.00600 | 0.00600 |
| Indeno[1,2,3-cd]pyrene | U | | 0.00200 | 0.0200 |
| Naphthalene | U | | 0.00600 | 0.00600 |
| Phenanthrene | U | | 0.00600 | 0.00600 |
| Pyrene | U | | 0.00200 | 0.0200 |
| 1-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 |
| (S) Nitrobenzene-d5 | 79.4 | | | 14.0-149 |
| (S) 2-Fluorobiphenyl | 71.2 | | | 34.0-125 |
| (S) p-Terphenyl-d14 | 75.1 | | | 23.0-120 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCS-D)

(LCS) R3345378-1 09/26/18 09:28 - (LCS-D) R3345378-2 09/26/18 09:49

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCS-D Qualifier | RPD % | RPD Limits % |
|-----------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|-----------------|----------|-----------------|
| Anthracene | 0.0800 | 0.0665 | 0.0642 | 83.1 | 80.3 | 50.0-126 | | | 3.52 | 20 |
| Acenaphthene | 0.0800 | 0.0663 | 0.0642 | 82.9 | 80.3 | 50.0-120 | | | 3.22 | 20 |
| Acenaphthylene | 0.0800 | 0.0678 | 0.0633 | 84.8 | 79.1 | 50.0-120 | | | 6.86 | 20 |
| Benzo[a]anthracene | 0.0800 | 0.0689 | 0.0660 | 86.1 | 82.5 | 45.0-120 | | | 4.30 | 20 |
| Benzo[e]pyrene | 0.0800 | 0.0589 | 0.0574 | 73.6 | 71.8 | 42.0-120 | | | 2.58 | 20 |
| Benzo[b]fluoranthene | 0.0800 | 0.0632 | 0.0613 | 79.0 | 76.6 | 42.0-121 | | | 3.05 | 20 |
| Benzo[g,h,i]perylene | 0.0800 | 0.0705 | 0.0653 | 88.1 | 81.6 | 45.0-125 | | | 7.66 | 20 |
| Benzo[k]fluoranthene | 0.0800 | 0.0671 | 0.0635 | 83.9 | 79.4 | 49.0-125 | | | 5.51 | 20 |
| Chrysene | 0.0800 | 0.0709 | 0.0695 | 88.6 | 86.9 | 49.0-122 | | | 1.99 | 20 |
| Dibenz[a,h]anthracene | 0.0800 | 0.0695 | 0.0658 | 86.9 | 82.3 | 47.0-125 | | | 5.47 | 20 |
| Fluoranthene | 0.0800 | 0.0706 | 0.0666 | 88.3 | 83.3 | 49.0-129 | | | 5.83 | 20 |

WG1170711

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

QUALITY CONTROL SUMMARY

L1027511-01

ONE LAB. NATIONWIDE.

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCS-D)

(LCS) R3345378-1 09/26/18 09:28 • (LCS-D) R3345378-2 09/26/18 09:49

| Analyte | Spike Amount | | LCS Result | | LCS Rec. | | Rec. Limits | | LCS Qualifier | | RPD | | RPD Limits | |
|------------------------|--------------|--------|------------|------|----------|----------|-------------|---|---------------|---|-------|----|------------|---|
| | mg/kg | mg/kg | mg/kg | % | mg/kg | % | mg/kg | % | mg/kg | % | mg/kg | % | mg/kg | % |
| Fluorene | 0.0800 | 0.0622 | 0.0613 | 77.8 | 76.6 | 49.0-120 | | | | | 1.46 | 20 | | |
| Indeno[1,2,3-cd]pyrene | 0.0800 | 0.0696 | 0.0662 | 87.0 | 82.8 | 46.0-125 | | | | | 5.01 | 20 | | |
| Naphthalene | 0.0800 | 0.0580 | 0.0548 | 72.5 | 68.5 | 50.0-120 | | | | | 5.67 | 20 | | |
| Phenanthrene | 0.0800 | 0.0650 | 0.0625 | 81.3 | 78.1 | 47.0-120 | | | | | 3.92 | 20 | | |
| Pyrene | 0.0800 | 0.0684 | 0.0644 | 85.5 | 80.5 | 43.0-123 | | | | | 6.02 | 20 | | |
| 1-Methylnaphthalene | 0.0800 | 0.0660 | 0.0628 | 82.5 | 78.5 | 51.0-121 | | | | | 4.97 | 20 | | |
| 2-Methylnaphthalene | 0.0800 | 0.0593 | 0.0563 | 74.1 | 70.4 | 50.0-120 | | | | | 5.19 | 20 | | |
| 2-Chloronaphthalene | 0.0800 | 0.0699 | 0.0645 | 87.4 | 80.6 | 50.0-120 | | | | | 8.04 | 20 | | |
| (S) Nitrobenzene-d5 | | | 96.9 | | 92.7 | 44.0-149 | | | | | | | | |
| (S) 2-Fluorobiphenyl | | | 87.8 | | 83.2 | 34.0-125 | | | | | | | | |
| (S) p-Terphenyl-d14 | | | 85.6 | | 78.5 | 23.0-120 | | | | | | | | |

L1027058-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1027058-15 09/26/18 15:04 • (MS) R3345378-4 09/26/18 15:25 • (MSD) R3345378-5 09/26/18 15:45

| Analyte | Spike Amount | | Original Result | | MS Result | | MSD Result | | MSD Rec. | | Dilution | Rec. Limits | | MS Qualifier | | RPD | | RPD Limits | |
|------------------------|--------------|---------|-----------------|-------|-----------|------|------------|---|----------|---|----------|-------------|---|--------------|-------|-------|---|------------|---|
| | mg/kg | mg/kg | mg/kg | % | mg/kg | % | mg/kg | % | mg/kg | % | | mg/kg | % | mg/kg | % | mg/kg | % | mg/kg | % |
| Anthracene | 0.0800 | 0.00728 | 0.0519 | 64.9 | 55.8 | 64.2 | | | | | 1 | 10.0-145 | | | 12.1 | 30 | | | |
| Acenaphthene | 0.0800 | ND | 0.0488 | 61.0 | 58.9 | 64.8 | | | | | 1 | 14.0-127 | | | 9.19 | 27 | | | |
| Acenaphthylene | 0.0800 | ND | 0.0525 | 65.6 | 65.6 | 70.9 | | | | | 1 | 21.0-124 | | | 7.69 | 25 | | | |
| Benzo[a]anthracene | 0.0800 | 0.0332 | 0.0659 | 82.4 | 40.9 | 52.6 | | | | | 1 | 10.0-139 | | | 13.3 | 30 | | | |
| Benzo[a]pyrene | 0.0800 | 0.0348 | 0.0643 | 80.4 | 36.9 | 47.6 | | | | | 1 | 10.0-141 | | | 12.5 | 31 | | | |
| Benzo[b]fluoranthene | 0.0800 | 0.0579 | 0.0740 | 92.5 | 20.1 | 30.2 | | | | | 1 | 10.0-140 | | | 10.4 | 36 | | | |
| Benzo[g,h,i]perylene | 0.0800 | 0.0297 | 0.0618 | 77.3 | 40.1 | 51.0 | | | | | 1 | 10.0-140 | | | 13.2 | 33 | | | |
| Benzo[k]fluoranthene | 0.0800 | 0.0187 | 0.0563 | 70.4 | 47.0 | 55.5 | | | | | 1 | 10.0-137 | | | 11.4 | 31 | | | |
| Chrysene | 0.0800 | 0.0409 | 0.0772 | 96.5 | 45.4 | 53.5 | | | | | 1 | 10.0-145 | | | 8.08 | 30 | | | |
| Dibenz[a,h]anthracene | 0.0800 | 0.00782 | 0.0481 | 60.1 | 50.3 | 63.4 | | | | | 1 | 10.0-132 | | | 19.5 | 31 | | | |
| Fluoranthene | 0.0800 | 0.0725 | 0.0969 | 121.1 | 30.5 | 30.3 | | | | | 1 | 10.0-153 | | | 0.207 | 33 | | | |
| Fluorene | 0.0800 | ND | 0.0461 | 57.6 | 54.0 | 60.3 | | | | | 1 | 11.0-130 | | | 10.3 | 29 | | | |
| Indeno[1,2,3-cd]pyrene | 0.0800 | 0.0241 | 0.0588 | 73.5 | 43.4 | 55.0 | | | | | 1 | 10.0-137 | | | 14.7 | 32 | | | |
| Naphthalene | 0.0800 | ND | 0.0485 | 60.6 | 55.9 | 61.2 | | | | | 1 | 10.0-135 | | | 8.30 | 27 | | | |
| Phenanthrene | 0.0800 | 0.0246 | 0.0616 | 77.0 | 46.3 | 49.8 | | | | | 1 | 10.0-144 | | | 4.44 | 31 | | | |
| Pyrene | 0.0800 | 0.0645 | 0.0859 | 106.1 | 26.8 | 30.8 | | | | | 1 | 10.0-148 | | | 3.66 | 35 | | | |
| 1-Methylnaphthalene | 0.0800 | ND | 0.0524 | 65.5 | 61.0 | 68.1 | | | | | 1 | 10.0-142 | | | 10.3 | 28 | | | |
| 2-Methylnaphthalene | 0.0800 | ND | 0.0478 | 59.8 | 54.0 | 61.8 | | | | | 1 | 10.0-137 | | | 12.4 | 28 | | | |
| 2-Chloronaphthalene | 0.0800 | ND | 0.0530 | 66.3 | 66.3 | 69.4 | | | | | 1 | 29.0-120 | | | 4.61 | 24 | | | |
| (S) Nitrobenzene-d5 | | | | | 84.7 | 82.7 | | | | | | 14.0-149 | | | | | | | |
| (S) 2-Fluorobiphenyl | | | | | 74.2 | 76.4 | | | | | | 34.0-125 | | | | | | | |
| (S) p-Terphenyl-d14 | | | | | 69.3 | 68.3 | | | | | | 23.0-120 | | | | | | | |



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

| | |
|------------------------------|--|
| (dry) | Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils]. |
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |



ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

| | | | |
|------------------------|-------------|-----------------------------|-------------------|
| Alabama | 40660 | Nebraska | NE-05-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey-NELAP | TN002 |
| California | 2932 | New Mexico ¹ | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Em975 |
| Florida | EB7487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio-VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ¹ | 90010 | South Carolina | 84004 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AJ30792 | Tennessee ^{1,4} | 2006 |
| Louisiana ¹ | LA180010 | Texas | T 104704245-17-14 |
| Maine | TN0002 | Texas ¹ | LAB052 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 480132 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |

Third Party Federal Accreditations

| | | | |
|-------------------------------|---------|---------------------|---------------|
| AZLA - ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| AZLA - ISO 17025 ¹ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA-Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

AJ

⁹ Sc

Seneca Companies - Tulsa, OK

5947 East 13th Street
Tulsa, OK 74112

Report for
Douglas Wilson

Project
Description: **Evans Firetube - Greenfield - City of Tulsa**

Phone: **918-638-6494**

Fax: **6362589**

Collected by: *(print)*

Collected by: *(Signature)*

Specimen ID: *(Signature)*

Picked on the N Y

Sample ID

Backfill 250yd3

Comp/Grab

SS

Matrix

NA

Depth

1300

Date

9/18/2016

Time

4

Must? (Lab MUST be notified)

Some Day Five Day

Next Day 5 Day (Real Clock)

Two Day 10 Day (Real Clock)

Three Day

Billing Information:

Accounts Payable
4140 East 14th Street
Des Moines, IA 50313

Email To:

dwilson@senecaco.com

City/State
Collecting: **Tulsa, OK**

Lab Project #

SENECATOK-6362589

P.O. #

338463

Quote #

Date Results Needed

Analysis / Container / Preservative

| PRE | COI | Analysis / Container / Preservative | Results | Sample | Substrate |
|-----|-----|-------------------------------------|---------|--------|-----------|
| X | | M6010PP 4ozClr-NoPres | | | |
| X | | SV8270P AHSHMD 4ozClr-NoPres | | | |
| X | | TPHTX 40mlTW / SyringeNoPres | | | |

Remarks:

SS - Soil
AW - Air
GW - Groundwater
WW - Wastewater
DW - Drinking Water
OT - Other

RAD SCREEN 4.5 mBq/L

Sample returned via:

City Express - Courier

Date: **9-18-18**

Time: **1600**

Date:

Time:

Date:

Time:

pH _____ Temp _____

Flow _____ Other _____

Flow: **7305 8953 7295**

Temp: **20.5°C**

Flow: **4**

Date: **9/20/18**

Time: **0845**

Received by: *(Signature)*

Received by: *(Signature)*

Received by: *(Signature)*

Received by: *(Signature)*



12000 Lakeside Rd
Meyersdale, PA 17327
Phone: 610-798-8000
Home: 610-798-8000
Fax: 610-798-8000

B181

Account: **SENECATOK**
Terminal: **T140131**
Program: **P672808**
TSP: **526 - Chris McCord**
PB:

Shipped Via:

Results

Sample

Substrate

Metric: Analyte, Batch/Lot, Date
DOE (MKT) System/Location: **WT**
DOE Approval/Accession: **WT**
MKT/Kit Refers: **148-001**
Complet: **Not (see notes)**
Validation: **not (see notes)**
DOE Date: **9/18/2018**
Preserved for: **Check/Checked**

If preservation required by Logic: Date/Time

Complet: **NOT**



ANALYTICAL REPORT

November 06, 2018

Seneca Companies - Tulsa, OK

Sample Delivery Group: L1038776
Samples Received: 10/27/2018
Project Number: 6362589
Description: Evans Fintube - Brownfield - City of Tulsa

Report To: Douglas Wilson
6947 E. 13th Street
Tulsa, OK 74112

Entire Report Reviewed By: 

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



TABLE OF CONTENTS



| | | |
|---|----------|-----------------|
| Cp: Cover Page | 1 | ¹ Cp |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | ² Tc |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | ³ Ss |
| BACKFILL 250-500 L1038776-01 | 5 | |
| Qc: Quality Control Summary | 6 | ⁴ Cn |
| Mercury by Method 7471A | 6 | ⁵ Sr |
| Metals (ICP) by Method 6010B | 7 | |
| Semi-Volatile Organic Compounds (GC) by TCEQ Method 1005 | 9 | ⁶ Qc |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | 10 | |
| Gl: Glossary of Terms | 12 | ⁷ Gl |
| Al: Accreditations & Locations | 13 | ⁸ Al |
| Sc: Sample Chain of Custody | 14 | ⁹ Sc |

SAMPLE SUMMARY

ONE LAB. NATIONWIDE. 

BACKFILL 250-500 L1038776-01 Solid

Collected by
Douglas Wilson

Collected date/time
10/26/18 13:15

Received date/time
10/27/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|-----------|----------|-----------------------|--------------------|---------|
| Mercury by Method 7471A | WG1188180 | 1 | 10/30/18 13:00 | 10/31/18 14:10 | ABL |
| Metals (ICP) by Method 6010B | WG1187706 | 1 | 10/29/18 17:39 | 10/30/18 04:18 | TRB |
| Semi-Volatile Organic Compounds (GC) by TCEQ Method 1005 | WG1190074 | 2.21 | 11/02/18 08:26 | 11/02/18 19:52 | DMW |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1188842 | 1 | 10/31/18 07:16 | 10/31/18 20:35 | LEA |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

1 Cp

2 Tc

3 Ss

Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

BACKFILL 250-500

Collected date/time: 10/26/18 13:15

SAMPLE RESULTS - 01

L1038776

ONE LAB. NATIONWIDE



Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.0334 | B | 0.00280 | 0.0200 | 1 | 10/31/2018 14:10 | WG1188180 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | U | | 0.750 | 2.00 | 1 | 10/30/2018 04:18 | WG1187706 |
| Arsenic | 2.49 | | 0.460 | 2.00 | 1 | 10/30/2018 04:18 | WG1187706 |
| Barium | 225 | | 0.170 | 0.500 | 1 | 10/30/2018 04:18 | WG1187706 |
| Beryllium | 0.705 | | 0.0700 | 0.200 | 1 | 10/30/2018 04:18 | WG1187706 |
| Cadmium | 0.104 | J | 0.0700 | 0.500 | 1 | 10/30/2018 04:18 | WG1187706 |
| Chromium | 17.3 | | 0.140 | 1.00 | 1 | 10/30/2018 04:18 | WG1187706 |
| Copper | 11.3 | | 0.530 | 2.00 | 1 | 10/30/2018 04:18 | WG1187706 |
| Lead | 30.0 | | 0.190 | 0.500 | 1 | 10/30/2018 04:18 | WG1187706 |
| Nickel | 13.2 | | 0.490 | 2.00 | 1 | 10/30/2018 04:18 | WG1187706 |
| Selenium | U | | 0.620 | 2.00 | 1 | 10/30/2018 04:18 | WG1187706 |
| Silver | U | | 0.120 | 1.00 | 1 | 10/30/2018 04:18 | WG1187706 |
| Thallium | U | | 0.650 | 2.00 | 1 | 10/30/2018 04:18 | WG1187706 |
| Zinc | 53.9 | | 0.590 | 5.00 | 1 | 10/30/2018 04:18 | WG1187706 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by TCEO Method 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| TPH C6 - C12 | U | | 33.2 | 111 | 2.21 | 11/02/2018 19:52 | WG1190074 |
| TPH C12 - C28 | U | | 33.2 | 111 | 2.21 | 11/02/2018 19:52 | WG1190074 |
| TPH C28 - C35 | U | | 33.2 | 111 | 2.21 | 11/02/2018 19:52 | WG1190074 |
| TPH C6 - C35 | U | | 33.2 | 111 | 2.21 | 11/02/2018 19:52 | WG1190074 |
| (S) o-Terphenyl | 107 | | | 70.0-130 | | 11/02/2018 19:52 | WG1190074 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.000785 | J | 0.000600 | 0.00600 | 1 | 10/31/2018 20:35 | WG1188842 |
| Acenaphthene | U | | 0.000600 | 0.00600 | 1 | 10/31/2018 20:35 | WG1188842 |
| Acenaphthylene | U | | 0.000600 | 0.00600 | 1 | 10/31/2018 20:35 | WG1188842 |
| Benzo(a)anthracene | 0.00813 | | 0.000600 | 0.00600 | 1 | 10/31/2018 20:35 | WG1188842 |
| Benzo(a)pyrene | 0.00872 | | 0.000600 | 0.00600 | 1 | 10/31/2018 20:35 | WG1188842 |
| Benzo(b)fluoranthene | 0.0137 | | 0.000600 | 0.00600 | 1 | 10/31/2018 20:35 | WG1188842 |
| Benzo(g,h,i)perylene | 0.0103 | | 0.000600 | 0.00600 | 1 | 10/31/2018 20:35 | WG1188842 |
| Benzo(k)fluoranthene | 0.00383 | J | 0.000600 | 0.00600 | 1 | 10/31/2018 20:35 | WG1188842 |
| Chrysene | 0.0103 | | 0.000600 | 0.00600 | 1 | 10/31/2018 20:35 | WG1188842 |
| Dibenz(a,h)anthracene | U | | 0.000600 | 0.00600 | 1 | 10/31/2018 20:35 | WG1188842 |
| Fluoranthene | 0.0180 | | 0.000600 | 0.00600 | 1 | 10/31/2018 20:35 | WG1188842 |
| Fluorene | U | | 0.000600 | 0.00600 | 1 | 10/31/2018 20:35 | WG1188842 |
| Indeno(1,2,3-cd)pyrene | 0.00634 | | 0.000600 | 0.00600 | 1 | 10/31/2018 20:35 | WG1188842 |
| Naphthalene | U | | 0.00200 | 0.0200 | 1 | 10/31/2018 20:35 | WG1188842 |
| Phenanthrene | 0.00522 | J | 0.000600 | 0.00600 | 1 | 10/31/2018 20:35 | WG1188842 |
| Pyrene | 0.0127 | | 0.000600 | 0.00600 | 1 | 10/31/2018 20:35 | WG1188842 |
| 1-Methylnaphthalene | U | | 0.00200 | 0.0200 | 1 | 10/31/2018 20:35 | WG1188842 |
| 2-Methylnaphthalene | U | | 0.00200 | 0.0200 | 1 | 10/31/2018 20:35 | WG1188842 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 10/31/2018 20:35 | WG1188842 |
| (S) Nitrobenzene-d5 | 85.8 | | | 14.0-149 | | 10/31/2018 20:35 | WG1188842 |
| (S) 2-Fluorobiphenyl | 93.5 | | | 34.0-125 | | 10/31/2018 20:35 | WG1188842 |
| (S) p-Terphenyl-d14 | 85.5 | | | 23.0-120 | | 10/31/2018 20:35 | WG1188842 |

WG1188180

Mercury by Method 7471A

QUALITY CONTROL SUMMARY

L1038776-01

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3355653-1 10/31/18 13:57

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---------|--------------------|--------------|-----------------|-----------------|
| Mercury | 0.00853 | J | 0.00280 | 0.0200 |

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCSD)

(LCS) R3355653-2 10/31/18 13:59 - (LCSD) R3355653-3 10/31/18 14:01

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Mercury | 0.300 | 0.322 | 0.320 | 107 | 107 | 80.0-120 | | | 0.571 | 20 |

L1039044-02 Original Sample (OS) - Matrix Spike (MS) - Matrix Spike Duplicate (MSD)

(OS) L1039044-02 10/31/18 14:04 - (MS) R3355653-4 10/31/18 14:06 - (MSD) R3355653-5 10/31/18 14:08

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---------|-----------------------|--------------------------|--------------------|---------------------|----------|------------------|--------------|---------------|----------|-----------------|
| Mercury | 0.300 | 0.0131 | 0.324 | 0.337 | 1 | 75.0-125 | | | 4.02 | 20 |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
QC
7 GI
8 AI
9 Sc

WG1187706

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L1038776-01

ONE LAB. NATIONWIDE.



Method Blank (MB)

(MB) R3355075-1 10/30/18 08:10

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-----------|--------------------|--------------|-----------------|-----------------|
| Antimony | U | 0.750 | 2.00 | 2.00 |
| Arsenic | U | 0.460 | 2.00 | 2.00 |
| Barium | U | 0.170 | 0.500 | 0.500 |
| Beryllium | U | 0.0700 | 0.200 | 0.200 |
| Cadmium | U | 0.0700 | 0.500 | 0.500 |
| Chromium | U | 0.140 | 1.00 | 1.00 |
| Copper | U | 0.530 | 2.00 | 2.00 |
| Lead | U | 0.190 | 0.500 | 0.500 |
| Nickel | U | 0.490 | 2.00 | 2.00 |
| Selenium | U | 0.620 | 2.00 | 2.00 |
| Silver | U | 0.120 | 1.00 | 1.00 |
| Thallium | U | 0.650 | 2.00 | 2.00 |
| Zinc | U | 0.590 | 5.00 | 5.00 |

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCSD)

(LCS) R3355075-2 10/30/18 08:12 • (LCSD) R3355075-3 10/30/18 08:14

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|-----------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Antimony | 100 | 95.0 | 97.6 | 95.0 | 97.6 | 80.0-120 | | | 2.66 | 20 |
| Arsenic | 100 | 92.3 | 94.7 | 92.3 | 94.7 | 80.0-120 | | | 2.64 | 20 |
| Barium | 100 | 97.9 | 100 | 97.9 | 100 | 80.0-120 | | | 2.25 | 20 |
| Beryllium | 100 | 97.0 | 99.8 | 97.0 | 99.8 | 80.0-120 | | | 2.76 | 20 |
| Cadmium | 100 | 92.9 | 95.0 | 92.9 | 95.0 | 80.0-120 | | | 2.29 | 20 |
| Chromium | 100 | 96.2 | 97.9 | 96.2 | 97.9 | 80.0-120 | | | 1.75 | 20 |
| Copper | 100 | 97.0 | 98.6 | 97.0 | 98.6 | 80.0-120 | | | 1.66 | 20 |
| Lead | 100 | 94.7 | 96.7 | 94.7 | 96.7 | 80.0-120 | | | 2.05 | 20 |
| Nickel | 100 | 96.5 | 98.8 | 96.5 | 98.8 | 80.0-120 | | | 2.34 | 20 |
| Selenium | 100 | 93.0 | 95.0 | 93.0 | 95.0 | 80.0-120 | | | 2.14 | 20 |
| Silver | 20.0 | 17.4 | 17.8 | 87.1 | 89.2 | 80.0-120 | | | 2.36 | 20 |
| Thallium | 100 | 92.1 | 94.4 | 92.1 | 94.4 | 80.0-120 | | | 2.47 | 20 |
| Zinc | 100 | 93.9 | 95.9 | 93.9 | 95.9 | 80.0-120 | | | 2.17 | 20 |

ACCOUNT: Seneca Companies - Tulsa, OK

PROJECT: 6362589

SDG: L1038776

DATE/TIME: 11/06/18 08:55

PAGE: 7 of 14

QUALITY CONTROL SUMMARY

L1038776-01

L1038902-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1038902-01 10/30/18 03:42 • (MS) R3355071-6 10/30/18 03:51 • (MSD) R3355071-7 10/30/18 03:54

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|-----------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Antimony | 100 | 1.29 | 62.1 | 68.1 | 60.8 | 66.8 | 1 | 75.0-125 | J6 | J6 | 9.20 | 20 |
| Arsenic | 100 | 2.44 | 99.6 | 107 | 97.2 | 105 | 1 | 75.0-125 | | | 7.37 | 20 |
| Barium | 100 | 586 | 671 | 707 | 94.7 | 121 | 1 | 75.0-125 | | | 5.25 | 20 |
| Beryllium | 100 | 0.499 | 93.1 | 99.2 | 92.6 | 98.7 | 1 | 75.0-125 | | | 6.43 | 20 |
| Cadmium | 100 | 2.76 | 101 | 106 | 98.0 | 104 | 1 | 75.0-125 | | | 5.39 | 20 |
| Chromium | 100 | 48.4 | 134 | 145 | 86.0 | 96.7 | 1 | 75.0-125 | | | 7.65 | 20 |
| Copper | 100 | 89.3 | 185 | 196 | 95.8 | 107 | 1 | 75.0-125 | | | 5.78 | 20 |
| Lead | 100 | U | 89.3 | 94.9 | 89.3 | 94.9 | 1 | 75.0-125 | | | 6.07 | 20 |
| Nickel | 100 | 40.1 | 135 | 141 | 94.5 | 101 | 1 | 75.0-125 | | | 4.42 | 20 |
| Selenium | 100 | 1.34 | 96.1 | 102 | 94.8 | 101 | 1 | 75.0-125 | | | 6.39 | 20 |
| Silver | 20.0 | 0.731 | 21.1 | 22.3 | 102 | 108 | 1 | 75.0-125 | | | 5.35 | 20 |
| Thallium | 100 | U | 85.2 | 91.4 | 85.2 | 91.4 | 1 | 75.0-125 | | | 6.98 | 20 |
| Zinc | 100 | 123 | 206 | 214 | 83.7 | 91.4 | 1 | 75.0-125 | | | 3.64 | 20 |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Oc
7 Gt
8 Al
9 Sc

Method Blank (MB)

(MB) R3356479-1 11/02/18 16:47

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-----------------|--------------------|--------------|-----------------|-----------------|
| TPH C6 - C12 | U | | 15.0 | 50.0 |
| TPH C12 - C28 | U | | 15.0 | 50.0 |
| TPH C28 - C35 | U | | 15.0 | 50.0 |
| TPH C6 - C35 | U | | 15.0 | 50.0 |
| (S) o-Terphenyl | 101 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3356479-2 11/02/18 17:00 • (LCSD) R3356479-3 11/02/18 17:13

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|-----------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| TPH C6 - C12 | 125 | 122 | 127 | 97.6 | 102 | 75.0-125 | | | 4.02 | 20 |
| TPH C12 - C28 | 125 | 115 | 115 | 92.0 | 92.0 | 75.0-125 | | | 0.000 | 20 |
| TPH C6 - C35 | 250 | 237 | 242 | 94.8 | 96.8 | 75.0-125 | | | 2.09 | 20 |
| (S) o-Terphenyl | | | | 110 | 106 | 70.0-130 | | | | |

L1037631-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1037631-08 11/02/18 21:51 • (MS) R3356479-4 11/02/18 22:05 • (MSD) R3356479-5 11/02/18 22:18

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|-----------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| TPH C6 - C12 | 125 | U | 136 | 129 | 109 | 103 | 1 | 75.0-125 | | 5.28 | 20 | 20 |
| TPH C12 - C28 | 125 | U | 120 | 120 | 96.0 | 96.0 | 1 | 75.0-125 | | 0.000 | 20 | 20 |
| TPH C6 - C35 | 250 | U | 256 | 249 | 102 | 99.6 | 1 | 75.0-125 | | 2.77 | 20 | 20 |
| (S) o-Terphenyl | | | | | 117 | 116 | | 70.0-130 | | | | |

Method Blank (MB)

(MB) R3355679-3 10/31/18 13:33

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Anthracene | U | | 0.000600 | 0.00600 |
| Acenaphthene | U | | 0.000600 | 0.00600 |
| Acenaphthylene | U | | 0.000600 | 0.00600 |
| Benzo(a)anthracene | U | | 0.000600 | 0.00600 |
| Benzo(e)pyrene | U | | 0.000600 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.000600 | 0.00600 |
| Benzo(g,h,i)perylene | U | | 0.000600 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.000600 | 0.00600 |
| Chrysene | U | | 0.000600 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.000600 | 0.00600 |
| Fluoranthene | U | | 0.000600 | 0.00600 |
| Fluorene | U | | 0.000600 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.000600 | 0.00600 |
| Naphthalene | U | | 0.00200 | 0.0200 |
| Phenanthrene | U | | 0.000600 | 0.00600 |
| Pyrene | U | | 0.000600 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 |
| (S) Nitrobenzene-d5 | 88.2 | | 14.0-149 | |
| (S) 2-Fluorobiphenyl | 101 | | 34.0-125 | |
| (S) p-Terphenyl-d14 | 98.2 | | 23.0-120 | |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCS-D)

(LCS) R3355679-1 10/31/18 12:51 • (LCS-D) R3355679-2 10/31/18 13:12

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | LCS Rec. mg/kg | LCS Rec. % | Rec. Limits % | LCS Qualifier | LCS-D Qualifier | RPD % | RPD Limits % |
|-----------------------|-----------------------|---------------------|---------------|-------------------|---------------|------------------|---------------|-----------------|----------|-----------------|
| Anthracene | 0.0800 | 0.0716 | 89.5 | 87.5 | 87.5 | 50.0-126 | | | 2.12 | 20 |
| Acenaphthene | 0.0800 | 0.0714 | 89.3 | 85.9 | 85.9 | 50.0-120 | | | 3.85 | 20 |
| Acenaphthylene | 0.0800 | 0.0711 | 88.9 | 85.3 | 85.3 | 50.0-120 | | | 4.16 | 20 |
| Benzo(a)anthracene | 0.0800 | 0.0703 | 87.9 | 83.6 | 83.6 | 45.0-120 | | | 4.96 | 20 |
| Benzo(e)pyrene | 0.0800 | 0.0644 | 80.5 | 79.6 | 79.6 | 42.0-120 | | | 1.09 | 20 |
| Benzo(b)fluoranthene | 0.0800 | 0.0711 | 88.9 | 81.1 | 81.1 | 42.0-121 | | | 9.12 | 20 |
| Benzo(g,h,i)perylene | 0.0800 | 0.0746 | 93.3 | 89.6 | 89.6 | 45.0-125 | | | 3.96 | 20 |
| Benzo(k)fluoranthene | 0.0800 | 0.0702 | 87.8 | 89.1 | 89.1 | 49.0-125 | | | 1.55 | 20 |
| Chrysene | 0.0800 | 0.0749 | 93.6 | 89.4 | 89.4 | 49.0-122 | | | 4.64 | 20 |
| Dibenz(a,h)anthracene | 0.0800 | 0.0748 | 93.5 | 89.9 | 89.9 | 47.0-125 | | | 3.95 | 20 |
| Fluoranthene | 0.0800 | 0.0797 | 99.6 | 96.0 | 96.0 | 49.0-129 | | | 3.71 | 20 |

WG1188842

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

QUALITY CONTROL SUMMARY

L1038776-01

ONE LAB. NATIONWIDE

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3355679-1 10/31/18 12:51 - (LCSD) R3355679-2 10/31/18 13:12

Table with 11 columns: Analyte, Spike Amount, LCS Result, LCSD Result, LCS Rec. %, LCSD Rec. %, Rec. Limits %, LCS Qualifier, LCS Qualifier %, RPD %, RPD Limits %.

L1038723-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1038723-01 10/31/18 13:54 • (MS) R3355679-4 10/31/18 14:15 • (MSD) R3355679-5 10/31/18 14:36

Table with 11 columns: Analyte, Spike Amount, Original Result, MS Result, MSD Result, MS Rec. %, MSD Rec. %, Dilution, Rec. Limits %, MS Qualifier, MSD Qualifier, RPD %, RPD Limits %.

ACCOUNT:

Seneca Companies - Tulsa, OK

PROJECT:

6362589

SDG:

L1038776

DATE/TIME:

11/06/18 08:55

PAGE

11 of 14



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| B | The same analyte is found in the associated blank. |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ GI

⁸ AI

⁹ Sc

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

¹ Not all certifications held by the laboratory are applicable to the results reported in the attached report.
² Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

| | | | |
|-------------------------|-------------|-----------------------------|-------------------|
| Alabama | 40660 | Nebraska | NE-05-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 89-0469 | New Jersey-NELAP | TN002 |
| California | 2932 | New Mexico ¹ | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87467 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ² | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio-VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,4} | 90010 | South Carolina | 84004 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | A130792 | Tennessee ^{1,4} | 2006 |
| Louisiana ¹ | LA180010 | Texas | T 104704245-17-14 |
| Maine | TN0002 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

Third Party Federal Accreditations

| | | | |
|-------------------------------|---------|---------------------|---------------|
| A2LA - ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA - ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | F330-15-00234 |
| EPA-Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



ACCOUNT:
Seneca Companies - Tulsa, OK

PROJECT:
6362589

SDG:
L1038776

DATE/TIME:
11/06/18 08:55

PAGE:
13 of 14



ANALYTICAL REPORT

October 02, 2018

Seneca Companies - Tulsa, OK

Sample Delivery Group: L1029304
Samples Received: 09/27/2018
Project Number: 6362589
Description: Evans Fintube - Brownfield - City of Tulsa
Site: 358463
Report To: Douglas Wilson
6947 E. 13th Street
Tulsa, OK 74112

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



TABLE OF CONTENTS



| | |
|---|----------|
| Cp: Cover Page | 1 |
| Tc: Table of Contents | 2 |
| Ss: Sample Summary | 3 |
| Cn: Case Narrative | 6 |
| Sr: Sample Results | 7 |
| SSA01 L1029304-01 | 7 |
| SSB02 L1029304-02 | 8 |
| SB02-SS01 L1029304-03 | 9 |
| SSA03 L1029304-04 | 10 |
| SSB03 L1029304-05 | 11 |
| SB03-SS01 L1029304-06 | 12 |
| SSB04 L1029304-07 | 13 |
| SSB05 L1029304-08 | 14 |
| SSB06 L1029304-09 | 15 |
| SB04-SS016 L1029304-10 | 16 |
| SSA07 L1029304-11 | 17 |
| SSB07 L1029304-12 | 18 |
| SSB11 L1029304-13 | 19 |
| SSB02-DUP L1029304-14 | 20 |
| DRUM COMPOSITE L1029304-15 | 21 |
| Qc: Quality Control Summary | 22 |
| Mercury by Method 7471A | 22 |
| Metals (ICP) by Method 6010B | 23 |
| Semi-Volatile Organic Compounds (GC) by Method TX 1005 | 27 |
| Polychlorinated Biphenyls (GC) by Method 8082 | 28 |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | 29 |
| Gl: Glossary of Terms | 31 |
| Al: Accreditations & Locations | 32 |
| Sc: Sample Chain of Custody | 33 |

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

SAMPLE SUMMARY

SSA01 L1029304-01 Solid Collected by Douglas Wilson Collected date/time 09/26/18 14:00 Received date/time 09/27/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|-----------|----------|-----------------------|--------------------|---------|
| Mercury by Method 7471A | WG1172764 | 1 | 09/28/18 06:55 | 09/30/18 11:47 | EL |
| Metals (ICP) by Method 6010B | WG1172634 | 1 | 09/30/18 11:39 | 10/01/18 01:45 | CCE |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1173450 | 1 | 09/28/18 11:04 | 09/29/18 13:16 | CJR |

1
Cp

2
Tc

3
Ss

4
Cn

SSB02 L1029304-02 Solid Collected by Douglas Wilson Collected date/time 09/26/18 13:45 Received date/time 09/27/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|-----------|----------|-----------------------|--------------------|---------|
| Mercury by Method 7471A | WG1172764 | 1 | 09/28/18 06:55 | 09/30/18 12:10 | EL |
| Metals (ICP) by Method 6010B | WG1172634 | 1 | 09/30/18 11:39 | 10/01/18 02:38 | CCE |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1173450 | 1 | 09/28/18 11:04 | 09/29/18 14:18 | CJR |

5
Sr

6
Qc

7
Gl

SB02-SS01 L1029304-03 Solid Collected by Douglas Wilson Collected date/time 09/25/18 08:30 Received date/time 09/27/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|-----------|----------|-----------------------|--------------------|---------|
| Mercury by Method 7471A | WG1172764 | 1 | 09/28/18 06:55 | 09/30/18 12:13 | EL |
| Metals (ICP) by Method 6010B | WG1172634 | 1 | 09/30/18 11:39 | 10/01/18 02:41 | CCE |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1173450 | 1 | 09/28/18 11:04 | 09/29/18 14:39 | CJR |

8
Al

9
Sc

SSA03 L1029304-04 Solid Collected by Douglas Wilson Collected date/time 09/26/18 14:20 Received date/time 09/27/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|-----------|----------|-----------------------|--------------------|---------|
| Mercury by Method 7471A | WG1172764 | 1 | 09/28/18 06:55 | 09/30/18 12:15 | EL |
| Metals (ICP) by Method 6010B | WG1172634 | 1 | 09/30/18 11:39 | 10/01/18 02:44 | CCE |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1173450 | 1 | 09/28/18 11:04 | 09/29/18 15:00 | CJR |

SSB03 L1029304-05 Solid Collected by Douglas Wilson Collected date/time 09/26/18 13:25 Received date/time 09/27/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|------------------------------|-----------|----------|-----------------------|--------------------|---------|
| Mercury by Method 7471A | WG1172764 | 1 | 09/28/18 06:55 | 09/30/18 12:18 | EL |
| Metals (ICP) by Method 6010B | WG1172634 | 1 | 09/30/18 11:39 | 10/01/18 02:46 | CCE |

SB03-SS01 L1029304-06 Solid Collected by Douglas Wilson Collected date/time 09/26/18 13:10 Received date/time 09/27/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|-----------|----------|-----------------------|--------------------|---------|
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1173450 | 1 | 09/28/18 11:04 | 09/29/18 15:20 | CJR |

SSB04 L1029304-07 Solid Collected by Douglas Wilson Collected date/time 09/26/18 12:35 Received date/time 09/27/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|---|-----------|----------|-----------------------|--------------------|---------|
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1173450 | 1 | 09/28/18 11:04 | 09/29/18 15:41 | CJR |

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.

| SSB05 L1029304-08 Solid | | | | | |
|---|-----------|----------|--------------------------------|---------------------------------------|--------------------------------------|
| | | | Collected by Douglas Wilson | Collected date/time 09/26/18 12:10 | Received date/time 09/27/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1173450 | 1 | 09/28/18 11:04 | 09/29/18 16:01 | CJR |

| SSB06 L1029304-09 Solid | | | | | |
|--|-----------|----------|--------------------------------|---------------------------------------|--------------------------------------|
| | | | Collected by Douglas Wilson | Collected date/time 09/26/18 11:50 | Received date/time 09/27/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Semi-Volatile Organic Compounds (GC) by Method TX 1005 | WG1172625 | 1.71 | 09/28/18 14:55 | 09/29/18 16:32 | MG |

| SB04-SS016 L1029304-10 Solid | | | | | |
|---|-----------|----------|--------------------------------|---------------------------------------|--------------------------------------|
| | | | Collected by Douglas Wilson | Collected date/time 09/26/18 10:10 | Received date/time 09/27/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Mercury by Method 7471A | WG1172764 | 1 | 09/28/18 06:55 | 09/30/18 12:02 | EL |
| Metals (ICP) by Method 6010B | WG1172634 | 1 | 09/30/18 11:39 | 10/01/18 01:57 | CCE |
| Polychlorinated Biphenyls (GC) by Method 8082 | WG1172596 | 1 | 09/27/18 19:00 | 09/28/18 12:14 | RP |

| SSA07 L1029304-11 Solid | | | | | |
|--|-----------|----------|--------------------------------|---------------------------------------|--------------------------------------|
| | | | Collected by Douglas Wilson | Collected date/time 09/26/18 10:25 | Received date/time 09/27/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Semi-Volatile Organic Compounds (GC) by Method TX 1005 | WG1172625 | 8.55 | 09/28/18 14:55 | 09/29/18 02:30 | MG |

| SSB07 L1029304-12 Solid | | | | | |
|--|-----------|----------|--------------------------------|---------------------------------------|--------------------------------------|
| | | | Collected by Douglas Wilson | Collected date/time 09/26/18 10:45 | Received date/time 09/27/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Semi-Volatile Organic Compounds (GC) by Method TX 1005 | WG1172625 | 1.61 | 09/28/18 14:55 | 09/29/18 00:34 | MG |

| SSB11 L1029304-13 Solid | | | | | |
|--|-----------|----------|--------------------------------|---------------------------------------|--------------------------------------|
| | | | Collected by Douglas Wilson | Collected date/time 09/26/18 09:45 | Received date/time 09/27/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Semi-Volatile Organic Compounds (GC) by Method TX 1005 | WG1172625 | 10 | 09/28/18 14:55 | 09/29/18 03:08 | MG |

| SSB02-DUP L1029304-14 Solid | | | | | |
|---|-----------|----------|--------------------------------|---------------------------------------|--------------------------------------|
| | | | Collected by Douglas Wilson | Collected date/time 09/26/18 13:47 | Received date/time 09/27/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Mercury by Method 7471A | WG1172764 | 1 | 09/28/18 06:55 | 09/30/18 12:20 | EL |
| Metals (ICP) by Method 6010B | WG1172634 | 1 | 09/30/18 11:39 | 10/01/18 02:49 | CCE |
| Semi-Volatile Organic Compounds (GC) by Method TX 1005 | WG1172625 | 1.73 | 09/28/18 14:55 | 09/29/18 00:47 | MG |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1173450 | 1 | 09/28/18 11:04 | 09/29/18 16:22 | CJR |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

SAMPLE SUMMARY

ONE LAB. NATIONWIDE



DRUM COMPOSITE L1029304-15 Solid

Collected by
Douglas Wilson

Collected date/time
09/26/18 15:30

Received date/time
09/27/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|------------------------------|-----------|----------|-----------------------|--------------------|---------|
| Mercury by Method 7471A | WG1172764 | 1 | 09/28/18 06:55 | 09/30/18 12:23 | EL |
| Metals (ICP) by Method 6010B | WG1173704 | 1 | 10/01/18 08:45 | 10/01/18 12:12 | CCE |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Collected date/time: 09/26/18 14:00

L1029304

Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.232 | | 0.00280 | 0.0200 | 1 | 09/30/2018 11:47 | WG1172764 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | 1.63 | J J6 | 0.750 | 2.00 | 1 | 10/01/2018 01:45 | WG1172634 |
| Arsenic | 5.48 | | 0.460 | 2.00 | 1 | 10/01/2018 01:45 | WG1172634 |
| Barium | 220 | J5 | 0.170 | 0.500 | 1 | 10/01/2018 01:45 | WG1172634 |
| Beryllium | 0.632 | | 0.0700 | 0.200 | 1 | 10/01/2018 01:45 | WG1172634 |
| Cadmium | 0.616 | | 0.0700 | 0.500 | 1 | 10/01/2018 01:45 | WG1172634 |
| Chromium | 16.5 | | 0.140 | 1.00 | 1 | 10/01/2018 01:45 | WG1172634 |
| Copper | 44.4 | | 0.530 | 2.00 | 1 | 10/01/2018 01:45 | WG1172634 |
| Lead | 222 | J5 | 0.190 | 0.500 | 1 | 10/01/2018 01:45 | WG1172634 |
| Nickel | 11.4 | | 0.490 | 2.00 | 1 | 10/01/2018 01:45 | WG1172634 |
| Selenium | U | | 0.620 | 2.00 | 1 | 10/01/2018 01:45 | WG1172634 |
| Silver | 0.543 | J | 0.120 | 1.00 | 1 | 10/01/2018 01:45 | WG1172634 |
| Thallium | U | | 0.650 | 2.00 | 1 | 10/01/2018 01:45 | WG1172634 |
| Zinc | 321 | J5 | 0.590 | 5.00 | 1 | 10/01/2018 01:45 | WG1172634 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.220 | J6 | 0.00600 | 0.00600 | 1 | 09/29/2018 13:16 | WG1173450 |
| Acenaphthene | 0.0849 | J6 | 0.00600 | 0.00600 | 1 | 09/29/2018 13:16 | WG1173450 |
| Acenaphthylene | 0.00983 | | 0.00600 | 0.00600 | 1 | 09/29/2018 13:16 | WG1173450 |
| Benzo(a)anthracene | 0.586 | V | 0.00600 | 0.00600 | 1 | 09/29/2018 13:16 | WG1173450 |
| Benzo(a)pyrene | 0.508 | J3 V | 0.00600 | 0.00600 | 1 | 09/29/2018 13:16 | WG1173450 |
| Benzo(b)fluoranthene | 0.695 | J3 V | 0.00600 | 0.00600 | 1 | 09/29/2018 13:16 | WG1173450 |
| Benzo(g,h,i)perylene | 0.386 | J3 V | 0.00600 | 0.00600 | 1 | 09/29/2018 13:16 | WG1173450 |
| Benzo(k)fluoranthene | 0.249 | J6 | 0.00600 | 0.00600 | 1 | 09/29/2018 13:16 | WG1173450 |
| Chrysene | 0.561 | J3 V | 0.00600 | 0.00600 | 1 | 09/29/2018 13:16 | WG1173450 |
| Dibenz(a,h)anthracene | 0.0874 | J3 J6 | 0.00600 | 0.00600 | 1 | 09/29/2018 13:16 | WG1173450 |
| Fluoranthene | 1.29 | J3 V | 0.00600 | 0.00600 | 1 | 09/29/2018 13:16 | WG1173450 |
| Fluorene | 0.0820 | J6 | 0.00600 | 0.00600 | 1 | 09/29/2018 13:16 | WG1173450 |
| Indeno(1,2,3-cd)pyrene | 0.316 | J3 J6 | 0.00600 | 0.00600 | 1 | 09/29/2018 13:16 | WG1173450 |
| Naphthalene | 0.0191 | B J | 0.00200 | 0.0200 | 1 | 09/29/2018 13:16 | WG1173450 |
| Phenanthrene | 0.868 | V | 0.00600 | 0.00600 | 1 | 09/29/2018 13:16 | WG1173450 |
| Pyrene | 1.03 | V | 0.00600 | 0.00600 | 1 | 09/29/2018 13:16 | WG1173450 |
| 1-Methylnaphthalene | 0.0273 | | 0.00200 | 0.0200 | 1 | 09/29/2018 13:16 | WG1173450 |
| 2-Methylnaphthalene | 0.0296 | | 0.00200 | 0.0200 | 1 | 09/29/2018 13:16 | WG1173450 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 09/29/2018 13:16 | WG1173450 |
| (S) Nitrobenzene-d5 | 97.0 | | | 14.0-149 | | 09/29/2018 13:16 | WG1173450 |
| (S) 2-Fluorobiphenyl | 107 | | | 34.0-125 | | 09/29/2018 13:16 | WG1173450 |
| (S) p-Terphenyl-d14 | 101 | | | 23.0-120 | | 09/29/2018 13:16 | WG1173450 |

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc



Collected date/time: 09/26/18 13:45

L1029304

Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.307 | | 0.00280 | 0.0200 | 1 | 09/30/2018 12:10 | WG1172764 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | 2.19 | | 0.750 | 2.00 | 1 | 10/01/2018 02:38 | WG1172634 |
| Arsenic | 6.30 | | 0.460 | 2.00 | 1 | 10/01/2018 02:38 | WG1172634 |
| Barium | 161 | | 0.170 | 0.500 | 1 | 10/01/2018 02:38 | WG1172634 |
| Beryllium | 0.648 | | 0.0700 | 0.200 | 1 | 10/01/2018 02:38 | WG1172634 |
| Cadmium | 0.508 | | 0.0700 | 0.500 | 1 | 10/01/2018 02:38 | WG1172634 |
| Chromium | 21.0 | | 0.140 | 1.00 | 1 | 10/01/2018 02:38 | WG1172634 |
| Copper | 29.0 | | 0.530 | 2.00 | 1 | 10/01/2018 02:38 | WG1172634 |
| Lead | 217 | | 0.190 | 0.500 | 1 | 10/01/2018 02:38 | WG1172634 |
| Nickel | 11.4 | | 0.490 | 2.00 | 1 | 10/01/2018 02:38 | WG1172634 |
| Selenium | 0.655 | J | 0.620 | 2.00 | 1 | 10/01/2018 02:38 | WG1172634 |
| Silver | 0.208 | J | 0.120 | 1.00 | 1 | 10/01/2018 02:38 | WG1172634 |
| Thallium | U | | 0.650 | 2.00 | 1 | 10/01/2018 02:38 | WG1172634 |
| Zinc | 282 | | 0.590 | 5.00 | 1 | 10/01/2018 02:38 | WG1172634 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gf

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.0364 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:18 | WG1173450 |
| Acenaphthene | 0.00519 | J | 0.000600 | 0.00600 | 1 | 09/29/2018 14:18 | WG1173450 |
| Acenaphthylene | 0.0143 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:18 | WG1173450 |
| Benzo(a)anthracene | 0.0883 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:18 | WG1173450 |
| Benzo(a)pyrene | 0.0913 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:18 | WG1173450 |
| Benzo(b)fluoranthene | 0.136 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:18 | WG1173450 |
| Benzo(g,h,i)perylene | 0.0684 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:18 | WG1173450 |
| Benzo(k)fluoranthene | 0.0421 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:18 | WG1173450 |
| Chrysene | 0.112 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:18 | WG1173450 |
| Dibenz(a,h)anthracene | 0.0171 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:18 | WG1173450 |
| Fluoranthene | 0.159 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:18 | WG1173450 |
| Fluorene | 0.00626 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:18 | WG1173450 |
| Indeno(1,2,3-cd)pyrene | 0.0565 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:18 | WG1173450 |
| Naphthalene | 0.0118 | B J | 0.00200 | 0.0200 | 1 | 09/29/2018 14:18 | WG1173450 |
| Phenanthrene | 0.0922 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:18 | WG1173450 |
| Pyrene | 0.158 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:18 | WG1173450 |
| 1-Methylnaphthalene | 0.0120 | J | 0.00200 | 0.0200 | 1 | 09/29/2018 14:18 | WG1173450 |
| 2-Methylnaphthalene | 0.0137 | J | 0.00200 | 0.0200 | 1 | 09/29/2018 14:18 | WG1173450 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 09/29/2018 14:18 | WG1173450 |
| (S) Nitrobenzene-d5 | 90.9 | | | 14.0-149 | | 09/29/2018 14:18 | WG1173450 |
| (S) 2-Fluorobiphenyl | 96.8 | | | 34.0-125 | | 09/29/2018 14:18 | WG1173450 |
| (S) p-Terphenyl-d14 | 88.7 | | | 23.0-120 | | 09/29/2018 14:18 | WG1173450 |

SB02-SS01

SAMPLE RESULTS - 03

ONE LAB. NATIONWIDE.

Collected date/time: 09/25/18 08:30

L1029304

Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.626 | | 0.00280 | 0.0200 | 1 | 09/30/2018 12:13 | WG1172764 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | 1.29 | J | 0.750 | 2.00 | 1 | 10/01/2018 02:41 | WG1172634 |
| Arsenic | 6.65 | | 0.460 | 2.00 | 1 | 10/01/2018 02:41 | WG1172634 |
| Barium | 231 | | 0.170 | 0.500 | 1 | 10/01/2018 02:41 | WG1172634 |
| Beryllium | 0.617 | | 0.0700 | 0.200 | 1 | 10/01/2018 02:41 | WG1172634 |
| Cadmium | 0.774 | | 0.0700 | 0.500 | 1 | 10/01/2018 02:41 | WG1172634 |
| Chromium | 17.4 | | 0.140 | 1.00 | 1 | 10/01/2018 02:41 | WG1172634 |
| Copper | 42.4 | | 0.530 | 2.00 | 1 | 10/01/2018 02:41 | WG1172634 |
| Lead | 269 | | 0.190 | 0.500 | 1 | 10/01/2018 02:41 | WG1172634 |
| Nickel | 12.4 | | 0.490 | 2.00 | 1 | 10/01/2018 02:41 | WG1172634 |
| Selenium | U | | 0.620 | 2.00 | 1 | 10/01/2018 02:41 | WG1172634 |
| Silver | 0.656 | J | 0.120 | 1.00 | 1 | 10/01/2018 02:41 | WG1172634 |
| Thallium | U | | 0.650 | 2.00 | 1 | 10/01/2018 02:41 | WG1172634 |
| Zinc | 414 | | 0.590 | 5.00 | 1 | 10/01/2018 02:41 | WG1172634 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.297 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:39 | WG1173450 |
| Acenaphthene | 0.140 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:39 | WG1173450 |
| Acenaphthylene | 0.0235 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:39 | WG1173450 |
| Benzo(a)anthracene | 0.872 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:39 | WG1173450 |
| Benzo(a)pyrene | 0.832 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:39 | WG1173450 |
| Benzo(b)fluoranthene | 1.13 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:39 | WG1173450 |
| Benzo(g,h,i)perylene | 0.608 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:39 | WG1173450 |
| Benzo(k)fluoranthene | 0.348 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:39 | WG1173450 |
| Chrysene | 0.877 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:39 | WG1173450 |
| Dibenz(a,h)anthracene | 0.139 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:39 | WG1173450 |
| Fluoranthene | 1.87 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:39 | WG1173450 |
| Fluorene | 0.130 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:39 | WG1173450 |
| Indeno(1,2,3-cd)pyrene | 0.511 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:39 | WG1173450 |
| Naphthalene | 0.0284 | | 0.00200 | 0.0200 | 1 | 09/29/2018 14:39 | WG1173450 |
| Phenanthrene | 1.24 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:39 | WG1173450 |
| Pyrene | 1.56 | | 0.000600 | 0.00600 | 1 | 09/29/2018 14:39 | WG1173450 |
| 1-Methylnaphthalene | 0.0279 | | 0.00200 | 0.0200 | 1 | 09/29/2018 14:39 | WG1173450 |
| 2-Methylnaphthalene | 0.0221 | | 0.00200 | 0.0200 | 1 | 09/29/2018 14:39 | WG1173450 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 09/29/2018 14:39 | WG1173450 |
| (S) Nitrobenzene-d5 | 99.9 | | | 14.0-149 | | 09/29/2018 14:39 | WG1173450 |
| (S) 2-Fluorobiphenyl | 110 | | | 34.0-125 | | 09/29/2018 14:39 | WG1173450 |
| (S) p-Terphenyl-d14 | 111 | | | 23.0-120 | | 09/29/2018 14:39 | WG1173450 |

Collected date/time: 09/26/18 14:20

L1029304

Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.0343 | <u>B</u> | 0.00280 | 0.0200 | 1 | 09/30/2018 12:15 | WG1172764 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | 4.89 | | 0.750 | 2.00 | 1 | 10/01/2018 02:44 | WG1172634 |
| Arsenic | 22.3 | | 0.460 | 2.00 | 1 | 10/01/2018 02:44 | WG1172634 |
| Barium | 60.4 | | 0.170 | 0.500 | 1 | 10/01/2018 02:44 | WG1172634 |
| Beryllium | 0.399 | | 0.0700 | 0.200 | 1 | 10/01/2018 02:44 | WG1172634 |
| Cadmium | U | | 0.0700 | 0.500 | 1 | 10/01/2018 02:44 | WG1172634 |
| Chromium | 37.1 | | 0.140 | 1.00 | 1 | 10/01/2018 02:44 | WG1172634 |
| Copper | 170 | | 0.530 | 2.00 | 1 | 10/01/2018 02:44 | WG1172634 |
| Lead | 127 | | 0.190 | 0.500 | 1 | 10/01/2018 02:44 | WG1172634 |
| Nickel | 52.6 | | 0.490 | 2.00 | 1 | 10/01/2018 02:44 | WG1172634 |
| Selenium | U | | 0.620 | 2.00 | 1 | 10/01/2018 02:44 | WG1172634 |
| Silver | 0.124 | <u>J</u> | 0.120 | 1.00 | 1 | 10/01/2018 02:44 | WG1172634 |
| Thallium | U | | 0.650 | 2.00 | 1 | 10/01/2018 02:44 | WG1172634 |
| Zinc | 103 | | 0.590 | 5.00 | 1 | 10/01/2018 02:44 | WG1172634 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|------------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.0212 | | 0.00600 | 0.00600 | 1 | 09/29/2018 15:00 | WG1173450 |
| Acenaphthene | 0.00347 | <u>J</u> | 0.00600 | 0.00600 | 1 | 09/29/2018 15:00 | WG1173450 |
| Acenaphthylene | U | | 0.00600 | 0.00600 | 1 | 09/29/2018 15:00 | WG1173450 |
| Benzo(a)anthracene | 0.368 | | 0.00600 | 0.00600 | 1 | 09/29/2018 15:00 | WG1173450 |
| Benzo(a)pyrene | 0.470 | | 0.00600 | 0.00600 | 1 | 09/29/2018 15:00 | WG1173450 |
| Benzo(b)fluoranthene | 0.907 | | 0.00600 | 0.00600 | 1 | 09/29/2018 15:00 | WG1173450 |
| Benzo(g,h,i)perylene | 0.528 | | 0.00600 | 0.00600 | 1 | 09/29/2018 15:00 | WG1173450 |
| Benzo(k)fluoranthene | 0.289 | | 0.00600 | 0.00600 | 1 | 09/29/2018 15:00 | WG1173450 |
| Chrysene | 0.517 | | 0.00600 | 0.00600 | 1 | 09/29/2018 15:00 | WG1173450 |
| Dibenz(a,h)anthracene | 0.152 | | 0.00600 | 0.00600 | 1 | 09/29/2018 15:00 | WG1173450 |
| Fluoranthene | 0.330 | | 0.00600 | 0.00600 | 1 | 09/29/2018 15:00 | WG1173450 |
| Fluorene | 0.00409 | <u>J</u> | 0.00600 | 0.00600 | 1 | 09/29/2018 15:00 | WG1173450 |
| Indeno(1,2,3-cd)pyrene | 0.427 | | 0.00600 | 0.00600 | 1 | 09/29/2018 15:00 | WG1173450 |
| Naphthalene | 0.0170 | <u>B J</u> | 0.00200 | 0.0200 | 1 | 09/29/2018 15:00 | WG1173450 |
| Phenanthrene | 0.0860 | | 0.00600 | 0.00600 | 1 | 09/29/2018 15:00 | WG1173450 |
| Pyrene | 0.322 | | 0.00600 | 0.00600 | 1 | 09/29/2018 15:00 | WG1173450 |
| 1-Methylnaphthalene | 0.0196 | <u>J</u> | 0.00200 | 0.0200 | 1 | 09/29/2018 15:00 | WG1173450 |
| 2-Methylnaphthalene | 0.0274 | | 0.00200 | 0.0200 | 1 | 09/29/2018 15:00 | WG1173450 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 09/29/2018 15:00 | WG1173450 |
| (S) Nitrobenzene-d5 | 104 | | | 14.0-149 | | 09/29/2018 15:00 | WG1173450 |
| (S) 2-Fluorobiphenyl | 102 | | | 34.0-125 | | 09/29/2018 15:00 | WG1173450 |
| (S) p-Terphenyl-d14 | 96.9 | | | 23.0-120 | | 09/29/2018 15:00 | WG1173450 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 09/26/18 13:25

L1029304

Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.0566 | | 0.00280 | 0.0200 | 1 | 09/30/2018 12:18 | WG1172764 |

1 Cp

2 Tc

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | 2.14 | | 0.750 | 2.00 | 1 | 10/01/2018 02:46 | WG1172634 |
| Arsenic | 5.69 | | 0.460 | 2.00 | 1 | 10/01/2018 02:46 | WG1172634 |
| Barium | 108 | | 0.170 | 0.500 | 1 | 10/01/2018 02:46 | WG1172634 |
| Beryllium | 0.405 | | 0.0700 | 0.200 | 1 | 10/01/2018 02:46 | WG1172634 |
| Cadmium | 1.06 | | 0.0700 | 0.500 | 1 | 10/01/2018 02:46 | WG1172634 |
| Chromium | 33.6 | | 0.140 | 1.00 | 1 | 10/01/2018 02:46 | WG1172634 |
| Copper | 30.8 | | 0.530 | 2.00 | 1 | 10/01/2018 02:46 | WG1172634 |
| Lead | 156 | | 0.190 | 0.500 | 1 | 10/01/2018 02:46 | WG1172634 |
| Nickel | 14.2 | | 0.490 | 2.00 | 1 | 10/01/2018 02:46 | WG1172634 |
| Selenium | U | | 0.620 | 2.00 | 1 | 10/01/2018 02:46 | WG1172634 |
| Silver | 0.146 | J | 0.120 | 1.00 | 1 | 10/01/2018 02:46 | WG1172634 |
| Thallium | U | | 0.650 | 2.00 | 1 | 10/01/2018 02:46 | WG1172634 |
| Zinc | 270 | | 0.590 | 5.00 | 1 | 10/01/2018 02:46 | WG1172634 |

3 Ss

4 Cn

5 Sr

6 Qc

7 Gt

8 Al

9 Sc



Collected date/time: 09/26/18 13:10

L1029304

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.0207 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:20 | WG1173450 |
| Acenaphthene | 0.00721 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:20 | WG1173450 |
| Acenaphthylene | 0.00434 | J | 0.000600 | 0.00600 | 1 | 09/29/2018 15:20 | WG1173450 |
| Benzo(a)anthracene | 0.0734 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:20 | WG1173450 |
| Benzo(a)pyrene | 0.0847 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:20 | WG1173450 |
| Benzo(b)fluoranthene | 0.109 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:20 | WG1173450 |
| Benzo(g,h,i)perylene | 0.0732 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:20 | WG1173450 |
| Benzo(k)fluoranthene | 0.0310 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:20 | WG1173450 |
| Chrysene | 0.0777 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:20 | WG1173450 |
| Dibenz(a,h)anthracene | 0.0152 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:20 | WG1173450 |
| Fluoranthene | 0.140 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:20 | WG1173450 |
| Fluorene | 0.00706 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:20 | WG1173450 |
| Indeno(1,2,3-cd)pyrene | 0.0513 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:20 | WG1173450 |
| Naphthalene | 0.00451 | B J | 0.00200 | 0.0200 | 1 | 09/29/2018 15:20 | WG1173450 |
| Phenanthrene | 0.0803 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:20 | WG1173450 |
| Pyrene | 0.121 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:20 | WG1173450 |
| 1-Methylnaphthalene | 0.00480 | J | 0.00200 | 0.0200 | 1 | 09/29/2018 15:20 | WG1173450 |
| 2-Methylnaphthalene | 0.00398 | J | 0.00200 | 0.0200 | 1 | 09/29/2018 15:20 | WG1173450 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 09/29/2018 15:20 | WG1173450 |
| (S) Nitrobenzene-d5 | 88.1 | | | 14.0-149 | | 09/29/2018 15:20 | WG1173450 |
| (S) 2-Fluorobiphenyl | 86.1 | | | 34.0-125 | | 09/29/2018 15:20 | WG1173450 |
| (S) p-Terphenyl-d14 | 77.7 | | | 23.0-120 | | 09/29/2018 15:20 | WG1173450 |

- Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Collected date/time: 09/26/18 12:35

L1029304

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.0188 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:41 | WG1173450 |
| Acenaphthene | 0.00571 | J | 0.000600 | 0.00600 | 1 | 09/29/2018 15:41 | WG1173450 |
| Acenaphthylene | 0.00495 | J | 0.000600 | 0.00600 | 1 | 09/29/2018 15:41 | WG1173450 |
| Benzo(a)anthracene | 0.0762 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:41 | WG1173450 |
| Benzo(a)pyrene | 0.0822 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:41 | WG1173450 |
| Benzo(b)fluoranthene | 0.114 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:41 | WG1173450 |
| Benzo(g,h,i)perylene | 0.0622 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:41 | WG1173450 |
| Benzo(k)fluoranthene | 0.0324 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:41 | WG1173450 |
| Chrysene | 0.0833 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:41 | WG1173450 |
| Dibenz(a,h)anthracene | 0.0149 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:41 | WG1173450 |
| Fluoranthene | 0.150 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:41 | WG1173450 |
| Fluorene | 0.00484 | J | 0.000600 | 0.00600 | 1 | 09/29/2018 15:41 | WG1173450 |
| Indeno(1,2,3-cd)pyrene | 0.0527 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:41 | WG1173450 |
| Naphthalene | 0.00446 | B J | 0.00200 | 0.0200 | 1 | 09/29/2018 15:41 | WG1173450 |
| Phenanthrene | 0.0658 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:41 | WG1173450 |
| Pyrene | 0.129 | | 0.000600 | 0.00600 | 1 | 09/29/2018 15:41 | WG1173450 |
| 1-Methylnaphthalene | 0.00511 | J | 0.00200 | 0.0200 | 1 | 09/29/2018 15:41 | WG1173450 |
| 2-Methylnaphthalene | 0.00501 | J | 0.00200 | 0.0200 | 1 | 09/29/2018 15:41 | WG1173450 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 09/29/2018 15:41 | WG1173450 |
| (S) Nitrobenzene-d5 | 90.9 | | | 14.0-149 | | 09/29/2018 15:41 | WG1173450 |
| (S) 2-Fluorobiphenyl | 85.6 | | | 34.0-125 | | 09/29/2018 15:41 | WG1173450 |
| (S) p-Terphenyl-d14 | 85.0 | | | 23.0-120 | | 09/29/2018 15:41 | WG1173450 |

Cp

2 Tc

3 Ss

4 Cn

Sr

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 09/26/18 12:10

L1029304

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch | |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|-----------------|
| Anthracene | 0.0298 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:01 | WG1173450 | Cp |
| Acenaphthene | 0.00593 | J | 0.000600 | 0.00600 | 1 | 09/29/2018 16:01 | WG1173450 | ² Tc |
| Acenaphthylene | 0.00491 | J | 0.000600 | 0.00600 | 1 | 09/29/2018 16:01 | WG1173450 | ³ Ss |
| Benzo[a]anthracene | 0.101 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:01 | WG1173450 | ⁴ Cn |
| Benzo[a]pyrene | 0.0924 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:01 | WG1173450 | ⁵ Sr |
| Benzo[b]fluoranthene | 0.120 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:01 | WG1173450 | ⁶ Qc |
| Benzo[g,h,i]perylene | 0.0597 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:01 | WG1173450 | ⁷ Gl |
| Benzo[k]fluoranthene | 0.0391 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:01 | WG1173450 | ⁸ Al |
| Chrysene | 0.108 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:01 | WG1173450 | ⁹ Sc |
| Dibenz[a,h]anthracene | 0.0159 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:01 | WG1173450 | |
| Fluoranthene | 0.219 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:01 | WG1173450 | |
| Fluorene | 0.00645 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:01 | WG1173450 | |
| Indeno[1,2,3-cd]pyrene | 0.0503 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:01 | WG1173450 | |
| Naphthalene | 0.00299 | B J | 0.00200 | 0.0200 | 1 | 09/29/2018 16:01 | WG1173450 | |
| Phenanthrene | 0.118 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:01 | WG1173450 | |
| Pyrene | 0.172 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:01 | WG1173450 | |
| 1-Methylnaphthalene | 0.00241 | J | 0.00200 | 0.0200 | 1 | 09/29/2018 16:01 | WG1173450 | |
| 2-Methylnaphthalene | 0.00276 | J | 0.00200 | 0.0200 | 1 | 09/29/2018 16:01 | WG1173450 | |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 09/29/2018 16:01 | WG1173450 | |
| (S) Nitrobenzene-d5 | 103 | | | 14.0-149 | | 09/29/2018 16:01 | WG1173450 | |
| (S) 2-Fluorobiphenyl | 98.4 | | | 34.0-125 | | 09/29/2018 16:01 | WG1173450 | |
| (S) p-Terphenyl-d14 | 98.1 | | | 23.0-120 | | 09/29/2018 16:01 | WG1173450 | |

SSB06

SAMPLE RESULTS - 09

ONE LAB. NATIONWIDE.



Collected date/time: 09/26/18 11:50

L1029304

Semi-Volatile Organic Compounds (GC) by Method TX 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|------------------|
| TPH C6 - C12 | U | | 25.7 | 85.5 | 1.71 | 09/29/2018 16:32 | <u>WG1172625</u> |
| TPH C12 - C28 | U | | 25.7 | 85.5 | 1.71 | 09/29/2018 16:32 | <u>WG1172625</u> |
| TPH C28 - C35 | U | | 25.7 | 85.5 | 1.71 | 09/29/2018 16:32 | <u>WG1172625</u> |
| TPH C6 - C35 | U | | 25.7 | 85.5 | 1.71 | 09/29/2018 16:32 | <u>WG1172625</u> |
| (S) <i>o</i> -Terphenyl | 113 | | | 70.0-130 | | 09/29/2018 16:32 | <u>WG1172625</u> |

Cp

²Tc

³Ss

⁴Cn

Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

SB04-SS016

Collected date/time: 09/26/18 10:10

SAMPLE RESULTS - 10

L1029304

ONE LAB. NATIONWIDE.



Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.0402 | B | 0.00280 | 0.0200 | 1 | 09/30/2018 12:02 | WG1172634 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | 0.869 | J | 0.750 | 2.00 | 1 | 10/01/2018 01:57 | WG1172634 |
| Arsenic | 2.70 | | 0.460 | 2.00 | 1 | 10/01/2018 01:57 | WG1172634 |
| Barium | 41.5 | J5 | 0.170 | 0.500 | 1 | 10/01/2018 01:57 | WG1172634 |
| Beryllium | 0.130 | J | 0.0700 | 0.200 | 1 | 10/01/2018 01:57 | WG1172634 |
| Cadmium | 0.413 | J | 0.0700 | 0.500 | 1 | 10/01/2018 01:57 | WG1172634 |
| Chromium | 14.2 | | 0.140 | 1.00 | 1 | 10/01/2018 01:57 | WG1172634 |
| Copper | 18.7 | J5 | 0.530 | 2.00 | 1 | 10/01/2018 01:57 | WG1172634 |
| Lead | 96.5 | J5 | 0.190 | 0.500 | 1 | 10/01/2018 01:57 | WG1172634 |
| Nickel | 17.8 | | 0.490 | 2.00 | 1 | 10/01/2018 01:57 | WG1172634 |
| Selenium | U | | 0.620 | 2.00 | 1 | 10/01/2018 01:57 | WG1172634 |
| Silver | U | | 0.120 | 1.00 | 1 | 10/01/2018 01:57 | WG1172634 |
| Thallium | U | | 0.650 | 2.00 | 1 | 10/01/2018 01:57 | WG1172634 |
| Zinc | 154 | J5 | 0.590 | 5.00 | 1 | 10/01/2018 01:57 | WG1172634 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Polychlorinated Biphenyls (GC) by Method 8082

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|--------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| PCB 1016 | U | J5 | 0.00350 | 0.0170 | 1 | 09/28/2018 12:14 | WG1172596 |
| PCB 1221 | U | | 0.00537 | 0.0170 | 1 | 09/28/2018 12:14 | WG1172596 |
| PCB 1232 | U | | 0.00417 | 0.0170 | 1 | 09/28/2018 12:14 | WG1172596 |
| PCB 1242 | U | | 0.00318 | 0.0170 | 1 | 09/28/2018 12:14 | WG1172596 |
| PCB 1248 | U | | 0.00315 | 0.0170 | 1 | 09/28/2018 12:14 | WG1172596 |
| PCB 1254 | U | | 0.00472 | 0.0170 | 1 | 09/28/2018 12:14 | WG1172596 |
| PCB 1260 | U | J5 | 0.00494 | 0.0170 | 1 | 09/28/2018 12:14 | WG1172596 |
| (S) Decachlorobiphenyl | 68.4 | | | 10.0-135 | | 09/28/2018 12:14 | WG1172596 |
| (S) Tetrachloro-m-xylene | 63.0 | | | 10.0-139 | | 09/28/2018 12:14 | WG1172596 |



Collected date/time: 09/26/18 10:25

L1029304

Semi-Volatile Organic Compounds (GC) by Method TX 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH C6 - C12 | U | | 128 | 428 | 8.55 | 09/29/2018 02:30 | WG1172625 |
| TPH C12 - C28 | U | | 128 | 428 | 8.55 | 09/29/2018 02:30 | WG1172625 |
| TPH C28 - C35 | U | | 128 | 428 | 8.55 | 09/29/2018 02:30 | WG1172625 |
| TPH C6 - C35 | U | | 128 | 428 | 8.55 | 09/29/2018 02:30 | WG1172625 |
| (S) o-Terphenyl | 107 | | | 70.0-130 | | 09/29/2018 02:30 | WG1172625 |

1 Cp

2 Tc

3 Ss

4 Cn

Sr

6 Qc

7 Gl

8 Al

9 Sc

SSB07

SAMPLE RESULTS - 12

ONE LAB. NATIONWIDE.



Collected date/time: 09/26/18 10:45

L1029304

Semi-Volatile Organic Compounds (GC) by Method TX 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH C6 - C12 | U | | 24.2 | 80.5 | 1.61 | 09/29/2018 00:34 | WG1172625 |
| TPH C12 - C28 | 85.1 | | 24.2 | 80.5 | 1.61 | 09/29/2018 00:34 | WG1172625 |
| TPH C28 - C35 | 187 | | 24.2 | 80.5 | 1.61 | 09/29/2018 00:34 | WG1172625 |
| TPH C6 - C35 | 272 | | 24.2 | 80.5 | 1.61 | 09/29/2018 00:34 | WG1172625 |
| (S) o-Terphenyl | 112 | | | 70.0-130 | | 09/29/2018 00:34 | WG1172625 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

SSB11

Collected date/time: 09/26/18 09:45

SAMPLE RESULTS - 13

L1029304

ONE LAB. NATIONWIDE



Semi-Volatile Organic Compounds (GC) by Method TX 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH C6 - C12 | U | | 150 | 500 | 10 | 09/29/2018 03:08 | WG1172625 |
| TPH C12 - C28 | U | | 150 | 500 | 10 | 09/29/2018 03:08 | WG1172625 |
| TPH C28 - C35 | 320 | U | 150 | 500 | 10 | 09/29/2018 03:08 | WG1172625 |
| TPH C6 - C35 | 320 | U | 150 | 500 | 10 | 09/29/2018 03:08 | WG1172625 |
| (S) o-Terphenyl | 103 | | | 70.0-130 | | 09/29/2018 03:08 | WG1172625 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Si

6 Qc

7 Gl

8 Al

9 Sc

SSB02-DUP

Collected date/time: 09/26/18 13:47

SAMPLE RESULTS - 14

L1029304

ONE LAB. NATIONWIDE.



Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.255 | | 0.00280 | 0.0200 | 1 | 09/30/2018 12:20 | WG1172764 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | 1.77 | J | 0.750 | 2.00 | 1 | 10/01/2018 02:49 | WG1172634 |
| Arsenic | 5.36 | | 0.460 | 2.00 | 1 | 10/01/2018 02:49 | WG1172634 |
| Barium | 135 | | 0.170 | 0.500 | 1 | 10/01/2018 02:49 | WG1172634 |
| Beryllium | 0.543 | | 0.0700 | 0.200 | 1 | 10/01/2018 02:49 | WG1172634 |
| Cadmium | 0.602 | | 0.0700 | 0.500 | 1 | 10/01/2018 02:49 | WG1172634 |
| Chromium | 22.2 | | 0.140 | 1.00 | 1 | 10/01/2018 02:49 | WG1172634 |
| Copper | 28.4 | | 0.530 | 2.00 | 1 | 10/01/2018 02:49 | WG1172634 |
| Lead | 226 | | 0.190 | 0.500 | 1 | 10/01/2018 02:49 | WG1172634 |
| Nickel | 12.2 | | 0.490 | 2.00 | 1 | 10/01/2018 02:49 | WG1172634 |
| Selenium | 0.694 | J | 0.620 | 2.00 | 1 | 10/01/2018 02:49 | WG1172634 |
| Silver | 0.184 | J | 0.120 | 1.00 | 1 | 10/01/2018 02:49 | WG1172634 |
| Thallium | U | | 0.650 | 2.00 | 1 | 10/01/2018 02:49 | WG1172634 |
| Zinc | 242 | | 0.590 | 5.00 | 1 | 10/01/2018 02:49 | WG1172634 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method TX 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| TPH C6 - C12 | U | | 25.9 | 86.5 | 1.73 | 09/29/2018 00:47 | WG1172625 |
| TPH C12 - C28 | U | | 25.9 | 86.5 | 1.73 | 09/29/2018 00:47 | WG1172625 |
| TPH C28 - C35 | U | | 25.9 | 86.5 | 1.73 | 09/29/2018 00:47 | WG1172625 |
| TPH C6 - C35 | U | | 25.9 | 86.5 | 1.73 | 09/29/2018 00:47 | WG1172625 |
| (S) o-Terphenyl | 108 | | | 70.0-130 | | 09/29/2018 00:47 | WG1172625 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.00638 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:22 | WG1173450 |
| Acenaphthene | 0.00110 | J | 0.000600 | 0.00600 | 1 | 09/29/2018 16:22 | WG1173450 |
| Acenaphthylene | 0.00492 | J | 0.000600 | 0.00600 | 1 | 09/29/2018 16:22 | WG1173450 |
| Benzo(a)anthracene | 0.0184 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:22 | WG1173450 |
| Benzo(a)pyrene | 0.0238 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:22 | WG1173450 |
| Benzo(b)fluoranthene | 0.0347 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:22 | WG1173450 |
| Benzo(g,h,i)perylene | 0.0203 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:22 | WG1173450 |
| Benzo(k)fluoranthene | 0.00949 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:22 | WG1173450 |
| Chrysene | 0.0241 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:22 | WG1173450 |
| Dibenz(a,h)anthracene | 0.00471 | J | 0.000600 | 0.00600 | 1 | 09/29/2018 16:22 | WG1173450 |
| Fluoranthene | 0.0374 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:22 | WG1173450 |
| Fluorene | 0.00133 | J | 0.000600 | 0.00600 | 1 | 09/29/2018 16:22 | WG1173450 |
| Indeno(1,2,3-cd)pyrene | 0.0155 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:22 | WG1173450 |
| Naphthalene | 0.00320 | B J | 0.00200 | 0.0200 | 1 | 09/29/2018 16:22 | WG1173450 |
| Phenanthrene | 0.0173 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:22 | WG1173450 |
| Pyrene | 0.0332 | | 0.000600 | 0.00600 | 1 | 09/29/2018 16:22 | WG1173450 |
| 1-Methylnaphthalene | 0.00292 | J | 0.00200 | 0.0200 | 1 | 09/29/2018 16:22 | WG1173450 |
| 2-Methylnaphthalene | 0.00311 | J | 0.00200 | 0.0200 | 1 | 09/29/2018 16:22 | WG1173450 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 09/29/2018 16:22 | WG1173450 |
| (S) Nitrobenzene-d5 | 104 | | | 14.0-149 | | 09/29/2018 16:22 | WG1173450 |
| (S) 2-Fluorobiphenyl | 101 | | | 34.0-125 | | 09/29/2018 16:22 | WG1173450 |
| (S) p-Terphenyl-d14 | 94.0 | | | 23.0-120 | | 09/29/2018 16:22 | WG1173450 |

ACCOUNT:

Seneca Companies - Tulsa, OK

PROJECT:

6362589

SDG:

L1029304

DATE/TIME:

10/02/18 08:26

PAGE:

20 of 34

DRUM COMPOSITE

Collected date/time: 09/26/18 15:30

SAMPLE RESULTS - 15

L1029304

ONE LAB. NATIONWIDE.



Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|------------------|
| Mercury | 0.0180 | <u>BJ</u> | 0.00280 | 0.0200 | 1 | 09/30/2018 12:23 | <u>WG1172764</u> |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|------------------|
| Antimony | U | | 0.750 | 2.00 | 1 | 10/01/2018 12:12 | <u>WG1173704</u> |
| Arsenic | 2.74 | | 0.460 | 2.00 | 1 | 10/01/2018 12:12 | <u>WG1173704</u> |
| Barium | 64.1 | | 0.170 | 0.500 | 1 | 10/01/2018 12:12 | <u>WG1173704</u> |
| Beryllium | 0.348 | | 0.0700 | 0.200 | 1 | 10/01/2018 12:12 | <u>WG1173704</u> |
| Cadmium | 0.142 | <u>J</u> | 0.0700 | 0.500 | 1 | 10/01/2018 12:12 | <u>WG1173704</u> |
| Chromium | 4.47 | | 0.140 | 1.00 | 1 | 10/01/2018 12:12 | <u>WG1173704</u> |
| Copper | 5.10 | | 0.530 | 2.00 | 1 | 10/01/2018 12:12 | <u>WG1173704</u> |
| Lead | 7.91 | | 0.190 | 0.500 | 1 | 10/01/2018 12:12 | <u>WG1173704</u> |
| Nickel | 7.51 | | 0.490 | 2.00 | 1 | 10/01/2018 12:12 | <u>WG1173704</u> |
| Selenium | U | | 0.620 | 2.00 | 1 | 10/01/2018 12:12 | <u>WG1173704</u> |
| Silver | U | | 0.120 | 1.00 | 1 | 10/01/2018 12:12 | <u>WG1173704</u> |
| Thallium | U | | 0.650 | 2.00 | 1 | 10/01/2018 12:12 | <u>WG1173704</u> |
| Zinc | 23.5 | | 0.590 | 5.00 | 1 | 10/01/2018 12:12 | <u>WG1173704</u> |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

WG1172764

Mercury by Method 7471A

QUALITY CONTROL SUMMARY

L1029304-01.02.03.04.05.10.14.15

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3346424-1 09/30/18 11:39

| Analyte | MB Result mg/kg | MB MDL mg/kg | MB RDL mg/kg |
|---------|--------------------|-----------------|-----------------|
| Mercury | 0.00513 | 0.00280 | 0.0200 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCS)

(LCS) R3346424-2 09/30/18 11:42 • (LCS) R3346424-3 09/30/18 11:44

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier % | LCSD Qualifier % | RPD % | RPD Limits % |
|---------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|--------------------|---------------------|----------|-----------------|
| Mercury | 0.300 | 0.253 | 0.249 | 84.4 | 83.2 | 80.0-120 | 1.43 | 1.43 | 20 | 20 |

L1029304-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1029304-01 09/30/18 11:47 • (MS) R3346424-4 09/30/18 11:49 • (MSD) R3346424-5 09/30/18 12:00

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier % | MSD Qualifier % | RPD % | RPD Limits % |
|---------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|-------------------|--------------------|----------|-----------------|
| Mercury | 0.300 | 0.232 | 0.496 | 0.522 | 87.9 | 96.7 | 1 | 75.0-125 | 5.15 | 5.15 | 20 | 20 |

L1029304-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1029304-10 09/30/18 12:02 • (MS) R3346424-6 09/30/18 12:05 • (MSD) R3346424-7 09/30/18 12:07

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier % | MSD Qualifier % | RPD % | RPD Limits % |
|---------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|-------------------|--------------------|----------|-----------------|
| Mercury | 0.300 | 0.0402 | 0.283 | 0.287 | 81.1 | 82.2 | 1 | 75.0-125 | 1.15 | 1.15 | 20 | 20 |

WG1172634

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L1029304-01.02.03.04.05.10.14

ONE LAB. NATIONWIDE.

Method Blank (MB)

(MB) R3346436-1 10/01/18 01:38

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-----------|--------------------|--------------|-----------------|-----------------|
| Antimony | U | | 0.750 | 2.00 |
| Arsenic | U | | 0.460 | 2.00 |
| Barium | U | | 0.170 | 0.500 |
| Beryllium | U | | 0.0700 | 0.200 |
| Cadmium | U | | 0.0700 | 0.500 |
| Chromium | U | | 0.140 | 1.00 |
| Copper | U | | 0.530 | 2.00 |
| Lead | U | | 0.190 | 0.500 |
| Nickel | U | | 0.490 | 2.00 |
| Selenium | U | | 0.620 | 2.00 |
| Silver | U | | 0.120 | 1.00 |
| Thallium | U | | 0.650 | 2.00 |
| Zinc | U | | 0.590 | 5.00 |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Cc
7 Gl
8 Al
9 Sc

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCS-D)

(LCS) R3346436-2 10/01/18 01:40 - (LCS-D) R3346436-3 10/01/18 01:43

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. | | LCSD Rec. | | Rec. Limits % | LCS Qualifier | | LCS-D Qualifier | | RPD Limits % |
|-----------|-----------------------|---------------------|----------------------|----------|------|-----------|------|------------------|---------------|-------|-----------------|----|-----------------|
| | | | | % | % | % | % | | % | % | | | |
| Antimony | 100 | 101 | 96.1 | 96.1 | 101 | 96.1 | 96.1 | 90.0-120 | 4.60 | 4.60 | 4.60 | 20 | |
| Arsenic | 100 | 96.3 | 94.2 | 94.2 | 96.3 | 94.2 | 94.2 | 80.0-120 | 2.28 | 2.28 | 2.28 | 20 | |
| Barium | 100 | 101 | 99.6 | 99.6 | 101 | 99.6 | 99.6 | 80.0-120 | 0.927 | 0.927 | 0.927 | 20 | |
| Beryllium | 100 | 98.6 | 98.1 | 98.1 | 98.6 | 98.1 | 98.1 | 80.0-120 | 0.531 | 0.531 | 0.531 | 20 | |
| Cadmium | 100 | 98.1 | 97.0 | 97.0 | 98.1 | 97.0 | 97.0 | 80.0-120 | 1.17 | 1.17 | 1.17 | 20 | |
| Chromium | 100 | 98.5 | 96.9 | 96.9 | 98.5 | 96.9 | 96.9 | 80.0-120 | 1.62 | 1.62 | 1.62 | 20 | |
| Copper | 100 | 102 | 101 | 101 | 102 | 101 | 101 | 80.0-120 | 1.11 | 1.11 | 1.11 | 20 | |
| Lead | 100 | 98.2 | 95.9 | 95.9 | 98.2 | 95.9 | 95.9 | 80.0-120 | 2.38 | 2.38 | 2.38 | 20 | |
| Nickel | 100 | 97.7 | 96.5 | 96.5 | 97.7 | 96.5 | 96.5 | 80.0-120 | 1.20 | 1.20 | 1.20 | 20 | |
| Selenium | 100 | 96.7 | 93.1 | 93.1 | 96.7 | 93.1 | 93.1 | 80.0-120 | 3.78 | 3.78 | 3.78 | 20 | |
| Silver | 20.0 | 19.7 | 19.3 | 19.3 | 19.7 | 19.3 | 19.3 | 80.0-120 | 2.29 | 2.29 | 2.29 | 20 | |
| Thallium | 100 | 98.2 | 96.2 | 96.2 | 98.2 | 96.2 | 96.2 | 80.0-120 | 2.10 | 2.10 | 2.10 | 20 | |
| Zinc | 100 | 97.8 | 96.4 | 96.4 | 97.8 | 96.4 | 96.4 | 80.0-120 | 1.41 | 1.41 | 1.41 | 20 | |

WG1172634

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

L1029304-01.02.03.04.05.10.14

L1029304-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1029304-01 10/01/18 01:45 - (MS) R3346436-8 10/01/18 01:52 - (MSD) R3346436-7 10/01/18 01:55

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|-----------|--------------------|-----------------------|-----------------|------------------|-----------|------------|----------|---------------|--------------|---------------|-------|--------------|
| Antimony | 100 | 1.63 | 70.9 | 71.4 | 69.3 | 69.7 | 1 | 75.0-125 | J6 | J6 | 0.613 | 20 |
| Arsenic | 100 | 5.48 | 96.5 | 94.3 | 91.0 | 88.8 | 1 | 75.0-125 | J5 | J6 | 2.33 | 20 |
| Barium | 100 | 220 | 354 | 314 | 134 | 94.4 | 1 | 75.0-125 | J5 | J6 | 11.8 | 20 |
| Beryllium | 100 | 0.632 | 96.1 | 93.8 | 95.5 | 93.1 | 1 | 75.0-125 | J5 | J6 | 2.47 | 20 |
| Cadmium | 100 | 0.676 | 95.5 | 93.4 | 94.9 | 92.8 | 1 | 75.0-125 | J5 | J6 | 2.23 | 20 |
| Chromium | 100 | 16.5 | 108 | 107 | 91.6 | 90.8 | 1 | 75.0-125 | J5 | J6 | 0.748 | 20 |
| Copper | 100 | 44.4 | 144 | 135 | 99.8 | 90.6 | 1 | 75.0-125 | J5 | J6 | 6.61 | 20 |
| Lead | 100 | 222 | 369 | 321 | 146 | 99.4 | 1 | 75.0-125 | J5 | J6 | 13.6 | 20 |
| Nickel | 100 | 11.4 | 108 | 105 | 97.0 | 93.8 | 1 | 75.0-125 | J5 | J6 | 3.04 | 20 |
| Selenium | 100 | U | 88.9 | 89.2 | 88.9 | 89.2 | 1 | 75.0-125 | J5 | J6 | 0.421 | 20 |
| Silver | 20.0 | 0.543 | 19.8 | 19.2 | 96.4 | 93.4 | 1 | 75.0-125 | J5 | J6 | 3.10 | 20 |
| Thallium | 100 | U | 94.6 | 94.0 | 94.6 | 94.0 | 1 | 75.0-125 | J5 | J6 | 0.659 | 20 |
| Zinc | 100 | 321 | 453 | 406 | 131 | 84.8 | 1 | 75.0-125 | J5 | J6 | 10.9 | 20 |

L1029304-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1029304-10 10/01/18 01:57 - (MS) R3346436-9 10/01/18 02:08 - (MSD) R3346436-10 10/01/18 02:10

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|-----------|--------------------|-----------------------|-----------------|------------------|-----------|------------|----------|---------------|--------------|---------------|-------|--------------|
| Antimony | 100 | 0.869 | 85.6 | 81.1 | 84.8 | 80.3 | 1 | 75.0-125 | J5 | J5 | 5.42 | 20 |
| Arsenic | 100 | 2.70 | 96.5 | 95.2 | 93.8 | 92.5 | 1 | 75.0-125 | J5 | J5 | 1.41 | 20 |
| Barium | 100 | 415 | 185 | 164 | 143 | 123 | 1 | 75.0-125 | J5 | J5 | 11.7 | 20 |
| Beryllium | 100 | 0.130 | 92.7 | 90.1 | 92.6 | 90.0 | 1 | 75.0-125 | J5 | J5 | 2.81 | 20 |
| Cadmium | 100 | 0.413 | 96.7 | 93.3 | 96.3 | 92.9 | 1 | 75.0-125 | J5 | J5 | 3.56 | 20 |
| Chromium | 100 | 14.2 | 118 | 115 | 104 | 101 | 1 | 75.0-125 | J5 | J5 | 2.41 | 20 |
| Copper | 100 | 18.7 | 156 | 136 | 138 | 117 | 1 | 75.0-125 | J5 | J5 | 14.2 | 20 |
| Lead | 100 | 96.5 | 298 | 284 | 201 | 188 | 1 | 75.0-125 | J5 | J5 | 4.53 | 20 |
| Nickel | 100 | 17.8 | 113 | 110 | 95.4 | 92.1 | 1 | 75.0-125 | J5 | J5 | 2.94 | 20 |
| Selenium | 100 | U | 91.3 | 88.8 | 91.3 | 88.8 | 1 | 75.0-125 | J5 | J5 | 2.74 | 20 |
| Silver | 20.0 | U | 19.8 | 19.2 | 99.1 | 96.1 | 1 | 75.0-125 | J5 | J5 | 3.05 | 20 |
| Thallium | 100 | U | 92.7 | 89.4 | 92.7 | 89.4 | 1 | 75.0-125 | J5 | J5 | 3.56 | 20 |
| Zinc | 100 | 154 | 466 | 417 | 312 | 263 | 1 | 75.0-125 | J5 | J5 | 11.1 | 20 |

Method Blank (MB)

(MB) R3346601-1 10/01/18 11:40

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-----------|--------------------|--------------|-----------------|-----------------|
| Antimony | U | | 0.750 | 2.00 |
| Arsenic | U | | 0.460 | 2.00 |
| Barium | U | | 0.170 | 0.500 |
| Beryllium | U | | 0.0700 | 0.200 |
| Cadmium | U | | 0.0700 | 0.500 |
| Chromium | U | | 0.140 | 1.00 |
| Copper | U | | 0.530 | 2.00 |
| Lead | U | | 0.190 | 0.500 |
| Nickel | U | | 0.490 | 2.00 |
| Selenium | U | | 0.620 | 2.00 |
| Silver | U | | 0.120 | 1.00 |
| Thallium | U | | 0.650 | 2.00 |
| Zinc | 0.767 | J | 0.590 | 5.00 |

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCS-D)

(LCS) R3346601-2 10/01/18 11:43 - (LCS-D) R3346601-3 10/01/18 11:45

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCS-D Rec. % | Rec. Limits % | LCS Qualifier | LCS-D Qualifier | RPD % | RPD Limits % |
|-----------|-----------------------|---------------------|----------------------|---------------|-----------------|------------------|---------------|-----------------|----------|-----------------|
| Antimony | 100 | 103 | 104 | 103 | 104 | 80.0-120 | | 1.49 | 20 | 20 |
| Arsenic | 100 | 100 | 102 | 100 | 102 | 80.0-120 | | 1.85 | 20 | 20 |
| Barium | 100 | 106 | 108 | 106 | 108 | 80.0-120 | | 1.18 | 20 | 20 |
| Beryllium | 100 | 103 | 105 | 103 | 105 | 80.0-120 | | 1.58 | 20 | 20 |
| Cadmium | 100 | 100 | 102 | 100 | 102 | 80.0-120 | | 1.68 | 20 | 20 |
| Chromium | 100 | 100 | 102 | 100 | 102 | 80.0-120 | | 1.55 | 20 | 20 |
| Copper | 100 | 101 | 102 | 101 | 102 | 80.0-120 | | 1.19 | 20 | 20 |
| Lead | 100 | 99.7 | 102 | 99.7 | 102 | 80.0-120 | | 1.94 | 20 | 20 |
| Nickel | 100 | 101 | 103 | 101 | 103 | 80.0-120 | | 1.89 | 20 | 20 |
| Selenium | 100 | 98.4 | 101 | 98.4 | 101 | 80.0-120 | | 2.15 | 20 | 20 |
| Silver | 20.0 | 19.2 | 19.4 | 95.8 | 97.1 | 80.0-120 | | 1.35 | 20 | 20 |
| Thallium | 100 | 98.4 | 101 | 98.4 | 101 | 80.0-120 | | 2.63 | 20 | 20 |
| Zinc | 100 | 104 | 105 | 104 | 105 | 80.0-120 | | 0.983 | 20 | 20 |

L1029304-15

L1030181-22 Original Sample (OS) - Matrix Spike (MS) - Matrix Spike Duplicate (MSD)

(OS) L1030181-22 10/01/18 11:48 - (MS) R3346601-6 10/01/18 11:56 - (MSD) R3346601-7 10/01/18 11:58

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|-----------|--------------------|-----------------------|-----------------|------------------|-----------|------------|----------|---------------|--------------|---------------|---------|--------------|
| Antimony | 100 | U | 83.2 | 89.3 | 83.2 | 89.3 | 1 | 75.0-125 | | | 6.98 | 20 |
| Arsenic | 100 | 1.89 | 91.0 | 94.3 | 89.1 | 92.4 | 1 | 75.0-125 | | | 3.48 | 20 |
| Barium | 100 | 44.6 | 134 | 122 | 89.7 | 77.1 | 1 | 75.0-125 | | | 9.82 | 20 |
| Beryllium | 100 | 0.127 | 93.8 | 95.6 | 93.7 | 95.5 | 1 | 75.0-125 | | | 1.92 | 20 |
| Cadmium | 100 | 3.23 | 94.5 | 95.1 | 91.3 | 91.9 | 1 | 75.0-125 | | | 0.689 | 20 |
| Chromium | 100 | 59.1 | 162 | 132 | 103 | 72.8 | 1 | 75.0-125 | .33 J6 | | 20.7 | 20 |
| Copper | 100 | 4.47 | 95.0 | 107 | 90.5 | 102 | 1 | 75.0-125 | | | 11.7 | 20 |
| Lead | 100 | 7.15 | 99.5 | 97.5 | 92.3 | 90.4 | 1 | 75.0-125 | | | 2.01 | 20 |
| Nickel | 100 | 3.46 | 96.7 | 95.0 | 93.2 | 91.5 | 1 | 75.0-125 | | | 1.76 | 20 |
| Selenium | 100 | 0.645 | 81.4 | 89.0 | 80.8 | 88.4 | 1 | 75.0-125 | | | 8.93 | 20 |
| Silver | 20.0 | U | 17.4 | 18.1 | 87.0 | 90.3 | 1 | 75.0-125 | | | 3.79 | 20 |
| Thallium | 100 | U | 91.4 | 91.4 | 91.4 | 91.4 | 1 | 75.0-125 | | | 0.00253 | 20 |
| Zinc | 100 | 9.63 | 101 | 97.8 | 91.2 | 88.2 | 1 | 75.0-125 | | | 3.00 | 20 |

Method Blank (MB)

(MB) R3346259-1 09/28/18 23:55

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-----------------|--------------------|--------------|-----------------|-----------------|
| TPH C6 - C12 | U | | 15.0 | 50.0 |
| TPH C12 - C28 | U | | 15.0 | 50.0 |
| TPH C28 - C35 | U | | 15.0 | 50.0 |
| TPH C6 - C35 | U | | 15.0 | 50.0 |
| (S) o-Terphenyl | 102 | | | 70.0-130 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3346259-2 09/29/18 00:08 - (LCSD) R3346259-3 09/29/18 00:21

| Analyte | Spike Amount mg/kg | LCS Result | | LCSD Result | | LCS Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|-----------------|-----------------------|------------|------|-------------|------|---------------|------------------|---------------|----------------|----------|-----------------|
| | | mg/kg | % | mg/kg | % | | | | | | |
| TPH C6 - C12 | 249 | 254 | 102 | 251 | 102 | 101 | 75.0-125 | | | 1.19 | 20 |
| TPH C12 - C28 | 249 | 243 | 97.6 | 244 | 97.6 | 98.4 | 75.0-125 | | | 0.411 | 20 |
| TPH C6 - C35 | 497 | 497 | 100 | 495 | 100 | 100 | 75.0-125 | | | 0.403 | 20 |
| (S) o-Terphenyl | | | 104 | | 104 | 100 | 70.0-130 | | | | |

L1029304-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1029304-11 09/29/18 02:30 - (MS) R3346259-4 09/29/18 02:43 - (MSD) R3346259-5 09/29/18 02:55

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | MSD Rec. | Diution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|-----------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|---------|------------------|--------------|---------------|----------|-----------------|
| | | | | | | | | | | | | | |
| TPH C6 - C12 | 203 | U | 195 | 225 | 96.1 | 94.9 | 75.0-125 | 5 | 75.0-125 | | 14.3 | 20 | 20 |
| TPH C12 - C28 | 203 | U | 211 | 235 | 104 | 99.2 | 75.0-125 | 5 | 75.0-125 | | 10.8 | 20 | 20 |
| TPH C6 - C35 | 406 | U | 406 | 460 | 100 | 97.0 | 75.0-125 | 5 | 75.0-125 | | 12.5 | 20 | 20 |
| (S) o-Terphenyl | | | | | 105 | 97.9 | 70.0-130 | | | | | | |

Method Blank (MB)

(MB) R3346066-1 09/28/18 07:06

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|--------------------------|--------------------|--------------|-----------------|-----------------|
| PCB 1016 | U | | 0.00350 | 0.0170 |
| PCB 1221 | U | | 0.00537 | 0.0170 |
| PCB 1232 | U | | 0.00417 | 0.0170 |
| PCB 1242 | U | | 0.00318 | 0.0170 |
| PCB 1248 | U | | 0.00315 | 0.0170 |
| PCB 1254 | U | | 0.00472 | 0.0170 |
| PCB 1260 | U | | 0.00494 | 0.0170 |
| (S) Decachlorobiphenyl | 106 | | | 10.0-135 |
| (S) Tetrachloro-m-xylene | 93.7 | | | 10.0-139 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3346066-2 09/28/18 07:20 • (LCSD) R3346066-3 09/28/18 07:34

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|--------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| PCB 1260 | 0.167 | 0.169 | 0.119 | 71.3 | 71.3 | 37.0-145 | | | 34.7 | 37 |
| PCB 1016 | 0.167 | 0.166 | 0.120 | 99.4 | 71.9 | 36.0-141 | | | 32.2 | 35 |
| (S) Decachlorobiphenyl | | | | 103 | 78.8 | 10.0-135 | | | | |
| (S) Tetrachloro-m-xylene | | | | 90.8 | 76.3 | 10.0-139 | | | | |

L1029304-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1029304-10 09/28/18 12:14 • (MS) R3346066-4 09/28/18 12:28 • (MSD) R3346066-5 09/28/18 12:42

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|--------------------------|-----------------------|--------------------------|--------------------|---------------------|----------|------------------|--------------|---------------|----------|-----------------|
| PCB 1260 | 0.167 | U | 0.299 | 0.411 | 1 | 10.0-160 | J5 | J5 | 31.5 | 38 |
| PCB 1016 | 0.167 | U | 0.292 | 0.382 | 1 | 10.0-160 | J5 | J5 | 26.7 | 37 |
| (S) Decachlorobiphenyl | | | | 95.2 | | 10.0-135 | | | | |
| (S) Tetrachloro-m-xylene | | | | 77.6 | | 10.0-139 | | | | |

Method Blank (MB)

(MB) R3346308-1 09/29/18 12:14

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Anthracene | U | | 0.000600 | 0.00600 |
| Acenaphthene | U | | 0.000600 | 0.00600 |
| Acenaphthylene | U | | 0.000600 | 0.00600 |
| Benzo(a)anthracene | U | | 0.000600 | 0.00600 |
| Benzo(a)pyrene | U | | 0.000600 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.000600 | 0.00600 |
| Benzo(g,h,i)perylene | U | | 0.000600 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.000600 | 0.00600 |
| Chrysene | U | | 0.000600 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.000600 | 0.00600 |
| Fluoranthene | U | | 0.000600 | 0.00600 |
| Fluorene | U | | 0.000600 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00200 | 0.0200 |
| Naphthalene | 0.00258 | J | | |
| Phenanthrene | U | | 0.000600 | 0.00600 |
| Pyrene | U | | 0.000600 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 |
| (S) Nitrobenzene-d5 | 106 | | | 14.0-149 |
| (S) 2-Fluorobiphenyl | 121 | | | 34.0-125 |
| (S) p-Terphenyl-d14 | 117 | | | 23.0-120 |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Oc
7 Gl
8 Al
9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3346308-2 09/29/18 12:35 • (LCSD) R3346308-3 09/29/18 12:56

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|-----------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Anthracene | 0.0800 | 0.0814 | 0.0820 | 102 | 103 | 50.0-126 | | | 0.794 | 20 |
| Acenaphthene | 0.0800 | 0.0783 | 0.0801 | 97.9 | 100 | 50.0-120 | | | 2.27 | 20 |
| Acenaphthylene | 0.0800 | 0.0880 | 0.0910 | 110 | 114 | 50.0-120 | | | 3.35 | 20 |
| Benzo(a)anthracene | 0.0800 | 0.0774 | 0.0801 | 96.8 | 100 | 45.0-120 | | | 3.43 | 20 |
| Benzo(a)pyrene | 0.0800 | 0.0784 | 0.0838 | 98.0 | 105 | 42.0-120 | | | 6.66 | 20 |
| Benzo(b)fluoranthene | 0.0800 | 0.0847 | 0.0856 | 106 | 107 | 42.0-121 | | | 1.06 | 20 |
| Benzo(g,h,i)perylene | 0.0800 | 0.0829 | 0.0861 | 104 | 108 | 45.0-125 | | | 3.79 | 20 |
| Benzo(k)fluoranthene | 0.0800 | 0.0915 | 0.0968 | 114 | 121 | 49.0-125 | | | 5.63 | 20 |
| Chrysene | 0.0800 | 0.0841 | 0.0856 | 105 | 107 | 49.0-122 | | | 1.77 | 20 |
| Dibenz(a,h)anthracene | 0.0800 | 0.0876 | 0.0904 | 110 | 113 | 47.0-125 | | | 3.15 | 20 |
| Fluoranthene | 0.0800 | 0.0826 | 0.0840 | 103 | 105 | 49.0-129 | | | 1.68 | 20 |

WG1173450

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

QUALITY CONTROL SUMMARY

L1029304-01.02.03.04.05.07.08.14

ONE LAB, NATIONWIDE

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3346308-2 09/29/18 12:35 • (LCSD) R3346308-3 09/29/18 12:56

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Fluorene | 0.0800 | 0.0846 | 0.0873 | 106 | 109 | 49.0-120 | | | 3.14 | 20 |
| Indeno[1,2,3-cd]pyrene | 0.0800 | 0.0869 | 0.0896 | 109 | 112 | 46.0-125 | | | 3.06 | 20 |
| Naphthalene | 0.0800 | 0.0795 | 0.0819 | 99.4 | 102 | 50.0-120 | | | 2.97 | 20 |
| Phenanthrene | 0.0800 | 0.0789 | 0.0797 | 98.6 | 99.6 | 47.0-120 | | | 1.01 | 20 |
| Pyrene | 0.0800 | 0.0807 | 0.0889 | 101 | 111 | 43.0-123 | | | 9.67 | 20 |
| 1-Methylnaphthalene | 0.0800 | 0.0827 | 0.0862 | 103 | 108 | 51.0-121 | | | 4.14 | 20 |
| 2-Methylnaphthalene | 0.0800 | 0.0763 | 0.0791 | 95.4 | 98.9 | 50.0-120 | | | 3.60 | 20 |
| 2-Chloronaphthalene | 0.0800 | 0.0834 | 0.0844 | 104 | 106 | 50.0-120 | | | 1.19 | 20 |
| (S) Nitrobenzene-d5 | | | 98.7 | 104 | 104 | 14.0-149 | | | | |
| (S) 2-Fluorobiphenyl | | | 115 | 118 | 118 | 34.0-125 | | | | |
| (S) p-Terphenyl-d14 | | | 106 | 117 | 117 | 23.0-120 | | | | |

L1029304-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1029304-01 09/29/18 13:16 • (MS) R3346308-4 09/29/18 13:37 • (MSD) R3346308-5 09/29/18 13:58

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Anthracene | 0.0800 | 0.220 | 0.0850 | 0.0954 | 0.000 | 0.000 | 1 | 10.0-145 | J6 | J6 | 11.5 | 30 |
| Acenaphthene | 0.0800 | 0.0849 | 0.0605 | 0.0601 | 0.000 | 0.000 | 1 | 14.0-127 | J6 | J6 | 0.663 | 27 |
| Acenaphthylene | 0.0800 | 0.00983 | 0.0672 | 0.0785 | 71.7 | 85.8 | 1 | 21.0-124 | | | 15.5 | 25 |
| Benzo[a]anthracene | 0.0800 | 0.586 | 0.169 | 0.250 | 0.000 | 0.000 | 1 | 10.0-139 | V | V | 27.8 | 30 |
| Benzo[e]pyrene | 0.0800 | 0.508 | 0.202 | 0.287 | 0.000 | 0.000 | 1 | 10.0-141 | V | J3 V | 34.8 | 31 |
| Benzo[ghi]peranthene | 0.0800 | 0.695 | 0.238 | 0.381 | 0.000 | 0.000 | 1 | 10.0-140 | V | J3 V | 46.2 | 36 |
| Benzo[ghi]perylene | 0.0800 | 0.386 | 0.162 | 0.243 | 0.000 | 0.000 | 1 | 10.0-140 | V | J3 V | 40.0 | 33 |
| Benzo[ghi]peranthene | 0.0800 | 0.249 | 0.107 | 0.141 | 0.000 | 0.000 | 1 | 10.0-137 | J6 | J6 | 27.4 | 31 |
| Chrysene | 0.0800 | 0.561 | 0.206 | 0.279 | 0.000 | 0.000 | 1 | 10.0-145 | V | J3 V | 30.1 | 30 |
| Dibenz[a,h]anthracene | 0.0800 | 0.0674 | 0.0874 | 0.00949 | 0.000 | 0.000 | 1 | 10.0-132 | J6 | J3 J6 | 161 | 31 |
| Fluoranthene | 0.0800 | 1.29 | 0.288 | 0.411 | 0.000 | 0.000 | 1 | 10.0-153 | V | J3 V | 35.2 | 33 |
| Fluorene | 0.0800 | 0.0820 | 0.0650 | 0.0698 | 0.000 | 0.000 | 1 | 11.0-130 | J6 | J6 | 7.12 | 29 |
| Indeno[1,2,3-cd]pyrene | 0.0800 | 0.316 | 0.150 | 0.211 | 0.000 | 0.000 | 1 | 10.0-137 | J6 | J3 J6 | 33.8 | 32 |
| Naphthalene | 0.0800 | 0.0191 | 0.0844 | 0.0759 | 81.6 | 71.0 | 1 | 10.0-135 | | V | 10.6 | 27 |
| Phenanthrene | 0.0800 | 0.868 | 0.178 | 0.214 | 0.000 | 0.000 | 1 | 10.0-144 | V | V | 18.4 | 31 |
| Pyrene | 0.0800 | 1.03 | 0.271 | 0.373 | 0.000 | 0.000 | 1 | 10.0-148 | V | V | 31.7 | 35 |
| 1-Methylnaphthalene | 0.0800 | 0.0273 | 0.0836 | 0.0813 | 70.4 | 67.5 | 1 | 10.0-142 | | | 2.79 | 28 |
| 2-Methylnaphthalene | 0.0800 | 0.0296 | 0.0821 | 0.0737 | 65.6 | 55.1 | 1 | 10.0-137 | | | 10.8 | 28 |
| 2-Chloronaphthalene | 0.0800 | U | 0.0589 | 0.0594 | 73.6 | 74.3 | 1 | 29.0-120 | | | 0.845 | 24 |
| (S) Nitrobenzene-d5 | | | | 94.2 | 94.2 | 89.8 | | 14.0-149 | | | | |
| (S) 2-Fluorobiphenyl | | | | 100 | 100 | 92.4 | | 34.0-125 | | | | |
| (S) p-Terphenyl-d14 | | | | 96.3 | 96.3 | 88.4 | | 23.0-120 | | | | |



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|--|
| B | The same analyte is found in the associated blank. |
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J5 | The sample matrix interfered with the ability to make any accurate determination; spike value is high. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |

Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

GI

⁸AI

⁹Sc

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

| | | | |
|-------------------------|-------------|-----------------------------|-------------------|
| Alabama | 40660 | Nebraska | NE-05-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0489 | New Jersey-NELAP | TN002 |
| California | 2932 | New Mexico ¹ | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env975 |
| Florida | EB7487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio-VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-IN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | 90010 | South Carolina | 84004 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | A130792 | Tennessee ^{1,4} | 2006 |
| Louisiana ¹ | LA180010 | Texas | T 104704245-17-14 |
| Maine | TN0002 | Texas ⁶ | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980339910 |
| Montana | CERT0086 | Wyoming | A2LA |

Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

AI

⁹Sc

Third Party Federal Accreditations

| | | | |
|-------------------------------|---------|--------------------|---------------|
| A2LA – ISO 17025 | 1461.01 | AHA-LAP, LLC EMLAP | 100789 |
| A2LA – ISO 17025 ¹ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USA | P330-15-00234 |
| EPA-Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.





ANALYTICAL REPORT

October 09, 2018

Seneca Companies - Tulsa, OK

Sample Delivery Group: L1032469
Samples Received: 10/06/2018
Project Number: 6362589
Description: Evans Flintube - Brownfield - City of Tulsa
Site: EVANS FINTUBE
Report To: Douglas Wilson
6947 E. 13th Street
Tulsa, OK 74112










Entire Report Reviewed By:

Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS



| | | |
|--|----|---|
| Cp: Cover Page | 1 |  |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 |  |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 |  |
| SSA01 L1032469-01 | 5 | |
| SB02-SS01 L1032469-02 | 6 |  |
| SSA03 L1032469-03 | 7 |  |
| SSB07 L1032469-04 | 8 | |
| SSB11 L1032469-05 | 9 |  |
| SSA01 DUP L1032469-06 | 10 |  |
| Gc: Quality Control Summary | 11 | |
| Mercury by Method 7471A | 11 |  |
| Metals (ICP) by Method 6010B | 12 | |
| Semi-Volatile Organic Compounds (GC) by TCEQ Method 1005 | 14 |  |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | 15 | |
| Gl: Glossary of Terms | 17 | |
| Al: Accreditations & Locations | 18 | |
| Sc: Sample Chain of Custody | 19 | |

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.

| SSA01 L1032469-01 Solid | | | | | |
|---|-----------|----------|--------------------------------|---------------------------------------|--------------------------------------|
| | | | Collected by Douglas Wilson | Collected date/time 10/05/18 09:35 | Received date/time 10/06/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Mercury by Method 7471A | WG1177256 | 1 | 10/07/18 10:04 | 10/08/18 08:30 | ABL |
| Metals (ICP) by Method 6010B | WG1177430 | 1 | 10/08/18 06:26 | 10/08/18 18:44 | ST |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1177401 | 1 | 10/08/18 14:06 | 10/09/18 00:07 | DMG |

| SB02-SS01 L1032469-02 Solid | | | | | |
|---|-----------|----------|--------------------------------|---------------------------------------|--------------------------------------|
| | | | Collected by Douglas Wilson | Collected date/time 10/05/18 09:05 | Received date/time 10/06/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Mercury by Method 7471A | WG1177256 | 5 | 10/07/18 10:04 | 10/08/18 13:44 | RDS |
| Metals (ICP) by Method 6010B | WG1177430 | 1 | 10/08/18 06:26 | 10/08/18 19:49 | ST |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1177401 | 1 | 10/08/18 14:06 | 10/09/18 01:10 | DMG |

| SSA03 L1032469-03 Solid | | | | | |
|---|-----------|----------|--------------------------------|---------------------------------------|--------------------------------------|
| | | | Collected by Douglas Wilson | Collected date/time 10/05/18 10:00 | Received date/time 10/06/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Mercury by Method 7471A | WG1177256 | 1 | 10/07/18 10:04 | 10/08/18 09:24 | ABL |
| Metals (ICP) by Method 6010B | WG1177430 | 1 | 10/08/18 06:26 | 10/08/18 19:51 | ST |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1177401 | 5 | 10/08/18 14:06 | 10/09/18 02:33 | DMG |

| SSB07 L1032469-04 Solid | | | | | |
|--|-----------|----------|--------------------------------|---------------------------------------|--------------------------------------|
| | | | Collected by Douglas Wilson | Collected date/time 10/05/18 10:25 | Received date/time 10/06/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Semi-Volatile Organic Compounds (GC) by TCEQ Method 1005 | WG1177418 | 1.63 | 10/08/18 13:10 | 10/08/18 21:23 | DMW |

| SSB11 L1032469-05 Solid | | | | | |
|--|-----------|----------|--------------------------------|---------------------------------------|--------------------------------------|
| | | | Collected by Douglas Wilson | Collected date/time 10/05/18 10:55 | Received date/time 10/06/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Semi-Volatile Organic Compounds (GC) by TCEQ Method 1005 | WG1177418 | 1.06 | 10/08/18 13:10 | 10/09/18 09:10 | DMW |

| SSA01 DUP L1032469-06 Solid | | | | | |
|---|-----------|----------|--------------------------------|---------------------------------------|--------------------------------------|
| | | | Collected by Douglas Wilson | Collected date/time 10/05/18 09:35 | Received date/time 10/06/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Mercury by Method 7471A | WG1177256 | 1 | 10/07/18 10:04 | 10/08/18 09:27 | ABL |
| Metals (ICP) by Method 6010B | WG1177430 | 1 | 10/08/18 06:26 | 10/08/18 19:54 | ST |
| Semi-Volatile Organic Compounds (GC) by TCEQ Method 1005 | WG1177418 | 1.69 | 10/08/18 13:10 | 10/08/18 21:35 | DMW |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1177401 | 1 | 10/08/18 14:06 | 10/09/18 01:31 | DMG |

Cp

Tc

Ss

Cn

Sr

Qc

Gf

Al

Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.177 | | 0.00280 | 0.0200 | 1 | 10/08/2018 08:30 | WG1177256 |

1 Cp

2 Tc

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | 0.831 | J J6 | 0.750 | 2.00 | 1 | 10/08/2018 18:44 | WG1177430 |
| Arsenic | 3.12 | | 0.460 | 2.00 | 1 | 10/08/2018 18:44 | WG1177430 |
| Barium | 187 | O1 | 0.170 | 0.500 | 1 | 10/08/2018 18:44 | WG1177430 |
| Beryllium | 0.759 | | 0.0700 | 0.200 | 1 | 10/08/2018 18:44 | WG1177430 |
| Cadmium | 0.406 | J | 0.0700 | 0.500 | 1 | 10/08/2018 18:44 | WG1177430 |
| Chromium | 18.4 | O1 | 0.140 | 1.00 | 1 | 10/08/2018 18:44 | WG1177430 |
| Copper | 21.2 | | 0.530 | 2.00 | 1 | 10/08/2018 18:44 | WG1177430 |
| Lead | 112 | J3 J5 | 0.190 | 0.500 | 1 | 10/08/2018 18:44 | WG1177430 |
| Nickel | 13.0 | | 0.490 | 2.00 | 1 | 10/08/2018 18:44 | WG1177430 |
| Selenium | U | | 0.620 | 2.00 | 1 | 10/08/2018 18:44 | WG1177430 |
| Silver | 0.250 | J | 0.120 | 1.00 | 1 | 10/08/2018 18:44 | WG1177430 |
| Thallium | U | | 0.650 | 2.00 | 1 | 10/08/2018 18:44 | WG1177430 |
| Zinc | 144 | J3 J5 O1 | 0.590 | 5.00 | 1 | 10/08/2018 18:44 | WG1177430 |

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.0185 | | 0.000600 | 0.00600 | 1 | 10/09/2018 00:07 | WG1177401 |
| Acenaphthene | 0.00358 | J | 0.000600 | 0.00600 | 1 | 10/09/2018 00:07 | WG1177401 |
| Acenaphthylene | U | | 0.000600 | 0.00600 | 1 | 10/09/2018 00:07 | WG1177401 |
| Benzo(a)anthracene | 0.124 | J6 | 0.000600 | 0.00600 | 1 | 10/09/2018 00:07 | WG1177401 |
| Benzo(a)pyrene | 0.134 | J6 | 0.000600 | 0.00600 | 1 | 10/09/2018 00:07 | WG1177401 |
| Benzo(b)fluoranthene | 0.230 | J6 | 0.000600 | 0.00600 | 1 | 10/09/2018 00:07 | WG1177401 |
| Benzo(g,h,i)perylene | 0.118 | J6 | 0.000600 | 0.00600 | 1 | 10/09/2018 00:07 | WG1177401 |
| Benzo(k)fluoranthene | 0.0672 | | 0.000600 | 0.00600 | 1 | 10/09/2018 00:07 | WG1177401 |
| Chrysene | 0.101 | J6 | 0.000600 | 0.00600 | 1 | 10/09/2018 00:07 | WG1177401 |
| Dibenz(a,h)anthracene | 0.0319 | | 0.000600 | 0.00600 | 1 | 10/09/2018 00:07 | WG1177401 |
| Fluoranthene | 0.199 | J6 | 0.000600 | 0.00600 | 1 | 10/09/2018 00:07 | WG1177401 |
| Fluorene | 0.00383 | J | 0.000600 | 0.00600 | 1 | 10/09/2018 00:07 | WG1177401 |
| Indeno(1,2,3-cd)pyrene | 0.0955 | | 0.000600 | 0.00600 | 1 | 10/09/2018 00:07 | WG1177401 |
| Naphthalene | 0.0218 | | 0.00200 | 0.0200 | 1 | 10/09/2018 00:07 | WG1177401 |
| Phenanthrene | 0.0619 | | 0.000600 | 0.00600 | 1 | 10/09/2018 00:07 | WG1177401 |
| Pyrene | 0.184 | J6 | 0.000600 | 0.00600 | 1 | 10/09/2018 00:07 | WG1177401 |
| 1-Methylnaphthalene | 0.0449 | | 0.00200 | 0.0200 | 1 | 10/09/2018 00:07 | WG1177401 |
| 2-Methylnaphthalene | 0.0485 | | 0.00200 | 0.0200 | 1 | 10/09/2018 00:07 | WG1177401 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 10/09/2018 00:07 | WG1177401 |
| (S) Nitrobenzene-d5 | 118 | | | 14.0-149 | | 10/09/2018 00:07 | WG1177401 |
| (S) 2-Fluorobiphenyl | 86.9 | | | 34.0-125 | | 10/09/2018 00:07 | WG1177401 |
| (S) p-Terphenyl-d14 | 97.4 | | | 23.0-120 | | 10/09/2018 00:07 | WG1177401 |

Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 2.70 | | 0.0140 | 0.100 | 5 | 10/08/2018 13:44 | WG1177256 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | 1.17 | | 0.750 | 2.00 | 1 | 10/08/2018 19:49 | WG1177430 |
| Arsenic | 6.63 | | 0.460 | 2.00 | 1 | 10/08/2018 19:49 | WG1177430 |
| Barium | 259 | | 0.170 | 0.500 | 1 | 10/08/2018 19:49 | WG1177430 |
| Beryllium | 0.700 | | 0.0700 | 0.200 | 1 | 10/08/2018 19:49 | WG1177430 |
| Cadmium | 0.994 | | 0.0700 | 0.500 | 1 | 10/08/2018 19:49 | WG1177430 |
| Chromium | 21.3 | | 0.140 | 1.00 | 1 | 10/08/2018 19:49 | WG1177430 |
| Copper | 46.5 | | 0.530 | 2.00 | 1 | 10/08/2018 19:49 | WG1177430 |
| Lead | 352 | | 0.190 | 0.500 | 1 | 10/08/2018 19:49 | WG1177430 |
| Nickel | 13.2 | | 0.490 | 2.00 | 1 | 10/08/2018 19:49 | WG1177430 |
| Selenium | U | | 0.620 | 2.00 | 1 | 10/08/2018 19:49 | WG1177430 |
| Silver | 1.70 | | 0.120 | 1.00 | 1 | 10/08/2018 19:49 | WG1177430 |
| Thallium | U | | 0.650 | 2.00 | 1 | 10/08/2018 19:49 | WG1177430 |
| Zinc | 599 | | 0.590 | 5.00 | 1 | 10/08/2018 19:49 | WG1177430 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.0489 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:10 | WG1177401 |
| Acenaphthene | 0.0135 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:10 | WG1177401 |
| Acenaphthylene | U | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:10 | WG1177401 |
| Benzo(a)anthracene | 0.266 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:10 | WG1177401 |
| Benzo(a)pyrene | 0.315 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:10 | WG1177401 |
| Benzo(b)fluoranthene | 0.499 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:10 | WG1177401 |
| Benzo(g,h,i)perylene | 0.329 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:10 | WG1177401 |
| Benzo(k)fluoranthene | 0.127 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:10 | WG1177401 |
| Chrysene | 0.201 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:10 | WG1177401 |
| Dibenz(a,h)anthracene | 0.0711 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:10 | WG1177401 |
| Fluoranthene | 0.465 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:10 | WG1177401 |
| Fluorene | 0.0137 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:10 | WG1177401 |
| Indeno(1,2,3-cd)pyrene | 0.240 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:10 | WG1177401 |
| Naphthalene | 0.00915 | | 0.00200 | 0.0200 | 1 | 10/09/2018 01:10 | WG1177401 |
| Phenanthrene | 0.221 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:10 | WG1177401 |
| Pyrene | 0.404 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:10 | WG1177401 |
| 1-Methylnaphthalene | 0.0109 | | 0.00200 | 0.0200 | 1 | 10/09/2018 01:10 | WG1177401 |
| 2-Methylnaphthalene | 0.0101 | | 0.00200 | 0.0200 | 1 | 10/09/2018 01:10 | WG1177401 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 10/09/2018 01:10 | WG1177401 |
| (S) Nitrobenzene-d5 | 106 | | | 14.0-149 | | 10/09/2018 01:10 | WG1177401 |
| (S) 2-Fluorobiphenyl | 76.9 | | | 34.0-125 | | 10/09/2018 01:10 | WG1177401 |
| (S) p-Terphenyl-d14 | 82.7 | | | 23.0-120 | | 10/09/2018 01:10 | WG1177401 |

- Cp
- ²Tc
- ³Ss
- ⁴Cn
- Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc



Collected date/time: 10/05/18 10:00

L1032469

Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.0332 | | 0.00280 | 0.0200 | 1 | 10/08/2018 09:24 | WG1177256 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | 2.72 | | 0.750 | 2.00 | 1 | 10/08/2018 19:51 | WG1177430 |
| Arsenic | 4.31 | | 0.460 | 2.00 | 1 | 10/08/2018 19:51 | WG1177430 |
| Barium | 47.8 | | 0.170 | 0.500 | 1 | 10/08/2018 19:51 | WG1177430 |
| Beryllium | 0.344 | | 0.0700 | 0.200 | 1 | 10/08/2018 19:51 | WG1177430 |
| Cadmium | 0.467 | J | 0.0700 | 0.500 | 1 | 10/08/2018 19:51 | WG1177430 |
| Chromium | 12.4 | | 0.140 | 1.00 | 1 | 10/08/2018 19:51 | WG1177430 |
| Copper | 28.1 | | 0.530 | 2.00 | 1 | 10/08/2018 19:51 | WG1177430 |
| Lead | 169 | | 0.190 | 0.500 | 1 | 10/08/2018 19:51 | WG1177430 |
| Nickel | 22.8 | | 0.490 | 2.00 | 1 | 10/08/2018 19:51 | WG1177430 |
| Selenium | U | | 0.620 | 2.00 | 1 | 10/08/2018 19:51 | WG1177430 |
| Silver | U | | 0.120 | 1.00 | 1 | 10/08/2018 19:51 | WG1177430 |
| Thallium | U | | 0.650 | 2.00 | 1 | 10/08/2018 19:51 | WG1177430 |
| Zinc | 122 | | 0.590 | 5.00 | 1 | 10/08/2018 19:51 | WG1177430 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.0300 | J | 0.00300 | 0.0300 | 5 | 10/09/2018 02:33 | WG1177401 |
| Acenaphthene | 0.00425 | J | 0.00300 | 0.0300 | 5 | 10/09/2018 02:33 | WG1177401 |
| Acenaphthylene | U | | 0.00300 | 0.0300 | 5 | 10/09/2018 02:33 | WG1177401 |
| Benzo(a)anthracene | 0.377 | | 0.00300 | 0.0300 | 5 | 10/09/2018 02:33 | WG1177401 |
| Benzo(a)pyrene | 0.493 | | 0.00300 | 0.0300 | 5 | 10/09/2018 02:33 | WG1177401 |
| Benzo(b)fluoranthene | 1.14 | | 0.00300 | 0.0300 | 5 | 10/09/2018 02:33 | WG1177401 |
| Benzo(g,h,i)perylene | 0.740 | | 0.00300 | 0.0300 | 5 | 10/09/2018 02:33 | WG1177401 |
| Benzo(k)fluoranthene | 0.278 | | 0.00300 | 0.0300 | 5 | 10/09/2018 02:33 | WG1177401 |
| Chrysene | 0.448 | | 0.00300 | 0.0300 | 5 | 10/09/2018 02:33 | WG1177401 |
| Dibenz(a,h)anthracene | 0.184 | | 0.00300 | 0.0300 | 5 | 10/09/2018 02:33 | WG1177401 |
| Fluoranthene | 0.416 | | 0.00300 | 0.0300 | 5 | 10/09/2018 02:33 | WG1177401 |
| Fluorene | U | | 0.00300 | 0.0300 | 5 | 10/09/2018 02:33 | WG1177401 |
| Indeno(1,2,3-cd)pyrene | 0.405 | | 0.00300 | 0.0300 | 5 | 10/09/2018 02:33 | WG1177401 |
| Naphthalene | 0.0168 | J | 0.0100 | 0.100 | 5 | 10/09/2018 02:33 | WG1177401 |
| Phenanthrene | 0.0903 | | 0.00300 | 0.0300 | 5 | 10/09/2018 02:33 | WG1177401 |
| Pyrene | 0.445 | | 0.00300 | 0.0300 | 5 | 10/09/2018 02:33 | WG1177401 |
| 1-Methylnaphthalene | 0.0203 | J | 0.0100 | 0.100 | 5 | 10/09/2018 02:33 | WG1177401 |
| 2-Methylnaphthalene | 0.0285 | J | 0.0100 | 0.100 | 5 | 10/09/2018 02:33 | WG1177401 |
| 2-Chloronaphthalene | U | | 0.0100 | 0.100 | 5 | 10/09/2018 02:33 | WG1177401 |
| (S) Nitrobenzene-d5 | 98.5 | | | 14.0-149 | | 10/09/2018 02:33 | WG1177401 |
| (S) 2-Fluorobiphenyl | 82.0 | | | 34.0-125 | | 10/09/2018 02:33 | WG1177401 |
| (S) p-Terphenyl-d14 | 81.1 | | | 23.0-120 | | 10/09/2018 02:33 | WG1177401 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

SSB07

SAMPLE RESULTS - 04

ONE LAB. NATIONWIDE.



Collected date/time: 10/05/18 10:25

L1032469

Semi-Volatile Organic Compounds (GC) by TCEQ Method 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| TPH C6 - C12 | U | | 24.5 | 81.5 | 1.63 | 10/08/2018 21:23 | WG1177418 |
| TPH C12 - C28 | 67.9 | J | 24.5 | 81.5 | 1.63 | 10/08/2018 21:23 | WG1177418 |
| TPH C28 - C35 | 163 | | 24.5 | 81.5 | 1.63 | 10/08/2018 21:23 | WG1177418 |
| TPH C6 - C35 | 231 | | 24.5 | 81.5 | 1.63 | 10/08/2018 21:23 | WG1177418 |
| (S) o-Terphenyl | 104 | | | 70.0-130 | | 10/08/2018 21:23 | WG1177418 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Si

6 Qc

7 Gl

8 Al

9 Sc



Collected date/time: 10/05/18 10:55

L1032469

Semi-Volatile Organic Compounds (GC) by TCEQ Method 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------|-----------------|-----------|--------------|--------------|----------|-------------------------|------------------|
| TPH C6 - C12 | U | | 15.9 | 53.0 | 1.06 | 10/09/2018 09:10 | <u>WG1177418</u> |
| TPH C12 - C28 | 136 | | 15.9 | 53.0 | 1.06 | 10/09/2018 09:10 | <u>WG1177418</u> |
| TPH C28 - C35 | 299 | | 15.9 | 53.0 | 1.06 | 10/09/2018 09:10 | <u>WG1177418</u> |
| TPH C6 - C35 | 435 | | 15.9 | 53.0 | 1.06 | 10/09/2018 09:10 | <u>WG1177418</u> |
| (S) o-Terphenyl | 95.1 | | | 70.0-130 | | 10/09/2018 09:10 | <u>WG1177418</u> |

Cp

2 Tc

3 Ss

4 Cn

5 Si

6 Qc

7 Gl

8 Al

9 Sc

SSA01 DUP

Collected date/time: 10/05/18 09:36

SAMPLE RESULTS - 06

L1032469

ONE LAB. NATIONWIDE.



Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.123 | | 0.00280 | 0.0200 | 1 | 10/08/2018 09:27 | WG1177256 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | 1.05 | J | 0.750 | 2.00 | 1 | 10/08/2018 19:54 | WG1177430 |
| Arsenic | 3.63 | | 0.460 | 2.00 | 1 | 10/08/2018 19:54 | WG1177430 |
| Barium | 211 | | 0.170 | 0.500 | 1 | 10/08/2018 19:54 | WG1177430 |
| Beryllium | 0.750 | | 0.0700 | 0.200 | 1 | 10/08/2018 19:54 | WG1177430 |
| Cadmium | 0.493 | J | 0.0700 | 0.500 | 1 | 10/08/2018 19:54 | WG1177430 |
| Chromium | 18.7 | | 0.140 | 1.00 | 1 | 10/08/2018 19:54 | WG1177430 |
| Copper | 35.7 | | 0.530 | 2.00 | 1 | 10/08/2018 19:54 | WG1177430 |
| Lead | 236 | | 0.190 | 0.500 | 1 | 10/08/2018 19:54 | WG1177430 |
| Nickel | 13.2 | | 0.490 | 2.00 | 1 | 10/08/2018 19:54 | WG1177430 |
| Selenium | U | | 0.620 | 2.00 | 1 | 10/08/2018 19:54 | WG1177430 |
| Silver | 0.226 | J | 0.120 | 1.00 | 1 | 10/08/2018 19:54 | WG1177430 |
| Thallium | U | | 0.650 | 2.00 | 1 | 10/08/2018 19:54 | WG1177430 |
| Zinc | 191 | | 0.590 | 5.00 | 1 | 10/08/2018 19:54 | WG1177430 |

Semi-Volatile Organic Compounds (GC) by TCEQ Method 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| TPH C6 - C12 | U | | 25.3 | 84.5 | 1.69 | 10/08/2018 21:35 | WG1177418 |
| TPH C12 - C28 | U | | 25.3 | 84.5 | 1.69 | 10/08/2018 21:35 | WG1177418 |
| TPH C28 - C35 | U | | 25.3 | 84.5 | 1.69 | 10/08/2018 21:35 | WG1177418 |
| TPH C6 - C35 | U | | 25.3 | 84.5 | 1.69 | 10/08/2018 21:35 | WG1177418 |
| (S) o-Terphenyl | 81.3 | | | 70.0-130 | | 10/08/2018 21:35 | WG1177418 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.0108 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:31 | WG1177401 |
| Acenaphthene | 0.00253 | J | 0.000600 | 0.00600 | 1 | 10/09/2018 01:31 | WG1177401 |
| Acenaphthylene | U | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:31 | WG1177401 |
| Benzo(a)anthracene | 0.0971 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:31 | WG1177401 |
| Benzo(a)pyrene | 0.102 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:31 | WG1177401 |
| Benzo(b)fluoranthene | 0.170 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:31 | WG1177401 |
| Benzo(g,h,i)perylene | 0.0812 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:31 | WG1177401 |
| Benzo(k)fluoranthene | 0.0510 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:31 | WG1177401 |
| Chrysene | 0.0786 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:31 | WG1177401 |
| Dibenz(a,h)anthracene | 0.0215 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:31 | WG1177401 |
| Fluoranthene | 0.166 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:31 | WG1177401 |
| Fluorene | 0.00235 | J | 0.000600 | 0.00600 | 1 | 10/09/2018 01:31 | WG1177401 |
| Indeno(1,2,3-cd)pyrene | 0.0671 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:31 | WG1177401 |
| Naphthalene | 0.00373 | J | 0.00200 | 0.0200 | 1 | 10/09/2018 01:31 | WG1177401 |
| Phenanthrene | 0.0491 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:31 | WG1177401 |
| Pyrene | 0.145 | | 0.000600 | 0.00600 | 1 | 10/09/2018 01:31 | WG1177401 |
| 1-Methylnaphthalene | 0.00554 | J | 0.00200 | 0.0200 | 1 | 10/09/2018 01:31 | WG1177401 |
| 2-Methylnaphthalene | 0.00546 | J | 0.00200 | 0.0200 | 1 | 10/09/2018 01:31 | WG1177401 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 10/09/2018 01:31 | WG1177401 |
| (S) Nitrobenzene-d5 | 118 | | | 14.0-149 | | 10/09/2018 01:31 | WG1177401 |
| (S) 2-Fluorobiphenyl | 88.4 | | | 34.0-125 | | 10/09/2018 01:31 | WG1177401 |
| (S) p-Terphenyl-d14 | 101 | | | 23.0-120 | | 10/09/2018 01:31 | WG1177401 |



Method Blank (MB)

(MB) R3348528-1 10/08/18 08:23

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|---------|--------------------|--------------|-----------------|-----------------|
| Mercury | U | | 0.00280 | 0.0200 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3348528-2 10/08/18 08:25 • (LCSD) R3348528-3 10/08/18 08:28

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Mercury | 0.300 | 0.272 | 0.256 | 90.7 | 85.3 | 80.0-120 | | | 6.07 | 20 |

L1032469-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1032469-01 10/08/18 08:30 • (MS) R3348528-4 10/08/18 08:33 • (MSD) R3348528-5 10/08/18 08:35

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Mercury | 0.300 | 0.177 | 0.437 | 0.475 | 86.6 | 99.1 | 1 | 75.0-125 | | | 8.23 | 20 |

| | | | | | | | | |
|------|------|------|------|------|------|------|------|------|
| 1 Cp | 2 Tc | 3 Ss | 4 Cn | 5 Sr | 6 Oe | 7 Gl | 8 Al | 9 Sc |
|------|------|------|------|------|------|------|------|------|

Method Blank (MB)

(MB) R3348733-1 10/08/18 18:37

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-----------|--------------------|--------------|-----------------|-----------------|
| Antimony | U | | 0.750 | 2.00 |
| Arsenic | U | | 0.460 | 2.00 |
| Barium | U | | 0.170 | 0.500 |
| Beryllium | U | | 0.0700 | 0.200 |
| Cadmium | U | | 0.0700 | 0.500 |
| Chromium | U | | 0.140 | 1.00 |
| Copper | U | | 0.530 | 2.00 |
| Lead | U | | 0.190 | 0.500 |
| Nickel | U | | 0.490 | 2.00 |
| Selenium | U | | 0.620 | 2.00 |
| Silver | U | | 0.120 | 1.00 |
| Thallium | U | | 0.650 | 2.00 |
| Zinc | U | | 0.590 | 5.00 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCS-D)

(LCS) R3348733-2 10/08/18 18:40 • (LCS-D) R3348733-3 10/08/18 18:42

| Analyte | Spiked Amount mg/kg | LCS Result mg/kg | LCS Rec. % | LCS-D Result mg/kg | LCS-D Rec. % | Rec. Limits % | LCS Qualifier | LCS-D Qualifier | RPD % | RPD Limits % |
|-----------|------------------------|---------------------|---------------|-----------------------|-----------------|------------------|---------------|-----------------|----------|-----------------|
| Antimony | 100 | 99.3 | 99.3 | 98.6 | 98.6 | 80.0-120 | | | 0.672 | 20 |
| Arsenic | 100 | 99.5 | 99.5 | 98.5 | 98.5 | 80.0-120 | | | 0.977 | 20 |
| Barium | 100 | 104 | 104 | 103 | 103 | 80.0-120 | | | 0.854 | 20 |
| Beryllium | 100 | 103 | 103 | 102 | 102 | 80.0-120 | | | 0.748 | 20 |
| Cadmium | 100 | 98.0 | 98.0 | 97.4 | 97.4 | 80.0-120 | | | 0.635 | 20 |
| Chromium | 100 | 101 | 101 | 100 | 100 | 80.0-120 | | | 0.841 | 20 |
| Copper | 100 | 98.7 | 98.7 | 98.3 | 98.3 | 80.0-120 | | | 0.357 | 20 |
| Lead | 100 | 101 | 101 | 100 | 100 | 80.0-120 | | | 0.574 | 20 |
| Nickel | 100 | 103 | 103 | 102 | 102 | 80.0-120 | | | 0.772 | 20 |
| Selenium | 100 | 98.2 | 98.2 | 98.2 | 98.2 | 80.0-120 | | | 0.0666 | 20 |
| Silver | 20.0 | 19.1 | 95.3 | 19.1 | 95.3 | 80.0-120 | | | 0.176 | 20 |
| Thallium | 100 | 101 | 101 | 99.7 | 99.7 | 80.0-120 | | | 0.875 | 20 |
| Zinc | 100 | 99.8 | 99.8 | 99.0 | 99.0 | 80.0-120 | | | 0.802 | 20 |

WG1177430

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE

L1032469-01.02.03.06

L1032469-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1032469-01 10/08/18 18:44 • (MS) R3348733-6 10/08/18 18:52 • (MSD) R3348733-7 10/08/18 18:54

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|-----------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Antimony | 100 | 0.031 | 55.6 | 50.0 | 54.8 | 49.1 | 1 | 75.0-125 | J6 | J6 | 10.7 | 20 |
| Arsenic | 100 | 3.12 | 99.8 | 96.0 | 96.6 | 92.8 | 1 | 75.0-125 | | | 3.90 | 20 |
| Barium | 100 | 187 | 288 | 269 | 101 | 82.1 | 1 | 75.0-125 | | | 6.91 | 20 |
| Beryllium | 100 | 0.759 | 102 | 98.0 | 101 | 97.2 | 1 | 75.0-125 | | | 3.77 | 20 |
| Cadmium | 100 | 0.406 | 96.8 | 92.9 | 96.4 | 92.4 | 1 | 75.0-125 | | | 4.21 | 20 |
| Chromium | 100 | 18.4 | 117 | 113 | 98.2 | 94.2 | 1 | 75.0-125 | | | 3.49 | 20 |
| Copper | 100 | 21.2 | 124 | 114 | 103 | 92.3 | 1 | 75.0-125 | J5 | J3 | 9.04 | 20 |
| Lead | 100 | 112 | 262 | 204 | 150 | 91.1 | 1 | 75.0-125 | | | 25.2 | 20 |
| Nickel | 100 | 13.0 | 120 | 117 | 107 | 104 | 1 | 75.0-125 | | | 2.79 | 20 |
| Selenium | 100 | U | 95.7 | 92.2 | 95.7 | 92.2 | 1 | 75.0-125 | | | 3.68 | 20 |
| Silver | 20.0 | 0.250 | 19.2 | 18.2 | 94.7 | 89.9 | 1 | 75.0-125 | | | 5.11 | 20 |
| Thallium | 100 | U | 100 | 96.5 | 100 | 96.5 | 1 | 75.0-125 | J5 | J3 | 3.78 | 20 |
| Zinc | 100 | 144 | 354 | 221 | 210 | 77.6 | 1 | 75.0-125 | | | 45.9 | 20 |

Method Blank (MB)

(MB) R3348787-1 10/08/18 16:51

| Analyte | MB Result mg/kg | MB MDL mg/kg | MB RDL mg/kg |
|-----------------|--------------------|-----------------|-----------------|
| TPH C6 - C12 | U | 15.0 | 50.0 |
| TPH C12 - C28 | U | 15.0 | 50.0 |
| TPH C28 - C35 | U | 15.0 | 50.0 |
| TPH C6 - C35 | U | 15.0 | 50.0 |
| (S) o-Terphenyl | 95.2 | | 70.0-180 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCS-D)

(LCS) R3348787-2 10/08/18 17:04 • (LCS-D) R3348787-3 10/08/18 17:17

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCS Rec. % | LCS-D Result mg/kg | LCS-D Rec. % | Rec. Limits % | LCS Qualifier | LCS-D Qualifier | RPD % | RPD Limits % |
|-----------------|-----------------------|---------------------|---------------|-----------------------|-----------------|------------------|---------------|-----------------|----------|-----------------|
| TPH C6 - C12 | 250 | 233 | 93.2 | 236 | 94.4 | 75.0-125 | | | 1.28 | 20 |
| TPH C12 - C28 | 250 | 201 | 80.4 | 209 | 83.6 | 75.0-125 | | | 3.90 | 20 |
| TPH C6 - C35 | 500 | 434 | 86.8 | 445 | 89.0 | 75.0-125 | | | 2.50 | 20 |
| (S) o-Terphenyl | | | 102 | | 104 | 70.0-180 | | | | |

L1032205-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1032205-05 10/08/18 17:30 • (MS) R3348787-4 10/08/18 17:43 • (MSD) R3348787-5 10/08/18 17:56

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MS Rec. % | MSD Result mg/kg | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|-----------------|-----------------------|--------------------------|--------------------|--------------|---------------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| TPH C6 - C12 | 250 | U | 238 | 95.2 | 237 | 94.8 | 1 | 75.0-125 | | 0.421 | 20 | 20 |
| TPH C12 - C28 | 250 | U | 218 | 87.2 | 211 | 84.4 | 1 | 75.0-125 | | 3.26 | 20 | 20 |
| TPH C6 - C35 | 500 | U | 456 | 91.2 | 448 | 89.6 | 1 | 75.0-125 | | 1.77 | 20 | 20 |
| (S) o-Terphenyl | | | | 105 | | 102 | | 70.0-180 | | | | |

Method Blank (MB)

(MB) R3348760-3 10/08/18 18:35

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Anthracene | U | | 0.000600 | 0.00600 |
| Acenaphthene | U | | 0.000600 | 0.00600 |
| Acenaphthylene | U | | 0.000600 | 0.00600 |
| Benzo(a)anthracene | U | | 0.000600 | 0.00600 |
| Benzo(a)pyrene | U | | 0.000600 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.000600 | 0.00600 |
| Benzo(g,h)perylene | U | | 0.000600 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.000600 | 0.00600 |
| Chrysene | U | | 0.000600 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.000600 | 0.00600 |
| Fluoranthene | U | | 0.000600 | 0.00600 |
| Fluorene | U | | 0.000600 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.000600 | 0.00600 |
| Naphthalene | U | | 0.00200 | 0.0200 |
| Phenanthrene | U | | 0.000600 | 0.00600 |
| Pyrene | U | | 0.000600 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 |
| (S) Nitrobenzene-d5 | 102 | | 14.0-149 | |
| (S) 2-Fluorobiphenyl | 78.1 | | 34.0-125 | |
| (S) p-Terphenyl-d14 | 86.5 | | 23.0-120 | |

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCSD)

(LCS) R3348760-1 10/08/18 17:53 - (LCSD) R3348760-2 10/08/18 18:14

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|-----------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Anthracene | 0.0800 | 0.0456 | 0.0503 | 57.0 | 62.9 | 50.0-126 | | | 9.80 | 20 |
| Acenaphthene | 0.0800 | 0.0482 | 0.0526 | 60.3 | 65.8 | 50.0-120 | | | 8.73 | 20 |
| Acenaphthylene | 0.0800 | 0.0468 | 0.0510 | 58.5 | 63.8 | 50.0-120 | | | 8.59 | 20 |
| Benzo(a)anthracene | 0.0800 | 0.0490 | 0.0523 | 61.3 | 65.4 | 45.0-120 | | | 6.52 | 20 |
| Benzo(a)pyrene | 0.0800 | 0.0521 | 0.0561 | 65.1 | 72.6 | 42.0-120 | | | 10.9 | 20 |
| Benzo(b)fluoranthene | 0.0800 | 0.0538 | 0.0598 | 67.3 | 74.8 | 42.0-121 | | | 10.6 | 20 |
| Benzo(g,h)perylene | 0.0800 | 0.0546 | 0.0603 | 68.3 | 75.4 | 45.0-125 | | | 9.92 | 20 |
| Benzo(k)fluoranthene | 0.0800 | 0.0609 | 0.0647 | 76.1 | 80.9 | 49.0-125 | | | 6.05 | 20 |
| Chrysene | 0.0800 | 0.0519 | 0.0570 | 64.9 | 71.3 | 49.0-122 | | | 9.37 | 20 |
| Dibenz(a,h)anthracene | 0.0800 | 0.0530 | 0.0576 | 66.3 | 72.0 | 47.0-125 | | | 8.32 | 20 |
| Fluoranthene | 0.0800 | 0.0512 | 0.0555 | 64.0 | 69.4 | 49.0-129 | | | 8.06 | 20 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCS-D)

(LCS) R3348760-1 10/08/18 17:53 • (LCS-D) R3348760-2 10/08/18 18:14

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCS-D Qualifier | RPD % | RPD Limits % |
|-----------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|-----------------|----------|-----------------|
| Fluorene | 0.0800 | 0.0485 | 0.0531 | 60.6 | 66.4 | 49.0-120 | | | 9.06 | 20 |
| Indeno[1,2,3-c]pyrene | 0.0800 | 0.0542 | 0.0598 | 67.8 | 74.8 | 46.0-125 | | | 9.82 | 20 |
| Naphthalene | 0.0800 | 0.0499 | 0.0547 | 62.4 | 68.4 | 50.0-120 | | | 9.18 | 20 |
| Phenanthrene | 0.0800 | 0.0472 | 0.0519 | 59.0 | 64.9 | 47.0-120 | | | 9.49 | 20 |
| Pyrene | 0.0800 | 0.0548 | 0.0598 | 68.5 | 74.8 | 43.0-123 | | | 8.73 | 20 |
| 1-Methylnaphthalene | 0.0800 | 0.0533 | 0.0591 | 66.6 | 73.9 | 51.0-121 | | | 10.3 | 20 |
| 2-Methylnaphthalene | 0.0800 | 0.0503 | 0.0544 | 62.9 | 68.0 | 50.0-120 | | | 7.83 | 20 |
| 2-Chloronaphthalene | 0.0800 | 0.0468 | 0.0511 | 58.5 | 63.9 | 50.0-120 | | | 8.78 | 20 |
| (S) Nitrobenzene-d5 | | | 146 | 146 | 147 | 14.0-149 | | | | |
| (S) 2-Fluorobiphenyl | | | 112 | 112 | 112 | 34.0-125 | | | | |
| (S) p-Terphenyl-d14 | | | 124 | 124 | 122 | 23.0-120 | J1 | J1 | | |

Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Oc
7 Gl
8 Al
9 Sc

L1032469-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1032469-01 10/09/18 00:07 • (MS) R3348760-4 10/09/18 00:28 • (MSD) R3348760-5 10/09/18 00:49

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|-----------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Anthracene | 0.0800 | 0.0185 | 0.0606 | 0.0675 | 52.6 | 61.3 | 1 | 10.0-145 | | | 10.8 | 30 |
| Acenaphthene | 0.0800 | 0.00358 | 0.0561 | 0.0629 | 65.7 | 74.2 | 1 | 14.0-127 | | | 11.4 | 27 |
| Acenaphthylene | 0.0800 | U | 0.0533 | 0.0621 | 66.6 | 77.6 | 1 | 21.0-124 | | | 15.3 | 25 |
| Benzo[e]anthracene | 0.0800 | 0.124 | 0.113 | 0.111 | 0.000 | 0.000 | 1 | 10.0-139 | J6 | J6 | 1.79 | 30 |
| Benzo[a]pyrene | 0.0800 | 0.134 | 0.128 | 0.122 | 0.000 | 0.000 | 1 | 10.0-141 | J6 | J6 | 4.80 | 31 |
| Benzo[b]fluoranthene | 0.0800 | 0.230 | 0.180 | 0.155 | 0.000 | 0.000 | 1 | 10.0-140 | J6 | J6 | 14.9 | 36 |
| Benzo[k]fluoranthene | 0.0800 | 0.118 | 0.131 | 0.113 | 16.2 | 0.000 | 1 | 10.0-140 | J6 | J6 | 14.8 | 33 |
| Benzo[a]fluoranthene | 0.0800 | 0.0672 | 0.0835 | 0.0952 | 20.4 | 35.0 | 1 | 10.0-137 | | | 13.1 | 31 |
| Chrysene | 0.0800 | 0.101 | 0.112 | 0.107 | 13.8 | 7.50 | 1 | 10.0-145 | | J6 | 4.57 | 30 |
| Dibenz[a,h]anthracene | 0.0800 | 0.0319 | 0.0828 | 0.0785 | 63.6 | 58.3 | 1 | 10.0-132 | | | 5.33 | 31 |
| Fluoranthene | 0.0800 | 0.199 | 0.142 | 0.150 | 0.000 | 0.000 | 1 | 10.0-153 | J6 | J6 | 5.48 | 33 |
| Fluorene | 0.0800 | 0.00383 | 0.0557 | 0.0631 | 64.8 | 74.1 | 1 | 11.0-130 | | | 12.5 | 29 |
| Indeno[1,2,3-c]pyrene | 0.0800 | 0.0955 | 0.112 | 0.104 | 20.6 | 10.6 | 1 | 10.0-137 | | | 7.41 | 32 |
| Naphthalene | 0.0800 | 0.0218 | 0.0593 | 0.0656 | 46.9 | 54.8 | 1 | 10.0-135 | | | 10.1 | 27 |
| Phenanthrene | 0.0800 | 0.0619 | 0.0789 | 0.0962 | 21.3 | 42.9 | 1 | 10.0-144 | | | 19.8 | 31 |
| Pyrene | 0.0800 | 0.184 | 0.138 | 0.141 | 0.000 | 0.000 | 1 | 10.0-148 | J6 | J6 | 2.15 | 35 |
| 1-Methylnaphthalene | 0.0800 | 0.0449 | 0.0652 | 0.0731 | 25.4 | 35.3 | 1 | 10.0-142 | | | 11.4 | 28 |
| 2-Methylnaphthalene | 0.0800 | 0.0485 | 0.0603 | 0.0675 | 14.7 | 23.8 | 1 | 10.0-137 | | | 11.3 | 28 |
| 2-Chloronaphthalene | 0.0800 | U | 0.0523 | 0.0587 | 65.4 | 73.4 | 1 | 29.0-120 | | | 11.5 | 24 |
| (S) Nitrobenzene-d5 | | | | | 110 | 124 | | 14.0-149 | | | | |
| (S) 2-Fluorobiphenyl | | | | | 81.7 | 91.7 | | 34.0-125 | | | | |
| (S) p-Terphenyl-d14 | | | | | 89.8 | 102 | | 23.0-120 | | | | |



Guide to Reading and Understanding Your Laboratory Report

The Information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J1 | Surrogate recovery limits have been exceeded; values are outside upper control limits. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J5 | The sample matrix interfered with the ability to make any accurate determination; spike value is high. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| O1 | The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference. |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

GI

8 AI

9 Sc

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

| | | | |
|--------------------------|-------------|-----------------------------|-------------------|
| Alabama | 40660 | Nebraska | NE-05-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey-NELAP | TN002 |
| California | 2932 | New Mexico ¹ | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env975 |
| Florida | EB7487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ² | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio-VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1, 6} | 90010 | South Carolina | 84004 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1, 4} | 2006 |
| Louisiana ¹ | LA180010 | Texas | T 104704245-17-14 |
| Maine | TN0002 | Texas ² | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | CB47 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |

Third Party Federal Accreditations

| | | | |
|-------------------------------|---------|---------------------|---------------|
| A2LA - ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA - ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | F930-15-00234 |
| EPA-Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Seneci Companies - Tulsa, OK

6947 E. 4th Street
Tulsa, OK 74112

Report to:
Douglas Wilson

Billing Information:
Accounts Payable
4140 East 14th Street
Des Moines, IA 50313

Email To: douglas@senecio.com

Project:
Description: **Evans Finstube - Brownfield - City of Tul**

Phone: 918-338-1494
Fax: 6362589

City/State
Collection: **Tulsa, OK**

Lab Project #
SENECATOK-6362589

Collected by (print):
Douglas Wilson

Collected (signature):
Douglas Wilson

Impression:
Douglas Wilson

Packed on (M N Y X): **Y X**

Situfacility ID #
Evans Finstube

Method? (Mark MUST be Recified)
 Same Day First Day
 Next Day 5 Day (Heat Only)
 Three Day 10 Day (Heat Only)

City/State
Collection: **Tulsa, OK**

Lab Project #
SENECATOK-6362589

P.O. #
358463

Quota #

Date Residual Recieved
48hr TURN

Time

No. of
Cores

Date

Time

Date

Time

Date

Time

Date

Time

Date

Time

Date

Time

Date

Time

Date

Time

Sample ID

Matrix *

Depth

SS

SS

SS

SS

SS

SS

SS

SS

SS

SS

SS

SS

SS

SS

SSA01

SSB02-SS01

SSA03

SSB07

SSB11

SSA01 DUP

SS

SS

SS

SS

SS

SS

SS

SS

SS

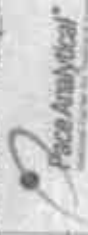
SS

SS

Analysis / Container / Representative

Date of Custody

Page 1 of 1



12001 Lakeside Dr
Muskogee, OK 74453
Phone: 918-278-1418
Fax: 918-278-1419

E #

L1632489

D163

Address: SENECA TOX

Telephone: 7241508

Fax: 675907

EM: 528 - Chris McCord

PT:

Shipped Via

Priority

Version # (if any)

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

MS/MSP

Sample, Analyte, Description
COC Soil - Heavy Metals
COC Groundwater - Heavy Metals
MVA - Drinking Water
MVA - Other
MVA - Wastewater
MVA - Wastewater
MVA - Drinking Water
MVA - Other

MS/MSP
MS/MSP

Temp
Flow
pH

Tracking # 41430 3429 7011
Received by (Signature)
Received by (Signature)
Received by (Signature)

48 h return around
Date: 10-5-18
Time: 1200

Remarks:
48 h return around
Date: 10-5-18
Time: 1200

Hub #
NCJ 151



ANALYTICAL REPORT

November 09, 2018

Seneca Companies - Tulsa, OK

Sample Delivery Group: L1041496
Samples Received: 11/06/2018
Project Number: 6362589
Description: Evans Fintube - Brownfield - City of Tulsa
Site: 358463
Report To: Douglas Wilson
6947 E. 13th Street
Tulsa, OK 74112













Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS



| | | |
|--|----|---|
| Cp: Cover Page | 1 |  |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 |  |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 |  |
| SSA01 L1041496-01 | 5 | |
| SB02-SS01 L1041496-02 | 6 |  |
| SSA03 L1041496-03 | 7 | |
| SSB07 L1041496-04 | 8 |  |
| SSB11 L1041496-05 | 9 | |
| SB02-SS01 DUP L1041496-06 | 10 |  |
| Qc: Quality Control Summary | 11 |  |
| Mercury by Method 7471A | 11 | |
| Metals (ICP) by Method 6010B | 12 |  |
| Semi-Volatile Organic Compounds (GC) by TCEQ Method 1005 | 14 | |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | 15 |  |
| Gl: Glossary of Terms | 17 |  |
| Al: Accreditations & Locations | 18 |  |
| Sc: Sample Chain of Custody | 19 |  |

SAMPLE SUMMARY

ONE LAB. NATIONWIDE.

| SSA01 L1041496-01 Solid | | | | | |
|---|-----------|----------|-----------------------|---------------------|--------------------|
| | | | Collected by | Collected date/time | Received date/time |
| | | | Douglas Wilson | 11/05/18 10:30 | 11/06/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Mercury by Method 7471A | WG1192806 | 1 | 11/07/18 13:30 | 11/07/18 19:55 | TCT |
| Metals (ICP) by Method 6010B | WG1192826 | 1 | 11/07/18 13:54 | 11/08/18 02:31 | TRB |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1192913 | 1 | 11/08/18 13:18 | 11/08/18 23:36 | DMG |

1
Cp

2
Tc

3
Ss

4
Cn

| SB02-SS01 L1041496-02 Solid | | | | | |
|---|-----------|----------|-----------------------|---------------------|--------------------|
| | | | Collected by | Collected date/time | Received date/time |
| | | | Douglas Wilson | 11/05/18 10:00 | 11/06/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Mercury by Method 7471A | WG1192806 | 1 | 11/07/18 13:30 | 11/07/18 19:57 | TCT |
| Metals (ICP) by Method 6010B | WG1192826 | 1 | 11/07/18 13:54 | 11/08/18 02:33 | TRB |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1192913 | 1 | 11/08/18 13:18 | 11/08/18 23:58 | DMG |

5
Sr

6
Qc

7
Gl

| SSA03 L1041496-03 Solid | | | | | |
|---|-----------|----------|-----------------------|---------------------|--------------------|
| | | | Collected by | Collected date/time | Received date/time |
| | | | Douglas Wilson | 11/05/18 11:10 | 11/06/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Mercury by Method 7471A | WG1192806 | 1 | 11/07/18 13:30 | 11/07/18 20:00 | TCT |
| Metals (ICP) by Method 6010B | WG1192826 | 1 | 11/07/18 13:54 | 11/08/18 02:41 | TRB |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1192913 | 1 | 11/08/18 13:18 | 11/09/18 04:32 | DMG |

8
Al

9
Sc

| SSB07 L1041496-04 Solid | | | | | |
|--|-----------|----------|-----------------------|---------------------|--------------------|
| | | | Collected by | Collected date/time | Received date/time |
| | | | Douglas Wilson | 11/05/18 11:40 | 11/06/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Semi-Volatile Organic Compounds (GC) by TCEQ Method 1005 | WG1193088 | 1.25 | 11/08/18 13:50 | 11/08/18 22:37 | AAT |

| SSB11 L1041496-05 Solid | | | | | |
|--|-----------|----------|-----------------------|---------------------|--------------------|
| | | | Collected by | Collected date/time | Received date/time |
| | | | Douglas Wilson | 11/05/18 12:00 | 11/06/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Semi-Volatile Organic Compounds (GC) by TCEQ Method 1005 | WG1193088 | 10 | 11/08/18 13:50 | 11/09/18 09:12 | AAT |

| SB02-SS01 DUP L1041496-06 Solid | | | | | |
|---|-----------|----------|-----------------------|---------------------|--------------------|
| | | | Collected by | Collected date/time | Received date/time |
| | | | Douglas Wilson | 11/05/18 10:05 | 11/06/18 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
| Mercury by Method 7471A | WG1192806 | 1 | 11/07/18 13:30 | 11/07/18 18:56 | TCT |
| Metals (ICP) by Method 6010B | WG1192826 | 1 | 11/07/18 13:54 | 11/08/18 02:18 | TRB |
| Semi-Volatile Organic Compounds (GC) by TCEQ Method 1005 | WG1193088 | 1 | 11/08/18 13:50 | 11/08/18 22:50 | AAT |
| Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM | WG1192913 | 1 | 11/08/18 13:18 | 11/09/18 00:19 | DMG |



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cr

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.0371 | | 0.00280 | 0.0200 | 1 | 11/07/2018 19:55 | WG1192806 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | 0.988 | K | 0.750 | 2.00 | 1 | 11/08/2018 02:31 | WG1192826 |
| Arsenic | 2.73 | | 0.460 | 2.00 | 1 | 11/08/2018 02:31 | WG1192826 |
| Barium | 136 | | 0.170 | 0.500 | 1 | 11/08/2018 02:31 | WG1192826 |
| Beryllium | 0.662 | | 0.0700 | 0.200 | 1 | 11/08/2018 02:31 | WG1192826 |
| Cadmium | 0.165 | L | 0.0700 | 0.500 | 1 | 11/08/2018 02:31 | WG1192826 |
| Chromium | 15.5 | | 0.140 | 1.00 | 1 | 11/08/2018 02:31 | WG1192826 |
| Copper | 13.4 | | 0.530 | 2.00 | 1 | 11/08/2018 02:31 | WG1192826 |
| Lead | 35.5 | | 0.190 | 0.500 | 1 | 11/08/2018 02:31 | WG1192826 |
| Nickel | 14.1 | | 0.490 | 2.00 | 1 | 11/08/2018 02:31 | WG1192826 |
| Selenium | U | | 0.620 | 2.00 | 1 | 11/08/2018 02:31 | WG1192826 |
| Silver | U | | 0.120 | 1.00 | 1 | 11/08/2018 02:31 | WG1192826 |
| Thallium | U | | 0.650 | 2.00 | 1 | 11/08/2018 02:31 | WG1192826 |
| Zinc | 70.9 | | 0.590 | 5.00 | 1 | 11/08/2018 02:31 | WG1192826 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.00842 | | 0.000600 | 0.00600 | 1 | 11/08/2018 23:36 | WG1192913 |
| Acenaphthene | 0.00254 | L | 0.000600 | 0.00600 | 1 | 11/08/2018 23:36 | WG1192913 |
| Acenaphthylene | U | | 0.000600 | 0.00600 | 1 | 11/08/2018 23:36 | WG1192913 |
| Benzo(a)anthracene | 0.0272 | | 0.000600 | 0.00600 | 1 | 11/08/2018 23:36 | WG1192913 |
| Benzo(a)pyrene | 0.0256 | | 0.000600 | 0.00600 | 1 | 11/08/2018 23:36 | WG1192913 |
| Benzo(b)fluoranthene | 0.0344 | | 0.000600 | 0.00600 | 1 | 11/08/2018 23:36 | WG1192913 |
| Benzo(g,h,i)perylene | 0.0194 | | 0.000600 | 0.00600 | 1 | 11/08/2018 23:36 | WG1192913 |
| Benzo(k)fluoranthene | 0.0141 | | 0.000600 | 0.00600 | 1 | 11/08/2018 23:36 | WG1192913 |
| Chrysene | 0.0253 | | 0.000600 | 0.00600 | 1 | 11/08/2018 23:36 | WG1192913 |
| Dibenz(a,h)anthracene | 0.00505 | L | 0.000600 | 0.00600 | 1 | 11/08/2018 23:36 | WG1192913 |
| Fluoranthene | 0.0738 | | 0.000600 | 0.00600 | 1 | 11/08/2018 23:36 | WG1192913 |
| Fluorene | 0.00178 | L | 0.000600 | 0.00600 | 1 | 11/08/2018 23:36 | WG1192913 |
| Indeno(1,2,3-cd)pyrene | 0.0163 | | 0.000600 | 0.00600 | 1 | 11/08/2018 23:36 | WG1192913 |
| Naphthalene | U | | 0.00200 | 0.0200 | 1 | 11/08/2018 23:36 | WG1192913 |
| Phenanthrene | 0.0262 | | 0.000600 | 0.00600 | 1 | 11/08/2018 23:36 | WG1192913 |
| Pyrene | 0.0467 | | 0.000600 | 0.00600 | 1 | 11/08/2018 23:36 | WG1192913 |
| 1-Methylnaphthalene | U | | 0.00200 | 0.0200 | 1 | 11/08/2018 23:36 | WG1192913 |
| 2-Methylnaphthalene | U | | 0.00200 | 0.0200 | 1 | 11/08/2018 23:36 | WG1192913 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 11/08/2018 23:36 | WG1192913 |
| (S) Nitrobenzene-d5 | 86.8 | | | 14.0-149 | | 11/08/2018 23:36 | WG1192813 |
| (S) 2-Fluorobiphenyl | 75.2 | | | 34.0-125 | | 11/08/2018 23:36 | WG1192913 |
| (S) p-Terphenyl-d14 | 73.6 | | | 23.0-120 | | 11/08/2018 23:36 | WG1192913 |

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.0313 | | 0.00280 | 0.0200 | 1 | 11/07/2018 19:57 | WG1192806 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | U | | 0.750 | 2.00 | 1 | 11/08/2018 02:33 | WG1192826 |
| Arsenic | 3.86 | | 0.460 | 2.00 | 1 | 11/08/2018 02:33 | WG1192826 |
| Barium | 97.6 | | 0.170 | 0.500 | 1 | 11/08/2018 02:33 | WG1192826 |
| Beryllium | 0.629 | | 0.0700 | 0.200 | 1 | 11/08/2018 02:33 | WG1192826 |
| Cadmium | 0.0730 | U | 0.0700 | 0.500 | 1 | 11/08/2018 02:33 | WG1192826 |
| Chromium | 15.6 | | 0.140 | 1.00 | 1 | 11/08/2018 02:33 | WG1192826 |
| Copper | 7.88 | | 0.530 | 2.00 | 1 | 11/08/2018 02:33 | WG1192826 |
| Lead | 15.7 | | 0.190 | 0.500 | 1 | 11/08/2018 02:33 | WG1192826 |
| Nickel | 12.3 | | 0.490 | 2.00 | 1 | 11/08/2018 02:33 | WG1192826 |
| Selenium | U | | 0.620 | 2.00 | 1 | 11/08/2018 02:33 | WG1192826 |
| Silver | U | | 0.120 | 1.00 | 1 | 11/08/2018 02:33 | WG1192826 |
| Thallium | U | | 0.650 | 2.00 | 1 | 11/08/2018 02:33 | WG1192826 |
| Zinc | 33.4 | | 0.590 | 5.00 | 1 | 11/08/2018 02:33 | WG1192826 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | U | | 0.000600 | 0.00600 | 1 | 11/08/2018 23:58 | WG1192913 |
| Acenaphthene | U | | 0.000600 | 0.00600 | 1 | 11/08/2018 23:58 | WG1192913 |
| Acenaphthylene | U | | 0.000600 | 0.00600 | 1 | 11/08/2018 23:58 | WG1192913 |
| Benzo(a)anthracene | 0.00115 | J | 0.000600 | 0.00600 | 1 | 11/08/2018 23:58 | WG1192913 |
| Benzo(a)pyrene | 0.000908 | J | 0.000600 | 0.00600 | 1 | 11/08/2018 23:58 | WG1192913 |
| Benzo(b)fluoranthene | 0.00131 | J | 0.000600 | 0.00600 | 1 | 11/08/2018 23:58 | WG1192913 |
| Benzo(g,h,i)perylene | 0.000907 | J | 0.000600 | 0.00600 | 1 | 11/08/2018 23:58 | WG1192913 |
| Benzo(k)fluoranthene | 0.000605 | J | 0.000600 | 0.00600 | 1 | 11/08/2018 23:58 | WG1192913 |
| Chrysene | 0.000869 | J | 0.000600 | 0.00600 | 1 | 11/08/2018 23:58 | WG1192913 |
| Dibenz(a,h)anthracene | U | | 0.000600 | 0.00600 | 1 | 11/08/2018 23:58 | WG1192913 |
| Fluoranthene | 0.00223 | J | 0.000600 | 0.00600 | 1 | 11/08/2018 23:58 | WG1192913 |
| Fluorene | U | | 0.000600 | 0.00600 | 1 | 11/08/2018 23:58 | WG1192913 |
| Indeno(1,2,3-cd)pyrene | 0.000641 | J | 0.000600 | 0.00600 | 1 | 11/08/2018 23:58 | WG1192913 |
| Naphthalene | 0.00213 | J | 0.00200 | 0.0200 | 1 | 11/08/2018 23:58 | WG1192913 |
| Phenanthrene | 0.00116 | J | 0.000600 | 0.00600 | 1 | 11/08/2018 23:58 | WG1192913 |
| Pyrene | 0.00147 | J | 0.000600 | 0.00600 | 1 | 11/08/2018 23:58 | WG1192913 |
| 1-Methylnaphthalene | U | | 0.00200 | 0.0200 | 1 | 11/08/2018 23:58 | WG1192913 |
| 2-Methylnaphthalene | 0.00217 | J | 0.00200 | 0.0200 | 1 | 11/08/2018 23:58 | WG1192913 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 11/08/2018 23:58 | WG1192913 |
| (S) Nitrobenzene-d5 | 94.4 | | | 14.0-149 | | 11/08/2018 23:58 | WG1192913 |
| (S) 2-Fluorobiphenyl | 60.0 | | | 34.0-125 | | 11/08/2018 23:58 | WG1192913 |
| (S) p-Terphenyl-d14 | 63.7 | | | 23.0-120 | | 11/08/2018 23:58 | WG1192913 |



Collected date/time: 11/05/18 11:10

L1041496

Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.0239 | | 0.00280 | 0.0200 | 1 | 11/07/2018 20:00 | WG1192806 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | U | | 0.750 | 2.00 | 1 | 11/08/2018 02:41 | WG1192826 |
| Arsenic | 3.60 | | 0.460 | 2.00 | 1 | 11/08/2018 02:41 | WG1192826 |
| Barium | 61.0 | | 0.170 | 0.500 | 1 | 11/08/2018 02:41 | WG1192826 |
| Beryllium | 0.516 | | 0.0700 | 0.200 | 1 | 11/08/2018 02:41 | WG1192826 |
| Cadmium | 0.221 | J | 0.0700 | 0.500 | 1 | 11/08/2018 02:41 | WG1192826 |
| Chromium | 14.2 | | 0.140 | 1.00 | 1 | 11/08/2018 02:41 | WG1192826 |
| Copper | 17.1 | | 0.530 | 2.00 | 1 | 11/08/2018 02:41 | WG1192826 |
| Lead | 38.4 | | 0.190 | 0.500 | 1 | 11/08/2018 02:41 | WG1192826 |
| Nickel | 21.6 | | 0.490 | 2.00 | 1 | 11/08/2018 02:41 | WG1192826 |
| Selenium | U | | 0.620 | 2.00 | 1 | 11/08/2018 02:41 | WG1192826 |
| Silver | U | | 0.120 | 1.00 | 1 | 11/08/2018 02:41 | WG1192826 |
| Thallium | U | | 0.650 | 2.00 | 1 | 11/08/2018 02:41 | WG1192826 |
| Zinc | 66.1 | | 0.590 | 5.00 | 1 | 11/08/2018 02:41 | WG1192826 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.0470 | | 0.000600 | 0.00600 | 1 | 11/09/2018 04:32 | WG1192913 |
| Acenaphthene | 0.00411 | J | 0.000600 | 0.00600 | 1 | 11/09/2018 04:32 | WG1192913 |
| Acenaphthylene | U | | 0.000600 | 0.00600 | 1 | 11/09/2018 04:32 | WG1192913 |
| Benzo(a)anthracene | 0.207 | | 0.000600 | 0.00600 | 1 | 11/09/2018 04:32 | WG1192913 |
| Benzo(a)pyrene | 0.218 | | 0.000600 | 0.00600 | 1 | 11/09/2018 04:32 | WG1192913 |
| Benzo(b)fluoranthene | 0.195 | | 0.000600 | 0.00600 | 1 | 11/09/2018 04:32 | WG1192913 |
| Benzo(g,h,i)perylene | 0.234 | | 0.000600 | 0.00600 | 1 | 11/09/2018 04:32 | WG1192913 |
| Benzo(k)fluoranthene | 0.0453 | | 0.000600 | 0.00600 | 1 | 11/09/2018 04:32 | WG1192913 |
| Chrysene | 0.206 | | 0.000600 | 0.00600 | 1 | 11/09/2018 04:32 | WG1192913 |
| Dibenz(a,h)anthracene | 0.0471 | | 0.000600 | 0.00600 | 1 | 11/09/2018 04:32 | WG1192913 |
| Fluoranthene | 0.138 | | 0.000600 | 0.00600 | 1 | 11/09/2018 04:32 | WG1192913 |
| Fluorene | 0.00358 | J | 0.000600 | 0.00600 | 1 | 11/09/2018 04:32 | WG1192913 |
| Indeno(1,2,3-cd)pyrene | 0.0744 | | 0.000600 | 0.00600 | 1 | 11/09/2018 04:32 | WG1192913 |
| Naphthalene | 0.00585 | J | 0.00200 | 0.0200 | 1 | 11/09/2018 04:32 | WG1192913 |
| Phenanthrene | 0.0589 | | 0.000600 | 0.00600 | 1 | 11/09/2018 04:32 | WG1192913 |
| Pyrene | 0.781 | | 0.000600 | 0.00600 | 1 | 11/09/2018 04:32 | WG1192913 |
| 1-Methylnaphthalene | 0.00694 | J | 0.00200 | 0.0200 | 1 | 11/09/2018 04:32 | WG1192913 |
| 2-Methylnaphthalene | 0.0103 | J | 0.00200 | 0.0200 | 1 | 11/09/2018 04:32 | WG1192913 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 11/09/2018 04:32 | WG1192913 |
| (S) Nitrobenzene-d5 | 94.5 | | | 14.0-149 | | 11/09/2018 04:32 | WG1192913 |
| (S) 2-Fluorobiphenyl | 76.0 | | | 34.0-125 | | 11/09/2018 04:32 | WG1192913 |
| (S) p-Terphenyl-d14 | 75.2 | | | 23.0-120 | | 11/09/2018 04:32 | WG1192913 |

SSB07

SAMPLE RESULTS - 04

ONE LAB. NATIONWIDE.



Collected date/time: 11/05/18 11:40

L1041496

Semi-Volatile Organic Compounds (GC) by TCEQ Method 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| TPH C6 - C12 | U | | 18.8 | 62.5 | 1.25 | 11/08/2018 22:37 | WG1193088 |
| TPH C12 - C28 | 22.6 | J | 18.8 | 62.5 | 1.25 | 11/08/2018 22:37 | WG1193088 |
| TPH C28 - C35 | 61.5 | J | 18.8 | 62.5 | 1.25 | 11/08/2018 22:37 | WG1193088 |
| TPH C6 - C35 | 84.1 | | 18.8 | 62.5 | 1.25 | 11/08/2018 22:37 | WG1193088 |
| (S) o-Terphenyl | 114 | | | 70.0-130 | | 11/08/2018 22:37 | WG1193088 |

Cp

²Tc

³Ss

⁴Cn

Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



Semi-Volatile Organic Compounds (GC) by TCEQ Method 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------|-----------------|-----------|--------------|--------------|----------|-------------------------|---------------------------|
| TPH C6 - C12 | U | | 150 | 500 | 10 | 11/09/2018 09:12 | WG1193088 |
| TPH C12 - C28 | U | | 150 | 500 | 10 | 11/09/2018 09:12 | WG1193088 |
| TPH C28 - C35 | 338 | J | 150 | 500 | 10 | 11/09/2018 09:12 | WG1193088 |
| TPH C6 - C35 | 338 | J | 150 | 500 | 10 | 11/09/2018 09:12 | WG1193088 |
| (S) o-Terphenyl | 108 | | | 70.0-130 | | 11/09/2018 09:12 | WG1193088 |

Sample Narrative:

L1041496-05 WG1193088: Dilution due to matrix

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

SB02-SS01 DUP

SAMPLE RESULTS - 06

ONE LAB. NATIONWIDE.

Collected date/time: 11/05/18 10:05

L1041496

Mercury by Method 7471A

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|---------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Mercury | 0.0497 | | 0.00280 | 0.0200 | 1 | 11/07/2018 18:56 | WG1192806 |

Metals (ICP) by Method 6010B

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Antimony | U | J6 | 0.750 | 2.00 | 1 | 11/08/2018 02:18 | WG1192826 |
| Arsenic | 4.59 | | 0.460 | 2.00 | 1 | 11/08/2018 02:18 | WG1192826 |
| Barium | 126 | | 0.170 | 0.500 | 1 | 11/08/2018 02:18 | WG1192826 |
| Beryllium | 0.635 | | 0.0700 | 0.200 | 1 | 11/08/2018 02:18 | WG1192826 |
| Cadmium | 0.149 | J | 0.0700 | 0.500 | 1 | 11/08/2018 02:18 | WG1192826 |
| Chromium | 14.9 | | 0.140 | 1.00 | 1 | 11/08/2018 02:18 | WG1192826 |
| Copper | 9.06 | | 0.530 | 2.00 | 1 | 11/08/2018 02:18 | WG1192826 |
| Lead | 24.7 | | 0.190 | 0.500 | 1 | 11/08/2018 02:18 | WG1192826 |
| Nickel | 12.6 | | 0.490 | 2.00 | 1 | 11/08/2018 02:18 | WG1192826 |
| Selenium | U | | 0.620 | 2.00 | 1 | 11/08/2018 02:18 | WG1192826 |
| Silver | U | | 0.120 | 1.00 | 1 | 11/08/2018 02:18 | WG1192826 |
| Thallium | U | | 0.650 | 2.00 | 1 | 11/08/2018 02:18 | WG1192826 |
| Zinc | 48.0 | | 0.590 | 5.00 | 1 | 11/08/2018 02:18 | WG1192826 |

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by TCEQ Method 1005

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|-----------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| TPH C6 - C12 | U | | 15.0 | 50.0 | 1 | 11/08/2018 22:50 | WG1193088 |
| TPH C12 - C28 | U | | 15.0 | 50.0 | 1 | 11/08/2018 22:50 | WG1193088 |
| TPH C28 - C35 | U | | 15.0 | 50.0 | 1 | 11/08/2018 22:50 | WG1193088 |
| TPH C6 - C35 | U | | 15.0 | 50.0 | 1 | 11/08/2018 22:50 | WG1193088 |
| (S) o-Terphenyl | 712 | | | 70.0-130 | | 11/08/2018 22:50 | WG1193088 |

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

| Analyte | Result mg/kg | Qualifier | MDL mg/kg | RDL mg/kg | Dilution | Analysis date / time | Batch |
|------------------------|-----------------|-----------|--------------|--------------|----------|-------------------------|-----------|
| Anthracene | 0.0365 | | 0.000600 | 0.00600 | 1 | 11/09/2018 00:19 | WG1192913 |
| Acenaphthene | 0.0166 | | 0.000600 | 0.00600 | 1 | 11/09/2018 00:19 | WG1192913 |
| Acenaphthylene | U | | 0.000600 | 0.00600 | 1 | 11/09/2018 00:19 | WG1192913 |
| Benzo(a)anthracene | 0.0844 | J6 | 0.000600 | 0.00600 | 1 | 11/09/2018 00:19 | WG1192913 |
| Benzo(a)pyrene | 0.0712 | J6 | 0.000600 | 0.00600 | 1 | 11/09/2018 00:19 | WG1192913 |
| Benzo(b)fluoranthene | 0.0996 | J8 | 0.000600 | 0.00600 | 1 | 11/09/2018 00:19 | WG1192913 |
| Benzo(g,h,i)perylene | 0.0582 | | 0.000600 | 0.00600 | 1 | 11/09/2018 00:19 | WG1192913 |
| Benzo(k)fluoranthene | 0.0377 | | 0.000600 | 0.00600 | 1 | 11/09/2018 00:19 | WG1192913 |
| Chrysene | 0.0715 | | 0.000600 | 0.00600 | 1 | 11/09/2018 00:19 | WG1192913 |
| Dibenz(a,h)anthracene | 0.0143 | | 0.000600 | 0.00600 | 1 | 11/09/2018 00:19 | WG1192913 |
| Fluoranthene | 0.238 | J3 J6 | 0.000600 | 0.00600 | 1 | 11/09/2018 00:19 | WG1192913 |
| Fluorene | 0.0119 | | 0.000600 | 0.00600 | 1 | 11/09/2018 00:19 | WG1192913 |
| Indeno(1,2,3-cd)pyrene | 0.0502 | | 0.000600 | 0.00600 | 1 | 11/09/2018 00:19 | WG1192913 |
| Naphthalene | 0.00274 | J | 0.00200 | 0.0200 | 1 | 11/09/2018 00:19 | WG1192913 |
| Phenanthrene | 0.141 | J3 J6 | 0.000600 | 0.00600 | 1 | 11/09/2018 00:19 | WG1192913 |
| Pyrene | 0.149 | J3 J6 | 0.000600 | 0.00600 | 1 | 11/09/2018 00:19 | WG1192913 |
| 1-Methylnaphthalene | 0.00318 | J | 0.00200 | 0.0200 | 1 | 11/09/2018 00:19 | WG1192913 |
| 2-Methylnaphthalene | 0.00225 | J | 0.00200 | 0.0200 | 1 | 11/09/2018 00:19 | WG1192913 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 | 1 | 11/09/2018 00:19 | WG1192913 |
| (S) Nitrobenzene-d5 | 84.3 | | | 14.0-149 | | 11/09/2018 00:19 | WG1192913 |
| (S) 2-Fluorobiphenyl | 71.3 | | | 34.0-125 | | 11/09/2018 00:19 | WG1192913 |
| (S) p-Terphenyl-d14 | 68.6 | | | 23.0-120 | | 11/09/2018 00:19 | WG1192913 |

WG1192806

Mercury by Method 7471A

QUALITY CONTROL SUMMARY

L1041496-01.02.03.06

ONE LAB, NATIONWIDE.



Method Blank (MB)

(MB) R3357921-5 11/07/18 20:08

| Analyte | MB Result mg/kg | MB MDL mg/kg | MB RDL mg/kg |
|---------|--------------------|-----------------|-----------------|
| Mercury | U | 0.00280 | 0.0200 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3357921-1 11/07/18 18:51 • (LCSD) R3357921-2 11/07/18 18:54

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Mercury | 0.300 | 0.256 | 0.248 | 85.3 | 82.8 | 80.0-120 | | | 2.94 | 20 |

L1041496-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1041496-06 11/07/18 18:56 • (MS) R3357921-3 11/07/18 18:59 • (MSD) R3357921-4 11/07/18 19:01

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Mercury | 0.300 | 0.0497 | 0.279 | 0.276 | 76.3 | 75.3 | 1 | 75.0-125 | | | 1.12 | 20 |

| | | | | | | | | |
|------|------|------|------|------|------|------|------|------|
| 1 Cp | 2 Tc | 3 Ss | 4 Cn | 5 Sr | 6 Qc | 7 Gl | 8 Al | 9 Sc |
|------|------|------|------|------|------|------|------|------|

Method Blank (MB)

(MB) R3357949-1 11/08/18 02:10

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|-----------|--------------------|--------------|-----------------|-----------------|
| Antimony | U | | 0.750 | 2.00 |
| Arsenic | U | | 0.460 | 2.00 |
| Barium | U | | 0.170 | 0.500 |
| Beryllium | U | | 0.0700 | 0.200 |
| Cadmium | U | | 0.0700 | 0.500 |
| Chromium | U | | 0.140 | 1.00 |
| Copper | U | | 0.530 | 2.00 |
| Lead | U | | 0.190 | 0.500 |
| Nickel | U | | 0.490 | 2.00 |
| Selenium | U | | 0.620 | 2.00 |
| Silver | U | | 0.120 | 1.00 |
| Thallium | U | | 0.650 | 2.00 |
| Zinc | U | | 0.590 | 5.00 |

1 Cp 2 Tc 3 Ss 4 Cn 5 Sr 6 **Cc** 7 GI 8 Al 9 Sc

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCS-D)

(LCS) R3357949-2 11/08/18 02:13 • (LCS-D) R3357949-3 11/08/18 02:15

| Analyte | Spike mg/kg | LCS Result mg/kg | LCS Rec. % | LCS-D Result mg/kg | LCS-D Rec. % | Rec. Limits % | LCS Qualifier | LCS-D Qualifier | RPD Limits % |
|-----------|----------------|---------------------|---------------|-----------------------|-----------------|------------------|---------------|-----------------|-----------------|
| Antimony | 100 | 104 | 104 | 103 | 103 | 80.0-120 | | | 20 |
| Arsenic | 100 | 97.7 | 97.7 | 96.6 | 96.6 | 80.0-120 | | 0.872 | 20 |
| Barium | 100 | 101 | 101 | 100 | 100 | 80.0-120 | | 1.16 | 20 |
| Beryllium | 100 | 98.1 | 98.1 | 97.3 | 97.3 | 80.0-120 | | 1.14 | 20 |
| Cadmium | 100 | 97.0 | 97.0 | 95.9 | 95.9 | 80.0-120 | | 0.834 | 20 |
| Chromium | 100 | 101 | 101 | 100 | 100 | 80.0-120 | | 1.13 | 20 |
| Copper | 100 | 101 | 101 | 100 | 100 | 80.0-120 | | 1.21 | 20 |
| Lead | 100 | 98.8 | 98.8 | 97.8 | 97.8 | 80.0-120 | | 0.418 | 20 |
| Nickel | 100 | 98.9 | 98.9 | 98.2 | 98.2 | 80.0-120 | | 0.958 | 20 |
| Selenium | 100 | 96.8 | 96.8 | 96.3 | 96.3 | 80.0-120 | | 0.721 | 20 |
| Silver | 20.0 | 18.4 | 92.1 | 18.2 | 90.8 | 80.0-120 | | 0.583 | 20 |
| Thallium | 100 | 94.1 | 94.1 | 92.9 | 92.9 | 80.0-120 | | 1.38 | 20 |
| Zinc | 100 | 97.7 | 97.7 | 96.8 | 96.8 | 80.0-120 | | 1.20 | 20 |
| | | | | | | | | 0.978 | 20 |

WG1192826

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE

L1041496-01.02.03.06

L1041496-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1041496-06 11/08/18 02:18 • (MS) R3357949-6 11/08/18 02:26 • (MSD) R3357949-7 11/08/18 02:28

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|-----------|-----------------------|--------------------------|--------------------|---------------------|--------------|----------|------------------|--------------|---------------|----------|-----------------|
| Arsimony | 100 | U | 69.3 | 67.3 | 69.3 | 1 | 75.0-125 | J6 | J6 | 2.98 | 20 |
| Arsenic | 100 | 4.59 | 91.3 | 91.4 | 86.7 | 1 | 75.0-125 | | | 0.110 | 20 |
| Barium | 100 | 126 | 216 | 217 | 89.4 | 1 | 75.0-125 | | | 0.695 | 20 |
| Beryllium | 100 | 0.635 | 90.8 | 91.4 | 90.1 | 1 | 75.0-125 | | | 0.693 | 20 |
| Cadmium | 100 | 0.149 | 88.3 | 89.2 | 88.2 | 1 | 75.0-125 | | | 0.957 | 20 |
| Chromium | 100 | 14.9 | 108 | 107 | 93.0 | 1 | 75.0-125 | | | 0.898 | 20 |
| Copper | 100 | 9.06 | 104 | 104 | 94.9 | 1 | 75.0-125 | | | 0.0190 | 20 |
| Lead | 100 | 24.7 | 122 | 119 | 97.2 | 1 | 75.0-125 | | | 2.72 | 20 |
| Nickel | 100 | 12.6 | 108 | 108 | 95.3 | 1 | 75.0-125 | | | 0.150 | 20 |
| Selenium | 100 | U | 85.9 | 87.6 | 85.9 | 1 | 75.0-125 | | | 1.97 | 20 |
| Silver | 20.0 | U | 16.7 | 16.9 | 83.4 | 1 | 75.0-125 | | | 1.06 | 20 |
| Thallium | 100 | U | 87.0 | 87.6 | 87.0 | 1 | 75.0-125 | | | 0.756 | 20 |
| Zinc | 100 | 48.0 | 140 | 134 | 91.7 | 1 | 75.0-125 | | | 3.95 | 20 |

Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Oc
7 Gf
8 Al
9 Sc

ACCOUNT: Seneca Companies - Tulsa, OK

PROJECT: 6962589

SDG: L1041496

DATE/TIME: 11/09/18 14:34

PAGE: 13 of 19

Method Blank (MB)

(MB) R3358377-1 1/08/18 21:06

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|--------------------------|--------------------|--------------|-----------------|-----------------|
| TPH C6 - C12 | U | | 15.0 | 50.0 |
| TPH C12 - C28 | U | | 15.0 | 50.0 |
| TPH C28 - C35 | U | | 15.0 | 50.0 |
| TPH C6 - C35 | U | | 15.0 | 50.0 |
| (S) <i>o</i> -Terephenyl | 103 | | | 70.0-130 |

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCSD)

(LCS) R3358377-2 1/08/18 21:19 - (LCSD) R3358377-3 1/08/18 21:32

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|--------------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| TPH C6 - C12 | 250 | 248 | 250 | 99.2 | 100 | 75.0-125 | | | 0.803 | 20 |
| TPH C12 - C28 | 250 | 225 | 229 | 90.0 | 91.6 | 75.0-125 | | | 1.76 | 20 |
| TPH C6 - C35 | 500 | 473 | 479 | 94.6 | 95.8 | 75.0-125 | | | 1.26 | 20 |
| (S) <i>o</i> -Terephenyl | | | | 110 | 108 | 70.0-130 | | | | |

L1041496-06 Original Sample (OS) - Matrix Spike (MS) - Matrix Spike Duplicate (MSD)

(OS) L1041496-06 1/08/18 22:50 - (MS) R3358377-4 1/08/18 23:04 - (MSD) R3358377-5 1/08/18 23:17

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|--------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| TPH C6 - C12 | 250 | U | 250 | 249 | 100 | 99.6 | 1 | 75.0-125 | | 0.401 | 0.401 | 20 |
| TPH C12 - C28 | 250 | U | 226 | 225 | 90.4 | 90.0 | 1 | 75.0-125 | | 0.443 | 0.443 | 20 |
| TPH C6 - C35 | 500 | U | 476 | 474 | 95.2 | 94.8 | 1 | 75.0-125 | | 0.421 | 0.421 | 20 |
| (S) <i>o</i> -Terephenyl | | | | | 108 | 104 | | 70.0-130 | | | | |

Method Blank (MB)

(MB) R3358369-3 11/08/18 21:08

| Analyte | MB Result mg/kg | MB Qualifier | MB MDL mg/kg | MB RDL mg/kg |
|------------------------|--------------------|--------------|-----------------|-----------------|
| Anthracene | U | | 0.00600 | 0.00600 |
| Acenaphthene | U | | 0.00600 | 0.00600 |
| Acenaphthylene | U | | 0.00600 | 0.00600 |
| Benzo(a)anthracene | U | | 0.00600 | 0.00600 |
| Benzo(a)pyrene | U | | 0.00600 | 0.00600 |
| Benzo(b)fluoranthene | U | | 0.00600 | 0.00600 |
| Benzo(g,h,i)perylene | U | | 0.00600 | 0.00600 |
| Benzo(k)fluoranthene | U | | 0.00600 | 0.00600 |
| Chrysene | U | | 0.00600 | 0.00600 |
| Dibenz(a,h)anthracene | U | | 0.00600 | 0.00600 |
| Fluoranthene | U | | 0.00600 | 0.00600 |
| Fluorene | U | | 0.00600 | 0.00600 |
| Indeno(1,2,3-cd)pyrene | U | | 0.00600 | 0.00600 |
| Naphthalene | U | | 0.00200 | 0.0200 |
| Phenanthrene | U | | 0.00600 | 0.00600 |
| Pyrene | U | | 0.00600 | 0.00600 |
| 1-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Methylnaphthalene | U | | 0.00200 | 0.0200 |
| 2-Chloronaphthalene | U | | 0.00200 | 0.0200 |
| (S) Nitrobenzene-d5 | 10 | | 14.0-149 | |
| (S) 2-Fluorobiphenyl | 106 | | 34.0-125 | |
| (S) p-Terphenyl-d14 | 94.7 | | 23.0-120 | |

Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Laboratory Control Sample (LCS) - Laboratory Control Sample Duplicate (LCSD)

(LCS) R3358369-1 11/08/18 20:26 - (LCSD) R3358369-2 11/08/18 20:47

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | LCSD Result mg/kg | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|-----------------------|-----------------------|---------------------|----------------------|---------------|----------------|------------------|---------------|----------------|----------|-----------------|
| Anthracene | 0.0800 | 0.0832 | 0.0883 | 104 | 110 | 50.0-126 | | | 5.95 | 20 |
| Acenaphthene | 0.0800 | 0.0765 | 0.0810 | 95.6 | 101 | 50.0-120 | | | 5.71 | 20 |
| Acenaphthylene | 0.0800 | 0.0779 | 0.0825 | 97.4 | 103 | 50.0-120 | | | 5.74 | 20 |
| Benzo(a)anthracene | 0.0800 | 0.0775 | 0.0812 | 96.9 | 102 | 45.0-120 | | | 4.66 | 20 |
| Benzo(a)pyrene | 0.0800 | 0.0724 | 0.0733 | 90.5 | 91.6 | 42.0-120 | | | 1.24 | 20 |
| Benzo(b)fluoranthene | 0.0800 | 0.0770 | 0.0830 | 96.3 | 104 | 42.0-121 | | | 7.50 | 20 |
| Benzo(g,h,i)perylene | 0.0800 | 0.0771 | 0.0819 | 96.4 | 102 | 45.0-125 | | | 6.04 | 20 |
| Benzo(k)fluoranthene | 0.0800 | 0.0814 | 0.0887 | 102 | 111 | 49.0-125 | | | 8.58 | 20 |
| Chrysene | 0.0800 | 0.0837 | 0.0895 | 105 | 112 | 49.0-122 | | | 6.70 | 20 |
| Dibenz(a,h)anthracene | 0.0800 | 0.0775 | 0.0832 | 96.9 | 104 | 47.0-125 | | | 7.09 | 20 |
| Fluoranthene | 0.0800 | 0.0875 | 0.0942 | 109 | 118 | 49.0-129 | | | 7.37 | 20 |

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (L.CSD)

(LCS) R3358369-1 11/08/18 20:26 • (L.CSD) R3358369-2 11/08/18 20:47

| Analyte | Spike Amount mg/kg | LCS Result mg/kg | L.CSD Result mg/kg | LCS Rec. % | L.CSD Rec. % | Rec. Limits % | LCS Qualifier | L.CSD Qualifier | RPD % | RPD Limits % |
|------------------------|-----------------------|---------------------|-----------------------|---------------|-----------------|------------------|---------------|-----------------|----------|-----------------|
| Fluorene | 0.0800 | 0.0770 | 0.0814 | 96.3 | 102 | 49.0-120 | | | 5.56 | 20 |
| Indeno[1,2,3-cd]pyrene | 0.0800 | 0.0780 | 0.0836 | 97.5 | 105 | 46.0-125 | | | 6.93 | 20 |
| Naphthalene | 0.0800 | 0.0746 | 0.0782 | 93.3 | 97.8 | 50.0-120 | | | 4.71 | 20 |
| Phenanthrene | 0.0800 | 0.0783 | 0.0821 | 97.9 | 103 | 47.0-120 | | | 4.74 | 20 |
| Pyrene | 0.0800 | 0.0733 | 0.0762 | 91.6 | 95.3 | 43.0-123 | | | 3.88 | 20 |
| 1-Methylnaphthalene | 0.0800 | 0.0819 | 0.0858 | 102 | 107 | 51.0-121 | | | 4.65 | 20 |
| 2-Methylnaphthalene | 0.0800 | 0.0754 | 0.0792 | 94.3 | 99.0 | 50.0-120 | | | 4.92 | 20 |
| 2-Chloronaphthalene | 0.0800 | 0.0792 | 0.0840 | 99.0 | 105 | 50.0-120 | | | 5.88 | 20 |
| (S) Nitrobenzene-d5 | | | 118 | 118 | 113 | 14.0-149 | | | | |
| (S) 2-Fluorobiphenyl | | | 112 | 112 | 112 | 34.0-125 | | | | |
| (S) p-Terphenyl-d14 | | | 108 | 108 | 97.8 | 23.0-120 | | | | |

L1041496-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1041496-06 11/09/18 00:19 • (MS) R3358369-4 11/09/18 00:40 • (MSD) R3358369-5 11/09/18 01:01

| Analyte | Spike Amount mg/kg | Original Result mg/kg | MS Result mg/kg | MSD Result mg/kg | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | RPD % | RPD Limits % |
|------------------------|-----------------------|--------------------------|--------------------|---------------------|--------------|---------------|----------|------------------|--------------|----------|-----------------|
| Anthracene | 0.0776 | 0.0365 | 0.0636 | 0.0701 | 34.9 | 42.6 | 1 | 10.0-146 | | 9.72 | 30 |
| Acenaphthene | 0.0776 | 0.0166 | 0.0558 | 0.0620 | 50.5 | 57.6 | 1 | 14.0-127 | | 10.5 | 27 |
| Acenaphthylene | 0.0776 | U | 0.0557 | 0.0541 | 71.8 | 68.7 | 1 | 21.0-124 | | 2.91 | 25 |
| Benzo[a]anthracene | 0.0776 | 0.0844 | 0.0752 | 0.0955 | 0.000 | 14.1 | 1 | 10.0-139 | J6 | 23.8 | 30 |
| Benzo[b]pyrene | 0.0776 | 0.0712 | 0.0776 | 0.0905 | 8.25 | 24.5 | 1 | 10.0-141 | J6 | 15.3 | 31 |
| Benzo[b]fluoranthene | 0.0776 | 0.0996 | 0.0792 | 0.0966 | 0.000 | 0.000 | 1 | 10.0-140 | J6 | 19.8 | 36 |
| Benzo[g,h,i]perylene | 0.0776 | 0.0582 | 0.0718 | 0.0763 | 17.5 | 23.0 | 1 | 10.0-140 | J6 | 6.08 | 33 |
| Benzo[k]fluoranthene | 0.0776 | 0.0377 | 0.0705 | 0.0663 | 42.3 | 36.3 | 1 | 10.0-137 | | 6.14 | 31 |
| Chrysene | 0.0776 | 0.0715 | 0.0839 | 0.106 | 16.0 | 43.8 | 1 | 10.0-145 | | 23.3 | 30 |
| Dibenz[a,h]anthracene | 0.0776 | 0.0143 | 0.0603 | 0.0585 | 59.3 | 56.1 | 1 | 10.0-132 | | 3.03 | 31 |
| Fluoranthene | 0.0776 | 0.238 | 0.121 | 0.199 | 0.000 | 0.000 | 1 | 10.0-153 | J6 | 48.8 | 33 |
| Fluorene | 0.0776 | 0.0119 | 0.0539 | 0.0565 | 54.1 | 56.6 | 1 | 11.0-130 | | 4.71 | 29 |
| Indeno[1,2,3-cd]pyrene | 0.0776 | 0.0502 | 0.0691 | 0.0743 | 24.4 | 30.6 | 1 | 10.0-137 | | 7.25 | 32 |
| Naphthalene | 0.0776 | 0.00274 | 0.0585 | 0.0580 | 71.9 | 70.1 | 1 | 10.0-135 | | 0.858 | 27 |
| Phenanthrene | 0.0776 | 0.141 | 0.0884 | 0.142 | 0.000 | 1.27 | 1 | 10.0-144 | J6 | 46.5 | 31 |
| Pyrene | 0.0776 | 0.149 | 0.0887 | 0.136 | 0.000 | 0.000 | 1 | 10.0-148 | J6 | 42.1 | 35 |
| 1-Methylnaphthalene | 0.0776 | 0.00318 | 0.0671 | 0.0606 | 82.4 | 72.9 | 1 | 10.0-142 | | 10.2 | 28 |
| 2-Methylnaphthalene | 0.0776 | 0.00225 | 0.0611 | 0.0557 | 75.8 | 67.8 | 1 | 10.0-137 | | 9.25 | 28 |
| 2-Chloronaphthalene | 0.0776 | U | 0.0566 | 0.0552 | 72.9 | 70.1 | 1 | 29.0-120 | | 2.50 | 24 |
| (S) Nitrobenzene-d5 | | | | 91.5 | 100 | 14.0-149 | | | | | |
| (S) 2-Fluorobiphenyl | | | | 82.3 | 88.2 | 34.0-125 | | | | | |
| (S) p-Terphenyl-d14 | | | | 78.7 | 81.6 | 23.0-120 | | | | | |



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

| | | | |
|-------------------------|-------------|-----------------------------|-------------------|
| Alabama | 40860 | Nebraska | NE-05-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0489 | New Jersey-NELAP | TN002 |
| California | 2932 | New Mexico ¹ | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Em375 |
| Florida | EB7487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio-VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,4} | 90010 | South Carolina | 84004 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AJ30792 | Tennessee ^{1,4} | 2006 |
| Louisiana ¹ | LA180010 | Texas | T 104704245-17-14 |
| Maine | TN0002 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |

Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Gc

⁷Gl

Al

⁹Sc

Third Party Federal Accreditations

| | | | |
|-------------------------------|---------|---------------------|---------------|
| A2LA - ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA - ISO 17025 ⁸ | 1461.02 | DDD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA-Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Seneca Companies - Tulsa, OK

6947 E. 13th Street
Tulsa, OK 74112

Report to:
Douglas Wilson

Project:
Description: Evans Pintube - Brownfield - City of Tud

Phone: 918-633-1494
Fax:

Client Project #
6362588

City/State Collected: 11/5/18 OK
Lab Project #
SENECATOR-6362588

Site/Facility ID #
358463

Method? (Lab MUST use (select))
 Same Day
 Next Day
 Two Day
 Three Day

Collected by (Print):
Douglas Wilson

Collected by (Signature):
Douglas Wilson

Intervenor:
Douglas Wilson

Packed on for to 16 1 X

| Sample ID | Comp/Str | Matrix | Depth | Date | Time | No. of Chits |
|---------------|----------|--------|-------|---------|------|--------------|
| SS-A01 | Comp | SS | 2FT | 11-5-18 | 1030 | 2 |
| SSB02-SS01 | | SS | 2FT | | 1000 | 2 |
| SSA03 | | SS | 2FT | | 1110 | 2 |
| SSB07 | | SS | 2FT | | 1140 | 2 |
| SSB11 | | SS | 2FT | | 1200 | 2 |
| SS02-SS01 Dup | | SS | 2FT | | 1000 | 4 |
| | | SS | | | | 4 |

Remarks: RAD SCREEN: <0.5 mPa

Matrix:
 SS - Soil
 AM - Air
 GW - Groundwater
 WW - Wastewater
 DW - Drinking Water
 OT - Other

Required by: (Signature)
Douglas Wilson

Required by: (Signature)

Required by: (Signature)

Required by: (Signature)

Date: 11-5-18

Date: 1300

Date: Time:

Date: Time:

Sample returned via
Lit Year Count

Date: 11-5-18

Date: 1300

Date: Time:

Date: Time:

Tracking # 4430 2429 6048

Received by: (Signature)

Received by: (Signature)

Received by: (Signature)

Received by: (Signature)

Chain of Custody Page 1 of 1

Pace Analytical

127881 Glenwood Ave
Mooresville, NC 27158
Phone: 815-746-9814
Fax: 815-746-9814

Account: SENEACATOR
Template: T142615
Protocol: P679872
TSM: SM - Chris McCord
#18

Shipped Via: _____
Amount: _____
Receipt # (if any): _____

LABOR: 11/5/18
COC: 11/5/18
SOCIAL: 11/5/18
COURT: 11/5/18
SUBMIT: 11/5/18
APP: 11/5/18
TSM: 11/5/18
TSM: 11/5/18
TSM: 11/5/18
TSM: 11/5/18

| Analysis / Container / Preservative | Matrix | Depth | Date | Time | No. of Chits |
|-------------------------------------|--------|-------|---------|------|--------------|
| M6010P 40CL-NOPRES | SS | 2FT | 11-5-18 | 1030 | 2 |
| SV8270P 40CL-NOPRES | SS | 2FT | | 1000 | 2 |
| TPH X 40MITW/SYNGEHO PRES | SS | 2FT | | 1110 | 2 |
| | SS | 2FT | | 1140 | 2 |
| | SS | 2FT | | 1200 | 2 |
| | SS | 2FT | | 1000 | 4 |
| | SS | | | | 4 |

Diagrams: RAD SCREEN: <0.5 mPa

Temperature: _____
pH: _____
Flow: _____
Other: _____

Received by: (Signature) _____
Date: 11/6/18 8:15

Condition: _____



ANALYTICAL REPORT

November 02, 2018

Seneca Companies - Tulsa, OK

Sample Delivery Group: L1038777
Samples Received: 10/27/2018
Project Number: 6362589
Description: Evans Flintube - Brownfield - City of Tulsa

Report To: Douglas Wilson
6947 E. 13th Street
Tulsa, OK 74112

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



TABLE OF CONTENTS



| | | |
|---|----|-----------|
| Cp: Cover Page | 1 | Cp |
| Tc: Table of Contents | 2 | Tc |
| Ss: Sample Summary | 3 | Ss |
| Cn: Case Narrative | 4 | Cn |
| Sr: Sample Results | 5 | Sr |
| DRUM L1038777-01 | 5 | |
| Qc: Quality Control Summary | 6 | Qc |
| Wet Chemistry by Method 4500 CN E-2011 | 6 | |
| Wet Chemistry by Method 9034-9030B | 7 | |
| Wet Chemistry by Method 9040C | 8 | |
| Wet Chemistry by Method D93/1010A | 9 | |
| Gl: Glossary of Terms | 10 | Gl |
| Al: Accreditations & Locations | 11 | Al |
| Sc: Sample Chain of Custody | 12 | Sc |

SAMPLE SUMMARY

ONE LAB. NATIONWIDE. 

DRUM L1038777-01 GW

Collected by
Douglas Wilson

Collected date/time
10/26/18 13:00

Received date/time
10/27/18 08:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst |
|--|-----------|----------|-----------------------|--------------------|---------|
| Wet Chemistry by Method 4500 CN E-2011 | WG1187587 | 1 | 10/30/18 08:13 | 10/30/18 12:14 | KK |
| Wet Chemistry by Method 9034-9030B | WG1188200 | 1 | 10/30/18 16:24 | 10/30/18 16:24 | MJA |
| Wet Chemistry by Method 9040C | WG1189025 | 1 | 10/31/18 12:22 | 10/31/18 12:22 | KBW |
| Wet Chemistry by Method D93/1010A | WG1188650 | 1 | 10/30/18 17:03 | 10/30/18 17:03 | TCC |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris McCord
Project Manager

Project Narrative

All Reactive Cyanide results reported in the attached report were determined as totals using method 9012B.
All Reactive Sulfide results reported in the attached report were determined as totals using method 9034/9030B.

¹ Cp

² Tc

³ Ss

Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

DRUM

Collected date/time: 10/26/18 13:00

SAMPLE RESULTS - 01

L1038777

ONE LAB. NATIONWIDE.



Wet Chemistry by Method 4500 CN E-2011

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|---------|----------|----------------------|-----------|
| Reactive Cyanide | ND | | 0.00500 | 1 | 10/30/2018 12:14 | WG1187587 |

1 Cp

2 Tc

Wet Chemistry by Method 9034-9030B

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|------------------|--------|-----------|--------|----------|----------------------|-----------|
| Reactive Sulfide | ND | | 0.0500 | 1 | 10/30/2018 16:24 | WG1188200 |

3 Ss

4 Cn

Wet Chemistry by Method 9040C

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|-------------------|--------|-----------|----------|----------------------|-----------|
| Corrosivity by pH | 12.1 | T8 | 1 | 10/31/2018 12:22 | WG1189025 |

5 Si

6 Qc

Sample Narrative:

L1038777-01 WG1189025: 12.11 at 25.9C

7 Gl

8 Al

Wet Chemistry by Method D93/1010A

| Analyte | Result | Qualifier | Dilution | Analysis date / time | Batch |
|------------|------------|-----------|----------|----------------------|-----------|
| Flashpoint | DNF at 170 | | 1 | 10/30/2018 17:03 | WG1188650 |

9 Sc

Method Blank (MB)

| MB Result | MB Qualifier | MB MDL | MB RDL |
|-----------|--------------|---------|---------|
| mg/l | | mg/l | mg/l |
| U | 0.00180 | 0.00180 | 0.00500 |

1 Cp
2 Tc
3 Ss
4 Ch
5 Sr
6 Oc
7 Gl
8 Al
9 Sc

L1037665-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1037665-01 10/30/18 11:52 • (DUP) R3355094-3 10/30/18 11:53

| Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|-----------------|------------|----------|---------|---------------|----------------|
| mg/l | mg/l | % | % | | % |
| ND | 0.000 | 1 | 0.000 | | 20 |

L1038759-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1038759-01 10/30/18 12:10 • (DUP) R3355094-8 10/30/18 12:11

| Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|-----------------|------------|----------|---------|---------------|----------------|
| mg/l | mg/l | % | % | | % |
| U | 0.00182 | 1 | 200 | JPI | 20 |

Laboratory Control Sample (LCS)

(LCS) R3355094-2 10/30/18 11:48

| Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|--------------|------------|----------|-------------|---------------|
| mg/l | mg/l | % | % | |
| 0.100 | 0.105 | 105 | 85.0-115 | |

L1037753-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1037753-14 10/30/18 11:54 • (MS) R3355094-4 10/30/18 11:55 • (MSD) R3355094-5 10/30/18 11:58

| Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| 0.100 | ND | 0.0980 | 0.0949 | 98.0 | 94.9 | 1 | 75.0-125 | | | 3.21 | 20 |

L1038210-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1038210-01 10/30/18 12:04 • (MS) R3355094-6 10/30/18 12:05 • (MSD) R3355094-7 10/30/18 12:06

| Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| 0.100 | ND | 0.0805 | 0.0858 | 80.5 | 85.8 | 1 | 75.0-125 | | | 6.37 | 20 |

Method Blank (MB)

| | | | | |
|--------------------------------|--------------|---------|--------|--|
| (MB) R3355278-1 10/30/18 16:10 | | | | |
| MB Result | MB Qualifier | MB MDL | MB RDL | |
| mg/l | mg/l | mg/l | mg/l | |
| U | 0.00650 | 0.00650 | 0.0500 | |
| Analyte | | | | |
| Reactive Sulfide | | | | |

L1038777-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1038777-01 10/30/18 16:24 • (DUP) R3355278-6 10/30/18 16:24

| | | | | |
|------------------|------------|----------|---------|----------------|
| Original Result | DUP Result | Dilution | DUP RPD | DUP RPD Limits |
| mg/l | mg/l | % | % | % |
| ND | 0.000 | 1 | 0.000 | 20 |
| Analyte | | | | |
| Reactive Sulfide | | | | |

Laboratory Control Sample (LCS)

(LCS) R3355278-2 10/30/18 16:10

| | | | | |
|------------------|------------|----------|-------------|---------------|
| Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
| mg/l | mg/l | % | % | |
| 0.500 | 0.486 | 97.2 | 85.0-115 | |
| Analyte | | | | |
| Reactive Sulfide | | | | |

| | | | | | | | |
|----|------|------|------|------|------|------|------|
| Cp | 2 Tc | 3 Ss | 4 Cn | 5 Sr | 6 Al | 7 GI | 8 Sc |
|----|------|------|------|------|------|------|------|

WG1189025

Wet Chemistry by Method 9040C

QUALITY CONTROL SUMMARY

L1038777-01

ONE LAB. NATIONWIDE

Laboratory Control Sample (LCS)

(LCS) R335558-1 10/31/18 12:22

| Analyte | Spike Amount SU | LCS Result SU | LCS Rec. % | Rec. Limits % | LCS Qualifier |
|-------------------|--------------------|------------------|---------------|------------------|---------------|
| Corrosivity by pH | 10.0 | 10.1 | 101 | 99.0-101 | |

Sample Narrative:

LCS: 10.12 at 18.1C

| | | | | | | | | |
|------|------|------|------|------|------|------|------|------|
| 1 Cd | 2 Tc | 3 Ss | 4 Cn | 5 Sr | 6 Oc | 7 Gl | 8 Al | 9 Sc |
|------|------|------|------|------|------|------|------|------|

ACCOUNT:
Seneca Companies - Tulsa, OK

PROJECT:
6362589

SDG:
L1038777

DATE/TIME:
11/02/18 12:09

PAGE:
8 of 12

WG1188650

Wet Chemistry by Method D93/1010A

QUALITY CONTROL SUMMARY

L1038777-01

ONE LAB, NATIONWIDE.

L1038777-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1038777-01 10/30/18 17:03 • (DUP) R3355293-2 10/30/18 17:03

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|------------|-----------------|------------|----------|---------|---------------|----------------|
| Flashpoint | deg F | deg F | % | % | % | % |
| | DNF at 170 | DNF at 170 | 1 | 0.000 | | 10 |

Laboratory Control Sample (LCS)

(LCS) R3355293-1 10/30/18 17:03

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|------------|--------------|------------|----------|-------------|---------------|
| Flashpoint | deg F | deg F | % | % | |
| | 82.0 | 82.7 | 101 | 96.0-104 | |

| | | | | | | | | |
|------|------|------|------|------|------|------|------|------|
| 1 Cp | 2 Tc | 3 Ss | 4 Cn | 5 Sr | 6 Qc | 7 Gl | 8 Al | 9 Sc |
|------|------|------|------|------|------|------|------|------|

ACCOUNT:
Seneca Companies - Tulsa, OK

PROJECT:
6362589

SDG:
L1038777

DATE/TIME:
11/02/18 12:09

PAGE
9 of 12

Guide to Reading and Understanding Your Laboratory Report

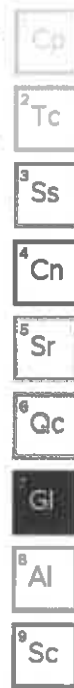
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|-------------|
|-----------|-------------|

| | |
|----|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |
| T8 | Sample(s) received past/too close to holding time expiration. |



ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

State Accreditations

| | | | |
|-------------------------|-------------|-----------------------------|-------------------|
| Alabama | 40660 | Nebraska | NE-05-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey-NELAP | TN002 |
| California | 2932 | New Mexico ¹ | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ² | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio-VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 88-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | 90010 | South Carolina | 84004 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,6} | 2006 |
| Louisiana ¹ | LA180010 | Texas | T 104704245-17-14 |
| Maine | TN0002 | Texas ⁸ | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2008 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |

Third Party Federal Accreditations

| | | | |
|-------------------------------|---------|--------------------|---------------|
| AZLA - ISO 17025 | 1461.01 | AHA-LAP, LLC EMLAP | 100789 |
| AZLA - ISO 17025 ¹ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | F330-15-00234 |
| EPA-Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aqueic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



ACCOUNT:
Seneca Companies - Tulsa, OK

PROJECT:
6362589

SDG:
L1038777

DATE/TIME:
11/02/18 12:09

PAGE:
11 of 12

Seneca Companies - Tulsa, OK
 5947 E. 13th Street
 Tulsa, OK 74112

Account rec
Douglas Wilson

Project Description
Evamins Piontube

Phone: 918-838-0494
 Fax:

Collected by (print)
Douglas Wilson

Collected by (signature)
Douglas Wilson

Impervious
 Pocket on ice N - Y

Billing Information:
 Accounts Payable
 4140 East 14th Street
 Des Moines, IA 50313

Client To
 dwilson@senecaco.com

City/State
 Collection, Tulsa, OK

Lab Project #

P.O. #
 358463

Quote #

Date Results Needed
 4/8/11 Turn

Analysis? (Lab MUST be notified)
 ___ Soils Dry ___ Five Day
 ___ Next Day ___ 5 Day (Rad Only)
 ___ Three Day ___ All Day (Rad Only)

Client Project #
 6362589

Site/Facility ID #

Completion Matrix* Depth Time

Sample ID
 D6003

Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Biossily
 WW - Waste Water
 DW - Drinking Water
 OX - Other

Analysis / Collector / Preparative

Prep OK

FLASH 250mlamb-NoPres

Corrosivity 125mlHDPPE-NoPres

Reactive Cyanide 250mlHDPPEAMB-NAOH

Reactive Sulfide 125mlamb-NAOH+ZnAc

Date of Custody Page 1 of 1



Seneca Analytical
 1500 Wagon M
 1500 Wagon M
 Phone: 918-838-0494
 Fax: 918-838-0494
 For 918-838-0494

UR 4035177
 C179

ASTM: SENELM
 Template:
 Preprog:
 150-526 - Chris McCord
 PE

Shipped Via

General Sample # (job only)

PH Temp

Flow Other

Trip Blank Received Yes No

Temp: 49.10 1:50

Date: 10/21/10

Received by (Signature)

Received by (Signature)

Received for (Signature)

Time: 8:45

Time: 8:45

Time: 8:45

Time: 8:45

Time: 8:45

Matrix: SS - Soil AIR - Air F - Filter

GW - Groundwater B - Biossily

WW - Waste Water

DW - Drinking Water

OX - Other

Requisitioned by: (Signature)

Requisitioned by: (Signature)

Requisitioned by: (Signature)

Date:

Date:

Date:

Date:

Date:

Date:

Date:

Seneca Analytical Checklist
 One Seal Present/Checked:
 Seal Blinded/Checked:
 Specimen Sealed/Checked:
 Current Position Label:
 Punctured Volume Vial:
 Vial Seal:
 Resealed with Cap/Checked:
 If preservation required by Log In: Date/Time

Health:

Comments: NCS 155

APPENDIX E

OWRB MULTI-PURPOSE WELL COMPLETION AND PLUGGING REPORTS

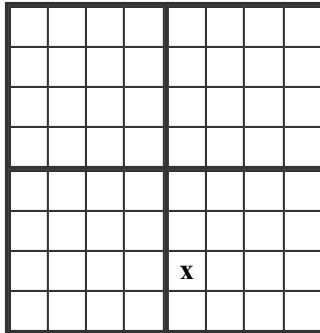


MULTI-PURPOSE WELL COMPLETION & PLUGGING REPORT

Oklahoma Water Resources Board
 3800 North Classen Boulevard
 Oklahoma City, OK 73118
 Telephone (405) 530-8800

Legal Location
 North

WELL ID NUMBER: 181415



«———— One Mile —————»
 Each square is 10-acres

Quarters NW-SW-SE Section 36 Township 20N Range 12E1

Latitude 36.1657833 Longitude -95.9828167

Date collected(latitude and longitude), if different from date the well was drilled:
05/16/2017

Method latitude and longitude was collected: GPS - uncorrected data

County Tulsa

Variance Request No. (if applicable) n/a

WELL OWNER - NAME AND ADDRESS

Well Owner ODEQ

Phone (405) 702-5123

Address/City/State PO Box 1677 Oklahoma City OK

Zip 73101

Finding Location 186 N. Lansing Ave, Tulsa, OK

Well Name MW-1

Water Rights #:

TYPE OF WORK: Monitoring Well

USE OF WELL: Site Assessment

NEW WELL CONSTRUCTION DATA

Date Well or Boring Was Completed 05/16/2017

Number of wells or borings represented by this log 1

* (Borings are within the same 10 acre-tract and with the same general depths and lithologies)

Hole Diameter 7.75 inches to a depth of 30 ft.

CASING INFORMATION *Note: If surface casing is used please indicate that on the appropriate well casing information line.

Surface Pipe Material: Surface Pipe Diameter inches Surface Pipe From ft to ft

1) Well Casing Material PVC Casing Diameter 2 inches Casing From 0 ft to 5 ft

SCREEN OR PERFORATION INFORMATION

Type of Screen: PVC Type of Slots or Openings: Factory Slotted - 10 slot (0.010 inch) From 5 ft to 30 ft.

FILTER PACK INFORMATIONFilter Pack Material: Sand 10-20 (coarse)Filter Pack Interval: From 3 ft to 30**WELL SEAL INFORMATION**Type of Surface Seal Cement GroutSurface Seal Interval: From 0 ft to 2 ftType of Annular Seal n/aAnnular Seal Interval: From n/a ft to n/a ftFilter Pack Seal Material Bentonite Granules/ChipsFilter Pack Seal Interval: From 2 ft to 3 ft**TYPE OF COMPLETION:** Flush Mounted**HYDROLOGIC INFORMATION**Depth to water at time of drilling ftEstimated yield of well gpmFirst water zone ft**LITHOLOGY DESCRIPTION**

| MATERIAL | ENCOUNTERED | | SATURATED |
|------------|---------------|-------------|-----------|
| | FROM (ft.) | TO (ft.) | |
| Brown Clay | 0 | 15 | N |
| Gray Shale | 15 | 30 | N |

WELL LOCATION TO POTENTIAL SOURCES OF POLLUTIONHas this well been disinfected after completion of work? NoAre there any potential sources of pollution or wastewater lagoons within 300 ft. of the well? n/aDistance of Well is n/a from possible source. Type of possible source: n/a**PLUGGING INFORMATION**Date Well or Boring Was Plugged n/aTotal Depth of well being plugged ft.Was the well contaminated or was it plugged as though it was contaminated? n/aIf the well or boring was plugged as if it was contaminated, was the casing removed or perforated? n/aWas the grout tremied? n/aBackfilled with n/aBackfilled from ft. to ft.Grouted with n/aGrouted from ft. to ft.Grouted with CementGrouted from ft. to ft.Firm Name ASSOCIATED ENVIRONMENTAL INDUSTRIES, CORP.D/PC No. DPC-0269Operator Name WESLEY FOSTEROP No. OP-1809Date 07/19/2017

Comments: n/a



MULTI-PURPOSE WELL COMPLETION & PLUGGING REPORT

Oklahoma Water Resources Board
 3800 North Classen Boulevard
 Oklahoma City, OK 73118
 Telephone (405) 530-8800

Legal Location
 North

WELL ID NUMBER: 181416

| | | | | | | | | | |
|--|--|--|--|--|---|--|--|--|--|
| | | | | | | | | | |
| | | | | | X | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

«———— One Mile —————»
 Each square is 10-acres

Quarters NE-NW-NE Section 01 Township 19N Range 12E1

Latitude 36.16175 Longitude -95.9822333

Date collected(latitude and longitude), if different from date the well was drilled:
05/16/2017

Method latitude and longitude was collected: GPS - uncorrected data

County Tulsa

Variance Request No. (if applicable) n/a

WELL OWNER - NAME AND ADDRESS

Well Owner ODEQ

Phone (405) 702-5123

Address/City/State PO Box 1677 Oklahoma City OK

Zip 73101

Finding Location 186 N. Lansing Ave, Tulsa, OK

Well Name MW-2 thru MW-5

Water Rights #:

TYPE OF WORK: Monitoring Well

USE OF WELL: Site Assessment

NEW WELL CONSTRUCTION DATA

Date Well or Boring Was Completed 05/16/2017

Number of wells or borings represented by this log 1

* (Borings are within the same 10 acre-tract and with the same general depths and lithologies)

Hole Diameter 7.75 inches to a depth of 20 ft.

CASING INFORMATION *Note: If surface casing is used please indicate that on the appropriate well casing information line.

Surface Pipe Material: Surface Pipe Diameter inches Surface Pipe From ft to ft

1) Well Casing Material PVC Casing Diameter 2 inches Casing From 0 ft to 5 ft

SCREEN OR PERFORATION INFORMATION

Type of Screen: PVC Type of Slots or Openings: Factory Slotted - 10 slot (0.010 inch) From 5 ft to 20 ft.

FILTER PACK INFORMATIONFilter Pack Material: Sand 10-20 (coarse)Filter Pack Interval: From 3 ft to 20**WELL SEAL INFORMATION**Type of Surface Seal Cement GroutSurface Seal Interval: From 0 ft to 2 ftType of Annular Seal n/aAnnular Seal Interval: From n/a ft to n/a ftFilter Pack Seal Material Bentonite Granules/ChipsFilter Pack Seal Interval: From 2 ft to 3 ft**TYPE OF COMPLETION:** Flush Mounted**HYDROLOGIC INFORMATION**Depth to water at time of drilling ftEstimated yield of well gpmFirst water zone ft**LITHOLOGY DESCRIPTION**

| MATERIAL | ENCOUNTERED | | SATURATED |
|---------------------------|---------------|-------------|-----------|
| | FROM (ft.) | TO (ft.) | |
| Brown Clay and Gray Shale | 0 | 20 | N |

WELL LOCATION TO POTENTIAL SOURCES OF POLLUTIONHas this well been disinfected after completion of work? NoAre there any potential sources of pollution or wastewater lagoons within 300 ft. of the well? n/aDistance of Well is n/a from possible source. Type of possible source: n/a**PLUGGING INFORMATION**Date Well or Boring Was Plugged n/aTotal Depth of well being plugged ft.Was the well contaminated or was it plugged as though it was contaminated? n/aIf the well or boring was plugged as if it was contaminated, was the casing removed or perforated? n/aWas the grout tremied? n/aBackfilled with n/aBackfilled from ft. to ft.Grouted with n/aGrouted from ft. to ft.Grouted with CementGrouted from ft. to ft.Firm Name ASSOCIATED ENVIRONMENTAL INDUSTRIES, CORP.D/PC No. DPC-0269Operator Name WESLEY FOSTEROP No. OP-1809Date 07/19/2017Comments: n/a



Science. Safety. Grit. Ingenuity.

September 13, 2019

Ms. Michelle Barnett
Deputy Chief of Economic Development
City of Tulsa
175 E. 2nd Street
Tulsa, OK 74103

**RE: Sampling and Excavation Report
Evans-Fintube Facility
118/186 North Lansing Avenue
Section 2 and Section 3
Tulsa, Oklahoma 74120**

Dear Ms. Barnett:

Environmental Works, Inc. (EWI) has prepared this report to document sampling, excavation, and restoration activities performed at the former Evans-Fintube Facility, located at 118 (Section 2)/186 (Section 3) North Lansing Avenue, Tulsa, Oklahoma 74120 (Site, see Figure 1).

Background

The Site was originally developed as Oklahoma Iron Works in 1939, which included a foundry and metalworking activities. The operations of Oklahoma Iron Works were discontinued in 1962 and the Site has remained vacant since. The overall site is occupied by two large building complexes, known as the Evans and Fintube buildings, and vacant land (see Figure 2). The Site is zoned for industrial use, consistent with historic operations. In 2017, the Site was selected as the location of the future BMX-USA headquarters, which would include new commercial development as well as a bicycle racing arena.

A Targeted Brownfields Assessment (TBA) Phase II Environmental Site Assessment (ESA) was conducted at the site in June 2010 by ALL Consulting. The Phase II ESA identified the potential presence of asbestos-containing building materials (ACBM) and lead-based paint (LBP), as well as shallow soil impacted with the priority pollutant (PP) metals arsenic and lead, total petroleum hydrocarbons (TPH), polychlorinated biphenols (PCBs), and polycyclic aromatic hydrocarbons (PAHs) (see Figures 3 and 4). Cleanup of ACBM and LBP was conducted in January 2017. A second TBA Phase II ESA was conducted by Oklahoma Department of Environmental Quality (ODEQ) in May 2017 to further characterize PCB contamination. In accordance with the City of Tulsa's Memorandum of Understanding (MOA) with the ODEQ, characterization of volatile organic compounds (VOC) in groundwater at monitor well MW-2 was conducted in October 2017¹.

¹ For additional background information, refer to the Site Characterization Work Plans for Sections 1, 2, and 3 or the Brownfields Proposal which detail the extensive history for the Site. The Brownfields Proposal, dated January 5, 2018, is incorporated by reference in accordance with Oklahoma Administrative Code (OAC) 252:221-3-8(b).

Based on the existing data, excavation activities were performed to remove shallow soil impact in Section 1 during September and October 2018. This included excavating a 20 ft by 20 ft area around the TBA Phase II ESA soil sample location.

The following sections include a summary of activities performed in Section 2 and Section 3 during March and April 2019 which included pre-excavation sampling for verification and waste characterization purposes, removal of existing floor brick pavers, excavation of impacted soil, post-excavation sampling, over-excavation in areas with concentrations above Risk-Based Screening Levels (RBSLs), additional investigation activities related to SSD14, and final restoration activities.

Pre-Excavation Activities

Prior to onsite work, a project meeting was held with EWI, City of Tulsa (City), and Enercon Services, Inc. (Enercon) personnel to discuss the scope of work. Documents prepared by EWI for the work include a project-specific Health and Safety Plan (HASP), Storm Water Pollution Prevention Plan (SWPPP), and City Earth Change Watershed Permit. The SWPPP and Earth Change permit are included as Attachment 1.

Upon approval of project documents, silt sock was placed around the existing stockpile of clean backfill, located southeast of the Evans building (see Figure 5), and down-gradient from anticipated excavation areas, in accordance with the SWPPP. The anticipated sampling and 20 ft by 20 ft excavation areas identified in the City Scope of Work (SOW) were then located via Global Positioning System (GPS) coordinates provided by the City and marked to identify work areas.

Per the City SOW and disposal landfill requirements, three sets of pre-excavation samples were collected as discussed below. All composite, grab, and quality control samples were collected per the City SOW and existing project Quality Assurance Project Plan (QAPP), placed into pre-cleaned, laboratory-supplied sampling containers, and submitted to Pace Analytical Services, LLC (Pace) in Lenexa, Kansas. Laboratory analytical reports are included as Attachment 2 and photographic documentation of site activities included as Attachment 3. Sample results are presented on Tables 4A – 4C.

- Waste Characterization
 - Floor brick pavers – because of elevated cadmium and lead concentrations documented in previous samples collected at SSD10, SSD11, SSD12, and SSD13, five-point composite samples of the brick pavers and bedding material beneath the pavers were collected for waste profiling purposes on February 18 and 19, 2019. The samples were submitted to Pace and analyzed for toxicity characteristic leachate procedure (TCLP) lead and cadmium (SSD11 only) concentrations. All concentrations were below United States Environmental Protection Agency (USEPA) hazardous waste characteristic concentrations. These results were utilized, along with existing data for samples collected at the respective location, to prepare a non-hazardous, special waste profile for the pavers and related bedding material (see Attachment 4).
 - Subsurface soil/materials – prior to excavation activities, five-point composite samples were collected at SSC15, SSD04, SSD05, SSD15, SB05-SS01, SSE07, SSE15, and SSE16 on February 18 and 19, 2019, to establish a waste profile(s) for the soil to be excavated. The samples were collected by coring through the existing concrete and collecting

soil beneath the concrete with a hand auger. For locations without concrete, the top 2-3 inches of topsoil was removed and samples collected within the upper one foot of soil. The collected samples were submitted to Pace and analyzed for TPH, PP metals, and PAHs as presented on Table 1. All results were below USEPA hazardous waste characteristic concentrations and so one non-hazardous, special waste profile was established for all the locations (see Attachment 4).

- Contaminant concentration confirmation – to verify existing sample data and determine if excavation was necessary at SSC14, SSD10, SSD11, SSD12, SSD13, SSD14, SSE12, SSE13, SSE14, and SSF14, grab samples were collected at these locations on February 18 and 21, 2019, and submitted to Pace for analysis of TPH, PP metals, and PAHs as presented on Table 2. Results for SSC14, SSD10, SSD11, SSD12, SSD13, SSE12, SSE13, SSE14, and SSF14 were below RBSLs; therefore, no excavation was conducted in these areas. TPH-diesel range organics (DRO) concentrations at SSD14 were above the RBSL and so excavation was conducted for this area.

Excavation Activities

As part of the City SOW, the existing floor brick pavers (approximately 1,550 square yards) were removed from the Evans building from March 5 – 7, 2019, with a combination of skid steer, excavator, and Guzzler® air-mover, and loaded directly into a dump truck for disposal at the American Environmental Landfill (AEL) located in Sand Springs, Oklahoma. Following removal of the brick pavers, clean AB-3 gravel was utilized to backfill the former pavers areas. A total of 118.61 tons of brick pavers and related bedding materials were disposed at the AEL during this work.

Based on the existing TBA Phase II ESA results and verification results discussed above, excavation activities were performed from March 7 – April 2, 2019, at the 10 locations illustrated on Figure 6. For areas with a concrete surface (SSD04, SSD05, and SSD14), a concrete saw was utilized to cut the 20 ft by 20 ft excavation areas. The concrete was then broken with a hydraulic breaker and removed with an excavator. Excavation activities were performed with an excavator by removing one foot of soil from beneath the surface or bottom of concrete. The excavated soil was loaded directly into a dump truck and transported to the AEL for disposal. Post-excavation samples were then collected and the area over-excavated or backfilled, based on the sample results. A total of 459.76 tons of impacted soil, including over-excavated soil discussed below, were disposed at the AEL during this work. A summary of the excavation dates and quantities is provided as Table 3.

Post-Excavation Confirmation Sampling and Over-Excavation Activities

Upon reaching an excavation depth of one foot below surface grade (BSG²), a five-point composite sample was collected at each location (SSC12, SSC15, SSD04, SSD05, SSD14, SSD15, SB05-SS01, SSE07, SSE15, and SSE16) and submitted to Pace for analyses as presented on Table 4. The results were compared to the appropriate RBSLs, depending on future use (industrial in northern portion of the Site and residential in southern portion), to determine next steps. If concentrations were below the RBSLs, the excavation area was backfilled with clean fill material. If concentrations were above the RBSLs, an additional six inches of soil was excavated for a total depth of 1.5 ft BSG. Samples were again compared to the RBSLs, and an additional six inches of soil excavated if exceedances were reported. Excavation

² Sampling and excavation depth was measured below surface cover (i.e. concrete, asphalt, soil).

activities did not extend beyond two feet BSG. Post-excavation sample results are presented on Tables 5D – 5G.

Compound exceedances were reported for SSC15 (arsenic), SSE15 (arsenic and lead), and SSC12 (PCBs). At SSC15 and SSE15, excavation activities were discontinued at two ft BSG as this is the vertical limit of the surficial direct contact exposure pathway and the areas backfilled as described in the restoration activities section below.

At SSC12, confirmation PCB sampling was performed in accordance with 40 CFR 761 Subpart O, following the non-point source protocol³ and coordination/consultation with ODEQ. As presented on Table 5E, The Aroclor 1260 concentration for SSC12-post-3:1' was reported at 1,170 micrograms per kilogram ($\mu\text{g}/\text{kg}$), or 1.17 milligrams per kilogram (mg/kg), which exceeds the 40 CFR 761.61 Risk-Based Cleanup Level (RBCL) of 1 mg/kg for Aroclors at high-occupancy areas. Based on this concentration, the SSC12 area was over-excavated on April 12, 2019, to two ft below surface and an additional five feet laterally in each direction, followed by collecting composite confirmation samples. PCB concentrations for confirmation samples collected at two ft BSG were below the RBCL, except for SSC12-post-3:2', which was reported at 1,930 $\mu\text{g}/\text{kg}$. As such, excavation activities were extended an additional five feet to the east to over-excavate impacted soil in this area. One side wall, composite, confirmation sample (SSC12-post-6:2') was collected following this over-excavation and did not include any detections of PCBs above the RBCL or laboratory reporting limit. The area was then backfilled with the clean onsite fill material discussed above.

Additional Investigation Activities – SSD14

Following excavation activities to one ft BSG at SSD14, water migrated into the excavation area over night. The water contained a petroleum-like odor and apparent petroleum-related sheen. Soil along the excavation area sidewalls also contained staining that appeared to be petroleum-related. Because the TPH-DRO concentration for the 1-ft confirmation sample collected at SSD14 was below the RBSL, the water was removed on March 29, 2019 (5,033 gallons), sampled, and disposed at the AEL as non-hazardous special waste on April 2, 2019 (see Attachment 4). The area was then backfilled and finished with concrete on March 29, 2019 per the SOW.

Following on-site discussions with ODEQ, City of Tulsa, EWI, and Enercon personnel, additional investigation activities were performed in this area to investigate the potential source of the impact and water.

- Shallow water – groundwater levels for the closest monitoring well (MW-5) were reviewed to identify depth to the shallow groundwater table. Depth to groundwater levels were recorded at 13.2 ft below monitoring point (bmp) or deeper. Additionally, a drain pipe was observed on the south side of the Evans building, approximately 25 ft southwest of SSD14. The drain pipe was gauged with an interface probe to evaluate if it could be a potential conduit for outside rain water to flow beneath the building slab in the SSD14 area. No liquids were detected in the pipe. Based on this information, it was determined that the water in SSD14 excavation area (1-2 ft

³ Confirmation PCB sampling performed at SSD05 did not follow 40 CFR 761 Subpart O protocol as impact at this location is related to a historic transformer oil spill and not considered PCB remediation waste by ODEQ.

BSG) was not naturally occurring groundwater and was likely pooled rainwater beneath the building concrete slab.

- Shallow petroleum-related impact – based on visual observations, it appears that a storm water drain pipe is located along the southern edge of SSD14 and positioned below the concrete slab in an east-west direction. Upon further investigation, a small (approximately two ft by two ft) “T” shaped area was observed in the concrete, approximately 30 ft east of SSD14 and adjacent to the apparent storm water drain pipe (see Figure 7). The exact nature of the “T” is unknown, but it’s suspected that it could be related to an old floor drain or lift of some kind.

To evaluate if this could be a potential source, two samples were collected between SSD14 and the “T” on May 17, 2019, adjacent to the storm water drain pipe (Drain Sample-East and Drain Sample-West), and submitted to Pace for TPH analyses. TPH-DRO and TPH-oil range organics (ORO) were reported below the residential RBSLs for the west sample. TPH was not detected for the east sample.

Additionally, sand and dirt located in the “T” were removed on March 29, 2019, to discover that the bottom of the “T” is concrete. Two samples of the materials in the area were collected (T-Zone: North and T-Zone: South) and submitted to Pace for TPH analyses. As presented on Table 5F, TPH concentrations were below the respective RBSLs. Materials removed from the “T” were contained and transported to the AEL for disposal as non-hazardous special waste (1.56 tons).

Restoration Activities

Upon excavating to two ft BSG or receiving confirmation results below the RBSLs, the excavation areas were backfilled with clean fill material located onsite from previous redevelopment-related activities in uncontaminated portions of the Site. The surfaces of each area were then finished with materials to match the surrounding surface grade (i.e. soil, gravel, concrete). The exceptions are SSD04 and SSD05, which were finished with gravel as the Fintube building will be razed during 2019. Following backfill activities, the remaining backfill (45.25 tons) was hauled to the AEL for disposal.

During performance of the work, multiple rain events occurred, which resulted in 8,871 gallons of water accumulating in SSC12 and 1,741 gallons of water accumulating in SSC15 prior to backfill activities. The water was recovered with a vacuum truck, sampled, and hauled to the AEL for disposal as non-hazardous special waste (see Table 6). Profile and disposal documentation is included in Attachment 4.

Finally, as part of restoring the Evans building for future development activities, approximately 500 square yards of the clean gravel previously placed in the brick pavers area were removed on June 18, 2019, and placed east/southeast of the building. The brick pavers area was then completed with concrete to match the surrounding surface.

A final site inspection was completed by City and ODEQ personnel on August 1, 2019, which identified 25 sample locations inside the Fintube building that required plugging. The holes were plugged with concrete by EWI personnel on August 5, 2019.

Quality Assurance / Quality Control

Quality control (QC) samples were collected during the sampling event in accordance with the City SOW. This included field duplicate samples and matrix spike/matrix spike duplicate (MS/MSD) samples at five percent of sample locations.

Duplicate samples were collected by concurrently filling an additional set of containers, which were submitted to the laboratory as “blind” samples, and are presented on Tables 5A – 5G. MS/MSD samples were collected by filling two additional sets of sample containers.

Upon receipt of laboratory data packages, validation of chemical data was performed by evaluating the laboratory submittal against requirements established in the analytical method and the QAPP to assess the overall usability of the data set for its intended purpose. According to 40 CFR 761 Subpart O, extraction methods 3540 (soxlet process) or 3550 (sonication process) must be used for PCB analyses. However, after ODEQ consultation with USEPA Region 6, it was confirmed that the microwave extraction method (3546) is acceptable as methods 3540 and 3550 are outdated and will be removed with future codification changes.

For this work, the QAPP completeness goal of 100% acceptable data was met, field duplicates were collected at five percent of parent sample locations, and MS/MSD samples were collected at five percent of parent location. Based on this review, the target analyte data are usable for meeting project objectives.

Summary

EWI was contracted to perform sampling and excavation activities to remove shallow soil impact at the Site in Section 2 and Section 3 prior to future development. Based on TBA Phase II ESA and pre-excavation data, the following areas were excavated to one ft BSG: SSC12, SSC15, SSD04, SSD05, SSD14, SSD15, SB05-SS01, SSE07, SSE15, and SSF16. Post-excavation confirmation sampling data resulted in over-excavation at SSC12, SSC15, and SSE15. Following excavation activities, the areas were backfilled with clean fill and completed to match the surrounding surface. As a result of the work, a total of 108.39 tons of floor brick pavers, 468.42 tons of impacted soil, and 15,645 gallons of pit water were disposed at the AEL. The final site inspection and restoration task were completed on August 1 and 5, 2019, respectively.

Thank you for your assistance with this project. Please feel free to contact me at anthony@environmentalworks.com or 417-773-5747 should you have any questions.

Sincerely,
Environmental Works, Inc.



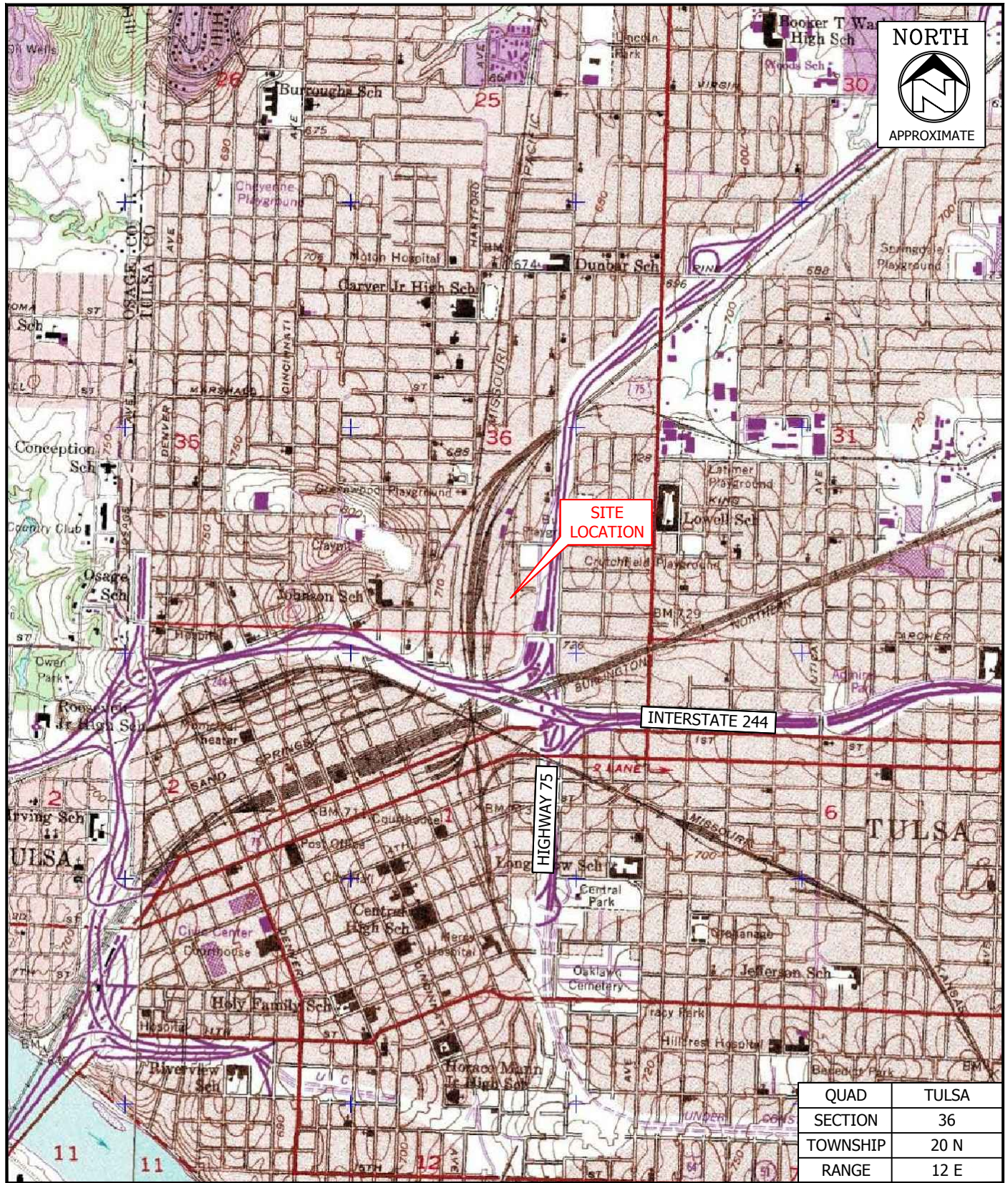
Anthony Moore
Senior Project Manager

Attachments: Figure 1 – Area Topographic Map

Figure 2 – Site Map
Figure 3 – Areas of Identified Surface Soil Impact – Section 2
Figure 4 – Areas of Identified Surface Soil Impact – Section 3
Figure 5 – Stormwater BMPs
Figure 6 – Surface Soil Excavation Map
Figure 7 – SSD14 Investigation Activities
Table 1 – Waste Characterization Pre-Excavation Soil Sampling
Table 2 – Verification Pre-Excavation Soil Sampling
Table 3 – Excavation Summary
Table 4 – Post-Excavation Soil Sampling
Table 5A – Pre-Excavation Soil Sampling Results – Priority Pollutant Metals
Table 5B – Pre-Excavation Soil Sampling Results – Polycyclic Aromatic Hydrocarbons
Table 5C – Pre-Excavation Soil Sampling Results – Total Petroleum Hydrocarbons
Table 5D – Post-Excavation Soil Sampling Results – Priority Pollutant Metals
Table 5E – Post-Excavation Soil Sampling Results – Polychlorinated Biphenyls
Table 5F – Post-Excavation Soil Sampling Results – Total Petroleum Hydrocarbons
Table 5G – Post-Excavation Soil Sampling Results – Polycyclic Aromatic Hydrocarbons
Table 6 – Water Accumulation Summary
1 – Project Documents
2 – Laboratory Analytical Reports
3 – Photographic Documentation
4 – Waste Disposal Documentation

C: Andrew Foreman, Enercon

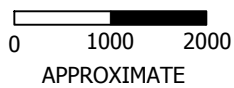
FIGURES



SOURCE: www.mapcard.com (1982)

CHECKED BY:
B. STANKE

SCALE (FEET)



EWI# 182045
DRAWN BY: CRR
Jul. 25, 2018



ENVIRONMENTAL WORKS
1455 E. Chestnut Expressway, Springfield, MO 65802

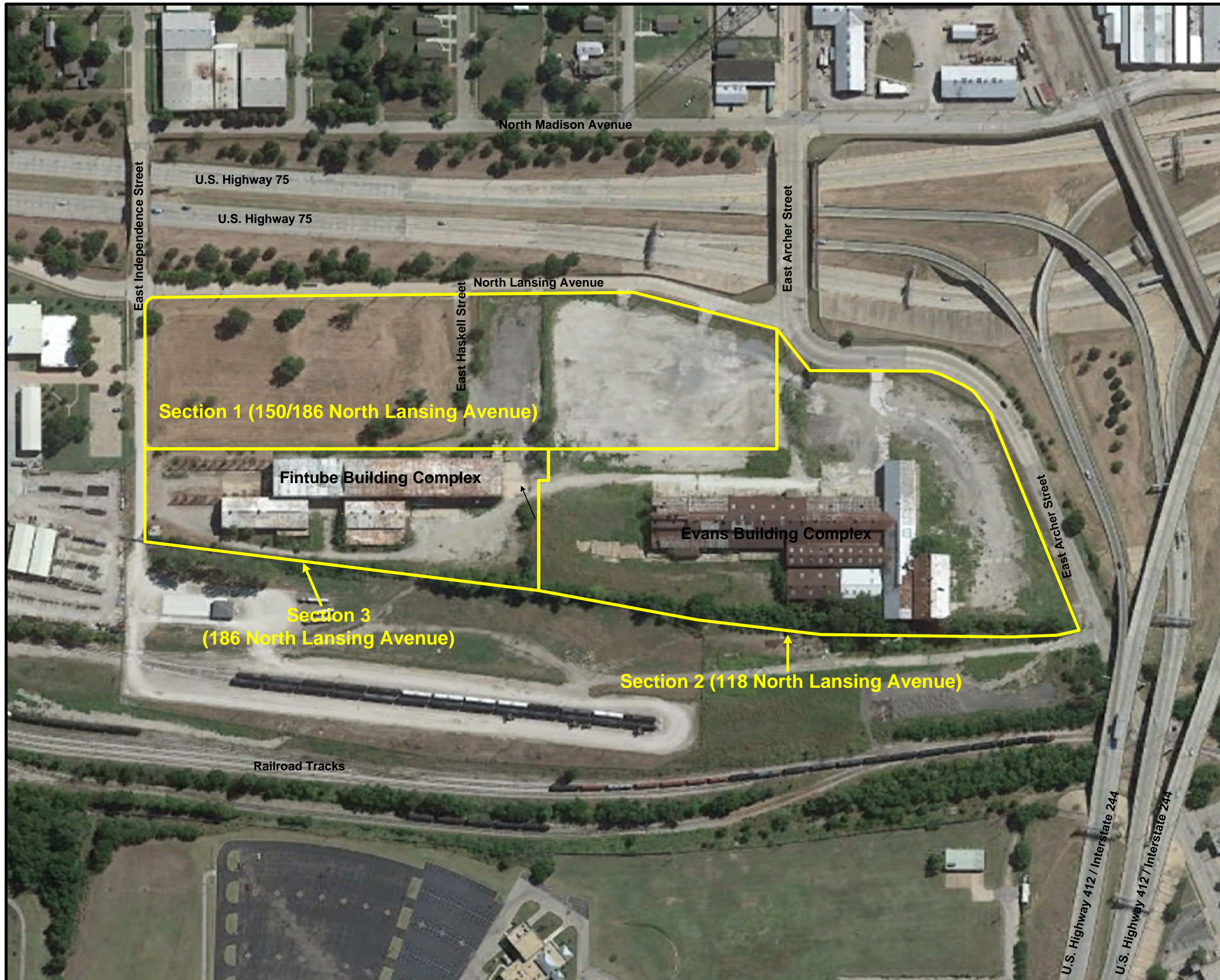
AREA TOPOGRAPHIC MAP

FORMER EVANS-FINTUBE FACILITY
118/150/186 N. LANSING AVENUE
TULSA, TULSA COUNTY, OKLAHOMA

FIGURE

1.0

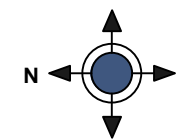
| | |
|----------|-------|
| QUAD | TULSA |
| SECTION | 36 |
| TOWNSHIP | 20 N |
| RANGE | 12 E |



City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
 Tulsa, Oklahoma

Site-Specific Brownfields Cleanup Grant



Scale: 1 inch = 200 feet

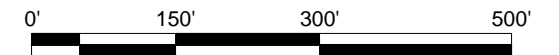


Figure 2 - Site Map

Project No: CTYTUL0050

Date: 03/14/2018

*Arsenic concentrations compared to EPA Region VI RSL of 30 mg/kg. Arsenic is present in this section ranging up to 70 mg/kg.
 PCB concentrations compared to 40 CFR 761.61 (A) for High Occupancy Areas (1 mg/kg). Areas in gray are considered used oil spills and not regulated PCB-remediation waste.
 TPH concentrations compared to DDEQ Tier I Generic Cleanup Levels for industrial soil (500 mg/kg)

● Surface Soil Samples Collected 4/2010
 ● Surface Soil Samples Collected 5/2017

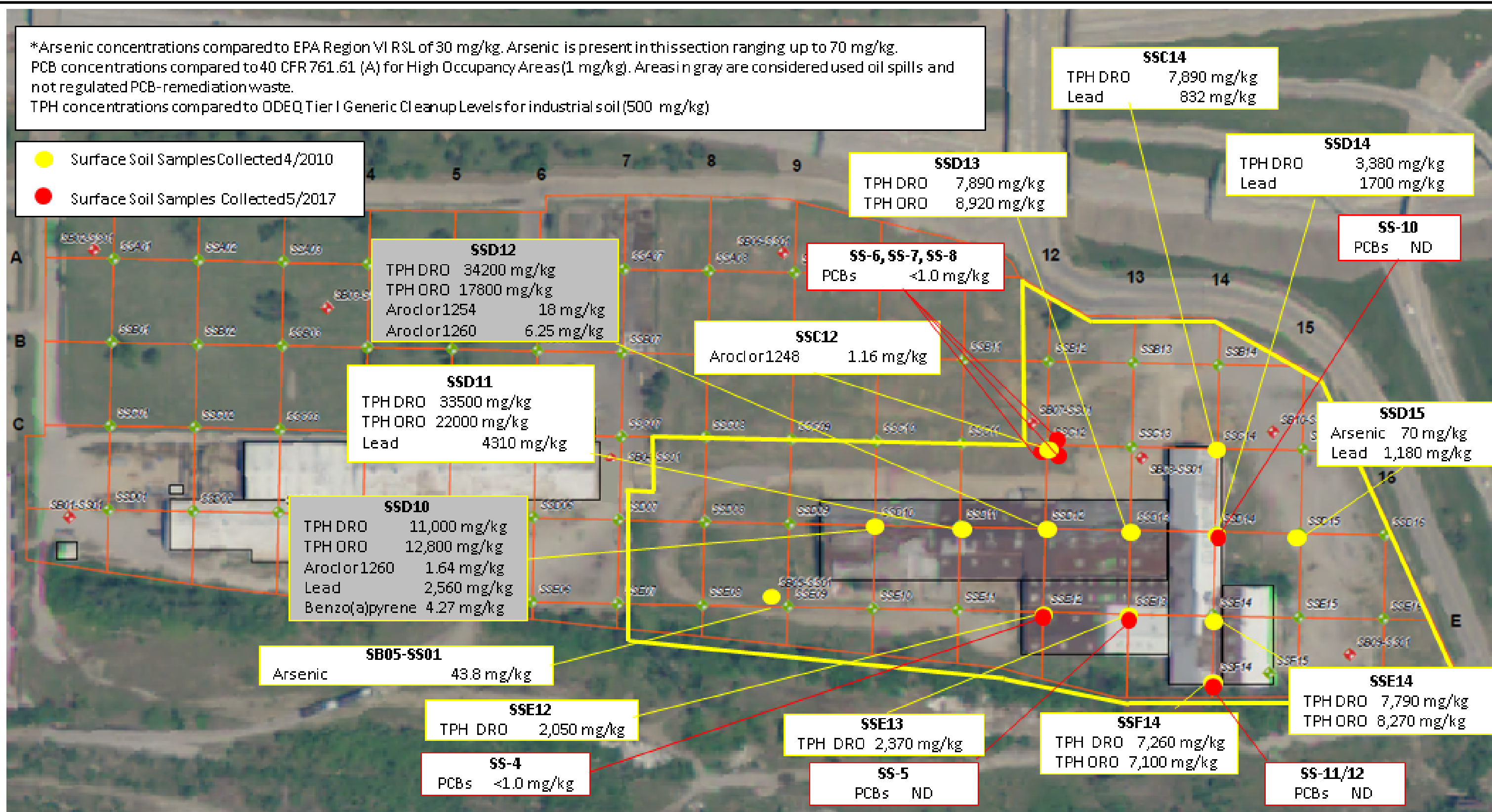


Figure 3:
 Areas of Identified Surface Soil Impact -
 Section 2

*Arsenic concentrations compared to EPA Region VI RSL of 30 mg/kg. Arsenic is present in this section ranging up to 34.5 mg/kg.
 PCB concentrations compared to 40 CFR 761.61 (A) for High Occupancy Areas (1 mg/kg). Areas in gray are considered used oil spills and not regulated PCB-remediation waste.
 TPH concentrations compared to ODEQ Tier I Generic Cleanup Levels for industrial soil (500 mg/kg).

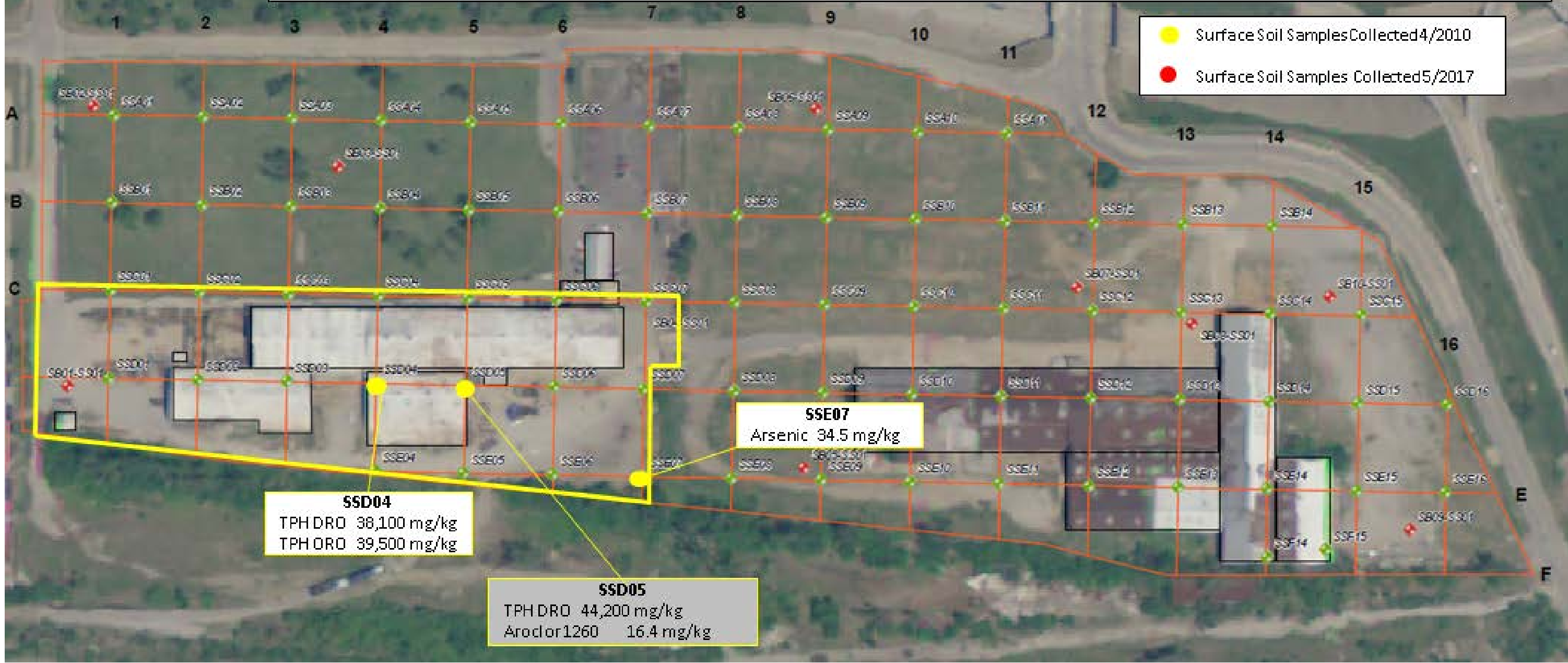




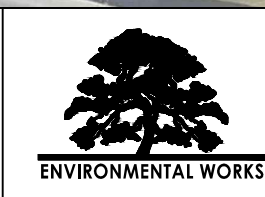
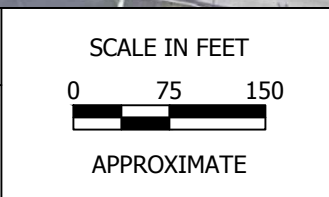
Figure 4:
Areas of Identified Surface Soil Impact -
Section 3



| LEGEND | |
|---|----------------|
|  | = SURFACE FLOW |
|  | = MULCH SOCK |



CHECKED BY:
B. STANKE
E.W.I. # 182045
DRAWN BY: CRR
Feb. 8, 2019



Springfield Office Location:
1455 E. Chestnut Expressway
Springfield, MO 65802
Phone: (417) 890-9500

STORMWATER BMPs
FORMER EVANS-FINTUBE FACILITY
118/150/186 N. LANSING AVENUE
TULSA, TULSA COUNTY, OKLAHOMA

FIGURE
5

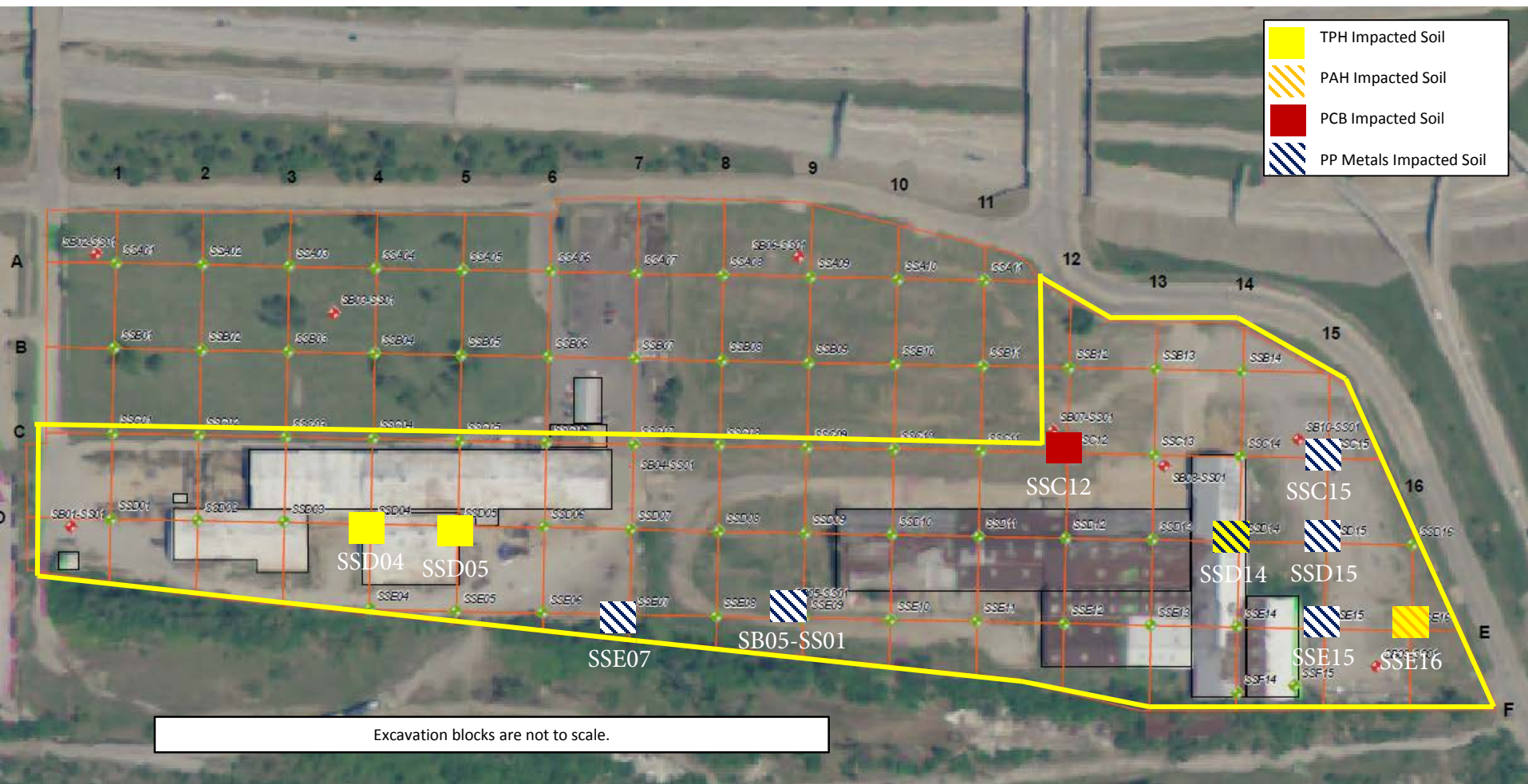


Figure 6 - Surface Soil Excavation Map

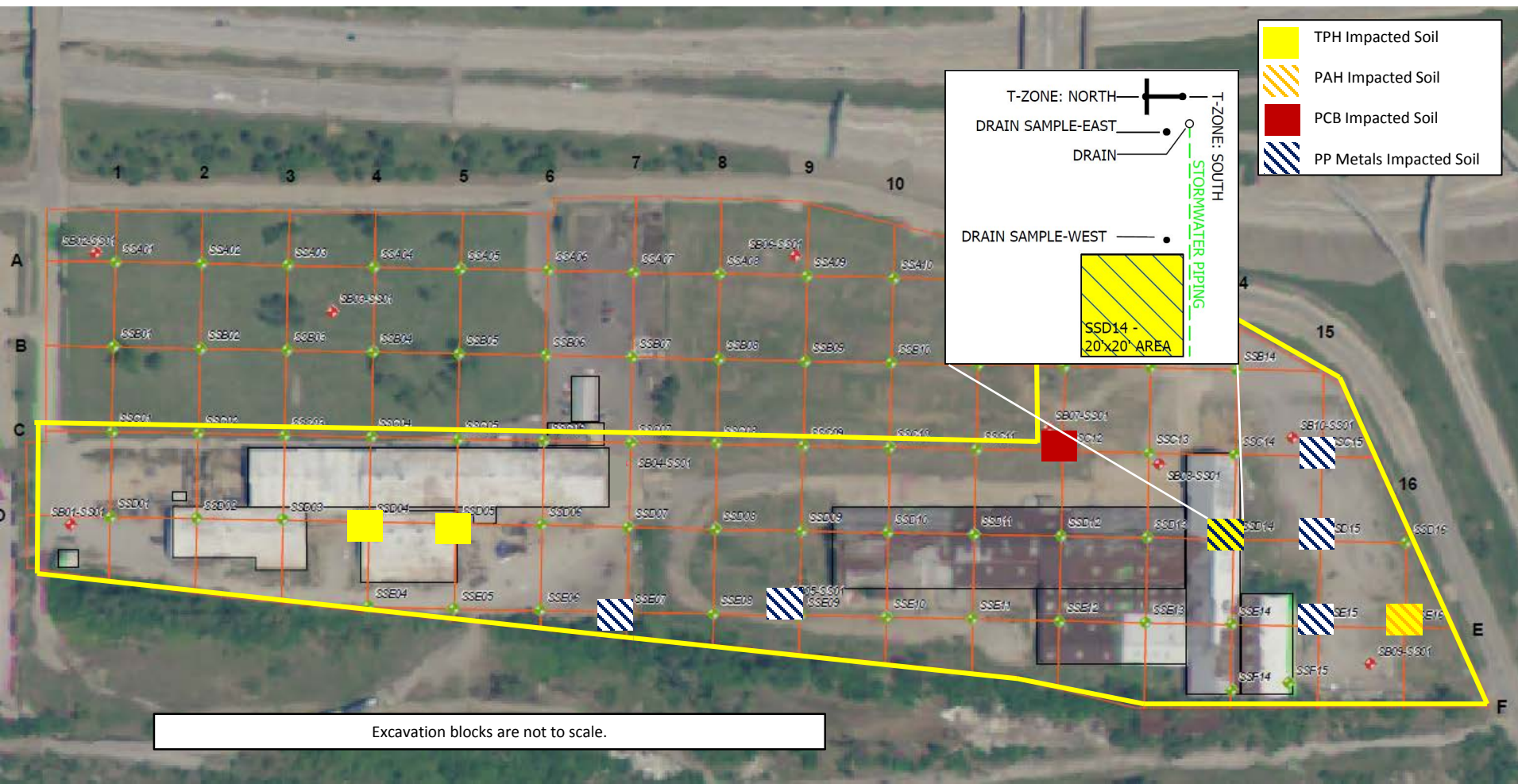


Figure 7 - SSD14 Investigation Activities

TABLES

**Table 1
Waste Characterization Pre-Excavation Soil Sampling**

**Evans-Fintube West
City of Tulsa
118/150/186 North Lansing Avenue
Tulsa, Oklahoma 74106**

| Purpose | Location | Parameter | Test Method | Type of Sample | Quantity of Samples/Frequency | Specification/Reference | Requirement |
|--------------------------------|-------------------------------------|----------------------|--|-------------------|-------------------------------|-------------------------|-------------|
| In-situ Waste Characterization | SSC12 ⁵ | PCBs | SW-846 Method 8082 | NA | - | QAPP, Amendment 1 | - |
| | SSC14 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | SSC15 | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | SSD04 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | -- |
| | SSD05 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | -- |
| | SSD10 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | | PAHs | SW-846 Method 8270D | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | SSD11 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | SSD12 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | SSD13 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | SSD14 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | SSD15 | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | SB05-SS01 | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | SSE07 | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | -- |
| | SSE12 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | SSE13 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | SSE14 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | SSE15 | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | -- |
| | SSE16 | PAHs | SW-846 Method 8270D | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| | SSF14 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | - |
| Quality Control | Field Duplicate | PP Metals, TPH, PAHs | SW-846 Methods 6010B, 7471A, 8270D and Texas Method 1005 | 5-Point Composite | 5% | -- | - |
| | Matrix Spike/Matrix Spike Duplicate | PP Metals, TPH, PAHs | SW-846 Methods 6010B, 7471A, 8270D and Texas Method 1005 | 5-Point Composite | 5% | -- | - |

1. Includes Level II Data Package and Standard EDD.

2. All samples will be expedited on a rush turnaround of 48-hours.

3. Trip blanks and rinsate blanks will not be required

4. Resampling and reanalysis of soils have not been included in the estimated quantity of samples.

5. Pre-excavation soil sampling for PCBs at SSC12 was conducted during the ODEQ's May 2017 TBA Phase II ESA.

**Table 2
Verification Pre-Excavation Soil Sampling**

**Evans-Fintube West
City of Tulsa
118/150/186 North Lansing Avenue
Tulsa, Oklahoma 74106**

| Purpose | Location | Parameter | Test Method | Type of Sample | Quantity of Samples/Frequency | Specification/Reference | Requirement ⁴ |
|------------------------------------|-------------------------------------|----------------------|--|----------------|-------------------------------|-------------------------|--------------------------------|
| Confirmatory Pre-excavation Sample | SSC12 | None | NA | NA | - | - | - |
| | SSC14 | TPH | Texas Method 1005 | Grab | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | | PP Metals | SW-846 Methods 6010B, 7471A | Grab | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSC15 | None | NA | NA | - | - | - |
| | SSD04 | None | NA | NA | - | - | - |
| | SSD05 | None | NA | NA | - | - | - |
| | SSD10 | TPH | Texas Method 1005 | Grab | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | | PP Metals | SW-846 Methods 6010B, 7471A | Grab | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | | PAHs | SW-846 Method 8270D | Grab | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSD11 | TPH | Texas Method 1005 | Grab | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | | PP Metals | SW-846 Methods 6010B, 7471A | Grab | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSD12 | TPH | Texas Method 1005 | Grab | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSD13 | TPH | Texas Method 1005 | Grab | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSD14 | TPH | Texas Method 1005 | Grab | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | | PP Metals | SW-846 Methods 6010B, 7471A | Grab | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSD15 | None | NA | NA | - | - | - |
| | SB05-SS01 | None | NA | NA | - | - | - |
| | SSE07 | None | NA | NA | - | - | - |
| | SSE12 | TPH | Texas Method 1005 | Grab | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSE13 | TPH | Texas Method 1005 | Grab | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSE14 | TPH | Texas Method 1005 | Grab | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSE15 | None | NA | NA | - | - | - |
| | SSE16 | None | NA | NA | - | - | - |
| | SSF14 | TPH | Texas Method 1005 | Grab | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| Quality Control | Field Duplicate | PP Metals, TPH, PAHs | SW-846 Methods 6010B, 7471A, 8270D and Texas Method 1005 | Grab | 5% | -- | - |
| | Matrix Spike/Matrix Spike Duplicate | PP Metals, TPH, PAHs | SW-846 Methods 6010B, 7471A, 8270D and Texas Method 1005 | Grab | 5% | -- | - |

1. Includes Level II Data Package and Standard EDD.
2. All samples will be expedited on a rush turnaround of 48-hours.
3. Trip blanks and rinsate blanks will not be required

4. Results will be compared against ODEQ Cleanup Levels listed in Table 3 – Soil Sample Constituents Table.

Table 3
Excavation Summary
Former Evans-Fintube Facility
Tulsa, Oklahoma

| Excavation Date | Location(s) | Tons of Soil Excavated |
|------------------------|--------------|------------------------|
| 3/7/2019 | SSE07 | 25.37 |
| 3/7/2019 | SSD04 | 27.25 |
| 3/8/2019 | SSD05 | 45.78 |
| 3/11/2019 | SSD14 | 14.65 |
| 3/11/2019 | SB05-SS01 | 33.11 |
| 3/11/2019 | SSE15 | 17.05 |
| 3/11/2019 ¹ | SSD15, SSE15 | 34.21 |
| 3/12/2019 | SSD14 | 12.34 |
| 3/14/2019 ² | SSC15 | 18.99 |
| 3/15/2019 | SSE16 | 31.07 |
| 3/15/2019 | SSE15 | 15.66 |
| 3/15/2019 ³ | SSC12 | 20.59 |
| 3/21/2019 | SSE15 | 11.93 |
| 3/21/2019 | SSC15 | 13.71 |
| 3/22/2019 ⁴ | SSC12 | 14.49 |
| 3/28/2019 | SSC15 | 13.26 |
| 3/28/2019 ⁵ | SSC12 | 31.66 |
| 4/1/2019 ⁶ | SSC12 | 54.71 |
| 4/10/2019 ⁷ | SSC12 | 22.37 |
| 4/18/2019 | "T" Zone | 1.56 |
| Total | | 459.76 |

Notes:

¹one load was hauled to landfill on 3/12/19

²hauled to the landfill on 3/15/19

³one load was hauled to landfill on 3/18/19

⁴load hauled to landfill on 3/28/19

⁵one load hauled to landfill on 3/29/19

⁶one load hauled to landfill on 4/2/19

⁷one load hauled to landfill on 4/11/19

**Table 4
Post-Excavation Soil Sampling**

**Evans-Fintube West
City of Tulsa, 118/150/186 North Lansing Avenue, Tulsa, Oklahoma 74106**

| Purpose | Location | Parameter | Test Method | Type of Sample | Quantity of Samples/Frequency | Specification/Reference | Requirement |
|-----------------|-------------------------------------|----------------------------|--|------------------------|-------------------------------|-------------------------|---------------------------------|
| Confirmation | SSC12 | PCBs | SW-846 Method 8082 | Composite ⁶ | 3 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSC14 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSC15 | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Residential Cleanup Levels |
| | SSD04 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSD05 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | | PCBs | SW-846 Method 8082 | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSD10 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | | PAHs | SW-846 Method 8270D | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | | PCBs | SW-846 Method 8082 | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSD11 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSD12 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | | PCBs | SW-846 Method 8082 | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSD13 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSD14 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSD15 | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Residential Cleanup Levels |
| | SB05-SS01 | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSE07 | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSE12 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSE13 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSE14 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| | SSE15 | PP Metals | SW-846 Methods 6010B, 7471A | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Residential Cleanup Levels |
| | SSE16 | PAHs | SW-846 Method 8270D | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Residential Cleanup Levels |
| | | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Residential Cleanup Levels |
| | SSF14 | TPH | Texas Method 1005 | 5-Point Composite | 1 | QAPP, Amendment 1 | ODEQ Industrial Cleanup Levels |
| Quality Control | Field Duplicate | PP Metals, PCBs, TPH, PCBs | SW-846 Methods 6010B, 7471A, 8082, & 8270D and Texas Method 1005 | 5-Point Composite | 5% | -- | ODEQ Cleanup Levels |
| | Matrix Spike/Matrix Spike Duplicate | PP Metals, PAHs, TPH, PCBs | SW-846 Methods 6010B, 7471A, 8082, & 8270D and Texas Method 1005 | 5-Point Composite | 5% | -- | ODEQ Cleanup Levels |

1. Includes Level II Data Package and Standard EDD.

2. All samples will be expedited on a rush turnaround of 48-hours.

3. Trip blanks and rinsate blanks will not be required

4. Results will be compared against ODEQ Cleanup Levels listed in Table 3 – Soil Sample Constituents Table.

5. Resampling and reanalysis of soils have not been included in the estimated quantity of samples.

6. PCB sampling at SSC12 shall be conducted in accordance with 40 CFR 761 Subpart O.

Table 5A
Pre-Excavation Soil Sampling Results - Priority Pollutant Metals
Former Evans-Fintube Facility
Tulsa, Oklahoma

| Analyte | Units | RBSL for Residential Soils | RBSL for Industrial Soils | SSC14 | Duplicate 6 | SSC15* | Duplicate 2 | SSD10 | SSD11 | SSD14 | SSE16 |
|-----------|-------|----------------------------|---------------------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|
| | | | | 2/21/2019 | (SSC14) | 2/18/2019 | (SSC15) | 2/19/2019 | 2/21/2019 | 2/21/2019 | 2/18/2019 |
| Antimony | mg/kg | 31 | 470 | <1.1 | 1.0 | <0.99 | <0.73 | <0.79 | <1.1 | <1.1 | 0.91 |
| Arsenic | mg/kg | 6.8 | 30 [#] | 1.8 | 2.2 | 10.5 | 12.7 | 3.3 | 5.8 | 5.2 | 15.4 |
| Beryllium | mg/kg | 160 | 2,300 | 0.13 | <0.10 | 0.21 | 0.16 | 0.36 | 0.99 | 1 | 0.78 |
| Cadmium | mg/kg | 71 | 980 | 2.4 | 1.5 | 1.7 | 1.5 | <0.40 | <0.53 | <0.53 | 1.1 |
| Chromium | mg/kg | NE | NE | 28.3 | 31.9 | 9.8 | 5.2 | 9.8 | 25 | 27.2 | 31 |
| Copper | mg/kg | 3,100 | 47,000 | 7.3 | 13.1 | 21 | 14.3 | 18.5 | 12 | 12.3 | 21.9 |
| Lead | mg/kg | 400 | 800 | 159 | 192 | 140 | 158 | 32.5 | 14.6 | 13.5 | 158 |
| Nickel | mg/kg | 1,500 | 22,000 | 4.5 | 3.5 | 11.6 | 8.4 | 8.0 | 15.9 | 11.6 | 12.6 |
| Selenium | mg/kg | 390 | 5,800 | <1.6 | <1.5 | <1.5 | <1.1 | <1.2 | <1.6 | <1.6 | 1.2 |
| Silver | mg/kg | 390 | 5,800 | <0.77 | <0.70 | <0.7 | <0.51 | <0.55 | <0.74 | <0.74 | <0.53 |
| Thallium | mg/kg | 0.78 | 12 | <2.2 | <2.0 | <2 | <1.5 | <1.6 | <2.1 | <2.1 | <1.5 |
| Zinc | mg/kg | 23,000 | 350,000 | 59.3 | 66.0 | 569 | 348 | 44.9 | 30.5 | 30.1 | 720 |
| Mercury | mg/kg | 11 | 46 | <0.049 | <0.057 | <0.049 | 0.059 | <0.046 | <0.057 | 0.07 | <0.052 |

Notes:

RBSL = Risk-Based Screening Level

All samples collected from 0-1 ft below surface

mg/kg = milligrams per kilogram

*sample collected for waste characterization and not compared to RBSLs

[#]arsenic RBSL using 1x10⁻⁵ risk

NE = not established

Table 5B
Pre-Excavation Soil Sampling Results - Polycyclic Aromatic Hydrocarbons
Former Evans-Fintube Facility
Tulsa, Oklahoma

| Analyte | Units | RBSL for Residential | RBSL for Industrial | SSD10 | Duplicate 5 | SSE16* | Duplicate 1 |
|--------------------------------|-------|----------------------|---------------------|-----------|-------------|-----------|-------------|
| | | Soils | Soils | 2/19/2019 | (SSD10) | 2/18/2019 | (SSE16) |
| Acenaphthene | mg/kg | 3,600 | 45,000 | <0.39 | <0.75 | <9.8 | <9.5 |
| Anthracene | mg/kg | 18,000 | 230,000 | <0.39 | <0.75 | <9.8 | <9.5 |
| Benzo(a)anthracene | mg/kg | 1.1 | 21 | <0.39 | <0.75 | <9.8 | <9.5 |
| Benzo(a)pyrene | mg/kg | 0.11 | 2.1 | <0.39 | <0.75 | <9.8 | <9.5 |
| Benzo(b)fluoranthene | mg/kg | 1.1 | 21 | <0.39 | <0.75 | <9.8 | <9.5 |
| Benzo(k)fluoranthene | mg/kg | 11 | 210 | <0.39 | <0.75 | <9.8 | <9.5 |
| 2-Chloronaphthalene | mg/kg | NE | NE | <0.39 | <0.75 | <9.8 | <9.5 |
| Chrysene | mg/kg | 110 | 2,100 | <0.39 | <0.75 | <9.8 | <9.5 |
| Dibenz(a,h)anthracene | mg/kg | 0.11 | 2.1 | <0.39 | <0.75 | <9.8 | <9.5 |
| 7,12-Dimethylbenz(a)anthracene | mg/kg | 0.00046 | 0.0084 | <2 | <3.8 | <49.6 | <47.8 |
| Fluoranthene | mg/kg | 2,400 | 30,000 | <0.39 | <0.75 | <9.8 | <9.5 |
| Fluorene | mg/kg | 2,400 | 30,000 | <0.39 | <0.75 | <9.8 | <9.5 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 1.1 | 21 | <0.39 | <0.75 | <9.8 | <9.5 |
| 1-Methylnaphthalene | mg/kg | 18 | 73 | <0.39 | <0.75 | <9.8 | <9.5 |
| 2-Methylnaphthalene | mg/kg | 240 | 3,000 | <0.39 | <0.75 | <9.8 | <9.5 |
| Naphthalene | mg/kg | 3.8 | 17 | <0.39 | <0.75 | <9.8 | <9.5 |
| Pyrene | mg/kg | 1,800 | 23,000 | <0.39 | <0.75 | <9.8 | <9.5 |

Notes:

RBSL = Risk-Based Screening Level

All samples collected from 0-1 ft below surface

mg/kg = milligrams per kilogram

*sample collected for waste characterization and not compared to RBSLs

NE = not established

Table 5C
Pre-Excavation Soil Sampling Results - Total Petroleum Hydrocarbons
Former Evans-Fintube Facility
Tulsa, Oklahoma

| Analyte | Units | RBSL for | RBSL for | SSC14 | SSD04* | Duplicate 3 | SSD10 | Duplicate 4 | SSD11 | SSD12 | SSD13 | SSD14 | SSE12 | SSE13 | SSE14 | SSF14 |
|---------------------|-------|-------------------|------------------|------------|-------------|-------------|-------------|-------------|-----------|-----------|-------------|--------------|-------------|-----------|-----------|-----------|
| | | Residential Soils | Industrial Soils | 2/21/2019 | 2/19/2019 | (SSD04) | 2/19/2019 | (SSD10) | 2/21/2019 | 2/21/2019 | 2/21/2019 | 2/21/2019 | 2/21/2019 | 2/21/2019 | 2/21/2019 | 2/21/2019 |
| TPH (C06-C12) | mg/kg | 50 | 500 | <21.9 | <21.5 | <19.7 | <19.4 | <22.5 | <20 | <21.1 | <21 | 486 | <19.4 | <19.7 | <19.8 | <21.1 |
| TPH (>C12-C28) | mg/kg | 50 | 2,500 | 175 | 861 | 721 | 21.7 | <22.5 | <20 | <21.1 | 54.9 | 8680 | <19.4 | <19.7 | <19.8 | <21.1 |
| TPH (>C28-C35) | mg/kg | 50 | 5,000 | 167 | 600 | 469 | 37.4 | <22.5 | <20 | <21.1 | 62.4 | 2670 | <19.4 | <19.7 | <19.8 | <21.1 |
| TPH Total (C06-C35) | mg/kg | | | 346 | 1460 | 1190 | 61.6 | <22.5 | <20 | <21.1 | 121 | 12000 | 19.7 | <19.7 | <19.8 | <21.1 |

Notes:

RBSL = Risk-Based Screening Level

All samples collected from 0-1 ft below surface

mg/kg = miligrams per kilogram

*sample collected for waste characterization and not compared to RBSLs

Table 5D
Post-Excavation Soil Sampling Results - Priority Pollutant Metals
Former Evans-Fintube Facility
Tulsa, Oklahoma

| Analyte | Units | RBSL for Residential | RBSL for Industrial | SB05-SS01 | Duplicate 7 | SSC15 | SSC15-1.5' | SSC15-2' | SSD15 | SB05-SS01 | SSE07 | SSE15-1' | SSE15-1.5' | SSE15-2' |
|-----------|-------|----------------------|---------------------|-----------|-------------|-----------|------------|-----------|-----------|-----------|----------|-----------|------------|-----------|
| | | | | 3/11/2019 | (SB05-SS01) | 3/15/2019 | 3/21/2019 | 3/28/2019 | 3/11/2019 | 3/11/2019 | 3/7/2019 | 3/11/2019 | 3/15/2019 | 3/21/2019 |
| Antimony | mg/kg | 31 | 470 | 2.1 | 1.5 | ND | <0.93 | <1.2 | <0.94 | 2.1 | 2.1 | <1 | <1.2 | <0.84 |
| Arsenic | mg/kg | 6.8 | 30 [#] | 4.8 | 6.3 | 7.7 | 9.1 | 5.9 | 6.6 | 4.8 | 21.9 | 126 | 9.4 | 6.9 |
| Beryllium | mg/kg | 160 | 2,300 | 0.32 | 0.31 | 0.99 | 0.99 | 0.96 | 0.71 | 0.32 | 0.43 | 3.4 | 1.3 | 0.73 |
| Cadmium | mg/kg | 71 | 980 | 0.78 | 0.92 | <0.53 | <0.46 | <0.60 | 0.55 | 0.78 | 1.2 | 4.8 | 1.0 | <0.42 |
| Chromium | mg/kg | NE | NE | 9.3 | 13.7 | 20.0 | 21.0 | 24.3 | 14.7 | 9.3 | 17.2 | 16.7 | 24.7 | 15.2 |
| Copper | mg/kg | 3,100 | 47,000 | 26.6 | 34.8 | 12.2 | 16.1 | 14.7 | 15.6 | 26.6 | 46.8 | 178 | 18.6 | 10.6 |
| Lead | mg/kg | 400 | 800 | 110 | 142 | 14.7 | 24.7 | 8.7 | 29.8 | 110 | 199 | 4620 | 43.0 | 56.7 |
| Nickel | mg/kg | 1,500 | 22,000 | 12.8 | 13.4 | 22.0 | 28.6 | 27.7 | 19.5 | 12.8 | 19.5 | 20.5 | 45.6 | 10.3 |
| Selenium | mg/kg | 390 | 5,800 | <1.6 | 1.6 | <1.6 | <1.4 | <1.8 | <1.4 | <1.6 | 4.3 | <4.6 | 2.2 | <1.3 |
| Silver | mg/kg | 390 | 5,800 | <0.74 | <0.56 | <0.74 | <0.65 | <0.84 | <0.66 | <0.74 | <0.67 | 16.7 | <0.83 | <0.59 |
| Thallium | mg/kg | 0.78 | 12 | <2.1 | <1.6 | <2.1 | <1.9 | <2.4 | <1.9 | <2.1 | <3.9 | <6.1 | <2.4 | <1.7 |
| Zinc | mg/kg | 23,000 | 350,000 | 206 | 346 | 43.7 | 66.0 | 80.4 | 115 | 206 | 221 | 6950 | 283 | 123 |
| Mercury | mg/kg | 11 | 46 | <0.056 | <0.052 | <0.052 | <0.055 | <0.049 | <0.051 | <0.056 | 0.077 | <0.048 | <0.059 | <0.055 |

Notes:

RBSL = Risk-Based Screening Level

All samples collected from 0-1 ft below surface, except where noted

mg/kg = milligrams per kilogram

*sample collected for waste characterization and not compared to RBSLs

[#]arsenic RBSL using 1x10⁻⁵ risk

NE = not established

Table 5E
Post-Excavation Soil Sampling Results - Polychlorinated Biphenyls
Former Evans-Fintube Facility
Tulsa, Oklahoma

| Analyte | Units | RBCL | SSC12-1:1' | SSC12-2:1' | SSC12-3:1' | Duplicate 10 (SSC12-1') | SSC12-1:1.5' | SSC12-2:1.5' | SSC12-3:1.5' | SSC12-1:2' | SSC12-2:2' | SSC12-3:2' | SSC12-4:2' | SSC12-5:2' | Duplicate 11 (SSC11-2') | SSC12-6:2' | SSD05 |
|----------|-------|------|--------------|--------------|-------------|----------------------------|---------------|--------------|---------------|---------------|--------------|-------------|---------------|------------|----------------------------|------------|--------|
| | | | 3/15/2019 | 3/15/2019 | 3/15/2019 | | 3/22/2019 | 3/22/2019 | 3/22/2019 | 4/2/2019 | 4/2/2019 | 4/2/2019 | 4/2/2019 | 4/2/2019 | | 4/2/2019 | |
| PCB-1016 | mg/kg | 1* | <0.0387 | <0.0389 | <0.182 | <0.0389 | <0.040 | <0.0401 | <0.040 | <0.0404 | <0.0822 | <0.288 | <0.0772 | <0.0799 | <0.0776 | <0.0854 | <0.038 |
| PCB-1221 | mg/kg | 1* | <0.0387 | <0.0389 | <0.182 | <0.0389 | <0.040 | <0.0401 | <0.040 | <0.0404 | <0.0822 | <0.288 | <0.0772 | <0.0799 | <0.0776 | <0.0854 | <0.038 |
| PCB-1232 | mg/kg | 1* | <0.0387 | <0.0389 | <0.182 | <0.0389 | <0.040 | <0.0401 | <0.040 | <0.0404 | <0.0822 | <0.288 | <0.0772 | <0.0799 | <0.0776 | <0.0854 | <0.038 |
| PCB-1242 | mg/kg | 1* | <0.0387 | <0.0389 | <0.182 | <0.0389 | <0.040 | <0.0401 | <0.040 | <0.0404 | <0.0822 | <0.288 | <0.0772 | <0.0799 | <0.0776 | <0.0854 | <0.038 |
| PCB-1248 | mg/kg | 1* | <0.0387 | <0.0389 | <0.182 | <0.0389 | <0.040 | <0.0401 | <0.040 | <0.0404 | <0.0822 | <0.288 | <0.0772 | <0.0799 | <0.0776 | <0.0854 | <0.038 |
| PCB-1254 | mg/kg | 1* | <0.0387 | <0.0389 | <0.182 | <0.0389 | <0.040 | <0.0401 | <0.040 | <0.0404 | <0.0822 | <0.288 | <0.0772 | <0.0799 | <0.0776 | <0.0854 | <0.038 |
| PCB-1260 | mg/kg | 1* | 0.233 | 0.223 | 1.17 | 0.261 | 0.0475 | <0.0401 | 0.0432 | 0.0555 | 0.175 | 1.93 | 0.0968 | <0.0799 | 0.0885 | <0.0854 | <0.038 |

Notes:

RBCL = Risk-Based Cleanup Level

mg/kg = milligrams per kilogram

*40 CFR 761.61 for RBCL for high-occupancy areas

Table 5F
Post-Excavation Soil Sampling Results - Total Petroleum Hydrocarbons
Former Evans-Fintube Facility
Tulsa, Oklahoma

| Analyte | Units | RBSL for Residential | RBSL for Industrial | SSD04 | SSD05 | SSD14 | SSE16 | Duplicate 9 (SSE16) | T-Zone:South | T-Zone:North | Drain Sample-West | Drain Sample-East |
|---------------------|-------|----------------------|---------------------|--------------|-------------|-------------|-----------|------------------------|--------------|--------------|-------------------|-------------------|
| | | | | 3/7/2019 | 3/11/2019 | 3/12/2019 | 3/16/2019 | | 3/29/2019 | 3/30/2019 | 5/17/2019 | 5/17/2019 |
| TPH (C06-C12) | mg/kg | 50 | 500 | 67.2 | <18.7 | 23.9 | <20.9 | <23.3 | <19.4 | <18.8 | <25.5 | <24.5 |
| TPH (>C12-C28) | mg/kg | 50 | 2,500 | 630 | 34.5 | 2150 | <20.9 | <23.3 | 92.9 | 487 | 758 | <24.5 |
| TPH (>C28-C35) | mg/kg | 50 | 5,000 | 597 | 27.2 | 704 | <20.9 | <23.3 | 48.2 | 862 | 398 | <24.5 |
| TPH Total (C06-C35) | mg/kg | | | 1,290 | <18.7 | 2870 | <20.9 | <23.3 | 150 | 1360 | 1160 | <24.5 |

Notes:

RBSL = Risk-Based Screening Level

All samples collected from 0-1 ft below surface

mg/kg = miligrams per kilogram

Table 5G
Post-Excavation Soil Sampling Results - Polycyclic Aromatic Hydrocarbons
Former Evans-Fintube Facility
Tulsa, Oklahoma

| Analyte | Units | RBSL for Residential | RBSL for Industrial | SSE16 3/15/2019 | Duplicate 8 (SSE16) |
|--------------------------------|-------|----------------------|---------------------|--------------------|------------------------|
| | | | | | |
| Acenaphthene | mg/kg | 3,600 | 45,000 | <0.74 | <0.77 |
| Anthracene | mg/kg | 18,000 | 230,000 | <0.74 | <0.77 |
| Benzo(a)anthracene | mg/kg | 1.1 | 21 | <0.74 | <0.77 |
| Benzo(a)pyrene | mg/kg | 0.11 | 2.1 | <0.74 | <0.77 |
| Benzo(b)fluoranthene | mg/kg | 1.1 | 21 | <0.74 | <0.77 |
| Benzo(k)fluoranthene | mg/kg | 11 | 210 | <0.74 | <0.77 |
| 2-Chloronaphthalene | mg/kg | NE | NE | <0.74 | <0.77 |
| Chrysene | mg/kg | 110 | 2,100 | <0.74 | <0.77 |
| Dibenz(a,h)anthracene | mg/kg | 0.11 | 2.1 | <0.74 | <0.77 |
| 7,12-Dimethylbenz(a)anthracene | mg/kg | 0.00046 | 0.0084 | <3.8 | <3.9 |
| Fluoranthene | mg/kg | 2,400 | 30,000 | <0.74 | <0.77 |
| Fluorene | mg/kg | 2,400 | 30,000 | <0.74 | <0.77 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 1.1 | 21 | <0.74 | <0.77 |
| 1-Methylnaphthalene | mg/kg | 18 | 73 | <0.74 | <0.77 |
| 2-Methylnaphthalene | mg/kg | 240 | 3,000 | <0.74 | <0.77 |
| Naphthalene | mg/kg | 3.8 | 17 | <0.74 | <0.77 |
| Pyrene | mg/kg | 1,800 | 23,000 | <0.74 | <0.77 |

Notes:

RBSL = Risk-Based Screening Level

All samples collected from 0-1 ft below surface

mg/kg = milligrams per kilogram

Table 6
Water Accumulation Summary
Former Evans-Fintube Facility
Tulsa, Oklahoma

| Location | Date | Gallons Removed |
|-----------------|-------------|------------------------|
| SSC12 | 4/1/2019 | 2,319 |
| SSD14 | 4/2/2019 | 5,033 |
| SSC15 | 4/2/2019 | 1,741 |
| SSC12 | 4/17/2019 | 6,552 |

ATTACHMENT 1

Project Documents

Land Disturbance
Former Evans-Fintube Facility
Stormwater Pollution Prevention Plan (SWP3)

for:

City of Tulsa
2317 South Jackson Avenue
Tulsa, Oklahoma 74107

Operator(s):

Environmental Works, Inc.
9529 E. 55th Place, Suite A
Tulsa, OK 74145

SWP3 Contact(s):

Anthony Moore, Project Manager, Environmental Works, Inc.
Cell #: (417) 773-5747

SWP3 Preparation By:

Environmental Works, Inc.
9529 E. 55th Place, Suite A
Tulsa, OK 74145

February 2019

Estimated Project Dates:

Project Start Date: February 18, 2019

Project Completion Date: Est. March 22, 2019

Contents

| | |
|--|-----------|
| SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING..... | 1 |
| 1.1 Project/Site Information..... | 1 |
| 1.2 Contact Information/ SWP3 Team | 2 |
| 1.3 Nature and Sequence of Construction Activity..... | 3 |
| 1.4 Soils, Slopes, Vegetation, and Current Drainage Patterns | 4 |
| 1.5 Construction Site Estimates..... | 4 |
| 1.6 Receiving Waters..... | 5 |
| 1.7 Site Features and Sensitive Areas to be Protected | 5 |
| 1.8 Potential Sources of Pollution | 5 |
| 1.9 Endangered Species Certification..... | 6 |
| 1.10 Historic Preservation..... | 7 |
| 1.11 Applicable Federal, Tribal, State or Local Programs..... | 7 |
| 1.12 Maps..... | 8 |
| SECTION 2: EROSION AND SEDIMENT CONTROL BMPS | 9 |
| 2.1 Minimize Disturbed Area and Protect Natural Features and Soil..... | 9 |
| 2.2 Coordination of BMPs with Construction Activities | 11 |
| 2.3 Construction Practices to Minimize Stormwater Contamination..... | 12 |
| SECTION 3: GOOD HOUSEKEEPING BMPS | 14 |
| 3.1 Material Handling and Waste Management..... | 14 |
| 3.2 Preventative Maintenance | 14 |
| 3.3 Spill Prevention and Control | 14 |
| SECTION 4: INSPECTIONS | 16 |
| 4.1 Inspections..... | 16 |
| 4.2 Delegation of Authority..... | 18 |
| 4.3 Corrective Action Log..... | 18 |
| SECTION 5: RECORDKEEPING AND TRAINING | 19 |
| 5.1 Recordkeeping..... | 19 |
| 5.2 Log of Changes to the SWP3 | 19 |
| 5.3 Training..... | 19 |
| SECTION 6: CERTIFICATION AND NOTIFICATION..... | 20 |
| Appendix A – City of Tulsa – Earth Change Permit | |
| Appendix B – Figures | |
| Appendix C – Flood Plain Map | |
| Appendix D – Inspection Checklist | |
| Appendix E – SWP3 Amendment Log | |
| Appendix F – Training Log | |

SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING

1.1 Project/Site Information

Project/Site Name: Former Evans-Fintube Facility

Project Street/Location: 118/150/186 North Lansing Avenue

City: Tulsa State: OK ZIP Code: 74120

County: Tulsa Latitude: 36° 9'50.26"N Longitude: 95°58'56.83"W

Is the project located in Indian country? Yes No

If yes, name of Reservation: Not Applicable

Is this project considered a federal facility? Yes No

Oklahoma Department of Environmental Quality (ODEQ) permit number*:

Not Applicable (Total Disturbed Area <1 Acre)

City of Tulsa Earth Change permit number: WSD-022808-2019

1.2 Contact Information/ SWP3 Team

| | |
|--|--|
| Name Phone Responsibilities | Kenzi Wilson – Field Supervisor, Environmental Works, Inc. Cell: (918) 671-0810 <ul style="list-style-type: none">• Implementing the SWP3 with the aid of the SWP3 team;• Evaluating the effects of new construction and process/procedural changes on the SWP3 and determining whether the SWP3 should be evaluated;• Approving and coordinating incident response, cleanup, and notification procedures; and• Reviewing environmental incidents and submitting a report to state and federal agencies.• Conducting documented weekly inspections and documented inspections following rainfall events.• Conducting corrective actions as necessary to satisfy requirements of the SWP3. |
| Name Phone Responsibilities | Anthony Moore – Senior Project Manager, Environmental Works, Inc. Cell: (417) 773-5747 Office: (918) 879-4499 <ul style="list-style-type: none">• Assisting the SWP3 team in developing, implementing, maintaining, and updating the SWP3;• Evaluating the effects of new construction and process/procedural changes on the SWP3. |

1.3 Nature and Sequence of Construction Activity

General Description of Project:

The Tulsa Evans-Fintube (Site) is composed of two large building complexes, known as the Evans and Fintube building complexes, and a vacant land area. The Site is zoned for industrial use, in keeping with historic operations. As part of a conceptual redevelopment plan for commercial redevelopment the Evans building complex will be renovated for commercial/industrial use; whereas the Fintube building complex will be demolished, the Site will be paved with asphalt, and converted to a surface parking lot in the during future Site activities.

The Site is currently under ownership of the City of Tulsa under the Brownfields program due to historically impacted asbestos-containing building materials (ACBM) and lead-based paint (LBP), as well as priority pollutant (PP) metals arsenic and lead, total petroleum hydrocarbons (TPH), polychlorinated biphenols (PCBs) and polycyclic aromatic hydrocarbons (PAHs). Cleanup of ACBM and LBP was previously conducted in January 2017. However, PP metals and TPH in soil exceeding the Oklahoma Department of Environmental Quality (ODEQ) Risk-Based Cleanup Levels remain at the Site. This SWP3 will address the land disturbance activities inclusive of excavating and removal of these PP metals and TPH in soils at the Site.

Function of the land disturbance activity:

- Residential Commercial Industrial Road Construction Linear Utility
 Other (please specify): Clearing and grubbing, excavation of impacted soils, loading soils into transport vehicles, and disposal offsite, stockpiling of clean backfill onsite, backfilling, and regrading.

Estimated Project Start Date: February 18, 2019

Estimated Project Completion Date: Estimated March 22, 2019

1.4 Slopes, Vegetation, and Current Drainage Patterns

Slope: Site topography is characterized by gentle features with relief differences on the order of twenty (20) feet for the entire property. The land surface has an overall westerly slope, with topographically high areas to the east.

Drainage Patterns: The Site is composed of a two building complexes, and a mixture of gravel (~40%) and grass-covered (~60%) areas. Prior to start of Site activities, runoff on the property flows to the west or southwest towards the railroad that borders the Site to the west (see Figure 1.0). Runoff enters storm drain inlets located immediately west-southwest of the railroad and enters the City of Tulsa storm drain system. Runoff is then carried west and south eventually daylighting in the Arkansas River south of the Site.

1.5 Construction Site Estimates

The following are estimates of the construction site.

Total project area: **~24 acres**

Construction site area to be disturbed: Fifteen 20'x20' excavation areas
or **0.14 acres**

Runoff Coefficient prior to excavations: **Industrial Areas,
Light – 0.50-0.60**

Runoff Coefficient after excavations: **Unchanged**

1.6 Receiving Waters

A potential outfall for this property is located at the southwest corner of the property. During periods of extended rainfall, overland flow from the Site would flow west and southwest and enter a storm drain inlet to the City of Tulsa storm drain system approximately 290 feet west of the Site along East Archer Street. Once entering the storm drain system, runoff would eventually daylight at the Arkansas River approximately 1.53 miles to the south.

1.7 Site Features and Sensitive Areas to be Protected

Site best management practices (BMPs) will be utilized to filter runoff from the property, and allow settleable or suspended solids to settle out of the runoff prior to be discharged from the property.

Potential sources of sediment to stormwater runoff: Excavation, backfilling, and soil stockpiling activities

Potential pollutants and sources, other than sediment, to stormwater runoff: Refer to Section 1.8.

1.8 Potential Sources of Pollution

Potential pollution sources include construction vehicle fueling, petroleum storage, and stockpiling of impacted soils:

| Description of Material | Physical Description | Potential Pollutant |
|-------------------------|---|---|
| Gasoline | Colorless, unless mixed, petroleum hydrocarbon | Benzene, ethyl benzene, toluene, xylene, MTBE |
| Diesel Fuel | Clear, blue green to yellowish Petroleum hydrocarbon | Petroleum distillate, oil and grease, naphthalene, xylene |

| | | |
|-------------------|------------------------------|--|
| Antifreeze | Green, pink, red | Ethylene glycol, propylene glycol, heavy metals (copper, lead, and zinc) |
| Oil/Hydraulic Oil | Brown/black oily hydrocarbon | Oil |
| Soil Erosion | Solid Particles | Soil, sediment |

1.9 Endangered Species Certification

Are endangered or threatened species and critical habitats on or near the project area?

Yes No

The U.S. Fish and Wildlife Service’s County Distribution of Federally-Listed Threatened, Endangered, Proposed, and Candidate Species page at <https://ecos.fws.gov/ipac/location/XGNIBI7L5VBYZF6AJ4P2WBWSFE/resources> was used to determine what species are listed in Tulsa County and have the potential of being within the vicinity of the Site. The Least Tern and American Burying Beetle are endangered species that were identified as potentially being present within the vicinity of the Site. The Least Tern nests on barren to sparsely vegetated sandbars along rivers, sand and gravel pits, lakes and reservoir shorelines; the Site does not have these habitats, and therefore, the Least Tern is not expected to be present at the Site. The American Burying Beetle can be found in many different habitats with a slight preference for grasslands and open understory oak hickory forests; therefore, it could be possible that these beetles may be present at the Site.

The Northern Long-eared bat, Piping Plover, and Red Knot are threatened species that were identified as potentially being present within the vicinity of the Site. The Northern Long-eared Bat habitat in the winter consists of hibernating in caves and mines, which are not present at the Site; and therefore, these bats are not expected to be present at the Site. The Piping Plover, a bird, has habitats in wide, flat, open,

sandy beaches with very little grass or other vegetation, which are not present at the Site; and therefore, these birds are not expected to be present at the Site. The Red Knot, a bird, has habitats in sparsely vegetated hillsides and marine environments, which are not present at the Site; and therefore, these birds are also not expected to be present at the Site.

The Information, Planning, and Conservation (IPaC) decision support system, which is a conservation planning tool for streamlining the environmental review process, was used to review critical habitat locations. The IPaC landscape explorer tool allowed wetlands, GAP land cover, USFWS critical habitat, and other natural resource map layers to be reviewed simultaneously. The mapview tool located at <https://ecos.fws.gov/ecp/report/table/critical-habitat.html> was used to find data specific to the property. No critical habitats are present at this location.

1.10 Historic Preservation

Are there any historic sites on or near the construction site?

Yes No

The Tulsa County National Register listings were reviewed from the Oklahoma Historical Society at <https://dnr.mo.gov/shpo/greene.htm>. The Evans building complex is listed as a historic property as the former Oklahoma Iron Works/Bethlehem Supply Company Building (ID# 15000067). This building complex is set for renovation during future Site activities as part of redevelopment.

1.11 Applicable Federal, Tribal, State or Local Programs

As the property is located within the city limits of Tulsa, Oklahoma, it is subject to land disturbance permitting requirements through the City of Tulsa; and therefore, required to obtain a Earth Change permit through the city unless other arrangements have been made with the City.

The property is not subject to additional programs as part of the land disturbance process.

1.12 Maps

An area topographic map and a BMP diagram illustrating BMPs utilized for this Site are shown on the maps presented in **Appendix B**. Additionally, proposed excavation areas are identified on the surface soil excavation maps also presented in this appendix.

According to the flood map issued by the Federal Emergency Management Agency (FEMA), no portion of the Site is located within the 100 year flood plain. The Flood Plain map is included as **Appendix C**.

SECTION 2: EROSION AND SEDIMENT CONTROL BMPS

2.1 *Minimize Disturbed Area and Protect Natural Features and Soil*

The sediment control BMPs, as shown in the BMP Diagram map in **Appendix B** are designed to capture sediment, limit the amount of erosion onsite, and protect natural features. The following table includes a list of structural BMPs that may be, but not limited to, at this Site.

| | |
|----------------------------------|---|
| Stabilized Construction Entrance | <ul style="list-style-type: none"> • Temporary rock construction entrance/exit. • Purpose is to have soil and mud deposited before exiting the property. • Combine with other erosion practices to ensure runoff does not leave property. |
| Vegetative Buffer Strip | <ul style="list-style-type: none"> • A wide belt of vegetation intended to provide infiltration, intercept sediment and other pollutants and reduce stormwater flow and velocity. • Can consist of grass, woody vegetation, or other erosion resistant plants. • Flow must be distributed evenly across strip to be effective. |

The following table includes non-structural BMPs practices for erosion and sediment control and may include, but is not limited to:

| | |
|---------------------|---|
| Straw Bale Barriers | <ul style="list-style-type: none"> • Temporary row of entrenched and anchored straw bales. • Applicable downstream of less than an acre of disturbance. • Intercept and detain small amounts of sediment from leaving the construction site. |
|---------------------|---|

| | |
|-----------------------|---|
| Permanent Seeding | <ul style="list-style-type: none"> • Establishment of perennial vegetation on disturbed areas for periods longer than 12 months. • Provides economical long term erosion control. • Use when long term halts in construction occur or vegetation is desired to stabilize the site. |
| Filter Sock/Silt Sock | <ul style="list-style-type: none"> • Temporary strip of anchored mulch-filled filtration sock. • Applicable downstream of low acreage disturbances. • Intercept and detain small amounts of sediment from leaving the construction site. |
| Mulching | <ul style="list-style-type: none"> • Application of plant residues such as straw or other suitable materials to the soil surface to reduce erosion. • Protects soil surface from the erosive force of raindrops. • Reduces overland flow rates. • Maintains infiltration rates of soil. |
| Dust Control | <ul style="list-style-type: none"> • Stabilize areas with mulch as soon as possible. • Provide watering in un-stabilized areas. |
| Vegetation Protection | <ul style="list-style-type: none"> • Protect and preserve mature vegetation. • Identify desirable vegetation, identify critical root radius, and limit construction activities in these areas. |

The following specific BMPs are to be used at the Site:

- Leave as much vegetation onsite as possible.
- Minimize the time the impacted soil is exposed to precipitation.
- Prevent runoff from flowing across disturbed areas.
- Stabilize the disturbed soils as soon as possible.
- Shot rock/rip-rap or clean gravel will be laid at the construction entrance/exit to trap sediment falling from vehicles exiting the construction site in order to minimize the track-out of sediment onto adjacent streets. This is located on the southeast side of the property to East Archer Street.
- Mulch filtration sock will be placed around the perimeter of any excavation areas exposed to precipitation to limit run-on and runoff of sediments in these areas;

and downslope of clean backfill stockpiles to prevent transport by runoff. It is anticipated that clean backfill stockpiles will be placed south of the Evans building complex on the south side of the Site; mulch sock will be placed on the south and west side of this stockpile staging area to filter sediment out of any discharges from precipitation.

- Utilization of plastic tarps or other similar cover will be placed over stockpiles to minimize the potential of sediment runoff from this area.
- Stockpile management will be performed as necessary.
- Areas will be watered to minimize the generation of dust, if necessary.
- Vehicles will be excluded from undisturbed natural buffer areas to limit soil compaction in these areas.
- Treatment chemicals will not be used onsite and dewatering will not occur onsite.

2.2 Coordination of BMPs with Construction Activities

The sequencing of construction activities with the implementation of construction site BMPs will be implemented to reduce the amount and duration of soil exposed to erosion by wind, rain, runoff and vehicle tracking, and to perform the construction activities and control practices in accordance with the planned schedule.

The sequence of Site activities is as follows:

1. Contact the Oklahoma One-Call System (1-800-522-OKIE) prior to beginning intrusive activities to identify, locate, and mark any underground utilities.
2. Establish temporary a staging area for imported, clean backfill material on the southern portion of the Site with installation of mulch sock along the downslope side.
3. Establish temporary staging area for any trees or shrubs removed in order to access excavation areas.
4. Install clean gravel or rip-rap cover at the construction egress on the southeast side of the Site.

5. Perform pre-excavation disposal characterization of in-situ soils as described in the Remedial Action Work Plans (RAWPs) in order to allow for immediate transport of impacted soils offsite after being excavated from the previously identified areas.
6. Perform excavation, loading, and offsite disposal of previously identified areas as described in the RAWPs.
7. Perform post-excavation confirmation sampling of each excavation area as described in the RAWPs.
8. Based on post-excavation confirmation sampling results, excavations may be further excavated and further confirmation sampling conducted or backfilling, compacting, and regrading to adjacent Site topography will occur.
9. Construction egress removal.
10. Permanent ground cover to include pavement and area revegetation.
11. Final site cleanup.

BMPs will be coordinated with construction activities so BMPs are in place before specific construction activities precede within the sequence. The following BMPs will be coordinated with construction activities:

- Clearing and grading will not occur in any area until it is necessary for excavation to proceed.
- Vehicle tracking control located at the construction site entrance will be in place before clearing and grading begins.
- Stockpile management will be performed, as necessary.
- Major grading operations will be scheduled for the non-rainy season when practical.

2.3 Construction Practices to Minimize Stormwater Contamination

All trash from the Site will be deposited in the appropriate containers. No construction materials will be buried onsite. Appropriate personnel will be instructed regarding the

correct procedure for waste disposal. Good housekeeping and spill control practices will be followed during construction to minimize stormwater contamination from petroleum products and wastes. To prevent stormwater contamination from the construction site, the following BMPs will be implemented:

- Petroleum products will be stored in tightly sealed containers that are clearly labeled.
- Petroleum product containers will have secondary containment, if utilized onsite.
- Spill kits will be included with all fueling sources and maintenance activities.
- All spills will be cleaned up immediately upon discovery. Spills will be reported to Local Emergency Planning Committee (LEPC) by appropriate personnel, the City of Tulsa, and the ODEQ, if necessary.
- A stabilized construction entrance will be constructed to reduce vehicle tracking of sediments.
- Good housekeeping practices will be maintained by all construction personnel at all times while onsite.
- Onsite personnel will clean adjacent streets as needed, after each rainfall, and at the end of construction activities.
- There will be no type of washing activities onsite. Examples of the types of washing that cannot take place onsite include vehicle, wheel, and material mixing or transferring containers.
- No hazardous waste will be stored onsite.

SECTION 3: GOOD HOUSEKEEPING BMPS

Good housekeeping practices are designed to maintain a clean and orderly work environment. An effective first step in preventing stormwater contamination at construction sites involves using common sense to improve the facility's basic housekeeping methods. A clean and orderly work area can reduce the hazards to facility personnel and the hazard of accidental spills caused by mishandling of chemicals and equipment. Well-maintained material and chemical storage areas reduce the possibility of stormwater contact with contaminants. All materials stored onsite will be stored in a neat and orderly manner in original containers with the manufacturer's label.

3.1 Material Handling and Waste Management

Oil, gasoline, and other hazardous substances will be properly stored and will have secondary containment to prevent spills and runoff contamination. No hazardous waste will be stored onsite.

3.2 Preventative Maintenance

Informal inspections will be conducted and formal inspections will be completed as discussed in Section 5.1. A copy of the inspection checklist is included in **Appendix D**.

3.3 Spill Prevention and Control

The preparation of a well-defined set of procedures for preventing spills, controlling spills, and cleaning up spills will aid in the prevention of stormwater contamination. Employee training and the adoption of operational procedures that reduce the risk of spills are the most effective methods of BMP application. Spill kits will be located in all areas where petroleum products and hazardous materials are used or stored. The permittee or authorized representative will be responsible for reporting to the City of Tulsa, and ODEQ, if necessary. Spills will be cleaned up immediately and disposed of properly. The permittee or authorized representative will be responsible for reporting to

the ODEQ, if necessary. Should a spill occur, the SWP3 will be evaluated for effectiveness and changes will be implemented accordingly.

SECTION 4: INSPECTIONS

4.1 Inspections

All erosion and control measures will be inspected, at least, every 14 calendar days AND within 24 hours after a rainfall event of 0.5-inches or more. The inspection will be conducted by the SWP3 field supervisor or their designated stormwater team members. The construction site perimeter, all disturbed areas, material and/or waste storage areas that are exposed to precipitation, and locations where vehicles access the Site shall be inspected for evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to state waters. All erosion and sediment control practices identified in the SWP3 shall be evaluated to ensure that they are maintained and operating correctly. The inspection will also verify that the procedures used to prevent stormwater contamination from construction materials and petroleum products are effective.

Inspection Schedule:

- Inspections will be conducted for all temporary and permanent erosion, sediment and stormwater control measures throughout the construction project.
- Inspections are necessary after rainfall that causes stormwater runoff, as well as periodic inspections and maintenance to ensure proper functioning of control measures.

The following inspection and maintenance practices will be used to maintain erosion and sediment controls:

- The stabilized construction entrance will be inspected for sediment tracked onto adjacent public roads, and if found, will be swept up, removed, and properly staged onsite.
- Filtration sock will be inspected for deterioration and will be replaced, as necessary.

- The Site Inspection Checklist included as **Appendix D** will be completed during/after each inspection and kept onsite.
- Any deficiencies in the sites BMPs shall be noted on the inspection form and corrected as soon as possible.

The Site Inspection Checklist included as **Appendix D** will be completed during/after each inspection and kept onsite. Any deficiencies in the sites BMPs shall be noted on the inspection form and corrected as soon as possible.

In the event spills are observed during the inspection, refer to Section 3.3.

4.2 Delegation of Authority

Duly Authorized Representative(s) or Position(s):

Environmental Works, Inc.
Mr. Anthony Moore – Senior Project Manager
9529 E. 55th Place, Suite A
Tulsa, OK 74145
(417) 773-5747
anthony@environmentalworks.com

4.3 Corrective Action Log

Corrective Action Log: Corrective action activity is noted in the bi-weekly inspection form.

SECTION 5: RECORDKEEPING AND TRAINING

5.1 Recordkeeping

Records will be retained for a minimum period of at least 3 years after the permit is terminated. Records will be kept in a binder at the Site. After completion of land disturbance/construction activities, records will be kept with the City of Tulsa Brownsfield program.

5.2 Log of Changes to the SWP3

The SWP3 will be updated as appropriate or necessary during the duration of construction activities. The SWP3 will be amended and the SWP3 Amendment Log included in **Appendix E** will be updated whenever the following criteria are met:

- Design, operation, or maintenance of BMP is changed.
- Design of the construction project is changed that could significantly affect the quality of the stormwater discharges.
- SWP3 is determined to be ineffective in significantly minimizing or controlling erosion and sedimentation.

5.3 Training

Employee training is an integral part of the successful implementation of this SWP3. The training will inform personnel, at all levels of responsibility, on the contents and requirements of the stormwater permit and this plan, including good housekeeping practices, spill prevention and response techniques, and proper material management practices. All contractors will be made aware of the SWP3, and will be supplied a copy and time to review.

A Training Log is included in **Appendix F** to document the required training.

SECTION 6: CERTIFICATION AND NOTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____ Title: _____

Signature: _____ Date: _____

APPENDIX A

City of Tulsa – Earth Change Permit



City of Tulsa
 175 E 2nd St., Suite #450
 Tulsa, OK 74103
 (918) 596-9456

Permit

Permit NO. **WSD-022808-2019**

Permit Type: **Watershed**

Work Classification: **Commercial**

Permit Status: **Issued**

Issue Date: **02/05/2019**

Expiration: 08/05/2019

Location Address

Parcel Number

118 N LANSING AVE E, Tulsa, OK 74120

38550023624210

Contacts

| | |
|---|--|
| Anthony Moore 9529 E. 55th Place, Tulsa, OK 74145 (417)773-5747 | Applicant anthony@environmentalworks.com |
|---|--|

Description:

Valuation: \$0.00
Total Sq Feet: 0.00

Inspection Requests:

(918) 596-9656

| Fees | Amount |
|---|-----------------|
| Application Fee (Watershed) | \$50.00 |
| Permit and Licensing System Maintenance Fee | \$4.00 |
| Record Retention Fee | \$10.50 |
| Stormwater Impact Review Fee | \$250.00 |
| System Development Fee | \$26.00 |
| Total: | \$340.50 |

| Payments | Amt Paid |
|-------------------------|-----------------|
| Total Fees | \$340.50 |
| Credit Card | \$290.50 |
| Check # cQvrEDn78AeG | \$50.00 |
| Amount Due: | \$0.00 |

Available Inspections:

| Inspection Type | IVR |
|------------------------------|------|
| Placement of Erosion Control | 1015 |
| Final Watershed | 2101 |

Additional Information

Work Type: Earth Change

Describe Proposed Scope of Work in Detail: EWI will excavate shallow soil impacted with petroleum hydrocarbons and heavy metals at the former Evans-Fintube facility. Scope will include excavating 20 ft by 20 ft areas to approximately 1-2 feet below land surface. Most of the work will be conducted inside the existing buildings, but some work will be performed outside.

SP3 Required: No

Floodplain: No

 Issued By: Yvonne Jackson

February 05, 2019

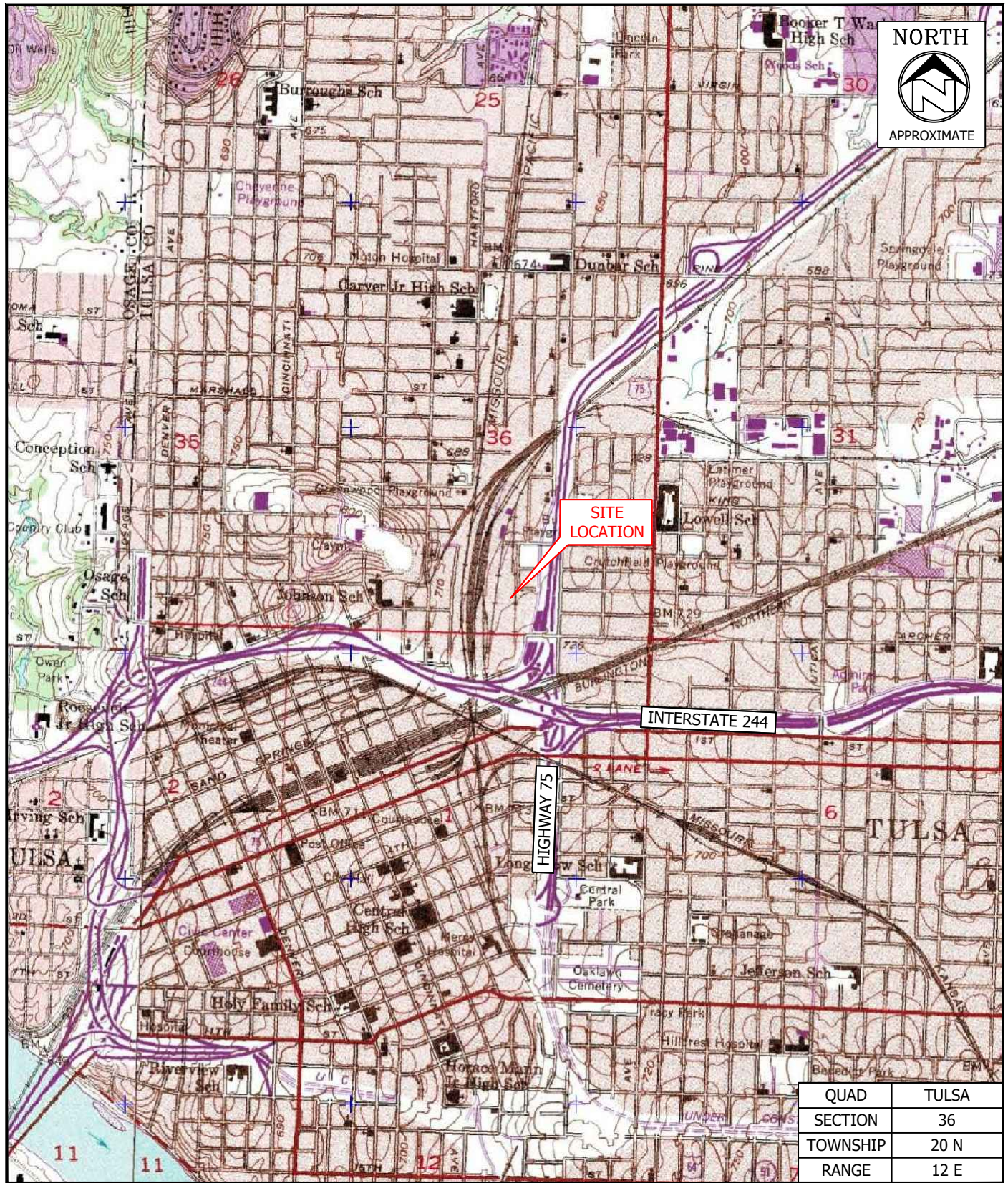
 Date

 Authorized Signature

 Date

APPENDIX B

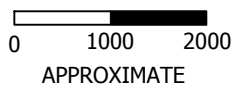
Figures



SOURCE: www.mapcard.com (1982)

CHECKED BY:
B. STANKE

SCALE (FEET)



EWI# 182045
DRAWN BY: CRR
Jul. 25, 2018



ENVIRONMENTAL WORKS
1455 E. Chestnut Expressway, Springfield, MO 65802

AREA TOPOGRAPHIC MAP



FORMER EVANS-FINTUBE FACILITY
118/150/186 N. LANSING AVENUE
TULSA, TULSA COUNTY, OKLAHOMA

FIGURE

1.0

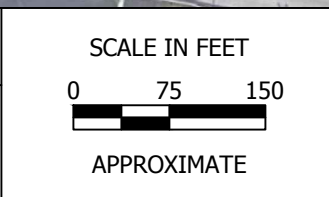
| | |
|----------|-------|
| QUAD | TULSA |
| SECTION | 36 |
| TOWNSHIP | 20 N |
| RANGE | 12 E |



| LEGEND | |
|---|----------------|
|  | = SURFACE FLOW |
|  | = MULCH SOCK |



CHECKED BY:
B. STANKE
E.W.I. # 182045
DRAWN BY: CRR
Feb. 8, 2019



Springfield Office Location:
1455 E. Chestnut Expressway
Springfield, MO 65802
Phone: (417) 890-9500

SITE DIAGRAM
FORMER EVANS-FINTUBE FACILITY
118/150/186 N. LANSING AVENUE
TULSA, TULSA COUNTY, OKLAHOMA

FIGURE
2.0

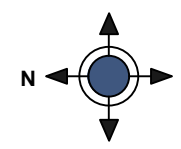
City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
 Tulsa, Oklahoma

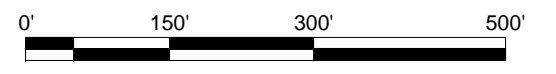
Site-Specific Brownfields Cleanup Grant

LEGEND

- SB-01 Soil Boring with Native Soil Sample Location (ALL Consulting - Installed April 13-15, 2010)
- MW-1 Monitoring Well Location (ODEQ - Installed 05/2017)
- SSA01 Surficial Soil Sample Location (ALL Consulting - April 13-15, 2010)
- TPH Impacted Soil
- PP Metals Impacted Soil
- PCB Impacted Soil
- PAH Impacted Soil



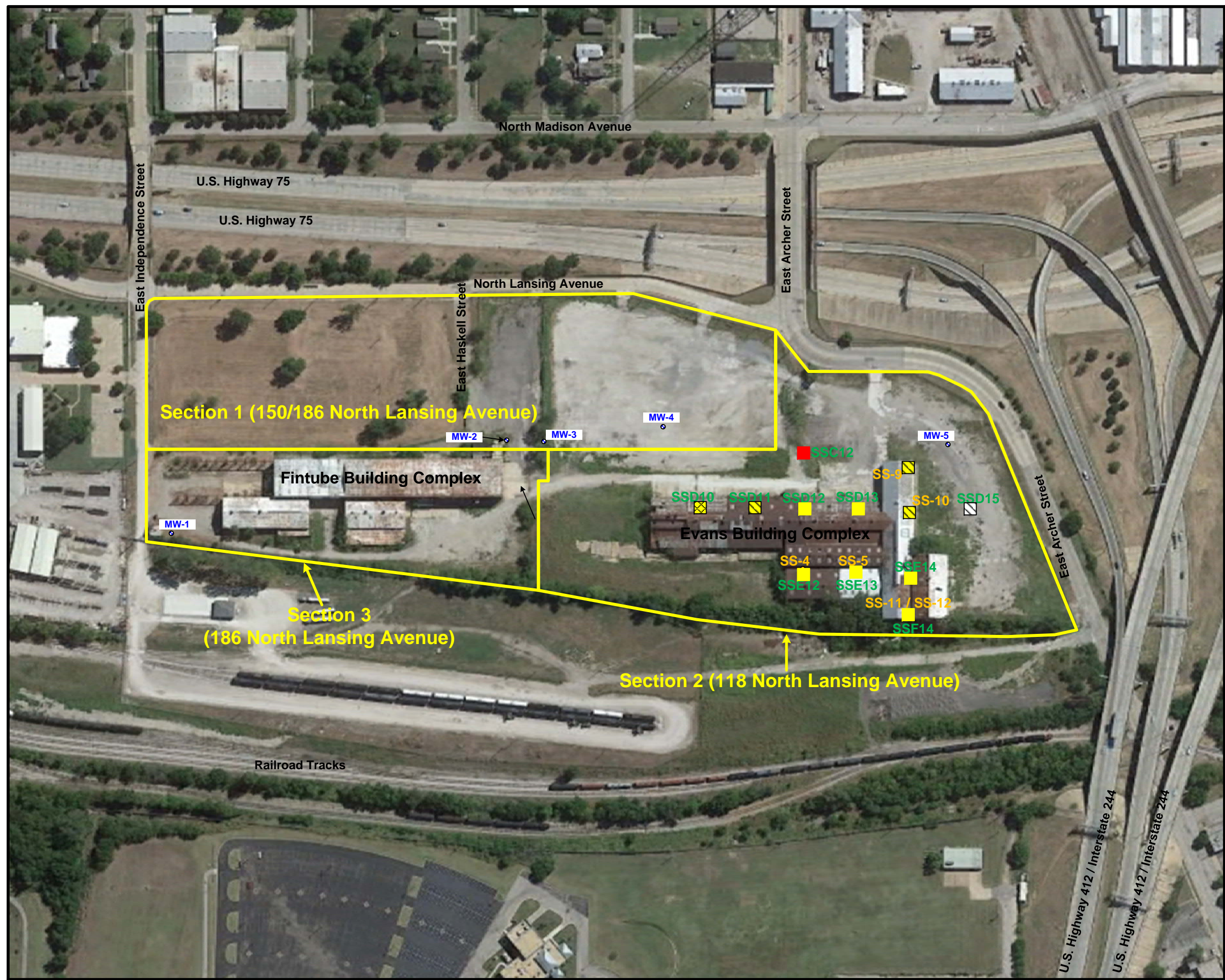
Scale: 1 inch = 200 feet



Section 2 Surface Soil Excavation Map

Project No: CTYTUL0050

Date: 05/09/2018








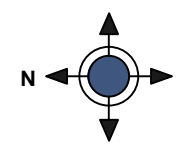
City of Tulsa
Evans-Fintube

118/150/186 North Lansing Avenue
Tulsa, Oklahoma

Site-Specific Brownfields Cleanup Grant

LEGEND

-  **SB-01** Soil Boring with Native Soil Sample Location (ALL Consulting - Installed April 13-15, 2010)
-  **MW-1** Monitoring Well Location (ODEQ - Installed 05/2017)
-  **SSA01** Surficial Soil Sample Location (ALL Consulting - April 13-15, 2010)
-  TPH Impacted Soil
-  PP Metals Impacted Soil



Scale: 1 inch = 200 feet



Section 3 Surface Soil Excavation Map

Project No: CTYTUL0050

Date: 03/14/2018



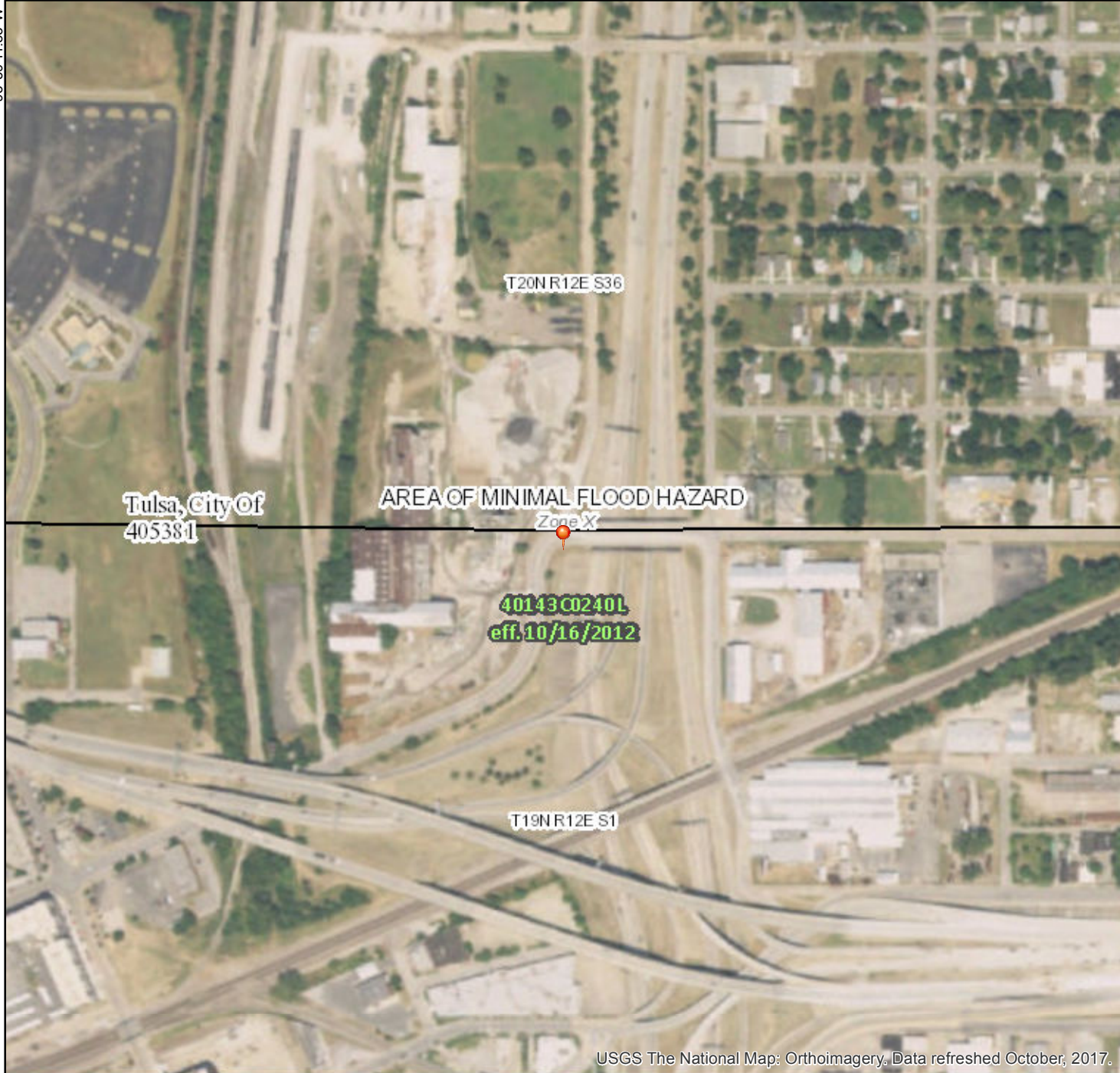
APPENDIX C

Flood Plain Map

National Flood Hazard Layer FIRMette



36°9'59.07"N



USGS The National Map: Orthoimagery, Data refreshed October, 2017. 1:6,000 36°9'30.02"N

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

| | | |
|----------------------------|--|--|
| SPECIAL FLOOD HAZARD AREAS | | Without Base Flood Elevation (BFE) Zone A, V, A99 |
| | | With BFE or Depth Zone AE, AO, AH, VE, AR |
| | | Regulatory Floodway |

| | | |
|-----------------------------|--|---|
| OTHER AREAS OF FLOOD HAZARD | | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X |
| | | Future Conditions 1% Annual Chance Flood Hazard Zone X |
| | | Area with Reduced Flood Risk due to Levee. See Notes. Zone X |
| | | Area with Flood Risk due to Levee Zone D |

| | | |
|-------------|--|---|
| OTHER AREAS | | NO SCREEN Area of Minimal Flood Hazard Zone X |
| | | Effective LOMRs |
| | | Area of Undetermined Flood Hazard Zone D |

| | | |
|--------------------|--|----------------------------------|
| GENERAL STRUCTURES | | Channel, Culvert, or Storm Sewer |
| | | Levee, Dike, or Floodwall |

| | | |
|----------------|--|---|
| OTHER FEATURES | | 20.2 Cross Sections with 1% Annual Chance |
| | | 17.5 Water Surface Elevation |
| | | Coastal Transect |
| | | Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| | | Jurisdiction Boundary |
| | | Coastal Transect Baseline |
| | | Profile Baseline |
| | | Hydrographic Feature |

| | | |
|------------|--|---------------------------|
| MAP PANELS | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/7/2019 at 12:15:35 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

95°59'11.83"W

95°58'34.37"W



0 250 500 1,000 1,500 2,000 Feet

APPENDIX D

Inspection Checklist

Former Evans-Fintube Excavation - 118/150/186 North Lansing Ave, Tulsa, Oklahoma - Land Disturbance

SWPPP Bi-Weekly Visual Inspection

Inspection Frequency - At least once every 14 calendar days AND within 24-hours of a storm event of 0.5-inches or greater.

Date: _____ **Weather Conditions:** _____ **Rain Since Previous Inspection** _____

Inspection Type: Regular Inspection _____ After Rain Event _____ (Place checkmark in blank corresponding to inspection type)

| General Requirements | | Yes | No | NA |
|-----------------------------|---|------------|-----------|-----------|
| 1 | Is there any stormwater contamination from; spillage or loss of fluids, oil, grease, fuel, etc. from vehicle refueling and/or maintenance? | | | |
| 2 | Are all petroleum products, petroleum waste products and storage containers under roof and not exposed to stormwater or have other prescribed Best Management Practices (BMP) such as plastic lids, portable spill pans or containment provided to prevent the commingling of stormwater? | | | |
| 3 | Have BMPs at the Site been observed and evaluated for; effectiveness and deficiencies and have corrective measures that will be taken been noted and discussed with the facility management? | | | |
| 4 | Are sediment and erosion controls sufficient to prevent or control sediment loss off of the property? | | | |
| 5 | Are good housekeeping practices being utilized to keep trash from entry into waters of the state? | | | |
| Site BMPs | | | | |
| 6 | Is there any evidence of sediment erosion or deposition around the Construction Entrance/Exit? | | | |
| 7 | Is there any offsite tracking of sediment or other materials onto North Lansing Avenue or East Archer Street from the property? | | | |
| 8 | Is installed filtration sock/silt sock in good condition, and performing as it was intended? | | | |
| 9 | Are BMPs free of built up sediment after the storm event? | | | |
| 10 | Is there any evidence of sediment erosion or deposition on southwest corner of property? | | | |

Please note the cause and action taken to correct any unsatisfactory conditions below (deficiencies must be corrected within seven days):

Inspector: _____
Printed Name
Signature

APPENDIX E

SWPPP Amendment Log

APPENDIX F

Training Log

Example Employee Training Outline

Topic 1 General overview of stormwater permit and pollution planning requirements.

Topic 2 List of materials and activities that have the potential to impact stormwater at the facility.

- Refueling of earth moving equipment
- Spill kit
- Housekeeping
- Soil stockpiling
- Soil grading

Topic 3 Pollution prevention activities

- Spill Prevention
- Spill Response
- Employee Training
- Good Housekeeping
- Preventive Maintenance
- Vegetative Cover to Prevent Erosion

ATTACHMENT 2

Laboratory Analytical Reports

March 04, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS-FINTUBE
Pace Project No.: 60294602

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on February 19, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Certification Number: 10090

Arkansas Drinking Water

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS-FINTUBE

Pace Project No.: 60294602

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|---------------------------|--------|----------------|----------------|
| 60294602001 | SSE16-PRE-COMP: 0-1' | Solid | 02/18/19 14:30 | 02/19/19 08:30 |
| 60294602002 | DUPLICATE 01 | Solid | 02/18/19 14:30 | 02/19/19 08:30 |
| 60294602003 | SSE15-PRE-COMP: 0-1' | Solid | 02/18/19 15:15 | 02/19/19 08:30 |
| 60294602004 | SSE07-PRE-COMP: 0-1' | Solid | 02/18/19 13:35 | 02/19/19 08:30 |
| 60294602005 | SSC15-PRE-COMP: 0-1' | Solid | 02/18/19 16:20 | 02/19/19 08:30 |
| 60294602006 | DUPLICATE 02 | Solid | 02/18/19 16:20 | 02/19/19 08:30 |
| 60294602007 | SB05-SS01-PRE-COMP: 10-1' | Solid | 02/18/19 13:10 | 02/19/19 08:30 |
| 60294602008 | SSD15-PRE-COMP: 0-1" | Solid | 02/18/19 15:40 | 02/19/19 08:30 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS-FINTUBE

Pace Project No.: 60294602

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|---------------------------|------------|----------|-------------------|------------|
| 60294602001 | SSE16-PRE-COMP: 0-1' | TNRCC 1005 | AJM | 6 | PASI-K |
| | | EPA 6010 | JDE | 12 | PASI-K |
| | | EPA 6010 | JDE | 1 | PASI-K |
| | | EPA 7471 | HKC | 1 | PASI-K |
| | | EPA 8270 | JMT | 23 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294602002 | DUPLICATE 01 | EPA 8270 | JMT | 23 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294602003 | SSE15-PRE-COMP: 0-1' | EPA 6010 | EMR | 12 | PASI-K |
| | | EPA 6010 | EMR | 1 | PASI-K |
| | | EPA 7471 | HKC | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294602004 | SSE07-PRE-COMP: 0-1' | EPA 6010 | EMR | 12 | PASI-K |
| | | EPA 6010 | EMR | 1 | PASI-K |
| | | EPA 7471 | HKC | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294602005 | SSC15-PRE-COMP: 0-1' | EPA 6010 | EMR | 12 | PASI-K |
| | | EPA 6010 | EMR | 1 | PASI-K |
| | | EPA 7471 | HKC | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294602006 | DUPLICATE 02 | EPA 6010 | EMR | 12 | PASI-K |
| | | EPA 7471 | HKC | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294602007 | SB05-SS01-PRE-COMP: 10-1' | EPA 6010 | EMR, JDE | 12 | PASI-K |
| | | EPA 7471 | HKC | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294602008 | SSD15-PRE-COMP: 0-1" | EPA 6010 | EMR | 12 | PASI-K |
| | | EPA 7471 | HKC | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS-FINTUBE

Pace Project No.: 60294602

| Lab Sample ID | Client Sample ID | Result | Units | Report Limit | Analyzed | Qualifiers |
|--------------------|-----------------------------|--------|-------|--------------|----------------|------------|
| Method | Parameters | | | | | |
| 60294602001 | SSE16-PRE-COMP: 0-1' | | | | | |
| TNRCC 1005 | TPH (>C28-C35) | 45.1 | mg/kg | 19.0 | 02/19/19 19:54 | |
| TNRCC 1005 | TPH Total (C06-C35) | 57.4 | mg/kg | 19.0 | 02/19/19 19:54 | |
| EPA 6010 | Antimony | 0.91 | mg/kg | 0.76 | 02/21/19 11:45 | M1 |
| EPA 6010 | Arsenic | 15.4 | mg/kg | 0.76 | 02/21/19 11:45 | 4e,M1 |
| EPA 6010 | Beryllium | 0.78 | mg/kg | 0.076 | 02/21/19 11:45 | M1 |
| EPA 6010 | Cadmium | 1.1 | mg/kg | 0.38 | 02/21/19 11:45 | 5e,M1 |
| EPA 6010 | Chromium | 31.0 | mg/kg | 0.38 | 02/21/19 11:45 | 2e,M1 |
| EPA 6010 | Copper | 21.9 | mg/kg | 1.5 | 02/21/19 11:45 | M1 |
| EPA 6010 | Lead | 158 | mg/kg | 0.38 | 02/21/19 11:45 | 1e,M1 |
| EPA 6010 | Nickel | 12.6 | mg/kg | 0.38 | 02/21/19 11:45 | M1 |
| EPA 6010 | Selenium | 1.2 | mg/kg | 1.1 | 02/21/19 11:45 | 6e,M1 |
| EPA 6010 | Zinc | 720 | mg/kg | 7.6 | 02/21/19 11:45 | M1 |
| ASTM D2974 | Percent Moisture | 9.8 | % | 0.50 | 02/20/19 15:15 | |
| 60294602002 | DUPLICATE 01 | | | | | |
| ASTM D2974 | Percent Moisture | 6.3 | % | 0.50 | 02/21/19 16:28 | |
| 60294602003 | SSE15-PRE-COMP: 0-1' | | | | | |
| EPA 6010 | Arsenic | 9.0 | mg/kg | 0.81 | 02/20/19 16:52 | |
| EPA 6010 | Beryllium | 0.67 | mg/kg | 0.081 | 02/20/19 16:52 | |
| EPA 6010 | Cadmium | 0.71 | mg/kg | 0.41 | 02/20/19 16:52 | |
| EPA 6010 | Chromium | 15.6 | mg/kg | 0.41 | 02/20/19 16:52 | |
| EPA 6010 | Copper | 19.4 | mg/kg | 1.6 | 02/20/19 16:52 | |
| EPA 6010 | Lead | 121 | mg/kg | 0.41 | 02/20/19 16:52 | |
| EPA 6010 | Nickel | 11.8 | mg/kg | 0.41 | 02/20/19 16:52 | |
| EPA 6010 | Zinc | 328 | mg/kg | 8.1 | 02/20/19 16:52 | |
| ASTM D2974 | Percent Moisture | 16.7 | % | 0.50 | 02/20/19 15:15 | |
| 60294602004 | SSE07-PRE-COMP: 0-1' | | | | | |
| EPA 6010 | Arsenic | 4.3 | mg/kg | 1.0 | 02/20/19 16:54 | |
| EPA 6010 | Beryllium | 0.17 | mg/kg | 0.10 | 02/20/19 16:54 | |
| EPA 6010 | Cadmium | 1.0 | mg/kg | 0.51 | 02/20/19 16:54 | |
| EPA 6010 | Chromium | 19.1 | mg/kg | 0.51 | 02/20/19 16:54 | |
| EPA 6010 | Copper | 44.4 | mg/kg | 2.1 | 02/20/19 16:54 | R1 |
| EPA 6010 | Lead | 123 | mg/kg | 0.51 | 02/20/19 16:54 | M1,R1 |
| EPA 6010 | Nickel | 16.5 | mg/kg | 0.51 | 02/20/19 16:54 | |
| EPA 6010 | Zinc | 186 | mg/kg | 10.3 | 02/20/19 16:54 | M1,R1 |
| ASTM D2974 | Percent Moisture | 10 | % | 0.50 | 02/20/19 15:15 | |
| 60294602005 | SSC15-PRE-COMP: 0-1' | | | | | |
| EPA 6010 | Arsenic | 10.5 | mg/kg | 0.99 | 02/20/19 16:56 | |
| EPA 6010 | Beryllium | 0.21 | mg/kg | 0.099 | 02/20/19 16:56 | |
| EPA 6010 | Cadmium | 1.7 | mg/kg | 0.50 | 02/20/19 16:56 | |
| EPA 6010 | Chromium | 9.8 | mg/kg | 0.50 | 02/20/19 16:56 | |
| EPA 6010 | Copper | 21.0 | mg/kg | 2.0 | 02/20/19 16:56 | |
| EPA 6010 | Lead | 140 | mg/kg | 0.50 | 02/20/19 16:56 | |
| EPA 6010 | Nickel | 11.6 | mg/kg | 0.50 | 02/20/19 16:56 | |
| EPA 6010 | Zinc | 569 | mg/kg | 9.9 | 02/20/19 16:56 | |
| ASTM D2974 | Percent Moisture | 6.8 | % | 0.50 | 02/20/19 15:15 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS-FINTUBE

Pace Project No.: 60294602

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|----------------------------------|--------|-------|--------------|----------------|------------|
| 60294602006 | DUPLICATE 02 | | | | | |
| EPA 6010 | Arsenic | 12.7 | mg/kg | 0.73 | 02/20/19 16:59 | |
| EPA 6010 | Beryllium | 0.16 | mg/kg | 0.073 | 02/20/19 16:59 | |
| EPA 6010 | Cadmium | 1.5 | mg/kg | 0.36 | 02/20/19 16:59 | |
| EPA 6010 | Chromium | 5.2 | mg/kg | 0.36 | 02/20/19 16:59 | |
| EPA 6010 | Copper | 14.3 | mg/kg | 1.5 | 02/20/19 16:59 | |
| EPA 6010 | Lead | 158 | mg/kg | 0.36 | 02/20/19 16:59 | |
| EPA 6010 | Nickel | 8.4 | mg/kg | 0.36 | 02/20/19 16:59 | |
| EPA 6010 | Zinc | 348 | mg/kg | 7.3 | 02/20/19 16:59 | |
| EPA 7471 | Mercury | 0.059 | mg/kg | 0.046 | 02/21/19 14:28 | |
| ASTM D2974 | Percent Moisture | 6.9 | % | 0.50 | 02/20/19 15:15 | |
| 60294602007 | SB05-SS01-PRE-COMP: 10-1' | | | | | |
| EPA 6010 | Antimony | 3.1 | mg/kg | 2.1 | 02/21/19 11:52 | |
| EPA 6010 | Arsenic | 13.3 | mg/kg | 1.0 | 02/20/19 17:01 | |
| EPA 6010 | Beryllium | 1.0 | mg/kg | 0.10 | 02/20/19 17:01 | |
| EPA 6010 | Cadmium | 2.4 | mg/kg | 0.52 | 02/20/19 17:01 | |
| EPA 6010 | Chromium | 29.8 | mg/kg | 1.0 | 02/21/19 11:52 | |
| EPA 6010 | Copper | 22.9 | mg/kg | 2.1 | 02/20/19 17:01 | |
| EPA 6010 | Lead | 64.8 | mg/kg | 0.52 | 02/20/19 17:01 | |
| EPA 6010 | Nickel | 45.6 | mg/kg | 0.52 | 02/20/19 17:01 | |
| EPA 6010 | Selenium | 3.9 | mg/kg | 3.1 | 02/21/19 11:52 | |
| EPA 6010 | Zinc | 206 | mg/kg | 10.4 | 02/20/19 17:01 | |
| EPA 7471 | Mercury | 0.13 | mg/kg | 0.062 | 02/21/19 14:30 | |
| ASTM D2974 | Percent Moisture | 19.8 | % | 0.50 | 02/20/19 15:15 | |
| 60294602008 | SSD15-PRE-COMP: 0-1" | | | | | |
| EPA 6010 | Arsenic | 9.1 | mg/kg | 0.98 | 02/20/19 17:08 | |
| EPA 6010 | Beryllium | 0.14 | mg/kg | 0.098 | 02/20/19 17:08 | |
| EPA 6010 | Cadmium | 2.2 | mg/kg | 0.49 | 02/20/19 17:08 | |
| EPA 6010 | Chromium | 6.1 | mg/kg | 0.49 | 02/20/19 17:08 | |
| EPA 6010 | Copper | 11.0 | mg/kg | 2.0 | 02/20/19 17:08 | |
| EPA 6010 | Lead | 52.4 | mg/kg | 0.49 | 02/20/19 17:08 | |
| EPA 6010 | Nickel | 8.5 | mg/kg | 0.49 | 02/20/19 17:08 | |
| EPA 6010 | Zinc | 533 | mg/kg | 9.8 | 02/20/19 17:08 | |
| ASTM D2974 | Percent Moisture | 11.6 | % | 0.50 | 02/20/19 15:15 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Date: March 04, 2019

SSE16-PRE-COMP: 0-1' (Lab ID: 60294602001)

- The following compounds were not detected in the 8270 TIC search: Dibenzo(a,e)pyrene, 4-Nitropyrene and Benzo(j)fluoranthene.

DUPLICATE 01 (Lab ID: 60294602002)

- The following compounds were not detected in the 8270 TIC search: Dibenzo(a,e)pyrene, 4-Nitropyrene and Benzo(j)fluoranthene.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Method: TNRCC 1005

Description: TNRCC 1005 TPH

Client: Environmental Works_OK office

Date: March 04, 2019

General Information:

1 sample was analyzed for TNRCC 1005. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with TNRCC 1005 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 569936

S1: Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

- MS (Lab ID: 2337089)
- 1-Chlorooctane (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Method: EPA 6010

Description: 6010 MET ICP Red. Interference

Client: Environmental Works_OK office

Date: March 04, 2019

General Information:

7 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 569966

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60294602004

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2337097)
 - Antimony
 - Lead
 - Zinc
- MSD (Lab ID: 2337098)
 - Antimony
 - Lead
 - Zinc

R1: RPD value was outside control limits.

- MSD (Lab ID: 2337098)
 - Copper
 - Lead
 - Zinc

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Method: EPA 6010

Description: 6010 MET ICP Red. Interference

Client: Environmental Works_OK office

Date: March 04, 2019

QC Batch: 569979

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60294602001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2337142)
 - Antimony
 - Arsenic
 - Beryllium
 - Cadmium
 - Chromium
 - Copper
 - Lead
 - Nickel
 - Selenium
 - Silver
 - Thallium
 - Zinc
- MSD (Lab ID: 2337143)
 - Antimony
 - Arsenic
 - Beryllium
 - Cadmium
 - Chromium
 - Copper
 - Lead
 - Nickel
 - Selenium
 - Silver
 - Thallium
 - Zinc

Additional Comments:

Analyte Comments:

QC Batch: 569966

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- SB05-SS01-PRE-COMP: 10-1' (Lab ID: 60294602007)
 - Thallium

QC Batch: 569979

1e: Post digestion spike performed 101.7% recovery

- MS (Lab ID: 2337142)
 - Lead
- MSD (Lab ID: 2337143)
 - Lead
- SSE16-PRE-COMP: 0-1' (Lab ID: 60294602001)
 - Lead

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Method: EPA 6010

Description: 6010 MET ICP Red. Interference

Client: Environmental Works_OK office

Date: March 04, 2019

Analyte Comments:

QC Batch: 569979

2e: Post digestion spike performed 102.7% recovery

- MS (Lab ID: 2337142)
 - Chromium
- MSD (Lab ID: 2337143)
 - Chromium
- SSE16-PRE-COMP: 0-1' (Lab ID: 60294602001)
 - Chromium

4e: Post digestion spike performed 94.7% recovery

- MS (Lab ID: 2337142)
 - Arsenic
- MSD (Lab ID: 2337143)
 - Arsenic
- SSE16-PRE-COMP: 0-1' (Lab ID: 60294602001)
 - Arsenic

5e: Post digestion spike performed 97.7% recovery

- MS (Lab ID: 2337142)
 - Cadmium
- MSD (Lab ID: 2337143)
 - Cadmium
- SSE16-PRE-COMP: 0-1' (Lab ID: 60294602001)
 - Cadmium

6e: Post digestion spike performed 99.4% recovery

- MS (Lab ID: 2337142)
 - Selenium
- MSD (Lab ID: 2337143)
 - Selenium
- SSE16-PRE-COMP: 0-1' (Lab ID: 60294602001)
 - Selenium

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Method: EPA 6010

Description: 6010 MET ICP, TCLP

Client: Environmental Works_OK office

Date: March 04, 2019

General Information:

4 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Method: EPA 7471

Description: 7471 Mercury

Client: Environmental Works_OK office

Date: March 04, 2019

General Information:

7 samples were analyzed for EPA 7471. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7471 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Method: EPA 8270

Description: 8270 MSSV Semivolatiles

Client: Environmental Works_OK office

Date: March 04, 2019

General Information:

2 samples were analyzed for EPA 8270. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

QC Batch: 570241

P3: Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

- DUPLICATE 01 (Lab ID: 60294602002)
- SSE16-PRE-COMP: 0-1' (Lab ID: 60294602001)

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Sample: **SSE16-PRE-COMP: 0-1'** Lab ID: **60294602001** Collected: 02/18/19 14:30 Received: 02/19/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Comments: • The following compounds were not detected in the 8270 TIC search: Dibenzo(a,e)pyrene, 4-Nitropyrene and Benzo(j)fluoranthene.

| Parameters | Results | Units | Report Limit | Reg. Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|--|---------|-------|--------------|------------|----|----------------|----------------|-----------|-------|
| TNRCC 1005 TPH Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 19.0 | | 1 | 02/19/19 15:25 | 02/19/19 19:54 | | |
| TPH (>C12-C28) | ND | mg/kg | 19.0 | | 1 | 02/19/19 15:25 | 02/19/19 19:54 | | |
| TPH (>C28-C35) | 45.1 | mg/kg | 19.0 | | 1 | 02/19/19 15:25 | 02/19/19 19:54 | | |
| TPH Total (C06-C35) | 57.4 | mg/kg | 19.0 | | 1 | 02/19/19 15:25 | 02/19/19 19:54 | | |
| Surrogates | | | | | | | | | |
| o-Terphenyl (S) | 102 | % | 70-130 | | 1 | 02/19/19 15:25 | 02/19/19 19:54 | 84-15-1 | |
| 1-Chlorooctane (S) | 101 | % | 70-130 | | 1 | 02/19/19 15:25 | 02/19/19 19:54 | 3386-33-2 | |
| 6010 MET ICP Red. Interference Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | | | |
| Antimony | 0.91 | mg/kg | 0.76 | | 1 | 02/19/19 16:37 | 02/21/19 11:45 | 7440-36-0 | M1 |
| Arsenic | 15.4 | mg/kg | 0.76 | | 1 | 02/19/19 16:37 | 02/21/19 11:45 | 7440-38-2 | 4e,M1 |
| Beryllium | 0.78 | mg/kg | 0.076 | | 1 | 02/19/19 16:37 | 02/21/19 11:45 | 7440-41-7 | M1 |
| Cadmium | 1.1 | mg/kg | 0.38 | | 1 | 02/19/19 16:37 | 02/21/19 11:45 | 7440-43-9 | 5e,M1 |
| Chromium | 31.0 | mg/kg | 0.38 | | 1 | 02/19/19 16:37 | 02/21/19 11:45 | 7440-47-3 | 2e,M1 |
| Copper | 21.9 | mg/kg | 1.5 | | 1 | 02/19/19 16:37 | 02/21/19 11:45 | 7440-50-8 | M1 |
| Lead | 158 | mg/kg | 0.38 | | 1 | 02/19/19 16:37 | 02/21/19 11:45 | 7439-92-1 | 1e,M1 |
| Nickel | 12.6 | mg/kg | 0.38 | | 1 | 02/19/19 16:37 | 02/21/19 11:45 | 7440-02-0 | M1 |
| Selenium | 1.2 | mg/kg | 1.1 | | 1 | 02/19/19 16:37 | 02/21/19 11:45 | 7782-49-2 | 6e,M1 |
| Silver | ND | mg/kg | 0.53 | | 1 | 02/19/19 16:37 | 02/21/19 11:45 | 7440-22-4 | M1 |
| Thallium | ND | mg/kg | 1.5 | | 1 | 02/19/19 16:37 | 02/21/19 11:45 | 7440-28-0 | M1 |
| Zinc | 720 | mg/kg | 7.6 | | 1 | 02/19/19 16:37 | 02/21/19 11:45 | 7440-66-6 | M1 |
| 6010 MET ICP, TCLP Analytical Method: EPA 6010 Preparation Method: EPA 3010 Leachate Method/Date: EPA 1311; 02/28/19 00:00 | | | | | | | | | |
| Lead | ND | mg/L | 0.50 | | 5 | 03/01/19 13:06 | 03/04/19 12:06 | 7439-92-1 | |
| 7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | | | |
| Mercury | ND | mg/kg | 0.052 | | 1 | 02/20/19 10:08 | 02/21/19 14:07 | 7439-97-6 | |
| 8270 MSSV Semivolatiles Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | | | |
| Acenaphthene | ND | mg/kg | 9.8 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 83-32-9 | |
| Anthracene | ND | mg/kg | 9.8 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 120-12-7 | |
| Benzo(a)anthracene | ND | mg/kg | 9.8 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 56-55-3 | |
| Benzo(a)pyrene | ND | mg/kg | 9.8 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | mg/kg | 9.8 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 205-99-2 | |
| Benzo(k)fluoranthene | ND | mg/kg | 9.8 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 207-08-9 | |
| 2-Chloronaphthalene | ND | mg/kg | 9.8 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 91-58-7 | |
| Chrysene | ND | mg/kg | 9.8 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | mg/kg | 9.8 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 53-70-3 | |
| 7,12-Dimethylbenz(a)anthracene | ND | mg/kg | 49.6 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 57-97-6 | |
| Fluoranthene | ND | mg/kg | 9.8 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 206-44-0 | |
| Fluorene | ND | mg/kg | 9.8 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 86-73-7 | |
| Indeno(1,2,3-cd)pyrene | ND | mg/kg | 9.8 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 193-39-5 | |
| 1-Methylnaphthalene | ND | mg/kg | 9.8 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 90-12-0 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Sample: SSE16-PRE-COMP: 0-1' Lab ID: 60294602001 Collected: 02/18/19 14:30 Received: 02/19/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Comments: • The following compounds were not detected in the 8270 TIC search: Dibenzo(a,e)pyrene, 4-Nitropyrene and Benzo(j)fluoranthene.

| Parameters | Results | Units | Report Limit | Reg. Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|--------------------------------|------------|---|--------------|------------|----|----------------|----------------|------------|------|
| 8270 MSSV Semivolatiles | | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | |
| 2-Methylnaphthalene | ND | mg/kg | 9.8 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 91-57-6 | |
| Naphthalene | ND | mg/kg | 9.8 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 91-20-3 | |
| Pyrene | ND | mg/kg | 9.8 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 129-00-0 | |
| Surrogates | | | | | | | | | |
| Nitrobenzene-d5 (S) | 98 | % | 35-119 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 4165-60-0 | P3 |
| 2-Fluorobiphenyl (S) | 98 | % | 55-110 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 321-60-8 | |
| Terphenyl-d14 (S) | 105 | % | 45-114 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 1718-51-0 | |
| Phenol-d6 (S) | 106 | % | 48-110 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 13127-88-3 | |
| 2-Fluorophenol (S) | 105 | % | 46-108 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 95 | % | 35-119 | | 1 | 02/20/19 11:43 | 02/21/19 14:17 | 118-79-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | | |
| Percent Moisture | 9.8 | % | 0.50 | | 1 | | 02/20/19 15:15 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Sample: DUPLICATE 01 **Lab ID: 60294602002** Collected: 02/18/19 14:30 Received: 02/19/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Comments: • The following compounds were not detected in the 8270 TIC search: Dibenzo(a,e)pyrene, 4-Nitropyrene and Benzo(j)fluoranthene.

| Parameters | Results | Units | Report Limit | Reg. Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---------|-------|--------------|------------|----|----------------|----------------|------------|------|
| 8270 MSSV Semivolatiles | | | | | | | | | |
| Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | | | | |
| Acenaphthene | ND | mg/kg | 9.5 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 83-32-9 | |
| Anthracene | ND | mg/kg | 9.5 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 120-12-7 | |
| Benzo(a)anthracene | ND | mg/kg | 9.5 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 56-55-3 | |
| Benzo(a)pyrene | ND | mg/kg | 9.5 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | mg/kg | 9.5 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 205-99-2 | |
| Benzo(k)fluoranthene | ND | mg/kg | 9.5 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 207-08-9 | |
| 2-Chloronaphthalene | ND | mg/kg | 9.5 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 91-58-7 | |
| Chrysene | ND | mg/kg | 9.5 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | mg/kg | 9.5 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 53-70-3 | |
| 7,12-Dimethylbenz(a)anthracene | ND | mg/kg | 47.8 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 57-97-6 | |
| Fluoranthene | ND | mg/kg | 9.5 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 206-44-0 | |
| Fluorene | ND | mg/kg | 9.5 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 86-73-7 | |
| Indeno(1,2,3-cd)pyrene | ND | mg/kg | 9.5 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 193-39-5 | |
| 1-Methylnaphthalene | ND | mg/kg | 9.5 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 90-12-0 | |
| 2-Methylnaphthalene | ND | mg/kg | 9.5 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 91-57-6 | |
| Naphthalene | ND | mg/kg | 9.5 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 91-20-3 | |
| Pyrene | ND | mg/kg | 9.5 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 129-00-0 | |
| Surrogates | | | | | | | | | |
| Nitrobenzene-d5 (S) | 90 | % | 35-119 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 4165-60-0 | P3 |
| 2-Fluorobiphenyl (S) | 93 | % | 55-110 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 321-60-8 | |
| Terphenyl-d14 (S) | 98 | % | 45-114 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 1718-51-0 | |
| Phenol-d6 (S) | 95 | % | 48-110 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 13127-88-3 | |
| 2-Fluorophenol (S) | 94 | % | 46-108 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 88 | % | 35-119 | | 1 | 02/20/19 11:43 | 02/21/19 14:39 | 118-79-6 | |

Percent Moisture

Analytical Method: ASTM D2974

| | | | | | | | | | |
|------------------|------------|---|------|--|---|--|----------------|--|--|
| Percent Moisture | 6.3 | % | 0.50 | | 1 | | 02/21/19 16:28 | | |
|------------------|------------|---|------|--|---|--|----------------|--|--|

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Sample: SSE15-PRE-COMP: 0-1' Lab ID: 60294602003 Collected: 02/18/19 15:15 Received: 02/19/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | Reg. Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|--|-------------|-------|--------------|------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP Red. Interference | | | | | | | | | |
| Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | | | |
| Antimony | ND | mg/kg | 0.81 | | 1 | 02/19/19 15:36 | 02/20/19 16:52 | 7440-36-0 | |
| Arsenic | 9.0 | mg/kg | 0.81 | | 1 | 02/19/19 15:36 | 02/20/19 16:52 | 7440-38-2 | |
| Beryllium | 0.67 | mg/kg | 0.081 | | 1 | 02/19/19 15:36 | 02/20/19 16:52 | 7440-41-7 | |
| Cadmium | 0.71 | mg/kg | 0.41 | | 1 | 02/19/19 15:36 | 02/20/19 16:52 | 7440-43-9 | |
| Chromium | 15.6 | mg/kg | 0.41 | | 1 | 02/19/19 15:36 | 02/20/19 16:52 | 7440-47-3 | |
| Copper | 19.4 | mg/kg | 1.6 | | 1 | 02/19/19 15:36 | 02/20/19 16:52 | 7440-50-8 | |
| Lead | 121 | mg/kg | 0.41 | | 1 | 02/19/19 15:36 | 02/20/19 16:52 | 7439-92-1 | |
| Nickel | 11.8 | mg/kg | 0.41 | | 1 | 02/19/19 15:36 | 02/20/19 16:52 | 7440-02-0 | |
| Selenium | ND | mg/kg | 1.2 | | 1 | 02/19/19 15:36 | 02/20/19 16:52 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.57 | | 1 | 02/19/19 15:36 | 02/20/19 16:52 | 7440-22-4 | |
| Thallium | ND | mg/kg | 1.6 | | 1 | 02/19/19 15:36 | 02/20/19 16:52 | 7440-28-0 | |
| Zinc | 328 | mg/kg | 8.1 | | 1 | 02/19/19 15:36 | 02/20/19 16:52 | 7440-66-6 | |
| 6010 MET ICP, TCLP | | | | | | | | | |
| Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | | |
| Leachate Method/Date: EPA 1311; 02/28/19 00:00 | | | | | | | | | |
| Lead | ND | mg/L | 0.50 | | 5 | 03/01/19 13:06 | 03/04/19 15:20 | 7439-92-1 | |
| 7471 Mercury | | | | | | | | | |
| Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | | | |
| Mercury | ND | mg/kg | 0.051 | | 1 | 02/20/19 10:08 | 02/21/19 14:19 | 7439-97-6 | |
| Percent Moisture | | | | | | | | | |
| Analytical Method: ASTM D2974 | | | | | | | | | |
| Percent Moisture | 16.7 | % | 0.50 | | 1 | | 02/20/19 15:15 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Sample: SSE07-PRE-COMP: 0-1' Lab ID: 60294602004 Collected: 02/18/19 13:35 Received: 02/19/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | Reg. Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|--|-------------|-------|--------------|------------|----|----------------|----------------|-----------|-------|
| 6010 MET ICP Red. Interference | | | | | | | | | |
| Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | | | |
| Antimony | ND | mg/kg | 1.0 | | 1 | 02/19/19 15:36 | 02/20/19 16:54 | 7440-36-0 | M1 |
| Arsenic | 4.3 | mg/kg | 1.0 | | 1 | 02/19/19 15:36 | 02/20/19 16:54 | 7440-38-2 | |
| Beryllium | 0.17 | mg/kg | 0.10 | | 1 | 02/19/19 15:36 | 02/20/19 16:54 | 7440-41-7 | |
| Cadmium | 1.0 | mg/kg | 0.51 | | 1 | 02/19/19 15:36 | 02/20/19 16:54 | 7440-43-9 | |
| Chromium | 19.1 | mg/kg | 0.51 | | 1 | 02/19/19 15:36 | 02/20/19 16:54 | 7440-47-3 | |
| Copper | 44.4 | mg/kg | 2.1 | | 1 | 02/19/19 15:36 | 02/20/19 16:54 | 7440-50-8 | R1 |
| Lead | 123 | mg/kg | 0.51 | | 1 | 02/19/19 15:36 | 02/20/19 16:54 | 7439-92-1 | M1,R1 |
| Nickel | 16.5 | mg/kg | 0.51 | | 1 | 02/19/19 15:36 | 02/20/19 16:54 | 7440-02-0 | |
| Selenium | ND | mg/kg | 1.5 | | 1 | 02/19/19 15:36 | 02/20/19 16:54 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.72 | | 1 | 02/19/19 15:36 | 02/20/19 16:54 | 7440-22-4 | |
| Thallium | ND | mg/kg | 2.1 | | 1 | 02/19/19 15:36 | 02/20/19 16:54 | 7440-28-0 | |
| Zinc | 186 | mg/kg | 10.3 | | 1 | 02/19/19 15:36 | 02/20/19 16:54 | 7440-66-6 | M1,R1 |
| 6010 MET ICP, TCLP | | | | | | | | | |
| Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | | |
| Leachate Method/Date: EPA 1311; 02/28/19 00:00 | | | | | | | | | |
| Lead | ND | mg/L | 0.50 | | 5 | 03/01/19 13:06 | 03/04/19 15:22 | 7439-92-1 | |
| 7471 Mercury | | | | | | | | | |
| Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | | | |
| Mercury | ND | mg/kg | 0.049 | | 1 | 02/20/19 10:08 | 02/21/19 14:21 | 7439-97-6 | |
| Percent Moisture | | | | | | | | | |
| Analytical Method: ASTM D2974 | | | | | | | | | |
| Percent Moisture | 10 | % | 0.50 | | 1 | | 02/20/19 15:15 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Sample: SSC15-PRE-COMP: 0-1' Lab ID: 60294602005 Collected: 02/18/19 16:20 Received: 02/19/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | Reg. Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|-------------|-------|--------------|------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP Red. Interference | | | | | | | | | |
| Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | | | |
| Antimony | ND | mg/kg | 0.99 | | 1 | 02/19/19 15:36 | 02/20/19 16:56 | 7440-36-0 | |
| Arsenic | 10.5 | mg/kg | 0.99 | | 1 | 02/19/19 15:36 | 02/20/19 16:56 | 7440-38-2 | |
| Beryllium | 0.21 | mg/kg | 0.099 | | 1 | 02/19/19 15:36 | 02/20/19 16:56 | 7440-41-7 | |
| Cadmium | 1.7 | mg/kg | 0.50 | | 1 | 02/19/19 15:36 | 02/20/19 16:56 | 7440-43-9 | |
| Chromium | 9.8 | mg/kg | 0.50 | | 1 | 02/19/19 15:36 | 02/20/19 16:56 | 7440-47-3 | |
| Copper | 21.0 | mg/kg | 2.0 | | 1 | 02/19/19 15:36 | 02/20/19 16:56 | 7440-50-8 | |
| Lead | 140 | mg/kg | 0.50 | | 1 | 02/19/19 15:36 | 02/20/19 16:56 | 7439-92-1 | |
| Nickel | 11.6 | mg/kg | 0.50 | | 1 | 02/19/19 15:36 | 02/20/19 16:56 | 7440-02-0 | |
| Selenium | ND | mg/kg | 1.5 | | 1 | 02/19/19 15:36 | 02/20/19 16:56 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.70 | | 1 | 02/19/19 15:36 | 02/20/19 16:56 | 7440-22-4 | |
| Thallium | ND | mg/kg | 2.0 | | 1 | 02/19/19 15:36 | 02/20/19 16:56 | 7440-28-0 | |
| Zinc | 569 | mg/kg | 9.9 | | 1 | 02/19/19 15:36 | 02/20/19 16:56 | 7440-66-6 | |
| 6010 MET ICP, TCLP | | | | | | | | | |
| Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | | |
| Leachate Method/Date: EPA 1311; 02/28/19 00:00 | | | | | | | | | |
| Lead | ND | mg/L | 0.50 | | 5 | 03/01/19 13:06 | 03/04/19 15:25 | 7439-92-1 | |
| 7471 Mercury | | | | | | | | | |
| Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | | | |
| Mercury | ND | mg/kg | 0.049 | | 1 | 02/20/19 10:08 | 02/21/19 14:26 | 7439-97-6 | |
| Percent Moisture | | | | | | | | | |
| Analytical Method: ASTM D2974 | | | | | | | | | |
| Percent Moisture | 6.8 | % | 0.50 | | 1 | | 02/20/19 15:15 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Sample: DUPLICATE 02 **Lab ID: 60294602006** Collected: 02/18/19 16:20 Received: 02/19/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | Reg. Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------------------|--------------|---|--------------|------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP Red. Interference | | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Antimony | ND | mg/kg | 0.73 | | 1 | 02/19/19 15:36 | 02/20/19 16:59 | 7440-36-0 | |
| Arsenic | 12.7 | mg/kg | 0.73 | | 1 | 02/19/19 15:36 | 02/20/19 16:59 | 7440-38-2 | |
| Beryllium | 0.16 | mg/kg | 0.073 | | 1 | 02/19/19 15:36 | 02/20/19 16:59 | 7440-41-7 | |
| Cadmium | 1.5 | mg/kg | 0.36 | | 1 | 02/19/19 15:36 | 02/20/19 16:59 | 7440-43-9 | |
| Chromium | 5.2 | mg/kg | 0.36 | | 1 | 02/19/19 15:36 | 02/20/19 16:59 | 7440-47-3 | |
| Copper | 14.3 | mg/kg | 1.5 | | 1 | 02/19/19 15:36 | 02/20/19 16:59 | 7440-50-8 | |
| Lead | 158 | mg/kg | 0.36 | | 1 | 02/19/19 15:36 | 02/20/19 16:59 | 7439-92-1 | |
| Nickel | 8.4 | mg/kg | 0.36 | | 1 | 02/19/19 15:36 | 02/20/19 16:59 | 7440-02-0 | |
| Selenium | ND | mg/kg | 1.1 | | 1 | 02/19/19 15:36 | 02/20/19 16:59 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.51 | | 1 | 02/19/19 15:36 | 02/20/19 16:59 | 7440-22-4 | |
| Thallium | ND | mg/kg | 1.5 | | 1 | 02/19/19 15:36 | 02/20/19 16:59 | 7440-28-0 | |
| Zinc | 348 | mg/kg | 7.3 | | 1 | 02/19/19 15:36 | 02/20/19 16:59 | 7440-66-6 | |
| 7471 Mercury | | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | 0.059 | mg/kg | 0.046 | | 1 | 02/20/19 10:08 | 02/21/19 14:28 | 7439-97-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | | |
| Percent Moisture | 6.9 | % | 0.50 | | 1 | | 02/20/19 15:15 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Sample: SB05-SS01-PRE-COMP: **Lab ID:** 60294602007 Collected: 02/18/19 13:10 Received: 02/19/19 08:30 Matrix: Solid 10-1'

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | Reg. Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|--|-------------|-------|--------------|------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP Red. Interference | | | | | | | | | |
| Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | | | |
| Antimony | 3.1 | mg/kg | 2.1 | | 2 | 02/19/19 15:36 | 02/21/19 11:52 | 7440-36-0 | |
| Arsenic | 13.3 | mg/kg | 1.0 | | 1 | 02/19/19 15:36 | 02/20/19 17:01 | 7440-38-2 | |
| Beryllium | 1.0 | mg/kg | 0.10 | | 1 | 02/19/19 15:36 | 02/20/19 17:01 | 7440-41-7 | |
| Cadmium | 2.4 | mg/kg | 0.52 | | 1 | 02/19/19 15:36 | 02/20/19 17:01 | 7440-43-9 | |
| Chromium | 29.8 | mg/kg | 1.0 | | 2 | 02/19/19 15:36 | 02/21/19 11:52 | 7440-47-3 | |
| Copper | 22.9 | mg/kg | 2.1 | | 1 | 02/19/19 15:36 | 02/20/19 17:01 | 7440-50-8 | |
| Lead | 64.8 | mg/kg | 0.52 | | 1 | 02/19/19 15:36 | 02/20/19 17:01 | 7439-92-1 | |
| Nickel | 45.6 | mg/kg | 0.52 | | 1 | 02/19/19 15:36 | 02/20/19 17:01 | 7440-02-0 | |
| Selenium | 3.9 | mg/kg | 3.1 | | 2 | 02/19/19 15:36 | 02/21/19 11:52 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.73 | | 1 | 02/19/19 15:36 | 02/20/19 17:01 | 7440-22-4 | |
| Thallium | ND | mg/kg | 4.2 | | 2 | 02/19/19 15:36 | 02/21/19 11:52 | 7440-28-0 | D3 |
| Zinc | 206 | mg/kg | 10.4 | | 1 | 02/19/19 15:36 | 02/20/19 17:01 | 7440-66-6 | |
| 7471 Mercury | | | | | | | | | |
| Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | | | |
| Mercury | 0.13 | mg/kg | 0.062 | | 1 | 02/20/19 10:08 | 02/21/19 14:30 | 7439-97-6 | |
| Percent Moisture | | | | | | | | | |
| Analytical Method: ASTM D2974 | | | | | | | | | |
| Percent Moisture | 19.8 | % | 0.50 | | 1 | | 02/20/19 15:15 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294602

Sample: SSD15-PRE-COMP: 0-1" Lab ID: 60294602008 Collected: 02/18/19 15:40 Received: 02/19/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | Reg. Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------------------|-------------|---|--------------|------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP Red. Interference | | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | | |
| Antimony | ND | mg/kg | 0.98 | | 1 | 02/19/19 15:36 | 02/20/19 17:08 | 7440-36-0 | |
| Arsenic | 9.1 | mg/kg | 0.98 | | 1 | 02/19/19 15:36 | 02/20/19 17:08 | 7440-38-2 | |
| Beryllium | 0.14 | mg/kg | 0.098 | | 1 | 02/19/19 15:36 | 02/20/19 17:08 | 7440-41-7 | |
| Cadmium | 2.2 | mg/kg | 0.49 | | 1 | 02/19/19 15:36 | 02/20/19 17:08 | 7440-43-9 | |
| Chromium | 6.1 | mg/kg | 0.49 | | 1 | 02/19/19 15:36 | 02/20/19 17:08 | 7440-47-3 | |
| Copper | 11.0 | mg/kg | 2.0 | | 1 | 02/19/19 15:36 | 02/20/19 17:08 | 7440-50-8 | |
| Lead | 52.4 | mg/kg | 0.49 | | 1 | 02/19/19 15:36 | 02/20/19 17:08 | 7439-92-1 | |
| Nickel | 8.5 | mg/kg | 0.49 | | 1 | 02/19/19 15:36 | 02/20/19 17:08 | 7440-02-0 | |
| Selenium | ND | mg/kg | 1.5 | | 1 | 02/19/19 15:36 | 02/20/19 17:08 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.68 | | 1 | 02/19/19 15:36 | 02/20/19 17:08 | 7440-22-4 | |
| Thallium | ND | mg/kg | 2.0 | | 1 | 02/19/19 15:36 | 02/20/19 17:08 | 7440-28-0 | |
| Zinc | 533 | mg/kg | 9.8 | | 1 | 02/19/19 15:36 | 02/20/19 17:08 | 7440-66-6 | |
| 7471 Mercury | | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | | |
| Mercury | ND | mg/kg | 0.051 | | 1 | 02/20/19 10:08 | 02/21/19 14:33 | 7439-97-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | | |
| Percent Moisture | 11.6 | % | 0.50 | | 1 | | 02/20/19 15:15 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294602

| | | | |
|-------------------------|---|-----------------------|--------------|
| QC Batch: | 570039 | Analysis Method: | EPA 7471 |
| QC Batch Method: | EPA 7471 | Analysis Description: | 7471 Mercury |
| Associated Lab Samples: | 60294602001, 60294602003, 60294602004, 60294602005, 60294602006, 60294602007, 60294602008 | | |

| | | | |
|-------------------------|---|---------|-------|
| METHOD BLANK: | 2337421 | Matrix: | Solid |
| Associated Lab Samples: | 60294602001, 60294602003, 60294602004, 60294602005, 60294602006, 60294602007, 60294602008 | | |

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Mercury | mg/kg | ND | 0.050 | 02/21/19 13:35 | |

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | mg/kg | 0.5 | 0.48 | 96 | 80-120 | |

| Parameter | Units | 2337423 | | 2337424 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|
| | | 60294602001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | | | | | | |
| Mercury | mg/kg | ND | 0.49 | 0.55 | 0.49 | 0.57 | 96 | 98 | 75-125 | 14 | 20 |

| Parameter | Units | 60294602004 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| Mercury | mg/kg | ND | 0.56 | 0.64 | 110 | 75-125 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294602

QC Batch: 569966 Analysis Method: EPA 6010
 QC Batch Method: EPA 3050 Analysis Description: 6010 MET
 Associated Lab Samples: 60294602003, 60294602004, 60294602005, 60294602006, 60294602007, 60294602008

METHOD BLANK: 2337095 Matrix: Solid
 Associated Lab Samples: 60294602003, 60294602004, 60294602005, 60294602006, 60294602007, 60294602008

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Antimony | mg/kg | ND | 1.0 | 02/20/19 16:43 | |
| Arsenic | mg/kg | ND | 1.0 | 02/20/19 16:43 | |
| Beryllium | mg/kg | ND | 0.10 | 02/20/19 16:43 | |
| Cadmium | mg/kg | ND | 0.50 | 02/20/19 16:43 | |
| Chromium | mg/kg | ND | 0.50 | 02/20/19 16:43 | |
| Copper | mg/kg | ND | 2.0 | 02/20/19 16:43 | |
| Lead | mg/kg | ND | 0.50 | 02/20/19 16:43 | |
| Nickel | mg/kg | ND | 0.50 | 02/20/19 16:43 | |
| Selenium | mg/kg | ND | 1.5 | 02/20/19 16:43 | |
| Silver | mg/kg | ND | 0.70 | 02/20/19 16:43 | |
| Thallium | mg/kg | ND | 2.0 | 02/20/19 16:43 | |
| Zinc | mg/kg | ND | 10.0 | 02/20/19 16:43 | |

LABORATORY CONTROL SAMPLE: 2337096

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | mg/kg | 100 | 102 | 102 | 80-120 | |
| Arsenic | mg/kg | 100 | 94.5 | 94 | 80-120 | |
| Beryllium | mg/kg | 100 | 101 | 101 | 80-120 | |
| Cadmium | mg/kg | 100 | 98.2 | 98 | 80-120 | |
| Chromium | mg/kg | 100 | 105 | 105 | 80-120 | |
| Copper | mg/kg | 100 | 104 | 104 | 80-120 | |
| Lead | mg/kg | 100 | 101 | 101 | 80-120 | |
| Nickel | mg/kg | 100 | 102 | 102 | 80-120 | |
| Selenium | mg/kg | 100 | 100 | 100 | 80-120 | |
| Silver | mg/kg | 50 | 50.2 | 100 | 80-120 | |
| Thallium | mg/kg | 100 | 103 | 103 | 80-120 | |
| Zinc | mg/kg | 100 | 100 | 100 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2337097 2337098

| Parameter | Units | 60294602004 Result | MS | | MSD | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-----------|------------|------------|----------|-----------|--------------|-----|---------|------|
| | | | Spike Conc. | MS Result | MSD Result | MSD Result | | | | | | |
| Antimony | mg/kg | ND | 107 | 109 | 55.6 | 58.8 | 51 | 53 | 75-125 | 6 | 20 | M1 |
| Arsenic | mg/kg | 4.3 | 107 | 109 | 106 | 99.7 | 96 | 88 | 75-125 | 6 | 20 | |
| Beryllium | mg/kg | 0.17 | 107 | 109 | 99.6 | 95.1 | 93 | 87 | 75-125 | 5 | 20 | |
| Cadmium | mg/kg | 1.0 | 107 | 109 | 101 | 96.9 | 94 | 88 | 75-125 | 4 | 20 | |
| Chromium | mg/kg | 19.1 | 107 | 109 | 128 | 114 | 102 | 88 | 75-125 | 11 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294602

| MATRIX SPIKE & MATRIX SPIKE DUPLICATE: | | 2337097 | | 2337098 | | | | | | | | |
|--|-------|-----------------------|----------------|----------------|--------------|---------------|-------------|--------------|-----------------|------------|-----|--------|
| Parameter | Units | 60294602004 Result | MS | MSD | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | RPD | Qual |
| | | | Spike Conc. | Spike Conc. | | | | | | | | |
| Copper | mg/kg | 44.4 | 107 | 109 | 174 | 135 | 121 | 83 | 75-125 | 25 | 20 | R1 |
| Lead | mg/kg | 123 | 107 | 109 | 300 | 201 | 166 | 72 | 75-125 | 39 | 20 | M1, R1 |
| Nickel | mg/kg | 16.5 | 107 | 109 | 115 | 103 | 93 | 80 | 75-125 | 11 | 20 | |
| Selenium | mg/kg | ND | 107 | 109 | 101 | 98.5 | 94 | 90 | 75-125 | 3 | 20 | |
| Silver | mg/kg | ND | 53.4 | 54.4 | 52.0 | 50.9 | 97 | 93 | 75-125 | 2 | 20 | |
| Thallium | mg/kg | ND | 107 | 109 | 86.6 | 81.4 | 81 | 75 | 75-125 | 6 | 20 | |
| Zinc | mg/kg | 186 | 107 | 109 | 371 | 234 | 173 | 44 | 75-125 | 45 | 20 | M1, R1 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294602

QC Batch: 569979

Analysis Method: EPA 6010

QC Batch Method: EPA 3050

Analysis Description: 6010 MET

Associated Lab Samples: 60294602001

METHOD BLANK: 2337140

Matrix: Solid

Associated Lab Samples: 60294602001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Antimony | mg/kg | ND | 1.0 | 02/21/19 11:38 | |
| Arsenic | mg/kg | ND | 1.0 | 02/21/19 11:38 | |
| Beryllium | mg/kg | ND | 0.10 | 02/21/19 11:38 | |
| Cadmium | mg/kg | ND | 0.50 | 02/21/19 11:38 | |
| Chromium | mg/kg | ND | 0.50 | 02/21/19 11:38 | |
| Copper | mg/kg | ND | 2.0 | 02/21/19 11:38 | |
| Lead | mg/kg | ND | 0.50 | 02/21/19 11:38 | |
| Nickel | mg/kg | ND | 0.50 | 02/21/19 11:38 | |
| Selenium | mg/kg | ND | 1.5 | 02/21/19 11:38 | |
| Silver | mg/kg | ND | 0.70 | 02/21/19 11:38 | |
| Thallium | mg/kg | ND | 2.0 | 02/21/19 11:38 | |
| Zinc | mg/kg | ND | 10.0 | 02/21/19 11:38 | |

LABORATORY CONTROL SAMPLE: 2337141

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | mg/kg | 100 | 94.6 | 95 | 80-120 | |
| Arsenic | mg/kg | 100 | 85.4 | 85 | 80-120 | |
| Beryllium | mg/kg | 100 | 90.5 | 90 | 80-120 | |
| Cadmium | mg/kg | 100 | 90.5 | 91 | 80-120 | |
| Chromium | mg/kg | 100 | 93.4 | 93 | 80-120 | |
| Copper | mg/kg | 100 | 94.3 | 94 | 80-120 | |
| Lead | mg/kg | 100 | 93.6 | 94 | 80-120 | |
| Nickel | mg/kg | 100 | 93.6 | 94 | 80-120 | |
| Selenium | mg/kg | 100 | 90.4 | 90 | 80-120 | |
| Silver | mg/kg | 50 | 45.4 | 91 | 80-120 | |
| Thallium | mg/kg | 100 | 93.3 | 93 | 80-120 | |
| Zinc | mg/kg | 100 | 90.5 | 91 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2337142 2337143

| Parameter | Units | 60294602001 | | 2337143 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual | |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|-------|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | | | | |
| Antimony | mg/kg | 0.91 | 74 | 76 | 15.7 | 18.3 | 20 | 23 | 75-125 | 16 | 20 | M1 |
| Arsenic | mg/kg | 15.4 | 74 | 76 | 50.8 | 53.5 | 48 | 50 | 75-125 | 5 | 20 | 4e,M1 |
| Beryllium | mg/kg | 0.78 | 74 | 76 | 49.2 | 49.4 | 65 | 64 | 75-125 | 1 | 20 | M1 |
| Cadmium | mg/kg | 1.1 | 74 | 76 | 49.9 | 51.6 | 66 | 66 | 75-125 | 3 | 20 | 5e,M1 |
| Chromium | mg/kg | 31.0 | 74 | 76 | 62.8 | 59.2 | 43 | 37 | 75-125 | 6 | 20 | 2e,M1 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294602

| Parameter | Units | 2337142 | | 2337143 | | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max | |
|-----------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|---------------|-------|
| | | 60294602001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | | | | | | MSD Result | RPD |
| Copper | mg/kg | 21.9 | 74 | 76 | 67.2 | 63.3 | 61 | 55 | 75-125 | 6 | 20 | M1 |
| Lead | mg/kg | 158 | 74 | 76 | 92.4 | 98.2 | -89 | -79 | 75-125 | 6 | 20 | 1e,M1 |
| Nickel | mg/kg | 12.6 | 74 | 76 | 56.2 | 53.4 | 59 | 54 | 75-125 | 5 | 20 | M1 |
| Selenium | mg/kg | 1.2 | 74 | 76 | 49.1 | 50.7 | 65 | 65 | 75-125 | 3 | 20 | 6e,M1 |
| Silver | mg/kg | ND | 36.9 | 37.9 | 26.2 | 27.7 | 71 | 73 | 75-125 | 5 | 20 | M1 |
| Thallium | mg/kg | ND | 74 | 76 | 45.8 | 44.9 | 62 | 59 | 75-125 | 2 | 20 | M1 |
| Zinc | mg/kg | 720 | 74 | 76 | 273 | 286 | -605 | -571 | 75-125 | 5 | 20 | M1 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294602

QC Batch: 571617

Analysis Method: EPA 6010

QC Batch Method: EPA 3010

Analysis Description: 6010 MET TCLP

Associated Lab Samples: 60294602001, 60294602003, 60294602004, 60294602005

METHOD BLANK: 2343747

Matrix: Water

Associated Lab Samples: 60294602001, 60294602003, 60294602004, 60294602005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Lead | mg/L | ND | 0.50 | 03/04/19 12:01 | |

LABORATORY CONTROL SAMPLE: 2343748

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Lead | mg/L | 10 | 10.3 | 103 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2343749 2343750

| Parameter | Units | 60294602001 | | MSD | | MS | | MSD | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|-------------|-----------|------------|-------|-------|--------|--------------|-----|---------|------|
| | | Result | MS Spike Conc. | Spike Conc. | MS Result | MSD Result | % Rec | % Rec | | | | | |
| Lead | mg/L | ND | 10 | 10 | 10.4 | 10.5 | 104 | 104 | 75-125 | 1 | 20 | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294602

QC Batch: 570241

Analysis Method: EPA 8270

QC Batch Method: EPA 3546

Analysis Description: 8270 Solid MSSV Microwave

Associated Lab Samples: 60294602001, 60294602002

METHOD BLANK: 2338134

Matrix: Solid

Associated Lab Samples: 60294602001, 60294602002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|--------------------------------|-------|--------------|-----------------|----------------|------------|
| 1-Methylnaphthalene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| 2-Chloronaphthalene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| 2-Methylnaphthalene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| 7,12-Dimethylbenz(a)anthracene | mg/kg | ND | 1.6 | 02/21/19 13:10 | |
| Acenaphthene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Anthracene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Benzo(a)anthracene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Benzo(a)pyrene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Benzo(b)fluoranthene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Benzo(k)fluoranthene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Chrysene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Dibenz(a,h)anthracene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Fluoranthene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Fluorene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Indeno(1,2,3-cd)pyrene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Naphthalene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Pyrene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| 2,4,6-Tribromophenol (S) | % | 95 | 35-119 | 02/21/19 13:10 | |
| 2-Fluorobiphenyl (S) | % | 83 | 55-110 | 02/21/19 13:10 | |
| 2-Fluorophenol (S) | % | 86 | 46-108 | 02/21/19 13:10 | |
| Nitrobenzene-d5 (S) | % | 85 | 35-119 | 02/21/19 13:10 | |
| Phenol-d6 (S) | % | 86 | 48-110 | 02/21/19 13:10 | |
| Terphenyl-d14 (S) | % | 88 | 45-114 | 02/21/19 13:10 | |

LABORATORY CONTROL SAMPLE: 2338135

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------------------|-------|-------------|------------|-----------|--------------|------------|
| 1-Methylnaphthalene | mg/kg | 1.6 | 1.2 | 77 | 61-90 | |
| 2-Chloronaphthalene | mg/kg | 1.6 | 1.2 | 78 | 59-95 | |
| 2-Methylnaphthalene | mg/kg | 1.6 | 1.2 | 78 | 60-93 | |
| Acenaphthene | mg/kg | 1.6 | 1.3 | 79 | 60-95 | |
| Anthracene | mg/kg | 1.6 | 1.3 | 81 | 61-97 | |
| Benzo(a)anthracene | mg/kg | 1.6 | 1.2 | 77 | 62-98 | |
| Benzo(a)pyrene | mg/kg | 1.6 | 1.3 | 84 | 60-99 | |
| Benzo(b)fluoranthene | mg/kg | 1.6 | 1.4 | 86 | 61-100 | |
| Benzo(k)fluoranthene | mg/kg | 1.6 | 1.3 | 81 | 58-100 | |
| Chrysene | mg/kg | 1.6 | 1.3 | 82 | 61-98 | |
| Dibenz(a,h)anthracene | mg/kg | 1.6 | 1.3 | 80 | 60-99 | |
| Fluoranthene | mg/kg | 1.6 | 1.3 | 82 | 61-100 | |
| Fluorene | mg/kg | 1.6 | 1.3 | 80 | 60-98 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294602

LABORATORY CONTROL SAMPLE: 2338135

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|--------------------------|-------|-------------|------------|-----------|--------------|------------|
| Indeno(1,2,3-cd)pyrene | mg/kg | 1.6 | 1.3 | 80 | 60-99 | |
| Naphthalene | mg/kg | 1.6 | 1.2 | 78 | 58-94 | |
| Pyrene | mg/kg | 1.6 | 1.3 | 83 | 61-100 | |
| 2,4,6-Tribromophenol (S) | % | | | 97 | 35-119 | |
| 2-Fluorobiphenyl (S) | % | | | 82 | 55-110 | |
| 2-Fluorophenol (S) | % | | | 84 | 46-108 | |
| Nitrobenzene-d5 (S) | % | | | 82 | 35-119 | |
| Phenol-d6 (S) | % | | | 84 | 48-110 | |
| Terphenyl-d14 (S) | % | | | 87 | 45-114 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2338136 2338137

| Parameter | Units | 60294602001 | | MS | MSD | MS | | MSD | | % Rec Limits | RPD | Max RPD | Qual |
|--------------------------|-------|-------------|-------------|-------------|--------|--------|-------|-------|--------|--------------|-------|---------|------|
| | | Result | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec | | | | | |
| 1-Methylnaphthalene | mg/kg | ND | 9.2 | 9 | 7.7J | 7.3J | 84 | 81 | 35-128 | | 26 | | |
| 2-Chloronaphthalene | mg/kg | ND | 9.2 | 9 | 8.1J | 8J | 88 | 88 | 43-104 | | 30 | | |
| 2-Methylnaphthalene | mg/kg | ND | 9.2 | 9 | 7.6J | 7.3J | 83 | 80 | 37-111 | | 36 | | |
| Acenaphthene | mg/kg | ND | 9.2 | 9 | 8.2J | 7.7J | 89 | 86 | 42-104 | | 36 | | |
| Anthracene | mg/kg | ND | 9.2 | 9 | 7.9J | 7.6J | 85 | 84 | 37-111 | | 52 | | |
| Benzo(a)anthracene | mg/kg | ND | 9.2 | 9 | 7.7J | 7.5J | 83 | 83 | 32-113 | | 73 | | |
| Benzo(a)pyrene | mg/kg | ND | 9.2 | 9 | 8J | 7.7J | 86 | 85 | 29-112 | | 60 | | |
| Benzo(b)fluoranthene | mg/kg | ND | 9.2 | 9 | 7.6J | 8.1J | 82 | 90 | 19-121 | | 69 | | |
| Benzo(k)fluoranthene | mg/kg | ND | 9.2 | 9 | 8.3J | 7.3J | 90 | 81 | 33-115 | | 56 | | |
| Chrysene | mg/kg | ND | 9.2 | 9 | 8.2J | 8J | 89 | 88 | 31-113 | | 72 | | |
| Dibenz(a,h)anthracene | mg/kg | ND | 9.2 | 9 | 7.8J | 7.3J | 84 | 81 | 29-115 | | 41 | | |
| Fluoranthene | mg/kg | ND | 9.2 | 9 | 7.7J | 7.5J | 84 | 83 | 34-113 | | 88 | | |
| Fluorene | mg/kg | ND | 9.2 | 9 | 8.1J | 7.8J | 88 | 86 | 37-111 | | 40 | | |
| Indeno(1,2,3-cd)pyrene | mg/kg | ND | 9.2 | 9 | 7.8J | 7.5J | 84 | 83 | 27-113 | | 46 | | |
| Naphthalene | mg/kg | ND | 9.2 | 9 | 7.9J | 7.6J | 85 | 84 | 39-106 | | 34 | | |
| Pyrene | mg/kg | ND | 9.2 | 9 | 8.6J | 8.4J | 93 | 93 | 24-129 | | 82 | | |
| 2,4,6-Tribromophenol (S) | % | | | | | | 88 | 91 | 35-119 | | 46 | | |
| 2-Fluorobiphenyl (S) | % | | | | | | 93 | 92 | 55-110 | | 44 | | |
| 2-Fluorophenol (S) | % | | | | | | 91 | 90 | 46-108 | | 36 | | |
| Nitrobenzene-d5 (S) | % | | | | | | 86 | 86 | 35-119 | | 43 P3 | | |
| Phenol-d6 (S) | % | | | | | | 94 | 91 | 48-110 | | 38 | | |
| Terphenyl-d14 (S) | % | | | | | | 99 | 96 | 45-114 | | 50 | | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2338138 2338139

| Parameter | Units | 60294683005 | | MS | MSD | MS | | MSD | | % Rec Limits | RPD | Max RPD | Qual |
|---------------------|-------|-------------|-------------|-------------|--------|--------|-------|-------|--------|--------------|-----|---------|------|
| | | Result | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec | | | | | |
| 1-Methylnaphthalene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.4 | 72 | 68 | 35-128 | | 6 | 26 | |
| 2-Chloronaphthalene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.3 | 71 | 67 | 43-104 | | 6 | 30 | |
| 2-Methylnaphthalene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.4 | 71 | 68 | 37-111 | | 5 | 36 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294602

| Parameter | Units | 2338138 | | 2338139 | | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | Qual |
|--------------------------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|------------|------|
| | | 60294683005 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | | | | | | | |
| Acenaphthene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.3 | 72 | 67 | 42-104 | 7 | 36 | |
| Anthracene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.2 | 69 | 60 | 37-111 | 13 | 52 | |
| Benzo(a)anthracene | mg/kg | ND | 1.9 | 1.9 | 1.3 | 1.1 | 62 | 51 | 32-113 | 18 | 73 | |
| Benzo(a)pyrene | mg/kg | ND | 1.9 | 1.9 | 1.2 | 0.98 | 58 | 47 | 29-112 | 21 | 60 | |
| Benzo(b)fluoranthene | mg/kg | ND | 1.9 | 1.9 | 1.3 | 1.0 | 59 | 47 | 19-121 | 21 | 69 | |
| Benzo(k)fluoranthene | mg/kg | ND | 1.9 | 1.9 | 1.2 | 1.0 | 61 | 50 | 33-115 | 20 | 56 | |
| Chrysene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.1 | 64 | 52 | 31-113 | 18 | 72 | |
| Dibenz(a,h)anthracene | mg/kg | ND | 1.9 | 1.9 | 1.1 | 0.92 | 55 | 45 | 29-115 | 20 | 41 | |
| Fluoranthene | mg/kg | ND | 1.9 | 1.9 | 1.3 | 1.1 | 65 | 55 | 34-113 | 17 | 88 | |
| Fluorene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.3 | 70 | 64 | 37-111 | 8 | 40 | |
| Indeno(1,2,3-cd)pyrene | mg/kg | ND | 1.9 | 1.9 | 1.1 | 0.87 | 52 | 42 | 27-113 | 20 | 46 | |
| Naphthalene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.4 | 71 | 70 | 39-106 | 2 | 34 | |
| Pyrene | mg/kg | ND | 1.9 | 1.9 | 1.5 | 1.3 | 71 | 60 | 24-129 | 16 | 82 | |
| 2,4,6-Tribromophenol (S) | % | | | | | | 71 | 67 | 35-119 | | 46 | |
| 2-Fluorobiphenyl (S) | % | | | | | | 77 | 73 | 55-110 | | 44 | |
| 2-Fluorophenol (S) | % | | | | | | 63 | 64 | 46-108 | | 36 | |
| Nitrobenzene-d5 (S) | % | | | | | | 78 | 79 | 35-119 | | 43 | |
| Phenol-d6 (S) | % | | | | | | 71 | 71 | 48-110 | | 38 | |
| Terphenyl-d14 (S) | % | | | | | | 82 | 71 | 45-114 | | 50 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294602

| | |
|-------------------------------------|--------------------------------------|
| QC Batch: 569936 | Analysis Method: TNRCC 1005 |
| QC Batch Method: TNRCC 1005 | Analysis Description: TX1005 TPH GCS |
| Associated Lab Samples: 60294602001 | |

METHOD BLANK: 2337022 Matrix: Solid
Associated Lab Samples: 60294602001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---------------------|-------|--------------|-----------------|----------------|------------|
| TPH (>C12-C28) | mg/kg | ND | 20.0 | 02/19/19 17:30 | |
| TPH (>C28-C35) | mg/kg | ND | 20.0 | 02/19/19 17:30 | |
| TPH (C06-C12) | mg/kg | ND | 20.0 | 02/19/19 17:30 | |
| TPH Total (C06-C35) | mg/kg | ND | 20.0 | 02/19/19 17:30 | |
| 1-Chlorooctane (S) | % | 91 | 70-130 | 02/19/19 17:30 | |
| o-Terphenyl (S) | % | 91 | 70-130 | 02/19/19 17:30 | |

LABORATORY CONTROL SAMPLE & LCSD: 2337023 2337024

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| TPH Total (C06-C35) | mg/kg | 2500 | 2100 | 2170 | 84 | 87 | 75-125 | 3 | 20 | |
| 1-Chlorooctane (S) | % | | | | 123 | 124 | 70-130 | | | |
| o-Terphenyl (S) | % | | | | 104 | 105 | 70-130 | | | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2337089 2337090

| Parameter | Units | 60294602001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| TPH Total (C06-C35) | mg/kg | 57.4 | 2520 | 2740 | 2520 | 2750 | 98 | 98 | 11-187 | 9 | 43 | |
| 1-Chlorooctane (S) | % | | | | | | 131 | 125 | 70-130 | | | S1 |
| o-Terphenyl (S) | % | | | | | | 112 | 107 | 70-130 | | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294602

| | | | |
|-------------------------|---|-----------------------|-----------------------------|
| QC Batch: | 570083 | Analysis Method: | ASTM D2974 |
| QC Batch Method: | ASTM D2974 | Analysis Description: | Dry Weight/Percent Moisture |
| Associated Lab Samples: | 60294602001, 60294602003, 60294602004, 60294602005, 60294602006, 60294602007, 60294602008 | | |

METHOD BLANK: 2337577 Matrix: Solid
Associated Lab Samples: 60294602001, 60294602003, 60294602004, 60294602005, 60294602006, 60294602007, 60294602008

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------------|-------|--------------|-----------------|----------------|------------|
| Percent Moisture | % | ND | 0.50 | 02/20/19 15:15 | |

SAMPLE DUPLICATE: 2337578

| Parameter | Units | 60294581021 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------|-------|--------------------|------------|-----|---------|------------|
| Percent Moisture | % | 11.2 | 11.4 | 1 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294602

QC Batch: 570389

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60294602002

METHOD BLANK: 2338752

Matrix: Solid

Associated Lab Samples: 60294602002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------------|-------|--------------|-----------------|----------------|------------|
| Percent Moisture | % | ND | 0.50 | 02/21/19 16:28 | |

SAMPLE DUPLICATE: 2338753

| Parameter | Units | 60293520008 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------|-------|--------------------|------------|-----|---------|------------|
| Percent Moisture | % | 20.6 | 20.1 | 3 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS-FINTUBE

Pace Project No.: 60294602

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

1e Post digestion spike performed 101.7% recovery

2e Post digestion spike performed 102.7% recovery

4e Post digestion spike performed 94.7% recovery

5e Post digestion spike performed 97.7% recovery

6e Post digestion spike performed 99.4% recovery

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

P3 Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

R1 RPD value was outside control limits.

S1 Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS-FINTUBE

Pace Project No.: 60294602

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|---------------------------|-----------------|----------|-------------------|------------------|
| 60294602001 | SSE16-PRE-COMP: 0-1' | TNRCC 1005 | 569936 | TNRCC 1005 | 570032 |
| 60294602001 | SSE16-PRE-COMP: 0-1' | EPA 3050 | 569979 | EPA 6010 | 570185 |
| 60294602003 | SSE15-PRE-COMP: 0-1' | EPA 3050 | 569966 | EPA 6010 | 570177 |
| 60294602004 | SSE07-PRE-COMP: 0-1' | EPA 3050 | 569966 | EPA 6010 | 570177 |
| 60294602005 | SSC15-PRE-COMP: 0-1' | EPA 3050 | 569966 | EPA 6010 | 570177 |
| 60294602006 | DUPLICATE 02 | EPA 3050 | 569966 | EPA 6010 | 570177 |
| 60294602007 | SB05-SS01-PRE-COMP: 10-1' | EPA 3050 | 569966 | EPA 6010 | 570177 |
| 60294602008 | SSD15-PRE-COMP: 0-1" | EPA 3050 | 569966 | EPA 6010 | 570177 |
| 60294602001 | SSE16-PRE-COMP: 0-1' | EPA 3010 | 571617 | EPA 6010 | 571813 |
| 60294602003 | SSE15-PRE-COMP: 0-1' | EPA 3010 | 571617 | EPA 6010 | 571813 |
| 60294602004 | SSE07-PRE-COMP: 0-1' | EPA 3010 | 571617 | EPA 6010 | 571813 |
| 60294602005 | SSC15-PRE-COMP: 0-1' | EPA 3010 | 571617 | EPA 6010 | 571813 |
| 60294602001 | SSE16-PRE-COMP: 0-1' | EPA 7471 | 570039 | EPA 7471 | 570262 |
| 60294602003 | SSE15-PRE-COMP: 0-1' | EPA 7471 | 570039 | EPA 7471 | 570262 |
| 60294602004 | SSE07-PRE-COMP: 0-1' | EPA 7471 | 570039 | EPA 7471 | 570262 |
| 60294602005 | SSC15-PRE-COMP: 0-1' | EPA 7471 | 570039 | EPA 7471 | 570262 |
| 60294602006 | DUPLICATE 02 | EPA 7471 | 570039 | EPA 7471 | 570262 |
| 60294602007 | SB05-SS01-PRE-COMP: 10-1' | EPA 7471 | 570039 | EPA 7471 | 570262 |
| 60294602008 | SSD15-PRE-COMP: 0-1" | EPA 7471 | 570039 | EPA 7471 | 570262 |
| 60294602001 | SSE16-PRE-COMP: 0-1' | EPA 3546 | 570241 | EPA 8270 | 570380 |
| 60294602002 | DUPLICATE 01 | EPA 3546 | 570241 | EPA 8270 | 570380 |
| 60294602001 | SSE16-PRE-COMP: 0-1' | ASTM D2974 | 570083 | | |
| 60294602002 | DUPLICATE 01 | ASTM D2974 | 570389 | | |
| 60294602003 | SSE15-PRE-COMP: 0-1' | ASTM D2974 | 570083 | | |
| 60294602004 | SSE07-PRE-COMP: 0-1' | ASTM D2974 | 570083 | | |
| 60294602005 | SSC15-PRE-COMP: 0-1' | ASTM D2974 | 570083 | | |
| 60294602006 | DUPLICATE 02 | ASTM D2974 | 570083 | | |
| 60294602007 | SB05-SS01-PRE-COMP: 10-1' | ASTM D2974 | 570083 | | |
| 60294602008 | SSD15-PRE-COMP: 0-1" | ASTM D2974 | 570083 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

A&D

WO#: 60294602



Client Name: Environmental Works

Courier: FedEx [x] UPS [] VIA [] Clay [] PEX [] ECI [] Pace [] Xroads [] Client [] Other []

Tracking #: 786514233190 Pace Shipping Label Used? Yes [] No [x]

Custody Seal on Cooler/Box Present: Yes [x] No [] Seals intact: Yes [x] No []

Packing Material: Bubble Wrap [] Bubble Bags [x] Foam [] None [] Other []

Thermometer Used: 296 Type of Ice: Wet [x] Blue [] None []

Cooler Temperature (°C): As-read 3.5 Corr. Factor -1.0 Corrected 2.5

Date and initials of person examining contents: 2/19/19 AC

Temperature should be above freezing to 6°C

Table with 3 columns: Question, Yes/No/N/A checkboxes, and handwritten notes. Rows include Chain of Custody, Short Hold Time, Rush Turn Around Time, Containers, and Sample labels.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date:

February 21, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: Evans-Fintube
Pace Project No.: 60294611

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on February 19, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: Evans-Fintube

Pace Project No.: 60294611

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Certification Number: 10090

Arkansas Drinking Water

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: Evans-Fintube

Pace Project No.: 60294611

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|-----------------|--------|----------------|----------------|
| 60294611001 | SSD11-WC-Pavers | Solid | 02/18/19 16:55 | 02/19/19 08:30 |
| 60294611002 | SSD13-WC-Pavers | Solid | 02/18/19 17:15 | 02/19/19 08:30 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: Evans-Fintube

Pace Project No.: 60294611

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------------|----------|----------|-------------------|------------|
| 60294611001 | SSD11-WC-Pavers | EPA 6010 | JDE | 2 | PASI-K |
| 60294611002 | SSD13-WC-Pavers | EPA 6010 | JDE | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: Evans-Fintube

Pace Project No.: 60294611

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|-------|--------------|----------------|------------|
| 60294611001 | SSD11-WC-Pavers | | | | | |
| EPA 6010 | Lead | 2.1 | mg/L | 0.50 | 02/21/19 10:09 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: Evans-Fintube

Pace Project No.: 60294611

Method: EPA 6010

Description: 6010 MET ICP, TCLP

Client: Environmental Works_OK office

Date: February 21, 2019

General Information:

2 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: Evans-Fintube

Pace Project No.: 60294611

Sample: SSD11-WC-Pavers **Lab ID: 60294611001** Collected: 02/18/19 16:55 Received: 02/19/19 08:30 Matrix: Solid

Results reported on a "wet-weight" basis

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------|------------|---|--------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP, TCLP | | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | |
| | | Leachate Method/Date: EPA 1311; 02/19/19 00:00 | | | | | | |
| Cadmium | ND | mg/L | 0.050 | 1 | 02/20/19 16:17 | 02/21/19 10:09 | 7440-43-9 | |
| Lead | 2.1 | mg/L | 0.50 | 1 | 02/20/19 16:17 | 02/21/19 10:09 | 7439-92-1 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: Evans-Fintube

Pace Project No.: 60294611

Sample: SSD13-WC-Pavers **Lab ID: 60294611002** Collected: 02/18/19 17:15 Received: 02/19/19 08:30 Matrix: Solid

Results reported on a "wet-weight" basis

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---------|-------|--------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP, TCLP | | | | | | | | |
| Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Leachate Method/Date: EPA 1311; 02/19/19 00:00 | | | | | | | | |
| Lead | ND | mg/L | 0.50 | 1 | 02/20/19 16:17 | 02/21/19 10:16 | 7439-92-1 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: Evans-Fintube

Pace Project No.: 60294611

QC Batch: 570218

Analysis Method: EPA 6010

QC Batch Method: EPA 3010

Analysis Description: 6010 MET TCLP

Associated Lab Samples: 60294611001, 60294611002

METHOD BLANK: 2338086

Matrix: Water

Associated Lab Samples: 60294611001, 60294611002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Cadmium | mg/L | ND | 0.050 | 02/21/19 10:05 | |
| Lead | mg/L | ND | 0.50 | 02/21/19 10:05 | |

LABORATORY CONTROL SAMPLE: 2338087

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Cadmium | mg/L | 10 | 9.9 | 99 | 80-120 | |
| Lead | mg/L | 10 | 9.7 | 97 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2338088 2338089

| Parameter | Units | 60294611001 Result | MS | | MSD | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-----------|------------|------------|----------|-----------|--------------|-----|---------|------|
| | | | Spike Conc. | MS Result | MSD Result | MSD Result | | | | | | |
| Cadmium | mg/L | ND | 10 | 9.9 | 9.8 | 98 | 98 | 75-125 | 0 | 20 | | |
| Lead | mg/L | 2.1 | 10 | 11.9 | 11.9 | 98 | 98 | 75-125 | 0 | 20 | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: Evans-Fintube

Pace Project No.: 60294611

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Evans-Fintube
Pace Project No.: 60294611

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------------|-----------------|----------|-------------------|------------------|
| 60294611001 | SSD11-WC-Pavers | EPA 3010 | 570218 | EPA 6010 | 570234 |
| 60294611002 | SSD13-WC-Pavers | EPA 3010 | 570218 | EPA 6010 | 570234 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO#: 60294611



Client Name: Environmental works

Courier: FedEx [checked] UPS [] VIA [] Clay [] PEX [] ECI [] Pace [] Xroads [] Client [] Other []

Tracking #: 786514233490 Pace Shipping Label Used? Yes [] No [checked]

Custody Seal on Cooler/Box Present: Yes [checked] No [] Seals intact: Yes [checked] No []

Packing Material: Bubble Wrap [] Bubble Bags [checked] Foam [] None [] Other []

Thermometer Used: 296 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 3.5 Corr. Factor -1.0 Corrected 2.5

Date and initials of person examining contents: 2/19/19 [initials]

Temperature should be above freezing to 6°C

| | | |
|--|--|--|
| Chain of Custody present: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Chain of Custody relinquished: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples arrived within holding time: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Short Hold Time analyses (<72hr): | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Rush Turn Around Time requested: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Sufficient volume: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Correct containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Pace containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers intact: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Filtered volume received for dissolved tests? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Sample labels match COC: Date / time / ID / analyses | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples contain multiple phases? Matrix: 52 | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | List sample IDs, volumes, lot #'s of preservative and the date/time added. |
| Cyanide water sample checks: | | |
| Lead acetate strip turns dark? (Record only) | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| Potassium iodide test strip turns blue/purple? (Preserve) | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| Trip Blank present: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Headspace in VOA vials (>6mm): | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Samples from USDA Regulated Area: State: OH | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Additional labels attached to 5035A / TX1005 vials in the field? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

February 25, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS-FINTUBE
Pace Project No.: 60294683

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on February 20, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS-FINTUBE

Pace Project No.: 60294683

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Certification Number: 10090

Arkansas Drinking Water

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS-FINTUBE

Pace Project No.: 60294683

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|----------------------------|--------|----------------|----------------|
| 60294683001 | DUPLICATE 04 | Solid | 02/19/19 14:15 | 02/20/19 09:10 |
| 60294683002 | DUPLICATE 03 | Solid | 02/19/19 10:15 | 02/20/19 09:10 |
| 60294683003 | SSD10-PRE-GRAB:0-1' | Solid | 02/19/19 14:15 | 02/20/19 09:10 |
| 60294683004 | SSD05-PRE-COMP:0-1' MS/MSD | Solid | 02/19/19 11:55 | 02/20/19 09:10 |
| 60294683005 | SSD10-PRE-GRAB:0-1' | Solid | 02/19/19 14:15 | 02/20/19 09:10 |
| 60294683006 | DUPLICATE 05 | Solid | 02/19/19 14:15 | 02/20/19 09:10 |
| 60294683007 | SSD10-PRE-GRAB:0-1' MS/MSD | Solid | 02/19/19 14:15 | 02/20/19 09:10 |
| 60294683008 | SSD05-PRE-COMP: 0-1' | Solid | 02/19/19 11:55 | 02/20/19 09:10 |
| 60294683009 | SSD04-PRE-COMP: 0-1' | Solid | 02/19/19 10:15 | 02/20/19 09:10 |
| 60294683010 | SSD10-PRE-GRAB: 0-1' | Solid | 02/19/19 14:15 | 02/20/19 09:10 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS-FINTUBE

Pace Project No.: 60294683

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|----------------------------|------------|----------|-------------------|------------|
| 60294683001 | DUPLICATE 04 | TNRCC 1005 | AJM | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294683002 | DUPLICATE 03 | TNRCC 1005 | AJM | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294683003 | SSD10-PRE-GRAB:0-1' | TNRCC 1005 | AJM | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294683004 | SSD05-PRE-COMP:0-1' MS/MSD | TNRCC 1005 | AJM | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294683005 | SSD10-PRE-GRAB:0-1' | EPA 8270 | JMT | 23 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294683006 | DUPLICATE 05 | EPA 8270 | JMT | 23 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294683008 | SSD05-PRE-COMP: 0-1' | TNRCC 1005 | AJM | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294683009 | SSD04-PRE-COMP: 0-1' | TNRCC 1005 | AJM | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294683010 | SSD10-PRE-GRAB: 0-1' | EPA 6010 | JDE | 12 | PASI-K |
| | | EPA 7471 | HKC | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS-FINTUBE

Pace Project No.: 60294683

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|-----------------------------------|--------|-------|--------------|----------------|------------|
| 60294683001 | DUPLICATE 04 | | | | | |
| ASTM D2974 | Percent Moisture | 12.0 | % | 0.50 | 02/21/19 16:00 | |
| 60294683002 | DUPLICATE 03 | | | | | |
| TNRCC 1005 | TPH (>C12-C28) | 721 | mg/kg | 19.7 | 02/21/19 14:26 | |
| TNRCC 1005 | TPH (>C28-C35) | 469 | mg/kg | 19.7 | 02/21/19 14:26 | |
| TNRCC 1005 | TPH Total (C06-C35) | 1190 | mg/kg | 19.7 | 02/21/19 14:26 | |
| ASTM D2974 | Percent Moisture | 7.9 | % | 0.50 | 02/21/19 16:00 | |
| 60294683003 | SSD10-PRE-GRAB:0-1' | | | | | |
| TNRCC 1005 | TPH (>C12-C28) | 21.7 | mg/kg | 19.4 | 02/21/19 15:05 | |
| TNRCC 1005 | TPH (>C28-C35) | 37.4 | mg/kg | 19.4 | 02/21/19 15:05 | |
| TNRCC 1005 | TPH Total (C06-C35) | 61.6 | mg/kg | 19.4 | 02/21/19 15:05 | |
| ASTM D2974 | Percent Moisture | 10.9 | % | 0.50 | 02/21/19 16:00 | |
| 60294683004 | SSD05-PRE-COMP:0-1' MS/MSD | | | | | |
| TNRCC 1005 | TPH (>C12-C28) | 21.8 | mg/kg | 19.7 | 02/23/19 14:00 | |
| TNRCC 1005 | TPH Total (C06-C35) | 29.3 | mg/kg | 19.7 | 02/23/19 14:00 | |
| ASTM D2974 | Percent Moisture | 1.4 | % | 0.50 | 02/21/19 16:00 | |
| 60294683005 | SSD10-PRE-GRAB:0-1' | | | | | |
| ASTM D2974 | Percent Moisture | 17.5 | % | 0.50 | 02/21/19 16:28 | |
| 60294683006 | DUPLICATE 05 | | | | | |
| ASTM D2974 | Percent Moisture | 12.0 | % | 0.50 | 02/21/19 16:28 | |
| 60294683008 | SSD05-PRE-COMP: 0-1' | | | | | |
| TNRCC 1005 | TPH Total (C06-C35) | 20.1 | mg/kg | 17.7 | 02/21/19 19:34 | |
| ASTM D2974 | Percent Moisture | 1.5 | % | 0.50 | 02/21/19 16:00 | |
| 60294683009 | SSD04-PRE-COMP: 0-1' | | | | | |
| TNRCC 1005 | TPH (>C12-C28) | 861 | mg/kg | 21.5 | 02/21/19 20:11 | |
| TNRCC 1005 | TPH (>C28-C35) | 600 | mg/kg | 21.5 | 02/21/19 20:11 | |
| TNRCC 1005 | TPH Total (C06-C35) | 1460 | mg/kg | 21.5 | 02/21/19 20:11 | |
| ASTM D2974 | Percent Moisture | 7.9 | % | 0.50 | 02/21/19 16:00 | |
| 60294683010 | SSD10-PRE-GRAB: 0-1' | | | | | |
| EPA 6010 | Arsenic | 3.3 | mg/kg | 0.79 | 02/22/19 11:26 | |
| EPA 6010 | Beryllium | 0.36 | mg/kg | 0.079 | 02/22/19 11:26 | |
| EPA 6010 | Chromium | 9.8 | mg/kg | 0.40 | 02/22/19 11:26 | |
| EPA 6010 | Copper | 18.5 | mg/kg | 1.6 | 02/22/19 11:26 | |
| EPA 6010 | Lead | 32.5 | mg/kg | 0.40 | 02/22/19 11:26 | |
| EPA 6010 | Nickel | 8.0 | mg/kg | 0.40 | 02/22/19 11:26 | |
| EPA 6010 | Zinc | 44.9 | mg/kg | 7.9 | 02/22/19 11:26 | |
| ASTM D2974 | Percent Moisture | 14.5 | % | 0.50 | 02/21/19 16:00 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294683

Date: February 25, 2019

SSD10-PRE-GRAB:0-1' (Lab ID: 60294683005)

- 8270 analyses for Tentatively Identified Compounds (TICs) for this sample did not contain: Dibenzo(ae)pyrene, 4-Nitropyrene or benzo(j)fluoranthene.

DUPLICATE 05 (Lab ID: 60294683006)

- 8270 analyses for Tentatively Identified Compounds (TICs) for this sample did not contain: Dibenzo(ae)pyrene, 4-Nitropyrene or benzo(j)fluoranthene.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294683

Method: TNRCC 1005

Description: TNRCC 1005 TPH

Client: Environmental Works_OK office

Date: February 25, 2019

General Information:

6 samples were analyzed for TNRCC 1005. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with TNRCC 1005 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294683

Method: EPA 6010

Description: 6010 MET ICP Red. Interference

Client: Environmental Works_OK office

Date: February 25, 2019

General Information:

1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 570252

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60294537004

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2338270)
 - Antimony
- MSD (Lab ID: 2338271)
 - Antimony

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294683

Method: EPA 7471

Description: 7471 Mercury

Client: Environmental Works_OK office

Date: February 25, 2019

General Information:

1 sample was analyzed for EPA 7471. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7471 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294683

Method: EPA 8270

Description: 8270 MSSV Semivolatiles

Client: Environmental Works_OK office

Date: February 25, 2019

General Information:

2 samples were analyzed for EPA 8270. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294683

Sample: DUPLICATE 04 **Lab ID: 60294683001** Collected: 02/19/19 14:15 Received: 02/20/19 09:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 22.5 | 1 | 02/20/19 16:15 | 02/21/19 13:44 | | |
| TPH (>C12-C28) | ND | mg/kg | 22.5 | 1 | 02/20/19 16:15 | 02/21/19 13:44 | | |
| TPH (>C28-C35) | ND | mg/kg | 22.5 | 1 | 02/20/19 16:15 | 02/21/19 13:44 | | |
| TPH Total (C06-C35) | ND | mg/kg | 22.5 | 1 | 02/20/19 16:15 | 02/21/19 13:44 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 90 | % | 70-130 | 1 | 02/20/19 16:15 | 02/21/19 13:44 | 84-15-1 | |
| 1-Chlorooctane (S) | 89 | % | 70-130 | 1 | 02/20/19 16:15 | 02/21/19 13:44 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 12.0 | % | 0.50 | 1 | | 02/21/19 16:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294683

Sample: DUPLICATE 03 **Lab ID: 60294683002** Collected: 02/19/19 10:15 Received: 02/20/19 09:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 19.7 | 1 | 02/20/19 16:15 | 02/21/19 14:26 | | |
| TPH (>C12-C28) | 721 | mg/kg | 19.7 | 1 | 02/20/19 16:15 | 02/21/19 14:26 | | |
| TPH (>C28-C35) | 469 | mg/kg | 19.7 | 1 | 02/20/19 16:15 | 02/21/19 14:26 | | |
| TPH Total (C06-C35) | 1190 | mg/kg | 19.7 | 1 | 02/20/19 16:15 | 02/21/19 14:26 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 88 | % | 70-130 | 1 | 02/20/19 16:15 | 02/21/19 14:26 | 84-15-1 | |
| 1-Chlorooctane (S) | 81 | % | 70-130 | 1 | 02/20/19 16:15 | 02/21/19 14:26 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 7.9 | % | 0.50 | 1 | | 02/21/19 16:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294683

Sample: SSD10-PRE-GRAB:0-1' **Lab ID: 60294683003** Collected: 02/19/19 14:15 Received: 02/20/19 09:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 19.4 | 1 | 02/20/19 16:15 | 02/21/19 15:05 | | |
| TPH (>C12-C28) | 21.7 | mg/kg | 19.4 | 1 | 02/20/19 16:15 | 02/21/19 15:05 | | |
| TPH (>C28-C35) | 37.4 | mg/kg | 19.4 | 1 | 02/20/19 16:15 | 02/21/19 15:05 | | |
| TPH Total (C06-C35) | 61.6 | mg/kg | 19.4 | 1 | 02/20/19 16:15 | 02/21/19 15:05 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 97 | % | 70-130 | 1 | 02/20/19 16:15 | 02/21/19 15:05 | 84-15-1 | |
| 1-Chlorooctane (S) | 96 | % | 70-130 | 1 | 02/20/19 16:15 | 02/21/19 15:05 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 10.9 | % | 0.50 | 1 | | 02/21/19 16:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294683

Sample: SSD05-PRE-COMP:0-1' **Lab ID:** 60294683004 Collected: 02/19/19 11:55 Received: 02/20/19 09:10 Matrix: Solid
MS/MSD

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|--|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 19.7 | 1 | 02/20/19 16:15 | 02/23/19 14:00 | | |
| TPH (>C12-C28) | 21.8 | mg/kg | 19.7 | 1 | 02/20/19 16:15 | 02/23/19 14:00 | | |
| TPH (>C28-C35) | ND | mg/kg | 19.7 | 1 | 02/20/19 16:15 | 02/23/19 14:00 | | |
| TPH Total (C06-C35) | 29.3 | mg/kg | 19.7 | 1 | 02/20/19 16:15 | 02/23/19 14:00 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 83 | % | 70-130 | 1 | 02/20/19 16:15 | 02/23/19 14:00 | 84-15-1 | |
| 1-Chlorooctane (S) | 81 | % | 70-130 | 1 | 02/20/19 16:15 | 02/23/19 14:00 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 1.4 | % | 0.50 | 1 | | 02/21/19 16:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294683

Sample: SSD10-PRE-GRAB:0-1' **Lab ID:** 60294683005 Collected: 02/19/19 14:15 Received: 02/20/19 09:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Comments: • 8270 analyses for Tentatively Identified Compounds (TICs) for this sample did not contain: Dibenzo(ae)pyrene, 4-Nitropyrene or benzo(j)fluoranthene.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|--------------------------------|-------------|--|--------------|----|----------------|----------------|------------|------|
| 8270 MSSV Semivolatiles | | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | |
| Acenaphthene | ND | mg/kg | 0.39 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 83-32-9 | |
| Anthracene | ND | mg/kg | 0.39 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 120-12-7 | |
| Benzo(a)anthracene | ND | mg/kg | 0.39 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 56-55-3 | |
| Benzo(a)pyrene | ND | mg/kg | 0.39 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | mg/kg | 0.39 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 205-99-2 | |
| Benzo(k)fluoranthene | ND | mg/kg | 0.39 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 207-08-9 | |
| 2-Chloronaphthalene | ND | mg/kg | 0.39 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 91-58-7 | |
| Chrysene | ND | mg/kg | 0.39 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | mg/kg | 0.39 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 53-70-3 | |
| 7,12-Dimethylbenz(a)anthracene | ND | mg/kg | 2.0 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 57-97-6 | |
| Fluoranthene | ND | mg/kg | 0.39 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 206-44-0 | |
| Fluorene | ND | mg/kg | 0.39 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 86-73-7 | |
| Indeno(1,2,3-cd)pyrene | ND | mg/kg | 0.39 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 193-39-5 | |
| 1-Methylnaphthalene | ND | mg/kg | 0.39 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 90-12-0 | |
| 2-Methylnaphthalene | ND | mg/kg | 0.39 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 91-57-6 | |
| Naphthalene | ND | mg/kg | 0.39 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 91-20-3 | |
| Pyrene | ND | mg/kg | 0.39 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 129-00-0 | |
| Surrogates | | | | | | | | |
| Nitrobenzene-d5 (S) | 79 | % | 35-119 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 76 | % | 55-110 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 321-60-8 | |
| Terphenyl-d14 (S) | 68 | % | 45-114 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 1718-51-0 | |
| Phenol-d6 (S) | 71 | % | 48-110 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 13127-88-3 | |
| 2-Fluorophenol (S) | 55 | % | 46-108 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 46 | % | 35-119 | 1 | 02/20/19 11:43 | 02/21/19 16:29 | 118-79-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 17.5 | % | 0.50 | 1 | | 02/21/19 16:28 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294683

Sample: DUPLICATE 05 **Lab ID: 60294683006** Collected: 02/19/19 14:15 Received: 02/20/19 09:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Comments: • 8270 analyses for Tentatively Identified Compounds (TICs) for this sample did not contain: Dibenzo(ae)pyrene, 4-Nitropyrene or benzo(j)fluoranthene.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|--------------------------------|-------------|---|--------------|----|----------------|----------------|------------|------|
| 8270 MSSV Semivolatiles | | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | |
| Acenaphthene | ND | mg/kg | 0.75 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 83-32-9 | |
| Anthracene | ND | mg/kg | 0.75 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 120-12-7 | |
| Benzo(a)anthracene | ND | mg/kg | 0.75 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 56-55-3 | |
| Benzo(a)pyrene | ND | mg/kg | 0.75 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | mg/kg | 0.75 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 205-99-2 | |
| Benzo(k)fluoranthene | ND | mg/kg | 0.75 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 207-08-9 | |
| 2-Chloronaphthalene | ND | mg/kg | 0.75 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 91-58-7 | |
| Chrysene | ND | mg/kg | 0.75 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | mg/kg | 0.75 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 53-70-3 | |
| 7,12-Dimethylbenz(a)anthracene | ND | mg/kg | 3.8 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 57-97-6 | |
| Fluoranthene | ND | mg/kg | 0.75 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 206-44-0 | |
| Fluorene | ND | mg/kg | 0.75 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 86-73-7 | |
| Indeno(1,2,3-cd)pyrene | ND | mg/kg | 0.75 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 193-39-5 | |
| 1-Methylnaphthalene | ND | mg/kg | 0.75 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 90-12-0 | |
| 2-Methylnaphthalene | ND | mg/kg | 0.75 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 91-57-6 | |
| Naphthalene | ND | mg/kg | 0.75 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 91-20-3 | |
| Pyrene | ND | mg/kg | 0.75 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 129-00-0 | |
| Surrogates | | | | | | | | |
| Nitrobenzene-d5 (S) | 84 | % | 35-119 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 4165-60-0 | |
| 2-Fluorobiphenyl (S) | 82 | % | 55-110 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 321-60-8 | |
| Terphenyl-d14 (S) | 94 | % | 45-114 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 1718-51-0 | |
| Phenol-d6 (S) | 82 | % | 48-110 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 13127-88-3 | |
| 2-Fluorophenol (S) | 75 | % | 46-108 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 66 | % | 35-119 | 1 | 02/20/19 11:43 | 02/21/19 16:51 | 118-79-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 12.0 | % | 0.50 | 1 | | 02/21/19 16:28 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294683

Sample: SSD05-PRE-COMP: 0-1' Lab ID: 60294683008 Collected: 02/19/19 11:55 Received: 02/20/19 09:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 17.7 | 1 | 02/20/19 16:15 | 02/21/19 19:34 | | |
| TPH (>C12-C28) | ND | mg/kg | 17.7 | 1 | 02/20/19 16:15 | 02/21/19 19:34 | | |
| TPH (>C28-C35) | ND | mg/kg | 17.7 | 1 | 02/20/19 16:15 | 02/21/19 19:34 | | |
| TPH Total (C06-C35) | 20.1 | mg/kg | 17.7 | 1 | 02/20/19 16:15 | 02/21/19 19:34 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 93 | % | 70-130 | 1 | 02/20/19 16:15 | 02/21/19 19:34 | 84-15-1 | |
| 1-Chlorooctane (S) | 91 | % | 70-130 | 1 | 02/20/19 16:15 | 02/21/19 19:34 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 1.5 | % | 0.50 | 1 | | 02/21/19 16:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294683

Sample: SSD04-PRE-COMP: 0-1' Lab ID: 60294683009 Collected: 02/19/19 10:15 Received: 02/20/19 09:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 21.5 | 1 | 02/20/19 16:15 | 02/21/19 20:11 | | |
| TPH (>C12-C28) | 861 | mg/kg | 21.5 | 1 | 02/20/19 16:15 | 02/21/19 20:11 | | |
| TPH (>C28-C35) | 600 | mg/kg | 21.5 | 1 | 02/20/19 16:15 | 02/21/19 20:11 | | |
| TPH Total (C06-C35) | 1460 | mg/kg | 21.5 | 1 | 02/20/19 16:15 | 02/21/19 20:11 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 113 | % | 70-130 | 1 | 02/20/19 16:15 | 02/21/19 20:11 | 84-15-1 | |
| 1-Chlorooctane (S) | 105 | % | 70-130 | 1 | 02/20/19 16:15 | 02/21/19 20:11 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 7.9 | % | 0.50 | 1 | | 02/21/19 16:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294683

Sample: SSD10-PRE-GRAB: 0-1' **Lab ID: 60294683010** Collected: 02/19/19 14:15 Received: 02/20/19 09:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP Red. Interference | | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | |
| Antimony | ND | mg/kg | 0.79 | 1 | 02/21/19 10:51 | 02/22/19 11:26 | 7440-36-0 | |
| Arsenic | 3.3 | mg/kg | 0.79 | 1 | 02/21/19 10:51 | 02/22/19 11:26 | 7440-38-2 | |
| Beryllium | 0.36 | mg/kg | 0.079 | 1 | 02/21/19 10:51 | 02/22/19 11:26 | 7440-41-7 | |
| Cadmium | ND | mg/kg | 0.40 | 1 | 02/21/19 10:51 | 02/22/19 11:26 | 7440-43-9 | |
| Chromium | 9.8 | mg/kg | 0.40 | 1 | 02/21/19 10:51 | 02/22/19 11:26 | 7440-47-3 | |
| Copper | 18.5 | mg/kg | 1.6 | 1 | 02/21/19 10:51 | 02/22/19 11:26 | 7440-50-8 | |
| Lead | 32.5 | mg/kg | 0.40 | 1 | 02/21/19 10:51 | 02/22/19 11:26 | 7439-92-1 | |
| Nickel | 8.0 | mg/kg | 0.40 | 1 | 02/21/19 10:51 | 02/22/19 11:26 | 7440-02-0 | |
| Selenium | ND | mg/kg | 1.2 | 1 | 02/21/19 10:51 | 02/22/19 11:26 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.55 | 1 | 02/21/19 10:51 | 02/22/19 11:26 | 7440-22-4 | |
| Thallium | ND | mg/kg | 1.6 | 1 | 02/21/19 10:51 | 02/22/19 11:26 | 7440-28-0 | |
| Zinc | 44.9 | mg/kg | 7.9 | 1 | 02/21/19 10:51 | 02/22/19 11:26 | 7440-66-6 | |
| 7471 Mercury | | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | |
| Mercury | ND | mg/kg | 0.046 | 1 | 02/21/19 13:46 | 02/22/19 09:47 | 7439-97-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 14.5 | % | 0.50 | 1 | | 02/21/19 16:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294683

QC Batch: 570372

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Associated Lab Samples: 60294683010

METHOD BLANK: 2338682

Matrix: Solid

Associated Lab Samples: 60294683010

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Mercury | mg/kg | ND | 0.050 | 02/22/19 08:47 | |

LABORATORY CONTROL SAMPLE: 2338683

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | mg/kg | 0.5 | 0.49 | 97 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2338684 2338685

| Parameter | Units | 60294179001 | | MS | | MSD | | MS | | MSD | | % Rec Limits | Max RPD | Qual |
|-----------|-------|-------------|-------|-------------|-------------|--------|--------|-------|--------|-----|----|--------------|---------|------|
| | | Result | Conc. | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec | | | | | |
| Mercury | mg/kg | 0.71 | 1.9 | 1.8 | 2.2 | 2.5 | 78 | 100 | 75-125 | 13 | 20 | | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294683

QC Batch: 570252

Analysis Method: EPA 6010

QC Batch Method: EPA 3050

Analysis Description: 6010 MET

Associated Lab Samples: 60294683010

METHOD BLANK: 2338268

Matrix: Solid

Associated Lab Samples: 60294683010

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Antimony | mg/kg | ND | 1.0 | 02/22/19 11:14 | |
| Arsenic | mg/kg | ND | 1.0 | 02/22/19 11:14 | |
| Beryllium | mg/kg | ND | 0.10 | 02/22/19 11:14 | |
| Cadmium | mg/kg | ND | 0.50 | 02/22/19 11:14 | |
| Chromium | mg/kg | ND | 0.50 | 02/22/19 11:14 | |
| Copper | mg/kg | ND | 2.0 | 02/22/19 11:14 | |
| Lead | mg/kg | ND | 0.50 | 02/22/19 11:14 | |
| Nickel | mg/kg | ND | 0.50 | 02/22/19 11:14 | |
| Selenium | mg/kg | ND | 1.5 | 02/22/19 11:14 | |
| Silver | mg/kg | ND | 0.70 | 02/22/19 11:14 | |
| Thallium | mg/kg | ND | 2.0 | 02/22/19 11:14 | |
| Zinc | mg/kg | ND | 10.0 | 02/22/19 11:14 | |

LABORATORY CONTROL SAMPLE: 2338269

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | mg/kg | 100 | 95.6 | 96 | 80-120 | |
| Arsenic | mg/kg | 100 | 88.5 | 89 | 80-120 | |
| Beryllium | mg/kg | 100 | 95.8 | 96 | 80-120 | |
| Cadmium | mg/kg | 100 | 92.7 | 93 | 80-120 | |
| Chromium | mg/kg | 100 | 98.2 | 98 | 80-120 | |
| Copper | mg/kg | 100 | 101 | 101 | 80-120 | |
| Lead | mg/kg | 100 | 93.7 | 94 | 80-120 | |
| Nickel | mg/kg | 100 | 95.5 | 96 | 80-120 | |
| Selenium | mg/kg | 100 | 93.4 | 93 | 80-120 | |
| Silver | mg/kg | 50 | 48.1 | 96 | 80-120 | |
| Thallium | mg/kg | 100 | 97.3 | 97 | 80-120 | |
| Zinc | mg/kg | 100 | 94.9 | 95 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2338270

2338271

| Parameter | Units | 60294537004 | | 2338271 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual | |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|----|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | | | | |
| Antimony | mg/kg | ND | 112 | 106 | 57.4 | 47.1 | 51 | 44 | 75-125 | 20 | 20 | M1 |
| Arsenic | mg/kg | 6.0 | 112 | 106 | 97.6 | 94.4 | 82 | 84 | 75-125 | 3 | 20 | |
| Beryllium | mg/kg | 0.44 | 112 | 106 | 102 | 98.8 | 91 | 93 | 75-125 | 3 | 20 | |
| Cadmium | mg/kg | ND | 112 | 106 | 98.7 | 94.0 | 88 | 89 | 75-125 | 5 | 20 | |
| Chromium | mg/kg | 14.0 | 112 | 106 | 120 | 119 | 95 | 99 | 75-125 | 1 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294683

| Parameter | Units | 60294537004 | | 2338270 | | 2338271 | | % Rec | % Rec | % Rec | Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|-----------------|-----------|------------|----------|-------|--------|-------|--------|-----|---------|------|
| | | Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | | | | | | | |
| Copper | mg/kg | 12.5 | 112 | 106 | 118 | 118 | 95 | 99 | 75-125 | 0 | 20 | | | |
| Lead | mg/kg | 20.9 | 112 | 106 | 127 | 105 | 95 | 79 | 75-125 | 19 | 20 | | | |
| Nickel | mg/kg | 16.5 | 112 | 106 | 113 | 109 | 87 | 87 | 75-125 | 4 | 20 | | | |
| Selenium | mg/kg | ND | 112 | 106 | 96.9 | 92.5 | 86 | 87 | 75-125 | 5 | 20 | | | |
| Silver | mg/kg | ND | 55.7 | 53 | 51.1 | 50.2 | 91 | 94 | 75-125 | 2 | 20 | | | |
| Thallium | mg/kg | ND | 112 | 106 | 95.1 | 90.0 | 85 | 85 | 75-125 | 6 | 20 | | | |
| Zinc | mg/kg | 63.6 | 112 | 106 | 171 | 153 | 96 | 84 | 75-125 | 11 | 20 | | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294683

QC Batch: 570241 Analysis Method: EPA 8270
QC Batch Method: EPA 3546 Analysis Description: 8270 Solid MSSV Microwave
Associated Lab Samples: 60294683005, 60294683006

METHOD BLANK: 2338134 Matrix: Solid

Associated Lab Samples: 60294683005, 60294683006

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|--------------------------------|-------|--------------|-----------------|----------------|------------|
| 1-Methylnaphthalene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| 2-Chloronaphthalene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| 2-Methylnaphthalene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| 7,12-Dimethylbenz(a)anthracene | mg/kg | ND | 1.6 | 02/21/19 13:10 | |
| Acenaphthene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Anthracene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Benzo(a)anthracene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Benzo(a)pyrene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Benzo(b)fluoranthene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Benzo(k)fluoranthene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Chrysene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Dibenz(a,h)anthracene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Fluoranthene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Fluorene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Indeno(1,2,3-cd)pyrene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Naphthalene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| Pyrene | mg/kg | ND | 0.32 | 02/21/19 13:10 | |
| 2,4,6-Tribromophenol (S) | % | 95 | 35-119 | 02/21/19 13:10 | |
| 2-Fluorobiphenyl (S) | % | 83 | 55-110 | 02/21/19 13:10 | |
| 2-Fluorophenol (S) | % | 86 | 46-108 | 02/21/19 13:10 | |
| Nitrobenzene-d5 (S) | % | 85 | 35-119 | 02/21/19 13:10 | |
| Phenol-d6 (S) | % | 86 | 48-110 | 02/21/19 13:10 | |
| Terphenyl-d14 (S) | % | 88 | 45-114 | 02/21/19 13:10 | |

LABORATORY CONTROL SAMPLE: 2338135

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------------------|-------|-------------|------------|-----------|--------------|------------|
| 1-Methylnaphthalene | mg/kg | 1.6 | 1.2 | 77 | 61-90 | |
| 2-Chloronaphthalene | mg/kg | 1.6 | 1.2 | 78 | 59-95 | |
| 2-Methylnaphthalene | mg/kg | 1.6 | 1.2 | 78 | 60-93 | |
| Acenaphthene | mg/kg | 1.6 | 1.3 | 79 | 60-95 | |
| Anthracene | mg/kg | 1.6 | 1.3 | 81 | 61-97 | |
| Benzo(a)anthracene | mg/kg | 1.6 | 1.2 | 77 | 62-98 | |
| Benzo(a)pyrene | mg/kg | 1.6 | 1.3 | 84 | 60-99 | |
| Benzo(b)fluoranthene | mg/kg | 1.6 | 1.4 | 86 | 61-100 | |
| Benzo(k)fluoranthene | mg/kg | 1.6 | 1.3 | 81 | 58-100 | |
| Chrysene | mg/kg | 1.6 | 1.3 | 82 | 61-98 | |
| Dibenz(a,h)anthracene | mg/kg | 1.6 | 1.3 | 80 | 60-99 | |
| Fluoranthene | mg/kg | 1.6 | 1.3 | 82 | 61-100 | |
| Fluorene | mg/kg | 1.6 | 1.3 | 80 | 60-98 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294683

LABORATORY CONTROL SAMPLE: 2338135

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|--------------------------|-------|-------------|------------|-----------|--------------|------------|
| Indeno(1,2,3-cd)pyrene | mg/kg | 1.6 | 1.3 | 80 | 60-99 | |
| Naphthalene | mg/kg | 1.6 | 1.2 | 78 | 58-94 | |
| Pyrene | mg/kg | 1.6 | 1.3 | 83 | 61-100 | |
| 2,4,6-Tribromophenol (S) | % | | | 97 | 35-119 | |
| 2-Fluorobiphenyl (S) | % | | | 82 | 55-110 | |
| 2-Fluorophenol (S) | % | | | 84 | 46-108 | |
| Nitrobenzene-d5 (S) | % | | | 82 | 35-119 | |
| Phenol-d6 (S) | % | | | 84 | 48-110 | |
| Terphenyl-d14 (S) | % | | | 87 | 45-114 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2338136 2338137

| Parameter | Units | 60294602001 | | MS | MSD | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|--------------------------|-------|-------------|-------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| | | Result | Conc. | Spike Conc. | Spike Conc. | | | | | | | | |
| 1-Methylnaphthalene | mg/kg | ND | 9.2 | 9.2 | 9 | 7.7J | 7.3J | 84 | 81 | 35-128 | | 26 | |
| 2-Chloronaphthalene | mg/kg | ND | 9.2 | 9.2 | 9 | 8.1J | 8J | 88 | 88 | 43-104 | | 30 | |
| 2-Methylnaphthalene | mg/kg | ND | 9.2 | 9.2 | 9 | 7.6J | 7.3J | 83 | 80 | 37-111 | | 36 | |
| Acenaphthene | mg/kg | ND | 9.2 | 9.2 | 9 | 8.2J | 7.7J | 89 | 86 | 42-104 | | 36 | |
| Anthracene | mg/kg | ND | 9.2 | 9.2 | 9 | 7.9J | 7.6J | 85 | 84 | 37-111 | | 52 | |
| Benzo(a)anthracene | mg/kg | ND | 9.2 | 9.2 | 9 | 7.7J | 7.5J | 83 | 83 | 32-113 | | 73 | |
| Benzo(a)pyrene | mg/kg | ND | 9.2 | 9.2 | 9 | 8J | 7.7J | 86 | 85 | 29-112 | | 60 | |
| Benzo(b)fluoranthene | mg/kg | ND | 9.2 | 9.2 | 9 | 7.6J | 8.1J | 82 | 90 | 19-121 | | 69 | |
| Benzo(k)fluoranthene | mg/kg | ND | 9.2 | 9.2 | 9 | 8.3J | 7.3J | 90 | 81 | 33-115 | | 56 | |
| Chrysene | mg/kg | ND | 9.2 | 9.2 | 9 | 8.2J | 8J | 89 | 88 | 31-113 | | 72 | |
| Dibenz(a,h)anthracene | mg/kg | ND | 9.2 | 9.2 | 9 | 7.8J | 7.3J | 84 | 81 | 29-115 | | 41 | |
| Fluoranthene | mg/kg | ND | 9.2 | 9.2 | 9 | 7.7J | 7.5J | 84 | 83 | 34-113 | | 88 | |
| Fluorene | mg/kg | ND | 9.2 | 9.2 | 9 | 8.1J | 7.8J | 88 | 86 | 37-111 | | 40 | |
| Indeno(1,2,3-cd)pyrene | mg/kg | ND | 9.2 | 9.2 | 9 | 7.8J | 7.5J | 84 | 83 | 27-113 | | 46 | |
| Naphthalene | mg/kg | ND | 9.2 | 9.2 | 9 | 7.9J | 7.6J | 85 | 84 | 39-106 | | 34 | |
| Pyrene | mg/kg | ND | 9.2 | 9.2 | 9 | 8.6J | 8.4J | 93 | 93 | 24-129 | | 82 | |
| 2,4,6-Tribromophenol (S) | % | | | | | | | 88 | 91 | 35-119 | | 46 | |
| 2-Fluorobiphenyl (S) | % | | | | | | | 93 | 92 | 55-110 | | 44 | |
| 2-Fluorophenol (S) | % | | | | | | | 91 | 90 | 46-108 | | 36 | |
| Nitrobenzene-d5 (S) | % | | | | | | | 86 | 86 | 35-119 | | 43 P3 | |
| Phenol-d6 (S) | % | | | | | | | 94 | 91 | 48-110 | | 38 | |
| Terphenyl-d14 (S) | % | | | | | | | 99 | 96 | 45-114 | | 50 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2338138 2338139

| Parameter | Units | 60294683005 | | MS | MSD | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---------------------|-------|-------------|-------|-------------|-------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| | | Result | Conc. | Spike Conc. | Spike Conc. | | | | | | | | |
| 1-Methylnaphthalene | mg/kg | ND | 1.9 | 1.9 | 1.9 | 1.4 | 1.4 | 72 | 68 | 35-128 | 6 | 26 | |
| 2-Chloronaphthalene | mg/kg | ND | 1.9 | 1.9 | 1.9 | 1.4 | 1.3 | 71 | 67 | 43-104 | 6 | 30 | |
| 2-Methylnaphthalene | mg/kg | ND | 1.9 | 1.9 | 1.9 | 1.4 | 1.4 | 71 | 68 | 37-111 | 5 | 36 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294683

| Parameter | Units | 2338138 | | 2338139 | | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | RPD | Qual |
|--------------------------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|------------|-----|------|
| | | 60294683005 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | | | | | | | | |
| Acenaphthene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.3 | 72 | 67 | 42-104 | 7 | 36 | | |
| Anthracene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.2 | 69 | 60 | 37-111 | 13 | 52 | | |
| Benzo(a)anthracene | mg/kg | ND | 1.9 | 1.9 | 1.3 | 1.1 | 62 | 51 | 32-113 | 18 | 73 | | |
| Benzo(a)pyrene | mg/kg | ND | 1.9 | 1.9 | 1.2 | 0.98 | 58 | 47 | 29-112 | 21 | 60 | | |
| Benzo(b)fluoranthene | mg/kg | ND | 1.9 | 1.9 | 1.3 | 1.0 | 59 | 47 | 19-121 | 21 | 69 | | |
| Benzo(k)fluoranthene | mg/kg | ND | 1.9 | 1.9 | 1.2 | 1.0 | 61 | 50 | 33-115 | 20 | 56 | | |
| Chrysene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.1 | 64 | 52 | 31-113 | 18 | 72 | | |
| Dibenz(a,h)anthracene | mg/kg | ND | 1.9 | 1.9 | 1.1 | 0.92 | 55 | 45 | 29-115 | 20 | 41 | | |
| Fluoranthene | mg/kg | ND | 1.9 | 1.9 | 1.3 | 1.1 | 65 | 55 | 34-113 | 17 | 88 | | |
| Fluorene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.3 | 70 | 64 | 37-111 | 8 | 40 | | |
| Indeno(1,2,3-cd)pyrene | mg/kg | ND | 1.9 | 1.9 | 1.1 | 0.87 | 52 | 42 | 27-113 | 20 | 46 | | |
| Naphthalene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.4 | 71 | 70 | 39-106 | 2 | 34 | | |
| Pyrene | mg/kg | ND | 1.9 | 1.9 | 1.5 | 1.3 | 71 | 60 | 24-129 | 16 | 82 | | |
| 2,4,6-Tribromophenol (S) | % | | | | | | 71 | 67 | 35-119 | | 46 | | |
| 2-Fluorobiphenyl (S) | % | | | | | | 77 | 73 | 55-110 | | 44 | | |
| 2-Fluorophenol (S) | % | | | | | | 63 | 64 | 46-108 | | 36 | | |
| Nitrobenzene-d5 (S) | % | | | | | | 78 | 79 | 35-119 | | 43 | | |
| Phenol-d6 (S) | % | | | | | | 71 | 71 | 48-110 | | 38 | | |
| Terphenyl-d14 (S) | % | | | | | | 82 | 71 | 45-114 | | 50 | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294683

QC Batch: 570043 Analysis Method: TNRCC 1005
 QC Batch Method: TNRCC 1005 Analysis Description: TX1005 TPH GCS
 Associated Lab Samples: 60294683001, 60294683002, 60294683003, 60294683004, 60294683008, 60294683009

METHOD BLANK: 2337437 Matrix: Solid
 Associated Lab Samples: 60294683001, 60294683002, 60294683003, 60294683004, 60294683008, 60294683009

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---------------------|-------|--------------|-----------------|----------------|------------|
| TPH (>C12-C28) | mg/kg | ND | 20.0 | 02/21/19 12:29 | |
| TPH (>C28-C35) | mg/kg | ND | 20.0 | 02/21/19 12:29 | |
| TPH (C06-C12) | mg/kg | ND | 20.0 | 02/21/19 12:29 | |
| TPH Total (C06-C35) | mg/kg | ND | 20.0 | 02/21/19 12:29 | |
| 1-Chlorooctane (S) | % | 91 | 70-130 | 02/21/19 12:29 | |
| o-Terphenyl (S) | % | 93 | 70-130 | 02/21/19 12:29 | |

LABORATORY CONTROL SAMPLE & LCSD: 2337438 2337439

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| TPH Total (C06-C35) | mg/kg | 2500 | 1950 | 2120 | 78 | 85 | 75-125 | 9 | 20 | |
| 1-Chlorooctane (S) | % | | | | 114 | 122 | 70-130 | | | |
| o-Terphenyl (S) | % | | | | 102 | 106 | 70-130 | | | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2337869 2337870

| Parameter | Units | 60294683004 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|------|
| TPH Total (C06-C35) | mg/kg | 29.3 | 2510 | 2560 | 1960 | 2280 | 77 | 88 | 11-187 | 15 | 43 | |
| 1-Chlorooctane (S) | % | | | | | | 107 | 120 | 70-130 | | | |
| o-Terphenyl (S) | % | | | | | | 92 | 103 | 70-130 | | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294683

QC Batch: 570294

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60294683001, 60294683002, 60294683003, 60294683004, 60294683008, 60294683009, 60294683010

METHOD BLANK: 2338387

Matrix: Solid

Associated Lab Samples: 60294683001, 60294683002, 60294683003, 60294683004, 60294683008, 60294683009, 60294683010

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------------|-------|--------------|-----------------|----------------|------------|
| Percent Moisture | % | ND | 0.50 | 02/21/19 16:00 | |

SAMPLE DUPLICATE: 2338388

| Parameter | Units | 60294558001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------|-------|--------------------|------------|-----|---------|------------|
| Percent Moisture | % | 20.4 | 22.3 | 9 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294683

QC Batch: 570389

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60294683005, 60294683006

METHOD BLANK: 2338752

Matrix: Solid

Associated Lab Samples: 60294683005, 60294683006

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------------|-------|--------------|-----------------|----------------|------------|
| Percent Moisture | % | ND | 0.50 | 02/21/19 16:28 | |

SAMPLE DUPLICATE: 2338753

| Parameter | Units | 60293520008 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------|-------|--------------------|------------|-----|---------|------------|
| Percent Moisture | % | 20.6 | 20.1 | 3 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS-FINTUBE

Pace Project No.: 60294683

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

P3 Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS-FINTUBE

Pace Project No.: 60294683

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|----------------------------|-----------------|----------|-------------------|------------------|
| 60294683001 | DUPLICATE 04 | TNRCC 1005 | 570043 | TNRCC 1005 | 570342 |
| 60294683002 | DUPLICATE 03 | TNRCC 1005 | 570043 | TNRCC 1005 | 570342 |
| 60294683003 | SSD10-PRE-GRAB:0-1' | TNRCC 1005 | 570043 | TNRCC 1005 | 570342 |
| 60294683004 | SSD05-PRE-COMP:0-1' MS/MSD | TNRCC 1005 | 570043 | TNRCC 1005 | 570342 |
| 60294683008 | SSD05-PRE-COMP: 0-1' | TNRCC 1005 | 570043 | TNRCC 1005 | 570342 |
| 60294683009 | SSD04-PRE-COMP: 0-1' | TNRCC 1005 | 570043 | TNRCC 1005 | 570342 |
| 60294683010 | SSD10-PRE-GRAB: 0-1' | EPA 3050 | 570252 | EPA 6010 | 570431 |
| 60294683010 | SSD10-PRE-GRAB: 0-1' | EPA 7471 | 570372 | EPA 7471 | 570450 |
| 60294683005 | SSD10-PRE-GRAB:0-1' | EPA 3546 | 570241 | EPA 8270 | 570380 |
| 60294683006 | DUPLICATE 05 | EPA 3546 | 570241 | EPA 8270 | 570380 |
| 60294683001 | DUPLICATE 04 | ASTM D2974 | 570294 | | |
| 60294683002 | DUPLICATE 03 | ASTM D2974 | 570294 | | |
| 60294683003 | SSD10-PRE-GRAB:0-1' | ASTM D2974 | 570294 | | |
| 60294683004 | SSD05-PRE-COMP:0-1' MS/MSD | ASTM D2974 | 570294 | | |
| 60294683005 | SSD10-PRE-GRAB:0-1' | ASTM D2974 | 570389 | | |
| 60294683006 | DUPLICATE 05 | ASTM D2974 | 570389 | | |
| 60294683008 | SSD05-PRE-COMP: 0-1' | ASTM D2974 | 570294 | | |
| 60294683009 | SSD04-PRE-COMP: 0-1' | ASTM D2974 | 570294 | | |
| 60294683010 | SSD10-PRE-GRAB: 0-1' | ASTM D2974 | 570294 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

AKB

WO#: 60294683



Client Name: Environmental Works

Courier: FedEx UPS VIA Clay PEX ECI Pace Xroads Client Other

Tracking #: 745598333312 Pace Shipping Label Used? Yes No

Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags Foam None Other

Thermometer Used: 896 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 3.5 Corr. Factor -1.0 Corrected 2.5

Date and initials of person examining contents: 2/20/19 A

Temperature should be above freezing to 6°C

| | | |
|--|--|--|
| Chain of Custody present: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Chain of Custody relinquished: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples arrived within holding time: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Short Hold Time analyses (<72hr): | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Rush Turn Around Time requested: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Sufficient volume: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Correct containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Pace containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers intact: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | <u>Frozen @ 10:20 2/20/19</u> |
| Filtered volume received for dissolved tests? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Sample labels match COC: Date / time / ID / analyses | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples contain multiple phases? Matrix: <u>52</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | List sample IDs, volumes, lot #'s of preservative and the date/time added. |
| Cyanide water sample checks: | | |
| Lead acetate strip turns dark? (Record only) | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| Potassium iodide test strip turns blue/purple? (Preserve) | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| Trip Blank present: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Headspace in VOA vials (>6mm): | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Samples from USDA Regulated Area: State: <u>Oh</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Additional labels attached to 5035A / TX1005 vials in the field? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

| | | | | | |
|------------------------------|----------------------------------|-------------------------------|----------------|-----------------------|--------------------------|
| Section A | | Section B | | Section C | |
| Required Client Information: | | Required Project Information: | | Invoice Information: | |
| Company: | Environmental Works_Tulsa Office | Report To: | MOORE, ANTHONY | Attention: | |
| Address: | 9529 E 55th Place | Copy To: | | Company Name: | |
| Suite A, Tulsa, OK 74145 | | Purchase Order #: | | Address: | |
| Email: | anthony.evans@emwork.com | Project Name: | Evans-Fintube | Pace Quote: | |
| Phone: | 918-773-5797 | Project #: | | Pace Project Manager: | angie.brown@pacelabs.com |
| Requested Due Date: | 4-8-2014 | | | Pace Profile #: | 12359 |

| ITEM # | MATRIX | CODE | COLLECTED | | SAMPLE TYPE (G=GRAB C=COMP) | MATRIX CODE (see valid codes to left) | # OF CONTAINERS | PRESERVATIVES | | | | | | | Y/N | Analyses Test | Metals | PAH 8270 by SIM | Residual Chlorine (Y/N) | Requested Analysis Filtered (Y/N) | |
|--------|--------|-----------------------------|------------|----------|-----------------------------|---------------------------------------|-----------------|---------------|------|-----|------|---------|----------|-------|-----|---------------|--------|-----------------|-------------------------|-----------------------------------|-----|
| | | | START DATE | END DATE | | | | H2SO4 | HNO3 | HCl | NaOH | Na2S2O3 | Methanol | Other | | | | | | | |
| 1 | | Duplicate 04 | 2/14/14 | 1415 | C | SL C | 4 | X | | | | | | | X | | | | | | 001 |
| 2 | | Duplicate 03 | 2/14/14 | 1015 | C | SL C | 4 | X | | | | | | | X | | | | | | 002 |
| 3 | | SSD10-pre-grab-0-1' | | 1415 | C | SL C | 4 | X | | | | | | | X | | | | | | 003 |
| 4 | | SSD05-pre-comp-0-1' m/s/m/s | 2/14/14 | 1150 | C | SL C | 8 | X | | | | | | | X | | | | | | 004 |
| 5 | | SSD10-pre-grab-0-1' | | 1415 | C | SL C | 1 | X | | | | | | | X | | | | | | 005 |
| 6 | | Duplicate 05 | | 1415 | C | SL C | 1 | X | | | | | | | X | | | | | | 006 |
| 7 | | SSD10-pre-grab-0-1' m/s/m/s | | 1415 | C | SL C | 2 | X | | | | | | | X | | | | | | 007 |
| 8 | | SSD05-pre-comp-0-1' | 2/14/14 | 1150 | C | SL C | 4 | X | | | | | | | X | | | | | | 008 |
| 9 | | SSD04-pre-comp-0-1' | " | 1011 | C | SL C | 4 | X | | | | | | | X | | | | | | 009 |
| 10 | | SSD10-pre-grab-0-1' | | 1415 | C | SL C | 1 | X | | | | | | | X | | | | | | 010 |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS |
|---------------------|-------------------------------|---------|------|---------------------------|---------|------|--|
| | EWI | 2/14/14 | 1730 | Anthony Moore | 2/20/14 | 0910 | Sealed / Cooled / Custody (Y/N) / Received on (Y/N) / Samples Intact (Y/N) |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

TEMP in C

DATE Signed: 2/14/14

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Anthony Moore

SIGNATURE of SAMPLER: [Signature]

February 22, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS-FINTUBE
Pace Project No.: 60294713

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on February 20, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS-FINTUBE

Pace Project No.: 60294713

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Certification Number: 10090

Arkansas Drinking Water

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS-FINTUBE

Pace Project No.: 60294713

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|-----------------|--------|----------------|----------------|
| 60294713001 | SSD10-WC-PAVERS | Solid | 02/19/19 14:10 | 02/20/19 08:10 |
| 60294713002 | SSD12-WC-PAVERS | Solid | 02/19/19 16:35 | 02/20/19 08:10 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS-FINTUBE

Pace Project No.: 60294713

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------------|----------|----------|-------------------|------------|
| 60294713001 | SSD10-WC-PAVERS | EPA 6010 | JDE | 1 | PASI-K |
| 60294713002 | SSD12-WC-PAVERS | EPA 6010 | JDE | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294713

Method: EPA 6010

Description: 6010 MET ICP, TCLP

Client: Environmental Works_OK office

Date: February 22, 2019

General Information:

2 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294713

Sample: SSD10-WC-PAVERS Lab ID: 60294713001 Collected: 02/19/19 14:10 Received: 02/20/19 08:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---------|-------|--------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP, TCLP | | | | | | | | |
| Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Leachate Method/Date: EPA 1311; 02/22/19 00:00 | | | | | | | | |
| Lead | ND | mg/L | 0.50 | 1 | 02/22/19 09:45 | 02/22/19 14:42 | 7439-92-1 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294713

Sample: SSD12-WC-PAVERS **Lab ID: 60294713002** Collected: 02/19/19 16:35 Received: 02/20/19 08:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---------|-------|--------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP, TCLP | | | | | | | | |
| Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Leachate Method/Date: EPA 1311; 02/22/19 00:00 | | | | | | | | |
| Lead | ND | mg/L | 0.50 | 1 | 02/22/19 09:45 | 02/22/19 14:44 | 7439-92-1 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294713

QC Batch: 570485

Analysis Method: EPA 6010

QC Batch Method: EPA 3010

Analysis Description: 6010 MET TCLP

Associated Lab Samples: 60294713001, 60294713002

METHOD BLANK: 2339275

Matrix: Water

Associated Lab Samples: 60294713001, 60294713002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Lead | mg/L | ND | 0.50 | 02/22/19 14:31 | |

LABORATORY CONTROL SAMPLE: 2339276

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Lead | mg/L | 10 | 9.4 | 94 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2339277 2339278

| Parameter | Units | 60294044002 Result | MS | | MSD | | % Rec | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|-------------|-------|--------|--------|-------|-------|--------------|-----|---------|------|
| | | | Spike Conc. | Conc. | Result | Result | % Rec | % Rec | | | | |
| Lead | mg/L | ND | 10 | 10 | 9.1 | 9.1 | 91 | 91 | 75-125 | 0 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS-FINTUBE

Pace Project No.: 60294713

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS-FINTUBE

Pace Project No.: 60294713

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------------|-----------------|----------|-------------------|------------------|
| 60294713001 | SSD10-WC-PAVERS | EPA 3010 | 570485 | EPA 6010 | 570496 |
| 60294713002 | SSD12-WC-PAVERS | EPA 3010 | 570485 | EPA 6010 | 570496 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

MCB

WO#: 60294713



60294713

Client Name: Environmental Works

Courier: FedEx [x] UPS [] VIA [] Clay [] PEX [] ECI [] Pace [] Xroads [] Client [] Other []

Tracking #: 785598333372 Pace Shipping Label Used? Yes [] No [x]

Custody Seal on Cooler/Box Present: Yes [x] No [] Seals intact: Yes [x] No []

Packing Material: Bubble Wrap [] Bubble Bags [x] Foam [] None [] Other []

Thermometer Used: T-276 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 3.5 Corr. Factor -1.0 Corrected 2.5

Date and initials of person examining contents: 2/20/19

Temperature should be above freezing to 6°C

Table with 2 columns: Question and Answer (Yes/No/N/A). Rows include Chain of Custody, Samples arrived, Short Hold Time, Rush Turn Around Time, Sufficient volume, Correct containers used, Pace containers used, Containers intact, Unpreserved soils, Filtered volume, Sample labels match, Samples contain multiple phases, Containers requiring pH preservation, Cyanide water sample checks, Trip Blank present, Headspace in VOA vials, Samples from USDA Regulated Area, Additional labels attached.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date:

March 11, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS-FINTUBE
Pace Project No.: 60294965

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on February 22, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Revised report_rev1

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS-FINTUBE

Pace Project No.: 60294965

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Certification Number: 10090

Arkansas Drinking Water

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS-FINTUBE

Pace Project No.: 60294965

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|---------------------|--------|----------------|----------------|
| 60294965001 | SSD12-PRE-GRAB:0-1' | Solid | 02/21/19 10:20 | 02/22/19 08:30 |
| 60294965002 | SSD12-PRE-COMP:0-1' | Solid | 02/21/19 10:25 | 02/22/19 08:30 |
| 60294965003 | SSF14-PRE-GRAB:0-1' | Solid | 02/21/19 17:15 | 02/22/19 08:30 |
| 60294965004 | SSF14-PRE-COMP:0-1' | Solid | 02/21/19 17:15 | 02/22/19 08:30 |
| 60294965005 | SSE12-PRE-GRAB:0-1' | Solid | 02/21/19 16:35 | 02/22/19 08:30 |
| 60294965006 | SSE12-PRE-COMP:0-1' | Solid | 02/21/19 16:45 | 02/22/19 08:30 |
| 60294965007 | SSE13-PRE-GRAB:0-1' | Solid | 02/21/19 15:20 | 02/22/19 08:30 |
| 60294965008 | SSE13-PRE-COMP:0-1' | Solid | 02/21/19 15:30 | 02/22/19 08:30 |
| 60294965009 | SSE14-PRE-GRAB:0-1' | Solid | 02/21/19 14:15 | 02/22/19 08:30 |
| 60294965010 | SSE14-PRE-COMP:0-1' | Solid | 02/21/19 14:20 | 02/22/19 08:30 |
| 60294965011 | SSD10-PRE-COMP:0-1' | Solid | 02/21/19 17:45 | 02/22/19 08:30 |
| 60294965012 | SSD14-PRE-GRAB:0-1' | Solid | 02/21/19 13:45 | 02/22/19 08:30 |
| 60294965013 | SSD14-PRE-COMP:0-1' | Solid | 02/21/19 13:55 | 02/22/19 08:30 |
| 60294965014 | DUPLICATE 06 | Solid | 02/21/19 11:20 | 02/22/19 08:30 |
| 60294965015 | SSC14-PRE-COMP:0-1' | Solid | 02/21/19 11:30 | 02/22/19 08:30 |
| 60294965016 | SSC1D-PRE-GRAB:0-1' | Solid | 02/21/19 10:45 | 02/22/19 08:30 |
| 60294965017 | SSC13-PRE-COMP:0-1' | Solid | 02/21/19 10:47 | 02/22/19 08:30 |
| 60294965018 | SSD11-PRE-GRAB:0-1' | Solid | 02/21/19 09:10 | 02/22/19 08:30 |
| 60294965019 | SSD11-PRE-COMP:0-1' | Solid | 02/21/19 09:15 | 02/22/19 08:30 |
| 60294965020 | SSC14-PRE-GRAB:0-1' | Solid | 02/21/19 11:20 | 02/22/19 08:30 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS-FINTUBE

Pace Project No.: 60294965

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|---------------------|------------|----------|-------------------|------------|
| 60294965001 | SSD12-PRE-GRAB:0-1' | TNRCC 1005 | AJM | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294965003 | SSF14-PRE-GRAB:0-1' | TNRCC 1005 | AJM | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294965005 | SSE12-PRE-GRAB:0-1' | TNRCC 1005 | AJM | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294965007 | SSE13-PRE-GRAB:0-1' | TNRCC 1005 | AJM | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294965009 | SSE14-PRE-GRAB:0-1' | TNRCC 1005 | AJM | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294965012 | SSD14-PRE-GRAB:0-1' | TNRCC 1005 | AJM | 6 | PASI-K |
| | | EPA 6010 | JDE | 12 | PASI-K |
| | | EPA 7471 | HKC | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294965013 | SSD14-PRE-COMP:0-1' | TNRCC 1005 | AJM | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294965014 | DUPLICATE 06 | EPA 6010 | JDE | 12 | PASI-K |
| | | EPA 7471 | HKC | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294965016 | SSC1D-PRE-GRAB:0-1' | TNRCC 1005 | AJM | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60294965018 | SSD11-PRE-GRAB:0-1' | TNRCC 1005 | AJM | 6 | PASI-K |
| | | EPA 6010 | JDE | 12 | PASI-K |
| | | EPA 7471 | HKC | 1 | PASI-K |
| 60294965020 | SSC14-PRE-GRAB:0-1' | ASTM D2974 | DWC | 1 | PASI-K |
| | | TNRCC 1005 | AJM | 6 | PASI-K |
| | | EPA 6010 | JDE | 12 | PASI-K |
| | | EPA 7471 | HKC | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS-FINTUBE

Pace Project No.: 60294965

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|-------|--------------|----------------|------------|
| 60294965001 | SSD12-PRE-GRAB:0-1' | | | | | |
| ASTM D2974 | Percent Moisture | 17.5 | % | 0.50 | 02/22/19 17:21 | |
| 60294965003 | SSF14-PRE-GRAB:0-1' | | | | | |
| ASTM D2974 | Percent Moisture | 12.7 | % | 0.50 | 02/22/19 17:21 | |
| 60294965005 | SSE12-PRE-GRAB:0-1' | | | | | |
| TNRCC 1005 | TPH Total (C06-C35) | 19.7 | mg/kg | 19.4 | 02/24/19 19:06 | |
| ASTM D2974 | Percent Moisture | 2.3 | % | 0.50 | 02/22/19 17:21 | |
| 60294965007 | SSE13-PRE-GRAB:0-1' | | | | | |
| ASTM D2974 | Percent Moisture | 11.1 | % | 0.50 | 02/22/19 17:21 | |
| 60294965009 | SSE14-PRE-GRAB:0-1' | | | | | |
| ASTM D2974 | Percent Moisture | 4.5 | % | 0.50 | 02/22/19 17:21 | |
| 60294965012 | SSD14-PRE-GRAB:0-1' | | | | | |
| TNRCC 1005 | TPH (C06-C12) | 486 | mg/kg | 189 | 02/25/19 13:44 | |
| TNRCC 1005 | TPH (>C12-C28) | 8680 | mg/kg | 189 | 02/25/19 13:44 | |
| TNRCC 1005 | TPH (>C28-C35) | 2670 | mg/kg | 189 | 02/25/19 13:44 | |
| TNRCC 1005 | TPH Total (C06-C35) | 12000 | mg/kg | 189 | 02/25/19 13:44 | |
| EPA 6010 | Arsenic | 5.2 | mg/kg | 1.1 | 02/26/19 12:36 | M1 |
| EPA 6010 | Beryllium | 1.0 | mg/kg | 0.11 | 02/26/19 12:36 | M1 |
| EPA 6010 | Chromium | 27.2 | mg/kg | 0.53 | 02/26/19 12:36 | |
| EPA 6010 | Copper | 12.3 | mg/kg | 2.1 | 02/26/19 12:36 | |
| EPA 6010 | Lead | 13.5 | mg/kg | 0.53 | 02/26/19 12:36 | M1 |
| EPA 6010 | Nickel | 11.6 | mg/kg | 0.53 | 02/26/19 12:36 | M1 |
| EPA 6010 | Zinc | 30.1 | mg/kg | 10.5 | 02/26/19 12:36 | M1 |
| EPA 7471 | Mercury | 0.070 | mg/kg | 0.059 | 02/25/19 14:29 | |
| ASTM D2974 | Percent Moisture | 18.2 | % | 0.50 | 02/22/19 17:21 | |
| 60294965013 | SSD14-PRE-COMP:0-1' | | | | | |
| TNRCC 1005 | TPH (>C12-C28) | 23100 | mg/kg | 416 | 03/07/19 10:08 | |
| TNRCC 1005 | TPH (>C28-C35) | 8330 | mg/kg | 416 | 03/07/19 10:08 | |
| TNRCC 1005 | TPH Total (C06-C35) | 32000 | mg/kg | 416 | 03/07/19 10:08 | |
| ASTM D2974 | Percent Moisture | 16.2 | % | 0.50 | 03/07/19 11:58 | |
| 60294965014 | DUPLICATE 06 | | | | | |
| EPA 6010 | Antimony | 1.0 | mg/kg | 1.0 | 02/26/19 12:42 | |
| EPA 6010 | Arsenic | 2.2 | mg/kg | 1.0 | 02/26/19 12:42 | |
| EPA 6010 | Cadmium | 1.5 | mg/kg | 0.50 | 02/26/19 12:42 | |
| EPA 6010 | Chromium | 31.9 | mg/kg | 0.50 | 02/26/19 12:42 | |
| EPA 6010 | Copper | 13.1 | mg/kg | 2.0 | 02/26/19 12:42 | |
| EPA 6010 | Lead | 192 | mg/kg | 0.50 | 02/26/19 12:42 | |
| EPA 6010 | Nickel | 3.5 | mg/kg | 0.50 | 02/26/19 12:42 | |
| EPA 6010 | Zinc | 66.0 | mg/kg | 10.1 | 02/26/19 12:42 | |
| ASTM D2974 | Percent Moisture | 22.4 | % | 0.50 | 02/22/19 17:21 | |
| 60294965016 | SSC1D-PRE-GRAB:0-1' | | | | | |
| TNRCC 1005 | TPH (>C12-C28) | 54.9 | mg/kg | 21.0 | 02/25/19 13:06 | |
| TNRCC 1005 | TPH (>C28-C35) | 62.4 | mg/kg | 21.0 | 02/25/19 13:06 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS-FINTUBE

Pace Project No.: 60294965

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|-------|--------------|----------------|------------|
| 60294965016 | SSC1D-PRE-GRAB:0-1' | | | | | |
| TNRCC 1005 | TPH Total (C06-C35) | 121 | mg/kg | 21.0 | 02/25/19 13:06 | |
| ASTM D2974 | Percent Moisture | 18.5 | % | 0.50 | 02/22/19 17:21 | |
| 60294965018 | SSD11-PRE-GRAB:0-1' | | | | | |
| EPA 6010 | Arsenic | 5.8 | mg/kg | 1.1 | 02/26/19 12:45 | |
| EPA 6010 | Beryllium | 0.99 | mg/kg | 0.11 | 02/26/19 12:45 | |
| EPA 6010 | Chromium | 25.0 | mg/kg | 0.53 | 02/26/19 12:45 | |
| EPA 6010 | Copper | 12.0 | mg/kg | 2.1 | 02/26/19 12:45 | |
| EPA 6010 | Lead | 14.6 | mg/kg | 0.53 | 02/26/19 12:45 | |
| EPA 6010 | Nickel | 15.9 | mg/kg | 0.53 | 02/26/19 12:45 | |
| EPA 6010 | Zinc | 30.5 | mg/kg | 10.6 | 02/26/19 12:45 | |
| ASTM D2974 | Percent Moisture | 17.2 | % | 0.50 | 02/22/19 17:21 | |
| 60294965020 | SSC14-PRE-GRAB:0-1' | | | | | |
| TNRCC 1005 | TPH (>C12-C28) | 175 | mg/kg | 21.9 | 02/24/19 23:25 | |
| TNRCC 1005 | TPH (>C28-C35) | 167 | mg/kg | 21.9 | 02/24/19 23:25 | |
| TNRCC 1005 | TPH Total (C06-C35) | 346 | mg/kg | 21.9 | 02/24/19 23:25 | |
| EPA 6010 | Arsenic | 1.8 | mg/kg | 1.1 | 02/26/19 12:47 | |
| EPA 6010 | Beryllium | 0.13 | mg/kg | 0.11 | 02/26/19 12:47 | |
| EPA 6010 | Cadmium | 2.4 | mg/kg | 0.55 | 02/26/19 12:47 | |
| EPA 6010 | Chromium | 28.3 | mg/kg | 0.55 | 02/26/19 12:47 | |
| EPA 6010 | Copper | 7.3 | mg/kg | 2.2 | 02/26/19 12:47 | |
| EPA 6010 | Lead | 159 | mg/kg | 0.55 | 02/26/19 12:47 | |
| EPA 6010 | Nickel | 4.5 | mg/kg | 0.55 | 02/26/19 12:47 | |
| EPA 6010 | Zinc | 59.3 | mg/kg | 10.9 | 02/26/19 12:47 | |
| ASTM D2974 | Percent Moisture | 23.9 | % | 0.50 | 02/22/19 17:21 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE
Pace Project No.: 60294965

Date: March 11, 2019

Amended report revised to correct the sample identification for 60294965016 as noted on the chain of custody.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294965

Method: TNRCC 1005

Description: TNRCC 1005 TPH

Client: Environmental Works_OK office

Date: March 11, 2019

General Information:

10 samples were analyzed for TNRCC 1005. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with TNRCC 1005 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 570647

S0: Surrogate recovery outside laboratory control limits.

- LCS (Lab ID: 2340022)
 - 1-Chlorooctane (S)

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 2340024)
 - 1-Chlorooctane (S)
 - o-Terphenyl (S)
- SSD14-PRE-GRAB:0-1' (Lab ID: 60294965012)
 - 1-Chlorooctane (S)
 - o-Terphenyl (S)

QC Batch: 572326

S1: Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

- LCS (Lab ID: 2346848)
 - 1-Chlorooctane (S)
- LCSD (Lab ID: 2346849)
 - 1-Chlorooctane (S)
- MS (Lab ID: 2346850)
 - 1-Chlorooctane (S)

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- SSD14-PRE-COMP:0-1' (Lab ID: 60294965013)
 - 1-Chlorooctane (S)
 - o-Terphenyl (S)

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294965

Method: TNRCC 1005

Description: TNRCC 1005 TPH

Client: Environmental Works_OK office

Date: March 11, 2019

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294965

Method: EPA 6010

Description: 6010 MET ICP Red. Interference

Client: Environmental Works_OK office

Date: March 11, 2019

General Information:

4 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 570681

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60294965012

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2340236)
 - Antimony
 - Arsenic
 - Beryllium
 - Cadmium
 - Lead
 - Nickel
 - Selenium
 - Silver
 - Thallium
 - Zinc
- MSD (Lab ID: 2340237)
 - Antimony
 - Arsenic
 - Cadmium
 - Lead

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294965

Method: EPA 6010

Description: 6010 MET ICP Red. Interference

Client: Environmental Works_OK office

Date: March 11, 2019

QC Batch: 570681

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60294965012

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Nickel
- Selenium
- Thallium

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60294965

Method: EPA 7471

Description: 7471 Mercury

Client: Environmental Works_OK office

Date: March 11, 2019

General Information:

4 samples were analyzed for EPA 7471. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7471 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294965

Sample: SSD12-PRE-GRAB:0-1' **Lab ID: 60294965001** Collected: 02/21/19 10:20 Received: 02/22/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 21.1 | 1 | 02/23/19 15:00 | 02/24/19 17:51 | | |
| TPH (>C12-C28) | ND | mg/kg | 21.1 | 1 | 02/23/19 15:00 | 02/24/19 17:51 | | |
| TPH (>C28-C35) | ND | mg/kg | 21.1 | 1 | 02/23/19 15:00 | 02/24/19 17:51 | | |
| TPH Total (C06-C35) | ND | mg/kg | 21.1 | 1 | 02/23/19 15:00 | 02/24/19 17:51 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 107 | % | 70-130 | 1 | 02/23/19 15:00 | 02/24/19 17:51 | 84-15-1 | |
| 1-Chlorooctane (S) | 106 | % | 70-130 | 1 | 02/23/19 15:00 | 02/24/19 17:51 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 17.5 | % | 0.50 | 1 | | 02/22/19 17:21 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294965

Sample: SSF14-PRE-GRAB:0-1' **Lab ID: 60294965003** Collected: 02/21/19 17:15 Received: 02/22/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 21.1 | 1 | 02/23/19 15:00 | 02/24/19 18:30 | | |
| TPH (>C12-C28) | ND | mg/kg | 21.1 | 1 | 02/23/19 15:00 | 02/24/19 18:30 | | |
| TPH (>C28-C35) | ND | mg/kg | 21.1 | 1 | 02/23/19 15:00 | 02/24/19 18:30 | | |
| TPH Total (C06-C35) | ND | mg/kg | 21.1 | 1 | 02/23/19 15:00 | 02/24/19 18:30 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 103 | % | 70-130 | 1 | 02/23/19 15:00 | 02/24/19 18:30 | 84-15-1 | |
| 1-Chlorooctane (S) | 101 | % | 70-130 | 1 | 02/23/19 15:00 | 02/24/19 18:30 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 12.7 | % | 0.50 | 1 | | 02/22/19 17:21 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294965

Sample: SSE12-PRE-GRAB:0-1' **Lab ID: 60294965005** Collected: 02/21/19 16:35 Received: 02/22/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 19.4 | 1 | 02/23/19 15:00 | 02/24/19 19:06 | | |
| TPH (>C12-C28) | ND | mg/kg | 19.4 | 1 | 02/23/19 15:00 | 02/24/19 19:06 | | |
| TPH (>C28-C35) | ND | mg/kg | 19.4 | 1 | 02/23/19 15:00 | 02/24/19 19:06 | | |
| TPH Total (C06-C35) | 19.7 | mg/kg | 19.4 | 1 | 02/23/19 15:00 | 02/24/19 19:06 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 94 | % | 70-130 | 1 | 02/23/19 15:00 | 02/24/19 19:06 | 84-15-1 | |
| 1-Chlorooctane (S) | 95 | % | 70-130 | 1 | 02/23/19 15:00 | 02/24/19 19:06 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 2.3 | % | 0.50 | 1 | | 02/22/19 17:21 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294965

Sample: SSE13-PRE-GRAB:0-1' **Lab ID: 60294965007** Collected: 02/21/19 15:20 Received: 02/22/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 19.7 | 1 | 02/23/19 15:00 | 02/24/19 19:46 | | |
| TPH (>C12-C28) | ND | mg/kg | 19.7 | 1 | 02/23/19 15:00 | 02/24/19 19:46 | | |
| TPH (>C28-C35) | ND | mg/kg | 19.7 | 1 | 02/23/19 15:00 | 02/24/19 19:46 | | |
| TPH Total (C06-C35) | ND | mg/kg | 19.7 | 1 | 02/23/19 15:00 | 02/24/19 19:46 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 85 | % | 70-130 | 1 | 02/23/19 15:00 | 02/24/19 19:46 | 84-15-1 | |
| 1-Chlorooctane (S) | 89 | % | 70-130 | 1 | 02/23/19 15:00 | 02/24/19 19:46 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 11.1 | % | 0.50 | 1 | | 02/22/19 17:21 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294965

Sample: SSE14-PRE-GRAB:0-1' **Lab ID: 60294965009** Collected: 02/21/19 14:15 Received: 02/22/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 19.8 | 1 | 02/23/19 15:00 | 02/24/19 20:21 | | |
| TPH (>C12-C28) | ND | mg/kg | 19.8 | 1 | 02/23/19 15:00 | 02/24/19 20:21 | | |
| TPH (>C28-C35) | ND | mg/kg | 19.8 | 1 | 02/23/19 15:00 | 02/24/19 20:21 | | |
| TPH Total (C06-C35) | ND | mg/kg | 19.8 | 1 | 02/23/19 15:00 | 02/24/19 20:21 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 103 | % | 70-130 | 1 | 02/23/19 15:00 | 02/24/19 20:21 | 84-15-1 | |
| 1-Chlorooctane (S) | 102 | % | 70-130 | 1 | 02/23/19 15:00 | 02/24/19 20:21 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 4.5 | % | 0.50 | 1 | | 02/22/19 17:21 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294965

Sample: SSD14-PRE-GRAB:0-1' Lab ID: 60294965012 Collected: 02/21/19 13:45 Received: 02/22/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------------------|--------------|--|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | 486 | mg/kg | 189 | 10 | 02/23/19 15:00 | 02/25/19 13:44 | | |
| TPH (>C12-C28) | 8680 | mg/kg | 189 | 10 | 02/23/19 15:00 | 02/25/19 13:44 | | |
| TPH (>C28-C35) | 2670 | mg/kg | 189 | 10 | 02/23/19 15:00 | 02/25/19 13:44 | | |
| TPH Total (C06-C35) | 12000 | mg/kg | 189 | 10 | 02/23/19 15:00 | 02/25/19 13:44 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 0 | % | 70-130 | 10 | 02/23/19 15:00 | 02/25/19 13:44 | 84-15-1 | S4 |
| 1-Chlorooctane (S) | 0 | % | 70-130 | 10 | 02/23/19 15:00 | 02/25/19 13:44 | 3386-33-2 | S4 |
| 6010 MET ICP Red. Interference | | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | |
| Antimony | ND | mg/kg | 1.1 | 1 | 02/25/19 10:30 | 02/26/19 12:36 | 7440-36-0 | M1 |
| Arsenic | 5.2 | mg/kg | 1.1 | 1 | 02/25/19 10:30 | 02/26/19 12:36 | 7440-38-2 | M1 |
| Beryllium | 1.0 | mg/kg | 0.11 | 1 | 02/25/19 10:30 | 02/26/19 12:36 | 7440-41-7 | M1 |
| Cadmium | ND | mg/kg | 0.53 | 1 | 02/25/19 10:30 | 02/26/19 12:36 | 7440-43-9 | M1 |
| Chromium | 27.2 | mg/kg | 0.53 | 1 | 02/25/19 10:30 | 02/26/19 12:36 | 7440-47-3 | |
| Copper | 12.3 | mg/kg | 2.1 | 1 | 02/25/19 10:30 | 02/26/19 12:36 | 7440-50-8 | |
| Lead | 13.5 | mg/kg | 0.53 | 1 | 02/25/19 10:30 | 02/26/19 12:36 | 7439-92-1 | M1 |
| Nickel | 11.6 | mg/kg | 0.53 | 1 | 02/25/19 10:30 | 02/26/19 12:36 | 7440-02-0 | M1 |
| Selenium | ND | mg/kg | 1.6 | 1 | 02/25/19 10:30 | 02/26/19 12:36 | 7782-49-2 | M1 |
| Silver | ND | mg/kg | 0.74 | 1 | 02/25/19 10:30 | 02/26/19 12:36 | 7440-22-4 | M1 |
| Thallium | ND | mg/kg | 2.1 | 1 | 02/25/19 10:30 | 02/26/19 12:36 | 7440-28-0 | M1 |
| Zinc | 30.1 | mg/kg | 10.5 | 1 | 02/25/19 10:30 | 02/26/19 12:36 | 7440-66-6 | M1 |
| 7471 Mercury | | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | |
| Mercury | 0.070 | mg/kg | 0.059 | 1 | 02/25/19 09:15 | 02/25/19 14:29 | 7439-97-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 18.2 | % | 0.50 | 1 | | 02/22/19 17:21 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294965

Sample: SSD14-PRE-COMP:0-1' Lab ID: 60294965013 Collected: 02/21/19 13:55 Received: 02/22/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|--------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 416 | 20 | 03/06/19 15:45 | 03/07/19 10:08 | | |
| TPH (>C12-C28) | 23100 | mg/kg | 416 | 20 | 03/06/19 15:45 | 03/07/19 10:08 | | |
| TPH (>C28-C35) | 8330 | mg/kg | 416 | 20 | 03/06/19 15:45 | 03/07/19 10:08 | | |
| TPH Total (C06-C35) | 32000 | mg/kg | 416 | 20 | 03/06/19 15:45 | 03/07/19 10:08 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 0 | % | 70-130 | 20 | 03/06/19 15:45 | 03/07/19 10:08 | 84-15-1 | S4 |
| 1-Chlorooctane (S) | 0 | % | 70-130 | 20 | 03/06/19 15:45 | 03/07/19 10:08 | 3386-33-2 | S4 |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 16.2 | % | 0.50 | 1 | | 03/07/19 11:58 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294965

Sample: DUPLICATE 06 **Lab ID: 60294965014** Collected: 02/21/19 11:20 Received: 02/22/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP Red. Interference | | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | |
| Antimony | 1.0 | mg/kg | 1.0 | 1 | 02/25/19 10:30 | 02/26/19 12:42 | 7440-36-0 | |
| Arsenic | 2.2 | mg/kg | 1.0 | 1 | 02/25/19 10:30 | 02/26/19 12:42 | 7440-38-2 | |
| Beryllium | ND | mg/kg | 0.10 | 1 | 02/25/19 10:30 | 02/26/19 12:42 | 7440-41-7 | |
| Cadmium | 1.5 | mg/kg | 0.50 | 1 | 02/25/19 10:30 | 02/26/19 12:42 | 7440-43-9 | |
| Chromium | 31.9 | mg/kg | 0.50 | 1 | 02/25/19 10:30 | 02/26/19 12:42 | 7440-47-3 | |
| Copper | 13.1 | mg/kg | 2.0 | 1 | 02/25/19 10:30 | 02/26/19 12:42 | 7440-50-8 | |
| Lead | 192 | mg/kg | 0.50 | 1 | 02/25/19 10:30 | 02/26/19 12:42 | 7439-92-1 | |
| Nickel | 3.5 | mg/kg | 0.50 | 1 | 02/25/19 10:30 | 02/26/19 12:42 | 7440-02-0 | |
| Selenium | ND | mg/kg | 1.5 | 1 | 02/25/19 10:30 | 02/26/19 12:42 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.70 | 1 | 02/25/19 10:30 | 02/26/19 12:42 | 7440-22-4 | |
| Thallium | ND | mg/kg | 2.0 | 1 | 02/25/19 10:30 | 02/26/19 12:42 | 7440-28-0 | |
| Zinc | 66.0 | mg/kg | 10.1 | 1 | 02/25/19 10:30 | 02/26/19 12:42 | 7440-66-6 | |
| 7471 Mercury | | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | |
| Mercury | ND | mg/kg | 0.057 | 1 | 02/25/19 09:15 | 02/25/19 14:36 | 7439-97-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 22.4 | % | 0.50 | 1 | | 02/22/19 17:21 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294965

Sample: SSC1D-PRE-GRAB-0-1' **Lab ID: 60294965016** Collected: 02/21/19 10:45 Received: 02/22/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 21.0 | 1 | 02/23/19 15:00 | 02/25/19 13:06 | | |
| TPH (>C12-C28) | 54.9 | mg/kg | 21.0 | 1 | 02/23/19 15:00 | 02/25/19 13:06 | | |
| TPH (>C28-C35) | 62.4 | mg/kg | 21.0 | 1 | 02/23/19 15:00 | 02/25/19 13:06 | | |
| TPH Total (C06-C35) | 121 | mg/kg | 21.0 | 1 | 02/23/19 15:00 | 02/25/19 13:06 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 100 | % | 70-130 | 1 | 02/23/19 15:00 | 02/25/19 13:06 | 84-15-1 | |
| 1-Chlorooctane (S) | 100 | % | 70-130 | 1 | 02/23/19 15:00 | 02/25/19 13:06 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 18.5 | % | 0.50 | 1 | | 02/22/19 17:21 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294965

Sample: SSD11-PRE-GRAB:0-1' Lab ID: 60294965018 Collected: 02/21/19 09:10 Received: 02/22/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------------------|-------------|--|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 20.0 | 1 | 02/23/19 15:00 | 02/25/19 12:28 | | |
| TPH (>C12-C28) | ND | mg/kg | 20.0 | 1 | 02/23/19 15:00 | 02/25/19 12:28 | | |
| TPH (>C28-C35) | ND | mg/kg | 20.0 | 1 | 02/23/19 15:00 | 02/25/19 12:28 | | |
| TPH Total (C06-C35) | ND | mg/kg | 20.0 | 1 | 02/23/19 15:00 | 02/25/19 12:28 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 99 | % | 70-130 | 1 | 02/23/19 15:00 | 02/25/19 12:28 | 84-15-1 | |
| 1-Chlorooctane (S) | 99 | % | 70-130 | 1 | 02/23/19 15:00 | 02/25/19 12:28 | 3386-33-2 | |
| 6010 MET ICP Red. Interference | | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | |
| Antimony | ND | mg/kg | 1.1 | 1 | 02/25/19 10:30 | 02/26/19 12:45 | 7440-36-0 | |
| Arsenic | 5.8 | mg/kg | 1.1 | 1 | 02/25/19 10:30 | 02/26/19 12:45 | 7440-38-2 | |
| Beryllium | 0.99 | mg/kg | 0.11 | 1 | 02/25/19 10:30 | 02/26/19 12:45 | 7440-41-7 | |
| Cadmium | ND | mg/kg | 0.53 | 1 | 02/25/19 10:30 | 02/26/19 12:45 | 7440-43-9 | |
| Chromium | 25.0 | mg/kg | 0.53 | 1 | 02/25/19 10:30 | 02/26/19 12:45 | 7440-47-3 | |
| Copper | 12.0 | mg/kg | 2.1 | 1 | 02/25/19 10:30 | 02/26/19 12:45 | 7440-50-8 | |
| Lead | 14.6 | mg/kg | 0.53 | 1 | 02/25/19 10:30 | 02/26/19 12:45 | 7439-92-1 | |
| Nickel | 15.9 | mg/kg | 0.53 | 1 | 02/25/19 10:30 | 02/26/19 12:45 | 7440-02-0 | |
| Selenium | ND | mg/kg | 1.6 | 1 | 02/25/19 10:30 | 02/26/19 12:45 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.74 | 1 | 02/25/19 10:30 | 02/26/19 12:45 | 7440-22-4 | |
| Thallium | ND | mg/kg | 2.1 | 1 | 02/25/19 10:30 | 02/26/19 12:45 | 7440-28-0 | |
| Zinc | 30.5 | mg/kg | 10.6 | 1 | 02/25/19 10:30 | 02/26/19 12:45 | 7440-66-6 | |
| 7471 Mercury | | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | |
| Mercury | ND | mg/kg | 0.057 | 1 | 02/25/19 09:15 | 02/25/19 14:38 | 7439-97-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 17.2 | % | 0.50 | 1 | | 02/22/19 17:21 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60294965

Sample: SSC14-PRE-GRAB:0-1' **Lab ID: 60294965020** Collected: 02/21/19 11:20 Received: 02/22/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 21.9 | 1 | 02/23/19 15:00 | 02/24/19 23:25 | | |
| TPH (>C12-C28) | 175 | mg/kg | 21.9 | 1 | 02/23/19 15:00 | 02/24/19 23:25 | | |
| TPH (>C28-C35) | 167 | mg/kg | 21.9 | 1 | 02/23/19 15:00 | 02/24/19 23:25 | | |
| TPH Total (C06-C35) | 346 | mg/kg | 21.9 | 1 | 02/23/19 15:00 | 02/24/19 23:25 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 99 | % | 70-130 | 1 | 02/23/19 15:00 | 02/24/19 23:25 | 84-15-1 | |
| 1-Chlorooctane (S) | 98 | % | 70-130 | 1 | 02/23/19 15:00 | 02/24/19 23:25 | 3386-33-2 | |
| 6010 MET ICP Red. Interference | | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | |
| Antimony | ND | mg/kg | 1.1 | 1 | 02/25/19 10:30 | 02/26/19 12:47 | 7440-36-0 | |
| Arsenic | 1.8 | mg/kg | 1.1 | 1 | 02/25/19 10:30 | 02/26/19 12:47 | 7440-38-2 | |
| Beryllium | 0.13 | mg/kg | 0.11 | 1 | 02/25/19 10:30 | 02/26/19 12:47 | 7440-41-7 | |
| Cadmium | 2.4 | mg/kg | 0.55 | 1 | 02/25/19 10:30 | 02/26/19 12:47 | 7440-43-9 | |
| Chromium | 28.3 | mg/kg | 0.55 | 1 | 02/25/19 10:30 | 02/26/19 12:47 | 7440-47-3 | |
| Copper | 7.3 | mg/kg | 2.2 | 1 | 02/25/19 10:30 | 02/26/19 12:47 | 7440-50-8 | |
| Lead | 159 | mg/kg | 0.55 | 1 | 02/25/19 10:30 | 02/26/19 12:47 | 7439-92-1 | |
| Nickel | 4.5 | mg/kg | 0.55 | 1 | 02/25/19 10:30 | 02/26/19 12:47 | 7440-02-0 | |
| Selenium | ND | mg/kg | 1.6 | 1 | 02/25/19 10:30 | 02/26/19 12:47 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.77 | 1 | 02/25/19 10:30 | 02/26/19 12:47 | 7440-22-4 | |
| Thallium | ND | mg/kg | 2.2 | 1 | 02/25/19 10:30 | 02/26/19 12:47 | 7440-28-0 | |
| Zinc | 59.3 | mg/kg | 10.9 | 1 | 02/25/19 10:30 | 02/26/19 12:47 | 7440-66-6 | |
| 7471 Mercury | | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | |
| Mercury | ND | mg/kg | 0.049 | 1 | 02/25/19 09:15 | 02/25/19 14:40 | 7439-97-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 23.9 | % | 0.50 | 1 | | 02/22/19 17:21 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294965

QC Batch: 570703 Analysis Method: EPA 7471
 QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
 Associated Lab Samples: 60294965012, 60294965014, 60294965018, 60294965020

METHOD BLANK: 2340293 Matrix: Solid
 Associated Lab Samples: 60294965012, 60294965014, 60294965018, 60294965020

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Mercury | mg/kg | ND | 0.050 | 02/25/19 14:22 | |

LABORATORY CONTROL SAMPLE: 2340294

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | mg/kg | 0.5 | 0.51 | 102 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2340295 2340296

| Parameter | Units | 2340295 | | 2340296 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|
| | | 60294965012 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | | | | | | |
| Mercury | mg/kg | 0.070 | 0.61 | 0.59 | 0.66 | 0.63 | 97 | 94 | 75-125 | 5 | 20 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
 without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE
Pace Project No.: 60294965

QC Batch: 570681 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 60294965012, 60294965014, 60294965018, 60294965020

METHOD BLANK: 2340234 Matrix: Solid
Associated Lab Samples: 60294965012, 60294965014, 60294965018, 60294965020

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Antimony | mg/kg | ND | 1.0 | 02/26/19 12:33 | |
| Arsenic | mg/kg | ND | 1.0 | 02/26/19 12:33 | |
| Beryllium | mg/kg | ND | 0.10 | 02/26/19 12:33 | |
| Cadmium | mg/kg | ND | 0.50 | 02/26/19 12:33 | |
| Chromium | mg/kg | ND | 0.50 | 02/26/19 12:33 | |
| Copper | mg/kg | ND | 2.0 | 02/26/19 12:33 | |
| Lead | mg/kg | ND | 0.50 | 02/26/19 12:33 | |
| Nickel | mg/kg | ND | 0.50 | 02/26/19 12:33 | |
| Selenium | mg/kg | ND | 1.5 | 02/26/19 12:33 | |
| Silver | mg/kg | ND | 0.70 | 02/26/19 12:33 | |
| Thallium | mg/kg | ND | 2.0 | 02/26/19 12:33 | |
| Zinc | mg/kg | ND | 10.0 | 02/26/19 12:33 | |

LABORATORY CONTROL SAMPLE: 2340235

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | mg/kg | 100 | 95.7 | 96 | 80-120 | |
| Arsenic | mg/kg | 100 | 86.9 | 87 | 80-120 | |
| Beryllium | mg/kg | 100 | 93.0 | 93 | 80-120 | |
| Cadmium | mg/kg | 100 | 91.6 | 92 | 80-120 | |
| Chromium | mg/kg | 100 | 98.8 | 99 | 80-120 | |
| Copper | mg/kg | 100 | 99.8 | 100 | 80-120 | |
| Lead | mg/kg | 100 | 93.8 | 94 | 80-120 | |
| Nickel | mg/kg | 100 | 95.5 | 96 | 80-120 | |
| Selenium | mg/kg | 100 | 90.6 | 91 | 80-120 | |
| Silver | mg/kg | 50 | 48.4 | 97 | 80-120 | |
| Thallium | mg/kg | 100 | 94.1 | 94 | 80-120 | |
| Zinc | mg/kg | 100 | 92.3 | 92 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2340236 2340237

| Parameter | Units | MS | | MSD | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual | |
|-----------|-------|--------------------|-------------|-------------|-----------|----------|-----------|--------------|--------|---------|------|------------|
| | | 60294965012 Result | Spike Conc. | Spike Conc. | MS Result | | | | | | | MSD Result |
| Antimony | mg/kg | ND | 105 | 111 | 23.2 | 27.0 | 22 | 24 | 75-125 | 15 | 20 | M1 |
| Arsenic | mg/kg | 5.2 | 105 | 111 | 71.4 | 80.2 | 63 | 68 | 75-125 | 12 | 20 | M1 |
| Beryllium | mg/kg | 1.0 | 105 | 111 | 74.4 | 84.4 | 70 | 75 | 75-125 | 13 | 20 | M1 |
| Cadmium | mg/kg | ND | 105 | 111 | 70.7 | 79.7 | 67 | 72 | 75-125 | 12 | 20 | M1 |
| Chromium | mg/kg | 27.2 | 105 | 111 | 112 | 123 | 80 | 87 | 75-125 | 10 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294965

| Parameter | Units | 2340236 | | 2340237 | | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | RPD | Qual |
|-----------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|------------|-----|------|
| | | 60294965012 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | | | | | | | | |
| Copper | mg/kg | 12.3 | 105 | 111 | 92.1 | 102 | 76 | 81 | 75-125 | 10 | 20 | | |
| Lead | mg/kg | 13.5 | 105 | 111 | 81.0 | 89.3 | 64 | 68 | 75-125 | 10 | 20 | M1 | |
| Nickel | mg/kg | 11.6 | 105 | 111 | 84.0 | 94.1 | 69 | 74 | 75-125 | 11 | 20 | M1 | |
| Selenium | mg/kg | ND | 105 | 111 | 69.7 | 78.8 | 65 | 70 | 75-125 | 12 | 20 | M1 | |
| Silver | mg/kg | ND | 52.7 | 55.6 | 38.5 | 43.5 | 73 | 78 | 75-125 | 12 | 20 | M1 | |
| Thallium | mg/kg | ND | 105 | 111 | 67.6 | 76.1 | 64 | 68 | 75-125 | 12 | 20 | M1 | |
| Zinc | mg/kg | 30.1 | 105 | 111 | 103 | 115 | 69 | 76 | 75-125 | 11 | 20 | M1 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294965

| | | | |
|-------------------------|---|-----------------------|----------------|
| QC Batch: | 570647 | Analysis Method: | TNRCC 1005 |
| QC Batch Method: | TNRCC 1005 | Analysis Description: | TX1005 TPH GCS |
| Associated Lab Samples: | 60294965001, 60294965003, 60294965005, 60294965007, 60294965009, 60294965012, 60294965016, 60294965018, 60294965020 | | |

| | | | |
|-------------------------|---|---------|-------|
| METHOD BLANK: | 2340021 | Matrix: | Solid |
| Associated Lab Samples: | 60294965001, 60294965003, 60294965005, 60294965007, 60294965009, 60294965012, 60294965016, 60294965018, 60294965020 | | |

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---------------------|-------|--------------|-----------------|----------------|------------|
| TPH (>C12-C28) | mg/kg | ND | 20.0 | 02/24/19 15:58 | |
| TPH (>C28-C35) | mg/kg | ND | 20.0 | 02/24/19 15:58 | |
| TPH (C06-C12) | mg/kg | ND | 20.0 | 02/24/19 15:58 | |
| TPH Total (C06-C35) | mg/kg | ND | 20.0 | 02/24/19 15:58 | |
| 1-Chlorooctane (S) | % | 100 | 70-130 | 02/24/19 15:58 | |
| o-Terphenyl (S) | % | 102 | 70-130 | 02/24/19 15:58 | |

| Parameter | Units | 2340022 | | 2340023 | | % Rec Limits | RPD | Max RPD | Qualifiers |
|---------------------|-------|-------------|------------|-------------|-------|--------------|--------|---------|------------|
| | | Spike Conc. | LCS Result | LCSD Result | % Rec | | | | |
| TPH Total (C06-C35) | mg/kg | 2500 | 2360 | 2270 | 94 | 91 | 75-125 | 4 | 20 |
| 1-Chlorooctane (S) | % | | | | 131 | 130 | 70-130 | | S0 |
| o-Terphenyl (S) | % | | | | 111 | 111 | 70-130 | | |

| Parameter | Units | 60294965012 | | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---------------------|-------|-------------|-------|-------------|-----------|----------|--------------|------------|
| | | Result | Conc. | | | | | |
| TPH Total (C06-C35) | mg/kg | 12000 | 2350 | | 13600 | 67 | 11-187 | |
| 1-Chlorooctane (S) | % | | | | | 0 | 70-130 | S4 |
| o-Terphenyl (S) | % | | | | | 0 | 70-130 | S4 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294965

| | |
|-------------------------------------|--------------------------------------|
| QC Batch: 572326 | Analysis Method: TNRCC 1005 |
| QC Batch Method: TNRCC 1005 | Analysis Description: TX1005 TPH GCS |
| Associated Lab Samples: 60294965013 | |

METHOD BLANK: 2346847 Matrix: Solid

Associated Lab Samples: 60294965013

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---------------------|-------|--------------|-----------------|----------------|------------|
| TPH (>C12-C28) | mg/kg | ND | 20.0 | 03/07/19 08:20 | |
| TPH (>C28-C35) | mg/kg | ND | 20.0 | 03/07/19 08:20 | |
| TPH (C06-C12) | mg/kg | ND | 20.0 | 03/07/19 08:20 | |
| TPH Total (C06-C35) | mg/kg | ND | 20.0 | 03/07/19 08:20 | |
| 1-Chlorooctane (S) | % | 113 | 70-130 | 03/07/19 08:20 | |
| o-Terphenyl (S) | % | 112 | 70-130 | 03/07/19 08:20 | |

LABORATORY CONTROL SAMPLE & LCSD: 2346848

2346849

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| TPH Total (C06-C35) | mg/kg | 2500 | 2380 | 2400 | 95 | 96 | 75-125 | 1 | 20 | |
| 1-Chlorooctane (S) | % | | | | 135 | 138 | 70-130 | | | S1 |
| o-Terphenyl (S) | % | | | | 118 | 120 | 70-130 | | | |

MATRIX SPIKE SAMPLE: 2346850

| Parameter | Units | 60295648066 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| TPH Total (C06-C35) | mg/kg | ND | 2320 | 2610 | 112 | 11-187 | |
| 1-Chlorooctane (S) | % | | | | 144 | 70-130 | S1 |
| o-Terphenyl (S) | % | | | | 127 | 70-130 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294965

QC Batch: 570594

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60294965001, 60294965003, 60294965005, 60294965007, 60294965009, 60294965012, 60294965014, 60294965016, 60294965018, 60294965020

METHOD BLANK: 2339640

Matrix: Solid

Associated Lab Samples: 60294965001, 60294965003, 60294965005, 60294965007, 60294965009, 60294965012, 60294965014, 60294965016, 60294965018, 60294965020

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------------|-------|--------------|-----------------|----------------|------------|
| Percent Moisture | % | ND | 0.50 | 02/22/19 17:21 | |

SAMPLE DUPLICATE: 2339641

| Parameter | Units | 60294965001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------|-------|--------------------|------------|-----|---------|------------|
| Percent Moisture | % | 17.5 | 17.2 | 2 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60294965

QC Batch: 572438

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60294965013

METHOD BLANK: 2347244

Matrix: Solid

Associated Lab Samples: 60294965013

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------------|-------|--------------|-----------------|----------------|------------|
| Percent Moisture | % | ND | 0.50 | 03/07/19 11:58 | |

SAMPLE DUPLICATE: 2347245

| Parameter | Units | 60294965013 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------|-------|--------------------|------------|-----|---------|------------|
| Percent Moisture | % | 16.2 | 16.7 | 4 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS-FINTUBE

Pace Project No.: 60294965

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

S0 Surrogate recovery outside laboratory control limits.

S1 Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS-FINTUBE

Pace Project No.: 60294965

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|---------------------|-----------------|----------|-------------------|------------------|
| 60294965001 | SSD12-PRE-GRAB:0-1' | TNRCC 1005 | 570647 | TNRCC 1005 | 570652 |
| 60294965003 | SSF14-PRE-GRAB:0-1' | TNRCC 1005 | 570647 | TNRCC 1005 | 570652 |
| 60294965005 | SSE12-PRE-GRAB:0-1' | TNRCC 1005 | 570647 | TNRCC 1005 | 570652 |
| 60294965007 | SSE13-PRE-GRAB:0-1' | TNRCC 1005 | 570647 | TNRCC 1005 | 570652 |
| 60294965009 | SSE14-PRE-GRAB:0-1' | TNRCC 1005 | 570647 | TNRCC 1005 | 570652 |
| 60294965012 | SSD14-PRE-GRAB:0-1' | TNRCC 1005 | 570647 | TNRCC 1005 | 570652 |
| 60294965013 | SSD14-PRE-COMP:0-1' | TNRCC 1005 | 572326 | TNRCC 1005 | 572408 |
| 60294965016 | SSC1D-PRE-GRAB:0-1' | TNRCC 1005 | 570647 | TNRCC 1005 | 570652 |
| 60294965018 | SSD11-PRE-GRAB:0-1' | TNRCC 1005 | 570647 | TNRCC 1005 | 570652 |
| 60294965020 | SSC14-PRE-GRAB:0-1' | TNRCC 1005 | 570647 | TNRCC 1005 | 570652 |
| 60294965012 | SSD14-PRE-GRAB:0-1' | EPA 3050 | 570681 | EPA 6010 | 570882 |
| 60294965014 | DUPLICATE 06 | EPA 3050 | 570681 | EPA 6010 | 570882 |
| 60294965018 | SSD11-PRE-GRAB:0-1' | EPA 3050 | 570681 | EPA 6010 | 570882 |
| 60294965020 | SSC14-PRE-GRAB:0-1' | EPA 3050 | 570681 | EPA 6010 | 570882 |
| 60294965012 | SSD14-PRE-GRAB:0-1' | EPA 7471 | 570703 | EPA 7471 | 570798 |
| 60294965014 | DUPLICATE 06 | EPA 7471 | 570703 | EPA 7471 | 570798 |
| 60294965018 | SSD11-PRE-GRAB:0-1' | EPA 7471 | 570703 | EPA 7471 | 570798 |
| 60294965020 | SSC14-PRE-GRAB:0-1' | EPA 7471 | 570703 | EPA 7471 | 570798 |
| 60294965001 | SSD12-PRE-GRAB:0-1' | ASTM D2974 | 570594 | | |
| 60294965003 | SSF14-PRE-GRAB:0-1' | ASTM D2974 | 570594 | | |
| 60294965005 | SSE12-PRE-GRAB:0-1' | ASTM D2974 | 570594 | | |
| 60294965007 | SSE13-PRE-GRAB:0-1' | ASTM D2974 | 570594 | | |
| 60294965009 | SSE14-PRE-GRAB:0-1' | ASTM D2974 | 570594 | | |
| 60294965012 | SSD14-PRE-GRAB:0-1' | ASTM D2974 | 570594 | | |
| 60294965013 | SSD14-PRE-COMP:0-1' | ASTM D2974 | 572438 | | |
| 60294965014 | DUPLICATE 06 | ASTM D2974 | 570594 | | |
| 60294965016 | SSC1D-PRE-GRAB:0-1' | ASTM D2974 | 570594 | | |
| 60294965018 | SSD11-PRE-GRAB:0-1' | ASTM D2974 | 570594 | | |
| 60294965020 | SSC14-PRE-GRAB:0-1' | ASTM D2974 | 570594 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO#: 60294965



Client Name: Env. Works

Courier: FedEx [x] UPS [] VIA [] Clay [] PEX [] ECI [] Pace [] Xroads [] Client [] Other []

Tracking #: 7856 3352 1980 Pace Shipping Label Used? Yes [] No [x]

Custody Seal on Cooler/Box Present: Yes [x] No [] Seals intact: Yes [x] No []

Packing Material: Bubble Wrap [] Bubble Bags [] Foam [x] None [] Other []

Thermometer Used: T-298 Type of Ice: Wet [x] Blue [] None []

Cooler Temperature (°C): As-read 2.8/4.0/5.2 Corr. Factor -0.6 Corrected 2.2/3.4/5.2

Date and initials of person examining contents: 2/22/19 [initials]

Temperature should be above freezing to 6°C

Table with 2 columns: Question and Answer. Rows include Chain of Custody present, Chain of Custody relinquished, Samples arrived within holding time, Short Hold Time analyses (<72hr), Rush Turn Around Time requested (1-Day), Sufficient volume, Correct containers used, Pace containers used, Containers intact, Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?, Filtered volume received for dissolved tests?, Sample labels match COC: Date / time / ID / analyses, Samples contain multiple phases? Matrix: SL, Containers requiring pH preservation in compliance?, Cyanide water sample checks, Trip Blank present, Headspace in VOA vials (>6mm), Samples from USDA Regulated Area: State: OK, Additional labels attached to 5035A / TX1005 vials in the field?

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: [Name] Date/Time: [Time]

Comments/ Resolution: All comp on hold, All TCEP on hold per DNR's totals

Project Manager Review: _____

Date: _____



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section B
Required Client Information:
 Company: Environmental Works, Tulsa Office
 Address: 9529 E 55th Place
 Suite A, Tulsa, OK 74145
 Email: anthony.levinson@envwork.com
 Phone: 417-773-5777 | Fax: [blank]
 Requested Due Date: 4-8-14

Section C
Invoice Information:
 Report To: MOORE, ANTHONY
 Copy To: [blank]
 Project Name: Evans-Fintube
 Project #: [blank]
 Purchase Order #: [blank]

Attention:
 Company Name: [blank]
 Address: [blank]
 Pace Project Manager: angie.brown@pacelabs.com
 Pace Profile #: 12359

Regulatory Agency
 State / Location: OK

| ITEM # | MATRIX | CODE | COLLECTED | | SAMPLE TYPE (G-GRAB C-COMP) | MATRIX CODE (see valid codes to left) | SAMPLE TEMP AT COLLECTION | | # OF CONTAINERS | PRESERVATIVES | | | | | | Y/N | Analyses Test | Metals | PAH 8270 by SIM | Residual Chlorine (Y/N) |
|--------|-----------------------------------|------|------------|------------|-----------------------------|---------------------------------------|---------------------------|----------|-----------------|---------------|------|-----|------|--------|----------|-----|---------------|--------|-----------------|-------------------------|
| | | | START DATE | START TIME | | | END DATE | END TIME | | H2SO4 | HNO3 | HCl | NaOH | Na2SO3 | Methanol | | | | | |
| 1 | SSD12 - pre - grab 10-1' | DW | 2/21/14 | 1020 | SLG | SLG | 2/21/14 | 1020 | 4 | X | X | X | X | X | X | X | X | X | 001 | |
| 2 | SSD12 - pre - comp 10-1' | WT | 2/21/14 | 1025 | SLC | SLC | 2/21/14 | 1025 | 4 | X | X | X | X | X | X | X | X | X | HOLD 002 | |
| 3 | SSF14 - pre - grab 10-1' | WW | 2/21/14 | 1715 | SLG | SLG | 2/21/14 | 1715 | 4 | X | X | X | X | X | X | X | X | X | 003 | |
| 4 | SSF14 - pre - comp 10-1' | P | 2/21/14 | 1725 | SLC | SLC | 2/21/14 | 1725 | 4 | X | X | X | X | X | X | X | X | X | 004 | |
| 5 | SSS12 - pre - grab 10-1' | SL | 2/21/14 | 1635 | SLG | SLG | 2/21/14 | 1635 | 4 | X | X | X | X | X | X | X | X | X | 005 | |
| 6 | SSS12 - pre - grab 10-1' ms/ms 13 | OL | 2/21/14 | 1635 | SLG | SLG | 2/21/14 | 1635 | 8 | X | X | X | X | X | X | X | X | X | HOLD 006 | |
| 7 | SSS12 - pre - comp 10-1' | WP | 2/21/14 | 1640 | SLC | SLC | 2/21/14 | 1640 | 4 | X | X | X | X | X | X | X | X | X | HOLD 007 | |
| 8 | SSS13 - pre - grab 10-1' | AR | 2/21/14 | 1520 | SLG | SLG | 2/21/14 | 1520 | 4 | X | X | X | X | X | X | X | X | X | HOLD 008 | |
| 9 | SSS13 - pre - comp 10-1' | OT | 2/21/14 | 1525 | SLC | SLC | 2/21/14 | 1525 | 4 | X | X | X | X | X | X | X | X | X | HOLD 009 | |
| 10 | SSS14 - pre - grab 10-1' | TS | 2/21/14 | 1415 | SLG | SLG | 2/21/14 | 1415 | 4 | X | X | X | X | X | X | X | X | X | HOLD 010 | |
| 11 | SSS14 - pre - comp 10-1' | | 2/21/14 | 1418 | SLC | SLC | 2/21/14 | 1418 | 4 | X | X | X | X | X | X | X | X | X | | |
| 12 | | | | | | | | | | | | | | | | | | | | |

Requested Analysis Filtered (Y/N)

RELINQUISHED BY / AFFILIATION [Signature] **DATE** 2/21/14 **TIME** 1910

ACCEPTED BY / AFFILIATION [Signature] **DATE** 2/22/14 **TIME** 0830

SAMPLE CONDITIONS

| | | |
|-------------|-----------|------|
| Received on | Temp in C | 22.4 |
| Sealed | | 5.2 |
| Custody | | |
| Cooler | | |
| Interact | | |
| Samples | | |

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Anthony Moore
 SIGNATURE of SAMPLER: [Signature] **DATE SIGNED:** 2/21/14



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

| | | | | | |
|-------------------------------------|-----------------------------------|--------------------------------------|----------------|-----------------------------|---------------------------|
| Section A | | Section B | | Section C | |
| Required Client Information: | | Required Project Information: | | Invoice Information: | |
| Company: | Environmental Works, Tulsa Office | Report To: | MOORE, ANTHONY | Attention: | |
| Address: | 9529 E 55th Place | Copy To: | | Company Name: | |
| | | Purchase Order #: | | Address: | |
| Email: | Anthony@environmentalworks.com | Project Name: | Evans-Fintube | Pace Quote: | |
| Phone: | 417-733-5747 Fax | Project #: | | Pace Project Manager: | angle.brown@pacelabs.com, |
| Requested Due Date: | 4-8-17 | | | Pace Profile #: | 12359 |

| ITEM # | MATRIX | CODE | COLLECTED | | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Y/N | Requested Analysis Filtered (Y/N) | | | | | Residual Chlorine (Y/N) | |
|--------|--------------------|--------------|------------|----------|---------------------------|-----------------|---------------|-----|-----------------------------------|--------|-----------------|-------------|------|-------------------------|------|
| | | | START DATE | END DATE | | | | | TX1005 | Metals | PAH B270 by SIM | TCPP metals | THUR | | WGRU |
| 1 | SSD10 - pre - comp | 0-1' | 2/21/14 | 1740 | 2/21/14 | 1745 | 7 X 3VGRU | X | X | X | X | X | X | X | 012 |
| 2 | SSD14 - pre - grab | 0-1' | | | 2/21/14 | 1345 | 5 X 3VGRU | X | X | X | X | X | X | X | 012 |
| 3 | SSD14 - pre - grab | 0-1' msl/msd | | | " | 1345 | 1 X WGRU | X | X | X | X | X | X | X | 012 |
| 4 | SSD14 - pre - grab | 0-1' | 2/21/14 | 1350 | " | 1355 | 5 X 3VGRU | X | X | X | X | X | X | X | 012 |
| 5 | SSC14 - pre - grab | 0-1' | | | " | 1120 | 5 X 3VGRU | X | X | X | X | X | X | X | 012 |
| 6 | Duplicate | 06 | | | " | 1120 | 1 X WGRU | X | X | X | X | X | X | X | 012 |
| 7 | SSC14 - pre - comp | 0-1' | 2/21/14 | 1125 | " | 1130 | 5 X 3VGRU | X | X | X | X | X | X | X | 012 |
| 8 | SSD13 - pre - grab | 0-1' | | | " | 1045 | 4 X 3VGRU | X | X | X | X | X | X | X | 012 |
| 9 | SSD13 - pre - comp | 0-1' | 2/21/14 | 1047 | " | 1050 | 4 X 3VGRU | X | X | X | X | X | X | X | 012 |
| 10 | SSD11 - pre - grab | 0-1' | | | " | 910 | 5 X 3VGRU | X | X | X | X | X | X | X | 012 |
| 11 | SSD11 - pre - comp | 0-1' | 2/21/14 | 913 | " | 915 | 5 X 3VGRU | X | X | X | X | X | X | X | 012 |
| 12 | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|---|--|--------------------------------------|--|------------------------------|--|---------------------|--|----------------------------------|--|-------------|--|-------------|--|--------------------------|--|
| ADDITIONAL COMMENTS | | RELINQUISHED BY / AFFILIATION | | DATE | | TIME | | ACCEPTED BY / AFFILIATION | | DATE | | TIME | | SAMPLE CONDITIONS | |
| SSD10 - hold TCCP metals per results | | [Signature] | | 2/21/14 | | 1910 | | [Signature] | | 2/22/14 | | 0830 | | Y Y Y X | |
| hold SSD10 results per - contact Anthony | | | | | | | | | | | | | | | |
| SSD14 comp - hold per grab results, hold TCCP | | | | | | | | | | | | | | | |
| SSC14 comp - hold per grab results, hold TCCP | | | | | | | | | | | | | | | |
| SSD13 comp - hold per grab results | | | | | | | | | | | | | | | |
| SSD11 comp - hold per grab results, hold TCCP | | | | | | | | | | | | | | | |
| SAMPLER NAME AND SIGNATURE | | PRINT Name of SAMPLER: | | SIGNATURE of SAMPLER: | | DATE Signed: | | | | | | | | | |
| | | Anthony Moore | | [Signature] | | 2/21/14 | | | | | | | | | |

March 12, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS-FINTUBE
Pace Project No.: 60296121

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on March 08, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS-FINTUBE

Pace Project No.: 60296121

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Certification Number: 10090

Arkansas Drinking Water

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS-FINTUBE

Pace Project No.: 60296121

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|--------------|--------|----------------|----------------|
| 60296121001 | SSE07-POST:1 | Solid | 03/07/19 12:22 | 03/08/19 06:55 |
| 60296121002 | SSD04-POST:1 | Solid | 03/07/19 16:39 | 03/08/19 06:55 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS-FINTUBE

Pace Project No.: 60296121

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|--------------|------------|----------|-------------------|------------|
| 60296121001 | SSE07-POST:1 | EPA 6010 | EMR | 12 | PASI-K |
| | | EPA 7471 | LRS | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60296121002 | SSD04-POST:1 | TNRCC 1005 | AJM | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS-FINTUBE

Pace Project No.: 60296121

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|-------|--------------|----------------|------------|
| 60296121001 | SSE07-POST:1 | | | | | |
| EPA 6010 | Antimony | 2.1 | mg/kg | 1.9 | 03/12/19 14:58 | D3 |
| EPA 6010 | Arsenic | 21.9 | mg/kg | 1.9 | 03/12/19 14:58 | |
| EPA 6010 | Beryllium | 0.43 | mg/kg | 0.096 | 03/12/19 14:53 | |
| EPA 6010 | Cadmium | 1.2 | mg/kg | 0.96 | 03/12/19 14:58 | |
| EPA 6010 | Chromium | 17.2 | mg/kg | 0.96 | 03/12/19 14:58 | |
| EPA 6010 | Copper | 46.8 | mg/kg | 3.9 | 03/12/19 14:58 | |
| EPA 6010 | Lead | 199 | mg/kg | 0.96 | 03/12/19 14:58 | |
| EPA 6010 | Nickel | 19.5 | mg/kg | 0.96 | 03/12/19 14:58 | |
| EPA 6010 | Selenium | 4.3 | mg/kg | 2.9 | 03/12/19 14:58 | |
| EPA 6010 | Zinc | 221 | mg/kg | 9.6 | 03/12/19 14:53 | |
| EPA 7471 | Mercury | 0.077 | mg/kg | 0.043 | 03/12/19 09:32 | |
| ASTM D2974 | Percent Moisture | 10.5 | % | 0.50 | 03/08/19 12:22 | |
| 60296121002 | SSD04-POST:1 | | | | | |
| TNRCC 1005 | TPH (C06-C12) | 67.2 | mg/kg | 20.7 | 03/11/19 22:25 | |
| TNRCC 1005 | TPH (>C12-C28) | 630 | mg/kg | 20.7 | 03/11/19 22:25 | |
| TNRCC 1005 | TPH (>C28-C35) | 597 | mg/kg | 20.7 | 03/11/19 22:25 | |
| TNRCC 1005 | TPH Total (C06-C35) | 1290 | mg/kg | 20.7 | 03/11/19 22:25 | |
| ASTM D2974 | Percent Moisture | 14.9 | % | 0.50 | 03/08/19 12:22 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60296121

Method: TNRCC 1005

Description: TNRCC 1005 TPH

Client: Environmental Works_OK office

Date: March 12, 2019

General Information:

1 sample was analyzed for TNRCC 1005. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with TNRCC 1005 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 572840

S1: Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

- LCS (Lab ID: 2349741)
 - 1-Chlorooctane (S)
- LCSD (Lab ID: 2349742)
 - 1-Chlorooctane (S)
- MS (Lab ID: 2349743)
 - 1-Chlorooctane (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60296121

Method: EPA 6010

Description: 6010 MET ICP Red. Interference

Client: Environmental Works_OK office

Date: March 12, 2019

General Information:

1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 573103

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60295839004

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2350543)
 - Antimony
 - Lead
- MSD (Lab ID: 2350544)
 - Antimony
 - Lead

R1: RPD value was outside control limits.

- MSD (Lab ID: 2350544)
 - Antimony
 - Lead

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60296121

Method: EPA 6010

Description: 6010 MET ICP Red. Interference

Client: Environmental Works_OK office

Date: March 12, 2019

Analyte Comments:

QC Batch: 573103

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- SSE07-POST:1 (Lab ID: 60296121001)
 - Antimony
 - Thallium

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60296121

Method: EPA 7471

Description: 7471 Mercury

Client: Environmental Works_OK office

Date: March 12, 2019

General Information:

1 sample was analyzed for EPA 7471. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7471 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60296121

Sample: SSE07-POST:1 **Lab ID: 60296121001** Collected: 03/07/19 12:22 Received: 03/08/19 06:55 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------------------|--------------|---|--------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP Red. Interference | | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | |
| Antimony | 2.1 | mg/kg | 1.9 | 2 | 03/12/19 08:46 | 03/12/19 14:58 | 7440-36-0 | D3 |
| Arsenic | 21.9 | mg/kg | 1.9 | 2 | 03/12/19 08:46 | 03/12/19 14:58 | 7440-38-2 | |
| Beryllium | 0.43 | mg/kg | 0.096 | 1 | 03/12/19 08:46 | 03/12/19 14:53 | 7440-41-7 | |
| Cadmium | 1.2 | mg/kg | 0.96 | 2 | 03/12/19 08:46 | 03/12/19 14:58 | 7440-43-9 | |
| Chromium | 17.2 | mg/kg | 0.96 | 2 | 03/12/19 08:46 | 03/12/19 14:58 | 7440-47-3 | |
| Copper | 46.8 | mg/kg | 3.9 | 2 | 03/12/19 08:46 | 03/12/19 14:58 | 7440-50-8 | |
| Lead | 199 | mg/kg | 0.96 | 2 | 03/12/19 08:46 | 03/12/19 14:58 | 7439-92-1 | |
| Nickel | 19.5 | mg/kg | 0.96 | 2 | 03/12/19 08:46 | 03/12/19 14:58 | 7440-02-0 | |
| Selenium | 4.3 | mg/kg | 2.9 | 2 | 03/12/19 08:46 | 03/12/19 14:58 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.67 | 1 | 03/12/19 08:46 | 03/12/19 14:53 | 7440-22-4 | |
| Thallium | ND | mg/kg | 3.9 | 2 | 03/12/19 08:46 | 03/12/19 14:58 | 7440-28-0 | D3 |
| Zinc | 221 | mg/kg | 9.6 | 1 | 03/12/19 08:46 | 03/12/19 14:53 | 7440-66-6 | |
| 7471 Mercury | | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | |
| Mercury | 0.077 | mg/kg | 0.043 | 1 | 03/11/19 10:26 | 03/12/19 09:32 | 7439-97-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 10.5 | % | 0.50 | 1 | | 03/08/19 12:22 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60296121

Sample: SSD04-POST:1 **Lab ID: 60296121002** Collected: 03/07/19 16:39 Received: 03/08/19 06:55 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | 67.2 | mg/kg | 20.7 | 1 | 03/11/19 11:40 | 03/11/19 22:25 | | |
| TPH (>C12-C28) | 630 | mg/kg | 20.7 | 1 | 03/11/19 11:40 | 03/11/19 22:25 | | |
| TPH (>C28-C35) | 597 | mg/kg | 20.7 | 1 | 03/11/19 11:40 | 03/11/19 22:25 | | |
| TPH Total (C06-C35) | 1290 | mg/kg | 20.7 | 1 | 03/11/19 11:40 | 03/11/19 22:25 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 116 | % | 70-130 | 1 | 03/11/19 11:40 | 03/11/19 22:25 | 84-15-1 | |
| 1-Chlorooctane (S) | 110 | % | 70-130 | 1 | 03/11/19 11:40 | 03/11/19 22:25 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 14.9 | % | 0.50 | 1 | | 03/08/19 12:22 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296121

QC Batch: 572920

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Associated Lab Samples: 60296121001

METHOD BLANK: 2349968

Matrix: Solid

Associated Lab Samples: 60296121001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Mercury | mg/kg | ND | 0.050 | 03/12/19 08:53 | |

LABORATORY CONTROL SAMPLE: 2349969

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | mg/kg | 0.5 | 0.55 | 110 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2349970 2349971

| Parameter | Units | 60295859001 | | 2349970 | | 2349971 | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-----------------|-----------|-----------------|-----------|------------|--------------|--------|---------|------|
| | | MS Result | MSD Spike Conc. | MS Result | MSD Spike Conc. | MS Result | MSD Result | | | | |
| Mercury | mg/kg | ND | 0.54 | 0.53 | 0.60 | 0.52 | 107 | 96 | 75-125 | 13 | 20 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296121

QC Batch: 573103 Analysis Method: EPA 6010
 QC Batch Method: EPA 3050 Analysis Description: 6010 MET
 Associated Lab Samples: 60296121001

METHOD BLANK: 2350541 Matrix: Solid

Associated Lab Samples: 60296121001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Antimony | mg/kg | ND | 1.0 | 03/12/19 14:41 | |
| Arsenic | mg/kg | ND | 1.0 | 03/12/19 14:41 | |
| Beryllium | mg/kg | ND | 0.10 | 03/12/19 14:41 | |
| Cadmium | mg/kg | ND | 0.50 | 03/12/19 14:41 | |
| Chromium | mg/kg | ND | 0.50 | 03/12/19 14:41 | |
| Copper | mg/kg | ND | 2.0 | 03/12/19 14:41 | |
| Lead | mg/kg | ND | 0.50 | 03/12/19 14:41 | |
| Nickel | mg/kg | ND | 0.50 | 03/12/19 14:41 | |
| Selenium | mg/kg | ND | 1.5 | 03/12/19 14:41 | |
| Silver | mg/kg | ND | 0.70 | 03/12/19 14:41 | |
| Thallium | mg/kg | ND | 2.0 | 03/12/19 14:41 | |
| Zinc | mg/kg | ND | 10.0 | 03/12/19 14:41 | |

LABORATORY CONTROL SAMPLE: 2350542

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | mg/kg | 100 | 94.0 | 94 | 80-120 | |
| Arsenic | mg/kg | 100 | 88.5 | 89 | 80-120 | |
| Beryllium | mg/kg | 100 | 96.8 | 97 | 80-120 | |
| Cadmium | mg/kg | 100 | 94.7 | 95 | 80-120 | |
| Chromium | mg/kg | 100 | 93.0 | 93 | 80-120 | |
| Copper | mg/kg | 100 | 96.3 | 96 | 80-120 | |
| Lead | mg/kg | 100 | 96.5 | 96 | 80-120 | |
| Nickel | mg/kg | 100 | 98.3 | 98 | 80-120 | |
| Selenium | mg/kg | 100 | 90.9 | 91 | 80-120 | |
| Silver | mg/kg | 50 | 46.6 | 93 | 80-120 | |
| Thallium | mg/kg | 100 | 98.2 | 98 | 80-120 | |
| Zinc | mg/kg | 100 | 92.5 | 93 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2350543 2350544

| Parameter | Units | 60295839004 | | MSD | | MS | | MSD | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-------------|-------------|-----------|------------|----------|-----------|--------|--------------|-----|---------|------|
| | | Result | Spike Conc. | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | | | | | |
| Antimony | mg/kg | ND | 100 | 103 | 34.1 | 46.4 | 34 | 45 | 75-125 | 31 | 20 | M1,R1 | |
| Arsenic | mg/kg | 12.1 | 100 | 103 | 89.2 | 93.9 | 77 | 79 | 75-125 | 5 | 20 | | |
| Beryllium | mg/kg | 1.1 | 100 | 103 | 87.4 | 93.3 | 86 | 89 | 75-125 | 7 | 20 | | |
| Cadmium | mg/kg | 1.0 | 100 | 103 | 89.2 | 95.3 | 88 | 91 | 75-125 | 7 | 20 | | |
| Chromium | mg/kg | 14.6 | 100 | 103 | 99.7 | 100 | 85 | 83 | 75-125 | 1 | 20 | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296121

| Parameter | Units | 60295839004 | | 2350543 | | 2350544 | | % Rec | % Rec | % Rec | Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|-----------------|-----------|------------|----------|-------|--------|-------|--------|--------|---------|------|
| | | Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | | | | | | | |
| Copper | mg/kg | 16.3 | 100 | 103 | 108 | 109 | 92 | 90 | 75-125 | 0 | 20 | | | |
| Lead | mg/kg | 208 | 100 | 103 | 434 | 345 | 226 | 133 | 75-125 | 23 | 20 | M1, R1 | | |
| Nickel | mg/kg | 25.4 | 100 | 103 | 109 | 109 | 84 | 81 | 75-125 | 0 | 20 | | | |
| Selenium | mg/kg | 2.2 | 100 | 103 | 83.8 | 90.3 | 82 | 85 | 75-125 | 7 | 20 | | | |
| Silver | mg/kg | ND | 50.1 | 51.6 | 43.5 | 46.1 | 87 | 89 | 75-125 | 6 | 20 | | | |
| Thallium | mg/kg | ND | 100 | 103 | 80.8 | 87.9 | 81 | 85 | 75-125 | 8 | 20 | | | |
| Zinc | mg/kg | 111 | 100 | 103 | 204 | 224 | 93 | 109 | 75-125 | 9 | 20 | | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296121

| | |
|-------------------------------------|--------------------------------------|
| QC Batch: 572840 | Analysis Method: TNRCC 1005 |
| QC Batch Method: TNRCC 1005 | Analysis Description: TX1005 TPH GCS |
| Associated Lab Samples: 60296121002 | |

METHOD BLANK: 2349740 Matrix: Solid

Associated Lab Samples: 60296121002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---------------------|-------|--------------|-----------------|----------------|------------|
| TPH (>C12-C28) | mg/kg | ND | 20.0 | 03/11/19 14:11 | |
| TPH (>C28-C35) | mg/kg | ND | 20.0 | 03/11/19 14:11 | |
| TPH (C06-C12) | mg/kg | ND | 20.0 | 03/11/19 14:11 | |
| TPH Total (C06-C35) | mg/kg | ND | 20.0 | 03/11/19 14:11 | |
| 1-Chlorooctane (S) | % | 105 | 70-130 | 03/11/19 14:11 | |
| o-Terphenyl (S) | % | 104 | 70-130 | 03/11/19 14:11 | |

LABORATORY CONTROL SAMPLE & LCSD: 2349741 2349742

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| TPH Total (C06-C35) | mg/kg | 2500 | 2450 | 2210 | 98 | 88 | 75-125 | 11 | 20 | |
| 1-Chlorooctane (S) | % | | | | 134 | 133 | 70-130 | | | S1 |
| o-Terphenyl (S) | % | | | | 115 | 110 | 70-130 | | | |

MATRIX SPIKE SAMPLE: 2349743

| Parameter | Units | 60296039001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| TPH Total (C06-C35) | mg/kg | 128 | 2280 | 2370 | 98 | 11-187 | |
| 1-Chlorooctane (S) | % | | | | 141 | 70-130 | S1 |
| o-Terphenyl (S) | % | | | | 121 | 70-130 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296121

QC Batch: 572678

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60296121001, 60296121002

METHOD BLANK: 2348274

Matrix: Solid

Associated Lab Samples: 60296121001, 60296121002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------------|-------|--------------|-----------------|----------------|------------|
| Percent Moisture | % | ND | 0.50 | 03/08/19 12:22 | |

SAMPLE DUPLICATE: 2348275

| Parameter | Units | 60296054011 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------|-------|--------------------|------------|-----|---------|------------|
| Percent Moisture | % | 20.4 | 20.0 | 2 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS-FINTUBE

Pace Project No.: 60296121

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

S1 Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS-FINTUBE

Pace Project No.: 60296121

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|--------------|-----------------|----------|-------------------|------------------|
| 60296121002 | SSD04-POST:1 | TNRCC 1005 | 572840 | TNRCC 1005 | 573093 |
| 60296121001 | SSE07-POST:1 | EPA 3050 | 573103 | EPA 6010 | 573231 |
| 60296121001 | SSE07-POST:1 | EPA 7471 | 572920 | EPA 7471 | 573000 |
| 60296121001 | SSE07-POST:1 | ASTM D2974 | 572678 | | |
| 60296121002 | SSD04-POST:1 | ASTM D2974 | 572678 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO#: 60296121

60296121

Client Name: Environmental Works

Courier: FedEx UPS VIA Clay PEX ECI Pace Xroads Client Other

Tracking #: 785904078201 Pace Shipping Label Used? Yes No

Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags Foam None Other X2PIC

Thermometer Used: T300 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 2.0 Corr. Factor +0.4 Corrected 2.4

Date and initials of person examining contents: 3-8-19

Temperature should be above freezing to 6°C

| | | |
|--|--|--|
| Chain of Custody present: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Chain of Custody relinquished: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples arrived within holding time: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Short Hold Time analyses (<72hr): | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | <u>TX1005</u> |
| Rush Turn Around Time requested: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | <u>48 HR</u> |
| Sufficient volume: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Correct containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Pace containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers intact: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | <u>Frozen on 3-8-19 at 0721</u> |
| Filtered volume received for dissolved tests? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Sample labels match COC: Date / time / ID / analyses | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples contain multiple phases? Matrix: <u>S2</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | List sample IDs, volumes, lot #'s of preservative and the date/time added. |
| Cyanide water sample checks: | | |
| Lead acetate strip turns dark? (Record only) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Potassium iodide test strip turns blue/purple? (Preserve) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Trip Blank present: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Headspace in VOA vials (>6mm): | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Samples from USDA Regulated Area: State: <u>OK</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Additional labels attached to 5035A / TX1005 vials in the field? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

March 12, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS-FINTUBE / Disposal
Pace Project No.: 60296335

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on March 11, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS-FINTUBE / Disposal

Pace Project No.: 60296335

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|---------------|--------|----------------|----------------|
| 60296335001 | SSD05-POST:1' | Solid | 03/08/19 15:17 | 03/11/19 08:25 |
| 60296335002 | SSD05-POST:1' | Solid | 03/08/19 15:20 | 03/11/19 08:25 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project:
Pace Project No.:

Method:
Description:
Client:
Date:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO#: 60296335



Client Name: Environmental Works-Tulsa

Courier: FedEx [X] UPS [] VIA [] Clay [] PEX [] ECI [] Pace [] Xroads [] Client [] Other []

Tracking #: 724919090692 Pace Shipping Label Used? Yes [] No [X]

Custody Seal on Cooler/Box Present: Yes [X] No [] Seals intact: Yes [X] No []

Packing Material: Bubble Wrap [] Bubble Bags [X] Foam [X] None [] Other [X] Zpic

Thermometer Used: T300 Type of Ice: Wet Blue None melted

Cooler Temperature (°C): As-read 11.7 Corr. Factor +0.4 Corrected 12.1

Date and initials of person examining contents: 3-11-19 [initials]

Temperature should be above freezing to 6°C

Table with 3 columns: Question, Yes/No/N/A checkboxes, and handwritten notes. Rows include Chain of Custody, Samples arrived, Short Hold Time, Rush Turn Around Time, Sufficient volume, Correct containers used, Pace containers used, Containers intact, Unpreserved soils, Filtered volume, Sample labels, Multiple phases, pH preservation, Cyanide checks, Trip Blank, Headspace, USDA Regulated Area, and Additional labels.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: [Signature] Date/Time: 3/11/19

Comments/ Resolution: DO NOT ANALYZE - LOG AS HOLD FOR DISPOSAL

Project Manager Review: _____ Date: _____



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
Required Client Information:
 Company: Environmental Works, Tulsa Office
 Address: 9529 E 55th Place
 Suite A, Tulsa, OK 74145
 Phone: 918-879-4499 Fax: [blank]
 Email: anthony@environmentalworks.com
 Requested Due Date: 48 hr TAT

Section B
Required Project Information:
 Report To: MOORE, ANTHONY
 Copy To: [blank]
 Project Name: Evans-Fintube
 Purchase Order #: [blank]
 Project #: [blank]

Section C
Invoice Information:
 Attention: [blank]
 Company Name: [blank]
 Address: [blank]
 Pace Project Manager: angie.brown@pace-labs.com
 Pace Profile #: 12359

Regulatory Agency: [blank]
State / Location: OK

| ITEM # | MATRIX | CODE | COLLECTED | | SAMPLE TYPE (G=GRAB C=COMP) | MATRIX CODE (see valid codes to left) | # OF CONTAINERS | Preservatives | Y/N | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) |
|--------|----------------|------|-----------------|---------------|-----------------------------|---------------------------------------|-----------------|---------------|-----|-----------------------------------|-------------------------|
| | | | START DATE TIME | END DATE TIME | | | | | | | |
| 1 | Drinking Water | DW | 3/8/19 15:13 | 3/8/19 15:17 | SLC | SLC | Unpreserved | X | | | 60296335 |
| 2 | Waste Water | WT | 3/8/19 15:18 | 3/8/19 15:20 | SLC | SLC | Unpreserved | X | | | 602 |
| 3 | Waste Water | WW | | | | | | | | | 602 |
| 4 | Product | P | | | | | | | | | |
| 5 | Solid | SL | | | | | | | | | |
| 6 | Oil | OL | | | | | | | | | |
| 7 | Wipe | WP | | | | | | | | | |
| 8 | Air | AR | | | | | | | | | |
| 9 | Other | OT | | | | | | | | | |
| 10 | Tissue | TS | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS |
|---------------------|-------------------------------|--------|------|---------------------------|---------|------|-------------------|
| | Ruggan Gwi | 3/8/19 | 1700 | McCoy / Gwy | 3/11/19 | 0825 | 12.1 melted, 1 Y |
| | Ruggan | | | | | | |
| | Ruggan | | | | | | |
| | KENTIC WILSON | | | | | | |
| | 3/8/19 | | | | | | |

Angie Brown - Evans-Fintube sample

From: Anthony Moore <anthony@environmentalworks.com>
To: "angie.brown@pacelabs.com" <angie.brown@pacelabs.com>
Date: 3/11/2019 9:55 AM
Subject: Evans-Fintube sample
Cc: Kenzie Wilson <kwilson@environmentalworks.com>

Hi Angie,

Got your voice mail. Do not analyze the sample in question. We will collect another sample today and submit with the others we collect today.

Thanks.

Note my new address

Anthony Moore
Environmental Works, Inc.
9529 E. 55th Place, Suite A
Tulsa, Oklahoma 74145
P: 918-879-4499
M: 417-773-5747
www.environmentalworks.com

24-Hour Emergency Spill Response 1-877-827-9500

March 15, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS-FINTUBE
Pace Project No.: 60296392

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on March 12, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS-FINTUBE

Pace Project No.: 60296392

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Certification Number: 10090

Arkansas Drinking Water

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS-FINTUBE

Pace Project No.: 60296392

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|-------------------|--------|----------------|----------------|
| 60296392001 | SSE15-POST:1' | Solid | 03/11/19 17:56 | 03/12/19 08:30 |
| 60296392002 | SSD15-POST:1' | Solid | 03/11/19 17:24 | 03/12/19 08:30 |
| 60296392003 | SSD05-POST:1' | Solid | 03/11/19 12:00 | 03/12/19 08:30 |
| 60296392004 | SB05-SS01-POST:1' | Solid | 03/11/19 15:00 | 03/12/19 08:30 |
| 60296392005 | DUPLICATE #7 | Solid | 03/11/19 15:00 | 03/12/19 08:30 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS-FINTUBE

Pace Project No.: 60296392

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-------------------|------------|----------|-------------------|------------|
| 60296392001 | SSE15-POST:1' | EPA 6010 | EMR | 12 | PASI-K |
| | | EPA 7471 | LRS | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60296392002 | SSD15-POST:1' | EPA 6010 | EMR | 12 | PASI-K |
| | | EPA 7471 | LRS | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60296392003 | SSD05-POST:1' | EPA 8082 | AJB1 | 8 | PASI-K |
| | | TNRCC 1005 | AJM | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60296392004 | SB05-SS01-POST:1' | EPA 6010 | EMR | 12 | PASI-K |
| | | EPA 7471 | LRS | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60296392005 | DUPLICATE #7 | EPA 6010 | EMR | 12 | PASI-K |
| | | EPA 7471 | LRS | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS-FINTUBE

Pace Project No.: 60296392

| Lab Sample ID | Client Sample ID | Result | Units | Report Limit | Analyzed | Qualifiers |
|--------------------|--------------------------|--------|-------|--------------|----------------|------------|
| Method | Parameters | | | | | |
| 60296392001 | SSE15-POST:1' | | | | | |
| EPA 6010 | Arsenic | 126 | mg/kg | 1.0 | 03/14/19 12:22 | M1, R1 |
| EPA 6010 | Beryllium | 3.4 | mg/kg | 0.10 | 03/14/19 12:22 | |
| EPA 6010 | Cadmium | 4.8 | mg/kg | 0.51 | 03/14/19 12:22 | |
| EPA 6010 | Chromium | 16.7 | mg/kg | 1.5 | 03/14/19 12:55 | |
| EPA 6010 | Copper | 178 | mg/kg | 2.0 | 03/14/19 12:22 | M1, R1 |
| EPA 6010 | Lead | 4620 | mg/kg | 0.51 | 03/14/19 12:22 | M1, R1 |
| EPA 6010 | Nickel | 20.5 | mg/kg | 0.51 | 03/14/19 12:22 | |
| EPA 6010 | Silver | 16.7 | mg/kg | 2.1 | 03/14/19 12:55 | |
| EPA 6010 | Zinc | 6950 | mg/kg | 30.4 | 03/14/19 12:55 | M1, R1 |
| ASTM D2974 | Percent Moisture | 17.7 | % | 0.50 | 03/13/19 17:00 | |
| 60296392002 | SSD15-POST:1' | | | | | |
| EPA 6010 | Arsenic | 6.6 | mg/kg | 0.94 | 03/14/19 12:29 | |
| EPA 6010 | Beryllium | 0.71 | mg/kg | 0.094 | 03/14/19 12:29 | |
| EPA 6010 | Cadmium | 0.55 | mg/kg | 0.47 | 03/14/19 12:29 | |
| EPA 6010 | Chromium | 14.7 | mg/kg | 0.47 | 03/14/19 12:29 | |
| EPA 6010 | Copper | 15.6 | mg/kg | 1.9 | 03/14/19 12:29 | |
| EPA 6010 | Lead | 29.8 | mg/kg | 0.47 | 03/14/19 12:29 | |
| EPA 6010 | Nickel | 19.5 | mg/kg | 0.47 | 03/14/19 12:29 | |
| EPA 6010 | Zinc | 115 | mg/kg | 9.4 | 03/14/19 12:29 | |
| ASTM D2974 | Percent Moisture | 18.2 | % | 0.50 | 03/13/19 17:00 | |
| 60296392003 | SSD05-POST:1' | | | | | |
| TNRCC 1005 | TPH Total (C06-C35) | 34.5 | mg/kg | 18.7 | 03/13/19 10:12 | |
| TNRCC 1005 | TPH (>C12-C28) | 27.2 | mg/kg | 18.7 | 03/13/19 10:12 | |
| ASTM D2974 | Percent Moisture | 14.3 | % | 0.50 | 03/13/19 17:00 | |
| 60296392004 | SB05-SS01-POST:1' | | | | | |
| EPA 6010 | Antimony | 2.1 | mg/kg | 1.1 | 03/15/19 14:00 | M1 |
| EPA 6010 | Arsenic | 4.8 | mg/kg | 1.1 | 03/15/19 14:00 | |
| EPA 6010 | Beryllium | 0.32 | mg/kg | 0.11 | 03/15/19 14:00 | |
| EPA 6010 | Cadmium | 0.78 | mg/kg | 0.53 | 03/15/19 14:00 | |
| EPA 6010 | Chromium | 9.3 | mg/kg | 0.53 | 03/15/19 14:00 | |
| EPA 6010 | Copper | 26.6 | mg/kg | 2.1 | 03/15/19 14:00 | |
| EPA 6010 | Lead | 110 | mg/kg | 0.53 | 03/15/19 14:00 | |
| EPA 6010 | Nickel | 12.8 | mg/kg | 0.53 | 03/15/19 14:00 | |
| EPA 6010 | Zinc | 206 | mg/kg | 10.5 | 03/15/19 14:00 | |
| ASTM D2974 | Percent Moisture | 16.8 | % | 0.50 | 03/13/19 17:00 | |
| 60296392005 | DUPLICATE #7 | | | | | |
| EPA 6010 | Antimony | 1.5 | mg/kg | 0.80 | 03/15/19 14:06 | |
| EPA 6010 | Arsenic | 6.3 | mg/kg | 0.80 | 03/15/19 14:06 | |
| EPA 6010 | Beryllium | 0.31 | mg/kg | 0.080 | 03/15/19 14:06 | |
| EPA 6010 | Cadmium | 0.92 | mg/kg | 0.40 | 03/15/19 14:06 | |
| EPA 6010 | Chromium | 13.7 | mg/kg | 0.40 | 03/15/19 14:06 | |
| EPA 6010 | Copper | 34.8 | mg/kg | 1.6 | 03/15/19 14:06 | |
| EPA 6010 | Lead | 142 | mg/kg | 0.40 | 03/15/19 14:06 | |
| EPA 6010 | Nickel | 13.4 | mg/kg | 0.40 | 03/15/19 14:06 | |
| EPA 6010 | Selenium | 1.6 | mg/kg | 1.2 | 03/15/19 14:06 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS-FINTUBE

Pace Project No.: 60296392

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|-------|--------------|----------------|------------|
| 60296392005 | DUPLICATE #7 | | | | | |
| EPA 6010 | Zinc | 346 | mg/kg | 8.0 | 03/15/19 14:06 | |
| EPA 7471 | Mercury | 0.057 | mg/kg | 0.052 | 03/15/19 13:42 | |
| ASTM D2974 | Percent Moisture | 9.8 | % | 0.50 | 03/13/19 17:00 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60296392

Method: EPA 8082

Description: 8082 GCS PCB SW

Client: Environmental Works_OK office

Date: March 15, 2019

General Information:

1 sample was analyzed for EPA 8082. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60296392

Method: TNRCC 1005

Description: TNRCC 1005 TPH

Client: Environmental Works_OK office

Date: March 15, 2019

General Information:

1 sample was analyzed for TNRCC 1005. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with TNRCC 1005 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 573082

S1: Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

- LCS (Lab ID: 2350356)
 - 1-Chlorooctane (S)
- LCSD (Lab ID: 2350357)
 - 1-Chlorooctane (S)
- MS (Lab ID: 2350358)
 - 1-Chlorooctane (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60296392

Method: EPA 6010

Description: 6010 MET ICP Red. Interference

Client: Environmental Works_OK office

Date: March 15, 2019

General Information:

4 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 573408

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60296392001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2351835)
 - Antimony
 - Arsenic
 - Copper
 - Lead
 - Zinc
- MSD (Lab ID: 2351836)
 - Antimony
 - Copper
 - Lead
 - Zinc

R1: RPD value was outside control limits.

- MSD (Lab ID: 2351836)
 - Arsenic
 - Copper
 - Lead

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60296392

Method: EPA 6010

Description: 6010 MET ICP Red. Interference

Client: Environmental Works_OK office

Date: March 15, 2019

QC Batch: 573408

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60296392001

R1: RPD value was outside control limits.

- Zinc

QC Batch: 573796

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60296392004

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2353537)
 - Antimony
- MSD (Lab ID: 2353538)
 - Antimony

Additional Comments:

Analyte Comments:

QC Batch: 573408

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- SSE15-POST:1' (Lab ID: 60296392001)
 - Selenium
 - Thallium

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60296392

Method: EPA 7471

Description: 7471 Mercury

Client: Environmental Works_OK office

Date: March 15, 2019

General Information:

4 samples were analyzed for EPA 7471. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7471 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60296392

Sample: SSE15-POST:1' Lab ID: 60296392001 Collected: 03/11/19 17:56 Received: 03/12/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------------------|-------------|---|--------------|----|----------------|----------------|-----------|-------|
| 6010 MET ICP Red. Interference | | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | |
| Antimony | ND | mg/kg | 1.0 | 1 | 03/13/19 13:15 | 03/14/19 12:22 | 7440-36-0 | M1 |
| Arsenic | 126 | mg/kg | 1.0 | 1 | 03/13/19 13:15 | 03/14/19 12:22 | 7440-38-2 | M1,R1 |
| Beryllium | 3.4 | mg/kg | 0.10 | 1 | 03/13/19 13:15 | 03/14/19 12:22 | 7440-41-7 | |
| Cadmium | 4.8 | mg/kg | 0.51 | 1 | 03/13/19 13:15 | 03/14/19 12:22 | 7440-43-9 | |
| Chromium | 16.7 | mg/kg | 1.5 | 3 | 03/13/19 13:15 | 03/14/19 12:55 | 7440-47-3 | |
| Copper | 178 | mg/kg | 2.0 | 1 | 03/13/19 13:15 | 03/14/19 12:22 | 7440-50-8 | M1,R1 |
| Lead | 4620 | mg/kg | 0.51 | 1 | 03/13/19 13:15 | 03/14/19 12:22 | 7439-92-1 | M1,R1 |
| Nickel | 20.5 | mg/kg | 0.51 | 1 | 03/13/19 13:15 | 03/14/19 12:22 | 7440-02-0 | |
| Selenium | ND | mg/kg | 4.6 | 3 | 03/13/19 13:15 | 03/14/19 12:55 | 7782-49-2 | D3 |
| Silver | 16.7 | mg/kg | 2.1 | 3 | 03/13/19 13:15 | 03/14/19 12:55 | 7440-22-4 | |
| Thallium | ND | mg/kg | 6.1 | 3 | 03/13/19 13:15 | 03/14/19 12:55 | 7440-28-0 | D3 |
| Zinc | 6950 | mg/kg | 30.4 | 3 | 03/13/19 13:15 | 03/14/19 12:55 | 7440-66-6 | M1,R1 |
| 7471 Mercury | | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | |
| Mercury | ND | mg/kg | 0.048 | 1 | 03/12/19 14:28 | 03/13/19 13:10 | 7439-97-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 17.7 | % | 0.50 | 1 | | 03/13/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60296392

Sample: SSD15-POST:1' Lab ID: 60296392002 Collected: 03/11/19 17:24 Received: 03/12/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP Red. Interference | | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | |
| Antimony | ND | mg/kg | 0.94 | 1 | 03/13/19 13:15 | 03/14/19 12:29 | 7440-36-0 | |
| Arsenic | 6.6 | mg/kg | 0.94 | 1 | 03/13/19 13:15 | 03/14/19 12:29 | 7440-38-2 | |
| Beryllium | 0.71 | mg/kg | 0.094 | 1 | 03/13/19 13:15 | 03/14/19 12:29 | 7440-41-7 | |
| Cadmium | 0.55 | mg/kg | 0.47 | 1 | 03/13/19 13:15 | 03/14/19 12:29 | 7440-43-9 | |
| Chromium | 14.7 | mg/kg | 0.47 | 1 | 03/13/19 13:15 | 03/14/19 12:29 | 7440-47-3 | |
| Copper | 15.6 | mg/kg | 1.9 | 1 | 03/13/19 13:15 | 03/14/19 12:29 | 7440-50-8 | |
| Lead | 29.8 | mg/kg | 0.47 | 1 | 03/13/19 13:15 | 03/14/19 12:29 | 7439-92-1 | |
| Nickel | 19.5 | mg/kg | 0.47 | 1 | 03/13/19 13:15 | 03/14/19 12:29 | 7440-02-0 | |
| Selenium | ND | mg/kg | 1.4 | 1 | 03/13/19 13:15 | 03/14/19 12:29 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.66 | 1 | 03/13/19 13:15 | 03/14/19 12:29 | 7440-22-4 | |
| Thallium | ND | mg/kg | 1.9 | 1 | 03/13/19 13:15 | 03/14/19 12:29 | 7440-28-0 | |
| Zinc | 115 | mg/kg | 9.4 | 1 | 03/13/19 13:15 | 03/14/19 12:29 | 7440-66-6 | |
| 7471 Mercury | | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | |
| Mercury | ND | mg/kg | 0.051 | 1 | 03/12/19 14:28 | 03/13/19 13:17 | 7439-97-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 18.2 | % | 0.50 | 1 | | 03/13/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60296392

Sample: SSD05-POST:1' Lab ID: 60296392003 Collected: 03/11/19 12:00 Received: 03/12/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|------------|------|
| 8082 GCS PCB SW | | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 38.0 | 1 | 03/12/19 23:36 | 03/13/19 16:28 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 38.0 | 1 | 03/12/19 23:36 | 03/13/19 16:28 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 38.0 | 1 | 03/12/19 23:36 | 03/13/19 16:28 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 38.0 | 1 | 03/12/19 23:36 | 03/13/19 16:28 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 38.0 | 1 | 03/12/19 23:36 | 03/13/19 16:28 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 38.0 | 1 | 03/12/19 23:36 | 03/13/19 16:28 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 38.0 | 1 | 03/12/19 23:36 | 03/13/19 16:28 | 11096-82-5 | |
| Surrogates | | | | | | | | |
| Decachlorobiphenyl (S) | 60 | % | 28-143 | 1 | 03/12/19 23:36 | 03/13/19 16:28 | 2051-24-3 | |
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 18.7 | 1 | 03/12/19 11:55 | 03/13/19 10:12 | | |
| TPH Total (C06-C35) | 34.5 | mg/kg | 18.7 | 1 | 03/12/19 11:55 | 03/13/19 10:12 | | |
| TPH (>C12-C28) | 27.2 | mg/kg | 18.7 | 1 | 03/12/19 11:55 | 03/13/19 10:12 | | |
| TPH (>C28-C35) | ND | mg/kg | 18.7 | 1 | 03/12/19 11:55 | 03/13/19 10:12 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 105 | % | 70-130 | 1 | 03/12/19 11:55 | 03/13/19 10:12 | 84-15-1 | |
| 1-Chlorooctane (S) | 102 | % | 70-130 | 1 | 03/12/19 11:55 | 03/13/19 10:12 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 14.3 | % | 0.50 | 1 | | 03/13/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60296392

Sample: SB05-SS01-POST:1' **Lab ID:** 60296392004 Collected: 03/11/19 15:00 Received: 03/12/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP Red. Interference | | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | |
| Antimony | 2.1 | mg/kg | 1.1 | 1 | 03/15/19 08:16 | 03/15/19 14:00 | 7440-36-0 | M1 |
| Arsenic | 4.8 | mg/kg | 1.1 | 1 | 03/15/19 08:16 | 03/15/19 14:00 | 7440-38-2 | |
| Beryllium | 0.32 | mg/kg | 0.11 | 1 | 03/15/19 08:16 | 03/15/19 14:00 | 7440-41-7 | |
| Cadmium | 0.78 | mg/kg | 0.53 | 1 | 03/15/19 08:16 | 03/15/19 14:00 | 7440-43-9 | |
| Chromium | 9.3 | mg/kg | 0.53 | 1 | 03/15/19 08:16 | 03/15/19 14:00 | 7440-47-3 | |
| Copper | 26.6 | mg/kg | 2.1 | 1 | 03/15/19 08:16 | 03/15/19 14:00 | 7440-50-8 | |
| Lead | 110 | mg/kg | 0.53 | 1 | 03/15/19 08:16 | 03/15/19 14:00 | 7439-92-1 | |
| Nickel | 12.8 | mg/kg | 0.53 | 1 | 03/15/19 08:16 | 03/15/19 14:00 | 7440-02-0 | |
| Selenium | ND | mg/kg | 1.6 | 1 | 03/15/19 08:16 | 03/15/19 14:00 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.74 | 1 | 03/15/19 08:16 | 03/15/19 14:00 | 7440-22-4 | |
| Thallium | ND | mg/kg | 2.1 | 1 | 03/15/19 08:16 | 03/15/19 14:00 | 7440-28-0 | |
| Zinc | 206 | mg/kg | 10.5 | 1 | 03/15/19 08:16 | 03/15/19 14:00 | 7440-66-6 | |
| 7471 Mercury | | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | |
| Mercury | ND | mg/kg | 0.056 | 1 | 03/15/19 09:53 | 03/15/19 13:35 | 7439-97-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 16.8 | % | 0.50 | 1 | | 03/13/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60296392

Sample: DUPLICATE #7 **Lab ID: 60296392005** Collected: 03/11/19 15:00 Received: 03/12/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------------------|--------------|---|--------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP Red. Interference | | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | |
| Antimony | 1.5 | mg/kg | 0.80 | 1 | 03/15/19 08:16 | 03/15/19 14:06 | 7440-36-0 | |
| Arsenic | 6.3 | mg/kg | 0.80 | 1 | 03/15/19 08:16 | 03/15/19 14:06 | 7440-38-2 | |
| Beryllium | 0.31 | mg/kg | 0.080 | 1 | 03/15/19 08:16 | 03/15/19 14:06 | 7440-41-7 | |
| Cadmium | 0.92 | mg/kg | 0.40 | 1 | 03/15/19 08:16 | 03/15/19 14:06 | 7440-43-9 | |
| Chromium | 13.7 | mg/kg | 0.40 | 1 | 03/15/19 08:16 | 03/15/19 14:06 | 7440-47-3 | |
| Copper | 34.8 | mg/kg | 1.6 | 1 | 03/15/19 08:16 | 03/15/19 14:06 | 7440-50-8 | |
| Lead | 142 | mg/kg | 0.40 | 1 | 03/15/19 08:16 | 03/15/19 14:06 | 7439-92-1 | |
| Nickel | 13.4 | mg/kg | 0.40 | 1 | 03/15/19 08:16 | 03/15/19 14:06 | 7440-02-0 | |
| Selenium | 1.6 | mg/kg | 1.2 | 1 | 03/15/19 08:16 | 03/15/19 14:06 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.56 | 1 | 03/15/19 08:16 | 03/15/19 14:06 | 7440-22-4 | |
| Thallium | ND | mg/kg | 1.6 | 1 | 03/15/19 08:16 | 03/15/19 14:06 | 7440-28-0 | |
| Zinc | 346 | mg/kg | 8.0 | 1 | 03/15/19 08:16 | 03/15/19 14:06 | 7440-66-6 | |
| 7471 Mercury | | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | |
| Mercury | 0.057 | mg/kg | 0.052 | 1 | 03/15/19 09:53 | 03/15/19 13:42 | 7439-97-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 9.8 | % | 0.50 | 1 | | 03/13/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296392

QC Batch: 573198

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Associated Lab Samples: 60296392001, 60296392002

METHOD BLANK: 2350944

Matrix: Solid

Associated Lab Samples: 60296392001, 60296392002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Mercury | mg/kg | ND | 0.050 | 03/13/19 12:50 | |

LABORATORY CONTROL SAMPLE: 2350945

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | mg/kg | 0.5 | 0.47 | 94 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2350946 2350947

| Parameter | Units | 2350946 | | 2350947 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|--------------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|
| | | 60296407001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | | | | | | |
| Mercury | mg/kg | ND | 0.51 | 0.47 | 0.47 | 0.42 | 89 | 85 | 75-125 | 10 | 20 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296392

QC Batch: 573802

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Associated Lab Samples: 60296392004, 60296392005

METHOD BLANK: 2353552

Matrix: Solid

Associated Lab Samples: 60296392004, 60296392005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Mercury | mg/kg | ND | 0.050 | 03/15/19 13:31 | |

LABORATORY CONTROL SAMPLE: 2353553

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | mg/kg | 0.5 | 0.46 | 92 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2353554 2353555

| Parameter | Units | 60296392004 | | MS | | MSD | | MS | | MSD | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----|-------------|----------|-------------|----------|--------|------------|--------|-----------|--------------|-----|---------|------|
| | | Result | ND | Spike Conc. | MS Conc. | Spike Conc. | MS Conc. | Result | MSD Result | % Rec | MSD % Rec | | | | |
| Mercury | mg/kg | ND | ND | 0.5 | 0.54 | 0.58 | 0.61 | 106 | 103 | 75-125 | 6 | 20 | | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296392

QC Batch: 573408 Analysis Method: EPA 6010
 QC Batch Method: EPA 3050 Analysis Description: 6010 MET
 Associated Lab Samples: 60296392001, 60296392002

METHOD BLANK: 2351833 Matrix: Solid

Associated Lab Samples: 60296392001, 60296392002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Antimony | mg/kg | ND | 1.0 | 03/14/19 11:59 | |
| Arsenic | mg/kg | ND | 1.0 | 03/14/19 11:59 | |
| Beryllium | mg/kg | ND | 0.10 | 03/14/19 11:59 | |
| Cadmium | mg/kg | ND | 0.50 | 03/14/19 11:59 | |
| Chromium | mg/kg | ND | 0.50 | 03/14/19 11:59 | |
| Copper | mg/kg | ND | 2.0 | 03/14/19 11:59 | |
| Lead | mg/kg | ND | 0.50 | 03/14/19 11:59 | |
| Nickel | mg/kg | ND | 0.50 | 03/14/19 11:59 | |
| Selenium | mg/kg | ND | 1.5 | 03/14/19 11:59 | |
| Silver | mg/kg | ND | 0.70 | 03/14/19 11:59 | |
| Thallium | mg/kg | ND | 2.0 | 03/14/19 11:59 | |
| Zinc | mg/kg | ND | 10.0 | 03/14/19 11:59 | |

LABORATORY CONTROL SAMPLE: 2351834

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | mg/kg | 100 | 96.0 | 96 | 80-120 | |
| Arsenic | mg/kg | 100 | 87.0 | 87 | 80-120 | |
| Beryllium | mg/kg | 100 | 91.9 | 92 | 80-120 | |
| Cadmium | mg/kg | 100 | 90.2 | 90 | 80-120 | |
| Chromium | mg/kg | 100 | 87.6 | 88 | 80-120 | |
| Copper | mg/kg | 100 | 96.0 | 96 | 80-120 | |
| Lead | mg/kg | 100 | 92.5 | 92 | 80-120 | |
| Nickel | mg/kg | 100 | 94.9 | 95 | 80-120 | |
| Selenium | mg/kg | 100 | 90.2 | 90 | 80-120 | |
| Silver | mg/kg | 50 | 47.2 | 94 | 80-120 | |
| Thallium | mg/kg | 100 | 96.0 | 96 | 80-120 | |
| Zinc | mg/kg | 100 | 88.0 | 88 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2351835 2351836

| Parameter | Units | 60296392001 | | 2351836 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual | |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|-------|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | | | | |
| Antimony | mg/kg | ND | 96.5 | 96.5 | 34.9 | 32.7 | 36 | 33 | 75-125 | 6 | 20 | M1 |
| Arsenic | mg/kg | 126 | 96.5 | 96.5 | 324 | 211 | 205 | 89 | 75-125 | 42 | 20 | M1,R1 |
| Beryllium | mg/kg | 3.4 | 96.5 | 96.5 | 84.2 | 94.4 | 84 | 94 | 75-125 | 11 | 20 | |
| Cadmium | mg/kg | 4.8 | 96.5 | 96.5 | 90.0 | 101 | 88 | 100 | 75-125 | 12 | 20 | |
| Chromium | mg/kg | 16.7 | 96.5 | 96.5 | 92.2 | 104 | 78 | 91 | 75-125 | 12 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296392

| Parameter | Units | 2351835 | | 2351836 | | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | RPD | Qual |
|-----------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|------------|-------|------|
| | | 60296392001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | | | | | | | | |
| Copper | mg/kg | 178 | 96.5 | 96.5 | 325 | 248 | 153 | 73 | 75-125 | 27 | 20 | M1,R1 | |
| Lead | mg/kg | 4620 | 96.5 | 96.5 | 6550 | 4010 | 2000 | -632 | 75-125 | 48 | 20 | M1,R1 | |
| Nickel | mg/kg | 20.5 | 96.5 | 96.5 | 107 | 114 | 89 | 96 | 75-125 | 6 | 20 | | |
| Selenium | mg/kg | ND | 96.5 | 96.5 | 86.0 | 91.2 | 88 | 93 | 75-125 | 6 | 20 | | |
| Silver | mg/kg | 16.7 | 48.2 | 48.2 | 56.2 | 62.4 | 82 | 95 | 75-125 | 10 | 20 | | |
| Thallium | mg/kg | ND | 96.5 | 96.5 | 78.5 | 90.1 | 81 | 93 | 75-125 | 14 | 20 | | |
| Zinc | mg/kg | 6950 | 96.5 | 96.5 | 11800 | 7390 | 5010 | 455 | 75-125 | 46 | 20 | M1,R1 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296392

QC Batch: 573796 Analysis Method: EPA 6010
 QC Batch Method: EPA 3050 Analysis Description: 6010 MET
 Associated Lab Samples: 60296392004, 60296392005

METHOD BLANK: 2353535 Matrix: Solid

Associated Lab Samples: 60296392004, 60296392005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Antimony | mg/kg | ND | 1.0 | 03/15/19 13:56 | |
| Arsenic | mg/kg | ND | 1.0 | 03/15/19 13:56 | |
| Beryllium | mg/kg | ND | 0.10 | 03/15/19 13:56 | |
| Cadmium | mg/kg | ND | 0.50 | 03/15/19 13:56 | |
| Chromium | mg/kg | ND | 0.50 | 03/15/19 13:56 | |
| Copper | mg/kg | ND | 2.0 | 03/15/19 13:56 | |
| Lead | mg/kg | ND | 0.50 | 03/15/19 13:56 | |
| Nickel | mg/kg | ND | 0.50 | 03/15/19 13:56 | |
| Selenium | mg/kg | ND | 1.5 | 03/15/19 13:56 | |
| Silver | mg/kg | ND | 0.70 | 03/15/19 13:56 | |
| Thallium | mg/kg | ND | 2.0 | 03/15/19 13:56 | |
| Zinc | mg/kg | ND | 10.0 | 03/15/19 13:56 | |

LABORATORY CONTROL SAMPLE: 2353536

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | mg/kg | 100 | 92.6 | 93 | 80-120 | |
| Arsenic | mg/kg | 100 | 87.2 | 87 | 80-120 | |
| Beryllium | mg/kg | 100 | 97.6 | 98 | 80-120 | |
| Cadmium | mg/kg | 100 | 91.7 | 92 | 80-120 | |
| Chromium | mg/kg | 100 | 96.5 | 96 | 80-120 | |
| Copper | mg/kg | 100 | 95.7 | 96 | 80-120 | |
| Lead | mg/kg | 100 | 95.7 | 96 | 80-120 | |
| Nickel | mg/kg | 100 | 96.1 | 96 | 80-120 | |
| Selenium | mg/kg | 100 | 88.0 | 88 | 80-120 | |
| Silver | mg/kg | 50 | 47.5 | 95 | 80-120 | |
| Thallium | mg/kg | 100 | 94.5 | 94 | 80-120 | |
| Zinc | mg/kg | 100 | 92.0 | 92 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2353537 2353538

| Parameter | Units | 60296392004 | | 2353538 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual | |
|-----------|-------|-------------|----------------|-----------------|-----------|----------|-----------|--------------|--------|---------|------|------------|
| | | Result | MS Spike Conc. | MSD Spike Conc. | MS Result | | | | | | | MSD Result |
| Antimony | mg/kg | 2.1 | 116 | 116 | 62.1 | 69.1 | 52 | 58 | 75-125 | 11 | 20 | M1 |
| Arsenic | mg/kg | 4.8 | 116 | 116 | 105 | 105 | 87 | 86 | 75-125 | 0 | 20 | |
| Beryllium | mg/kg | 0.32 | 116 | 116 | 112 | 111 | 97 | 95 | 75-125 | 1 | 20 | |
| Cadmium | mg/kg | 0.78 | 116 | 116 | 104 | 103 | 90 | 89 | 75-125 | 1 | 20 | |
| Chromium | mg/kg | 9.3 | 116 | 116 | 126 | 122 | 101 | 98 | 75-125 | 3 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296392

| Parameter | Units | 2353537 | | 2353538 | | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | Qual |
|-----------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|------------|------|
| | | 60296392004 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | | | | | | | |
| Copper | mg/kg | 26.6 | 116 | 116 | 142 | 139 | 100 | 97 | 75-125 | 2 | 20 | |
| Lead | mg/kg | 110 | 116 | 116 | 224 | 231 | 98 | 105 | 75-125 | 3 | 20 | |
| Nickel | mg/kg | 12.8 | 116 | 116 | 118 | 118 | 91 | 91 | 75-125 | 0 | 20 | |
| Selenium | mg/kg | ND | 116 | 116 | 101 | 101 | 87 | 86 | 75-125 | 0 | 20 | |
| Silver | mg/kg | ND | 57.8 | 57.8 | 55.6 | 54.9 | 96 | 95 | 75-125 | 1 | 20 | |
| Thallium | mg/kg | ND | 116 | 116 | 102 | 102 | 89 | 88 | 75-125 | 0 | 20 | |
| Zinc | mg/kg | 206 | 116 | 116 | 303 | 311 | 84 | 91 | 75-125 | 2 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296392

| | |
|-------------------------------------|------------------------------------|
| QC Batch: 573121 | Analysis Method: EPA 8082 |
| QC Batch Method: EPA 3546 | Analysis Description: 8082 GCS PCB |
| Associated Lab Samples: 60296392003 | |

METHOD BLANK: 2350569 Matrix: Solid
Associated Lab Samples: 60296392003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-------------------------|-------|--------------|-----------------|----------------|------------|
| PCB-1016 (Aroclor 1016) | ug/kg | ND | 32.3 | 03/13/19 14:41 | |
| PCB-1221 (Aroclor 1221) | ug/kg | ND | 32.3 | 03/13/19 14:41 | |
| PCB-1232 (Aroclor 1232) | ug/kg | ND | 32.3 | 03/13/19 14:41 | |
| PCB-1242 (Aroclor 1242) | ug/kg | ND | 32.3 | 03/13/19 14:41 | |
| PCB-1248 (Aroclor 1248) | ug/kg | ND | 32.3 | 03/13/19 14:41 | |
| PCB-1254 (Aroclor 1254) | ug/kg | ND | 32.3 | 03/13/19 14:41 | |
| PCB-1260 (Aroclor 1260) | ug/kg | ND | 32.3 | 03/13/19 14:41 | |
| Decachlorobiphenyl (S) | % | 90 | 28-143 | 03/13/19 14:41 | |

LABORATORY CONTROL SAMPLE: 2350570

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-------------------------|-------|-------------|------------|-----------|--------------|------------|
| PCB-1016 (Aroclor 1016) | ug/kg | 164 | 173 | 106 | 65-132 | |
| PCB-1260 (Aroclor 1260) | ug/kg | 164 | 166 | 101 | 65-138 | |
| Decachlorobiphenyl (S) | % | | | 92 | 28-143 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2350571 2350572

| Parameter | Units | 60296147001 | | MSD | | MS | | MSD | | % Rec Limits | RPD | Max RPD | Qual |
|-------------------------|-------|-------------|-------------|-------------|--------|--------|-------|-------|--------|--------------|-----|---------|------|
| | | Result | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec | | | | | |
| PCB-1016 (Aroclor 1016) | ug/kg | ND | 6170 | 6940 | 4290 | 4370 | 69 | 63 | 19-145 | 2 | 47 | | |
| PCB-1260 (Aroclor 1260) | ug/kg | ND | 6170 | 6940 | 5370 | 4900 | 87 | 71 | 11-153 | 9 | 35 | | |
| Decachlorobiphenyl (S) | % | | | | | | 71 | 60 | 28-143 | | | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296392

| | |
|-------------------------------------|--------------------------------------|
| QC Batch: 573082 | Analysis Method: TNRCC 1005 |
| QC Batch Method: TNRCC 1005 | Analysis Description: TX1005 TPH GCS |
| Associated Lab Samples: 60296392003 | |

METHOD BLANK: 2350355 Matrix: Solid
Associated Lab Samples: 60296392003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---------------------|-------|--------------|-----------------|----------------|------------|
| TPH (>C12-C28) | mg/kg | ND | 20.0 | 03/13/19 02:51 | |
| TPH (>C28-C35) | mg/kg | ND | 20.0 | 03/13/19 02:51 | |
| TPH (C06-C12) | mg/kg | ND | 20.0 | 03/13/19 02:51 | |
| TPH Total (C06-C35) | mg/kg | ND | 20.0 | 03/13/19 02:51 | |
| 1-Chlorooctane (S) | % | 97 | 70-130 | 03/13/19 02:51 | |
| o-Terphenyl (S) | % | 99 | 70-130 | 03/13/19 02:51 | |

LABORATORY CONTROL SAMPLE & LCSD: 2350356 2350357

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| TPH Total (C06-C35) | mg/kg | 2500 | 2440 | 2360 | 97 | 94 | 75-125 | 3 | 20 | |
| 1-Chlorooctane (S) | % | | | | 140 | 132 | 70-130 | | | S1 |
| o-Terphenyl (S) | % | | | | 119 | 110 | 70-130 | | | |

MATRIX SPIKE SAMPLE: 2350358

| Parameter | Units | 2098137003 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---------------------|-------|-------------------|-------------|-----------|----------|--------------|------------|
| TPH Total (C06-C35) | mg/kg | 15.3U | 2590 | 2740 | 106 | 11-187 | |
| 1-Chlorooctane (S) | % | | | | 148 | 70-130 | S1 |
| o-Terphenyl (S) | % | | | | 123 | 70-130 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS-FINTUBE

Pace Project No.: 60296392

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

S1 Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS-FINTUBE

Pace Project No.: 60296392

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------------|-----------------|----------|-------------------|------------------|
| 60296392003 | SSD05-POST:1' | EPA 3546 | 573121 | EPA 8082 | 573305 |
| 60296392003 | SSD05-POST:1' | TNRCC 1005 | 573082 | TNRCC 1005 | 573375 |
| 60296392001 | SSE15-POST:1' | EPA 3050 | 573408 | EPA 6010 | 573601 |
| 60296392002 | SSD15-POST:1' | EPA 3050 | 573408 | EPA 6010 | 573601 |
| 60296392004 | SB05-SS01-POST:1' | EPA 3050 | 573796 | EPA 6010 | 573931 |
| 60296392005 | DUPLICATE #7 | EPA 3050 | 573796 | EPA 6010 | 573931 |
| 60296392001 | SSE15-POST:1' | EPA 7471 | 573198 | EPA 7471 | 573260 |
| 60296392002 | SSD15-POST:1' | EPA 7471 | 573198 | EPA 7471 | 573260 |
| 60296392004 | SB05-SS01-POST:1' | EPA 7471 | 573802 | EPA 7471 | 573876 |
| 60296392005 | DUPLICATE #7 | EPA 7471 | 573802 | EPA 7471 | 573876 |
| 60296392001 | SSE15-POST:1' | ASTM D2974 | 573319 | | |
| 60296392002 | SSD15-POST:1' | ASTM D2974 | 573319 | | |
| 60296392003 | SSD05-POST:1' | ASTM D2974 | 573319 | | |
| 60296392004 | SB05-SS01-POST:1' | ASTM D2974 | 573319 | | |
| 60296392005 | DUPLICATE #7 | ASTM D2974 | 573319 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO# : 60296392

60296392

Client Name: Environmental Works

Courier: FedEx UPS VIA Clay PEX ECI Pace Xroads Client Other

Tracking #: 745969207689 Pace Shipping Label Used? Yes No

Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags Foam None Other

Thermometer Used: T-296 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 1.6 Corr. Factor 1.0 Corrected 0.6

Date and initials of person examining contents: (3/12/19) [Signature]

Temperature should be above freezing to 6°C

| | | |
|--|--|--|
| Chain of Custody present: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Chain of Custody relinquished: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples arrived within holding time: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Short Hold Time analyses (<72hr): | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Rush Turn Around Time requested: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | <u>2 Day</u> |
| Sufficient volume: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Correct containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Pace containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers intact: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | <u>Frozen @ 0945 3/12/19</u> |
| Filtered volume received for dissolved tests? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Sample labels match COC: Date / time / ID / analyses | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples contain multiple phases? Matrix: <u>SL</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | List sample IDs, volumes, lot #'s of preservative and the date/time added. |
| Cyanide water sample checks: | | |
| Lead acetate strip turns dark? (Record only) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Potassium iodide test strip turns blue/purple? (Preserve) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Trip Blank present: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Headspace in VOA vials (>6mm): | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Samples from USDA Regulated Area: State: <u>OK</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Additional labels attached to 5035A / TX1005 vials in the field? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1
 2270415

Section A
 Required Client Information:
 Company: Environmental Works Tulsa Office
 Address: 9529 E. 55th Place
 Suite A, Tulsa, OK 74145
 Email To: environmentalworks.com
 Phone: 918-979-4499 Fax:
 Requested Due Date/TAT: 48-hr TAT

Section B
 Required Project Information:
 Report To: Moore, Anthony
 Copy To:
 Purchase Order No.:
 Project Name: Swans FinTube
 Project Number:
 Attention:
 Company Name:
 Address:
 Pace Quote Reference:
 Pace Project Manager: angie.brown@pace-labs.com
 Site Location
 STATE: OK

Section C
 Invoice Information:
 REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

| ITEM # | Section D Required Client Information | Matrix Codes MATRIX / CODE | SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE | SAMPLE TYPE (G=GRAB C=COMP) (see valid codes to left) | COLLECTED | | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ O ₃ Methanol Other | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|--------|--|-------------------------------|--|--|-----------------|--------------------|---------------------------|-----------------|--|-----------------------------------|-------------------------|----------------------------|
| | | | | | COMPOSITE START | COMPOSITE END/GRAB | | | | | | |
| 1 | | Drinking Water DW | SS915-Post:1' | SLC | 3/11/19 17:51 | 3/11/19 17:50 | | 1 X | | | | 001 |
| 2 | | Water WT | SSD15-Post:1' | SLC | 3/11/19 17:19 | 3/11/19 17:24 | | 1 X | | | | 002 |
| 3 | | Waste Water WW | SSD05-Post:1' | SLC | 3/11/19 11:52 | 3/11/19 12:00 | | 5 X | | | | 003 |
| 4 | | Product P | SSD05-Post:1' | SLC | 3/11/19 14:54 | 3/11/19 15:00 | | 1 X | | | | 004 |
| 5 | | Soil/Solid SL | Duplicate #7 | SLC | 3/11/19 14:54 | 3/11/19 15:00 | | 1 X | | | | 005 |
| 6 | | Oil OL | | | | | | | | | | |
| 7 | | Wipe WP | | | | | | | | | | |
| 8 | | Air AR | | | | | | | | | | |
| 9 | | Tissue TS | | | | | | | | | | |
| 10 | | Other OT | | | | | | | | | | |
| 11 | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | |

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION: Angie Moore EWI DATE: 3/11/19 TIME: 20:30

ACCEPTED BY / AFFILIATION: Angie Moore / EWI DATE: 3/12/19 TIME: 0550

SAMPLE CONDITIONS

Received on Ice (Y/N): 1.6 Y

Custody Sealed Cooler (Y/N): 1.6 Y

Samples Intact (Y/N): 1.6 Y

Temp in °C: 1.6

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: VENZIE WILSON
 SIGNATURE of SAMPLER: Venzie Wilson
 DATE Signed (MM/DD/YYYY): 03/11/19

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.



| | | | |
|--|---|--|---|
| Section A Required Client Information: | Section B Required Project Information: | Section C Invoice Information: | REGULATORY AGENCY |
| Company: Environmental Mgmt. & Consulting | Report To: Michael Anthony | Attention: 2270525 | <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____ |
| Address: 4521 E. 55th Place | Copy To: _____ | Company Name: _____ | |
| Client: Suite A, Tulsa, OK 74119 | Purchase Order No.: _____ | Address: _____ | Site Location STATE: OK |
| Email To: Orin@environmentalmgt.com | Project Name: Quartz - Fintube | Pace Quote Reference: _____ | Requested Analysis Filtered (Y/N) |
| Phone: 918-874-4444 Fax: _____ | Project Number: _____ | Pace Project Manager: Angie Brown | |
| Requested Due Date/TAT: 48-hr TAT | | Pace Profile #: 1235a | |

| ITEM # | Section D Required Client Information | Matrix Codes MATRIX / CODE | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED | | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Analysis Test ↑ | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS |
|---|--|--|-----------------------------|-----------------|--------------------|---------------------------|-----------------|---------------|-----------------|---------------------------|------|------|-----------------------|
| | | | | COMPOSITE START | COMPOSITE END/GRAB | | | | | | | | |
| 1 | SAMPLE ID (A-Z, 0-9 / - / :) | Drinking Water Water Waste Water Product Soil/Solid Oil Wipe Air Tissue Other | SLC | 3/11/19 17:51 | 3/11/19 17:56 | | 1 X | | | | | | |
| 2 | | | SLC | 3/11/19 17:17 | 3/11/19 17:24 | | 1 X | | | | | | |
| 3 | | | SLC | 3/11/19 11:52 | 3/11/19 12:00 | | 5 X | | | | | | |
| 4 | | | SLC | 3/11/19 14:54 | 3/11/19 15:00 | | 1 X | | | | | | |
| 5 | | | SLC | 3/11/19 14:54 | 3/11/19 15:00 | | 1 X | | | | | | |
| 6 | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | |
| ADDITIONAL COMMENTS | | | | | | | | | | | | | Temp in °C |
| Relinquished by / Affiliation: Regina Miller gwi | | | | | | | | | | | | | Received on Ice (Y/N) |
| Date: 3/11/19 20:30 | | | | | | | | | | | | | Sealed Cooler (Y/N) |
| Signature of Sampler: Regina Miller | | | | | | | | | | | | | Custody (Y/N) |
| Print Name of Sampler: Kenzie Wilson | | | | | | | | | | | | | Samples Intact (Y/N) |
| Signature of Sampler: Kenzie Wilson | | | | | | | | | | | | | |

ORIGINAL

Page 30 of 30

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days. F-ALL-C-010-rev.00, 09Nov2017

March 15, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS - FINTUBE
Pace Project No.: 60296533

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on March 13, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS - FINTUBE

Pace Project No.: 60296533

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Certification Number: 10090

Arkansas Drinking Water

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS - FINTUBE

Pace Project No.: 60296533

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|-------------------|--------|----------------|----------------|
| 60296533001 | SSD14-POST:1' | Solid | 03/12/19 11:55 | 03/13/19 08:30 |
| 60296533003 | TRIP BLANK / HOLD | Solid | 03/12/19 08:00 | 03/13/19 08:30 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS - FINTUBE
Pace Project No.: 60296533

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|---------------|------------|----------|-------------------|------------|
| 60296533001 | SSD14-POST:1' | TNRCC 1005 | AJM | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS - FINTUBE

Pace Project No.: 60296533

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|-------|--------------|----------------|------------|
| 60296533001 | SSD14-POST:1' | | | | | |
| TNRCC 1005 | TPH (C06-C12) | 23.9 | mg/kg | 21.8 | 03/13/19 15:21 | |
| TNRCC 1005 | TPH (>C12-C28) | 2150 | mg/kg | 21.8 | 03/13/19 15:21 | |
| TNRCC 1005 | TPH (>C28-C35) | 704 | mg/kg | 21.8 | 03/13/19 15:21 | |
| TNRCC 1005 | TPH Total (C06-C35) | 2870 | mg/kg | 21.8 | 03/13/19 15:21 | M1, R1 |
| ASTM D2974 | Percent Moisture | 19.6 | % | 0.50 | 03/13/19 17:00 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS - FINTUBE

Pace Project No.: 60296533

Method: TNRCC 1005

Description: TNRCC 1005 TPH

Client: Environmental Works_OK office

Date: March 15, 2019

General Information:

1 sample was analyzed for TNRCC 1005. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with TNRCC 1005 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 573401

S1: Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

- LCS (Lab ID: 2351819)
 - 1-Chlorooctane (S)
- LCSD (Lab ID: 2351820)
 - 1-Chlorooctane (S)

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 2351821)
 - 1-Chlorooctane (S)
 - o-Terphenyl (S)
- MSD (Lab ID: 2351930)
 - 1-Chlorooctane (S)
 - o-Terphenyl (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS - FINTUBE

Pace Project No.: 60296533

Method: TNRCC 1005

Description: TNRCC 1005 TPH

Client: Environmental Works_OK office

Date: March 15, 2019

QC Batch: 573401

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60296533001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2351821)
 - TPH Total (C06-C35)
- MSD (Lab ID: 2351930)
 - TPH Total (C06-C35)

R1: RPD value was outside control limits.

- MSD (Lab ID: 2351930)
 - TPH Total (C06-C35)

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS - FINTUBE

Pace Project No.: 60296533

Sample: SSD14-POST:1' Lab ID: 60296533001 Collected: 03/12/19 11:55 Received: 03/13/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|-----------|--------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | 23.9 | mg/kg | 21.8 | 1 | 03/13/19 12:30 | 03/13/19 15:21 | | |
| TPH (>C12-C28) | 2150 | mg/kg | 21.8 | 1 | 03/13/19 12:30 | 03/13/19 15:21 | | |
| TPH (>C28-C35) | 704 | mg/kg | 21.8 | 1 | 03/13/19 12:30 | 03/13/19 15:21 | | |
| TPH Total (C06-C35) | 2870 | mg/kg | 21.8 | 1 | 03/13/19 12:30 | 03/13/19 15:21 | | M1, R1 |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 128 | % | 70-130 | 1 | 03/13/19 12:30 | 03/13/19 15:21 | 84-15-1 | |
| 1-Chlorooctane (S) | 113 | % | 70-130 | 1 | 03/13/19 12:30 | 03/13/19 15:21 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 19.6 | % | 0.50 | 1 | | 03/13/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS - FINTUBE
Pace Project No.: 60296533

QC Batch: 573401 Analysis Method: TNRCC 1005
QC Batch Method: TNRCC 1005 Analysis Description: TX1005 TPH GCS
Associated Lab Samples: 60296533001

METHOD BLANK: 2351818 Matrix: Solid
Associated Lab Samples: 60296533001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---------------------|-------|--------------|-----------------|----------------|------------|
| TPH (>C12-C28) | mg/kg | ND | 20.0 | 03/13/19 14:44 | |
| TPH (>C28-C35) | mg/kg | ND | 20.0 | 03/13/19 14:44 | |
| TPH (C06-C12) | mg/kg | ND | 20.0 | 03/13/19 14:44 | |
| TPH Total (C06-C35) | mg/kg | ND | 20.0 | 03/13/19 14:44 | |
| 1-Chlorooctane (S) | % | 112 | 70-130 | 03/13/19 14:44 | |
| o-Terphenyl (S) | % | 111 | 70-130 | 03/13/19 14:44 | |

LABORATORY CONTROL SAMPLE & LCSD: 2351819 2351820

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| TPH Total (C06-C35) | mg/kg | 2500 | 2530 | 2600 | 101 | 104 | 75-125 | 3 | 20 | |
| 1-Chlorooctane (S) | % | | | | 144 | 147 | 70-130 | | | S1 |
| o-Terphenyl (S) | % | | | | 121 | 120 | 70-130 | | | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2351821 2351930

| Parameter | Units | 60296533001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---------------------|-------|--------------------|----------------|-----------------|-----------|------------|----------|-----------|--------------|-----|---------|-------|
| TPH Total (C06-C35) | mg/kg | 2870 | 2750 | 2940 | 14800 | 8800 | 432 | 202 | 11-187 | 51 | 43 | M1,R1 |
| 1-Chlorooctane (S) | % | | | | | | 0 | 0 | 70-130 | | | S4 |
| o-Terphenyl (S) | % | | | | | | 0 | 0 | 70-130 | | | S4 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS - FINTUBE

Pace Project No.: 60296533

QC Batch: 573442

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60296533001

METHOD BLANK: 2351923

Matrix: Solid

Associated Lab Samples: 60296533001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------------|-------|--------------|-----------------|----------------|------------|
| Percent Moisture | % | ND | 0.50 | 03/13/19 17:00 | |

SAMPLE DUPLICATE: 2351924

| Parameter | Units | 60296534001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------|-------|--------------------|------------|-----|---------|------------|
| Percent Moisture | % | 13.9 | 12.9 | 7 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS - FINTUBE

Pace Project No.: 60296533

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

S1 Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS - FINTUBE

Pace Project No.: 60296533

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---------------|------------------|------------------------|-----------------|--------------------------|-------------------------|
| 60296533001 | SSD14-POST:1' | TNRCC 1005 | 573401 | TNRCC 1005 | 573459 |
| 60296533001 | SSD14-POST:1' | ASTM D2974 | 573442 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO#: 60296533



60296533

Client Name:

Environmental Works

Courier: FedEx [X] UPS [] VIA [] Clay [] PEX [] ECI [] Pace [] Xroads [] Client [] Other []

Tracking #: 724919090843 Pace Shipping Label Used? Yes [] No [X]

Custody Seal on Cooler/Box Present: Yes [X] No [] Seals intact: Yes [X] No []

Packing Material: Bubble Wrap [] Bubble Bags [X] Foam [X] None [] Other [X] Ziploc

Thermometer Used: Y100 Type of Ice: Wet [X] Blue [] None []

Cooler Temperature (°C): As-read 2.9 Corr. Factor 10.4 Corrected 3.3

Date and initials of person examining contents: 3-13-19 [initials]

Temperature should be above freezing to 6°C

Table with 3 columns: Question, Yes/No/N/A checkboxes, and handwritten notes. Rows include Chain of Custody, Short Hold Time, Rush Turn Around Time, Sufficent volume, Correct containers used, Pace containers used, Containers intact, Unpreserved soils, Filtered volume, Sample labels match COC, Samples contain multiple phases, Containers requiring pH preservation, Cyanide water sample checks, Trip Blank present, Headspace in VOA vials, Samples from USDA Regulated Area, and Additional labels attached.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

March 20, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS-FINTUBE
Pace Project No.: 60296859

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on March 15, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Revised report_rev1

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS-FINTUBE

Pace Project No.: 60296859

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Certification Number: 10090

Arkansas Drinking Water

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS-FINTUBE

Pace Project No.: 60296859

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|-------------------|--------|----------------|----------------|
| 60296859001 | SSC15-POST: 1 | Solid | 03/14/19 17:30 | 03/15/19 08:10 |
| 60296859002 | TRIP BLANK / HOLD | Water | 03/14/19 08:00 | 03/15/19 08:10 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS-FINTUBE

Pace Project No.: 60296859

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|---------------|------------|----------|-------------------|------------|
| 60296859001 | SSC15-POST: 1 | EPA 6010 | EMR | 12 | PASI-K |
| | | EPA 7471 | LRS | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS-FINTUBE

Pace Project No.: 60296859

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|-------|--------------|----------------|------------|
| 60296859001 | SSC15-POST: 1 | | | | | |
| EPA 6010 | Arsenic | 7.7 | mg/kg | 1.1 | 03/19/19 10:51 | |
| EPA 6010 | Beryllium | 0.99 | mg/kg | 0.11 | 03/19/19 10:51 | |
| EPA 6010 | Chromium | 20.0 | mg/kg | 0.53 | 03/19/19 10:51 | |
| EPA 6010 | Copper | 12.2 | mg/kg | 2.1 | 03/19/19 10:51 | |
| EPA 6010 | Lead | 14.7 | mg/kg | 0.53 | 03/19/19 10:51 | |
| EPA 6010 | Nickel | 22.0 | mg/kg | 0.53 | 03/19/19 10:51 | |
| EPA 6010 | Zinc | 43.7 | mg/kg | 10.6 | 03/19/19 10:51 | |
| ASTM D2974 | Percent Moisture | 15.8 | % | 0.50 | 03/18/19 17:00 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60296859

Method: EPA 6010

Description: 6010 MET ICP Red. Interference

Client: Environmental Works_OK office

Date: March 20, 2019

General Information:

1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 574058

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60296859001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2354906)
 - Antimony
- MSD (Lab ID: 2354907)
 - Antimony

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60296859

Method: EPA 7471

Description: 7471 Mercury

Client: Environmental Works_OK office

Date: March 20, 2019

General Information:

1 sample was analyzed for EPA 7471. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7471 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60296859

Sample: SSC15-POST: 1 **Lab ID: 60296859001** Collected: 03/14/19 17:30 Received: 03/15/19 08:10 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------------------|---------|---|--------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP Red. Interference | | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | |
| Antimony | ND | mg/kg | 1.1 | 1 | 03/18/19 12:52 | 03/19/19 10:51 | 7440-36-0 | M1 |
| Arsenic | 7.7 | mg/kg | 1.1 | 1 | 03/18/19 12:52 | 03/19/19 10:51 | 7440-38-2 | |
| Beryllium | 0.99 | mg/kg | 0.11 | 1 | 03/18/19 12:52 | 03/19/19 10:51 | 7440-41-7 | |
| Cadmium | ND | mg/kg | 0.53 | 1 | 03/18/19 12:52 | 03/19/19 10:51 | 7440-43-9 | |
| Chromium | 20.0 | mg/kg | 0.53 | 1 | 03/18/19 12:52 | 03/19/19 10:51 | 7440-47-3 | |
| Copper | 12.2 | mg/kg | 2.1 | 1 | 03/18/19 12:52 | 03/19/19 10:51 | 7440-50-8 | |
| Lead | 14.7 | mg/kg | 0.53 | 1 | 03/18/19 12:52 | 03/19/19 10:51 | 7439-92-1 | |
| Nickel | 22.0 | mg/kg | 0.53 | 1 | 03/18/19 12:52 | 03/19/19 10:51 | 7440-02-0 | |
| Selenium | ND | mg/kg | 1.6 | 1 | 03/18/19 12:52 | 03/19/19 10:51 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.74 | 1 | 03/18/19 12:52 | 03/19/19 10:51 | 7440-22-4 | |
| Thallium | ND | mg/kg | 2.1 | 1 | 03/18/19 12:52 | 03/19/19 10:51 | 7440-28-0 | |
| Zinc | 43.7 | mg/kg | 10.6 | 1 | 03/18/19 12:52 | 03/19/19 10:51 | 7440-66-6 | |
| 7471 Mercury | | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | |
| Mercury | ND | mg/kg | 0.052 | 1 | 03/18/19 00:00 | 03/19/19 14:10 | 7439-97-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 15.8 | % | 0.50 | 1 | | 03/18/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296859

QC Batch: 574059

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Associated Lab Samples: 60296859001

METHOD BLANK: 2354908

Matrix: Solid

Associated Lab Samples: 60296859001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Mercury | mg/kg | ND | 0.050 | 03/19/19 14:05 | |

LABORATORY CONTROL SAMPLE: 2354909

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | mg/kg | 0.5 | 0.52 | 103 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2354910 2354911

| Parameter | Units | 60296859001 | | 2354911 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-----------------|-----------|-----------------|----------|-----------|--------------|-----|---------|------|
| | | MS Result | MSD Spike Conc. | MS Result | MSD Spike Conc. | | | | | | |
| Mercury | mg/kg | ND | 0.56 | 0.60 | 0.49 | 104 | 110 | 75-125 | 8 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296859

QC Batch: 574058

Analysis Method: EPA 6010

QC Batch Method: EPA 3050

Analysis Description: 6010 MET

Associated Lab Samples: 60296859001

METHOD BLANK: 2354904

Matrix: Solid

Associated Lab Samples: 60296859001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Antimony | mg/kg | ND | 1.0 | 03/19/19 10:46 | |
| Arsenic | mg/kg | ND | 1.0 | 03/19/19 10:46 | |
| Beryllium | mg/kg | ND | 0.10 | 03/19/19 10:46 | |
| Cadmium | mg/kg | ND | 0.50 | 03/19/19 10:46 | |
| Chromium | mg/kg | ND | 0.50 | 03/19/19 10:46 | |
| Copper | mg/kg | ND | 2.0 | 03/19/19 10:46 | |
| Lead | mg/kg | ND | 0.50 | 03/19/19 10:46 | |
| Nickel | mg/kg | ND | 0.50 | 03/19/19 10:46 | |
| Selenium | mg/kg | ND | 1.5 | 03/19/19 10:46 | |
| Silver | mg/kg | ND | 0.70 | 03/19/19 10:46 | |
| Thallium | mg/kg | ND | 2.0 | 03/19/19 10:46 | |
| Zinc | mg/kg | ND | 10.0 | 03/19/19 10:46 | |

LABORATORY CONTROL SAMPLE: 2354905

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | mg/kg | 100 | 93.3 | 93 | 80-120 | |
| Arsenic | mg/kg | 100 | 87.8 | 88 | 80-120 | |
| Beryllium | mg/kg | 100 | 95.0 | 95 | 80-120 | |
| Cadmium | mg/kg | 100 | 92.1 | 92 | 80-120 | |
| Chromium | mg/kg | 100 | 97.2 | 97 | 80-120 | |
| Copper | mg/kg | 100 | 97.3 | 97 | 80-120 | |
| Lead | mg/kg | 100 | 96.1 | 96 | 80-120 | |
| Nickel | mg/kg | 100 | 96.2 | 96 | 80-120 | |
| Selenium | mg/kg | 100 | 87.0 | 87 | 80-120 | |
| Silver | mg/kg | 50 | 47.4 | 95 | 80-120 | |
| Thallium | mg/kg | 100 | 95.8 | 96 | 80-120 | |
| Zinc | mg/kg | 100 | 92.8 | 93 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2354906 2354907

| Parameter | Units | 60296859001 | | 2354907 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual | |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|----|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | | | | |
| Antimony | mg/kg | ND | 114 | 108 | 42.4 | 41.3 | 37 | 38 | 75-125 | 3 | 20 | M1 |
| Arsenic | mg/kg | 7.7 | 114 | 108 | 107 | 101 | 87 | 86 | 75-125 | 6 | 20 | |
| Beryllium | mg/kg | 0.99 | 114 | 108 | 111 | 103 | 96 | 95 | 75-125 | 7 | 20 | |
| Cadmium | mg/kg | ND | 114 | 108 | 103 | 95.8 | 90 | 89 | 75-125 | 8 | 20 | |
| Chromium | mg/kg | 20.0 | 114 | 108 | 137 | 132 | 103 | 103 | 75-125 | 4 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296859

| Parameter | Units | 2354906 | | 2354907 | | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | Qual |
|-----------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|------------|------|
| | | 60296859001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | | | | | | | |
| Copper | mg/kg | 12.2 | 114 | 108 | 124 | 119 | 98 | 99 | 75-125 | 4 | 20 | |
| Lead | mg/kg | 14.7 | 114 | 108 | 120 | 112 | 92 | 90 | 75-125 | 7 | 20 | |
| Nickel | mg/kg | 22.0 | 114 | 108 | 129 | 121 | 93 | 91 | 75-125 | 6 | 20 | |
| Selenium | mg/kg | ND | 114 | 108 | 97.1 | 90.7 | 84 | 83 | 75-125 | 7 | 20 | |
| Silver | mg/kg | ND | 57.1 | 54 | 53.1 | 50.6 | 93 | 94 | 75-125 | 5 | 20 | |
| Thallium | mg/kg | ND | 114 | 108 | 101 | 93.3 | 88 | 86 | 75-125 | 8 | 20 | |
| Zinc | mg/kg | 43.7 | 114 | 108 | 154 | 146 | 96 | 95 | 75-125 | 5 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296859

QC Batch: 574091

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60296859001

METHOD BLANK: 2354952

Matrix: Solid

Associated Lab Samples: 60296859001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------------|-------|--------------|-----------------|----------------|------------|
| Percent Moisture | % | ND | 0.50 | 03/18/19 17:00 | |

SAMPLE DUPLICATE: 2354953

| Parameter | Units | 60296693001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------|-------|--------------------|------------|-----|---------|------------|
| Percent Moisture | % | 7.6 | 7.6 | 1 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS-FINTUBE

Pace Project No.: 60296859

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS-FINTUBE

Pace Project No.: 60296859

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|---------------|-----------------|----------|-------------------|------------------|
| 60296859001 | SSC15-POST: 1 | EPA 3050 | 574058 | EPA 6010 | 574348 |
| 60296859001 | SSC15-POST: 1 | EPA 7471 | 574059 | EPA 7471 | 574205 |
| 60296859001 | SSC15-POST: 1 | ASTM D2974 | 574091 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO#: 60296859



Client Name: Env. Works

Courier: FedEx [x] UPS [] VIA [] Clay [] PEX [] ECI [] Pace [] Xroads [] Client [] Other []

Tracking #: 786040645125 Pace Shipping Label Used? Yes [x] No []

Custody Seal on Cooler/Box Present: Yes [x] No [] Seals intact: Yes [x] No []

Packing Material: Bubble Wrap [] Bubble Bags [x] Foam [] None [] Other []

Thermometer Used: T-298 Type of Ice: Wet [x] Blue [] None []

Cooler Temperature (°C): As-read 5.0 Corr. Factor -0.1 Corrected 4.9

Date and initials of person examining contents: 3/13/19

Temperature should be above freezing to 6°C

Table with 2 columns: Question and Answer. Rows include Chain of Custody present, Chain of Custody relinquished, Samples arrived within holding time, Short Hold Time analyses (<72hr), Rush Turn Around Time requested (2-Day), Sufficient volume, Correct containers used, Pace containers used, Containers intact, Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?, Filtered volume received for dissolved tests?, Sample labels match COC: Date / time / ID / analyses, Samples contain multiple phases? Matrix: wt/sl, Containers requiring pH preservation in compliance?, Cyanide water sample checks, Trip Blank present, Headspace in VOA vials (>6mm), Samples from USDA Regulated Area: State: OK, Additional labels attached to 5035A / TX1005 vials in the field?

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date:

March 20, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS-FINTUBE
Pace Project No.: 60296983

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on March 16, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS-FINTUBE

Pace Project No.: 60296983

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Certification Number: 10090

Arkansas Drinking Water

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS-FINTUBE

Pace Project No.: 60296983

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|-----------------|--------|----------------|----------------|
| 60296983001 | SSE15-POST:1-5' | Solid | 03/15/19 16:42 | 03/16/19 08:50 |
| 60296983002 | SSE16- POST:1' | Solid | 03/15/19 12:26 | 03/16/19 08:50 |
| 60296983003 | DUPLICATE 08 | Solid | 03/15/19 12:26 | 03/16/19 08:50 |
| 60296983004 | DUPLICATE 09 | Solid | 03/15/19 12:26 | 03/16/19 08:50 |
| 60296983005 | SSC12-POST-1:1' | Solid | 03/15/19 15:56 | 03/16/19 08:50 |
| 60296983006 | SSC12-POST-2:1' | Solid | 03/15/19 15:56 | 03/16/19 08:50 |
| 60296983007 | SSC12-POST-3:1' | Solid | 03/15/19 15:56 | 03/16/19 08:50 |
| 60296983008 | DUPLICATE 10 | Solid | 03/15/19 15:56 | 03/16/19 08:50 |
| 60296983009 | TRIP BLANK/hold | Water | 03/15/19 08:00 | 03/16/19 08:50 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS-FINTUBE

Pace Project No.: 60296983

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------------|------------|----------|-------------------|------------|
| 60296983001 | SSE15-POST:1-5' | EPA 6010 | EMR | 12 | PASI-K |
| | | EPA 7471 | LRS | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60296983002 | SSE16- POST:1' | TNRCC 1005 | AJM | 6 | PASI-K |
| | | EPA 8270 | JMT | 23 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60296983003 | DUPLICATE 08 | EPA 8270 | JMT | 23 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60296983004 | DUPLICATE 09 | TNRCC 1005 | AJM | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60296983005 | SSC12-POST-1:1' | EPA 8082 | AJB1 | 8 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60296983006 | SSC12-POST-2:1' | EPA 8082 | AJB1 | 8 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60296983007 | SSC12-POST-3:1' | EPA 8082 | AJB1 | 8 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60296983008 | DUPLICATE 10 | EPA 8082 | AJB1 | 8 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS-FINTUBE

Pace Project No.: 60296983

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|-------|--------------|----------------|------------|
| 60296983001 | SSE15-POST:1-5' | | | | | |
| EPA 6010 | Arsenic | 9.4 | mg/kg | 1.2 | 03/19/19 10:57 | |
| EPA 6010 | Beryllium | 1.3 | mg/kg | 0.12 | 03/19/19 10:57 | |
| EPA 6010 | Cadmium | 1.0 | mg/kg | 0.59 | 03/19/19 10:57 | |
| EPA 6010 | Chromium | 24.7 | mg/kg | 0.59 | 03/19/19 10:57 | |
| EPA 6010 | Copper | 18.6 | mg/kg | 2.4 | 03/19/19 10:57 | |
| EPA 6010 | Lead | 43.0 | mg/kg | 0.59 | 03/19/19 10:57 | |
| EPA 6010 | Nickel | 45.6 | mg/kg | 0.59 | 03/19/19 10:57 | |
| EPA 6010 | Selenium | 2.2 | mg/kg | 1.8 | 03/19/19 10:57 | |
| EPA 6010 | Zinc | 283 | mg/kg | 11.8 | 03/19/19 10:57 | |
| ASTM D2974 | Percent Moisture | 15.4 | % | 0.50 | 03/18/19 17:00 | |
| 60296983002 | SSE16- POST:1' | | | | | |
| ASTM D2974 | Percent Moisture | 12.5 | % | 0.50 | 03/18/19 17:00 | |
| 60296983003 | DUPLICATE 08 | | | | | |
| ASTM D2974 | Percent Moisture | 15.1 | % | 0.50 | 03/18/19 17:00 | |
| 60296983004 | DUPLICATE 09 | | | | | |
| ASTM D2974 | Percent Moisture | 14.4 | % | 0.50 | 03/18/19 17:00 | |
| 60296983005 | SSC12-POST-1:1' | | | | | |
| EPA 8082 | PCB-1260 (Aroclor 1260) | 233 | ug/kg | 38.7 | 03/19/19 13:20 | M1,R1 |
| ASTM D2974 | Percent Moisture | 15.1 | % | 0.50 | 03/18/19 17:00 | |
| 60296983006 | SSC12-POST-2:1' | | | | | |
| EPA 8082 | PCB-1260 (Aroclor 1260) | 223 | ug/kg | 38.9 | 03/19/19 14:14 | |
| ASTM D2974 | Percent Moisture | 17.2 | % | 0.50 | 03/18/19 17:00 | |
| 60296983007 | SSC12-POST-3:1' | | | | | |
| EPA 8082 | PCB-1260 (Aroclor 1260) | 1170 | ug/kg | 182 | 03/19/19 17:49 | |
| ASTM D2974 | Percent Moisture | 11.2 | % | 0.50 | 03/18/19 17:00 | |
| 60296983008 | DUPLICATE 10 | | | | | |
| EPA 8082 | PCB-1260 (Aroclor 1260) | 261 | ug/kg | 38.9 | 03/19/19 18:07 | |
| ASTM D2974 | Percent Moisture | 17.5 | % | 0.50 | 03/18/19 17:00 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60296983

Method: EPA 8082

Description: 8082 GCS PCB SW

Client: Environmental Works_OK office

Date: March 20, 2019

General Information:

4 samples were analyzed for EPA 8082. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 574116

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- SSC12-POST-3:1' (Lab ID: 60296983007)
- Decachlorobiphenyl (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 574116

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60296983005

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2355037)
 - PCB-1016 (Aroclor 1016)
 - PCB-1260 (Aroclor 1260)

R1: RPD value was outside control limits.

- MSD (Lab ID: 2355038)
 - PCB-1260 (Aroclor 1260)

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60296983

Method: TNRCC 1005

Description: TNRCC 1005 TPH

Client: Environmental Works_OK office

Date: March 20, 2019

General Information:

2 samples were analyzed for TNRCC 1005. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with TNRCC 1005 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 574323

S1: Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

- LCS (Lab ID: 2355535)
 - 1-Chlorooctane (S)
- LCSD (Lab ID: 2355536)
 - 1-Chlorooctane (S)
- MS (Lab ID: 2355537)
 - 1-Chlorooctane (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60296983

Method: EPA 6010

Description: 6010 MET ICP Red. Interference

Client: Environmental Works_OK office

Date: March 20, 2019

General Information:

1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 574058

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60296859001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2354906)
 - Antimony
- MSD (Lab ID: 2354907)
 - Antimony

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60296983

Method: EPA 7471

Description: 7471 Mercury

Client: Environmental Works_OK office

Date: March 20, 2019

General Information:

1 sample was analyzed for EPA 7471. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7471 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60296983

Method: EPA 8270

Description: 8270 MSSV Semivolatiles

Client: Environmental Works_OK office

Date: March 20, 2019

General Information:

2 samples were analyzed for EPA 8270. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

QC Batch: 574100

P3: Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

- DUPLICATE 08 (Lab ID: 60296983003)
- SSE16- POST:1' (Lab ID: 60296983002)

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 574100

L1: Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

- LCS (Lab ID: 2354983)
- Fluoranthene

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60296983

Method: EPA 8270

Description: 8270 MSSV Semivolatiles

Client: Environmental Works_OK office

Date: March 20, 2019

QC Batch: 574100

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60296983002,60296983003

R1: RPD value was outside control limits.

- MSD (Lab ID: 2354987)
 - 1-Methylnaphthalene

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60296983

Sample: SSE15-POST:1-5' Lab ID: 60296983001 Collected: 03/15/19 16:42 Received: 03/16/19 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP Red. Interference | | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | |
| Antimony | ND | mg/kg | 1.2 | 1 | 03/18/19 12:52 | 03/19/19 10:57 | 7440-36-0 | |
| Arsenic | 9.4 | mg/kg | 1.2 | 1 | 03/18/19 12:52 | 03/19/19 10:57 | 7440-38-2 | |
| Beryllium | 1.3 | mg/kg | 0.12 | 1 | 03/18/19 12:52 | 03/19/19 10:57 | 7440-41-7 | |
| Cadmium | 1.0 | mg/kg | 0.59 | 1 | 03/18/19 12:52 | 03/19/19 10:57 | 7440-43-9 | |
| Chromium | 24.7 | mg/kg | 0.59 | 1 | 03/18/19 12:52 | 03/19/19 10:57 | 7440-47-3 | |
| Copper | 18.6 | mg/kg | 2.4 | 1 | 03/18/19 12:52 | 03/19/19 10:57 | 7440-50-8 | |
| Lead | 43.0 | mg/kg | 0.59 | 1 | 03/18/19 12:52 | 03/19/19 10:57 | 7439-92-1 | |
| Nickel | 45.6 | mg/kg | 0.59 | 1 | 03/18/19 12:52 | 03/19/19 10:57 | 7440-02-0 | |
| Selenium | 2.2 | mg/kg | 1.8 | 1 | 03/18/19 12:52 | 03/19/19 10:57 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.83 | 1 | 03/18/19 12:52 | 03/19/19 10:57 | 7440-22-4 | |
| Thallium | ND | mg/kg | 2.4 | 1 | 03/18/19 12:52 | 03/19/19 10:57 | 7440-28-0 | |
| Zinc | 283 | mg/kg | 11.8 | 1 | 03/18/19 12:52 | 03/19/19 10:57 | 7440-66-6 | |
| 7471 Mercury | | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | |
| Mercury | ND | mg/kg | 0.059 | 1 | 03/18/19 00:00 | 03/19/19 14:16 | 7439-97-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 15.4 | % | 0.50 | 1 | | 03/18/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60296983

Sample: SSE16- POST:1' Lab ID: 60296983002 Collected: 03/15/19 12:26 Received: 03/16/19 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|--------------------------------|-------------|--|--------------|----|----------------|----------------|------------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 20.9 | 1 | 03/19/19 12:15 | 03/20/19 00:31 | | |
| TPH (>C12-C28) | ND | mg/kg | 20.9 | 1 | 03/19/19 12:15 | 03/20/19 00:31 | | |
| TPH (>C28-C35) | ND | mg/kg | 20.9 | 1 | 03/19/19 12:15 | 03/20/19 00:31 | | |
| TPH Total (C06-C35) | ND | mg/kg | 20.9 | 1 | 03/19/19 12:15 | 03/20/19 00:31 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 104 | % | 70-130 | 1 | 03/19/19 12:15 | 03/20/19 00:31 | 84-15-1 | |
| 1-Chlorooctane (S) | 104 | % | 70-130 | 1 | 03/19/19 12:15 | 03/20/19 00:31 | 3386-33-2 | |
| 8270 MSSV Semivolatiles | | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | |
| Acenaphthene | ND | mg/kg | 0.74 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 83-32-9 | |
| Anthracene | ND | mg/kg | 0.74 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 120-12-7 | |
| Benzo(a)anthracene | ND | mg/kg | 0.74 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 56-55-3 | |
| Benzo(a)pyrene | ND | mg/kg | 0.74 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | mg/kg | 0.74 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 205-99-2 | |
| Benzo(k)fluoranthene | ND | mg/kg | 0.74 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 207-08-9 | |
| 2-Chloronaphthalene | ND | mg/kg | 0.74 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 91-58-7 | |
| Chrysene | ND | mg/kg | 0.74 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | mg/kg | 0.74 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 53-70-3 | |
| 7,12-Dimethylbenz(a)anthracene | ND | mg/kg | 3.8 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 57-97-6 | |
| Fluoranthene | ND | mg/kg | 0.74 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 206-44-0 | L1 |
| Fluorene | ND | mg/kg | 0.74 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 86-73-7 | |
| Indeno(1,2,3-cd)pyrene | ND | mg/kg | 0.74 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 193-39-5 | |
| 1-Methylnaphthalene | ND | mg/kg | 0.74 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 90-12-0 | |
| 2-Methylnaphthalene | ND | mg/kg | 0.74 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 91-57-6 | |
| Naphthalene | ND | mg/kg | 0.74 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 91-20-3 | |
| Pyrene | ND | mg/kg | 0.74 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 129-00-0 | |
| Surrogates | | | | | | | | |
| Nitrobenzene-d5 (S) | 76 | % | 35-119 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 4165-60-0 | P3 |
| 2-Fluorobiphenyl (S) | 77 | % | 55-110 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 321-60-8 | |
| Terphenyl-d14 (S) | 79 | % | 45-114 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 1718-51-0 | |
| Phenol-d6 (S) | 76 | % | 48-110 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 13127-88-3 | |
| 2-Fluorophenol (S) | 77 | % | 46-108 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 71 | % | 35-119 | 1 | 03/18/19 23:00 | 03/19/19 10:09 | 118-79-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 12.5 | % | 0.50 | 1 | | 03/18/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60296983

Sample: DUPLICATE 08 **Lab ID: 60296983003** Collected: 03/15/19 12:26 Received: 03/16/19 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|--------------------------------|-------------|---|--------------|----|----------------|----------------|------------|------|
| 8270 MSSV Semivolatiles | | Analytical Method: EPA 8270 Preparation Method: EPA 3546 | | | | | | |
| Acenaphthene | ND | mg/kg | 0.77 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 83-32-9 | |
| Anthracene | ND | mg/kg | 0.77 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 120-12-7 | |
| Benzo(a)anthracene | ND | mg/kg | 0.77 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 56-55-3 | |
| Benzo(a)pyrene | ND | mg/kg | 0.77 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 50-32-8 | |
| Benzo(b)fluoranthene | ND | mg/kg | 0.77 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 205-99-2 | |
| Benzo(k)fluoranthene | ND | mg/kg | 0.77 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 207-08-9 | |
| 2-Chloronaphthalene | ND | mg/kg | 0.77 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 91-58-7 | |
| Chrysene | ND | mg/kg | 0.77 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 218-01-9 | |
| Dibenz(a,h)anthracene | ND | mg/kg | 0.77 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 53-70-3 | |
| 7,12-Dimethylbenz(a)anthracene | ND | mg/kg | 3.9 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 57-97-6 | |
| Fluoranthene | ND | mg/kg | 0.77 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 206-44-0 | L1 |
| Fluorene | ND | mg/kg | 0.77 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 86-73-7 | |
| Indeno(1,2,3-cd)pyrene | ND | mg/kg | 0.77 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 193-39-5 | |
| 1-Methylnaphthalene | ND | mg/kg | 0.77 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 90-12-0 | R1 |
| 2-Methylnaphthalene | ND | mg/kg | 0.77 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 91-57-6 | |
| Naphthalene | ND | mg/kg | 0.77 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 91-20-3 | |
| Pyrene | ND | mg/kg | 0.77 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 129-00-0 | |
| Surrogates | | | | | | | | |
| Nitrobenzene-d5 (S) | 72 | % | 35-119 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 4165-60-0 | P3 |
| 2-Fluorobiphenyl (S) | 78 | % | 55-110 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 321-60-8 | |
| Terphenyl-d14 (S) | 82 | % | 45-114 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 1718-51-0 | |
| Phenol-d6 (S) | 77 | % | 48-110 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 13127-88-3 | |
| 2-Fluorophenol (S) | 82 | % | 46-108 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 367-12-4 | |
| 2,4,6-Tribromophenol (S) | 75 | % | 35-119 | 1 | 03/18/19 23:00 | 03/19/19 10:31 | 118-79-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 15.1 | % | 0.50 | 1 | | 03/18/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60296983

Sample: DUPLICATE 09 **Lab ID: 60296983004** Collected: 03/15/19 12:26 Received: 03/16/19 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 23.3 | 1 | 03/19/19 12:15 | 03/20/19 01:44 | | |
| TPH (>C12-C28) | ND | mg/kg | 23.3 | 1 | 03/19/19 12:15 | 03/20/19 01:44 | | |
| TPH (>C28-C35) | ND | mg/kg | 23.3 | 1 | 03/19/19 12:15 | 03/20/19 01:44 | | |
| TPH Total (C06-C35) | ND | mg/kg | 23.3 | 1 | 03/19/19 12:15 | 03/20/19 01:44 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 117 | % | 70-130 | 1 | 03/19/19 12:15 | 03/20/19 01:44 | 84-15-1 | |
| 1-Chlorooctane (S) | 116 | % | 70-130 | 1 | 03/19/19 12:15 | 03/20/19 01:44 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 14.4 | % | 0.50 | 1 | | 03/18/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60296983

Sample: SSC12-POST-1:1' Lab ID: 60296983005 Collected: 03/15/19 15:56 Received: 03/16/19 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|------------|-------|
| 8082 GCS PCB SW | | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 38.7 | 1 | 03/18/19 23:00 | 03/19/19 13:20 | 12674-11-2 | M1 |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 38.7 | 1 | 03/18/19 23:00 | 03/19/19 13:20 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 38.7 | 1 | 03/18/19 23:00 | 03/19/19 13:20 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 38.7 | 1 | 03/18/19 23:00 | 03/19/19 13:20 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 38.7 | 1 | 03/18/19 23:00 | 03/19/19 13:20 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 38.7 | 1 | 03/18/19 23:00 | 03/19/19 13:20 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | 233 | ug/kg | 38.7 | 1 | 03/18/19 23:00 | 03/19/19 13:20 | 11096-82-5 | M1,R1 |
| Surrogates | | | | | | | | |
| Decachlorobiphenyl (S) | 78 | % | 28-143 | 1 | 03/18/19 23:00 | 03/19/19 13:20 | 2051-24-3 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 15.1 | % | 0.50 | 1 | | 03/18/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60296983

Sample: SSC12-POST-2:1' Lab ID: 60296983006 Collected: 03/15/19 15:56 Received: 03/16/19 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|------------|------|
| 8082 GCS PCB SW | | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 38.9 | 1 | 03/18/19 23:00 | 03/19/19 14:14 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 38.9 | 1 | 03/18/19 23:00 | 03/19/19 14:14 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 38.9 | 1 | 03/18/19 23:00 | 03/19/19 14:14 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 38.9 | 1 | 03/18/19 23:00 | 03/19/19 14:14 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 38.9 | 1 | 03/18/19 23:00 | 03/19/19 14:14 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 38.9 | 1 | 03/18/19 23:00 | 03/19/19 14:14 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | 223 | ug/kg | 38.9 | 1 | 03/18/19 23:00 | 03/19/19 14:14 | 11096-82-5 | |
| Surrogates | | | | | | | | |
| Decachlorobiphenyl (S) | 76 | % | 28-143 | 1 | 03/18/19 23:00 | 03/19/19 14:14 | 2051-24-3 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 17.2 | % | 0.50 | 1 | | 03/18/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60296983

Sample: SSC12-POST-3:1' Lab ID: 60296983007 Collected: 03/15/19 15:56 Received: 03/16/19 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|------------|------|
| 8082 GCS PCB SW | | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 182 | 5 | 03/18/19 23:00 | 03/19/19 17:49 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 182 | 5 | 03/18/19 23:00 | 03/19/19 17:49 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 182 | 5 | 03/18/19 23:00 | 03/19/19 17:49 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 182 | 5 | 03/18/19 23:00 | 03/19/19 17:49 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 182 | 5 | 03/18/19 23:00 | 03/19/19 17:49 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 182 | 5 | 03/18/19 23:00 | 03/19/19 17:49 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | 1170 | ug/kg | 182 | 5 | 03/18/19 23:00 | 03/19/19 17:49 | 11096-82-5 | |
| Surrogates | | | | | | | | |
| Decachlorobiphenyl (S) | 0 | % | 28-143 | 5 | 03/18/19 23:00 | 03/19/19 17:49 | 2051-24-3 | S4 |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 11.2 | % | 0.50 | 1 | | 03/18/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60296983

Sample: DUPLICATE 10 **Lab ID: 60296983008** Collected: 03/15/19 15:56 Received: 03/16/19 08:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|------------|------|
| 8082 GCS PCB SW | | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 38.9 | 1 | 03/18/19 23:00 | 03/19/19 18:07 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 38.9 | 1 | 03/18/19 23:00 | 03/19/19 18:07 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 38.9 | 1 | 03/18/19 23:00 | 03/19/19 18:07 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 38.9 | 1 | 03/18/19 23:00 | 03/19/19 18:07 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 38.9 | 1 | 03/18/19 23:00 | 03/19/19 18:07 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 38.9 | 1 | 03/18/19 23:00 | 03/19/19 18:07 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | 261 | ug/kg | 38.9 | 1 | 03/18/19 23:00 | 03/19/19 18:07 | 11096-82-5 | |
| Surrogates | | | | | | | | |
| Decachlorobiphenyl (S) | 66 | % | 28-143 | 1 | 03/18/19 23:00 | 03/19/19 18:07 | 2051-24-3 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 17.5 | % | 0.50 | 1 | | 03/18/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296983

QC Batch: 574059

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Associated Lab Samples: 60296983001

METHOD BLANK: 2354908

Matrix: Solid

Associated Lab Samples: 60296983001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Mercury | mg/kg | ND | 0.050 | 03/19/19 14:05 | |

LABORATORY CONTROL SAMPLE: 2354909

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | mg/kg | 0.5 | 0.52 | 103 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2354910 2354911

| Parameter | Units | 60296859001 | | 2354910 | | 2354911 | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-----------------|-----------|-----------------|-----------|------------|--------------|--------|---------|------|
| | | MS Result | MSD Spike Conc. | MS Result | MSD Spike Conc. | MS Result | MSD Result | | | | |
| Mercury | mg/kg | ND | 0.56 | 0.49 | 0.60 | 0.55 | 104 | 110 | 75-125 | 8 | 20 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296983

QC Batch: 574058

Analysis Method: EPA 6010

QC Batch Method: EPA 3050

Analysis Description: 6010 MET

Associated Lab Samples: 60296983001

METHOD BLANK: 2354904

Matrix: Solid

Associated Lab Samples: 60296983001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Antimony | mg/kg | ND | 1.0 | 03/19/19 10:46 | |
| Arsenic | mg/kg | ND | 1.0 | 03/19/19 10:46 | |
| Beryllium | mg/kg | ND | 0.10 | 03/19/19 10:46 | |
| Cadmium | mg/kg | ND | 0.50 | 03/19/19 10:46 | |
| Chromium | mg/kg | ND | 0.50 | 03/19/19 10:46 | |
| Copper | mg/kg | ND | 2.0 | 03/19/19 10:46 | |
| Lead | mg/kg | ND | 0.50 | 03/19/19 10:46 | |
| Nickel | mg/kg | ND | 0.50 | 03/19/19 10:46 | |
| Selenium | mg/kg | ND | 1.5 | 03/19/19 10:46 | |
| Silver | mg/kg | ND | 0.70 | 03/19/19 10:46 | |
| Thallium | mg/kg | ND | 2.0 | 03/19/19 10:46 | |
| Zinc | mg/kg | ND | 10.0 | 03/19/19 10:46 | |

LABORATORY CONTROL SAMPLE: 2354905

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | mg/kg | 100 | 93.3 | 93 | 80-120 | |
| Arsenic | mg/kg | 100 | 87.8 | 88 | 80-120 | |
| Beryllium | mg/kg | 100 | 95.0 | 95 | 80-120 | |
| Cadmium | mg/kg | 100 | 92.1 | 92 | 80-120 | |
| Chromium | mg/kg | 100 | 97.2 | 97 | 80-120 | |
| Copper | mg/kg | 100 | 97.3 | 97 | 80-120 | |
| Lead | mg/kg | 100 | 96.1 | 96 | 80-120 | |
| Nickel | mg/kg | 100 | 96.2 | 96 | 80-120 | |
| Selenium | mg/kg | 100 | 87.0 | 87 | 80-120 | |
| Silver | mg/kg | 50 | 47.4 | 95 | 80-120 | |
| Thallium | mg/kg | 100 | 95.8 | 96 | 80-120 | |
| Zinc | mg/kg | 100 | 92.8 | 93 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2354906 2354907

| Parameter | Units | 60296859001 | | 2354907 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual | |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|----|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | | | | |
| Antimony | mg/kg | ND | 114 | 108 | 42.4 | 41.3 | 37 | 38 | 75-125 | 3 | 20 | M1 |
| Arsenic | mg/kg | 7.7 | 114 | 108 | 107 | 101 | 87 | 86 | 75-125 | 6 | 20 | |
| Beryllium | mg/kg | 0.99 | 114 | 108 | 111 | 103 | 96 | 95 | 75-125 | 7 | 20 | |
| Cadmium | mg/kg | ND | 114 | 108 | 103 | 95.8 | 90 | 89 | 75-125 | 8 | 20 | |
| Chromium | mg/kg | 20.0 | 114 | 108 | 137 | 132 | 103 | 103 | 75-125 | 4 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296983

| Parameter | Units | 2354906 | | 2354907 | | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | Qual |
|-----------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|------------|------|
| | | 60296859001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | | | | | | | |
| Copper | mg/kg | 12.2 | 114 | 108 | 124 | 119 | 98 | 99 | 75-125 | 4 | 20 | |
| Lead | mg/kg | 14.7 | 114 | 108 | 120 | 112 | 92 | 90 | 75-125 | 7 | 20 | |
| Nickel | mg/kg | 22.0 | 114 | 108 | 129 | 121 | 93 | 91 | 75-125 | 6 | 20 | |
| Selenium | mg/kg | ND | 114 | 108 | 97.1 | 90.7 | 84 | 83 | 75-125 | 7 | 20 | |
| Silver | mg/kg | ND | 57.1 | 54 | 53.1 | 50.6 | 93 | 94 | 75-125 | 5 | 20 | |
| Thallium | mg/kg | ND | 114 | 108 | 101 | 93.3 | 88 | 86 | 75-125 | 8 | 20 | |
| Zinc | mg/kg | 43.7 | 114 | 108 | 154 | 146 | 96 | 95 | 75-125 | 5 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296983

QC Batch: 574116 Analysis Method: EPA 8082
 QC Batch Method: EPA 3546 Analysis Description: 8082 GCS PCB
 Associated Lab Samples: 60296983005, 60296983006, 60296983007, 60296983008

METHOD BLANK: 2355035 Matrix: Solid
 Associated Lab Samples: 60296983005, 60296983006, 60296983007, 60296983008

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-------------------------|-------|--------------|-----------------|----------------|------------|
| PCB-1016 (Aroclor 1016) | ug/kg | ND | 32.2 | 03/19/19 11:33 | |
| PCB-1221 (Aroclor 1221) | ug/kg | ND | 32.2 | 03/19/19 11:33 | |
| PCB-1232 (Aroclor 1232) | ug/kg | ND | 32.2 | 03/19/19 11:33 | |
| PCB-1242 (Aroclor 1242) | ug/kg | ND | 32.2 | 03/19/19 11:33 | |
| PCB-1248 (Aroclor 1248) | ug/kg | ND | 32.2 | 03/19/19 11:33 | |
| PCB-1254 (Aroclor 1254) | ug/kg | ND | 32.2 | 03/19/19 11:33 | |
| PCB-1260 (Aroclor 1260) | ug/kg | ND | 32.2 | 03/19/19 11:33 | |
| Decachlorobiphenyl (S) | % | 81 | 28-143 | 03/19/19 11:33 | |

LABORATORY CONTROL SAMPLE: 2355036

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-------------------------|-------|-------------|------------|-----------|--------------|------------|
| PCB-1016 (Aroclor 1016) | ug/kg | 166 | 164 | 99 | 65-132 | |
| PCB-1260 (Aroclor 1260) | ug/kg | 166 | 149 | 90 | 65-138 | |
| Decachlorobiphenyl (S) | % | | | 79 | 28-143 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2355037 2355038

| Parameter | Units | 60296983005 | | 2355037 | | 2355038 | | % Rec | MSD | % Rec | MSD | % Rec | Limits | RPD | Max RPD | Qual |
|-------------------------|-------|----------------|-----------------|-----------|------------|-----------|------------|-------|--------|-------|-----|--------|--------|-----|---------|------|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS Result | MSD Result | | | | | | | | | |
| PCB-1016 (Aroclor 1016) | ug/kg | ND | 194 | 192 | 334 | 219 | 172 | 114 | 19-145 | 42 | 47 | M1 | | | | |
| PCB-1260 (Aroclor 1260) | ug/kg | 233 | 194 | 192 | 739 | 348 | 260 | 60 | 11-153 | 72 | 35 | M1, R1 | | | | |
| Decachlorobiphenyl (S) | % | | | | | | 74 | 76 | 28-143 | | | | | | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296983

| | | | |
|-------------------------|--------------------------|-----------------------|---------------------------|
| QC Batch: | 574100 | Analysis Method: | EPA 8270 |
| QC Batch Method: | EPA 3546 | Analysis Description: | 8270 Solid MSSV Microwave |
| Associated Lab Samples: | 60296983002, 60296983003 | | |

METHOD BLANK: 2354982 Matrix: Solid

Associated Lab Samples: 60296983002, 60296983003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|--------------------------------|-------|--------------|-----------------|----------------|------------|
| 1-Methylnaphthalene | mg/kg | ND | 0.33 | 03/19/19 09:26 | |
| 2-Chloronaphthalene | mg/kg | ND | 0.33 | 03/19/19 09:26 | |
| 2-Methylnaphthalene | mg/kg | ND | 0.33 | 03/19/19 09:26 | |
| 7,12-Dimethylbenz(a)anthracene | mg/kg | ND | 1.6 | 03/19/19 09:26 | |
| Acenaphthene | mg/kg | ND | 0.33 | 03/19/19 09:26 | |
| Anthracene | mg/kg | ND | 0.33 | 03/19/19 09:26 | |
| Benzo(a)anthracene | mg/kg | ND | 0.33 | 03/19/19 09:26 | |
| Benzo(a)pyrene | mg/kg | ND | 0.33 | 03/19/19 09:26 | |
| Benzo(b)fluoranthene | mg/kg | ND | 0.33 | 03/19/19 09:26 | |
| Benzo(k)fluoranthene | mg/kg | ND | 0.33 | 03/19/19 09:26 | |
| Chrysene | mg/kg | ND | 0.33 | 03/19/19 09:26 | |
| Dibenz(a,h)anthracene | mg/kg | ND | 0.33 | 03/19/19 09:26 | |
| Fluoranthene | mg/kg | ND | 0.33 | 03/19/19 09:26 | |
| Fluorene | mg/kg | ND | 0.33 | 03/19/19 09:26 | |
| Indeno(1,2,3-cd)pyrene | mg/kg | ND | 0.33 | 03/19/19 09:26 | |
| Naphthalene | mg/kg | ND | 0.33 | 03/19/19 09:26 | |
| Pyrene | mg/kg | ND | 0.33 | 03/19/19 09:26 | |
| 2,4,6-Tribromophenol (S) | % | 82 | 35-119 | 03/19/19 09:26 | |
| 2-Fluorobiphenyl (S) | % | 82 | 55-110 | 03/19/19 09:26 | |
| 2-Fluorophenol (S) | % | 82 | 46-108 | 03/19/19 09:26 | |
| Nitrobenzene-d5 (S) | % | 75 | 35-119 | 03/19/19 09:26 | |
| Phenol-d6 (S) | % | 77 | 48-110 | 03/19/19 09:26 | |
| Terphenyl-d14 (S) | % | 74 | 45-114 | 03/19/19 09:26 | |

LABORATORY CONTROL SAMPLE: 2354983

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------------------|-------|-------------|------------|-----------|--------------|------------|
| 1-Methylnaphthalene | mg/kg | 1.6 | 1.2 | 73 | 61-90 | |
| 2-Chloronaphthalene | mg/kg | 1.6 | 1.5 | 91 | 59-95 | |
| 2-Methylnaphthalene | mg/kg | 1.6 | 1.2 | 71 | 60-93 | |
| Acenaphthene | mg/kg | 1.6 | 1.4 | 84 | 60-95 | |
| Anthracene | mg/kg | 1.6 | 1.4 | 87 | 61-97 | |
| Benzo(a)anthracene | mg/kg | 1.6 | 1.3 | 80 | 62-98 | |
| Benzo(a)pyrene | mg/kg | 1.6 | 1.3 | 78 | 60-99 | |
| Benzo(b)fluoranthene | mg/kg | 1.6 | 1.4 | 88 | 61-100 | |
| Benzo(k)fluoranthene | mg/kg | 1.6 | 1.3 | 77 | 58-100 | |
| Chrysene | mg/kg | 1.6 | 1.5 | 91 | 61-98 | |
| Dibenz(a,h)anthracene | mg/kg | 1.6 | 1.3 | 78 | 60-99 | |
| Fluoranthene | mg/kg | 1.6 | 1.7 | 101 | 61-100 L1 | |
| Fluorene | mg/kg | 1.6 | 1.5 | 91 | 60-98 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296983

LABORATORY CONTROL SAMPLE: 2354983

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|--------------------------|-------|-------------|------------|-----------|--------------|------------|
| Indeno(1,2,3-cd)pyrene | mg/kg | 1.6 | 1.3 | 77 | 60-99 | |
| Naphthalene | mg/kg | 1.6 | 1.3 | 79 | 58-94 | |
| Pyrene | mg/kg | 1.6 | 1.6 | 97 | 61-100 | |
| 2,4,6-Tribromophenol (S) | % | | | 100 | 35-119 | |
| 2-Fluorobiphenyl (S) | % | | | 91 | 55-110 | |
| 2-Fluorophenol (S) | % | | | 80 | 46-108 | |
| Nitrobenzene-d5 (S) | % | | | 77 | 35-119 | |
| Phenol-d6 (S) | % | | | 83 | 48-110 | |
| Terphenyl-d14 (S) | % | | | 96 | 45-114 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2354984 2354985

| Parameter | Units | 60296983002 | | MS | MSD | MS | | MSD | | % Rec Limits | RPD | Max RPD | Qual |
|--------------------------|-------|-------------|-------------|-------------|--------|--------|-------|-------|--------|--------------|-----|---------|------|
| | | Result | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec | | | | | |
| 1-Methylnaphthalene | mg/kg | ND | 1.9 | 1.8 | 1.4 | 1.4 | 71 | 75 | 35-128 | 2 | 26 | | |
| 2-Chloronaphthalene | mg/kg | ND | 1.9 | 1.8 | 1.6 | 1.4 | 87 | 73 | 43-104 | 19 | 30 | | |
| 2-Methylnaphthalene | mg/kg | ND | 1.9 | 1.8 | 1.3 | 1.3 | 68 | 73 | 37-111 | 4 | 36 | | |
| Acenaphthene | mg/kg | ND | 1.9 | 1.8 | 1.6 | 1.5 | 85 | 83 | 42-104 | 5 | 36 | | |
| Anthracene | mg/kg | ND | 1.9 | 1.8 | 1.5 | 1.5 | 77 | 83 | 37-111 | 4 | 52 | | |
| Benzo(a)anthracene | mg/kg | ND | 1.9 | 1.8 | 1.6 | 1.4 | 80 | 76 | 32-113 | 8 | 73 | | |
| Benzo(a)pyrene | mg/kg | ND | 1.9 | 1.8 | 1.7 | 1.6 | 88 | 86 | 29-112 | 5 | 60 | | |
| Benzo(b)fluoranthene | mg/kg | ND | 1.9 | 1.8 | 1.8 | 1.7 | 91 | 89 | 19-121 | 4 | 69 | | |
| Benzo(k)fluoranthene | mg/kg | ND | 1.9 | 1.8 | 1.7 | 1.6 | 91 | 86 | 33-115 | 8 | 56 | | |
| Chrysene | mg/kg | ND | 1.9 | 1.8 | 1.7 | 1.5 | 86 | 78 | 31-113 | 12 | 72 | | |
| Dibenz(a,h)anthracene | mg/kg | ND | 1.9 | 1.8 | 1.4 | 1.3 | 73 | 71 | 29-115 | 6 | 41 | | |
| Fluoranthene | mg/kg | ND | 1.9 | 1.8 | 1.4 | 1.3 | 72 | 68 | 34-113 | 8 | 88 | | |
| Fluorene | mg/kg | ND | 1.9 | 1.8 | 1.8 | 1.4 | 95 | 77 | 37-111 | 23 | 40 | | |
| Indeno(1,2,3-cd)pyrene | mg/kg | ND | 1.9 | 1.8 | 1.4 | 1.3 | 72 | 70 | 27-113 | 6 | 46 | | |
| Naphthalene | mg/kg | ND | 1.9 | 1.8 | 1.4 | 1.4 | 74 | 74 | 39-106 | 4 | 34 | | |
| Pyrene | mg/kg | ND | 1.9 | 1.8 | 1.7 | 1.6 | 86 | 82 | 24-129 | 7 | 82 | | |
| 2,4,6-Tribromophenol (S) | % | | | | | | 97 | 73 | 35-119 | | 46 | | |
| 2-Fluorobiphenyl (S) | % | | | | | | 96 | 82 | 55-110 | | 44 | | |
| 2-Fluorophenol (S) | % | | | | | | 80 | 72 | 46-108 | | 36 | | |
| Nitrobenzene-d5 (S) | % | | | | | | 68 | 69 | 35-119 | | 43 | P3 | |
| Phenol-d6 (S) | % | | | | | | 78 | 69 | 48-110 | | 38 | | |
| Terphenyl-d14 (S) | % | | | | | | 90 | 79 | 45-114 | | 50 | | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2354986 2354987

| Parameter | Units | 60296983003 | | MS | MSD | MS | | MSD | | % Rec Limits | RPD | Max RPD | Qual |
|---------------------|-------|-------------|-------------|-------------|--------|--------|-------|-------|--------|--------------|-----|---------|------|
| | | Result | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec | | | | | |
| 1-Methylnaphthalene | mg/kg | ND | 1.9 | 1.9 | 1.1 | 1.5 | 57 | 78 | 35-128 | 31 | 26 | R1 | |
| 2-Chloronaphthalene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.7 | 74 | 86 | 43-104 | 15 | 30 | | |
| 2-Methylnaphthalene | mg/kg | ND | 1.9 | 1.9 | 1.1 | 1.6 | 58 | 83 | 37-111 | 35 | 36 | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296983

| Parameter | Units | 2354986 | | 2354987 | | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | RPD | Qual |
|--------------------------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|------------|-----|------|
| | | 60296983003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | | | | | | | | |
| Acenaphthene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.7 | 74 | 86 | 42-104 | 16 | 36 | | |
| Anthracene | mg/kg | ND | 1.9 | 1.9 | 1.5 | 1.7 | 79 | 90 | 37-111 | 13 | 52 | | |
| Benzo(a)anthracene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.6 | 71 | 83 | 32-113 | 16 | 73 | | |
| Benzo(a)pyrene | mg/kg | ND | 1.9 | 1.9 | 1.5 | 1.6 | 76 | 84 | 29-112 | 11 | 60 | | |
| Benzo(b)fluoranthene | mg/kg | ND | 1.9 | 1.9 | 1.8 | 1.8 | 92 | 92 | 19-121 | 1 | 69 | | |
| Benzo(k)fluoranthene | mg/kg | ND | 1.9 | 1.9 | 1.5 | 1.6 | 78 | 84 | 33-115 | 9 | 56 | | |
| Chrysene | mg/kg | ND | 1.9 | 1.9 | 1.5 | 1.7 | 75 | 87 | 31-113 | 15 | 72 | | |
| Dibenz(a,h)anthracene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.4 | 72 | 71 | 29-115 | 1 | 41 | | |
| Fluoranthene | mg/kg | ND | 1.9 | 1.9 | 1.5 | 1.8 | 79 | 92 | 34-113 | 16 | 88 | | |
| Fluorene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.6 | 71 | 85 | 37-111 | 18 | 40 | | |
| Indeno(1,2,3-cd)pyrene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.4 | 72 | 70 | 27-113 | 2 | 46 | | |
| Naphthalene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 1.9 | 71 | 98 | 39-106 | 33 | 34 | | |
| Pyrene | mg/kg | ND | 1.9 | 1.9 | 1.4 | 2.1 | 74 | 109 | 24-129 | 38 | 82 | | |
| 2,4,6-Tribromophenol (S) | % | | | | | | 67 | 82 | 35-119 | | 46 | | |
| 2-Fluorobiphenyl (S) | % | | | | | | 64 | 82 | 55-110 | | 44 | | |
| 2-Fluorophenol (S) | % | | | | | | 62 | 78 | 46-108 | | 36 | | |
| Nitrobenzene-d5 (S) | % | | | | | | 65 | 69 | 35-119 | | 43 | P3 | |
| Phenol-d6 (S) | % | | | | | | 64 | 76 | 48-110 | | 38 | | |
| Terphenyl-d14 (S) | % | | | | | | 72 | 94 | 45-114 | | 50 | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296983

| | |
|--|--------------------------------------|
| QC Batch: 574323 | Analysis Method: TNRCC 1005 |
| QC Batch Method: TNRCC 1005 | Analysis Description: TX1005 TPH GCS |
| Associated Lab Samples: 60296983002, 60296983004 | |

METHOD BLANK: 2355534 Matrix: Solid

Associated Lab Samples: 60296983002, 60296983004

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---------------------|-------|--------------|-----------------|----------------|------------|
| TPH (>C12-C28) | mg/kg | ND | 20.0 | 03/19/19 21:26 | |
| TPH (>C28-C35) | mg/kg | ND | 20.0 | 03/19/19 21:26 | |
| TPH (C06-C12) | mg/kg | ND | 20.0 | 03/19/19 21:26 | |
| TPH Total (C06-C35) | mg/kg | ND | 20.0 | 03/19/19 21:26 | |
| 1-Chlorooctane (S) | % | 114 | 70-130 | 03/19/19 21:26 | |
| o-Terphenyl (S) | % | 114 | 70-130 | 03/19/19 21:26 | |

LABORATORY CONTROL SAMPLE & LCSD: 2355535

| Parameter | Units | 2355536 | | | | | | | Max RPD | Qualifiers |
|---------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| | | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | | |
| TPH Total (C06-C35) | mg/kg | 2500 | 2360 | 2310 | 95 | 93 | 75-125 | 2 | 20 | |
| 1-Chlorooctane (S) | % | | | | 139 | 133 | 70-130 | | | S1 |
| o-Terphenyl (S) | % | | | | 119 | 113 | 70-130 | | | |

MATRIX SPIKE SAMPLE: 2355537

| Parameter | Units | 60296983002 | | | | | | Qualifiers |
|---------------------|-------|-------------|-------------|-----------|----------|--------------|----|------------|
| | | Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | | |
| TPH Total (C06-C35) | mg/kg | ND | 2550 | 2610 | 103 | 11-187 | | |
| 1-Chlorooctane (S) | % | | | | 152 | 70-130 | S1 | |
| o-Terphenyl (S) | % | | | | 126 | 70-130 | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60296983

QC Batch: 574091

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60296983001, 60296983002, 60296983003, 60296983004, 60296983005, 60296983006, 60296983007, 60296983008

METHOD BLANK: 2354952

Matrix: Solid

Associated Lab Samples: 60296983001, 60296983002, 60296983003, 60296983004, 60296983005, 60296983006, 60296983007, 60296983008

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------------|-------|--------------|-----------------|----------------|------------|
| Percent Moisture | % | ND | 0.50 | 03/18/19 17:00 | |

SAMPLE DUPLICATE: 2354953

| Parameter | Units | 60296693001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------|-------|--------------------|------------|-----|---------|------------|
| Percent Moisture | % | 7.6 | 7.6 | 1 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS-FINTUBE

Pace Project No.: 60296983

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

P3 Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

R1 RPD value was outside control limits.

S1 Surrogate recovery outside laboratory control limits (confirmed by re-analysis).

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS-FINTUBE

Pace Project No.: 60296983

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------------|-----------------|----------|-------------------|------------------|
| 60296983005 | SSC12-POST-1:1' | EPA 3546 | 574116 | EPA 8082 | 574287 |
| 60296983006 | SSC12-POST-2:1' | EPA 3546 | 574116 | EPA 8082 | 574287 |
| 60296983007 | SSC12-POST-3:1' | EPA 3546 | 574116 | EPA 8082 | 574287 |
| 60296983008 | DUPLICATE 10 | EPA 3546 | 574116 | EPA 8082 | 574287 |
| 60296983002 | SSE16- POST:1' | TNRCC 1005 | 574323 | TNRCC 1005 | 574477 |
| 60296983004 | DUPLICATE 09 | TNRCC 1005 | 574323 | TNRCC 1005 | 574477 |
| 60296983001 | SSE15-POST:1-5' | EPA 3050 | 574058 | EPA 6010 | 574348 |
| 60296983001 | SSE15-POST:1-5' | EPA 7471 | 574059 | EPA 7471 | 574205 |
| 60296983002 | SSE16- POST:1' | EPA 3546 | 574100 | EPA 8270 | 574327 |
| 60296983003 | DUPLICATE 08 | EPA 3546 | 574100 | EPA 8270 | 574327 |
| 60296983001 | SSE15-POST:1-5' | ASTM D2974 | 574091 | | |
| 60296983002 | SSE16- POST:1' | ASTM D2974 | 574091 | | |
| 60296983003 | DUPLICATE 08 | ASTM D2974 | 574091 | | |
| 60296983004 | DUPLICATE 09 | ASTM D2974 | 574091 | | |
| 60296983005 | SSC12-POST-1:1' | ASTM D2974 | 574091 | | |
| 60296983006 | SSC12-POST-2:1' | ASTM D2974 | 574091 | | |
| 60296983007 | SSC12-POST-3:1' | ASTM D2974 | 574091 | | |
| 60296983008 | DUPLICATE 10 | ASTM D2974 | 574091 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO# : 60296983

60296983

Client Name: Environmental Works

Courier: FedEx UPS VIA Clay PEX ECI Pace Xroads Client Other

Tracking #: 724974090957 Pace Shipping Label Used? Yes No

Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags Foam None Other

Thermometer Used: T-296 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 3.5 Corr. Factor -2.0 Corrected 2.5

Date and initials of person examining contents: 3/16/19

Temperature should be above freezing to 6°C

| | | |
|--|--|--|
| Chain of Custody present: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Chain of Custody relinquished: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples arrived within holding time: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Short Hold Time analyses (<72hr): | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Rush Turn Around Time requested: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | <u>2 Day</u> |
| Sufficient volume: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Correct containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Pace containers used: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers intact: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | <u>Frozen @ 100 3/16/19</u> |
| Filtered volume received for dissolved tests? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Sample labels match COC: Date / time / ID / analyses | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples contain multiple phases? Matrix: <u>62</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | List sample IDs, volumes, lot #'s of preservative and the date/time added. |
| Cyanide water sample checks: | | |
| Lead acetate strip turns dark? (Record only) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Potassium iodide test strip turns blue/purple? (Preserve) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Trip Blank present: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | <u>sent water trip blank instead of soil trip blank.</u> |
| Headspace in VOA vials (>6mm): | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Samples from USDA Regulated Area: State: _____ | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Additional labels attached to 5035A / TX1005 vials in the field? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

March 22, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS-FINTUBE
Pace Project No.: 60297311

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on March 20, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS-FINTUBE

Pace Project No.: 60297311

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Certification Number: 10090

Arkansas Drinking Water

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS-FINTUBE

Pace Project No.: 60297311

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---------------|------------------|---------------|-----------------------|----------------------|
| 60297311001 | SSD14 WATER | Water | 03/19/19 15:37 | 03/20/19 08:40 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS-FINTUBE
Pace Project No.: 60297311

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-------------|-----------------|----------|-------------------|------------|
| 60297311001 | SSD14 WATER | EPA 8015B | AHS | 4 | PASI-K |
| | | EPA 8082 | AJB1 | 8 | PASI-K |
| | | EPA 5030B/8015B | QD | 3 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS-FINTUBE

Pace Project No.: 60297311

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|-------|--------------|----------------|------------|
| 60297311001 | SSD14 WATER | | | | | |
| EPA 8015B | TPH-DRO (C10-C28) | 13.5 | mg/L | 4.8 | 03/21/19 12:26 | |
| EPA 8015B | TPH-ORO (C28-C35) | 6.0 | mg/L | 4.8 | 03/21/19 12:26 | |
| EPA 5030B/8015B | Preservation pH | 1.0 | | 0.10 | 03/21/19 14:39 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60297311

Method: EPA 8015B

Description: 8015B Diesel Range Organics

Client: Environmental Works_OK office

Date: March 22, 2019

General Information:

1 sample was analyzed for EPA 8015B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 574661

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- SSD14 WATER (Lab ID: 60297311001)
 - n-Tetracosane (S)
 - p-Terphenyl (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60297311

Method: EPA 8082

Description: 8082 GCS PCB

Client: Environmental Works_OK office

Date: March 22, 2019

General Information:

1 sample was analyzed for EPA 8082. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60297311

Method: EPA 5030B/8015B

Description: Gasoline Range Organics

Client: Environmental Works_OK office

Date: March 22, 2019

General Information:

1 sample was analyzed for EPA 5030B/8015B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 574846

S3: Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.

- SSD14 WATER (Lab ID: 60297311001)
- 4-Bromofluorobenzene (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 574846

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60297311

| Sample: SSD14 WATER | | Lab ID: 60297311001 | Collected: 03/19/19 15:37 | Received: 03/20/19 08:40 | Matrix: Water | | | |
|------------------------------------|---------|--|---------------------------|--------------------------|----------------|----------------|------------|------|
| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
| 8015B Diesel Range Organics | | Analytical Method: EPA 8015B Preparation Method: EPA 3510C | | | | | | |
| TPH-DRO (C10-C28) | 13.5 | mg/L | 4.8 | 10 | 03/20/19 22:00 | 03/21/19 12:26 | | |
| TPH-ORO (C28-C35) | 6.0 | mg/L | 4.8 | 10 | 03/20/19 22:00 | 03/21/19 12:26 | | |
| Surrogates | | | | | | | | |
| p-Terphenyl (S) | 0 | % | 51-118 | 10 | 03/20/19 22:00 | 03/21/19 12:26 | 92-94-4 | S4 |
| n-Tetracosane (S) | 0 | % | 27-146 | 10 | 03/20/19 22:00 | 03/21/19 12:26 | 646-31-1 | S4 |
| 8082 GCS PCB | | Analytical Method: EPA 8082 Preparation Method: EPA 3510 | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/L | 0.95 | 1 | 03/20/19 22:00 | 03/21/19 14:56 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/L | 0.95 | 1 | 03/20/19 22:00 | 03/21/19 14:56 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/L | 0.95 | 1 | 03/20/19 22:00 | 03/21/19 14:56 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/L | 0.95 | 1 | 03/20/19 22:00 | 03/21/19 14:56 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/L | 0.95 | 1 | 03/20/19 22:00 | 03/21/19 14:56 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/L | 0.95 | 1 | 03/20/19 22:00 | 03/21/19 14:56 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/L | 0.95 | 1 | 03/20/19 22:00 | 03/21/19 14:56 | 11096-82-5 | |
| Surrogates | | | | | | | | |
| Decachlorobiphenyl (S) | 77 | % | 38-124 | 1 | 03/20/19 22:00 | 03/21/19 14:56 | 2051-24-3 | |
| Gasoline Range Organics | | Analytical Method: EPA 5030B/8015B | | | | | | |
| TPH-GRO | ND | mg/L | 1.0 | 1 | | 03/21/19 14:39 | | |
| Surrogates | | | | | | | | |
| 4-Bromofluorobenzene (S) | 636 | % | 72-112 | 1 | | 03/21/19 14:39 | 460-00-4 | S3 |
| Preservation pH | 1.0 | | 0.10 | 1 | | 03/21/19 14:39 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60297311

| | |
|-------------------------------------|---|
| QC Batch: 574846 | Analysis Method: EPA 5030B/8015B |
| QC Batch Method: EPA 5030B/8015B | Analysis Description: Gasoline Range Organics |
| Associated Lab Samples: 60297311001 | |

METHOD BLANK: 2357868 Matrix: Water

Associated Lab Samples: 60297311001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|--------------------------|-------|--------------|-----------------|----------------|------------|
| TPH-GRO | mg/L | ND | 0.50 | 03/21/19 13:51 | |
| 4-Bromofluorobenzene (S) | % | 83 | 72-112 | 03/21/19 13:51 | |

LABORATORY CONTROL SAMPLE: 2357869

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|--------------------------|-------|-------------|------------|-----------|--------------|------------|
| TPH-GRO | mg/L | 1 | 1.2 | 121 | 80-127 | |
| 4-Bromofluorobenzene (S) | % | | | 86 | 72-112 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60297311

| | |
|-------------------------------------|---------------------------------|
| QC Batch: 574661 | Analysis Method: EPA 8015B |
| QC Batch Method: EPA 3510C | Analysis Description: EPA 8015B |
| Associated Lab Samples: 60297311001 | |

METHOD BLANK: 2356989 Matrix: Water

Associated Lab Samples: 60297311001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-------------------|-------|--------------|-----------------|----------------|------------|
| TPH-DRO (C10-C28) | mg/L | ND | 0.50 | 03/21/19 12:01 | |
| TPH-ORO (C28-C35) | mg/L | ND | 0.50 | 03/21/19 12:01 | |
| n-Tetracosane (S) | % | 89 | 27-146 | 03/21/19 12:01 | |
| p-Terphenyl (S) | % | 72 | 51-118 | 03/21/19 12:01 | |

LABORATORY CONTROL SAMPLE: 2356990

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-------------------|-------|-------------|------------|-----------|--------------|------------|
| TPH-DRO (C10-C28) | mg/L | 2.5 | 2.3 | 92 | 51-114 | |
| n-Tetracosane (S) | % | | | 100 | 27-146 | |
| p-Terphenyl (S) | % | | | 94 | 51-118 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60297311

QC Batch: 574656

Analysis Method: EPA 8082

QC Batch Method: EPA 3510

Analysis Description: 8082 GCS PCB

Associated Lab Samples: 60297311001

METHOD BLANK: 2356946

Matrix: Water

Associated Lab Samples: 60297311001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-------------------------|-------|--------------|-----------------|----------------|------------|
| PCB-1016 (Aroclor 1016) | ug/L | ND | 1.0 | 03/21/19 14:20 | |
| PCB-1221 (Aroclor 1221) | ug/L | ND | 1.0 | 03/21/19 14:20 | |
| PCB-1232 (Aroclor 1232) | ug/L | ND | 1.0 | 03/21/19 14:20 | |
| PCB-1242 (Aroclor 1242) | ug/L | ND | 1.0 | 03/21/19 14:20 | |
| PCB-1248 (Aroclor 1248) | ug/L | ND | 1.0 | 03/21/19 14:20 | |
| PCB-1254 (Aroclor 1254) | ug/L | ND | 1.0 | 03/21/19 14:20 | |
| PCB-1260 (Aroclor 1260) | ug/L | ND | 1.0 | 03/21/19 14:20 | |
| Decachlorobiphenyl (S) | % | 89 | 38-124 | 03/21/19 14:20 | |

LABORATORY CONTROL SAMPLE: 2356947

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-------------------------|-------|-------------|------------|-----------|--------------|------------|
| PCB-1016 (Aroclor 1016) | ug/L | 5 | 5.2 | 104 | 63-129 | |
| PCB-1260 (Aroclor 1260) | ug/L | 5 | 5.1 | 101 | 57-143 | |
| Decachlorobiphenyl (S) | % | | | 89 | 38-124 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS-FINTUBE

Pace Project No.: 60297311

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: 574846

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

S3 Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS-FINTUBE

Pace Project No.: 60297311

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------|-----------------|----------|-------------------|------------------|
| 60297311001 | SSD14 WATER | EPA 3510C | 574661 | EPA 8015B | 574942 |
| 60297311001 | SSD14 WATER | EPA 3510 | 574656 | EPA 8082 | 574776 |
| 60297311001 | SSD14 WATER | EPA 5030B/8015B | 574846 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO#: 60297311



Client Name: Environmental Works-Tulsa

Courier: FedEx [X] UPS [] VIA [] Clay [] PEX [] ECI [] Pace [] Xroads [] Client [] Other []

Tracking #: 724919096968 Pace Shipping Label Used? Yes [] No [X]

Custody Seal on Cooler/Box Present: Yes [X] No [] Seals intact: Yes [X] No []

Packing Material: Bubble Wrap [] Bubble Bags [X] Foam [] None [] Other [X] Epic

Thermometer Used: T100 Type of Ice: Wet [] Blue [] None []

Cooler Temperature (°C): As-read 4.0 Corr. Factor +0.4 Corrected 4.4

Date and initials of person examining contents: 3/20/19/kt

Temperature should be above freezing to 6°C

Table with 3 columns: Question, Yes/No/N/A checkboxes, and handwritten notes. Rows include Chain of Custody, Short Hold Time, Rush Turn Around Time (24 HR), Sufficient volume, Correct containers used, Pace containers used, Containers intact, Unpreserved soils, Filtered volume, Sample labels match COC, Samples contain multiple phases (Matrix: WT), Containers requiring pH preservation, Cyanide water sample checks, Trip Blank present, Headspace in VOA vials, Samples from USDA Regulated Area, and Additional labels attached.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

| | | | | | |
|---|---------------------|--|--|-----------------------------------|----|
| Section A Required Client Information: | | Section B Required Project Information: | | Section C Invoice Information: | |
| Company: | Report To: | Company Name: | Attention: | Page: | of |
| Address: | Copy To: | Address: | REGULATORY AGENCY | 2270417 | |
| City/State/Zip: | Purchase Order No.: | City/State/Zip: | <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER | | |
| Project Name: | Project Name: | City/State/Zip: | <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER | | |
| Requested Due Date/TAT: | Project Number: | Site Location | STATE: | | |

| ITEM # | Section D Required Client Information | Matrix Codes MATRIX / CODE | SAMPLE CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED | | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Requested Analysis Filtered (Y/N) | Temp in °C | Received on | Custody | Sealed Cooler | Samples Intact |
|--------|--|-------------------------------|--|-----------------------------|-----------------|--------------------|---------------------------|-----------------|---|-----------------------------------|------------|-------------|---------|---------------|----------------|
| | | | | | COMPOSITE START | COMPOSITE END/GRAB | | | | | | | | | |
| 1 | SSDI4 WATER | DW Drinking Water | WT C | G | DATE | TIME | DATE | TIME | Unpreserved | Y | 3-20-19 | 08:40 | Y | Y | Y |
| 2 | | WT | | | DATE | TIME | | | H ₂ SO ₄ | | | | | | |
| 3 | | WW | | | | | | | HNO ₃ | | | | | | |
| 4 | | WP | | | | | | | HCl | | | | | | |
| 5 | | AR | | | | | | | NaOH | | | | | | |
| 6 | | TS | | | | | | | Na ₂ S ₂ O ₅ | | | | | | |
| 7 | | OT | | | | | | | Other | | | | | | |
| 8 | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | |

| | | | | | | | |
|---|-------------------------------|---------|-------|---------------------------|---------|-------|-------------------|
| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS |
| | Ruggie M 9MI | 3/19/19 | 10:30 | Wright / Lgs. | 3-20-19 | 08:40 | Y Y Y |
| <p>SAMPLER NAME AND SIGNATURE</p> <p>PRINT Name of SAMPLER: <u>VENERE WILSON</u></p> <p>SIGNATURE of SAMPLER: <u>[Signature]</u></p> <p>DATE Signed (MM/DD/YY): <u>03/19/19</u></p> | | | | | | | |

March 27, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS FINTUBE
Pace Project No.: 60297607

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on March 22, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS FINTUBE

Pace Project No.: 60297607

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Certification Number: 10090

Arkansas Drinking Water

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS FINTUBE

Pace Project No.: 60297607

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|------------------|--------|----------------|----------------|
| 60297607001 | SSC15-POST: 1.5' | Solid | 03/21/19 15:00 | 03/22/19 08:20 |
| 60297607002 | SSE15-POST: 2' | Solid | 03/21/19 11:55 | 03/22/19 08:20 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS FINTUBE

Pace Project No.: 60297607

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|------------------|------------|----------|-------------------|------------|
| 60297607001 | SSC15-POST: 1.5' | EPA 6010 | EMR | 12 | PASI-K |
| | | EPA 7471 | LRS | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60297607002 | SSE15-POST: 2' | EPA 6010 | EMR | 12 | PASI-K |
| | | EPA 7471 | LRS | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS FINTUBE

Pace Project No.: 60297607

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|-------|--------------|----------------|------------|
| 60297607001 | SSC15-POST: 1.5' | | | | | |
| EPA 6010 | Arsenic | 9.1 | mg/kg | 0.93 | 03/27/19 12:19 | |
| EPA 6010 | Beryllium | 0.99 | mg/kg | 0.093 | 03/27/19 12:19 | |
| EPA 6010 | Chromium | 21.0 | mg/kg | 0.46 | 03/27/19 12:19 | |
| EPA 6010 | Copper | 16.1 | mg/kg | 1.9 | 03/27/19 12:19 | |
| EPA 6010 | Lead | 24.7 | mg/kg | 0.46 | 03/27/19 12:19 | |
| EPA 6010 | Nickel | 28.6 | mg/kg | 0.46 | 03/27/19 12:19 | |
| EPA 6010 | Zinc | 66.0 | mg/kg | 9.3 | 03/27/19 12:19 | |
| ASTM D2974 | Percent Moisture | 17.2 | % | 0.50 | 03/22/19 17:00 | |
| 60297607002 | SSE15-POST: 2' | | | | | |
| EPA 6010 | Arsenic | 6.9 | mg/kg | 0.84 | 03/27/19 12:25 | |
| EPA 6010 | Beryllium | 0.73 | mg/kg | 0.084 | 03/27/19 12:25 | |
| EPA 6010 | Chromium | 15.2 | mg/kg | 0.42 | 03/27/19 12:25 | |
| EPA 6010 | Copper | 10.6 | mg/kg | 1.7 | 03/27/19 12:25 | |
| EPA 6010 | Lead | 56.7 | mg/kg | 0.42 | 03/27/19 12:25 | |
| EPA 6010 | Nickel | 10.3 | mg/kg | 0.42 | 03/27/19 12:25 | |
| EPA 6010 | Zinc | 123 | mg/kg | 8.4 | 03/27/19 12:25 | |
| ASTM D2974 | Percent Moisture | 15.1 | % | 0.50 | 03/22/19 17:00 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS FINTUBE

Pace Project No.: 60297607

Method: EPA 6010

Description: 6010 MET ICP Red. Interference

Client: Environmental Works_OK office

Date: March 27, 2019

General Information:

2 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 575663

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60297607001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2361629)
 - Antimony
- MSD (Lab ID: 2361630)
 - Antimony

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS FINTUBE

Pace Project No.: 60297607

Method: EPA 7471

Description: 7471 Mercury

Client: Environmental Works_OK office

Date: March 27, 2019

General Information:

2 samples were analyzed for EPA 7471. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7471 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS FINTUBE

Pace Project No.: 60297607

Sample: SSC15-POST: 1.5' **Lab ID: 60297607001** Collected: 03/21/19 15:00 Received: 03/22/19 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP Red. Interference | | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | |
| Antimony | ND | mg/kg | 0.93 | 1 | 03/26/19 16:07 | 03/27/19 12:19 | 7440-36-0 | M1 |
| Arsenic | 9.1 | mg/kg | 0.93 | 1 | 03/26/19 16:07 | 03/27/19 12:19 | 7440-38-2 | |
| Beryllium | 0.99 | mg/kg | 0.093 | 1 | 03/26/19 16:07 | 03/27/19 12:19 | 7440-41-7 | |
| Cadmium | ND | mg/kg | 0.46 | 1 | 03/26/19 16:07 | 03/27/19 12:19 | 7440-43-9 | |
| Chromium | 21.0 | mg/kg | 0.46 | 1 | 03/26/19 16:07 | 03/27/19 12:19 | 7440-47-3 | |
| Copper | 16.1 | mg/kg | 1.9 | 1 | 03/26/19 16:07 | 03/27/19 12:19 | 7440-50-8 | |
| Lead | 24.7 | mg/kg | 0.46 | 1 | 03/26/19 16:07 | 03/27/19 12:19 | 7439-92-1 | |
| Nickel | 28.6 | mg/kg | 0.46 | 1 | 03/26/19 16:07 | 03/27/19 12:19 | 7440-02-0 | |
| Selenium | ND | mg/kg | 1.4 | 1 | 03/26/19 16:07 | 03/27/19 12:19 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.65 | 1 | 03/26/19 16:07 | 03/27/19 12:19 | 7440-22-4 | |
| Thallium | ND | mg/kg | 1.9 | 1 | 03/26/19 16:07 | 03/27/19 12:19 | 7440-28-0 | |
| Zinc | 66.0 | mg/kg | 9.3 | 1 | 03/26/19 16:07 | 03/27/19 12:19 | 7440-66-6 | |
| 7471 Mercury | | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | |
| Mercury | ND | mg/kg | 0.055 | 1 | 03/22/19 15:06 | 03/25/19 15:08 | 7439-97-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 17.2 | % | 0.50 | 1 | | 03/22/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS FINTUBE

Pace Project No.: 60297607

Sample: SSE15-POST: 2' Lab ID: 60297607002 Collected: 03/21/19 11:55 Received: 03/22/19 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP Red. Interference | | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | |
| Antimony | ND | mg/kg | 0.84 | 1 | 03/26/19 16:07 | 03/27/19 12:25 | 7440-36-0 | |
| Arsenic | 6.9 | mg/kg | 0.84 | 1 | 03/26/19 16:07 | 03/27/19 12:25 | 7440-38-2 | |
| Beryllium | 0.73 | mg/kg | 0.084 | 1 | 03/26/19 16:07 | 03/27/19 12:25 | 7440-41-7 | |
| Cadmium | ND | mg/kg | 0.42 | 1 | 03/26/19 16:07 | 03/27/19 12:25 | 7440-43-9 | |
| Chromium | 15.2 | mg/kg | 0.42 | 1 | 03/26/19 16:07 | 03/27/19 12:25 | 7440-47-3 | |
| Copper | 10.6 | mg/kg | 1.7 | 1 | 03/26/19 16:07 | 03/27/19 12:25 | 7440-50-8 | |
| Lead | 56.7 | mg/kg | 0.42 | 1 | 03/26/19 16:07 | 03/27/19 12:25 | 7439-92-1 | |
| Nickel | 10.3 | mg/kg | 0.42 | 1 | 03/26/19 16:07 | 03/27/19 12:25 | 7440-02-0 | |
| Selenium | ND | mg/kg | 1.3 | 1 | 03/26/19 16:07 | 03/27/19 12:25 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.59 | 1 | 03/26/19 16:07 | 03/27/19 12:25 | 7440-22-4 | |
| Thallium | ND | mg/kg | 1.7 | 1 | 03/26/19 16:07 | 03/27/19 12:25 | 7440-28-0 | |
| Zinc | 123 | mg/kg | 8.4 | 1 | 03/26/19 16:07 | 03/27/19 12:25 | 7440-66-6 | |
| 7471 Mercury | | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | |
| Mercury | ND | mg/kg | 0.055 | 1 | 03/22/19 15:06 | 03/25/19 15:15 | 7439-97-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 15.1 | % | 0.50 | 1 | | 03/22/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS FINTUBE

Pace Project No.: 60297607

QC Batch: 575136

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Associated Lab Samples: 60297607001, 60297607002

METHOD BLANK: 2359149

Matrix: Solid

Associated Lab Samples: 60297607001, 60297607002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Mercury | mg/kg | ND | 0.050 | 03/25/19 14:57 | |

LABORATORY CONTROL SAMPLE: 2359150

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | mg/kg | 0.5 | 0.47 | 94 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2359151 2359152

| Parameter | Units | 60297607001 | | MS | | MSD | | MS | | MSD | | % Rec Limits | Max RPD | Qual |
|-----------|-------|-------------|------|-------------|-------|--------|--------|-------|-------|--------|----|--------------|---------|------|
| | | Result | ND | Spike Conc. | Conc. | Result | Result | % Rec | % Rec | | | | | |
| Mercury | mg/kg | ND | 0.57 | 0.57 | 0.5 | 0.66 | 0.55 | 117 | 112 | 75-125 | 20 | 20 | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS FINTUBE

Pace Project No.: 60297607

QC Batch: 575663 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 60297607001, 60297607002

METHOD BLANK: 2361627 Matrix: Solid

Associated Lab Samples: 60297607001, 60297607002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Antimony | mg/kg | ND | 1.0 | 03/27/19 12:16 | |
| Arsenic | mg/kg | ND | 1.0 | 03/27/19 12:16 | |
| Beryllium | mg/kg | ND | 0.10 | 03/27/19 12:16 | |
| Cadmium | mg/kg | ND | 0.50 | 03/27/19 12:16 | |
| Chromium | mg/kg | ND | 0.50 | 03/27/19 12:16 | |
| Copper | mg/kg | ND | 2.0 | 03/27/19 12:16 | |
| Lead | mg/kg | ND | 0.50 | 03/27/19 12:16 | |
| Nickel | mg/kg | ND | 0.50 | 03/27/19 12:16 | |
| Selenium | mg/kg | ND | 1.5 | 03/27/19 12:16 | |
| Silver | mg/kg | ND | 0.70 | 03/27/19 12:16 | |
| Thallium | mg/kg | ND | 2.0 | 03/27/19 12:16 | |
| Zinc | mg/kg | ND | 10.0 | 03/27/19 12:16 | |

LABORATORY CONTROL SAMPLE: 2361628

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | mg/kg | 100 | 98.3 | 98 | 80-120 | |
| Arsenic | mg/kg | 100 | 92.5 | 93 | 80-120 | |
| Beryllium | mg/kg | 100 | 93.6 | 94 | 80-120 | |
| Cadmium | mg/kg | 100 | 96.6 | 97 | 80-120 | |
| Chromium | mg/kg | 100 | 96.6 | 97 | 80-120 | |
| Copper | mg/kg | 100 | 96.4 | 96 | 80-120 | |
| Lead | mg/kg | 100 | 100 | 100 | 80-120 | |
| Nickel | mg/kg | 100 | 101 | 101 | 80-120 | |
| Selenium | mg/kg | 100 | 94.4 | 94 | 80-120 | |
| Silver | mg/kg | 50 | 48.7 | 97 | 80-120 | |
| Thallium | mg/kg | 100 | 101 | 101 | 80-120 | |
| Zinc | mg/kg | 100 | 97.4 | 97 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2361629 2361630

| Parameter | Units | 60297607001 | | 2361630 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual | |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|----|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | | | | |
| Antimony | mg/kg | ND | 94.3 | 97.3 | 22.9 | 21.7 | 24 | 22 | 75-125 | 5 | 20 | M1 |
| Arsenic | mg/kg | 9.1 | 94.3 | 97.3 | 89.3 | 95.6 | 85 | 89 | 75-125 | 7 | 20 | |
| Beryllium | mg/kg | 0.99 | 94.3 | 97.3 | 85.9 | 87.9 | 90 | 89 | 75-125 | 2 | 20 | |
| Cadmium | mg/kg | ND | 94.3 | 97.3 | 84.9 | 87.2 | 90 | 89 | 75-125 | 3 | 20 | |
| Chromium | mg/kg | 21.0 | 94.3 | 97.3 | 115 | 120 | 100 | 102 | 75-125 | 5 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS FINTUBE

Pace Project No.: 60297607

| Parameter | Units | 2361629 | | 2361630 | | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | Qual |
|-----------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|------------|------|
| | | 60297607001 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | | | | | | | |
| Copper | mg/kg | 16.1 | 94.3 | 97.3 | 103 | 107 | 92 | 94 | 75-125 | 4 | 20 | |
| Lead | mg/kg | 24.7 | 94.3 | 97.3 | 103 | 101 | 83 | 79 | 75-125 | 1 | 20 | |
| Nickel | mg/kg | 28.6 | 94.3 | 97.3 | 113 | 121 | 90 | 95 | 75-125 | 7 | 20 | |
| Selenium | mg/kg | ND | 94.3 | 97.3 | 80.7 | 84.9 | 85 | 87 | 75-125 | 5 | 20 | |
| Silver | mg/kg | ND | 47.2 | 48.7 | 42.1 | 43.5 | 89 | 89 | 75-125 | 3 | 20 | |
| Thallium | mg/kg | ND | 94.3 | 97.3 | 80.7 | 82.1 | 86 | 84 | 75-125 | 2 | 20 | |
| Zinc | mg/kg | 66.0 | 94.3 | 97.3 | 147 | 154 | 86 | 90 | 75-125 | 4 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS FINTUBE

Pace Project No.: 60297607

QC Batch: 575124

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60297607001, 60297607002

METHOD BLANK: 2359128

Matrix: Solid

Associated Lab Samples: 60297607001, 60297607002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------------|-------|--------------|-----------------|----------------|------------|
| Percent Moisture | % | ND | 0.50 | 03/22/19 17:00 | |

SAMPLE DUPLICATE: 2359129

| Parameter | Units | 60297448001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------|-------|--------------------|------------|-----|---------|------------|
| Percent Moisture | % | 14.4 | 13.9 | 3 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS FINTUBE

Pace Project No.: 60297607

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS FINTUBE

Pace Project No.: 60297607

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|------------------|-----------------|----------|-------------------|------------------|
| 60297607001 | SSC15-POST: 1.5' | EPA 3050 | 575663 | EPA 6010 | 575836 |
| 60297607002 | SSE15-POST: 2' | EPA 3050 | 575663 | EPA 6010 | 575836 |
| 60297607001 | SSC15-POST: 1.5' | EPA 7471 | 575136 | EPA 7471 | 575313 |
| 60297607002 | SSE15-POST: 2' | EPA 7471 | 575136 | EPA 7471 | 575313 |
| 60297607001 | SSC15-POST: 1.5' | ASTM D2974 | 575124 | | |
| 60297607002 | SSE15-POST: 2' | ASTM D2974 | 575124 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO#: 60297607



Client Name: Environmental Works Tulsa

Courier: FedEx [X] UPS [] VIA [] Clay [] PEX [] ECI [] Pace [] Xroads [] Client [] Other []

Tracking #: 724919091026 Pace Shipping Label Used? Yes [] No [X]

Custody Seal on Cooler/Box Present: Yes [X] No [] Seals intact: Yes [X] No []

Packing Material: Bubble Wrap [] Bubble Bags [X] Foam [] None [] Other []

Thermometer Used: T300 Type of Ice: Wet [X] Blue [] None []

Cooler Temperature (°C): As-read 3.2 Corr. Factor +0.4 Corrected 3.6

Date and initials of person examining contents: 3.22.19 [initials]

Temperature should be above freezing to 6°C

Table with 2 columns: Question/Field and Yes/No/N/A checkboxes. Includes fields like Chain of Custody present, Short Hold Time analyses, Rush Turn Around Time requested (48HR), Containers requiring pH preservation, etc.

Client Notification/ Resolution:

Copy COC to Client? Y / N

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: _____



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1
 2270531

Section A
 Required Client Information:
 Company: Environmental Works - Tulsa Office
 Address: 9529 E. 55th Place
 Suite A, Tulsa, OK 74145
 Email To: ced@environmentalworks.com
 Phone: 918-894-4494 Fax:
 Requested Due Date/TAT: 40hr TAT

Section B
 Required Project Information:
 Report To: Moore, Anthony
 Copy To:
 Purchase Order No.:
 Project Name: Evans - Future
 Project Number:
 Pace Project Reference:
 Pace Project Manager: angie.brown@pacelabs.com
 Pace Profile #: 1358

Section C
 Invoice Information:
 Attention:
 Company Name:
 Address:
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER
 Site Location STATE: OK

| ITEM # | Section D Required Client Information | Matrix Codes MATRIX / CODE | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED | | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Analysis Test ↑ | Requested Analysis Filtered (Y/N) | Temp in °C | Received on | Custody Sealed (Y/N) | Samples Intact (Y/N) |
|--------|--|-------------------------------|-----------------------------|-----------------|--------------------|---------------------------|-----------------|--------------------------------|-----------------|-----------------------------------|------------|-------------|----------------------|----------------------|
| | | | | COMPOSITE START | COMPOSITE END/GRAB | | | | | | | | | |
| 1 | SS15-post: 1.5' | DW Drinking Water | SL C 3/21/19 14:53 | 3/21/19 15:00 | | 1 X | Unpreserved | H ₂ SO ₄ | | | | | | |
| 2 | SS15-post: 2' | WT Waste Water | SL C 3/21/19 11:50 | 3/21/19 11:55 | | 1 X | Unpreserved | HNO ₃ | | | | | | |
| 3 | | WW Waste Water | | | | | | NaOH | | | | | | |
| 4 | | P Product | | | | | | HCl | | | | | | |
| 5 | | SL Soil/Solid | | | | | | H ₂ O ₂ | | | | | | |
| 6 | | OL Oil | | | | | | Methanol | | | | | | |
| 7 | | WP Wipe | | | | | | Other | | | | | | |
| 8 | | AR Air | | | | | | | | | | | | |
| 9 | | TS Tissue | | | | | | | | | | | | |
| 10 | | OT Other | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | |

Additional Comments: Relinquish 9WI 3/21/19 1400 U.C. pt 145

DATE: 5-22-19 0830 TIME: 3:36 SAMPLE CONDITIONS: Y Y Y

Temp in °C: 36 Received on: Y Custody Sealed (Y/N): Y Samples Intact (Y/N): Y

Pace Project No./ Lab I.D.: 001 002

Residual Chlorine (Y/N): 0.29707

SAMPLER NAME AND SIGNATURE: Kentel Wilson
 PRINT Name of SAMPLER: Kentel Wilson
 SIGNATURE of SAMPLER: [Signature]

DATE Signed (MM/DD/YY): 03/21/19

ORIGINAL

March 28, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS-FINTUBE
Pace Project No.: 60297707

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on March 23, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS-FINTUBE

Pace Project No.: 60297707

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Certification Number: 10090

Arkansas Drinking Water

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS-FINTUBE

Pace Project No.: 60297707

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|-------------------|--------|----------------|----------------|
| 60297707001 | SSC12-POST-1:1.5' | Solid | 03/22/19 11:10 | 03/23/19 08:35 |
| 60297707002 | SSC12-POST-2:1.5' | Solid | 03/22/19 11:10 | 03/23/19 08:35 |
| 60297707003 | SSC12-POST-3:1.5' | Solid | 03/22/19 11:10 | 03/23/19 08:35 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS-FINTUBE

Pace Project No.: 60297707

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-------------------|------------|----------|-------------------|------------|
| 60297707001 | SSC12-POST-1:1.5' | EPA 8082 | AJB1 | 8 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60297707002 | SSC12-POST-2:1.5' | EPA 8082 | AJB1 | 8 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60297707003 | SSC12-POST-3:1.5' | EPA 8082 | AJB1 | 8 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS-FINTUBE

Pace Project No.: 60297707

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|-------|--------------|----------------|------------|
| 60297707001 | SSC12-POST-1:1.5' | | | | | |
| EPA 8082 | PCB-1260 (Aroclor 1260) | 47.5 | ug/kg | 40.0 | 03/28/19 13:21 | |
| ASTM D2974 | Percent Moisture | 17.7 | % | 0.50 | 03/25/19 17:00 | |
| 60297707002 | SSC12-POST-2:1.5' | | | | | |
| ASTM D2974 | Percent Moisture | 17.9 | % | 0.50 | 03/25/19 17:00 | |
| 60297707003 | SSC12-POST-3:1.5' | | | | | |
| EPA 8082 | PCB-1260 (Aroclor 1260) | 43.2 | ug/kg | 40.0 | 03/28/19 13:58 | |
| ASTM D2974 | Percent Moisture | 17.7 | % | 0.50 | 03/25/19 17:00 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60297707

Method: EPA 8082

Description: 8082 GCS PCB SW

Client: Environmental Works_OK office

Date: March 28, 2019

General Information:

3 samples were analyzed for EPA 8082. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60297707

Sample: SSC12-POST-1:1.5' **Lab ID: 60297707001** Collected: 03/22/19 11:10 Received: 03/23/19 08:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|------------|------|
| 8082 GCS PCB SW | | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 40.0 | 1 | 03/25/19 21:56 | 03/28/19 13:21 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 40.0 | 1 | 03/25/19 21:56 | 03/28/19 13:21 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 40.0 | 1 | 03/25/19 21:56 | 03/28/19 13:21 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 40.0 | 1 | 03/25/19 21:56 | 03/28/19 13:21 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 40.0 | 1 | 03/25/19 21:56 | 03/28/19 13:21 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 40.0 | 1 | 03/25/19 21:56 | 03/28/19 13:21 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | 47.5 | ug/kg | 40.0 | 1 | 03/25/19 21:56 | 03/28/19 13:21 | 11096-82-5 | |
| Surrogates | | | | | | | | |
| Decachlorobiphenyl (S) | 80 | % | 28-143 | 1 | 03/25/19 21:56 | 03/28/19 13:21 | 2051-24-3 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 17.7 | % | 0.50 | 1 | | 03/25/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60297707

Sample: SSC12-POST-2:1.5' **Lab ID: 60297707002** Collected: 03/22/19 11:10 Received: 03/23/19 08:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|------------|------|
| 8082 GCS PCB SW | | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 40.1 | 1 | 03/25/19 21:56 | 03/28/19 13:40 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 40.1 | 1 | 03/25/19 21:56 | 03/28/19 13:40 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 40.1 | 1 | 03/25/19 21:56 | 03/28/19 13:40 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 40.1 | 1 | 03/25/19 21:56 | 03/28/19 13:40 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 40.1 | 1 | 03/25/19 21:56 | 03/28/19 13:40 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 40.1 | 1 | 03/25/19 21:56 | 03/28/19 13:40 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 40.1 | 1 | 03/25/19 21:56 | 03/28/19 13:40 | 11096-82-5 | |
| Surrogates | | | | | | | | |
| Decachlorobiphenyl (S) | 85 | % | 28-143 | 1 | 03/25/19 21:56 | 03/28/19 13:40 | 2051-24-3 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 17.9 | % | 0.50 | 1 | | 03/25/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60297707

Sample: SSC12-POST-3:1.5' **Lab ID: 60297707003** Collected: 03/22/19 11:10 Received: 03/23/19 08:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|------------|------|
| 8082 GCS PCB SW | | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 40.0 | 1 | 03/25/19 21:56 | 03/28/19 13:58 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 40.0 | 1 | 03/25/19 21:56 | 03/28/19 13:58 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 40.0 | 1 | 03/25/19 21:56 | 03/28/19 13:58 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 40.0 | 1 | 03/25/19 21:56 | 03/28/19 13:58 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 40.0 | 1 | 03/25/19 21:56 | 03/28/19 13:58 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 40.0 | 1 | 03/25/19 21:56 | 03/28/19 13:58 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | 43.2 | ug/kg | 40.0 | 1 | 03/25/19 21:56 | 03/28/19 13:58 | 11096-82-5 | |
| Surrogates | | | | | | | | |
| Decachlorobiphenyl (S) | 82 | % | 28-143 | 1 | 03/25/19 21:56 | 03/28/19 13:58 | 2051-24-3 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 17.7 | % | 0.50 | 1 | | 03/25/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60297707

QC Batch: 575275

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60297707001, 60297707002, 60297707003

METHOD BLANK: 2360140

Matrix: Solid

Associated Lab Samples: 60297707001, 60297707002, 60297707003

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------------|-------|--------------|-----------------|----------------|------------|
| Percent Moisture | % | ND | 0.50 | 03/25/19 17:00 | |

SAMPLE DUPLICATE: 2360141

| Parameter | Units | 60297444001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------|-------|--------------------|------------|-----|---------|------------|
| Percent Moisture | % | 22.9 | 22.8 | 0 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS-FINTUBE

Pace Project No.: 60297707

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS-FINTUBE

Pace Project No.: 60297707

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------------|-----------------|----------|-------------------|------------------|
| 60297707001 | SSC12-POST-1:1.5' | EPA 3546 | 575355 | EPA 8082 | 575504 |
| 60297707002 | SSC12-POST-2:1.5' | EPA 3546 | 575355 | EPA 8082 | 575504 |
| 60297707003 | SSC12-POST-3:1.5' | EPA 3546 | 575355 | EPA 8082 | 575504 |
| 60297707001 | SSC12-POST-1:1.5' | ASTM D2974 | 575275 | | |
| 60297707002 | SSC12-POST-2:1.5' | ASTM D2974 | 575275 | | |
| 60297707003 | SSC12-POST-3:1.5' | ASTM D2974 | 575275 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO#: 60297707



Client Name: Environmental Works

Courier: FedEx [x] UPS [] VIA [] Clay [] PEX [] ECI [] Pace [] Xroads [] Client [] Other []

Tracking #: 724919091037 Pace Shipping Label Used? Yes [] No [x]

Custody Seal on Cooler/Box Present: Yes [x] No [] Seals intact: Yes [x] No []

Packing Material: Bubble Wrap [] Bubble Bags [x] Foam [] None [] Other []

Thermometer Used: T-296 Type of Ice: Wet [x] Blue [] None []

Cooler Temperature (°C): As-read 5.5 Corr. Factor -1.0 Corrected 4.5

Date and initials of person examining contents: 3/23/19

Temperature should be above freezing to 6°C

Table with 2 columns: Question/Field and Answer (checkboxes). Rows include Chain of Custody, Short Hold Time, Rush Turn Around Time, Containers, and various sample checks.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date:

April 01, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS-FINTUBE
Pace Project No.: 60297823

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on March 26, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Revised report_rev1

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS-FINTUBE

Pace Project No.: 60297823

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Arkansas Drinking Water

Missouri Certification Number: 10090

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

Dallas Certification IDs:

400 West Bethany Dr Suite 190, Allen, TX 75013

Texas T104704232-18-26

EPA# TX00074

Florida Certification #: E871118

Texas Certification #: T104704232-18-26

Kansas Certification #: E-10388

Arkansas Certification #: 88-0647

Oklahoma Certification #: 8727

Louisiana Certification #: 30686

Iowa Certification #: 408

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS-FINTUBE

Pace Project No.: 60297823

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|----------------|--------|----------------|----------------|
| 60297823001 | SSD14 Water WC | Water | 03/25/19 14:50 | 03/26/19 08:30 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS-FINTUBE

Pace Project No.: 60297823

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|----------------|----------------|----------|-------------------|------------|
| 60297823001 | SSD14 Water WC | EPA 6010 | EMR | 12 | PASI-K |
| | | EPA 7470 | LRS | 1 | PASI-K |
| | | EPA 5030B/8260 | PGH | 69 | PASI-K |
| | | EPA 1010 | ZMH | 1 | PASI-K |
| | | SW-846 7.3.4.2 | LNMI | 1 | PASI-D |
| | | EPA 9040 | ZMH | 1 | PASI-K |
| | | SW-846 7.3.3.2 | SRT | 1 | PASI-D |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS-FINTUBE

Pace Project No.: 60297823

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|------------|--------------|----------------|------------|
| 60297823001 | SSD14 Water WC | | | | | |
| EPA 6010 | Chromium | 0.0051 | mg/L | 0.0050 | 03/27/19 10:16 | |
| EPA 6010 | Lead | 0.023 | mg/L | 0.010 | 03/27/19 10:16 | |
| EPA 6010 | Zinc | 0.056 | mg/L | 0.050 | 03/27/19 10:16 | |
| EPA 5030B/8260 | Preservation pH | 1.0 | | 0.10 | 03/26/19 21:37 | |
| EPA 1010 | Flashpoint | >200 | deg F | 78.0 | 03/27/19 11:24 | |
| EPA 9040 | pH | 7.9 | Std. Units | 0.10 | 03/27/19 10:42 | H6 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60297823

Date: April 01, 2019

Amended report revised to correct the sample identification as noted on the chain of custody.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60297823

Method: EPA 6010

Description: 6010 MET ICP

Client: Environmental Works_OK office

Date: April 01, 2019

General Information:

1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60297823

Method: EPA 7470

Description: 7470 Mercury

Client: Environmental Works_OK office

Date: April 01, 2019

General Information:

1 sample was analyzed for EPA 7470. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7470 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60297823

Method: EPA 5030B/8260

Description: 8260 MSV

Client: Environmental Works_OK office

Date: April 01, 2019

General Information:

1 sample was analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 575640

L1: Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

- LCS (Lab ID: 2361448)
- Carbon disulfide

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 575640

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60297823

Method: EPA 1010

Description: 1010 Flashpoint,Closed Cup

Client: Environmental Works_OK office

Date: April 01, 2019

General Information:

1 sample was analyzed for EPA 1010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60297823

Method: SW-846 7.3.4.2

Description: Reactive Sulfide

Client: Environmental Works_OK office

Date: April 01, 2019

General Information:

1 sample was analyzed for SW-846 7.3.4.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with SW-846 7.3.4.2 with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 114825

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 517034)
 - Sulfide, Reactive
- DUP (Lab ID: 517035)
 - Sulfide, Reactive
- SSD14 Water WC (Lab ID: 60297823001)
 - Sulfide, Reactive

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60297823

Method: EPA 9040

Description: 9040 pH

Client: Environmental Works_OK office

Date: April 01, 2019

General Information:

1 sample was analyzed for EPA 9040. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

H6: Analysis initiated outside of the 15 minute EPA required holding time.

- SSD14 Water WC (Lab ID: 60297823001)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60297823

Method: SW-846 7.3.3.2

Description: 733C S Reactive Cyanide

Client: Environmental Works_OK office

Date: April 01, 2019

General Information:

1 sample was analyzed for SW-846 7.3.3.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with SW-846 7.3.3.2 with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 114824

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 517032)
 - Cyanide, Reactive
- DUP (Lab ID: 517033)
 - Cyanide, Reactive
- SSD14 Water WC (Lab ID: 60297823001)
 - Cyanide, Reactive

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60297823

| Sample: SSD14 Water WC | | Lab ID: 60297823001 | Collected: 03/25/19 14:50 | Received: 03/26/19 08:30 | Matrix: Water | | | |
|-----------------------------|---------------|--|---------------------------|--------------------------|----------------|----------------|-----------|------|
| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
| 6010 MET ICP | | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | |
| Antimony | ND | mg/L | 0.015 | 1 | 03/26/19 12:54 | 03/27/19 10:16 | 7440-36-0 | |
| Arsenic | ND | mg/L | 0.010 | 1 | 03/26/19 12:54 | 03/27/19 10:16 | 7440-38-2 | |
| Beryllium | ND | mg/L | 0.0010 | 1 | 03/26/19 12:54 | 03/27/19 10:16 | 7440-41-7 | |
| Cadmium | ND | mg/L | 0.0050 | 1 | 03/26/19 12:54 | 03/27/19 10:16 | 7440-43-9 | |
| Chromium | 0.0051 | mg/L | 0.0050 | 1 | 03/26/19 12:54 | 03/27/19 10:16 | 7440-47-3 | |
| Copper | ND | mg/L | 0.010 | 1 | 03/26/19 12:54 | 03/27/19 10:16 | 7440-50-8 | |
| Lead | 0.023 | mg/L | 0.010 | 1 | 03/26/19 12:54 | 03/27/19 10:16 | 7439-92-1 | |
| Nickel | ND | mg/L | 0.0050 | 1 | 03/26/19 12:54 | 03/27/19 10:16 | 7440-02-0 | |
| Selenium | ND | mg/L | 0.015 | 1 | 03/26/19 12:54 | 03/27/19 10:16 | 7782-49-2 | |
| Silver | ND | mg/L | 0.0070 | 1 | 03/26/19 12:54 | 03/27/19 10:16 | 7440-22-4 | |
| Thallium | ND | mg/L | 0.020 | 1 | 03/26/19 12:54 | 03/27/19 10:16 | 7440-28-0 | |
| Zinc | 0.056 | mg/L | 0.050 | 1 | 03/26/19 12:54 | 03/27/19 10:16 | 7440-66-6 | |
| 7470 Mercury | | Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | |
| Mercury | ND | mg/L | 0.00020 | 1 | 03/26/19 14:19 | 03/27/19 10:30 | 7439-97-6 | |
| 8260 MSV | | Analytical Method: EPA 5030B/8260 | | | | | | |
| Acetone | ND | ug/L | 10.0 | 1 | | 03/26/19 21:37 | 67-64-1 | |
| Benzene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 71-43-2 | |
| Bromobenzene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 108-86-1 | |
| Bromochloromethane | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 75-27-4 | |
| Bromoform | ND | ug/L | 2.0 | 1 | | 03/26/19 21:37 | 75-25-2 | |
| Bromomethane | ND | ug/L | 5.0 | 1 | | 03/26/19 21:37 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 10.0 | 1 | | 03/26/19 21:37 | 78-93-3 | |
| n-Butylbenzene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 98-06-6 | |
| Carbon disulfide | ND | ug/L | 5.0 | 1 | | 03/26/19 21:37 | 75-15-0 | L1 |
| Carbon tetrachloride | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 108-90-7 | |
| Chloroethane | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 75-00-3 | |
| Chloroform | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 2.5 | 1 | | 03/26/19 21:37 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 74-95-3 | |
| 1,2-Dichlorobenzene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 107-06-2 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60297823

| Sample: SSD14 Water WC | Lab ID: 60297823001 | Collected: 03/25/19 14:50 | Received: 03/26/19 08:30 | Matrix: Water | | | | |
|-----------------------------------|---------------------|-----------------------------------|--------------------------|---------------|----------|----------------|------------|------|
| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
| 8260 MSV | | Analytical Method: EPA 5030B/8260 | | | | | | |
| 1,2-Dichloroethene (Total) | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 540-59-0 | |
| 1,1-Dichloroethene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 10061-02-6 | |
| Ethylbenzene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 87-68-3 | |
| 2-Hexanone | ND | ug/L | 10.0 | 1 | | 03/26/19 21:37 | 591-78-6 | |
| Isopropylbenzene (Cumene) | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 99-87-6 | |
| Methylene chloride | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10.0 | 1 | | 03/26/19 21:37 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 10.0 | 1 | | 03/26/19 21:37 | 91-20-3 | |
| n-Propylbenzene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 103-65-1 | |
| Styrene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 127-18-4 | |
| Toluene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 2.5 | 1 | | 03/26/19 21:37 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 108-67-8 | |
| Vinyl chloride | ND | ug/L | 1.0 | 1 | | 03/26/19 21:37 | 75-01-4 | |
| Xylene (Total) | ND | ug/L | 3.0 | 1 | | 03/26/19 21:37 | 1330-20-7 | |
| Surrogates | | | | | | | | |
| 4-Bromofluorobenzene (S) | 104 | % | 80-120 | 1 | | 03/26/19 21:37 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 96 | % | 77-122 | 1 | | 03/26/19 21:37 | 17060-07-0 | |
| Toluene-d8 (S) | 101 | % | 80-120 | 1 | | 03/26/19 21:37 | 2037-26-5 | |
| Preservation pH | 1.0 | | 0.10 | 1 | | 03/26/19 21:37 | | |
| 1010 Flashpoint,Closed Cup | | Analytical Method: EPA 1010 | | | | | | |
| Flashpoint | >200 | deg F | 78.0 | 1 | | 03/27/19 11:24 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60297823

| Sample: SSD14 Water WC | | Lab ID: 60297823001 | Collected: 03/25/19 14:50 | Received: 03/26/19 08:30 | Matrix: Water | | | |
|--------------------------------|------------|--|---------------------------|--------------------------|----------------|----------------|---------|------|
| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
| Reactive Sulfide | | Analytical Method: SW-846 7.3.4.2 Preparation Method: SW-846 7.3.4.2 | | | | | | |
| Sulfide, Reactive | ND | mg/kg | 60.0 | 1 | 03/29/19 11:06 | 03/29/19 14:56 | | N2 |
| 9040 pH | | Analytical Method: EPA 9040 | | | | | | |
| pH | 7.9 | Std. Units | 0.10 | 1 | | 03/27/19 10:42 | | H6 |
| 733C S Reactive Cyanide | | Analytical Method: SW-846 7.3.3.2 Preparation Method: SW-846 7.3.3.2 | | | | | | |
| Cyanide, Reactive | ND | mg/kg | 0.20 | 1 | 03/29/19 11:06 | 03/29/19 13:15 | | N2 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60297823

QC Batch: 575618

Analysis Method: EPA 7470

QC Batch Method: EPA 7470

Analysis Description: 7470 Mercury

Associated Lab Samples: 60297823001

METHOD BLANK: 2361352

Matrix: Water

Associated Lab Samples: 60297823001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Mercury | mg/L | ND | 0.00020 | 03/27/19 10:28 | |

LABORATORY CONTROL SAMPLE: 2361353

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | mg/L | 0.005 | 0.0051 | 102 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2361354 2361355

| Parameter | Units | 60297626007 | | MS | | MSD | | % Rec | | Max | | Qual |
|-----------|-------|-------------|-------|-------------|-------------|--------|--------|-------|--------|--------|-----|------|
| | | Result | Conc. | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec | Limits | RPD | |
| Mercury | mg/L | 0.13J ug/L | 0.005 | 0.005 | 0.0050 | 0.0051 | 98 | 99 | 75-125 | 1 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE
Pace Project No.: 60297823

QC Batch: 575619 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 60297823001

METHOD BLANK: 2361378 Matrix: Water
Associated Lab Samples: 60297823001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Antimony | mg/L | ND | 0.015 | 03/27/19 10:14 | |
| Arsenic | mg/L | ND | 0.010 | 03/27/19 10:14 | |
| Beryllium | mg/L | ND | 0.0010 | 03/27/19 10:14 | |
| Cadmium | mg/L | ND | 0.0050 | 03/27/19 10:14 | |
| Chromium | mg/L | ND | 0.0050 | 03/27/19 10:14 | |
| Copper | mg/L | ND | 0.010 | 03/27/19 10:14 | |
| Lead | mg/L | ND | 0.010 | 03/27/19 10:14 | |
| Nickel | mg/L | ND | 0.0050 | 03/27/19 10:14 | |
| Selenium | mg/L | ND | 0.015 | 03/27/19 10:14 | |
| Silver | mg/L | ND | 0.0070 | 03/27/19 10:14 | |
| Thallium | mg/L | ND | 0.020 | 03/27/19 10:14 | |
| Zinc | mg/L | ND | 0.050 | 03/27/19 10:14 | |

LABORATORY CONTROL SAMPLE: 2361379

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Antimony | mg/L | 1 | 1.0 | 100 | 80-120 | |
| Arsenic | mg/L | 1 | 0.96 | 96 | 80-120 | |
| Beryllium | mg/L | 1 | 1.1 | 105 | 80-120 | |
| Cadmium | mg/L | 1 | 0.96 | 96 | 80-120 | |
| Chromium | mg/L | 1 | 1.0 | 102 | 80-120 | |
| Copper | mg/L | 1 | 0.99 | 99 | 80-120 | |
| Lead | mg/L | 1 | 1.0 | 102 | 80-120 | |
| Nickel | mg/L | 1 | 1.0 | 100 | 80-120 | |
| Selenium | mg/L | 1 | 1.0 | 100 | 80-120 | |
| Silver | mg/L | 0.5 | 0.51 | 101 | 80-120 | |
| Thallium | mg/L | 1 | 1.0 | 100 | 80-120 | |
| Zinc | mg/L | 1 | 0.99 | 99 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2361380 2361381

| Parameter | Units | 60297823001 | | 2361381 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual | |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|--|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | | | | |
| Antimony | mg/L | ND | 1 | 1 | 1.0 | 1.0 | 100 | 100 | 75-125 | 1 | 20 | |
| Arsenic | mg/L | ND | 1 | 1 | 0.96 | 0.95 | 96 | 95 | 75-125 | 1 | 20 | |
| Beryllium | mg/L | ND | 1 | 1 | 1.0 | 1.0 | 104 | 104 | 75-125 | 0 | 20 | |
| Cadmium | mg/L | ND | 1 | 1 | 0.96 | 0.95 | 96 | 95 | 75-125 | 1 | 20 | |
| Chromium | mg/L | 0.0051 | 1 | 1 | 1.0 | 1.0 | 100 | 100 | 75-125 | 0 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60297823

| Parameter | Units | 60297823001 | | 2361380 | | 2361381 | | % Rec | % Rec | % Rec | Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|-----------------|-----------|------------|----------|-------|--------|-------|--------|-----|---------|------|
| | | Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | | | | | | | |
| Copper | mg/L | ND | 1 | 1 | 1.0 | 0.99 | 99 | 98 | 75-125 | 1 | 20 | | | |
| Lead | mg/L | 0.023 | 1 | 1 | 1.0 | 1.0 | 100 | 99 | 75-125 | 1 | 20 | | | |
| Nickel | mg/L | ND | 1 | 1 | 0.99 | 0.98 | 98 | 98 | 75-125 | 1 | 20 | | | |
| Selenium | mg/L | ND | 1 | 1 | 1.0 | 0.99 | 100 | 99 | 75-125 | 1 | 20 | | | |
| Silver | mg/L | ND | 0.5 | 0.5 | 0.50 | 0.50 | 100 | 100 | 75-125 | 1 | 20 | | | |
| Thallium | mg/L | ND | 1 | 1 | 0.98 | 0.98 | 98 | 98 | 75-125 | 0 | 20 | | | |
| Zinc | mg/L | 0.056 | 1 | 1 | 1.0 | 1.0 | 97 | 96 | 75-125 | 1 | 20 | | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60297823

QC Batch: 575640

Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260

Analysis Description: 8260 MSV Water 10 mL Purge

Associated Lab Samples: 60297823001

METHOD BLANK: 2361447

Matrix: Water

Associated Lab Samples: 60297823001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------------------------|-------|--------------|-----------------|----------------|------------|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,1,1-Trichloroethane | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,1,2-Trichloroethane | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,1-Dichloroethane | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,1-Dichloroethene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,1-Dichloropropene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,2,3-Trichlorobenzene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,2,3-Trichloropropane | ug/L | ND | 2.5 | 03/26/19 19:43 | |
| 1,2,4-Trichlorobenzene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,2,4-Trimethylbenzene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 2.5 | 03/26/19 19:43 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,2-Dichlorobenzene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,2-Dichloroethane | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,2-Dichloroethene (Total) | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,2-Dichloropropane | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,3,5-Trimethylbenzene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,3-Dichlorobenzene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,3-Dichloropropane | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 1,4-Dichlorobenzene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 2,2-Dichloropropane | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 2-Butanone (MEK) | ug/L | ND | 10.0 | 03/26/19 19:43 | |
| 2-Chlorotoluene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 2-Hexanone | ug/L | ND | 10.0 | 03/26/19 19:43 | |
| 4-Chlorotoluene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 10.0 | 03/26/19 19:43 | |
| Acetone | ug/L | ND | 10.0 | 03/26/19 19:43 | |
| Benzene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Bromobenzene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Bromochloromethane | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Bromodichloromethane | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Bromoform | ug/L | ND | 2.0 | 03/26/19 19:43 | |
| Bromomethane | ug/L | ND | 5.0 | 03/26/19 19:43 | |
| Carbon disulfide | ug/L | ND | 5.0 | 03/26/19 19:43 | |
| Carbon tetrachloride | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Chlorobenzene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Chloroethane | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Chloroform | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Chloromethane | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| cis-1,2-Dichloroethene | ug/L | ND | 1.0 | 03/26/19 19:43 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60297823

METHOD BLANK: 2361447

Matrix: Water

Associated Lab Samples: 60297823001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---------------------------|-------|--------------|-----------------|----------------|------------|
| cis-1,3-Dichloropropene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Dibromochloromethane | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Dibromomethane | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Dichlorodifluoromethane | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Ethylbenzene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Hexachloro-1,3-butadiene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Isopropylbenzene (Cumene) | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Methyl-tert-butyl ether | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Methylene chloride | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| n-Butylbenzene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| n-Propylbenzene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Naphthalene | ug/L | ND | 10.0 | 03/26/19 19:43 | |
| p-Isopropyltoluene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| sec-Butylbenzene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Styrene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| tert-Butylbenzene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Tetrachloroethene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Toluene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| trans-1,2-Dichloroethene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| trans-1,3-Dichloropropene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Trichloroethene | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Trichlorofluoromethane | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Vinyl chloride | ug/L | ND | 1.0 | 03/26/19 19:43 | |
| Xylene (Total) | ug/L | ND | 3.0 | 03/26/19 19:43 | |
| 1,2-Dichloroethane-d4 (S) | % | 99 | 77-122 | 03/26/19 19:43 | |
| 4-Bromofluorobenzene (S) | % | 102 | 80-120 | 03/26/19 19:43 | |
| Toluene-d8 (S) | % | 95 | 80-120 | 03/26/19 19:43 | |

LABORATORY CONTROL SAMPLE: 2361448

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------------------------|-------|-------------|------------|-----------|--------------|------------|
| 1,1,1,2-Tetrachloroethane | ug/L | 20 | 20.7 | 104 | 77-123 | |
| 1,1,1-Trichloroethane | ug/L | 20 | 21.1 | 106 | 79-120 | |
| 1,1,2,2-Tetrachloroethane | ug/L | 20 | 20.7 | 104 | 71-122 | |
| 1,1,2-Trichloroethane | ug/L | 20 | 20.3 | 102 | 76-123 | |
| 1,1-Dichloroethane | ug/L | 20 | 20.2 | 101 | 78-117 | |
| 1,1-Dichloroethene | ug/L | 20 | 22.7 | 113 | 74-122 | |
| 1,1-Dichloropropene | ug/L | 20 | 21.1 | 105 | 83-115 | |
| 1,2,3-Trichlorobenzene | ug/L | 20 | 20.6 | 103 | 74-131 | |
| 1,2,3-Trichloropropane | ug/L | 20 | 20.9 | 105 | 77-126 | |
| 1,2,4-Trichlorobenzene | ug/L | 20 | 20.1 | 101 | 76-122 | |
| 1,2,4-Trimethylbenzene | ug/L | 20 | 20.9 | 104 | 74-127 | |
| 1,2-Dibromo-3-chloropropane | ug/L | 20 | 21.5 | 108 | 65-133 | |
| 1,2-Dibromoethane (EDB) | ug/L | 20 | 20.7 | 104 | 80-118 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60297823

LABORATORY CONTROL SAMPLE: 2361448

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------------------------|-------|-------------|------------|-----------|--------------|------------|
| 1,2-Dichlorobenzene | ug/L | 20 | 20.0 | 100 | 84-118 | |
| 1,2-Dichloroethane | ug/L | 20 | 20.0 | 100 | 73-120 | |
| 1,2-Dichloroethene (Total) | ug/L | 40 | 44.6 | 112 | 80-120 | |
| 1,2-Dichloropropane | ug/L | 20 | 19.9 | 99 | 78-115 | |
| 1,3,5-Trimethylbenzene | ug/L | 20 | 20.6 | 103 | 81-117 | |
| 1,3-Dichlorobenzene | ug/L | 20 | 20.3 | 102 | 84-116 | |
| 1,3-Dichloropropane | ug/L | 20 | 20.9 | 104 | 78-120 | |
| 1,4-Dichlorobenzene | ug/L | 20 | 19.7 | 99 | 83-115 | |
| 2,2-Dichloropropane | ug/L | 20 | 19.4 | 97 | 66-124 | |
| 2-Butanone (MEK) | ug/L | 100 | 113 | 113 | 54-133 | |
| 2-Chlorotoluene | ug/L | 20 | 21.2 | 106 | 80-120 | |
| 2-Hexanone | ug/L | 100 | 103 | 103 | 60-133 | |
| 4-Chlorotoluene | ug/L | 20 | 20.1 | 101 | 82-120 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | 100 | 105 | 105 | 62-130 | |
| Acetone | ug/L | 100 | 121 | 121 | 54-130 | |
| Benzene | ug/L | 20 | 20.7 | 104 | 80-120 | |
| Bromobenzene | ug/L | 20 | 19.7 | 99 | 83-118 | |
| Bromochloromethane | ug/L | 20 | 20.4 | 102 | 79-118 | |
| Bromodichloromethane | ug/L | 20 | 20.6 | 103 | 78-121 | |
| Bromoform | ug/L | 20 | 21.4 | 107 | 62-137 | |
| Bromomethane | ug/L | 20 | 18.7 | 93 | 41-145 | |
| Carbon disulfide | ug/L | 20 | 26.5 | 132 | 64-119 L1 | |
| Carbon tetrachloride | ug/L | 20 | 21.0 | 105 | 77-122 | |
| Chlorobenzene | ug/L | 20 | 20.3 | 101 | 80-123 | |
| Chloroethane | ug/L | 20 | 22.4 | 112 | 60-146 | |
| Chloroform | ug/L | 20 | 20.6 | 103 | 81-116 | |
| Chloromethane | ug/L | 20 | 18.9 | 94 | 29-154 | |
| cis-1,2-Dichloroethene | ug/L | 20 | 20.6 | 103 | 80-120 | |
| cis-1,3-Dichloropropene | ug/L | 20 | 20.8 | 104 | 78-118 | |
| Dibromochloromethane | ug/L | 20 | 18.5 | 93 | 73-128 | |
| Dibromomethane | ug/L | 20 | 21.1 | 106 | 83-115 | |
| Dichlorodifluoromethane | ug/L | 20 | 19.2 | 96 | 13-185 | |
| Ethylbenzene | ug/L | 20 | 20.6 | 103 | 80-120 | |
| Hexachloro-1,3-butadiene | ug/L | 20 | 20.7 | 103 | 75-130 | |
| Isopropylbenzene (Cumene) | ug/L | 20 | 20.5 | 103 | 81-115 | |
| Methyl-tert-butyl ether | ug/L | 20 | 23.0 | 115 | 67-125 | |
| Methylene chloride | ug/L | 20 | 21.2 | 106 | 80-126 | |
| n-Butylbenzene | ug/L | 20 | 20.3 | 101 | 83-122 | |
| n-Propylbenzene | ug/L | 20 | 21.1 | 105 | 83-116 | |
| Naphthalene | ug/L | 20 | 19.7 | 98 | 73-125 | |
| p-Isopropyltoluene | ug/L | 20 | 19.9 | 99 | 83-116 | |
| sec-Butylbenzene | ug/L | 20 | 20.3 | 102 | 80-124 | |
| Styrene | ug/L | 20 | 20.9 | 104 | 85-120 | |
| tert-Butylbenzene | ug/L | 20 | 20.5 | 103 | 80-120 | |
| Tetrachloroethene | ug/L | 20 | 20.3 | 101 | 77-121 | |
| Toluene | ug/L | 20 | 19.9 | 100 | 80-120 | |
| trans-1,2-Dichloroethene | ug/L | 20 | 24.1 | 120 | 80-120 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60297823

LABORATORY CONTROL SAMPLE: 2361448

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---------------------------|-------|-------------|------------|-----------|--------------|------------|
| trans-1,3-Dichloropropene | ug/L | 20 | 20.1 | 101 | 76-123 | |
| Trichloroethene | ug/L | 20 | 21.2 | 106 | 80-121 | |
| Trichlorofluoromethane | ug/L | 20 | 19.3 | 96 | 64-124 | |
| Vinyl chloride | ug/L | 20 | 19.7 | 98 | 46-162 | |
| Xylene (Total) | ug/L | 60 | 61.7 | 103 | 80-120 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 101 | 77-122 | |
| 4-Bromofluorobenzene (S) | % | | | 98 | 80-120 | |
| Toluene-d8 (S) | % | | | 99 | 80-120 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60297823

QC Batch: 114825

Analysis Method: SW-846 7.3.4.2

QC Batch Method: SW-846 7.3.4.2

Analysis Description: Reactive Sulfide

Associated Lab Samples: 60297823001

METHOD BLANK: 517034

Matrix: Solid

Associated Lab Samples: 60297823001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-------------------|-------|--------------|-----------------|----------------|------------|
| Sulfide, Reactive | mg/kg | ND | 60.0 | 03/29/19 14:55 | N2 |

SAMPLE DUPLICATE: 517035

| Parameter | Units | 60297823001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|-------------------|-------|--------------------|------------|-----|---------|------------|
| Sulfide, Reactive | mg/kg | ND | 160 | | 20 | N2 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60297823

QC Batch: 575750

Analysis Method: EPA 9040

QC Batch Method: EPA 9040

Analysis Description: 9040 pH

Associated Lab Samples: 60297823001

SAMPLE DUPLICATE: 2361875

| Parameter | Units | 60297651001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|-----------|------------|-----------------------|---------------|-----|------------|------------|
| pH | Std. Units | 6.0 | 6.0 | 0 | 10 | H6 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60297823

| | |
|-------------------------------------|---|
| QC Batch: 114824 | Analysis Method: SW-846 7.3.3.2 |
| QC Batch Method: SW-846 7.3.3.2 | Analysis Description: 733C Reactive Cyanide |
| Associated Lab Samples: 60297823001 | |

METHOD BLANK: 517032 Matrix: Solid

Associated Lab Samples: 60297823001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-------------------|-------|--------------|-----------------|----------------|------------|
| Cyanide, Reactive | mg/kg | ND | 0.20 | 03/29/19 13:15 | N2 |

SAMPLE DUPLICATE: 517033

| Parameter | Units | 60297823001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|-------------------|-------|--------------------|------------|-----|---------|------------|
| Cyanide, Reactive | mg/kg | ND | ND | | 20 | N2 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS-FINTUBE

Pace Project No.: 60297823

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-D Pace Analytical Services - Dallas

PASI-K Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: 575640

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

H6 Analysis initiated outside of the 15 minute EPA required holding time.

L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS-FINTUBE

Pace Project No.: 60297823

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|----------------|-----------------|----------|-------------------|------------------|
| 60297823001 | SSD14 Water WC | EPA 3010 | 575619 | EPA 6010 | 575661 |
| 60297823001 | SSD14 Water WC | EPA 7470 | 575618 | EPA 7470 | 575677 |
| 60297823001 | SSD14 Water WC | EPA 5030B/8260 | 575640 | | |
| 60297823001 | SSD14 Water WC | EPA 1010 | 575747 | | |
| 60297823001 | SSD14 Water WC | SW-846 7.3.4.2 | 114825 | SW-846 7.3.4.2 | 114867 |
| 60297823001 | SSD14 Water WC | EPA 9040 | 575750 | | |
| 60297823001 | SSD14 Water WC | SW-846 7.3.3.2 | 114824 | SW-846 7.3.3.2 | 114866 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Sample Condition Upon Receipt

WO#: 60297823

 60297823

Client Name: EWI
 Courier: FedEx UPS VIA Clay PEX ECI Pace Xroads Client Other
 Tracking #: 7249 1909 1059 Pace Shipping Label Used? Yes No
 Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No
 Packing Material: Bubble Wrap Bubble Bags Foam None Other Zplc
 Thermometer Used: T-298 Type of Ice: WV Blue None
 Cooler Temperature (°C): As-read 2.9 Corr. Factor -0.1 Corrected 2.8
 Date and initials of person examining contents: LR 3-26-19

Temperature should be above freezing to 6°C

| | | |
|--|--|--|
| Chain of Custody present: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Chain of Custody relinquished: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples arrived within holding time: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Short Hold Time analyses (<72hr): | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Rush Turn Around Time requested: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | <u>24 hr</u> |
| Sufficient volume: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Correct containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Pace containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers intact: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Filtered volume received for dissolved tests? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Sample labels match COC: Date / time / ID / analyses | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples contain multiple phases? Matrix: <u>WT</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | List sample IDs, volumes, lot #'s of preservative and the date/time added. |
| Cyanide water sample checks: | | |
| Lead acetate strip turns dark? (Record only) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Potassium iodide test strip turns blue/purple? (Preserve) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Trip Blank present: | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Headspace in VOA vials (>6mm): | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Samples from USDA Regulated Area: State: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Additional labels attached to 5035A / TX1005 vials in the field? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N
 Person Contacted: _____ Date/Time: _____
 Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.


| | | | |
|--|---|--|----------------------------|
| Section A Required Client Information: | Section B Required Project Information: | Section C Invoice Information: | Page: <u>1</u> of <u>1</u> |
| Company: <u>Environmental Services-Tulsa, OK</u> | Report To: <u>Moore, Anthony</u> | Attention: <u>2270428</u> | |
| Address: <u>2929 E 55th Pl</u> | Copy To: | Company Name: | |
| City: <u>Suite A, Tulsa, OK 74145</u> | Purchase Order No.: | Address: | |
| Phone: <u>918-871-4441</u> | Project Name: <u>Evans-Finube</u> | Reference: | |
| Fax: | Project Number: | Regulatory Agency: | |
| Requested Due Date: <u>TAT</u> | | NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> | |
| | | UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/> | |
| | | Site Location STATE: <u>OK</u> | |

| ITEM # | Section D Required Client Information | Matrix Codes MATRIX / CODE | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED | | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|--------|--|---|-----------------------------|---------------------|--------------------|---------------------------|-----------------|---|-----------------------------------|-------------------------|----------------------------|
| | | | | COMPOSITE START | COMPOSITE END/GRAB | | | | | | |
| 1 | SSDI4 water WC | DW WT WW P SL OL WP AR TS OT | WTG | DATE: 3/25/19 14:50 | TIME: 14:50 | | 0 X | Analysis Test ↑ Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₈ Methanol Other | Y | | 002978323 |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS | | | | | | |
|---------------------|-------------------------------|----------------|-------------|---------------------------|----------------|-------------|-------------------|----------|---------------|------------|----------|----------|----------|
| | | | | | | | Received on | Custody | Sealed Cooler | Temp in °C | | | |
| | <u>Ruggie W</u> | <u>3/25/19</u> | <u>1700</u> | <u>L. Ruffalo</u> | <u>3-26-19</u> | <u>0830</u> | <u>Y</u> | <u>Y</u> | <u>Y</u> | <u>2.8</u> | <u>Y</u> | <u>Y</u> | <u>Y</u> |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Venzie Wilson
 SIGNATURE of SAMPLER: [Signature]
 DATE Signed (MM/DD/YY): 03/25/19

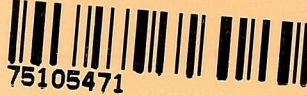
ORIGINAL

| | | |
|--|---|--|
|  | Document Name: Sample Condition Upon Receipt | Document Revised: 03-14-19 Page 1 of 1 |
| | Document No.: F-DAL-C-001-rev.9 | Issuing Authority: Pace Dallas Quality Office |

Sample Condition Upon Receipt

Dallas Ft Worth

WO# : 75105471



Client Name: DALLAS Project Work order: _____

Courier: FedEX UPS USPS Client LSO PACE Other: _____

Tracking #: 4746 8744 2167

Custody Seal on Cooler/Box: Yes No Packing Material: Bubble Wrap/Bags Foam None Other

Received on ice: Yes No Type of Ice: Wet Blue

Thermometer Used: IR-11 Cooler Temp °C: -0.3 (Recorded) 0 (Correction Factor) -0.3 (Actual)

Temperature should be above freezing to 6°C.

| | |
|---|---|
| Chain of Custody relinquished | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Sampler name & signature on COC | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <u>IRWD</u> |
| Short HT analyses (<72 hrs) | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Sufficient Volume received | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Correct Container used | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Container Intact | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Sample pH Acceptable pH Strips: _____ | Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/> |
| Residual Chlorine Present Cl Strips: _____ | Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/> |
| Sulfide Present Lead Acetate Strips: _____ | Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/> |
| Are soil samples (volatiles, TPH) received in 5035A Kits | Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/> |
| Unpreserved 5035A soil frozen within 48 hrs | Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/> |
| Headspace in VOA (>6mm) | Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/> |
| Project sampled in USDA Regulated Area: State Sampled: <u>OK</u> | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Non-Conformance(s): | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |

March 29, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS-FINTUBE
Pace Project No.: 60298119

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on March 28, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS-FINTUBE

Pace Project No.: 60298119

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Arkansas Drinking Water

Missouri Certification Number: 10090

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

Dallas Certification IDs:

400 West Bethany Dr Suite 190, Allen, TX 75013

Texas T104704232-18-26

EPA# TX00074

Florida Certification #: E871118

Texas Certification #: T104704232-18-26

Kansas Certification #: E-10388

Arkansas Certification #: 88-0647

Oklahoma Certification #: 8727

Louisiana Certification #: 30686

Iowa Certification #: 408

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS-FINTUBE

Pace Project No.: 60298119

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|-----------|--------|----------------|----------------|
| 60298119001 | PIT WATER | Water | 03/27/19 13:30 | 03/28/19 08:30 |
| 60298119002 | PIT WATER | Water | 03/27/19 13:30 | 03/28/19 09:05 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS-FINTUBE

Pace Project No.: 60298119

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------|----------------|----------|-------------------|------------|
| 60298119001 | PIT WATER | EPA 8082 | AJB1 | 8 | PASI-K |
| | | EPA 6010 | JDE | 7 | PASI-K |
| | | EPA 7470 | HKC | 1 | PASI-K |
| | | EPA 5030B/8260 | EAG | 69 | PASI-K |
| 60298119002 | PIT WATER | EPA 1010 | JAP2 | 1 | PASI-D |
| | | SW-846 7.3.4.2 | LN1 | 1 | PASI-D |
| | | EPA 9040 | LN1 | 1 | PASI-D |
| | | SW-846 7.3.3.2 | SRT | 1 | PASI-D |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS-FINTUBE

Pace Project No.: 60298119

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|------------|--------------|----------------|------------|
| 60298119001 | PIT WATER | | | | | |
| EPA 6010 | Arsenic | 0.021 | mg/L | 0.010 | 03/29/19 12:47 | |
| EPA 6010 | Barium | 0.29 | mg/L | 0.0050 | 03/29/19 12:47 | |
| EPA 6010 | Chromium | 0.059 | mg/L | 0.0050 | 03/29/19 12:47 | |
| EPA 6010 | Lead | 0.083 | mg/L | 0.010 | 03/29/19 12:47 | |
| EPA 5030B/8260 | Acetone | 11.4 | ug/L | 10.0 | 03/28/19 17:48 | |
| EPA 5030B/8260 | Benzene | 11.8 | ug/L | 1.0 | 03/28/19 17:48 | |
| EPA 5030B/8260 | n-Butylbenzene | 1.2 | ug/L | 1.0 | 03/28/19 17:48 | |
| EPA 5030B/8260 | Ethylbenzene | 8.5 | ug/L | 1.0 | 03/28/19 17:48 | |
| EPA 5030B/8260 | Isopropylbenzene (Cumene) | 1.6 | ug/L | 1.0 | 03/28/19 17:48 | |
| EPA 5030B/8260 | n-Propylbenzene | 2.3 | ug/L | 1.0 | 03/28/19 17:48 | |
| EPA 5030B/8260 | Toluene | 45.3 | ug/L | 1.0 | 03/28/19 17:48 | |
| EPA 5030B/8260 | 1,2,4-Trimethylbenzene | 21.4 | ug/L | 1.0 | 03/28/19 17:48 | |
| EPA 5030B/8260 | 1,3,5-Trimethylbenzene | 6.4 | ug/L | 1.0 | 03/28/19 17:48 | |
| EPA 5030B/8260 | Xylene (Total) | 60.5 | ug/L | 3.0 | 03/28/19 17:48 | |
| EPA 5030B/8260 | Preservation pH | 1.0 | | 0.10 | 03/28/19 17:48 | |
| 60298119002 | PIT WATER | | | | | |
| EPA 1010 | Flashpoint | >158 | deg F | 32.9 | 03/29/19 09:58 | |
| EPA 9040 | pH at 25 Degrees C | 7.6 | Std. Units | 0.10 | 03/29/19 15:04 | H3,H6 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60298119

Method: EPA 8082

Description: 8082 GCS PCB

Client: Environmental Works_OK office

Date: March 29, 2019

General Information:

1 sample was analyzed for EPA 8082. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 576072

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

Analyte Comments:

QC Batch: 576072

1e: A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

- PIT WATER (Lab ID: 60298119001)
 - PCB-1016 (Aroclor 1016)
 - PCB-1221 (Aroclor 1221)
 - PCB-1232 (Aroclor 1232)
 - PCB-1242 (Aroclor 1242)
 - PCB-1248 (Aroclor 1248)
 - PCB-1254 (Aroclor 1254)
 - PCB-1260 (Aroclor 1260)

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60298119

Method: EPA 6010

Description: 6010 MET ICP

Client: Environmental Works_OK office

Date: March 29, 2019

General Information:

1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60298119

Method: EPA 7470

Description: 7470 Mercury

Client: Environmental Works_OK office

Date: March 29, 2019

General Information:

1 sample was analyzed for EPA 7470. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7470 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 576146

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60298075001

R1: RPD value was outside control limits.

- MSD (Lab ID: 2363657)
- Mercury

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60298119

Method: EPA 5030B/8260

Description: 8260 MSV

Client: Environmental Works_OK office

Date: March 29, 2019

General Information:

1 sample was analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60298119

Method: EPA 1010

Description: 1010 Flashpoint,Closed Cup

Client: Environmental Works_OK office

Date: March 29, 2019

General Information:

1 sample was analyzed for EPA 1010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60298119

Method: SW-846 7.3.4.2

Description: Reactive Sulfide

Client: Environmental Works_OK office

Date: March 29, 2019

General Information:

1 sample was analyzed for SW-846 7.3.4.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with SW-846 7.3.4.2 with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 114825

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 517034)
 - Sulfide, Reactive
- DUP (Lab ID: 517035)
 - Sulfide, Reactive
- PIT WATER (Lab ID: 60298119002)
 - Sulfide, Reactive

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60298119

Method: EPA 9040

Description: 9040 pH

Client: Environmental Works_OK office

Date: March 29, 2019

General Information:

1 sample was analyzed for EPA 9040. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

H3: Sample was received or analysis requested beyond the recognized method holding time.

- PIT WATER (Lab ID: 60298119002)

H6: Analysis initiated outside of the 15 minute EPA required holding time.

- PIT WATER (Lab ID: 60298119002)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60298119

Method: SW-846 7.3.3.2

Description: 733C S Reactive Cyanide

Client: Environmental Works_OK office

Date: March 29, 2019

General Information:

1 sample was analyzed for SW-846 7.3.3.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with SW-846 7.3.3.2 with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 114824

N2: The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

- BLANK (Lab ID: 517032)
 - Cyanide, Reactive
- DUP (Lab ID: 517033)
 - Cyanide, Reactive
- PIT WATER (Lab ID: 60298119002)
 - Cyanide, Reactive

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60298119

| Sample: PIT WATER | Lab ID: 60298119001 | Collected: 03/27/19 13:30 | Received: 03/28/19 08:30 | Matrix: Water | | | | |
|--|---------------------|---------------------------|--------------------------|---------------|----------------|----------------|------------|------|
| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
| 8082 GCS PCB | | | | | | | | |
| Analytical Method: EPA 8082 Preparation Method: EPA 3510 | | | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/L | 0.93 | 1 | 03/28/19 17:00 | 03/29/19 10:31 | 12674-11-2 | 1e |
| PCB-1221 (Aroclor 1221) | ND | ug/L | 0.93 | 1 | 03/28/19 17:00 | 03/29/19 10:31 | 11104-28-2 | 1e |
| PCB-1232 (Aroclor 1232) | ND | ug/L | 0.93 | 1 | 03/28/19 17:00 | 03/29/19 10:31 | 11141-16-5 | 1e |
| PCB-1242 (Aroclor 1242) | ND | ug/L | 0.93 | 1 | 03/28/19 17:00 | 03/29/19 10:31 | 53469-21-9 | 1e |
| PCB-1248 (Aroclor 1248) | ND | ug/L | 0.93 | 1 | 03/28/19 17:00 | 03/29/19 10:31 | 12672-29-6 | 1e |
| PCB-1254 (Aroclor 1254) | ND | ug/L | 0.93 | 1 | 03/28/19 17:00 | 03/29/19 10:31 | 11097-69-1 | 1e |
| PCB-1260 (Aroclor 1260) | ND | ug/L | 0.93 | 1 | 03/28/19 17:00 | 03/29/19 10:31 | 11096-82-5 | 1e |
| Surrogates | | | | | | | | |
| Decachlorobiphenyl (S) | 71 | % | 38-124 | 1 | 03/28/19 17:00 | 03/29/19 10:31 | 2051-24-3 | |
| 6010 MET ICP | | | | | | | | |
| Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Arsenic | 0.021 | mg/L | 0.010 | 1 | 03/28/19 15:00 | 03/29/19 12:47 | 7440-38-2 | |
| Barium | 0.29 | mg/L | 0.0050 | 1 | 03/28/19 15:00 | 03/29/19 12:47 | 7440-39-3 | |
| Cadmium | ND | mg/L | 0.0050 | 1 | 03/28/19 15:00 | 03/29/19 12:47 | 7440-43-9 | |
| Chromium | 0.059 | mg/L | 0.0050 | 1 | 03/28/19 15:00 | 03/29/19 12:47 | 7440-47-3 | |
| Lead | 0.083 | mg/L | 0.010 | 1 | 03/28/19 15:00 | 03/29/19 12:47 | 7439-92-1 | |
| Selenium | ND | mg/L | 0.015 | 1 | 03/28/19 15:00 | 03/29/19 12:47 | 7782-49-2 | |
| Silver | ND | mg/L | 0.0070 | 1 | 03/28/19 15:00 | 03/29/19 12:47 | 7440-22-4 | |
| 7470 Mercury | | | | | | | | |
| Analytical Method: EPA 7470 Preparation Method: EPA 7470 | | | | | | | | |
| Mercury | ND | mg/L | 0.00020 | 1 | 03/28/19 17:02 | 03/29/19 14:53 | 7439-97-6 | |
| 8260 MSV | | | | | | | | |
| Analytical Method: EPA 5030B/8260 | | | | | | | | |
| Acetone | 11.4 | ug/L | 10.0 | 1 | | 03/28/19 17:48 | 67-64-1 | |
| Benzene | 11.8 | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 71-43-2 | |
| Bromobenzene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 108-86-1 | |
| Bromochloromethane | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 74-97-5 | |
| Bromodichloromethane | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 75-27-4 | |
| Bromoform | ND | ug/L | 2.0 | 1 | | 03/28/19 17:48 | 75-25-2 | |
| Bromomethane | ND | ug/L | 5.0 | 1 | | 03/28/19 17:48 | 74-83-9 | |
| 2-Butanone (MEK) | ND | ug/L | 10.0 | 1 | | 03/28/19 17:48 | 78-93-3 | |
| n-Butylbenzene | 1.2 | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 104-51-8 | |
| sec-Butylbenzene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 135-98-8 | |
| tert-Butylbenzene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 98-06-6 | |
| Carbon disulfide | ND | ug/L | 5.0 | 1 | | 03/28/19 17:48 | 75-15-0 | |
| Carbon tetrachloride | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 56-23-5 | |
| Chlorobenzene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 108-90-7 | |
| Chloroethane | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 75-00-3 | |
| Chloroform | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 67-66-3 | |
| Chloromethane | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 74-87-3 | |
| 2-Chlorotoluene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 95-49-8 | |
| 4-Chlorotoluene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 106-43-4 | |
| 1,2-Dibromo-3-chloropropane | ND | ug/L | 2.5 | 1 | | 03/28/19 17:48 | 96-12-8 | |
| Dibromochloromethane | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 124-48-1 | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 106-93-4 | |
| Dibromomethane | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 74-95-3 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60298119

| Sample: PIT WATER | | Lab ID: 60298119001 | Collected: 03/27/19 13:30 | Received: 03/28/19 08:30 | Matrix: Water | | | |
|-----------------------------|---------|-----------------------------------|---------------------------|--------------------------|---------------|----------------|------------|------|
| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
| 8260 MSV | | Analytical Method: EPA 5030B/8260 | | | | | | |
| 1,2-Dichlorobenzene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 95-50-1 | |
| 1,3-Dichlorobenzene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 541-73-1 | |
| 1,4-Dichlorobenzene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 106-46-7 | |
| Dichlorodifluoromethane | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 75-71-8 | |
| 1,1-Dichloroethane | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 75-34-3 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 107-06-2 | |
| 1,2-Dichloroethene (Total) | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 540-59-0 | |
| 1,1-Dichloroethene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 75-35-4 | |
| cis-1,2-Dichloroethene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 156-59-2 | |
| trans-1,2-Dichloroethene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 156-60-5 | |
| 1,2-Dichloropropane | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 78-87-5 | |
| 1,3-Dichloropropane | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 142-28-9 | |
| 2,2-Dichloropropane | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 594-20-7 | |
| 1,1-Dichloropropene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 563-58-6 | |
| cis-1,3-Dichloropropene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 10061-01-5 | |
| trans-1,3-Dichloropropene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 10061-02-6 | |
| Ethylbenzene | 8.5 | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 100-41-4 | |
| Hexachloro-1,3-butadiene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 87-68-3 | |
| 2-Hexanone | ND | ug/L | 10.0 | 1 | | 03/28/19 17:48 | 591-78-6 | |
| Isopropylbenzene (Cumene) | 1.6 | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 98-82-8 | |
| p-Isopropyltoluene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 99-87-6 | |
| Methylene chloride | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 75-09-2 | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10.0 | 1 | | 03/28/19 17:48 | 108-10-1 | |
| Methyl-tert-butyl ether | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 10.0 | 1 | | 03/28/19 17:48 | 91-20-3 | |
| n-Propylbenzene | 2.3 | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 103-65-1 | |
| Styrene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 100-42-5 | |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 630-20-6 | |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 79-34-5 | |
| Tetrachloroethene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 127-18-4 | |
| Toluene | 45.3 | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 108-88-3 | |
| 1,2,3-Trichlorobenzene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 87-61-6 | |
| 1,2,4-Trichlorobenzene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 120-82-1 | |
| 1,1,1-Trichloroethane | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 71-55-6 | |
| 1,1,2-Trichloroethane | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 79-00-5 | |
| Trichloroethene | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 79-01-6 | |
| Trichlorofluoromethane | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 75-69-4 | |
| 1,2,3-Trichloropropane | ND | ug/L | 2.5 | 1 | | 03/28/19 17:48 | 96-18-4 | |
| 1,2,4-Trimethylbenzene | 21.4 | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 95-63-6 | |
| 1,3,5-Trimethylbenzene | 6.4 | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 108-67-8 | |
| Vinyl chloride | ND | ug/L | 1.0 | 1 | | 03/28/19 17:48 | 75-01-4 | |
| Xylene (Total) | 60.5 | ug/L | 3.0 | 1 | | 03/28/19 17:48 | 1330-20-7 | |
| Surrogates | | | | | | | | |
| 4-Bromofluorobenzene (S) | 98 | % | 80-120 | 1 | | 03/28/19 17:48 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 96 | % | 77-122 | 1 | | 03/28/19 17:48 | 17060-07-0 | |
| Toluene-d8 (S) | 101 | % | 80-120 | 1 | | 03/28/19 17:48 | 2037-26-5 | |
| Preservation pH | 1.0 | | 0.10 | 1 | | 03/28/19 17:48 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60298119

| Sample: PIT WATER | | Lab ID: 60298119002 | Collected: 03/27/19 13:30 | Received: 03/28/19 09:05 | Matrix: Water | | | |
|------------------------------------|---------|--|---------------------------|--------------------------|----------------|----------------|---------|-------|
| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
| 1010 Flashpoint, Closed Cup | | Analytical Method: EPA 1010 | | | | | | |
| Flashpoint | >158 | deg F | 32.9 | 1 | | 03/29/19 09:58 | | |
| Reactive Sulfide | | Analytical Method: SW-846 7.3.4.2 Preparation Method: SW-846 7.3.4.2 | | | | | | |
| Sulfide, Reactive | ND | mg/kg | 59.9 | 1 | 03/29/19 11:06 | 03/29/19 15:02 | | N2 |
| 9040 pH | | Analytical Method: EPA 9040 | | | | | | |
| pH at 25 Degrees C | 7.6 | Std. Units | 0.10 | 1 | | 03/29/19 15:04 | | H3,H6 |
| 733C S Reactive Cyanide | | Analytical Method: SW-846 7.3.3.2 Preparation Method: SW-846 7.3.3.2 | | | | | | |
| Cyanide, Reactive | ND | mg/kg | 0.20 | 1 | 03/29/19 11:06 | 03/29/19 13:16 | | N2 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60298119

| | |
|-------------------------------------|------------------------------------|
| QC Batch: 576146 | Analysis Method: EPA 7470 |
| QC Batch Method: EPA 7470 | Analysis Description: 7470 Mercury |
| Associated Lab Samples: 60298119001 | |

METHOD BLANK: 2363654 Matrix: Water

Associated Lab Samples: 60298119001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Mercury | mg/L | ND | 0.00020 | 03/29/19 14:42 | |

LABORATORY CONTROL SAMPLE: 2363655

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | mg/L | 0.005 | 0.0050 | 101 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2363656 2363657

| Parameter | Units | 60298075001 | | 2363656 | | 2363657 | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|-----------------|-----------|-----------------|-----------|-----------------|--------------|--------|---------|----------|
| | | MS Result | MSD Spike Conc. | MS Result | MSD Spike Conc. | MS Result | MSD Spike Conc. | | | | |
| Mercury | mg/L | 0.67 ug/L | 0.005 | 0.005 | 0.0066 | 0.0054 | 119 | 94 | 75-125 | 21 | 20 H3,R1 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60298119

| | |
|-------------------------------------|--------------------------------|
| QC Batch: 576127 | Analysis Method: EPA 6010 |
| QC Batch Method: EPA 3010 | Analysis Description: 6010 MET |
| Associated Lab Samples: 60298119001 | |

METHOD BLANK: 2363582 Matrix: Water
Associated Lab Samples: 60298119001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Arsenic | mg/L | ND | 0.010 | 03/29/19 12:45 | |
| Barium | mg/L | ND | 0.0050 | 03/29/19 12:45 | |
| Cadmium | mg/L | ND | 0.0050 | 03/29/19 12:45 | |
| Chromium | mg/L | ND | 0.0050 | 03/29/19 12:45 | |
| Lead | mg/L | ND | 0.010 | 03/29/19 12:45 | |
| Selenium | mg/L | ND | 0.015 | 03/29/19 12:45 | |
| Silver | mg/L | ND | 0.0070 | 03/29/19 12:45 | |

LABORATORY CONTROL SAMPLE: 2363583

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Arsenic | mg/L | 1 | 0.96 | 96 | 80-120 | |
| Barium | mg/L | 1 | 0.99 | 99 | 80-120 | |
| Cadmium | mg/L | 1 | 1.0 | 100 | 80-120 | |
| Chromium | mg/L | 1 | 1.0 | 100 | 80-120 | |
| Lead | mg/L | 1 | 1.0 | 102 | 80-120 | |
| Selenium | mg/L | 1 | 1.0 | 101 | 80-120 | |
| Silver | mg/L | 0.5 | 0.50 | 100 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2363584 2363585

| Parameter | Units | 60298119001 | | 2363585 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | | | |
| Arsenic | mg/L | 0.021 | 1 | 1 | 0.99 | 0.98 | 97 | 96 | 75-125 | 1 | 20 |
| Barium | mg/L | 0.29 | 1 | 1 | 1.3 | 1.3 | 99 | 98 | 75-125 | 1 | 20 |
| Cadmium | mg/L | ND | 1 | 1 | 0.99 | 1.0 | 99 | 100 | 75-125 | 1 | 20 |
| Chromium | mg/L | 0.059 | 1 | 1 | 1.1 | 1.1 | 99 | 100 | 75-125 | 1 | 20 |
| Lead | mg/L | 0.083 | 1 | 1 | 1.1 | 1.1 | 97 | 98 | 75-125 | 1 | 20 |
| Selenium | mg/L | ND | 1 | 1 | 0.99 | 1.0 | 99 | 100 | 75-125 | 1 | 20 |
| Silver | mg/L | ND | 0.5 | 0.5 | 0.50 | 0.50 | 100 | 101 | 75-125 | 1 | 20 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60298119

QC Batch: 576107

Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260

Analysis Description: 8260 MSV Water 10 mL Purge

Associated Lab Samples: 60298119001

METHOD BLANK: 2363470

Matrix: Water

Associated Lab Samples: 60298119001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------------------------|-------|--------------|-----------------|----------------|------------|
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,1,1-Trichloroethane | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,1,2-Trichloroethane | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,1-Dichloroethane | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,1-Dichloroethene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,1-Dichloropropene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,2,3-Trichlorobenzene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,2,3-Trichloropropane | ug/L | ND | 2.5 | 03/28/19 14:00 | |
| 1,2,4-Trichlorobenzene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,2,4-Trimethylbenzene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 2.5 | 03/28/19 14:00 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,2-Dichlorobenzene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,2-Dichloroethane | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,2-Dichloroethene (Total) | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,2-Dichloropropane | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,3,5-Trimethylbenzene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,3-Dichlorobenzene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,3-Dichloropropane | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 1,4-Dichlorobenzene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 2,2-Dichloropropane | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 2-Butanone (MEK) | ug/L | ND | 10.0 | 03/28/19 14:00 | |
| 2-Chlorotoluene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 2-Hexanone | ug/L | ND | 10.0 | 03/28/19 14:00 | |
| 4-Chlorotoluene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 10.0 | 03/28/19 14:00 | |
| Acetone | ug/L | ND | 10.0 | 03/28/19 14:00 | |
| Benzene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Bromobenzene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Bromochloromethane | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Bromodichloromethane | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Bromoform | ug/L | ND | 2.0 | 03/28/19 14:00 | |
| Bromomethane | ug/L | ND | 5.0 | 03/28/19 14:00 | |
| Carbon disulfide | ug/L | ND | 5.0 | 03/28/19 14:00 | |
| Carbon tetrachloride | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Chlorobenzene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Chloroethane | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Chloroform | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Chloromethane | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| cis-1,2-Dichloroethene | ug/L | ND | 1.0 | 03/28/19 14:00 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60298119

METHOD BLANK: 2363470

Matrix: Water

Associated Lab Samples: 60298119001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---------------------------|-------|--------------|-----------------|----------------|------------|
| cis-1,3-Dichloropropene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Dibromochloromethane | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Dibromomethane | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Dichlorodifluoromethane | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Ethylbenzene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Hexachloro-1,3-butadiene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Isopropylbenzene (Cumene) | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Methyl-tert-butyl ether | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Methylene chloride | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| n-Butylbenzene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| n-Propylbenzene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Naphthalene | ug/L | ND | 10.0 | 03/28/19 14:00 | |
| p-Isopropyltoluene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| sec-Butylbenzene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Styrene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| tert-Butylbenzene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Tetrachloroethene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Toluene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| trans-1,2-Dichloroethene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| trans-1,3-Dichloropropene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Trichloroethene | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Trichlorofluoromethane | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Vinyl chloride | ug/L | ND | 1.0 | 03/28/19 14:00 | |
| Xylene (Total) | ug/L | ND | 3.0 | 03/28/19 14:00 | |
| 1,2-Dichloroethane-d4 (S) | % | 100 | 77-122 | 03/28/19 14:00 | |
| 4-Bromofluorobenzene (S) | % | 97 | 80-120 | 03/28/19 14:00 | |
| Toluene-d8 (S) | % | 100 | 80-120 | 03/28/19 14:00 | |

LABORATORY CONTROL SAMPLE: 2363471

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------------------------|-------|-------------|------------|-----------|--------------|------------|
| 1,1,1,2-Tetrachloroethane | ug/L | 20 | 19.2 | 96 | 77-123 | |
| 1,1,1-Trichloroethane | ug/L | 20 | 18.8 | 94 | 79-120 | |
| 1,1,2,2-Tetrachloroethane | ug/L | 20 | 18.3 | 92 | 71-122 | |
| 1,1,2-Trichloroethane | ug/L | 20 | 19.0 | 95 | 76-123 | |
| 1,1-Dichloroethane | ug/L | 20 | 18.0 | 90 | 78-117 | |
| 1,1-Dichloroethene | ug/L | 20 | 19.1 | 95 | 74-122 | |
| 1,1-Dichloropropene | ug/L | 20 | 19.1 | 96 | 83-115 | |
| 1,2,3-Trichlorobenzene | ug/L | 20 | 22.0 | 110 | 74-131 | |
| 1,2,3-Trichloropropane | ug/L | 20 | 20.5 | 102 | 77-126 | |
| 1,2,4-Trichlorobenzene | ug/L | 20 | 21.0 | 105 | 76-122 | |
| 1,2,4-Trimethylbenzene | ug/L | 20 | 18.7 | 94 | 74-127 | |
| 1,2-Dibromo-3-chloropropane | ug/L | 20 | 18.3 | 92 | 65-133 | |
| 1,2-Dibromoethane (EDB) | ug/L | 20 | 19.7 | 98 | 80-118 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60298119

LABORATORY CONTROL SAMPLE: 2363471

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------------------------|-------|-------------|------------|-----------|--------------|------------|
| 1,2-Dichlorobenzene | ug/L | 20 | 19.9 | 100 | 84-118 | |
| 1,2-Dichloroethane | ug/L | 20 | 19.1 | 96 | 73-120 | |
| 1,2-Dichloroethene (Total) | ug/L | 40 | 38.2 | 96 | 80-120 | |
| 1,2-Dichloropropane | ug/L | 20 | 18.7 | 93 | 78-115 | |
| 1,3,5-Trimethylbenzene | ug/L | 20 | 18.3 | 91 | 81-117 | |
| 1,3-Dichlorobenzene | ug/L | 20 | 19.5 | 97 | 84-116 | |
| 1,3-Dichloropropane | ug/L | 20 | 18.7 | 94 | 78-120 | |
| 1,4-Dichlorobenzene | ug/L | 20 | 19.2 | 96 | 83-115 | |
| 2,2-Dichloropropane | ug/L | 20 | 17.4 | 87 | 66-124 | |
| 2-Butanone (MEK) | ug/L | 100 | 98.9 | 99 | 54-133 | |
| 2-Chlorotoluene | ug/L | 20 | 19.3 | 97 | 80-120 | |
| 2-Hexanone | ug/L | 100 | 96.2 | 96 | 60-133 | |
| 4-Chlorotoluene | ug/L | 20 | 19.2 | 96 | 82-120 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | 100 | 89.5 | 89 | 62-130 | |
| Acetone | ug/L | 100 | 98.8 | 99 | 54-130 | |
| Benzene | ug/L | 20 | 19.1 | 95 | 80-120 | |
| Bromobenzene | ug/L | 20 | 19.2 | 96 | 83-118 | |
| Bromochloromethane | ug/L | 20 | 20.8 | 104 | 79-118 | |
| Bromodichloromethane | ug/L | 20 | 18.8 | 94 | 78-121 | |
| Bromoform | ug/L | 20 | 19.8 | 99 | 62-137 | |
| Bromomethane | ug/L | 20 | 15.1 | 75 | 41-145 | |
| Carbon disulfide | ug/L | 20 | 19.0 | 95 | 64-119 | |
| Carbon tetrachloride | ug/L | 20 | 19.4 | 97 | 77-122 | |
| Chlorobenzene | ug/L | 20 | 19.4 | 97 | 80-123 | |
| Chloroethane | ug/L | 20 | 14.3 | 71 | 60-146 | |
| Chloroform | ug/L | 20 | 18.7 | 93 | 81-116 | |
| Chloromethane | ug/L | 20 | 11.0 | 55 | 29-154 | |
| cis-1,2-Dichloroethene | ug/L | 20 | 19.1 | 96 | 80-120 | |
| cis-1,3-Dichloropropene | ug/L | 20 | 18.7 | 93 | 78-118 | |
| Dibromochloromethane | ug/L | 20 | 19.0 | 95 | 73-128 | |
| Dibromomethane | ug/L | 20 | 19.9 | 99 | 83-115 | |
| Dichlorodifluoromethane | ug/L | 20 | 17.4 | 87 | 13-185 | |
| Ethylbenzene | ug/L | 20 | 19.6 | 98 | 80-120 | |
| Hexachloro-1,3-butadiene | ug/L | 20 | 22.4 | 112 | 75-130 | |
| Isopropylbenzene (Cumene) | ug/L | 20 | 19.6 | 98 | 81-115 | |
| Methyl-tert-butyl ether | ug/L | 20 | 16.4 | 82 | 67-125 | |
| Methylene chloride | ug/L | 20 | 17.8 | 89 | 80-126 | |
| n-Butylbenzene | ug/L | 20 | 19.1 | 95 | 83-122 | |
| n-Propylbenzene | ug/L | 20 | 18.5 | 92 | 83-116 | |
| Naphthalene | ug/L | 20 | 20.2 | 101 | 73-125 | |
| p-Isopropyltoluene | ug/L | 20 | 18.2 | 91 | 83-116 | |
| sec-Butylbenzene | ug/L | 20 | 18.9 | 94 | 80-124 | |
| Styrene | ug/L | 20 | 19.9 | 99 | 85-120 | |
| tert-Butylbenzene | ug/L | 20 | 18.9 | 94 | 80-120 | |
| Tetrachloroethene | ug/L | 20 | 20.7 | 103 | 77-121 | |
| Toluene | ug/L | 20 | 18.9 | 95 | 80-120 | |
| trans-1,2-Dichloroethene | ug/L | 20 | 19.1 | 96 | 80-120 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60298119

LABORATORY CONTROL SAMPLE: 2363471

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---------------------------|-------|-------------|------------|-----------|--------------|------------|
| trans-1,3-Dichloropropene | ug/L | 20 | 18.6 | 93 | 76-123 | |
| Trichloroethene | ug/L | 20 | 19.1 | 96 | 80-121 | |
| Trichlorofluoromethane | ug/L | 20 | 16.6 | 83 | 64-124 | |
| Vinyl chloride | ug/L | 20 | 14.0 | 70 | 46-162 | |
| Xylene (Total) | ug/L | 60 | 57.9 | 97 | 80-120 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 97 | 77-122 | |
| 4-Bromofluorobenzene (S) | % | | | 97 | 80-120 | |
| Toluene-d8 (S) | % | | | 99 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2363510 2363511

| Parameter | Units | MS | | MSD | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual | |
|-----------------------------|-------|--------------------|-------------|-------------|-----------|----------|-----------|--------------|--------|---------|------|------------|
| | | 60297669032 Result | Spike Conc. | Spike Conc. | MS Result | | | | | | | MSD Result |
| 1,1,1,2-Tetrachloroethane | ug/L | ND | 20 | 20 | 19.8 | 19.4 | 99 | 97 | 61-129 | 2 | 33 | |
| 1,1,1-Trichloroethane | ug/L | ND | 20 | 20 | 20.3 | 20.1 | 101 | 101 | 67-137 | 1 | 31 | |
| 1,1,2,2-Tetrachloroethane | ug/L | ND | 20 | 20 | 17.2 | 17.7 | 86 | 88 | 54-134 | 3 | 33 | |
| 1,1,2-Trichloroethane | ug/L | ND | 20 | 20 | 19.1 | 18.7 | 95 | 94 | 59-131 | 2 | 30 | |
| 1,1-Dichloroethane | ug/L | 0.59J | 20 | 20 | 19.6 | 19.8 | 95 | 96 | 63-134 | 1 | 31 | |
| 1,1-Dichloroethene | ug/L | 0.20J | 20 | 20 | 21.7 | 21.4 | 108 | 106 | 64-140 | 2 | 37 | |
| 1,1-Dichloropropene | ug/L | ND | 20 | 20 | 20.7 | 20.2 | 104 | 101 | 65-137 | 3 | 34 | |
| 1,2,3-Trichlorobenzene | ug/L | ND | 20 | 20 | 18.4 | 19.9 | 92 | 99 | 56-128 | 8 | 39 | |
| 1,2,3-Trichloropropane | ug/L | ND | 20 | 20 | 18.5 | 19.2 | 93 | 96 | 37-153 | 3 | 37 | |
| 1,2,4-Trichlorobenzene | ug/L | ND | 20 | 20 | 18.3 | 18.6 | 91 | 93 | 57-122 | 2 | 38 | |
| 1,2,4-Trimethylbenzene | ug/L | ND | 20 | 20 | 18.5 | 18.0 | 92 | 90 | 58-134 | 3 | 34 | |
| 1,2-Dibromo-3-chloropropane | ug/L | ND | 20 | 20 | 16.2 | 16.0 | 81 | 80 | 44-137 | 1 | 41 | |
| 1,2-Dibromoethane (EDB) | ug/L | ND | 20 | 20 | 20.2 | 20.3 | 101 | 101 | 44-141 | 0 | 30 | |
| 1,2-Dichlorobenzene | ug/L | ND | 20 | 20 | 18.9 | 18.6 | 94 | 93 | 63-126 | 1 | 33 | |
| 1,2-Dichloroethane | ug/L | ND | 20 | 20 | 18.7 | 19.1 | 94 | 95 | 42-140 | 2 | 35 | |
| 1,2-Dichloroethene (Total) | ug/L | 5.4 | 40 | 40 | 45.3 | 44.7 | 100 | 98 | 31-168 | 1 | 34 | |
| 1,2-Dichloropropane | ug/L | ND | 20 | 20 | 18.7 | 18.6 | 94 | 93 | 60-132 | 0 | 30 | |
| 1,3,5-Trimethylbenzene | ug/L | ND | 20 | 20 | 18.6 | 17.7 | 93 | 88 | 61-130 | 5 | 34 | |
| 1,3-Dichlorobenzene | ug/L | ND | 20 | 20 | 18.9 | 18.2 | 94 | 91 | 63-127 | 4 | 34 | |
| 1,3-Dichloropropane | ug/L | ND | 20 | 20 | 18.9 | 18.6 | 95 | 93 | 59-121 | 2 | 33 | |
| 1,4-Dichlorobenzene | ug/L | ND | 20 | 20 | 18.4 | 17.9 | 92 | 89 | 62-124 | 3 | 33 | |
| 2,2-Dichloropropane | ug/L | ND | 20 | 20 | 8.8 | 9.5 | 44 | 48 | 42-127 | 8 | 35 | |
| 2-Butanone (MEK) | ug/L | ND | 100 | 100 | 90.8 | 96.5 | 90 | 96 | 44-132 | 6 | 34 | |
| 2-Chlorotoluene | ug/L | ND | 20 | 20 | 19.6 | 18.4 | 98 | 92 | 63-132 | 6 | 34 | |
| 2-Hexanone | ug/L | ND | 100 | 100 | 91.1 | 93.8 | 91 | 94 | 47-134 | 3 | 33 | |
| 4-Chlorotoluene | ug/L | ND | 20 | 20 | 18.6 | 18.4 | 93 | 92 | 60-127 | 2 | 34 | |
| 4-Methyl-2-pentanone (MIBK) | ug/L | ND | 100 | 100 | 84.1 | 87.6 | 84 | 88 | 50-136 | 4 | 34 | |
| Acetone | ug/L | 20.0 | 100 | 100 | 109 | 108 | 89 | 88 | 35-129 | 1 | 35 | |
| Benzene | ug/L | ND | 20 | 20 | 19.7 | 19.7 | 99 | 99 | 42-137 | 0 | 35 | |
| Bromobenzene | ug/L | ND | 20 | 20 | 18.8 | 18.8 | 94 | 94 | 62-128 | 0 | 31 | |
| Bromochloromethane | ug/L | ND | 20 | 20 | 20.4 | 20.3 | 102 | 101 | 61-128 | 1 | 35 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60298119

| Parameter | Units | 60297669032 | | 2363510 | | 2363511 | | % Rec | % Rec | Limits | RPD | Max RPD | Qual |
|---------------------------|-------|-------------|----------------|-----------------|-----------|------------|----------|-------|--------|--------|-----|---------|------|
| | | Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | | | | | | |
| Bromodichloromethane | ug/L | ND | 20 | 20 | 18.4 | 18.6 | 92 | 93 | 61-130 | 1 | 32 | | |
| Bromoform | ug/L | ND | 20 | 20 | 19.3 | 19.2 | 97 | 96 | 53-128 | 1 | 32 | | |
| Bromomethane | ug/L | ND | 20 | 20 | 14.2 | 16.0 | 60 | 69 | 33-148 | 12 | 42 | | |
| Carbon disulfide | ug/L | ND | 20 | 20 | 21.8 | 21.6 | 109 | 108 | 52-138 | 1 | 37 | | |
| Carbon tetrachloride | ug/L | ND | 20 | 20 | 21.0 | 20.7 | 105 | 104 | 65-143 | 1 | 31 | | |
| Chlorobenzene | ug/L | ND | 20 | 20 | 19.9 | 19.4 | 100 | 97 | 63-131 | 3 | 30 | | |
| Chloroethane | ug/L | ND | 20 | 20 | 15.7 | 17.0 | 79 | 85 | 51-153 | 8 | 39 | | |
| Chloroform | ug/L | ND | 20 | 20 | 18.9 | 19.0 | 94 | 94 | 62-129 | 0 | 32 | | |
| Chloromethane | ug/L | ND | 20 | 20 | 15.2 | 17.4 | 76 | 87 | 16-169 | 13 | 59 | | |
| cis-1,2-Dichloroethene | ug/L | 5.4 | 20 | 20 | 24.8 | 24.8 | 97 | 97 | 43-152 | 0 | 30 | | |
| cis-1,3-Dichloropropene | ug/L | ND | 20 | 20 | 16.3 | 16.8 | 81 | 84 | 58-127 | 3 | 31 | | |
| Dibromochloromethane | ug/L | ND | 20 | 20 | 18.8 | 18.8 | 94 | 94 | 54-134 | 0 | 33 | | |
| Dibromomethane | ug/L | ND | 20 | 20 | 19.0 | 19.5 | 95 | 98 | 61-129 | 3 | 33 | | |
| Dichlorodifluoromethane | ug/L | ND | 20 | 20 | 24.9 | 24.1 | 125 | 120 | 13-179 | 3 | 33 | | |
| Ethylbenzene | ug/L | ND | 20 | 20 | 20.4 | 19.9 | 102 | 100 | 44-143 | 2 | 36 | | |
| Hexachloro-1,3-butadiene | ug/L | ND | 20 | 20 | 19.0 | 18.9 | 95 | 95 | 52-141 | 0 | 35 | | |
| Isopropylbenzene (Cumene) | ug/L | ND | 20 | 20 | 20.4 | 19.7 | 102 | 99 | 64-129 | 4 | 31 | | |
| Methyl-tert-butyl ether | ug/L | ND | 20 | 20 | 15.8 | 17.5 | 79 | 87 | 30-152 | 10 | 42 | | |
| Methylene chloride | ug/L | ND | 20 | 20 | 18.3 | 18.6 | 91 | 92 | 65-135 | 2 | 33 | | |
| n-Butylbenzene | ug/L | ND | 20 | 20 | 17.9 | 17.2 | 90 | 86 | 62-135 | 4 | 36 | | |
| n-Propylbenzene | ug/L | ND | 20 | 20 | 18.3 | 17.8 | 91 | 89 | 60-137 | 3 | 34 | | |
| Naphthalene | ug/L | ND | 20 | 20 | 17.6 | 19.0 | 88 | 95 | 29-147 | 8 | 39 | | |
| p-Isopropyltoluene | ug/L | ND | 20 | 20 | 18.3 | 17.6 | 92 | 88 | 63-130 | 4 | 35 | | |
| sec-Butylbenzene | ug/L | ND | 20 | 20 | 19.0 | 18.2 | 95 | 91 | 68-141 | 4 | 34 | | |
| Styrene | ug/L | ND | 20 | 20 | 19.8 | 19.6 | 99 | 98 | 49-141 | 1 | 37 | | |
| tert-Butylbenzene | ug/L | ND | 20 | 20 | 19.4 | 18.5 | 97 | 93 | 65-132 | 5 | 31 | | |
| Tetrachloroethene | ug/L | 9.8 | 20 | 20 | 32.0 | 30.6 | 111 | 104 | 62-134 | 4 | 33 | | |
| Toluene | ug/L | ND | 20 | 20 | 19.9 | 19.1 | 99 | 96 | 45-142 | 4 | 36 | | |
| trans-1,2-Dichloroethene | ug/L | ND | 20 | 20 | 20.4 | 19.9 | 102 | 99 | 65-133 | 3 | 32 | | |
| trans-1,3-Dichloropropene | ug/L | ND | 20 | 20 | 16.6 | 16.9 | 83 | 84 | 56-127 | 2 | 28 | | |
| Trichloroethene | ug/L | 0.63J | 20 | 20 | 20.4 | 20.5 | 99 | 99 | 61-148 | 0 | 25 | | |
| Trichlorofluoromethane | ug/L | ND | 20 | 20 | 17.2 | 18.5 | 86 | 93 | 60-141 | 8 | 32 | | |
| Vinyl chloride | ug/L | ND | 20 | 20 | 18.3 | 18.7 | 91 | 93 | 35-185 | 2 | 29 | | |
| Xylene (Total) | ug/L | ND | 60 | 60 | 59.6 | 58.0 | 99 | 97 | 33-149 | 3 | 35 | | |
| 1,2-Dichloroethane-d4 (S) | % | | | | | | 96 | 95 | 77-122 | | | | |
| 4-Bromofluorobenzene (S) | % | | | | | | 95 | 95 | 80-120 | | | | |
| Toluene-d8 (S) | % | | | | | | 101 | 100 | 80-120 | | | | |
| Preservation pH | | 1.0 | | | 1.0 | 1.0 | | | | | 0 | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60298119

QC Batch: 576072

Analysis Method: EPA 8082

QC Batch Method: EPA 3510

Analysis Description: 8082 GCS PCB

Associated Lab Samples: 60298119001

METHOD BLANK: 2363392

Matrix: Water

Associated Lab Samples: 60298119001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-------------------------|-------|--------------|-----------------|----------------|------------|
| PCB-1016 (Aroclor 1016) | ug/L | ND | 1.0 | 03/29/19 10:49 | |
| PCB-1221 (Aroclor 1221) | ug/L | ND | 1.0 | 03/29/19 10:49 | |
| PCB-1232 (Aroclor 1232) | ug/L | ND | 1.0 | 03/29/19 10:49 | |
| PCB-1242 (Aroclor 1242) | ug/L | ND | 1.0 | 03/29/19 10:49 | |
| PCB-1248 (Aroclor 1248) | ug/L | ND | 1.0 | 03/29/19 10:49 | |
| PCB-1254 (Aroclor 1254) | ug/L | ND | 1.0 | 03/29/19 10:49 | |
| PCB-1260 (Aroclor 1260) | ug/L | ND | 1.0 | 03/29/19 10:49 | |
| Decachlorobiphenyl (S) | % | 89 | 38-124 | 03/29/19 10:49 | |

LABORATORY CONTROL SAMPLE: 2363393

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-------------------------|-------|-------------|------------|-----------|--------------|------------|
| PCB-1016 (Aroclor 1016) | ug/L | 5 | 4.4 | 88 | 63-129 | |
| PCB-1260 (Aroclor 1260) | ug/L | 5 | 4.5 | 90 | 57-143 | |
| Decachlorobiphenyl (S) | % | | | 80 | 38-124 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60298119

QC Batch: 114816

Analysis Method: EPA 1010

QC Batch Method: EPA 1010

Analysis Description: 1010 Flash Point, Closed Cup

Associated Lab Samples: 60298119002

METHOD BLANK: 517009

Matrix: Water

Associated Lab Samples: 60298119002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------|-------|--------------|-----------------|----------------|------------|
| Flashpoint | deg F | >158 | 32.9 | 03/29/19 07:49 | |

LABORATORY CONTROL SAMPLE: 517010

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|------------|-------|-------------|------------|-----------|--------------|------------|
| Flashpoint | deg F | | 79.81 | | | |

SAMPLE DUPLICATE: 517011

| Parameter | Units | 60298119002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------|-------|--------------------|------------|-----|---------|------------|
| Flashpoint | deg F | >158 | >158 | | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60298119

QC Batch: 114825

Analysis Method: SW-846 7.3.4.2

QC Batch Method: SW-846 7.3.4.2

Analysis Description: Reactive Sulfide

Associated Lab Samples: 60298119002

METHOD BLANK: 517034

Matrix: Solid

Associated Lab Samples: 60298119002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-------------------|-------|--------------|-----------------|----------------|------------|
| Sulfide, Reactive | mg/kg | ND | 60.0 | 03/29/19 14:55 | N2 |

SAMPLE DUPLICATE: 517035

| Parameter | Units | 60297823001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|-------------------|-------|--------------------|------------|-----|---------|------------|
| Sulfide, Reactive | mg/kg | ND | 160 | | 20 | N2 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60298119

| | |
|-------------------------------------|-------------------------------|
| QC Batch: 114883 | Analysis Method: EPA 9040 |
| QC Batch Method: EPA 9040 | Analysis Description: 9040 pH |
| Associated Lab Samples: 60298119002 | |

LABORATORY CONTROL SAMPLE: 517301

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|--------------------|------------|-------------|------------|-----------|--------------|------------|
| pH at 25 Degrees C | Std. Units | 6 | 6.0 | 101 | 99-101 | H6 |

SAMPLE DUPLICATE: 517302

| Parameter | Units | 60298119002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|--------------------|------------|--------------------|------------|-----|---------|------------|
| pH at 25 Degrees C | Std. Units | 7.6 | 7.7 | 1 | 20 | H3,H6 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60298119

QC Batch: 114824

Analysis Method: SW-846 7.3.3.2

QC Batch Method: SW-846 7.3.3.2

Analysis Description: 733C Reactive Cyanide

Associated Lab Samples: 60298119002

METHOD BLANK: 517032

Matrix: Solid

Associated Lab Samples: 60298119002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-------------------|-------|--------------|-----------------|----------------|------------|
| Cyanide, Reactive | mg/kg | ND | 0.20 | 03/29/19 13:15 | N2 |

SAMPLE DUPLICATE: 517033

| Parameter | Units | 60297823001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|-------------------|-------|--------------------|------------|-----|---------|------------|
| Cyanide, Reactive | mg/kg | ND | ND | | 20 | N2 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS-FINTUBE

Pace Project No.: 60298119

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-D Pace Analytical Services - Dallas

PASI-K Pace Analytical Services - Kansas City

BATCH QUALIFIERS

Batch: 576072

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1e A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

H3 Sample was received or analysis requested beyond the recognized method holding time.

H6 Analysis initiated outside of the 15 minute EPA required holding time.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS-FINTUBE

Pace Project No.: 60298119

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------|-----------------|----------|-------------------|------------------|
| 60298119001 | PIT WATER | EPA 3510 | 576072 | EPA 8082 | 576188 |
| 60298119001 | PIT WATER | EPA 3010 | 576127 | EPA 6010 | 576159 |
| 60298119001 | PIT WATER | EPA 7470 | 576146 | EPA 7470 | 576244 |
| 60298119001 | PIT WATER | EPA 5030B/8260 | 576107 | | |
| 60298119002 | PIT WATER | EPA 1010 | 114816 | | |
| 60298119002 | PIT WATER | SW-846 7.3.4.2 | 114825 | SW-846 7.3.4.2 | 114867 |
| 60298119002 | PIT WATER | EPA 9040 | 114883 | | |
| 60298119002 | PIT WATER | SW-846 7.3.3.2 | 114824 | SW-846 7.3.3.2 | 114866 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO# : 60298119

 60298119

Client Name: Environmental Works
 Courier: FedEx UPS VIA Clay PEX ECI Pace Xroads Client Other
 Tracking #: 724919091129 Pace Shipping Label Used? Yes No
 Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No
 Packing Material: Bubble Wrap Bubble Bags Foam None Other
 Thermometer Used: P-296 Type of Ice: Wet Blue None
 Cooler Temperature (°C): As-read 4.1 Corr. Factor -1.0 Corrected 3.1

Date and initials of person examining contents: 3/28/19 *R*

Temperature should be above freezing to 6°C

| | | |
|--|--|--|
| Chain of Custody present: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Chain of Custody relinquished: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples arrived within holding time: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Short Hold Time analyses (<72hr): | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Rush Turn Around Time requested: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | <u>1 Day</u> |
| Sufficient volume: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Correct containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Pace containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers intact: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Filtered volume received for dissolved tests? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Sample labels match COC: Date / time / ID / analyses | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples contain multiple phases? Matrix: <u>WET</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | List sample IDs, volumes, lot #'s of preservative and the date/time added. |
| Cyanide water sample checks: | | |
| Lead acetate strip turns dark? (Record only) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Potassium iodide test strip turns blue/purple? (Preserve) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Trip Blank present: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Headspace in VOA vials (>6mm): | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples from USDA Regulated Area: State: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Additional labels attached to 5035A / TX1005 vials in the field? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

| | | | | | | | |
|--|--|---|--|--|--|---|--|
| Section A Required Client Information: Company: Environmental Works - Julia Office Address: 9529 E. 55th Place Suite A, Tulsa, OK 74145 Email To: julia@environmentalworks.com Phone: 918-819-4499 Fax: Requested Due Date/TAT: 24hr-TAT | | Section B Required Project Information: Report To: Moore, Anthony Copy To: Purchase Order No.: Project Name: Evans-Fintube Project Number: | | Section C Invoice Information: Attention: Company Name: Address: Pace Quote Reference: Pace Project Manager: angie.brown@pace.labs.com Pace Profile #: 12359 | | Page: 1 of 1 2270430 REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER Site Location STATE: OK | |
|--|--|---|--|--|--|---|--|

| ITEM # | Section D Required Client Information | Matrix Codes MATRIX / CODE | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED | | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Requested Analysis Filtered (Y/N) | Temp in °C | Received on | Sealed Cooler | Samples Intact | | |
|--------|--|---|-----------------------------|------------------------------|------------------------------|---------------------------|-----------------|---|-----------------------------------|---------------|-------------|---------------|----------------|-----|--|
| | | | | COMPOSITE START | COMPOSITE END/GRAB | | | | | | | | | | |
| 1 | PIT WATER | DW WT WW P SL OL WP AR TS OT | NTG | DATE: 3/27/19 TIME: 13:30 | DATE: 3/27/19 TIME: 16:30 | | 0 | Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ O ₃ Methanol Other | Y | 3/28/19 08:50 | 4.1 | Y | Y | 001 | |
| 2 | | | | | | | | | Y | | | | | | |
| 3 | | | | | | | | | Y | | | | | | |
| 4 | | | | | | | | | Y | | | | | | |
| 5 | | | | | | | | | Y | | | | | | |
| 6 | | | | | | | | | Y | | | | | | |
| 7 | | | | | | | | | Y | | | | | | |
| 8 | | | | | | | | | Y | | | | | | |
| 9 | | | | | | | | | Y | | | | | | |
| 10 | | | | | | | | | Y | | | | | | |
| 11 | | | | | | | | | Y | | | | | | |
| 12 | | | | | | | | | Y | | | | | | |

| | | | |
|---|--|---|--|
| ADDITIONAL COMMENTS Relinquished by / Affiliation: Angie gwi Date: 3/27/19 Time: 16:30 Accepted by / Affiliation: Angie Wilson Date: 3/28/19 Time: 08:50 | | SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Yentze Wilson SIGNATURE of SAMPLER: Angie Wilson | |
|---|--|---|--|

ORIGINAL



Sample Condition Upon Receipt

WO#: 60298119
60298119

Client Name: Environmental Works

Courier: FedEx UPS VIA Clay PEX ECI Pace Xroads Client Other

Tracking #: 724919091129 Pace Shipping Label Used? Yes No

Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags Foam None Other

Thermometer Used: P-296 Type of Ice: Wet Blue None

Cooler Temperature (°C): As-read 4.1 Corr. Factor -1.0 Corrected 3.1

Date and initials of person examining contents: 3/28/19 AR

Temperature should be above freezing to 6°C

| | | |
|--|--|--|
| Chain of Custody present: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Chain of Custody relinquished: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples arrived within holding time: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Short Hold Time analyses (<72hr): | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Rush Turn Around Time requested: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | <u>1 Day</u> |
| Sufficient volume: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Correct containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Pace containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers intact: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Filtered volume received for dissolved tests? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Sample labels match COC: Date / time / ID / analyses | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples contain multiple phases? Matrix: <u>WET</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | List sample IDs, volumes, lot #'s of preservative and the date/time added. |
| Cyanide water sample checks: | | |
| Lead acetate strip turns dark? (Record only) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Potassium iodide test strip turns blue/purple? (Preserve) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Trip Blank present: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Headspace in VOA vials (>6mm): | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples from USDA Regulated Area: State: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Additional labels attached to 5035A / TX1005 vials in the field? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____




CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

| | | | | | | | |
|--|--|---|--|--|--|----------------------------|--|
| Section A Required Client Information: Company: Environmental Works - Julia Office Address: 9529 E. 55th Place Suite A, Tulsa, OK 74145 Email To: julia@environmentalworks.com Phone: 918-819-4499 Fax: Requested Due Date/TAT: 24hr-TAT | | Section B Required Project Information: Report To: Moore, Anthony Copy To: Purchase Order No.: Project Name: Evans-Fintube Project Number: | | Section C Invoice Information: Attention: Company Name: Address: Pace Quote Reference: Pace Project Manager: angie.brown@pace.labs.com Pace Profile #: 12359 | | Page: 1 of 1 2270430 | |
| Section D Required Client Information: Matrix Codes MATRIX / CODE Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Tissue TS Other OT | | Matrix Code (see valid codes to left) SAMPLE TYPE (G=GRAB C=COMP) SAMPLE TEMP AT COLLECTION # OF CONTAINERS Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ O ₃ Methanol Other | | Requested Analysis Filtered (Y/N) | | Site Location STATE: OK | |

| ITEM # | SAMPLE ID (A-Z, 0-9 / , / -) | COLLECTED | | DATE | TIME | DATE | TIME | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS | Temp in °C | Received on | Ice (Y/N) | Sealed Cooler | Custody (Y/N) | Samples Intact (Y/N) |
|--------|---------------------------------|-----------------|--------------------|---------|-------|---------|-------|-------------------------------|---------|-------|---------------------------|---------|-------|-------------------|------------|-------------|-----------|---------------|---------------|----------------------|
| | | COMPOSITE START | COMPOSITE END/GRAB | | | | | | | | | | | | | | | | | |
| 1 | PIT WATER | | | 3/27/19 | 13:30 | 3/27/19 | 10:30 | Angie W | 3/27/19 | 10:30 | Angie W | 3/28/19 | 08:50 | 4.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 2 | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | |

| | | | |
|---|--|---|--|
| Section E ADDITIONAL COMMENTS | | Section F SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Yentze Wilson SIGNATURE of SAMPLER: Yentze Wilson | |
| DATE Signed (MM/DD/YY): 03/27/19 | | DATE Signed (MM/DD/YY): 03/27/19 | |

| | | |
|--|---|--|
|  | Document Name: Sample Condition Upon Receipt | Document Revised: 03-14-19 Page 1 of 1 |
| | Document No.: F-DAL-C-001-rev.9 | Issuing Authority: Pace Dallas Quality Office |

Sample Condition Upon Receipt

Dallas Ft Worth

WO#: 75105476

Client Name: Pace - KS Project Work order: _____

Courier: FedEX UPS USPS Client LSO PACE Other: _____

Tracking #: 7249 1909 1140



Custody Seal on Cooler/Box: Yes No Packing Material: Bubble Wrap/Bags Foam None Other

Received on ice: Yes No Type of Ice: Wet Blue

Thermometer Used: IR-11 Cooler Temp °C: 4.2 (Recorded) / 10.0 (Correction Factor) 4.2 (Actual)

Temperature should be above freezing to 6°C.

| | |
|---|---|
| Chain of Custody relinquished | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Sampler name & signature on COC | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> <u>IRW</u> |
| Short HT analyses (<72 hrs) | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Sufficient Volume received | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |
| Correct Container used | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Container Intact | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Sample pH Acceptable pH Strips: _____ | Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/> |
| Residual Chlorine Present Cl Strips: _____ | Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/> |
| Sulfide Present Lead Acetate Strips: _____ | Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/> |
| Are soil samples (volatiles, TPH) received in 5035A Kits | Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/> |
| Unpreserved 5035A soil frozen within 48 hrs | Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/> |
| Headspace in VOA (>6mm) | Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input checked="" type="checkbox"/> |
| Project sampled in USDA Regulated Area: State Sampled: <u>TX</u> | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Non-Conformance(s): | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |

Chain of Custody



Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: OK
 Cert. Needed: Yes No

Workorder: 60298119 Workorder Name: EVANS-FINTUBE Results Requested By: 3/29/2019

Report To: Subcontract To

Angie Brown
 Pace Analytical Kansas
 9608 Loiret Blvd.
 Lenexa, KS 66219
 Phone 1(913)563-1402

Pace Analytical Dallas
 400 West Bethany Drive
 Suite 190
 Allen, TX 75013
 Phone (972)727-1123

WO#: 75105476

PM: CRH Due Date: 04/08/19

CLIENT: PASI_KS

| Item | Sample ID | Sample Type | Collect Date/Time | Lab ID | Matrix | Preserved Containers | | LAB USE ONLY |
|------|-----------|-------------|-------------------|-------------|--------|----------------------|--|--------------|
| | | | | | | Unpreserved | | |
| 1 | PIT WATER | PS | 3/27/2019 13:30 | 60298119002 | Water | 2 | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |

Flashpoint

Reactive CN/Reactive Sulfide

pH EPA 9040

LAB USE ONLY
-001

| Transfers | Released By | Date/Time | Received By | Date/Time | Received on Ice | Y or N | Samples Intact | Y or N |
|-----------|-------------|-----------|----------------------------|--------------|-----------------|--------|----------------|--------|
| 1 | | | <i>Jenny Wagner / Pace</i> | 3/28/19 9:05 | | Y | | N |
| 2 | | | | | | | | |
| 3 | | | | | | | | |

Comments

RUSH TAT !!

Cooler Temperature on Receipt 4.2 °C Custody Seal (Y) or (N) Received on Ice (Y) or (N) Samples Intact (Y) or (N)

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
 This chain of custody is considered complete as is since this information is available in the owner laboratory.

April 02, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS - FINTUBE
Pace Project No.: 60298284

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on March 29, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS - FINTUBE

Pace Project No.: 60298284

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Certification Number: 10090

Arkansas Drinking Water

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS - FINTUBE

Pace Project No.: 60298284

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|---------------|--------|----------------|----------------|
| 60298284001 | SSC15-POST:2' | Solid | 03/28/19 13:30 | 03/29/19 08:35 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS - FINTUBE

Pace Project No.: 60298284

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|---------------|------------|----------|-------------------|------------|
| 60298284001 | SSC15-POST:2' | EPA 6010 | EMR | 12 | PASI-K |
| | | EPA 7471 | LRS | 1 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS - FINTUBE

Pace Project No.: 60298284

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|-------|--------------|----------------|------------|
| 60298284001 | SSC15-POST:2' | | | | | |
| EPA 6010 | Arsenic | 5.9 | mg/kg | 1.2 | 04/01/19 16:09 | |
| EPA 6010 | Beryllium | 0.96 | mg/kg | 0.12 | 04/01/19 16:09 | |
| EPA 6010 | Chromium | 24.3 | mg/kg | 0.60 | 04/01/19 16:09 | |
| EPA 6010 | Copper | 14.7 | mg/kg | 2.4 | 04/01/19 16:09 | |
| EPA 6010 | Lead | 8.7 | mg/kg | 0.60 | 04/01/19 16:09 | |
| EPA 6010 | Nickel | 27.7 | mg/kg | 0.60 | 04/01/19 16:09 | |
| EPA 6010 | Zinc | 80.4 | mg/kg | 12.1 | 04/01/19 16:09 | |
| ASTM D2974 | Percent Moisture | 17.1 | % | 0.50 | 04/01/19 00:00 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS - FINTUBE

Pace Project No.: 60298284

Method: EPA 6010

Description: 6010 MET ICP Red. Interference

Client: Environmental Works_OK office

Date: April 02, 2019

General Information:

1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS - FINTUBE

Pace Project No.: 60298284

Method: EPA 7471

Description: 7471 Mercury

Client: Environmental Works_OK office

Date: April 02, 2019

General Information:

1 sample was analyzed for EPA 7471. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7471 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS - FINTUBE

Pace Project No.: 60298284

Sample: SSC15-POST:2' Lab ID: 60298284001 Collected: 03/28/19 13:30 Received: 03/29/19 08:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|---------------------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| 6010 MET ICP Red. Interference | | Analytical Method: EPA 6010 Preparation Method: EPA 3050 | | | | | | |
| Antimony | ND | mg/kg | 1.2 | 1 | 03/29/19 14:57 | 04/01/19 16:09 | 7440-36-0 | |
| Arsenic | 5.9 | mg/kg | 1.2 | 1 | 03/29/19 14:57 | 04/01/19 16:09 | 7440-38-2 | |
| Beryllium | 0.96 | mg/kg | 0.12 | 1 | 03/29/19 14:57 | 04/01/19 16:09 | 7440-41-7 | |
| Cadmium | ND | mg/kg | 0.60 | 1 | 03/29/19 14:57 | 04/01/19 16:09 | 7440-43-9 | |
| Chromium | 24.3 | mg/kg | 0.60 | 1 | 03/29/19 14:57 | 04/01/19 16:09 | 7440-47-3 | |
| Copper | 14.7 | mg/kg | 2.4 | 1 | 03/29/19 14:57 | 04/01/19 16:09 | 7440-50-8 | |
| Lead | 8.7 | mg/kg | 0.60 | 1 | 03/29/19 14:57 | 04/01/19 16:09 | 7439-92-1 | |
| Nickel | 27.7 | mg/kg | 0.60 | 1 | 03/29/19 14:57 | 04/01/19 16:09 | 7440-02-0 | |
| Selenium | ND | mg/kg | 1.8 | 1 | 03/29/19 14:57 | 04/01/19 16:09 | 7782-49-2 | |
| Silver | ND | mg/kg | 0.84 | 1 | 03/29/19 14:57 | 04/01/19 16:09 | 7440-22-4 | |
| Thallium | ND | mg/kg | 2.4 | 1 | 03/29/19 14:57 | 04/01/19 16:09 | 7440-28-0 | |
| Zinc | 80.4 | mg/kg | 12.1 | 1 | 03/29/19 14:57 | 04/01/19 16:09 | 7440-66-6 | |
| 7471 Mercury | | Analytical Method: EPA 7471 Preparation Method: EPA 7471 | | | | | | |
| Mercury | ND | mg/kg | 0.049 | 1 | 03/29/19 15:01 | 04/01/19 11:34 | 7439-97-6 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 17.1 | % | 0.50 | 1 | | 04/01/19 00:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS - FINTUBE

Pace Project No.: 60298284

QC Batch: 576353

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Associated Lab Samples: 60298284001

METHOD BLANK: 2364921

Matrix: Solid

Associated Lab Samples: 60298284001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-----------|-------|--------------|-----------------|----------------|------------|
| Mercury | mg/kg | ND | 0.050 | 04/01/19 11:30 | |

LABORATORY CONTROL SAMPLE: 2364922

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-----------|-------|-------------|------------|-----------|--------------|------------|
| Mercury | mg/kg | 0.5 | 0.48 | 96 | 80-120 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2364923 2364924

| Parameter | Units | 60298284001 | | MSD | | MS | | MSD | | % Rec Limits | RPD | Max RPD | Qual |
|-----------|-------|-------------|----------------|-----------------|-----------|------------|-------|-------|--------|--------------|-----|---------|------|
| | | Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | % Rec | % Rec | | | | | |
| Mercury | mg/kg | ND | 0.53 | 0.51 | 0.50 | 0.48 | 90 | 91 | 75-125 | 4 | 20 | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS - FINTUBE

Pace Project No.: 60298284

| Parameter | Units | 2364133 | | 2364134 | | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | Max RPD | RPD | Qual |
|-----------|-------|-----------------------|----------------------|-----------------------|--------------|--------------|---------------|-------------|--------------|-----------------|------------|-----|------|
| | | 60297762008 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | | | | | | | | |
| Copper | mg/kg | 1670 | 1350 | 1310 | 3090 | 2930 | 105 | 96 | 75-125 | 6 | 20 | | |
| Lead | mg/kg | 32.0 | 1350 | 1310 | 1350 | 1280 | 97 | 96 | 75-125 | 5 | 20 | | |
| Nickel | mg/kg | 14.1 | 1350 | 1310 | 1390 | 1320 | 101 | 100 | 75-125 | 5 | 20 | | |
| Selenium | mg/kg | ND | 1350 | 1310 | 1200 | 1140 | 87 | 86 | 75-125 | 5 | 20 | | |
| Silver | mg/kg | ND | 679 | 653 | 647 | 615 | 95 | 94 | 75-125 | 5 | 20 | | |
| Thallium | mg/kg | ND | 1350 | 1310 | 1370 | 1310 | 101 | 100 | 75-125 | 5 | 20 | | |
| Zinc | mg/kg | 549 | 1350 | 1310 | 1850 | 1760 | 96 | 92 | 75-125 | 5 | 20 | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS - FINTUBE

Pace Project No.: 60298284

QC Batch: 576483

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60298284001

METHOD BLANK: 2365804

Matrix: Solid

Associated Lab Samples: 60298284001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------------|-------|--------------|-----------------|----------------|------------|
| Percent Moisture | % | ND | 0.50 | 04/01/19 00:00 | |

SAMPLE DUPLICATE: 2365805

| Parameter | Units | 60298158003 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------|-------|--------------------|------------|-----|---------|------------|
| Percent Moisture | % | 1.6 | 1.7 | 6 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS - FINTUBE

Pace Project No.: 60298284

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS - FINTUBE

Pace Project No.: 60298284

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|---------------|-----------------|----------|-------------------|------------------|
| 60298284001 | SSC15-POST:2' | EPA 3050 | 576212 | EPA 6010 | 576580 |
| 60298284001 | SSC15-POST:2' | EPA 7471 | 576353 | EPA 7471 | 576536 |
| 60298284001 | SSC15-POST:2' | ASTM D2974 | 576483 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO#: 60298284



Client Name:

Environmental Works-Tulsa

Courier: FedEx [X] UPS [] VIA [] Clay [] PEX [] ECI [] Pace [] Xroads [] Client [] Other []

Tracking #: 724919091173 Pace Shipping Label Used? Yes [] No [X]

Custody Seal on Cooler/Box Present: Yes [X] No [] Seals intact: Yes [] No [X]

Packing Material: Bubble Wrap [] Bubble Bags [X] Foam [] None [] Other [X] CPC

Thermometer Used: T300 Type of Ice: Wet [X] Blue [] None []

Cooler Temperature (°C): As-read 4.3 Corr. Factor 40.4 Corrected 4.7

Date and initials of person examining contents: 3-29-19 [initials]

Temperature should be above freezing to 6°C

Table with 3 columns: Question, Yes/No/N/A checkboxes, and handwritten notes. Includes rows for Chain of Custody, Short Hold Time, Rush Turn Around Time (48 HR), and USDA Regulated Area (State: Ok).

USDA USDA

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date:



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

| | | | | | |
|---|--|---|--|---|--|
| Section A Required Client Information: Company: Anthony Dennis... Address: 9529 E. 55th Place Suite A1, Tulsa, OK 74145 Email To: anthony@denis... Phone: 918-211-4199 Requested Due Date: 11/19/19 | | Section B Required Project Information: Report To: Moore, Anthony Copy To: Purchase Order No.: Project Name: Evans - Fintube Project Number: | | Section C Invoice Information: Attention: Company Name: Address: Pace Quote Reference: Pace Project Manager: Anthony Dennis Pace Profile #: 1235A | |
| Page: 1 of 1 2270532 | | REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER | | Site Location STATE: OK | |

| ITEM # | Section D Required Client Information | Matrix Codes MATRIX L CODE | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED | | # OF CONTAINERS | Preservatives | Requested Analysis Filtered (Y/N) | Temp in °C | Received on | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
|---|--|---|-----------------------------|-----------------|--------------------|-----------------|--|-----------------------------------|------------|-------------|-----------------------------|----------------------|
| | | | | COMPOSITE START | COMPOSITE END/GRAB | | | | | | | |
| 1 | SSC15 - Post : a' | DW WT WW P SL OL WP AR TS OT | SLC | 3/19/19 13:22 | 3/19/19 13:30 | 1 X | Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other | X | 5.889 | 3/28/19 | Y | Y |
| 2 | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | |
| ADDITIONAL COMMENTS Relinquished by / Affiliation: Sangster gwl Date: 3/28/19 13:30 Accepted by / Affiliation: USC-ipt / ps Date: 3/28/19 08:55 Time: 13:30 | | | | | | | | | | | | |
| SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Kenzie Wilson SIGNATURE of SAMPLER: <i>[Signature]</i> DATE Signed (MM/DD/YY): 03/28/19 | | | | | | | | | | | | |

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days. F-ALL-C-010-rev.00, 09Nov2017

April 02, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS- FINTUBE
Pace Project No.: 60298444

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on March 30, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS- FINTUBE

Pace Project No.: 60298444

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Certification Number: 10090

Arkansas Drinking Water

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS- FINTUBE

Pace Project No.: 60298444

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|---------------|--------|----------------|----------------|
| 60298444001 | T-ZONE: SOUTH | Solid | 03/29/19 13:30 | 03/30/19 09:00 |
| 60298444002 | T-ZONE: NORTH | Solid | 03/29/19 13:30 | 03/30/19 09:00 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS- FINTUBE

Pace Project No.: 60298444

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|---------------|------------|----------|-------------------|------------|
| 60298444001 | T-ZONE: SOUTH | TNRCC 1005 | NAW | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60298444002 | T-ZONE: NORTH | TNRCC 1005 | NAW | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS- FINTUBE

Pace Project No.: 60298444

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|-------|--------------|----------------|------------|
| 60298444001 | T-ZONE: SOUTH | | | | | |
| TNRCC 1005 | TPH (>C12-C28) | 92.9 | mg/kg | 19.4 | 04/01/19 13:50 | |
| TNRCC 1005 | TPH (>C28-C35) | 48.2 | mg/kg | 19.4 | 04/01/19 13:50 | |
| TNRCC 1005 | TPH Total (C06-C35) | 150 | mg/kg | 19.4 | 04/01/19 13:50 | |
| ASTM D2974 | Percent Moisture | 10 | % | 0.50 | 04/01/19 00:00 | |
| 60298444002 | T-ZONE: NORTH | | | | | |
| TNRCC 1005 | TPH (>C12-C28) | 487 | mg/kg | 18.8 | 04/01/19 15:08 | |
| TNRCC 1005 | TPH (>C28-C35) | 862 | mg/kg | 18.8 | 04/01/19 15:08 | |
| TNRCC 1005 | TPH Total (C06-C35) | 1360 | mg/kg | 18.8 | 04/01/19 15:08 | |
| ASTM D2974 | Percent Moisture | 7.2 | % | 0.50 | 04/01/19 00:00 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS- FINTUBE

Pace Project No.: 60298444

Method: TNRCC 1005

Description: TNRCC 1005 TPH

Client: Environmental Works_OK office

Date: April 02, 2019

General Information:

2 samples were analyzed for TNRCC 1005. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with TNRCC 1005 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS- FINTUBE

Pace Project No.: 60298444

Sample: T-ZONE: SOUTH **Lab ID: 60298444001** Collected: 03/29/19 13:30 Received: 03/30/19 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 19.4 | 1 | 04/01/19 11:30 | 04/01/19 13:50 | | |
| TPH (>C12-C28) | 92.9 | mg/kg | 19.4 | 1 | 04/01/19 11:30 | 04/01/19 13:50 | | |
| TPH (>C28-C35) | 48.2 | mg/kg | 19.4 | 1 | 04/01/19 11:30 | 04/01/19 13:50 | | |
| TPH Total (C06-C35) | 150 | mg/kg | 19.4 | 1 | 04/01/19 11:30 | 04/01/19 13:50 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 93 | % | 70-130 | 1 | 04/01/19 11:30 | 04/01/19 13:50 | 84-15-1 | |
| 1-Chlorooctane (S) | 88 | % | 70-130 | 1 | 04/01/19 11:30 | 04/01/19 13:50 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 10 | % | 0.50 | 1 | | 04/01/19 00:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS- FINTUBE

Pace Project No.: 60298444

Sample: T-ZONE: NORTH **Lab ID: 60298444002** Collected: 03/29/19 13:30 Received: 03/30/19 09:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 18.8 | 1 | 04/01/19 11:30 | 04/01/19 15:08 | | |
| TPH (>C12-C28) | 487 | mg/kg | 18.8 | 1 | 04/01/19 11:30 | 04/01/19 15:08 | | |
| TPH (>C28-C35) | 862 | mg/kg | 18.8 | 1 | 04/01/19 11:30 | 04/01/19 15:08 | | |
| TPH Total (C06-C35) | 1360 | mg/kg | 18.8 | 1 | 04/01/19 11:30 | 04/01/19 15:08 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 94 | % | 70-130 | 1 | 04/01/19 11:30 | 04/01/19 15:08 | 84-15-1 | |
| 1-Chlorooctane (S) | 92 | % | 70-130 | 1 | 04/01/19 11:30 | 04/01/19 15:08 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 7.2 | % | 0.50 | 1 | | 04/01/19 00:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS- FINTUBE

Pace Project No.: 60298444

| | | | |
|-------------------------|--------------------------|-----------------------|----------------|
| QC Batch: | 576507 | Analysis Method: | TNRCC 1005 |
| QC Batch Method: | TNRCC 1005 | Analysis Description: | TX1005 TPH GCS |
| Associated Lab Samples: | 60298444001, 60298444002 | | |

METHOD BLANK: 2365855 Matrix: Solid

Associated Lab Samples: 60298444001, 60298444002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---------------------|-------|--------------|-----------------|----------------|------------|
| TPH (>C12-C28) | mg/kg | ND | 20.0 | 04/01/19 17:44 | |
| TPH (>C28-C35) | mg/kg | ND | 20.0 | 04/01/19 17:44 | |
| TPH (C06-C12) | mg/kg | ND | 20.0 | 04/01/19 17:44 | |
| TPH Total (C06-C35) | mg/kg | ND | 20.0 | 04/01/19 17:44 | |
| 1-Chlorooctane (S) | % | 78 | 70-130 | 04/01/19 17:44 | |
| o-Terphenyl (S) | % | 82 | 70-130 | 04/01/19 17:44 | |

LABORATORY CONTROL SAMPLE & LCSD: 2365856

| Parameter | Units | 2365857 | | | | | | | RPD | Max RPD | Qualifiers |
|---------------------|-------|-------------|------------|-------------|-----------|------------|--------------|---|-----|---------|------------|
| | | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | | | | |
| TPH Total (C06-C35) | mg/kg | 2500 | 2000 | 2140 | 80 | 86 | 75-125 | 7 | 20 | | |
| 1-Chlorooctane (S) | % | | | | 101 | 105 | 70-130 | | | | |
| o-Terphenyl (S) | % | | | | 90 | 93 | 70-130 | | | | |

MATRIX SPIKE SAMPLE: 2365858

| Parameter | Units | 60298444001 | | | | | |
|---------------------|-------|-------------|-----------|----------|--------------|------------|--|
| | | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers | |
| TPH Total (C06-C35) | mg/kg | 150 | 2380 | 2220 | 87 | 11-187 | |
| 1-Chlorooctane (S) | % | | | | 108 | 70-130 | |
| o-Terphenyl (S) | % | | | | 97 | 70-130 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS- FINTUBE

Pace Project No.: 60298444

QC Batch: 576489

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60298444001, 60298444002

METHOD BLANK: 2365818

Matrix: Solid

Associated Lab Samples: 60298444001, 60298444002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------------|-------|--------------|-----------------|----------------|------------|
| Percent Moisture | % | ND | 0.50 | 04/01/19 00:00 | |

SAMPLE DUPLICATE: 2365819

| Parameter | Units | 60298204001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------|-------|--------------------|------------|-----|---------|------------|
| Percent Moisture | % | 25.0 | 20.1 | 22 | 20 | D6 |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS- FINTUBE

Pace Project No.: 60298444

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS- FINTUBE

Pace Project No.: 60298444

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|---------------|-----------------|----------|-------------------|------------------|
| 60298444001 | T-ZONE: SOUTH | TNRCC 1005 | 576507 | TNRCC 1005 | 576644 |
| 60298444002 | T-ZONE: NORTH | TNRCC 1005 | 576507 | TNRCC 1005 | 576644 |
| 60298444001 | T-ZONE: SOUTH | ASTM D2974 | 576489 | | |
| 60298444002 | T-ZONE: NORTH | ASTM D2974 | 576489 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO#: 60298444



Client Name: Env. Wks

Courier: FedEx [x] UPS [] VIA [] Clay [] PEX [] ECI [] Pace [] Xroads [] Client [] Other []

Tracking #: 724919091195 Pace Shipping Label Used? Yes [x] No []

Custody Seal on Cooler/Box Present: Yes [x] No [] Seals intact: Yes [x] No []

Packing Material: Bubble Wrap [] Bubble Bags [x] Foam [x] None [] Other []

Thermometer Used: T-298 Type of Ice: Wet [x] Blue [] None []

Cooler Temperature (°C): As-read 1.8 Corr. Factor -0.1 Corrected 1.7

Date and initials of person examining contents: 3/30/19

Temperature should be above freezing to 6°C

Table with 2 columns: Question/Field and Answer/Status. Rows include Chain of Custody, Samples arrived, Short Hold Time, Rush Turn Around Time, Sufficient volume, Correct containers used, Pace containers used, Containers intact, Unpreserved soils frozen, Filtered volume, Sample labels match, Samples contain multiple phases, Containers requiring pH preservation, Cyanide water sample checks, Trip Blank present, Headspace in VOA vials, Samples from USDA Regulated Area, Additional labels attached.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date:



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: Evans-Future Project Name: Evans-Future Project Number: 24-tr TAT

Section B Required Project Information: Report To: Moore, Anthony Copy To: Moore, Anthony

Section C Invoice Information: Attention: Moore, Anthony Company Name: Evans-Future Address: Suite #, Tulsa, OK 74145 Regulatory Agency: RCRA

Site Location: OK STATE: OK

Residual Chlorine (Y/N): 001

| ITEM # | Section D Required Client Information | Matrix Codes MATRIX CODE | COLLECTED | | SAMPLE TYPE (G=GRAB C=COMP) | MATRIX CODE (see valid codes to left) | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Y/N | Requested Analysis Filtered (Y/N) | | Pace Project No./ Lab I.D. |
|--------|---------------------------------------|--------------------------|-----------------|--------------------|-----------------------------|---------------------------------------|---------------------------|-----------------|---------------|-----|-----------------------------------|------|----------------------------|
| | | | COMPOSITE START | COMPOSITE END/GRAB | | | | | | | DATE | TIME | |
| 1 | T-Zone: South | DW | 5/29/19 | 13:30 | G | SL G | 5 X | Unpreserved | X | X | X | X | 001 |
| 2 | T-Zone: North | WT | 3/29/19 | 13:30 | G | SL G | 5 X | H2SO4 | X | X | X | X | 002 |
| 3 | | WW | | | | | | HCl | | | | | |
| 4 | | WP | | | | | | HNO3 | | | | | |
| 5 | | SL | | | | | | NaOH | | | | | |
| 6 | | OL | | | | | | Na2O3 | | | | | |
| 7 | | WP | | | | | | Methanol | | | | | |
| 8 | | AR | | | | | | Other | | | | | |
| 9 | | TS | | | | | | | | | | | |
| 10 | | OT | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | |

ADDITIONAL COMMENTS: Relinquish to EMI 3/29/19 19:30

RELINQUISHED BY / AFFILIATION: Relinquish to EMI DATE: 3/29/19 TIME: 19:30

ACCEPTED BY / AFFILIATION: [Signature] DATE: 3/30/19 TIME: 0900

Temp in °C: 1.7 Received on: Y Sealed Cooler: Y Samples Intact: Y

SAMPLER NAME AND SIGNATURE: Venture Wilson DATE Signed (MM/DD/YY): 03/29/19

SIGNATURE OF SAMPLER: [Signature]

ORIGINAL

April 10, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS- FINTUBE
Pace Project No.: 60298670

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on April 03, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Revised report_rev1

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS- FINTUBE

Pace Project No.: 60298670

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Certification Number: 10090

Arkansas Drinking Water

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS- FINTUBE

Pace Project No.: 60298670

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|-----------------|--------|----------------|----------------|
| 60298670001 | SSC12-POST-1:2' | Solid | 04/02/19 10:14 | 04/03/19 08:30 |
| 60298670002 | SSC12-POST-2:2' | Solid | 04/02/19 10:14 | 04/03/19 08:30 |
| 60298670003 | SSC12-POST-3:2' | Solid | 04/02/19 10:14 | 04/03/19 08:30 |
| 60298670004 | SSC12-POST-4:2' | Solid | 04/02/19 10:14 | 04/03/19 08:30 |
| 60298670005 | DUPLICATE 11 | Solid | 04/02/19 10:14 | 04/03/19 08:30 |
| 60298670006 | SSC12-POST-5:2' | Solid | 04/02/19 10:14 | 04/03/19 08:30 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS- FINTUBE

Pace Project No.: 60298670

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------------|------------|----------|-------------------|------------|
| 60298670001 | SSC12-POST-1:2' | EPA 8082 | AJB1 | 8 | PASI-K |
| | | ASTM D2974 | JBC | 1 | PASI-K |
| 60298670002 | SSC12-POST-2:2' | EPA 8082 | AJB1 | 8 | PASI-K |
| | | ASTM D2974 | JBC | 1 | PASI-K |
| 60298670003 | SSC12-POST-3:2' | EPA 8082 | AJB1 | 8 | PASI-K |
| | | ASTM D2974 | JBC | 1 | PASI-K |
| 60298670004 | SSC12-POST-4:2' | EPA 8082 | AJB1 | 8 | PASI-K |
| | | ASTM D2974 | JBC | 1 | PASI-K |
| 60298670005 | DUPLICATE 11 | EPA 8082 | AJB1 | 8 | PASI-K |
| | | ASTM D2974 | JBC | 1 | PASI-K |
| 60298670006 | SSC12-POST-5:2' | EPA 8082 | NAW | 8 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS- FINTUBE

Pace Project No.: 60298670

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|-------|--------------|----------------|------------|
| 60298670001 | SSC12-POST-1:2' | | | | | |
| EPA 8082 | PCB-1260 (Aroclor 1260) | 55.5 | ug/kg | 40.4 | 04/05/19 09:52 | |
| ASTM D2974 | Percent Moisture | 18.8 | % | 0.50 | 04/04/19 17:00 | |
| 60298670002 | SSC12-POST-2:2' | | | | | |
| EPA 8082 | PCB-1260 (Aroclor 1260) | 175 | ug/kg | 82.2 | 04/05/19 10:09 | |
| ASTM D2974 | Percent Moisture | 20.2 | % | 0.50 | 04/04/19 17:00 | |
| 60298670003 | SSC12-POST-3:2' | | | | | |
| EPA 8082 | PCB-1260 (Aroclor 1260) | 1930 | ug/kg | 288 | 04/05/19 12:14 | |
| ASTM D2974 | Percent Moisture | 16.5 | % | 0.50 | 04/04/19 17:00 | |
| 60298670004 | SSC12-POST-4:2' | | | | | |
| EPA 8082 | PCB-1260 (Aroclor 1260) | 96.8 | ug/kg | 77.2 | 04/05/19 12:32 | |
| ASTM D2974 | Percent Moisture | 17.7 | % | 0.50 | 04/04/19 17:00 | |
| 60298670005 | DUPLICATE 11 | | | | | |
| EPA 8082 | PCB-1260 (Aroclor 1260) | 88.5 | ug/kg | 77.6 | 04/05/19 11:38 | |
| ASTM D2974 | Percent Moisture | 18.5 | % | 0.50 | 04/04/19 17:00 | |
| 60298670006 | SSC12-POST-5:2' | | | | | |
| ASTM D2974 | Percent Moisture | 19.1 | % | 0.50 | 04/08/19 17:00 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS- FINTUBE

Pace Project No.: 60298670

Date: April 10, 2019

Amended report revised to include analyses results for SSC12-Post 5:2'.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS- FINTUBE

Pace Project No.: 60298670

Method: EPA 8082

Description: 8082 GCS PCB SW

Client: Environmental Works_OK office

Date: April 10, 2019

General Information:

6 samples were analyzed for EPA 8082. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 577214

S0: Surrogate recovery outside laboratory control limits.

- SSC12-POST-3:2' (Lab ID: 60298670003)
- Decachlorobiphenyl (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS- FINTUBE

Pace Project No.: 60298670

Sample: SSC12-POST-1:2' Lab ID: 60298670001 Collected: 04/02/19 10:14 Received: 04/03/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|------------|------|
| 8082 GCS PCB SW | | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 40.4 | 1 | 04/04/19 17:00 | 04/05/19 09:52 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 40.4 | 1 | 04/04/19 17:00 | 04/05/19 09:52 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 40.4 | 1 | 04/04/19 17:00 | 04/05/19 09:52 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 40.4 | 1 | 04/04/19 17:00 | 04/05/19 09:52 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 40.4 | 1 | 04/04/19 17:00 | 04/05/19 09:52 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 40.4 | 1 | 04/04/19 17:00 | 04/05/19 09:52 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | 55.5 | ug/kg | 40.4 | 1 | 04/04/19 17:00 | 04/05/19 09:52 | 11096-82-5 | |
| Surrogates | | | | | | | | |
| Decachlorobiphenyl (S) | 75 | % | 28-143 | 1 | 04/04/19 17:00 | 04/05/19 09:52 | 2051-24-3 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 18.8 | % | 0.50 | 1 | | 04/04/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS- FINTUBE

Pace Project No.: 60298670

Sample: SSC12-POST-2:2' Lab ID: 60298670002 Collected: 04/02/19 10:14 Received: 04/03/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|------------|------|
| 8082 GCS PCB SW | | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 82.2 | 1 | 04/04/19 17:00 | 04/05/19 10:09 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 82.2 | 1 | 04/04/19 17:00 | 04/05/19 10:09 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 82.2 | 1 | 04/04/19 17:00 | 04/05/19 10:09 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 82.2 | 1 | 04/04/19 17:00 | 04/05/19 10:09 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 82.2 | 1 | 04/04/19 17:00 | 04/05/19 10:09 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 82.2 | 1 | 04/04/19 17:00 | 04/05/19 10:09 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | 175 | ug/kg | 82.2 | 1 | 04/04/19 17:00 | 04/05/19 10:09 | 11096-82-5 | |
| Surrogates | | | | | | | | |
| Decachlorobiphenyl (S) | 79 | % | 28-143 | 1 | 04/04/19 17:00 | 04/05/19 10:09 | 2051-24-3 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 20.2 | % | 0.50 | 1 | | 04/04/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS- FINTUBE

Pace Project No.: 60298670

Sample: SSC12-POST-3:2' Lab ID: 60298670003 Collected: 04/02/19 10:14 Received: 04/03/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|------------|------|
| 8082 GCS PCB SW | | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 288 | 5 | 04/04/19 17:00 | 04/05/19 12:14 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 288 | 5 | 04/04/19 17:00 | 04/05/19 12:14 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 288 | 5 | 04/04/19 17:00 | 04/05/19 12:14 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 288 | 5 | 04/04/19 17:00 | 04/05/19 12:14 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 288 | 5 | 04/04/19 17:00 | 04/05/19 12:14 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 288 | 5 | 04/04/19 17:00 | 04/05/19 12:14 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | 1930 | ug/kg | 288 | 5 | 04/04/19 17:00 | 04/05/19 12:14 | 11096-82-5 | |
| Surrogates | | | | | | | | |
| Decachlorobiphenyl (S) | 0 | % | 28-143 | 5 | 04/04/19 17:00 | 04/05/19 12:14 | 2051-24-3 | S0 |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 16.5 | % | 0.50 | 1 | | 04/04/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS- FINTUBE

Pace Project No.: 60298670

Sample: SSC12-POST-4:2' Lab ID: 60298670004 Collected: 04/02/19 10:14 Received: 04/03/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|------------|------|
| 8082 GCS PCB SW | | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 77.2 | 1 | 04/04/19 17:00 | 04/05/19 12:32 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 77.2 | 1 | 04/04/19 17:00 | 04/05/19 12:32 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 77.2 | 1 | 04/04/19 17:00 | 04/05/19 12:32 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 77.2 | 1 | 04/04/19 17:00 | 04/05/19 12:32 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 77.2 | 1 | 04/04/19 17:00 | 04/05/19 12:32 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 77.2 | 1 | 04/04/19 17:00 | 04/05/19 12:32 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | 96.8 | ug/kg | 77.2 | 1 | 04/04/19 17:00 | 04/05/19 12:32 | 11096-82-5 | |
| Surrogates | | | | | | | | |
| Decachlorobiphenyl (S) | 76 | % | 28-143 | 1 | 04/04/19 17:00 | 04/05/19 12:32 | 2051-24-3 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 17.7 | % | 0.50 | 1 | | 04/04/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS- FINTUBE

Pace Project No.: 60298670

Sample: DUPLICATE 11 **Lab ID: 60298670005** Collected: 04/02/19 10:14 Received: 04/03/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|------------|------|
| 8082 GCS PCB SW | | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 77.6 | 1 | 04/04/19 17:00 | 04/05/19 11:38 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 77.6 | 1 | 04/04/19 17:00 | 04/05/19 11:38 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 77.6 | 1 | 04/04/19 17:00 | 04/05/19 11:38 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 77.6 | 1 | 04/04/19 17:00 | 04/05/19 11:38 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 77.6 | 1 | 04/04/19 17:00 | 04/05/19 11:38 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 77.6 | 1 | 04/04/19 17:00 | 04/05/19 11:38 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | 88.5 | ug/kg | 77.6 | 1 | 04/04/19 17:00 | 04/05/19 11:38 | 11096-82-5 | |
| Surrogates | | | | | | | | |
| Decachlorobiphenyl (S) | 75 | % | 28-143 | 1 | 04/04/19 17:00 | 04/05/19 11:38 | 2051-24-3 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 18.5 | % | 0.50 | 1 | | 04/04/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS- FINTUBE

Pace Project No.: 60298670

Sample: SSC12-POST-5:2' Lab ID: 60298670006 Collected: 04/02/19 10:14 Received: 04/03/19 08:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|------------|------|
| 8082 GCS PCB SW | | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 79.9 | 1 | 04/08/19 20:00 | 04/09/19 18:16 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 79.9 | 1 | 04/08/19 20:00 | 04/09/19 18:16 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 79.9 | 1 | 04/08/19 20:00 | 04/09/19 18:16 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 79.9 | 1 | 04/08/19 20:00 | 04/09/19 18:16 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 79.9 | 1 | 04/08/19 20:00 | 04/09/19 18:16 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 79.9 | 1 | 04/08/19 20:00 | 04/09/19 18:16 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 79.9 | 1 | 04/08/19 20:00 | 04/09/19 18:16 | 11096-82-5 | |
| Surrogates | | | | | | | | |
| Decachlorobiphenyl (S) | 74 | % | 28-143 | 1 | 04/08/19 20:00 | 04/09/19 18:16 | 2051-24-3 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 19.1 | % | 0.50 | 1 | | 04/08/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS- FINTUBE

Pace Project No.: 60298670

QC Batch: 577214 Analysis Method: EPA 8082
 QC Batch Method: EPA 3546 Analysis Description: 8082 GCS PCB
 Associated Lab Samples: 60298670001, 60298670002, 60298670003, 60298670004, 60298670005

METHOD BLANK: 2368263 Matrix: Solid
 Associated Lab Samples: 60298670001, 60298670002, 60298670003, 60298670004, 60298670005

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-------------------------|-------|--------------|-----------------|----------------|------------|
| PCB-1016 (Aroclor 1016) | ug/kg | ND | 32.3 | 04/05/19 12:50 | |
| PCB-1221 (Aroclor 1221) | ug/kg | ND | 32.3 | 04/05/19 12:50 | |
| PCB-1232 (Aroclor 1232) | ug/kg | ND | 32.3 | 04/05/19 12:50 | |
| PCB-1242 (Aroclor 1242) | ug/kg | ND | 32.3 | 04/05/19 12:50 | |
| PCB-1248 (Aroclor 1248) | ug/kg | ND | 32.3 | 04/05/19 12:50 | |
| PCB-1254 (Aroclor 1254) | ug/kg | ND | 32.3 | 04/05/19 12:50 | |
| PCB-1260 (Aroclor 1260) | ug/kg | ND | 32.3 | 04/05/19 12:50 | |
| Decachlorobiphenyl (S) | % | 81 | 28-143 | 04/05/19 12:50 | |

LABORATORY CONTROL SAMPLE: 2368264

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-------------------------|-------|-------------|------------|-----------|--------------|------------|
| PCB-1016 (Aroclor 1016) | ug/kg | 165 | 156 | 94 | 65-132 | |
| PCB-1260 (Aroclor 1260) | ug/kg | 165 | 154 | 93 | 65-138 | |
| Decachlorobiphenyl (S) | % | | | 82 | 28-143 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2368265 2368266

| Parameter | Units | 60298670002 | | MSD | | MS | | MSD | | % Rec Limits | RPD | Max RPD | Qual |
|-------------------------|-------|-------------|-------------|-------------|--------|--------|-------|-------|--------|--------------|-----|---------|------|
| | | Result | Spike Conc. | Spike Conc. | Result | Result | % Rec | % Rec | | | | | |
| PCB-1016 (Aroclor 1016) | ug/kg | ND | 406 | 371 | 400 | 364 | 98 | 98 | 19-145 | 10 | 47 | | |
| PCB-1260 (Aroclor 1260) | ug/kg | 175 | 406 | 371 | 467 | 401 | 72 | 61 | 11-153 | 15 | 35 | | |
| Decachlorobiphenyl (S) | % | | | | | | 73 | 76 | 28-143 | | | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
 without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS- FINTUBE
Pace Project No.: 60298670

QC Batch: 577737 Analysis Method: EPA 8082
QC Batch Method: EPA 3546 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 60298670006

METHOD BLANK: 2371007 Matrix: Solid
Associated Lab Samples: 60298670006

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-------------------------|-------|--------------|-----------------|----------------|------------|
| PCB-1016 (Aroclor 1016) | ug/kg | ND | 31.8 | 04/09/19 19:09 | |
| PCB-1221 (Aroclor 1221) | ug/kg | ND | 31.8 | 04/09/19 19:09 | |
| PCB-1232 (Aroclor 1232) | ug/kg | ND | 31.8 | 04/09/19 19:09 | |
| PCB-1242 (Aroclor 1242) | ug/kg | ND | 31.8 | 04/09/19 19:09 | |
| PCB-1248 (Aroclor 1248) | ug/kg | ND | 31.8 | 04/09/19 19:09 | |
| PCB-1254 (Aroclor 1254) | ug/kg | ND | 31.8 | 04/09/19 19:09 | |
| PCB-1260 (Aroclor 1260) | ug/kg | ND | 31.8 | 04/09/19 19:09 | |
| Decachlorobiphenyl (S) | % | 75 | 28-143 | 04/09/19 19:09 | |

LABORATORY CONTROL SAMPLE: 2371008

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-------------------------|-------|-------------|------------|-----------|--------------|------------|
| PCB-1016 (Aroclor 1016) | ug/kg | 165 | 157 | 95 | 65-132 | |
| PCB-1260 (Aroclor 1260) | ug/kg | 165 | 154 | 93 | 65-138 | |
| Decachlorobiphenyl (S) | % | | | 75 | 28-143 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2371009 2371010

| Parameter | Units | 60298670006 | | 2371010 | | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|-------------------------|-------|----------------|-----------------|-----------|------------|----------|-----------|--------------|--------|---------|------|
| | | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | | | | | | |
| PCB-1016 (Aroclor 1016) | ug/kg | ND | 360 | 385 | 336 | 405 | 94 | 105 | 19-145 | 19 | 47 |
| PCB-1260 (Aroclor 1260) | ug/kg | ND | 360 | 385 | 404 | 471 | 93 | 104 | 11-153 | 15 | 35 |
| Decachlorobiphenyl (S) | % | | | | | | 71 | 69 | 28-143 | | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS- FINTUBE

Pace Project No.: 60298670

QC Batch: 577726

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60298670006

METHOD BLANK: 2370993

Matrix: Solid

Associated Lab Samples: 60298670006

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------------|-------|--------------|-----------------|----------------|------------|
| Percent Moisture | % | ND | 0.50 | 04/08/19 17:00 | |

SAMPLE DUPLICATE: 2370994

| Parameter | Units | 60298670006 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------|-------|--------------------|------------|-----|---------|------------|
| Percent Moisture | % | 19.1 | 17.5 | 8 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS- FINTUBE

Pace Project No.: 60298670

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

S0 Surrogate recovery outside laboratory control limits.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS- FINTUBE

Pace Project No.: 60298670

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-----------------|-----------------|----------|-------------------|------------------|
| 60298670001 | SSC12-POST-1:2' | EPA 3546 | 577214 | EPA 8082 | 577394 |
| 60298670002 | SSC12-POST-2:2' | EPA 3546 | 577214 | EPA 8082 | 577394 |
| 60298670003 | SSC12-POST-3:2' | EPA 3546 | 577214 | EPA 8082 | 577394 |
| 60298670004 | SSC12-POST-4:2' | EPA 3546 | 577214 | EPA 8082 | 577394 |
| 60298670005 | DUPLICATE 11 | EPA 3546 | 577214 | EPA 8082 | 577394 |
| 60298670006 | SSC12-POST-5:2' | EPA 3546 | 577737 | EPA 8082 | 578009 |
| 60298670001 | SSC12-POST-1:2' | ASTM D2974 | 577192 | | |
| 60298670002 | SSC12-POST-2:2' | ASTM D2974 | 577192 | | |
| 60298670003 | SSC12-POST-3:2' | ASTM D2974 | 577192 | | |
| 60298670004 | SSC12-POST-4:2' | ASTM D2974 | 577192 | | |
| 60298670005 | DUPLICATE 11 | ASTM D2974 | 577192 | | |
| 60298670006 | SSC12-POST-5:2' | ASTM D2974 | 577726 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO#: 60298670



Client Name: Environmental Works Tulsa

Courier: FedEx [X] UPS [] VIA [] Clay [] PEX [] ECI [] Pace [] Xroads [] Client [] Other []

Tracking #: 724919091243 Pace Shipping Label Used? Yes [] No [X]

Custody Seal on Cooler/Box Present: Yes [X] No [] Seals intact: Yes [X] No []

Packing Material: Bubble Wrap [] Bubble Bags [X] Foam [] None [] Other []

Thermometer Used: T300 Type of Ice: Wet [] Blue [] None []

Cooler Temperature (°C): As-read 0.8 Corr. Factor 10.4 Corrected 1.2

Date and initials of person examining contents: 4.3.19 [initials]

Temperature should be above freezing to 6°C

| | | |
|--|--|--|
| Chain of Custody present: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Chain of Custody relinquished: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples arrived within holding time: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Short Hold Time analyses (<72hr): | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Rush Turn Around Time requested: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | 48 HR |
| Sufficient volume: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Correct containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Pace containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers intact: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Filtered volume received for dissolved tests? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Sample labels match COC: Date / time / ID / analyses | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples contain multiple phases? Matrix: SL | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | List sample IDs, volumes, lot #'s of preservative and the date/time added. |
| Cyanide water sample checks: | | |
| Lead acetate strip turns dark? (Record only) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Potassium iodide test strip turns blue/purple? (Preserve) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Trip Blank present: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Headspace in VOA vials (>6mm): | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Samples from USDA Regulated Area: State: SL | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Additional labels attached to 5035A / TX1005 vials in the field? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____



Sample Condition Upon Receipt

WO#: 60298670



Client Name: Environmental Works Tulsa

Courier: FedEx [X] UPS [] VIA [] Clay [] PEX [] ECI [] Pace [] Xroads [] Client [] Other []

Tracking #: 724919091243 Pace Shipping Label Used? Yes [] No [X]

Custody Seal on Cooler/Box Present: Yes [X] No [] Seals intact: Yes [X] No []

Packing Material: Bubble Wrap [] Bubble Bags [X] Foam [] None [] Other []

Thermometer Used: T300 Type of Ice: Wet [] Blue [] None []

Cooler Temperature (°C): As-read 0.8 Corr. Factor 10.4 Corrected 1.2

Date and initials of person examining contents: 4.3.19 [initials]

Temperature should be above freezing to 6°C

Table with 3 columns: Description, Yes/No/N/A checkboxes, and additional notes. Rows include Chain of Custody, Short Hold Time analyses, Rush Turn Around Time (48 HR), Containers requiring pH preservation, Trip Blank present, and Samples from USDA Regulated Area.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

April 15, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS-FINTUBE
Pace Project No.: 60299577

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on April 11, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
Angie.Brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS-FINTUBE

Pace Project No.: 60299577

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Certification Number: 10090

Arkansas Drinking Water

WY STR Certification #: 2456.01

Arkansas Certification #: 18-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116 / E10426

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS-FINTUBE

Pace Project No.: 60299577

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|-----------------|--------|----------------|----------------|
| 60299577001 | SSC12-POST-6:2' | Solid | 04/10/19 17:00 | 04/11/19 08:20 |
| 60299577002 | SSC12-POST-7:2' | Solid | 04/10/19 17:00 | 04/11/19 08:20 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS-FINTUBE

Pace Project No.: 60299577

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-----------------|------------|----------|-------------------|------------|
| 60299577001 | SSC12-POST-6:2' | EPA 8082 | AJB1 | 8 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS-FINTUBE

Pace Project No.: 60299577

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|-------|--------------|----------------|------------|
| 60299577001 | SSC12-POST-6:2' | | | | | |
| ASTM D2974 | Percent Moisture | 25.0 | % | 0.50 | 04/12/19 17:00 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60299577

Method: EPA 8082

Description: 8082 GCS PCB SW

Client: Environmental Works_OK office

Date: April 15, 2019

General Information:

1 sample was analyzed for EPA 8082. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 578461

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60299285004

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2373873)
- PCB-1016 (Aroclor 1016)

Additional Comments:

Analyte Comments:

QC Batch: 578461

1e: The continuing calibration for this compound is outside of Pace Analytical acceptance limits due to matrix interferences. The results may be biased low.

- BLANK (Lab ID: 2373871)
 - Decachlorobiphenyl (S)
- LCS (Lab ID: 2373872)
 - Decachlorobiphenyl (S)

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60299577

Method: EPA 8082

Description: 8082 GCS PCB SW

Client: Environmental Works_OK office

Date: April 15, 2019

Analyte Comments:

QC Batch: 578461

1e: The continuing calibration for this compound is outside of Pace Analytical acceptance limits due to matrix interferences. The results may be biased low.

- MS (Lab ID: 2373873)
 - Decachlorobiphenyl (S)
- MSD (Lab ID: 2373874)
 - Decachlorobiphenyl (S)
- SSC12-POST-6:2' (Lab ID: 60299577001)
 - Decachlorobiphenyl (S)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60299577

Sample: SSC12-POST-6:2' Lab ID: 60299577001 Collected: 04/10/19 17:00 Received: 04/11/19 08:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|------------|------|
| 8082 GCS PCB SW | | Analytical Method: EPA 8082 Preparation Method: EPA 3546 | | | | | | |
| PCB-1016 (Aroclor 1016) | ND | ug/kg | 85.4 | 1 | 04/11/19 17:00 | 04/13/19 00:17 | 12674-11-2 | |
| PCB-1221 (Aroclor 1221) | ND | ug/kg | 85.4 | 1 | 04/11/19 17:00 | 04/13/19 00:17 | 11104-28-2 | |
| PCB-1232 (Aroclor 1232) | ND | ug/kg | 85.4 | 1 | 04/11/19 17:00 | 04/13/19 00:17 | 11141-16-5 | |
| PCB-1242 (Aroclor 1242) | ND | ug/kg | 85.4 | 1 | 04/11/19 17:00 | 04/13/19 00:17 | 53469-21-9 | |
| PCB-1248 (Aroclor 1248) | ND | ug/kg | 85.4 | 1 | 04/11/19 17:00 | 04/13/19 00:17 | 12672-29-6 | |
| PCB-1254 (Aroclor 1254) | ND | ug/kg | 85.4 | 1 | 04/11/19 17:00 | 04/13/19 00:17 | 11097-69-1 | |
| PCB-1260 (Aroclor 1260) | ND | ug/kg | 85.4 | 1 | 04/11/19 17:00 | 04/13/19 00:17 | 11096-82-5 | |
| Surrogates | | | | | | | | |
| Decachlorobiphenyl (S) | 69 | % | 28-143 | 1 | 04/11/19 17:00 | 04/13/19 00:17 | 2051-24-3 | 1e |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 25.0 | % | 0.50 | 1 | | 04/12/19 17:00 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60299577

| | |
|-------------------------------------|------------------------------------|
| QC Batch: 578461 | Analysis Method: EPA 8082 |
| QC Batch Method: EPA 3546 | Analysis Description: 8082 GCS PCB |
| Associated Lab Samples: 60299577001 | |

METHOD BLANK: 2373871 Matrix: Solid

Associated Lab Samples: 60299577001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|-------------------------|-------|--------------|-----------------|----------------|------------|
| PCB-1016 (Aroclor 1016) | ug/kg | ND | 32.2 | 04/12/19 20:44 | |
| PCB-1221 (Aroclor 1221) | ug/kg | ND | 32.2 | 04/12/19 20:44 | |
| PCB-1232 (Aroclor 1232) | ug/kg | ND | 32.2 | 04/12/19 20:44 | |
| PCB-1242 (Aroclor 1242) | ug/kg | ND | 32.2 | 04/12/19 20:44 | |
| PCB-1248 (Aroclor 1248) | ug/kg | ND | 32.2 | 04/12/19 20:44 | |
| PCB-1254 (Aroclor 1254) | ug/kg | ND | 32.2 | 04/12/19 20:44 | |
| PCB-1260 (Aroclor 1260) | ug/kg | ND | 32.2 | 04/12/19 20:44 | |
| Decachlorobiphenyl (S) | % | 78 | 28-143 | 04/12/19 20:44 | 1e |

LABORATORY CONTROL SAMPLE: 2373872

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|-------------------------|-------|-------------|------------|-----------|--------------|------------|
| PCB-1016 (Aroclor 1016) | ug/kg | 165 | 154 | 93 | 65-132 | |
| PCB-1260 (Aroclor 1260) | ug/kg | 165 | 152 | 92 | 65-138 | |
| Decachlorobiphenyl (S) | % | | | 76 | 28-143 | 1e |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2373873 2373874

| Parameter | Units | 60299285004 | | MSD | | MS | | MSD | | % Rec Limits | RPD | Max RPD | Qual |
|-------------------------|-------|-------------|-------------|-------------|-----------|------------|----------|-----------|--------|--------------|-----|---------|------|
| | | Result | Spike Conc. | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | | | | | |
| PCB-1260 (Aroclor 1260) | ug/kg | ND | 327 | 325 | 277 | 316 | 85 | 97 | 11-153 | 13 | 35 | | |
| Decachlorobiphenyl (S) | % | | | | | | 71 | 69 | 28-143 | | | 1e | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60299577

QC Batch: 578671

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60299577001

METHOD BLANK: 2374679

Matrix: Solid

Associated Lab Samples: 60299577001

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------------|-------|--------------|-----------------|----------------|------------|
| Percent Moisture | % | ND | 0.50 | 04/12/19 17:00 | |

SAMPLE DUPLICATE: 2374680

| Parameter | Units | 60299487001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------|-------|--------------------|------------|-----|---------|------------|
| Percent Moisture | % | 25.5 | 26.1 | 2 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS-FINTUBE

Pace Project No.: 60299577

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

1e The continuing calibration for this compound is outside of Pace Analytical acceptance limits due to matrix interferences. The results may be biased low.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS-FINTUBE

Pace Project No.: 60299577

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---------------|------------------|------------------------|-----------------|--------------------------|-------------------------|
| 60299577001 | SSC12-POST-6:2' | EPA 3546 | 578461 | EPA 8082 | 578862 |
| 60299577001 | SSC12-POST-6:2' | ASTM D2974 | 578671 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO#: 60299577



Client Name: Env. Wks

Courier: FedEx [x] UPS [] VIA [] Clay [] PEX [] ECI [] Pace [] Xroads [] Client [] Other []

Tracking #: 7249 1909 1001 Pace Shipping Label Used? Yes [x] No []

Custody Seal on Cooler/Box Present: Yes [x] No [] Seals intact: Yes [x] No []

Packing Material: Bubble Wrap [] Bubble Bags [x] Foam [] None [] Other []

Thermometer Used: T-288 Type of Ice: Wet [x] Blue [] None []

Cooler Temperature (°C): As-read 2.2 Corr. Factor -0.1 Corrected 2.1

Date and initials of person examining contents: 4/18/19 [initials]

Temperature should be above freezing to 6°C

Table with 2 columns: Question/Field and Answer (Yes/No/N/A). Rows include Chain of Custody, Samples arrived, Short Hold Time, Rush Turn Around Time, Sufficient volume, Containers used, Containers intact, Unpreserved soils, Filtered volume, Sample labels match, Samples contain multiple phases, Containers requiring pH preservation, Cyanide water sample checks, Trip Blank present, Headspace in VOA vials, Samples from USDA Regulated Area, Additional labels attached.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

| | | | |
|--|---|---|--|
| Section A Required Client Information: | Section B Required Project Information: | Section C Invoice Information: | Page: <u>1</u> of <u>1</u> |
| Company: <u>SAVING PRIVATE INDUSTRIES - TULSA OFFICE</u> | Report To: <u>Moore, Anthony</u> | Attention: | 2270541 |
| Address: <u>6529 E. 55th Place</u> | Copy To: | Company Name: | |
| Email To: <u>Suite #1, Tulsa, OK 74145</u> | Purchase Order No.: | Address: | REGULATORY AGENCY |
| Phone: <u>918-579-4499</u> Fax: <u>918-579-4499</u> | Project Name: <u>Evans - Fintube</u> | Pace Quote Reference: | |
| Requested Due Date/TAT: <u>48-hr TAT</u> | Project Number: | Pace Project Manager: <u>Angie Brown @ pacelabs.com</u> | <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER |
| | | Pace Profile #: <u>12359</u> | <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER |
| | | Site Location STATE: <u>OK</u> | |

| ITEM # | Section D Required Client Information | Matrix Codes MATRIX / CODE | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED | | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives | Requested Analysis Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project No. / Lab I.D. |
|--------|--|-------------------------------|-----------------------------|-----------------|--------------------|---------------------------|-----------------|--|-----------------------------------|-------------------------|-----------------------------|
| | | | | COMPOSITE START | COMPOSITE END/GRAB | | | | | | |
| 1 | S8812 - post-7:21' | Drinking Water DW | SLC | 4/10/19 10:40 | 4/10/19 17:00 | | 1 | Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other | | | 001 |
| 2 | S8812 - post-7:21' | Waste Water WW | SLC | 4/10/19 10:40 | 4/10/19 17:00 | | 1 | Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other | | | 002 |
| 3 | | Product P | | | | | | | | | |
| 4 | | Soil/Solid SL | | | | | | | | | |
| 5 | | Oil OL | | | | | | | | | |
| 6 | | Wipe WP | | | | | | | | | |
| 7 | | Air AR | | | | | | | | | |
| 8 | | Tissue TS | | | | | | | | | |
| 9 | | Other OT | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS |
|-------------------------|-------------------------------|---------|------|---------------------------|---------|------|--|
| Hold S8812 - post-7:21' | Ruzick W | 4/10/19 | 1900 | Justin Pace | 4/11/19 | 0820 | Temp in °C Received on Ice (Y/N) Custody Sealed Cooler (Y/N) Samples Intact (Y/N) |
| | | | | | | | 2.1 y y y |
| | | | | | | | |
| | | | | | | | |

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Katie Wilson DATE Signed (MM/DD/YYYY): 04/10/19

SIGNATURE of SAMPLER: Ruzick W

*Important Note: By signing this form, you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

May 22, 2019

ANTHONY MOORE
ENVIRONMENTAL WORKS
1731 LOCUST ST
Kansas City, MO 64108

RE: Project: EVANS-FINTUBE
Pace Project No.: 60303231

Dear ANTHONY MOORE:

Enclosed are the analytical results for sample(s) received by the laboratory on May 18, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown
angie.brown@pacelabs.com
1(913)563-1402
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: EVANS-FINTUBE

Pace Project No.: 60303231

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

Arkansas Drinking Water

Missouri Certification Number: 10090

WY STR Certification #: 2456.01

Arkansas Certification #: 19-016-0

Arkansas Drinking Water

Illinois Certification #: 004455

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212018-1

Oklahoma Certification #: 9205/9935

Florida: Cert E871149 SEKS WET

Florida: Cert E871149 SEKS WET

Florida: Cert E871149 SEKS WET

Texas Certification #: T104704407-18-11

Utah Certification #: KS000212018-8

Kansas Field Laboratory Accreditation: # E-92587

Missouri Certification: 10070

Missouri Certification Number: 10090

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: EVANS-FINTUBE

Pace Project No.: 60303231

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|-------------|-------------------|--------|----------------|----------------|
| 60303231001 | DRAIN SAMPLE-WEST | Solid | 05/17/19 16:00 | 05/18/19 08:40 |
| 60303231002 | DRAIN SAMPLE-EAST | Solid | 05/17/19 16:17 | 05/18/19 08:40 |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: EVANS-FINTUBE

Pace Project No.: 60303231

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|-------------|-------------------|------------|----------|-------------------|------------|
| 60303231001 | DRAIN SAMPLE-WEST | TNRCC 1005 | NAW | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |
| 60303231002 | DRAIN SAMPLE-EAST | TNRCC 1005 | NAW | 6 | PASI-K |
| | | ASTM D2974 | DWC | 1 | PASI-K |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUMMARY OF DETECTION

Project: EVANS-FINTUBE

Pace Project No.: 60303231

| Lab Sample ID Method | Client Sample ID Parameters | Result | Units | Report Limit | Analyzed | Qualifiers |
|-------------------------|--------------------------------|--------|-------|--------------|----------------|------------|
| 60303231001 | DRAIN SAMPLE-WEST | | | | | |
| TNRCC 1005 | TPH (>C12-C28) | 758 | mg/kg | 25.5 | 05/20/19 16:30 | |
| TNRCC 1005 | TPH (>C28-C35) | 398 | mg/kg | 25.5 | 05/20/19 16:30 | |
| TNRCC 1005 | TPH Total (C06-C35) | 1160 | mg/kg | 25.5 | 05/20/19 16:30 | |
| ASTM D2974 | Percent Moisture | 25.3 | % | 0.50 | 05/20/19 13:24 | |
| 60303231002 | DRAIN SAMPLE-EAST | | | | | |
| ASTM D2974 | Percent Moisture | 22.8 | % | 0.50 | 05/20/19 13:24 | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: EVANS-FINTUBE

Pace Project No.: 60303231

Method: TNRCC 1005

Description: TNRCC 1005 TPH

Client: Environmental Works_OK office

Date: May 22, 2019

General Information:

2 samples were analyzed for TNRCC 1005. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with TNRCC 1005 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 585549

1e: Surrogate recovery outside laboratory control limits. No further action taken due to TPH Total passing within acceptance limits.

- LCS (Lab ID: 2402892)
 - 1-Chlorooctane (S)
- LCSD (Lab ID: 2402893)
 - 1-Chlorooctane (S)
- MS (Lab ID: 2403010)
 - 1-Chlorooctane (S)
 - o-Terphenyl (S)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60303231

Sample: DRAIN SAMPLE-WEST Lab ID: 60303231001 Collected: 05/17/19 16:00 Received: 05/18/19 08:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 25.5 | 1 | 05/20/19 11:11 | 05/20/19 16:30 | | |
| TPH (>C12-C28) | 758 | mg/kg | 25.5 | 1 | 05/20/19 11:11 | 05/20/19 16:30 | | |
| TPH (>C28-C35) | 398 | mg/kg | 25.5 | 1 | 05/20/19 11:11 | 05/20/19 16:30 | | |
| TPH Total (C06-C35) | 1160 | mg/kg | 25.5 | 1 | 05/20/19 11:11 | 05/20/19 16:30 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 128 | % | 70-130 | 1 | 05/20/19 11:11 | 05/20/19 16:30 | 84-15-1 | |
| 1-Chlorooctane (S) | 118 | % | 70-130 | 1 | 05/20/19 11:11 | 05/20/19 16:30 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 25.3 | % | 0.50 | 1 | | 05/20/19 13:24 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS

Project: EVANS-FINTUBE

Pace Project No.: 60303231

Sample: DRAIN SAMPLE-EAST Lab ID: 60303231002 Collected: 05/17/19 16:17 Received: 05/18/19 08:40 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

| Parameters | Results | Units | Report Limit | DF | Prepared | Analyzed | CAS No. | Qual |
|-------------------------|-------------|---|--------------|----|----------------|----------------|-----------|------|
| TNRCC 1005 TPH | | Analytical Method: TNRCC 1005 Preparation Method: TNRCC 1005 | | | | | | |
| TPH (C06-C12) | ND | mg/kg | 24.5 | 1 | 05/20/19 11:11 | 05/21/19 19:53 | | |
| TPH (>C12-C28) | ND | mg/kg | 24.5 | 1 | 05/20/19 11:11 | 05/21/19 19:53 | | |
| TPH (>C28-C35) | ND | mg/kg | 24.5 | 1 | 05/20/19 11:11 | 05/21/19 19:53 | | |
| TPH Total (C06-C35) | ND | mg/kg | 24.5 | 1 | 05/20/19 11:11 | 05/21/19 19:53 | | |
| Surrogates | | | | | | | | |
| o-Terphenyl (S) | 119 | % | 70-130 | 1 | 05/20/19 11:11 | 05/21/19 19:53 | 84-15-1 | |
| 1-Chlorooctane (S) | 119 | % | 70-130 | 1 | 05/20/19 11:11 | 05/21/19 19:53 | 3386-33-2 | |
| Percent Moisture | | Analytical Method: ASTM D2974 | | | | | | |
| Percent Moisture | 22.8 | % | 0.50 | 1 | | 05/20/19 13:24 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60303231

QC Batch: 585549 Analysis Method: TNRCC 1005
 QC Batch Method: TNRCC 1005 Analysis Description: TX1005 TPH GCS
 Associated Lab Samples: 60303231001, 60303231002

METHOD BLANK: 2402891 Matrix: Solid

Associated Lab Samples: 60303231001, 60303231002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---------------------|-------|--------------|-----------------|----------------|------------|
| TPH (>C12-C28) | mg/kg | ND | 20.0 | 05/20/19 14:35 | |
| TPH (>C28-C35) | mg/kg | ND | 20.0 | 05/20/19 14:35 | |
| TPH (C06-C12) | mg/kg | ND | 20.0 | 05/20/19 14:35 | |
| TPH Total (C06-C35) | mg/kg | ND | 20.0 | 05/20/19 14:35 | |
| 1-Chlorooctane (S) | % | 113 | 70-130 | 05/20/19 14:35 | |
| o-Terphenyl (S) | % | 113 | 70-130 | 05/20/19 14:35 | |

LABORATORY CONTROL SAMPLE & LCSD: 2402892

2402893

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---------------------|-------|-------------|------------|-------------|-----------|------------|--------------|-----|---------|------------|
| TPH Total (C06-C35) | mg/kg | 2490 | 2420 | 2330 | 97 | 93 | 75-125 | 4 | 20 | |
| 1-Chlorooctane (S) | % | | | | 146 | 142 | 70-130 | | | 1e |
| o-Terphenyl (S) | % | | | | 128 | 124 | 70-130 | | | |

MATRIX SPIKE SAMPLE: 2403010

| Parameter | Units | 60303231001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---------------------|-------|--------------------|-------------|-----------|----------|--------------|------------|
| TPH Total (C06-C35) | mg/kg | 1160 | 2690 | 4330 | 118 | 11-187 | |
| 1-Chlorooctane (S) | % | | | | 142 | 70-130 | 1e |
| o-Terphenyl (S) | % | | | | 139 | 70-130 | 1e |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: EVANS-FINTUBE

Pace Project No.: 60303231

QC Batch: 585500

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60303231001, 60303231002

METHOD BLANK: 2402747

Matrix: Solid

Associated Lab Samples: 60303231001, 60303231002

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|------------------|-------|--------------|-----------------|----------------|------------|
| Percent Moisture | % | ND | 0.50 | 05/20/19 13:23 | |

SAMPLE DUPLICATE: 2402748

| Parameter | Units | 50224665001 Result | Dup Result | RPD | Max RPD | Qualifiers |
|------------------|-------|--------------------|------------|-----|---------|------------|
| Percent Moisture | % | 15.4 | 13.9 | 10 | 20 | |

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: EVANS-FINTUBE

Pace Project No.: 60303231

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

1e Surrogate recovery outside laboratory control limits. No further action taken due to TPH Total passing within acceptance limits.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: EVANS-FINTUBE

Pace Project No.: 60303231

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|-------------|-------------------|-----------------|----------|-------------------|------------------|
| 60303231001 | DRAIN SAMPLE-WEST | TNRCC 1005 | 585549 | TNRCC 1005 | 585634 |
| 60303231002 | DRAIN SAMPLE-EAST | TNRCC 1005 | 585549 | TNRCC 1005 | 585634 |
| 60303231001 | DRAIN SAMPLE-WEST | ASTM D2974 | 585500 | | |
| 60303231002 | DRAIN SAMPLE-EAST | ASTM D2974 | 585500 | | |

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



Sample Condition Upon Receipt

WO#: 60303231



Client Name: EWI
 Courier: FedEx UPS VIA Clay PEX ECI Pace Xroads Client Other
 Tracking #: 7249 1909 1574 Pace Shipping Label Used? Yes No
 Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No
 Packing Material: Bubble Wrap Bubble Bags Foam None Other
 Thermometer Used: T-298 Type of Ice: Wet Blue None
 Cooler Temperature (°C): As-read 3.3 Corr. Factor -0.1 Corrected 3.2

Date and initials of person examining contents: 5/18/19-*SL*

Temperature should be above freezing to 6°C

| | | |
|--|--|--|
| Chain of Custody present: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Chain of Custody relinquished: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples arrived within holding time: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Short Hold Time analyses (<72hr): | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Rush Turn Around Time requested: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | <u>2-day</u> |
| Sufficient volume: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Correct containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Pace containers used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers intact: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Filtered volume received for dissolved tests? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Sample labels match COC: Date / time / ID / analyses | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |
| Samples contain multiple phases? Matrix: <u>SL</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | |
| Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | List sample IDs, volumes, lot #'s of preservative and the date/time added. |
| Cyanide water sample checks: | | |
| Lead acetate strip turns dark? (Record only) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Potassium iodide test strip turns blue/purple? (Preserve) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Trip Blank present: | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Headspace in VOA vials (>6mm): | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | |
| Samples from USDA Regulated Area: State: <u>OK</u> | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | <u>location not specific</u> |
| Additional labels attached to 5035A / TX1005 vials in the field? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | |

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

ATTACHMENT 3

Photographic Documentation

Evan-Fintube Property
118/186 North Lansing Avenue, Tulsa, Oklahoma
Photographed by: Kenzie Wilson



1. Removal of floor brick pavers inside Evans building (looking north).



2. Removal of floor brick pavers inside Evans building with Guzzler air mover.

Evan-Fintube Property
118/186 North Lansing Avenue, Tulsa, Oklahoma
Photographed by: Kenzie Wilson



3. Concrete breaking inside Fintube building (SSD04, looking north).



4. Excavating at SB05-SS01 (looking southwest).

Evan-Fintube Property
118/186 North Lansing Avenue, Tulsa, Oklahoma
Photographed by: Kenzie Wilson



5. Removing concrete at SSD05 (looking east).



6. Excavation at SSD14 (looking south).

**Evan-Fintube Property
118/186 North Lansing Avenue, Tulsa, Oklahoma
Photographed by: Kenzie Wilson**



7. Oil sheen observed at SSD14.



8. Floor brick pavers area in Evans building following gravel backfill (looking northeast).

Evan-Fintube Property
118/186 North Lansing Avenue, Tulsa, Oklahoma
Photographed by: Kenzie Wilson



9. SSD05 following excavation and backfill activities (looking east).



10. Excavation work in SSD12 (looking south).

**Evan-Fintube Property
118/186 North Lansing Avenue, Tulsa, Oklahoma
Photographed by: Kenzie Wilson**



11. Concrete surface work at SSD14 (looking west).



12. Final concrete surface at SSD14 (looking southwest).

Evan-Fintube Property
118/186 North Lansing Avenue, Tulsa, Oklahoma
Photographed by: Kenzie Wilson



13. "T" area east of SSD14 (looking west).



14. Final concrete surface in floor brick pavers area (looking north).

ATTACHMENT 4

Waste Disposal Documentation

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802

HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT01
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/08/2019 TIME IN: 11:32:34
DATE OUT: 03/08/2019 TIME OUT: 11:41:24

INBOUND TICKET Number: 01-00676307

SCALE 1 GROSS WT. 60320 LB
SCALE 2 TARE WT. 28780 LB
NET WEIGHT 31540 LB

Qty Description Amount
15.770 Bulk Soilds 299.63

State Fee 19.71
NET CHARGE AMOUNT: 319.34

x

I hereby certify that the above material was picked up at the generator site listed above.

William Walker
Driver Signature

3/8/19
Ship Date

Destination

American Environmental Landfill, Inc.
210 N. 177th W Ave
Sand Springs, Ok. 74063

Phone: (918) 245-7766
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

[Signature]
Signature

3/8/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

Manifest Job No. 182045 MN348COT01

OK 74103
City Zip

Bill to Name: Environmental Works, Inc.

OK 74120
City Zip

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

(918) 596-7457

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | PT | 16 | cy |
| | | 15.777 | |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly condition for transportation according to applicable regulations.

Michael [Signature]
Signature

Shipment Date

Transporter

ks, Inc.
Expressway
802

Driver Name (Print): William Walker
Tag No. 01A M4P State: MO
USDOT No. 933 327

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Walker
Driver Signature

3/8/19
Deliver Date

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT01
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/07/2019 TIME IN: 08:55:00
DATE OUT: 03/07/2019 TIME OUT: 09:04:38

INBOUND TICKET Number: 01-00676097

SCALE 1 GROSS WT. 36020 LB
SCALE 2 TARE WT. 27740 LB
NET WEIGHT 8280 LB

| Qty | Description | Amount |
|-------|-------------|--------|
| 4.140 | Bulk Soilds | 78.66 |

State Fee 5.18
NET CHARGE AMOUNT: 83.84

X

William Walker

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

K 74103
City/State/Zip

K 74120
City/State/Zip
(18) 596-7457

Manifest Job No: ~~102045~~ MN348COT01
Bill to Name: Environmental Works, Inc.
Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City/State/Zip
Contact: Anthony Moore (417) 773-5747
Name/Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | DOT | 3 | CF |
| | | 464 | |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

William Walker
Signature

Shipment Date

Transporter

Environmental Landfill, Inc.
Expressway
802

Driver Name (Print): William Walker
Tag No: 01A M4P State: MO
USDOT No: 933 327

I hereby certify that the above material was picked up at the generator site listed above.

William Walker
Driver Signature

3/6/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Walker
Driver Signature

3/7/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W. Ave.
Sand Springs, OK 74063

Phone: (918) 248-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Authorized Agent

William Walker
Signature

3719
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King
Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT01
Generator: CITY OF TULSA

Street: 118 N LANSING
City/State: TULSA, OK 74120

DATE IN: 03/06/2019 TIME IN: 14:58:56
DATE OUT: 03/06/2019 TIME OUT: 15:09:14

INBOUND TICKET Number: 01-00676030

SCALE 1 GROSS WT. 50060 LB
SCALE 2 TARE WT. 28000 LB
NET WEIGHT 22060 LB

| Qty | Description | Amount |
|--------|-------------|--------|
| 11.030 | Bulk Soilds | 209.57 |

State Fee 13.79
NET CHARGE AMOUNT: 223.36

X

I hereby certify that the above material was picked up at the generator site listed above.

Driver Signature: *[Signature]*

3/6/19
Ship Date

Transporter

Environmental Works, Inc.
Expressway
802

Driver Name (Print): William Walker
Tag No: OIA M4P State: MO
USDOT No: 933 327

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature: *[Signature]*

3/6/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave
Sand Springs, OK. 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King, Micki King, Raven Blunt
Name of Authorized Agent

Signature: *[Signature]*

3-6-19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

Manifest Job No: ~~182045~~ MN348COT02

OK 74103
City/State/Zip

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City/State/Zip

OK 74120
City/State/Zip

Contact: Anthony Moore (417) 773-5747
Name/Phone

(918) 596-7457
Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | 7-1 | 16 | CU |

11.03T

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Signature: *[Signature]*

Shipment Date

X

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT01
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/06/2019 TIME IN: 13:09:39
DATE OUT: 03/06/2019 TIME OUT: 13:20:41

INBOUND TICKET Number: 01-00675991

SCALE 1 GROSS WT. 43180 LB
SCALE 2 TARE WT. 28060 LB
NET WEIGHT 15120 LB

| Qty | Description | Amount |
|-------|-------------|--------|
| 7.560 | Bulk Solids | 143.64 |

State Fee 9.45
NET CHARGE AMOUNT: 153.09

X

I hereby certify that the above material was picked up at the generator site listed above.

William Walker
Driver Signature

3/6/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Walker
Driver Signature

3/6/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W. Ave.
Sand Springs, OK. 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name(s) Authorized Agent

Signature

[Signature]

3/6/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

74103
Zip

74120
Zip

8) 596-7457

Manifest

Job No. 182045 MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway

Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | D7 | 16 | cy |

7.560 T

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

[Signature]
Signature

Shipment Date

Transporter

Environmental Works, Inc.

1455 E. Chestnut Expressway

Driver Name (Print): William Walker

Tag No. 01A M4P State: MO

USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

William Walker
Driver Signature

3/6/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Walker
Driver Signature

3/6/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W. Ave.
Sand Springs, OK. 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name(s) Authorized Agent

Signature

[Signature]

3/6/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT01
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/06/2019 TIME IN: 11:19:40
DATE OUT: 03/06/2019 TIME OUT: 11:31:15

INBOUND TICKET Number: 01-00675950

SCALE 1 GROSS WT. 41540 LB
SCALE 2 TARE WT. 28160 LB
NET WEIGHT 13380 LB

| Qty | Description | Amount |
|-------|-------------|--------|
| 6.690 | Bulk Solids | 127.11 |

State Fee 8.36
NET CHARGE AMOUNT: 135.47

X

William Walker

I hereby certify that the above material was picked up at the generator site listed above.

Will Wall
Driver Signature

3/6/19
Ship Date

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

OK 74103
City Zip

OK 74120
City Zip

(918) 596-7457

Manifest

Job No. ~~182045~~ MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway

Springfield MO 65802

City State Zip

Contact: Anthony Moore (417) 773-5747

Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
|---------------|------|----------------|------|

DT 10 CY

66 RT

hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Michelle
Signature

Shipment Date

Transporter

Environmental Works, Inc.

Expressway

802

Driver Name (Print): William Walker

Tag No. OIAM4P State: MO

USDOT No. 933 327

I hereby certify that the above named material was delivered without incident to the destination listed below.

Will Wall
Driver Signature

3/6/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W. Ave.
Sand Springs, OK. 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557024

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt

Name of Authorized Signatory

Signature

Will Wall

Receipt Date

3-6-19

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT01
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/06/2019 TIME IN: 08:45:14
DATE OUT: 03/06/2019 TIME OUT: 09:04:19

INBOUND TICKET Number: 01-00675888

SCALE 1 GROSS WT. 46420 LB
SCALE 2 TARE WT. 28240 LB
NET WEIGHT 18180 LB

Qty Description Amount
9.090 Bulk Solids 172.71

State Fee 11.36
NET CHARGE AMOUNT: 184.07

x

William Walker

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

74103
Zip

74120
Zip

(18) 596-7457

Manifest Job No. 182045

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway

Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

Container No. Type Total Quantity Unit

DT 16 CY
9.090

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly identified for transportation according to applicable regulations.

William Walker
Signature

Shipment Date

Transporter

Environmental Works, Inc.
1455 E. Chestnut Expressway
Springfield, MO 65802

Driver Name (Print): William Walker

Tag No. 01A M4P State: MO

USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

William Walker
Driver Signature

3/6/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Walker
Driver Signature

3/6/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK. 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

William Walker
Signature

3-6-19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT01
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/05/2019 TIME IN: 15:49:51
DATE OUT: 03/05/2019 TIME OUT: 16:01:44

INBOUND TICKET Number: 01-00675835

SCALE 1 GROSS WT. 43600 LB
SCALE 1 TARE WT. 28380 LB
NET WEIGHT 15220 LB

| Qty | Description | Amount |
|-------|-------------|--------|
| 7.610 | Bulk Solids | 144.59 |

State Fee 9.51
NET CHARGE AMOUNT: 154.10

X

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

74103
Zip

74120
Zip

(918) 596-7457
Phone

Manifest Job No. 182045

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | PT | 16 | CY |
| | | 7.610 | |

This material is a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Signature: *Michelle*

Shipment Date

Transporter

Environmental Works, Inc.
1455 E. Chestnut Expressway

Driver Name (Print): William Walker
Tag No. 01A M4P State: MO
USDOT No. 933 327

City, State Zip: Springfield, MO 65802

I hereby certify that the above material was picked up at the generator site listed above.

Signature: *William Walker*

315/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Signature: *William Walker*

315/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Signature: *Micki King*

3-5-19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldonrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT01
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/05/2019 TIME IN: 14:11:55
DATE OUT: 03/05/2019 TIME OUT: 14:22:56

INBOUND TICKET Number: 01-00675798

SCALE 1 GROSS WT. 41840 LB
SCALE 1 TARE WT. 28520 LB
NET WEIGHT 13320 LB

| Qty | Description | Amount |
|-------|-------------|--------|
| 6.660 | Bulk Soilds | 126.54 |

State Fee 8.33
NET CHARGE AMOUNT: 134.87

X _____

I hereby certify that the above material was picked up at the generator site listed above.

William Walker
Driver Signature

315119
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Michelle Stoll
Driver Signature

315119
Delivery Date

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

23

Generator

74103
Zip
74120
Zip
596-7457

Manifest Job No. 182045
Bill to Name: Environmental Works, Inc.
Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip
Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | DT | 14 | CY |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly manifested for transportation according to applicable regulations.

Michelle Stoll
Signature

Shipment Date

Transporter

Inc.
Expressway
2

Driver Name (Print): William Walker
Tag No. 01A M4P State: MO
USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

William Walker
Driver Signature

315119
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Michelle Stoll
Driver Signature

315119
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W. Ave.
Sand Springs, Ok. 74063

Phone: (918) 248-7786
Fax: (918) 248-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Wicki King Raven Blunt
Name of Authorized Person

Signature

Wicki King

3-5-19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRONMENTAL LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King
Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT01
Generator: CITY OF TULSA

Street: 118 N LANSING
City/State: TULSA, OK 74120

DATE IN: 03/05/2019 TIME IN: 12:11:09
DATE OUT: 03/05/2019 TIME OUT: 12:26:20

INBOUND TICKET Number: 01-00675751

SCALE 1 GROSS WT. 39920 LB
SCALE 1 TARE WT. 28940 LB
NET WEIGHT 10980 LB

| Qty | Description | Amount |
|-------|-------------|--------|
| 5.490 | Bulk Solids | 104.31 |

State Fee 6.86
NET CHARGE AMOUNT: 111.17

X

*** City, State Zip: Springfield, MO 65802

I hereby certify that the above material was picked up at the generator site listed above.

William Walker
Driver Signature

3/5/19
Ship Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

[Signature]
Signature

3/5/19
Receipt Date

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

Manifest Job No. 182045

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

74103
Zip

74120
Zip

8) 596-7457

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | DT | 16 | CU |

5495

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly packaged for transportation according to applicable regulations.

William Walker
Signature

Shipment Date

Transporter

Environmental Works, Inc.

Driver Name (Print): William Walker

Tag No. DIA M4P State: MO

USDOT No. 933 327

Expressway

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Walker
Driver Signature

3/5/19
Delivery Date

Laura King Micki King Raven Blunt
Name of Authorized Agent

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT01
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/05/2019 TIME IN: 10:26:11
DATE OUT: 03/05/2019 TIME OUT: 10:39:57

INBOUND TICKET Number: 01-00675719

SCALE 1 GROSS WT. 47580 LB
SCALE 1 TARE WT. 29240 LB
NET WEIGHT 18340 LB

| Qty | Description | Amount |
|-------|-------------|--------|
| 9.170 | Bulk Solids | 174.23 |

State Fee 11.46
NET CHARGE AMOUNT: 185.69

X

I hereby certify that the above material was picked up at the generator site listed above.

Driver Signature

Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature

Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK. 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King, Micki King Raven Blunt
Name of Authorized Agent

Signature

Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

an Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

OK 74103
State Zip

OK 74120
State Zip

(918) 596-7457
Phone

Manifest

Job No. 182045 MN348COT01

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway

Springfield MO 65802

City State Zip

Contact: Anthony Moore (417) 773-5747

Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | DOT | 14 | DR |
| | | 9.177 | |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Signature

Shipment Date

Transporter

Environmental Works, Inc.

Driver Name (Print): William Walker

Chestnut Expressway

Tag No. OIA 148 State: MO

65802

USDOT No. 933 321

I hereby certify that the above material was picked up at the generator site listed above.

Driver Signature

Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature

Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK. 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King, Micki King Raven Blunt
Name of Authorized Agent

Signature

Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT01
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/12/2019 TIME IN: 15:16:31
DATE OUT: 03/12/2019 TIME OUT: 15:16:31

INBOUND TICKET Number: 01-00676805

MANUAL GROSS WT. 48400 LB
MANUAL TARE WT. 28820 LB
NET WEIGHT 19580 LB

| Qty | Description | Amount |
|-------|--------------------|--------|
| 9.790 | Bulk Soilds | 186.01 |
| | State Fee | 12.24 |
| | NET CHARGE AMOUNT: | 198.25 |

X William Walker

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator 48400 28820 23

Manifest Job No. MN348COT01

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|-----------|----------------|-----------|
| | <u>DT</u> | <u>10</u> | <u>cy</u> |
| | | <u>9.790</u> | |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly identified for transportation according to applicable regulations.

Michele Pitt 3/12/19
Signature Shipment Date

Transporter

Environmental Works, Inc. Driver Name (Print): William Walker

Tag No. 01A M4P State: MO

USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

William Walker 3/12/19
Driver Signature Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Walker 3/12/19
Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063
Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt 3-12-19
Name of Authorized Agent Signature Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT01
Generator: CITY OF TULSA

Street: 118 N LANSING
City/State: TULSA, OK 74120

DATE IN: 03/13/2019 TIME IN: 08:19:34
DATE OUT: 03/13/2019 TIME OUT: 08:37:56

INBOUND TICKET Number: 01-00676863

SCALE 1 GROSS WT. 48680 LB
SCALE 2 TARE WT. 28760 LB
NET WEIGHT 19920 LB

Qty Description Amount
9.960 Bulk Solids 189.24

State Fee 12.45
NET CHARGE AMOUNT: 201.69

X William Walker

I hereby certify that the above material was picked up at the generator site listed above.

William Walker 3/13/19
Driver Signature Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Walker 3/13/19
Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Signature

3/13/19
Receipt Date

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

83

Manifest Job No. MN348COT021
Bill to Name: Environmental Works, Inc.
Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip
Contact: Anthony Moore (417) 773-5747
Name Phone

74103
Zip

74120
Zip

(918) 596-7457

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | DI | 10 | cy |
| | | 9.960 | |

hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

William Walker
Signature

3/12/19
Shipment Date

Transporter

Environmental Works, Inc.
Expressway
802

Driver Name (Print): William Walker
Tag No. DIA MHP State: MO
USDOT No. 933 321

I hereby certify that the above material was picked up at the generator site listed above.

William Walker 3/13/19
Driver Signature Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Walker 3/13/19
Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Signature

3/13/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT01
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/13/2019 TIME IN: 12:28:25
DATE OUT: 03/13/2019 TIME OUT: 13:26:27

INBOUND TICKET Number: 01-00676920

SCALE 1 GROSS WT. 39460 LB
SCALE 2 TARE WT. 28600 LB
NET WEIGHT 10860 LB

| Qty | Description | Amount |
|-------|-------------|--------|
| 5.430 | Bulk Solids | 103.17 |

State Fee 6.79
NET CHARGE AMOUNT: 109.96

x William

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

74103
Zip

74120
Zip
596-7457
Phone

Manifest Job No. MN348COT01
Bill to Name: Environmental Works, Inc.
Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip
Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|------------------|-----------|----------------|-----------|
| | <u>DT</u> | <u>10</u> | <u>cy</u> |
| <u>materials</u> | | <u>5.430</u> | |

hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

H. Walker Signature
3/13/19 Shipment Date

Transporter

Environmental Works, Inc.
Expressway
Springfield, MO 65802

Driver Name (Print): William Walker
Tag No. Q1744P State: MO
USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.
William Walker Driver Signature
3/13/19 Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.
William Walker Driver Signature
3/13/19 Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.
Laura King Micki King Raven Blunt Name of Authorized Agent
[Signature] Signature
3/13/19 Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-27
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/15/2019 TIME IN: 08:39:01
DATE OUT: 03/15/2019 TIME OUT: 09:01:21

INBOUND TICKET Number: 01-00677244

SCALE 1 GROSS WT. 56960 LB
SCALE 2 TARE WT. 41800 LB
NET WEIGHT 15160 LB

| Qty | Description | Amount |
|-------|-------------|--------|
| 7.580 | Bulk Solids | 144.02 |

State Fee 9.48
NET CHARGE AMOUNT: 153.50

K

Roland

I hereby certify that the above material was picked up at the generator site listed above.

[Signature]
Driver Signature

3/15/19
Ship Date

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

27

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

K 74103
Site Zip

K 74120
Site Zip

(918) 596-7457

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | Tank | 1500 | g |
| | | 7.580 | T |

dry concrete

This material is hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

[Signature]
Signature

Shipment Date

Transporter

Environmental Works, Inc.
Expressway
802

Driver Name (Print): Roland Wyatt

Tag No. 05A73P State: MO

USDOT No. 1923327

I hereby certify that the above named material was delivered without incident to the destination listed below.

[Signature]
Driver Signature

3/15/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

[Signature]
Signature

3/15/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Assigned: Micki King

Position: Laura King

CALL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
CUSTOMER: Cash Customer

Mobile ID: 348-27
Reference: MN348COT02
Generator: CITY OF TULSA

Address: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/15/2019 TIME IN: 15:23:20
DATE OUT: 03/15/2019 TIME OUT: 15:37:38

BOUND TICKET Number: 01-00677428

SCALE 1 GROSS WT. 47500 LB
SCALE 2 TARE WT. 42220 LB
NET WEIGHT 5280 LB

Quantity Description Amount
2.640 Bulk Solids 50.16

State Fee 3.30
NET CHARGE AMOUNT: 53.46

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

27

K 74103
City State Zip
K 74120
City State Zip
(918) 596-7457
Phone

Manifest Job No. MN348COT02
Bill to Name: Environmental Works, Inc.
Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip
Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | Tank | 1500 | G |
| | | 2164 | T |

The above material is hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Michelle B
Signature

Shipment Date

Transporter

Environmental Works, Inc.
Expressway
802

Driver Name (Print): Roland Wyatt
Tag No. DSA M3P State: MO
USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

[Signature]
Driver Signature

3/15/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

[Signature]
Driver Signature

3/15/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK. 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

[Signature]
Signature

3/15/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

Environmental Landfill, Inc.
 Leading the Industry in Environmental Compliance

AMERICAN ENVIRON. LANDFILL
 A.E.L.
 1420 W. 35TH ST., SUITE B
 TULSA, OK. 74107-3814

Hazardous Waste Manifest

23

Generator

Weighed: Laura King
 Deposit: Laura King
 BILL TO: 348
 Environmental Works
 1455 E. Chestnut Exp
 Springfield MO 65802
 HAULER: Cash Customer
 Vehicle ID: 348-23
 Reference: MN348COT02
 Generator: CITY OF TULSA
 Street: 118 N LANSING
 City/State: TULSA, OK 74120

74103
 Zip
 74120
 Zip
 596-7457

Manifest Job No. MN348COT03 2
 Bill to Name: Environmental Works Inc.
 Address: 1455 E. Chestnut Expressway
Springfield OK 65802
 City State Zip
 Contact: Anthony Moore (417) 773-5747
 Name Phone

DATE IN: 05/17/2019 TIME IN: 12:14:24
 DATE OUT: 05/17/2019 TIME OUT: 12:23:28

INBOUND TICKET Number: 01-00687800

SCALE 2 GROSS WT. 54720 LB
 SCALE 2 TARE WT. 24580 LB
 NET WEIGHT 30140 LB

Qty Description Amount
 15.070 Bulk Soilds 286.33

State Fee 18.84
 NET CHARGE AMOUNT: 305.17

| Container No. | Container Type | Total Quantity | Unit |
|---------------|----------------|----------------|------|
| 16 | Soil Tank | 16 | cy |
| | | SOIL | |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly identified for transportation according to applicable regulations.

[Signature]
 Signature
 5/16/19
 Shipment Date

Transporter

Environmental Works Inc.
 Expressway
 65802

Driver Name (Print): Jim Dallas
 Tag No. 01N M4P State: MO
 USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

[Signature]
 Driver Signature
 5/17/19
 Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

[Signature]
 Driver Signature
 5/17/19
 Delivery Date

Destination

American Environmental Landfill, Inc.
 212 N. 177th W Ave.
 Sand Springs, OK 74063

Phone: (918) 245-7786
 Fax: (918) 245-7774
 Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
 Name of Authorized Agent

Signature

Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 05/17/2019 TIME IN: 10:34:30
DATE OUT: 05/17/2019 TIME OUT: 10:47:36

INBOUND TICKET Number: 01-00687753

SCALE 2 GROSS WT. 56320 LB
SCALE 2 TARE WT. 24540 LB
NET WEIGHT: 31780 LB

| Qty | Description | Amount |
|--------|-------------|--------|
| 15.890 | Bulk Soilds | 301.91 |

State Fee 19.86
NET CHARGE AMOUNT: 321.77

Environmental Landfill, Inc.
The Industry in Environmental Compliance

Hazardous Waste Manifest

23

Generator

74103

Zip

74120

Zip

596-7457

Manifest Job No. MN348COT03²

Bill to Name: Environmental Works Inc.

Address: 1455 E. Chestnut Expressway
Springfield OK 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | DI | 16 | cy |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly prepared for transportation according to applicable regulations.

Signature

4/16/19
Shipment Date

Transporter

Environmental Works Inc.
Expressway

Driver Name (Print): Jim Dallas

Tag No. 01A MHP State: MO

USDOT No. 933 327

I hereby certify that the above named material was delivered without incident to the destination listed below.

I hereby certify that the above material was picked up at the generator site listed above.

Driver Signature

5/17/19
Ship Date

Driver Signature

5/17/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt

Name of Authorized Agent

Signature

5-17-19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

Environmental Landfill, Inc.

the Industry in Environmental Compliance

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Hazardous Waste Manifest

Weighed: Laura King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802

HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 05/17/2019 TIME IN: 09:05:44
DATE OUT: 05/17/2019 TIME OUT: 09:17:47

INBOUND TICKET Number: 01-00687718

SCALE 2 GROSS WT. 52820 LB
SCALE 2 TARE WT. 24240 LB
NET WEIGHT 28580 LB

Qty Description Amount
14.290 Bulk Scolds 271.51

State Fee 17.86
NET CHARGE AMOUNT: 289.37

Generator

74103

Zip

74120

Zip

596-7457

Manifest

Job No. MN348COT03²

Bill to Name: Environmental Works Inc.

Address: 1455 E. Chestnut Expressway
Springfield OK 65802

Contact: Anthony Moore (417) 773-5747
Name Phone

23

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| 011-EW | DT | 14.29 | cy |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly handled for transportation according to applicable regulations.

[Signature]
Signature

5/16/19
Shipment Date

Transporter

Environmental Works Inc.

Expressway

741802

Driver Name (Print): Jim Dallas

Tag No. 01A M4P State: MO

USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

I hereby certify that the above named material was delivered without incident to the destination listed below.

[Signature]
Driver Signature 5/17/19
Ship Date

[Signature]
Driver Signature 5/17/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt

Name of Authorized Agent

[Signature]
Signature

5-17-19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Mioki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/07/2019 TIME IN: 10:40:17
DATE OUT: 03/07/2019 TIME OUT: 10:49:22

INBOUND TICKET Number: 01-00676130

SCALE 1 GROSS WT. 51760 LB
SCALE 2 TARE WT. 28440 LB
NET WEIGHT 23320 LB

| Qty | Description | Amount |
|--------|-------------|--------|
| 11.660 | Bulk Solids | 221.54 |

State Fee 14.58
NET CHARGE AMOUNT: 236.12

X

I hereby certify that the above material was picked up at the generator site listed above.

William Walker
Driver Signature

3/7/19
Ship Date

American Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

74103
Zip

74120
Zip

(8) 596-7457

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

23

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | DTT | 16 | cy |

11.660

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly identified for transportation according to applicable regulations.

William Walker
Signature

3/16/19
Shipment Date

Transporter

, Inc.
Expressway

Driver Name (Print): William Walker
Tag No. 01A MHP State: MO
USDOT No. 933 327

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Walker
Driver Signature

3/7/19
Delivery Date

Destination

American Environmental Landfill, Inc
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

[Signature]
Signature

3/7/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King
Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING
City/State: TULSA, OK 74120

DATE IN: 03/07/2019 TIME IN: 12:04:44
DATE OUT: 03/07/2019 TIME OUT: 12:14:20

INBOUND TICKET Number: 01-00676157

SCALE 1 GROSS WT. 55860 LB
SCALE 2 TARE WT. 28440 LB
NET WEIGHT 27420 LB

Qty Description Amount
13.710 Bulk Soilds 260.49

State Fee 17.14
NET CHARGE AMOUNT: 277.63

x

City, State Zip: Springfield, MO 65802

I hereby certify that the above material was picked up at the generator site listed above.

Driver Signature: *William Walker*

Ship Date: 3/7/19

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature: *William Walker*

Delivery Date: 3/7/19

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

74103
Zip

74120
Zip

(18) 596-7457

Container No. Type Total Quantity Unit

D7 16 41
Bill

This material is a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Signature: *William Walker*

3/6/19
Shipment Date

Transporter

Environmental Works, Inc.
1455 E. Chestnut Expressway

Driver Name (Print): William Walker

Tag No. OIA MHP State: MO

USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

Driver Signature: *William Walker*

Ship Date: 3/7/19

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature: *William Walker*

Delivery Date: 3/7/19

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Name of Authorized Agent: Laura King Micki King Raven Blunt

Signature: *Raven Blunt*

Receipt Date: 3/7/19

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
 A.E.L.
 1420 W. 35TH ST., SUITE B
 TULSA, OK. 74107-3814

Called: Micki King
 Contact: Laura King

CALL TO: 348
 Environmental Works
 1455 E. Chestnut Exp
 Springfield MO 65802
 HAULER: Cash Customer

Vehicle ID: 348-23
 Reference: MN348COT02
 Generator: CITY OF TULSA

Street: 118 N LANSING
 City/State: TULSA, OK 74120

DATE IN: 03/07/2019 TIME IN: 13:41:52
 DATE OUT: 03/07/2019 TIME OUT: 13:55:12

INBOUND TICKET Number: 01-00676194

| | |
|-------------------|----------|
| SCALE 1 GROSS WT. | 54380 LB |
| SCALE 2 TARE WT. | 28320 LB |
| NET WEIGHT | 26060 LB |

| | | |
|--------|-------------|--------|
| Qty | Description | Amount |
| 13.030 | Bulk Soilds | 247.57 |

State Fee 16.29
 NET CHARGE AMOUNT: 263.86

X William Walker

American Environmental Landfill, Inc.
 Leading the Industry in Environmental Compliance

(13:22)

Non-Hazardous Waste Manifest

Generator

23

Manifest Job No. MN348COT02
 Bill to Name: Environmental Works, Inc.
 Address: 1455 E. Chestnut Expressway
Springfield MO 65802
 City State Zip
 Contact: Anthony Moore (417) 773-5747
 Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | PT | 16 | CU |
| | | 13030 | |

hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly condition for transportation according to applicable regulations.

4 William Walker 3/6/19
 Signature Shipment Date

Transporter

Driver Name (Print): William Walker
 Tag No. 01A M4P State: MO
 USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

William Walker 3/7/19
 Driver Signature Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Walker 3/7/19
 Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
 212 N. 177th W Ave.
 Sand Springs, OK. 74063
 Phone: (918) 245-7786
 Fax: (918) 245-7774
 Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt 3/7/19
 Name of Authorized Agent Signature Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/07/2019 TIME IN: 15:22:24
DATE OUT: 03/07/2019 TIME OUT: 15:32:13

INBOUND TICKET Number: 01-00676224

SCALE 1 GROSS WT. 56600 LB
SCALE 2 TARE WT. 28160 LB
NET WEIGHT 28440 LB

| Qty | Description | Amount |
|--------|-------------|--------|
| 14.220 | Bulk Soilds | 270.18 |

State Fee 17.78
NET CHARGE AMOUNT: 287.96

X

William Walker

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

OK 74103
City State Zip

OK 74120
City State Zip

(918) 596-7457
Phone

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | D7 | 16 | CY |
| | | 14.22 | T |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Signature

3/6/19
Shipmen Date

Transporter

Environmental Works, Inc.
Expressway
802

Driver Name (Print): William Walker
Tag No. DIA 448 State: MO
USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

Victor Bull
Driver Signature

3/7/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Victor Bull
Driver Signature

3/7/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Signature

3/7/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING
City/State: TULSA, OK 74120

DATE IN: 03/08/2019 TIME IN: 09:45:27
DATE OUT: 03/08/2019 TIME OUT: 09:55:41

INBOUND TICKET Number: 01-00676275
SCALE 1 GROSS WT. 56240 LB
SCALE 2 TARE WT. 28280 LB
NET WEIGHT 27960 LB

| Qty | Description | Amount |
|--------|--------------------|--------|
| 13.980 | Bulk Soilds | 265.62 |
| | State Fee | 17.48 |
| | NET CHARGE AMOUNT: | 283.10 |

X William

I hereby certify that the above material was picked up at the generator site listed above.

Will Walker
Driver Signature

3/8/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Will Walker
Driver Signature

3/8/19
Delivery Date

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

Manifest Job No. MN348COT02

74103
Zip

Bill to Name: Environmental Works, Inc.

74120
Zip

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

596-7457

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | DT | 16 | cy |
| | | 13.98 | |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly identified for transportation according to applicable regulations.

Will Walker
Signature

3/16/19
Shipment Date

Transporter

Inc.
Expressway

Driver Name (Print): William Walker

Tag No. 01A MUP State: MO

USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

Will Walker
Driver Signature

3/8/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Will Walker
Driver Signature

3/8/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Signature

[Signature]

Receipt Date

3-8-19

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/08/2019 TIME IN: 12:57:55
DATE OUT: 03/08/2019 TIME OUT: 13:10:36

INBOUND TICKET Number: 01-00676333

| | |
|-------------------|----------|
| SCALE 1 GROSS WT. | 58000 LB |
| SCALE 2 TARE WT. | 28720 LB |
| NET WEIGHT | 29280 LB |

| Qty | Description | Amount |
|--------|-------------|--------|
| 14.640 | Bulk Soilds | 278.16 |

| | |
|--------------------|--------|
| State Fee | 18.30 |
| NET CHARGE AMOUNT: | 296.46 |

X

Environmental Landfill, Inc.
the Industry in Environmental Compliance

ardous Waste Manifest

Generator

74103
Zip
74120
Zip
596-7457

Manifest Job No. MN348COT02
Bill to Name: Environmental Works, Inc.
Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip
Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | DT | 16 | cy |
| | | 14.640 | |

ardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly
tion for transportation according to applicable regulations.

Signature

3/6/19
Shipment Date

Transporter

Address: 1455 E. Chestnut Expressway
City, State Zip: Springfield, MO 65802

Driver Name (Print): William Walker
Tag No. 01A MHP State: MO
USDOT No. 933 327

I hereby certify that the above material was picked up at the
generator site listed above.

Driver Signature

3/8/19
Ship Date

I hereby certify that the above named material was delivered without
incident to the destination listed below.

Driver Signature

3/8/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Signature

3/8/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A. E. L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802

HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/08/2019 TIME IN: 15:06:02
DATE OUT: 03/08/2019 TIME OUT: 15:14:18

INBOUND TICKET Number: 01-00676374

SCALE 1 GROSS WT. 62960 LB
SCALE 2 TARE WT. 28640 LB
NET WEIGHT 34320 LB

Qty Description Amount
17.160 Bulk Soilds 326.04

State Fee 21.45
NET CHARGE AMOUNT: 347.49

X

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

K 74103
City/State/Zip

K 74120
City/State/Zip

(918) 596-7457
Phone

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City/State/Zip

Contact: Anthony Moore (417) 773-5747
Name/Phone

23

Container No. Type Total Quantity Unit

DT 16 cu

17.160

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Signature: *William Walker*

Shipment Date: 3/6/19

Transporter

Environmental Works, Inc.
1455 E. Chestnut Expressway
Springfield MO 65802

Driver Name (Print): William Walker
Tag No. DIA M4P State: MO
USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

Driver Signature: *William Walker*

Ship Date: 3/8/19

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature: *William Walker*

Delivery Date: 3/8/19

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Name of Authorized Agent: Laura King, Micki King, Raven Blunt

Signature: *Micki King*

Receipt Date: 3-18-19

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/11/2019 TIME IN: 09:21:26
DATE OUT: 03/11/2019 TIME OUT: 09:35:29

INBOUND TICKET Number: 01-00676509

SCALE 1 GROSS WT. 57320 LB
SCALE 2 TARE WT. 28020 LB
NET WEIGHT 29300 LB

| Qty | Description | Amount |
|--------|--------------------|--------|
| 14.650 | Bulk Soilds | 278.35 |
| | State Fee | 18.31 |
| | NET CHARGE AMOUNT: | 296.66 |

X William Walker

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

Manifest Job No. MN348COT02
Bill to Name: Environmental Works, Inc.
Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip
Contact: Anthony Moore (417) 773-5747
Name Phone
Zip 74103
Zip 74120
8) 596-7457

| Container No. | Type | Total Quantity | Unit |
|---------------|-----------|----------------|-----------|
| | <u>DT</u> | <u>16</u> | <u>CY</u> |
| | | <u>14165</u> | |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly identified for transportation according to applicable regulations.

Signature: William Walker Shipment Date: 3/10/19

Transporter

Environmental Landfill, Inc. Driver Name (Print): William Walker
Expressway Tag No. 01A MHP State: MO
802 USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

Driver Signature: William Walker Ship Date: 3/11/19

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature: William Walker Delivery Date: 3/11/19

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Name of Authorized Agent: Laura King Micki King Raven Blunt

Signature: [Signature] Receipt Date: 3/11/19

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/11/2019 TIME IN: 11:03:24
DATE OUT: 03/11/2019 TIME OUT: 11:43:28

INBOUND TICKET Number: 01-00676555

SCALE 1 GROSS WT. 58520 LB
SCALE 2 TARE WT. 28640 LB
NET WEIGHT 29880 LB

| Qty | Description | Amount |
|--------|-------------|--------|
| 14.940 | Bulk Soilds | 283.86 |

State Fee 18.68
NET CHARGE AMOUNT: 302.54

X Williams

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator 23

74103
Zip

74120
Zip

596-7457

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway

Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | DT | 16 | CU |
| | | 14.947 | |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly identified for transportation according to applicable regulations.

Moore
Signature

3/16/19
Shipment Date

Transporter

Inc. Expressway

Driver Name (Print): William Walker

Tag No. OIA M4P State: MO

USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

Williams
Driver Signature

3/11/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Walker
Driver Signature

3/11/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Bluff
Name of Authorized Agent

[Signature]
Signature

3/11/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/11/2019 TIME IN: 13:07:42
DATE OUT: 03/11/2019 TIME OUT: 13:18:16

INBOUND TICKET Number: 01-00676596

SCALE 1 GROSS WT. 64700 LB
SCALE 2 TARE WT. 28360 LB
NET WEIGHT 36340 LB

| Qty | Description | Amount |
|--------|-------------|--------|
| 18.170 | Bulk Soilds | 345.23 |

State Fee 22.71
NET CHARGE AMOUNT: 367.94

x

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

23

Generator

74103

74120

18) 596-7457

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | DT | 18 | CU |
| | | 15.17 | |

I hereby certify that the above named material was delivered without incident to the destination listed below.

Signature: [Signature] Ship Date: 3/10/19

Transporter

Environmental Works, Inc.
1455 E. Chestnut Expressway

Driver Name (Print): William Walker
Tag No. DIA M4P State: MO
USDOT No. 933 327

Springfield, MO 65802

I hereby certify that the above material was picked up at the generator site listed above.

Driver Signature: [Signature] Ship Date: 3/11/19

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature: [Signature] Delivery Date: 3/11/19

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK. 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Signature: [Signature] Receipt Date: 3/11/19

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING
City/State: TULSA, OK 74120

DATE IN: 03/11/2019 TIME IN: 15:06:56
DATE OUT: 03/11/2019 TIME OUT: 15:19:00

INBOUND TICKET Number: 01-00676632

SCALE 1 GROSS WT. 62460 LB
SCALE 2 TARE WT. 28360 LB
NET WEIGHT 34100 LB

| Qty | Description | Amount |
|--------|-------------|--------|
| 17.050 | Bulk Solids | 323.95 |

State Fee 21.31
NET CHARGE AMOUNT: 345.26

X

I hereby certify that the above material was picked up at the generator site listed above.

William
Driver Signature

3/11/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

William
Driver Signature

3/11/19
Delivery Date

American Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

K 74103
City Zip

K 74120
City Zip

(918) 596-7457
Phone

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway

Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
|---------------|------|----------------|------|

DT

116

cy

17.050

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Michael
Signature

3/11/19
Shipment Date

Transporter

Environmental Works, Inc.
1455 E. Chestnut Expressway

Driver Name (Print): William Walker

Tag No. 01A M4P State: MO

USDOT No. 933 327

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Raven Blunt
Signature

3/11/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSI.

City/State: TULSA, OK 74120

DATE IN: 03/11/2019 TIME IN: 16:20:09
DATE OUT: 03/11/2019 TIME OUT: 16:30:38

INBOUND TICKET Number: 01-00676680

SCALE 1 GROSS WT. 63060 LB
SCALE 2 TARE WT. 28400 LB
NET WEIGHT 34660 LB

| Qty | Description | Amount |
|--------|-------------|--------|
| 17.330 | Bulk Solids | 329.27 |

State Fee 21.66
NET CHARGE AMOUNT: 350.93

x

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

74103

Zip

74120

Zip

8) 596-7457

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|-----------|----------------|-----------|
| | <u>DT</u> | <u>16</u> | <u>CU</u> |

17.330

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Signature

3/11/19
Shipment Date

Transporter

Environmental Works, Inc.

1455 E. Chestnut Expressway

Springfield, MO 65802

Driver Name (Print): William Walker

Tag No. 01A M4P State: MO

USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

Driver Signature

3/11/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature

3/11/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt

Name of Authorized Agent

Signature

3/11/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA OK 74103

DATE IN: 03/12/2019 TIME IN: 08:45:29
DATE OUT: 03/12/2019 TIME OUT: 08:59:37

INBOUND TICKET Number: 01-00676716

SCALE 1 GROSS WT. 62380 LB
SCALE 2 GROSS WT. 28620 LB
NET WEIGHT 33760 LB

Qty Description Amount
16.880 Bulk Soilds 320.72

State Fee 21.10
NET CHARGE AMOUNT: 341.82

X William Weller

I hereby certify that the above material was picked up at the generator site listed above.

William Weller
Driver Signature

3/12/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Weller
Driver Signature

3/12/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

[Signature]
Signature

3-12-19
Receipt Date

White - Destination Retention • Yellow - Return to Eill to • Pink - Transporter Retain • Goldenrod - Generator Retain

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

-Hazardous Waste Manifest

Generator

23

OK 74103
City State Zip

OK 74120
City State Zip

(918) 596-7457
Phone

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway

Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

Container No. Type Total Quantity Unit

DT 16 16.88 LT

The above material is a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

William Weller
Signature

3/12/19
Shipment Date

Transporter

Environmental Works, Inc.
1455 E. Chestnut Expressway

Driver Name (Print): William Weller

Tag No. 01A M4P State: MO

USDOT No. 933 327

Springfield, MO 65802

I hereby certify that the above material was picked up at the generator site listed above.

William Weller
Driver Signature

3/12/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Weller
Driver Signature

3/12/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

[Signature]
Signature

3-12-19
Receipt Date

White - Destination Retention • Yellow - Return to Eill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/12/2019 TIME IN: 12:06:10
DATE OUT: 03/12/2019 TIME OUT: 12:18:03

INBOUND TICKET Number: 01-00676761

SCALE 1 GROSS WT. 53020 LB
SCALE 2 TARE WT. 28340 LB
NET WEIGHT 24680 LB

| Qty | Description | Amount |
|--------|--------------------|--------|
| 12.340 | Bulk Soilds | 234.46 |
| | State Fee | 15.43 |
| | NET CHARGE AMOUNT: | 249.89 |

x

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

74103
Zip

74120
Zip

(8) 596-7457

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway

Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | PT | 16 | Cy |

12.347

hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

William Walker
Signature

3/12/19
Shipment Date

Transporter

Environmental Works, Inc.
Expressway

Driver Name (Print): William Walker
Tag No. OIA MYP State: MO

USDOT No. 433 327

I hereby certify that the above material was picked up at the generator site listed above.

William Walker
Driver Signature

3/12/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Walker
Driver Signature

3/12/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

[Signature]
Signature

3-12-19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/15/2019 TIME IN: 08:35:44
DATE OUT: 03/15/2019 TIME OUT: 08:54:53

INBOUND TICKET Number: 01-00677243

SCALE 1 GROSS WT. 66400 LB
SCALE 2 TARE WT. 28420 LB
NET WEIGHT 37980 LB

Qty Description Amount
18.990 Bulk Solids 360.81
State Fee 23.74
NET CHARGE AMOUNT: 384.55

K

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

K 74103
City Zip

K 74120
City Zip

(918) 596-7457
Phone

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | D7 | 16 | cy |
| | | 16.990 | |

This hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

H. McQuinn
Signature

Shipment Date

Transporter

Environmental Works, Inc.
1455 E. Chestnut Expressway
Springfield, MO 65802

Driver Name (Print): William Walker
Tag No. 31A MHP State: MO
USDOT No. 9033327

I hereby certify that the above material was picked up at the generator site listed above.

William Walker
Driver Signature

3115119
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Walker
Driver Signature

3115119
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Laura King
Signature

3115119
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802

HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/15/2019 TIME IN: 10:18:53
DATE OUT: 03/15/2019 TIME OUT: 10:27:35

INBOUND TICKET Number: 01-00677288

SCALE 1 GROSS WT. 57740 LB
SCALE 2 TARE WT. 28360 LB
NET WEIGHT 29380 LB

| Qty | Description | Amount |
|--------|-------------|--------|
| 14.690 | Bulk Scolds | 279.11 |

State Fee 18.36
NET CHARGE AMOUNT: 297.47

X

William

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

74103
Zip

74120
Zip

(8) 596-7457

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
|---------------|------|----------------|------|

| | | | |
|-------|----|-------|----|
| crete | DT | 16 | cy |
| | | 14.69 | T |

hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Michelle
Signature

3/15/19
Shipment Date

Transporter

Environmental Works, Inc.

Expressway

Driver Name (Print): William Walker

Tag No. 019 M4P State: MO

USDOT No. 933 327

Springfield, MO 65802

I hereby certify that the above material was picked up at the generator site listed above.

William Walker
Driver Signature

3/15/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Walker
Driver Signature

3/15/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

[Signature]
Signature

3/15/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/15/2019 TIME IN: 12:10:44
DATE OUT: 03/15/2019 TIME OUT: 12:22:40

INBOUND TICKET Number: 01-00677336

SCALE 1 GROSS WT. 61040 LB
SCALE 2 TARE WT. 28280 LB
NET WEIGHT 32760 LB

Qty Description Amount
16.380 Bulk Soilds 311.22

State Fee 20.48
NET CHARGE AMOUNT: 331.70

X

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

< 74103
e Zip

< 74120
e Zip
18) 596-7457
ne

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

Container No. Type Total Quantity Unit

07 16 cy
16138-T

hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly condition for transportation according to applicable regulations.

William Walker
Signature

3115119
Shipment Date

Transporter

Environmental Works, Inc.
Expressway
802

Driver Name (Print): William Walker
Tag No. 61A MYP State: MO
USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

William Walker
Driver Signature

3115119
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Walker
Driver Signature

3115119
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Raven Blunt
Signature

31519
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/15/2019 TIME IN: 13:49:43
DATE OUT: 03/15/2019 TIME OUT: 13:58:47

INBOUND TICKET Number: 01-00677384

SCALE 1 GROSS WT. 59540 LB
SCALE 2 TARE WT. 28220 LB
NET WEIGHT 31320 LB

Qty Description Amount
15.660 Bulk Solids 297.54

State Fee 19.58
NET CHARGE AMOUNT: 317.12

X

William

Environmental Landfill, Inc.

the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

74103
Zip

74120
Zip

3) 596-7457

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | D7 | 16 | cy |
| | | 15.660 | T |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

[Signature]
Signature

3115119
Shipment Date

Transporter

Environmental Works, Inc.
Expressway
802

Driver Name (Print): William Walker
Tag No. OIA 141P State: MO
USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

[Signature]
Driver Signature

3115119
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

[Signature]
Driver Signature

3115119
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

[Signature]
Signature

3115119
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802

HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/15/2019 TIME IN: 15:46:51
DATE OUT: 03/15/2019 TIME OUT: 15:55:32

INBOUND TICKET Number: 01-00677441

SCALE 1 GROSS WT. 57740 LB
SCALE 2 TARE WT. 28380 LB
NET WEIGHT 29360 LB

| Qty | Description | Amount |
|--------|-------------|--------|
| 14.680 | Bulk Soilds | 278.92 |

State Fee 18.35
NET CHARGE AMOUNT: 297.27

x

William Walker

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator 23

K 74103
City Zip

K 74120
City Zip

(18) 596-7457
Phone

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway

Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | DT | 16 | cy |
| | | 14680 | |

hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

William Walker
Signature

3115119
Shipment Date

Transporter

Environmental Works, Inc.
1455 E. Chestnut Expressway
Springfield, MO 65802

Driver Name (Print): William Walker

Tag No. 01A M4P State: MO

USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

William Walker
Driver Signature

3115119
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

William Walker
Driver Signature

3115119
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Laura King
Signature

31519
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802

HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/18/2019 TIME IN: 08:50:47
DATE OUT: 03/18/2019 TIME OUT: 09:29:05

INBOUND TICKET Number: 01-00677674

SCALE 1 GROSS WT. 40960 LB
SCALE 1 TARE WT. 29140 LB
NET WEIGHT 11820 LB

| Qty | Description | Amount |
|-------|--------------------|--------|
| 5.910 | Bulk Solids | 112.29 |
| | State Fee | 7.39 |
| | NET CHARGE AMOUNT: | 119.68 |

X David

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

23

Generator

74103
Zip
74120
Zip
8) 596-7457

Manifest Job No. MN348COT02
Bill to Name: Environmental Works, Inc.
Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip
Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|-----------|----------------|--------------|
| | <u>DT</u> | <u>16</u> | <u>5.91T</u> |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly identified for transportation according to applicable regulations.

Michelle G
Signature 3/18/19
Shipment Date

Transporter

Expressway, Inc. Driver Name (Print): Daniel Davis
Tag No. GA M4P State: MO
USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

Davis
Driver Signature 3/18/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Davis
Driver Signature 3/18/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063
Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557024

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent Davis
Signature 3-18-19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/21/2019 TIME IN: 10:30:44
DATE OUT: 03/21/2019 TIME OUT: 10:44:36

INBOUND TICKET Number: 01-00678484

SCALE 1 GROSS WT. 50340 LB
SCALE 2 TARE WT. 26480 LB
NET WEIGHT 23860 LB

| Qty | Description | Amount |
|--------|-------------|--------|
| 11.930 | Bulk Soilds | 226.67 |

State Fee 14.91
NET CHARGE AMOUNT: 241.58

Daniel

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

City/State: TULSA, OK 74103

City/State: TULSA, OK 74120

Phone: (918) 596-7457

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | DI | 11.930 | cy |

This material is hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Signature

Shipment Date

Transporter

Environmental Works, Inc.
Expressway
302

Driver Name (Print): Daniel Davis
Tag No. 01A MHP State: MO
USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

D.D. 3/21/19
Driver Signature Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

D.D. 3/21/19
Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Signature

Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/21/2019 TIME IN: 12:15:25
DATE OUT: 03/21/2019 TIME OUT: 12:27:10

INBOUND TICKET Number: 01-00678528

SCALE 1 GROSS WT. 53760 LB
SCALE 2 TARE WT. 26340 LB
NET WEIGHT 27420 LB

Qty Description Amount
13.710 Bulk Soilds 260.49

State Fee 17.14
NET CHARGE AMOUNT: 277.63

X

Daniel D

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

23

Generator

74103
Zip
74120
Zip
8) 596-7457

Manifest Job No. MN348COT02
Bill to Name: Environmental Works, Inc.
Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip
Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | TA | 16 | cy |
| | | 137 | IT |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

[Signature]
Signature Shipment Date

Transporter

Environmental Works, Inc.
1455 E. Chestnut Expressway
Springfield, MO 65802

Driver Name (Print): Daniel Davis
Tag No. DA M4P State: MO
USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

I hereby certify that the above named material was delivered without incident to the destination listed below.

[Signature] 3/21/19
Driver Signature Ship Date

[Signature] 3/21/19
Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

[Signature]
Signature
3/21/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/28/2019 TIME IN: 09:12:01
DATE OUT: 03/28/2019 TIME OUT: 09:31:02

INBOUND TICKET Number: 01-00679837

SCALE 1 GROSS WT. 55120 LB
SCALE 2 TARE WT. 26140 LB
NET WEIGHT 28980 LB

Qty Description Amount
14.490 Bulk Soilds 275.31

State Fee 18.11
NET CHARGE AMOUNT: 293.42

X

Springfield, MO 65802

I hereby certify that the above material was picked up at the generator site listed above.

Jim Dallas 3/28/19
Driver Signature Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Jim Dallas 3/28/19
Driver Signature Delivery Date

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

74103

Zip

74120

Zip

74103
74120
596-7457

Manifest

Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway

Springfield MO 65802

City State Zip

Contact: Anthony Moore (417) 773-5747

Name Phone

Container No. Type Total Quantity Unit

121

16

cy

14.490

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly prepared for transportation according to applicable regulations.

Signature

Shipment Date

Transporter

Environmental Works, Inc.

1455 E. Chestnut Expressway

Springfield, MO 65802

Driver Name (Print): Jim Dallas

Tag No. OIA MHP State: MO

USDOT No. 933 327

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786

Fax: (918) 245-7774

Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt

Name of Authorized Agent

Signature

Receipt Date

3-28-19

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK, 74107-3814

Weighed: Laura King

Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 03/28/2019 TIME IN: 11:48:46
DATE OUT: 03/28/2019 TIME OUT: 12:03:31

INBOUND TICKET Number: 01-00679908

SCALE 1 GROSS WT. 52540 LB
SCALE 2 TARE WT. 26020 LB
NET WEIGHT 26520 LB

| Qty | Description | Amount |
|--------|-------------|--------|
| 13.260 | Bulk Soilds | 251.94 |

State Fee 16.58
NET CHARGE AMOUNT: 268.52

K J.M.D.

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

Manifest Job No. MN348COT02
Bill to Name: Environmental Works, Inc.
Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip
Contact: Anthony Moore (417) 773-5747
Name Phone

74103
Zip

74120
Zip

(918) 596-7457
Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | DT | 16 | cy |
| | | 13.260 | |

This material is hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

[Signature] 3/28/19
Signature Shipment Date

Transporter

Environmental Works, Inc. Driver Name (Print): Jim Dallas
Expressway Tag No. 01A M4P State: MO
USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

[Signature] 3/28/19
Driver Signature Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

[Signature] 3/28/19
Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc. Phone: (918) 245-7786
212 N. 177th W Ave. Fax: (918) 245-7774
Sand Springs, OK 74063 Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent Signature [Signature] 3/28/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King
Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING
City/State: TULSA, OK 74120

DATE IN: 03/28/2019 TIME IN: 14:46:23
DATE OUT: 03/28/2019 TIME OUT: 14:59:19

INBOUND TICKET Number: 01-00680001
SCALE 1 GROSS WT. 56580 LB
SCALE 2 TARE WT. 26000 LB
NET WEIGHT 30580 LB
Qty Description Amount
15.290 Bulk Soilds 290.51
State Fee 19.11
NET CHARGE AMOUNT: 309.62

X

I hereby certify that the above material was picked up at the generator site listed above.

Jim Dallas
Driver Signature

3/28/19
Ship Date

Environmental Landfill, Inc.
the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

Manifest Job No. MN348COT02
74103 Bill to Name: Environmental Works, Inc.
Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip
74120 Contact: Anthony Moore (417) 773-5747
Name Phone
96-7457

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | DT | 16 | cy |
| | | 15,290 | |

This waste as defined by 40 CFR Part 261 or any applicable state law, has been properly stored or transportation according to applicable regulations.

Signature

3/28/19
Shipment Date

Transporter

way

Driver Name (Print): Jim Dallas
Tag No. 01A M4P State: MO
USDOT No. 933 387

I hereby certify that the above named material was delivered without incident to the destination listed below.

Jim Dallas
Driver Signature

3/28/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786

Fax: (918) 245-7774

Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Signature

3/28/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King
Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING
City/State: TULSA, OK 74120

DATE IN: 03/29/2019 TIME IN: 06:59:19
DATE OUT: 03/29/2019 TIME OUT: 07:57:05

INBOUND TICKET Number: 01-00680045

SCALE 1 GROSS WT. 57100 LB
SCALE 2 TARE WT. 24360 LB
NET WEIGHT 32740 LB

| Qty | Description | Amount |
|--------|-------------|--------|
| 16.370 | Bulk Scolds | 311.03 |
| 2.000 | Washout | 390.00 |

State Fee 20.46
NET CHARGE AMOUNT: 721.49

X

I hereby certify that the above material was picked up at the generator site listed above.

Tim Dallas 3/29/19
Driver Signature Ship Date

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

Manifest Job No. MN348COT02
74103 Zip
Bill to Name: Environmental Works, Inc.
Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip
Contact: Anthony Moore (417) 773-5747
Name Phone
596-7457

23

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | DT | 16 | CY |
| | | 16.37 | T |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly prepared for transportation according to applicable regulations.

Signature

3/29/19
Shipment Date

Transporter

Inc. Environmental Works, Inc.
Driver Name (Print): Jim Dallas
Tag No. 01A M4P State: MO
USDOT No. 933 327

I hereby certify that the above named material was delivered without incident to the destination listed below.

Jim Dallas 3/29/19
Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Signature

3/29/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 04/01/2019 TIME IN: 11:54:30
DATE OUT: 04/01/2019 TIME OUT: 12:05:15

INBOUND TICKET Number: 01-00680412

SCALE 1 GROSS WT. 61800 LB
SCALE 2 TARE WT. 25560 LB
NET WEIGHT 36240 LB

| Qty | Description | Amount |
|--------|-------------|--------|
| 18.120 | Bulk Soilds | 344.28 |

State Fee 22.65
NET CHARGE AMOUNT: 366.93

X

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Non-Hazardous Waste Manifest

23

Generator

OK 74103
City State Zip

OK 74120
City State Zip
(918) 596-7457
Phone

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.
Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | DT | 16 | cu |
| | | 18.12 | # |

This material is a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Signature

4/1/19
Ship Date

Transporter

Environmental Works, Inc.
1455 E. Chestnut Expressway

Driver Name (Print): Jim Dallas
Tag No. OIAM4P State: MO
USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

I hereby certify that the above named material was delivered without incident to the destination listed below.

Signature Ship Date 4/1/19

Signature Delivery Date 4/1/19

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Signature

4-1-19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 04/01/2019 TIME IN: 14:39:53
DATE OUT: 04/01/2019 TIME OUT: 14:54:48

INBOUND TICKET Number: 01-00680474

SCALE 1 GROSS WT. 67540 LB
SCALE 2 TARE WT. 26900 LB
NET WEIGHT 40640 LB

| Qty | Description | Amount |
|--------|-------------|--------|
| 20.320 | Bulk Solids | 386.08 |

State Fee 25.40
NET CHARGE AMOUNT: 411.48

I hereby certify that the above material was picked up at the generator site listed above.

Driver Signature

4/1/19
Ship Date

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway

Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

OK 74103
State Zip

OK 74120
State Zip

(918) 596-7457
Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
|---------------|------|----------------|------|

DT 16 cy

2032 T

The above material is a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

f [Signature]
Signature

4/1/19
Shipment Date

Transporter

Environmental Works, Inc.
Expressway
802

Driver Name (Print): Jim Dallas

Tag No. 01A M4P State: MO

USDOT No. 933 327

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature

4/1/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Signature

4-1-19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-23
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 04/02/2019 TIME IN: 09:28:19
DATE OUT: 04/02/2019 TIME OUT: 10:26:21

INBOUND TICKET Number: 01-00680563

SCALE 1 GROSS WT. 57740 LB
SCALE 2 TARE WT. 25200 LB
NET WEIGHT 32540 LB

| Qty | Description | Amount |
|--------|-------------|--------|
| 16.270 | Bulk Soilds | 309.13 |
| 2.000 | Washout | 390.00 |

State Fee 20.34
NET CHARGE AMOUNT: 719.47

X

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

23

K 74103
City Zip

K 74120
City Zip

(918) 596-7457
Phone

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | | | |

Washout

16.270

This material is a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly packaged in accordance with applicable regulations.

[Signature]
Signature

4/4/19
Shipment Date

Transporter

Environmental Works, Inc.
1455 E. Chestnut Expressway
Springfield MO 65802

Driver Name (Print): JAMES DAVIS
Tag No. 01AM4P State: MO
USDOT No. 933327

I hereby certify that the above material was picked up at the generator site listed above.

[Signature] 4-2-19
Driver Signature Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

[Signature] 4-2-19
Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

[Signature]
Signature

4-2-19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-RENTAL
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING
City/State: TULSA, OK 74120

DATE IN: 04/10/2019 TIME IN: 16:13:31
DATE OUT: 04/10/2019 TIME OUT: 16:32:29

INBOUND TICKET Number: 01-00682073

SCALE 1 GROSS WT. 29680 LB
SCALE 2 TARE WT. 14300 LB
NET WEIGHT 15380 LB

| Qty | Description | Amount |
|-------|-------------|--------|
| 7.690 | Bulk Soilds | 146.11 |

State Fee 9.61
NET CHARGE AMOUNT: 155.72

X

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

Rental

74103
Zip
74120
Zip
18) 596-7457

Manifest Job No. MN348COT02
Bill to Name: Environmental Works, Inc.
Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip
Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
|---------------|------|----------------|------|

| | | | |
|--|----|-------|----|
| | DT | 7.690 | cy |
|--|----|-------|----|

hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Signature: *[Signature]* Shipment Date: 4/1/19

Transporter

ks, Inc.
Expressway
Springfield, MO 65802

Driver Name (Print): Jim Dallas
Tag No. _____ State: _____
USDOT No. _____

I hereby certify that the above material was picked up at the generator site listed above.

Driver Signature: *[Signature]* Ship Date: 4/10/19

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature: *[Signature]* Delivery Date: 4/10/19

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and, to the best of my knowledge the foregoing is accurate.

Name of Authorized Agent: Laura King Micki King Raven Blunt

Signature: *[Signature]* Receipt Date: 4/10/19

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-RENTAL
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 04/10/2019 TIME IN: 14:28:41
DATE OUT: 04/10/2019 TIME OUT: 14:42:26

INBOUND TICKET Number: 01-00682036

SCALE 1 GROSS WT. 27880 LB
SCALE 2 TARE WT. 14320 LB
NET WEIGHT 13560 LB

Qty Description Amount
6.780 Bulk Solids 128.82

State Fee 8.48
NET CHARGE AMOUNT: 137.30

X

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Rental

Generator

Manifest Job No. MN348COT02
74103 Zip
Bill to Name: Environmental Works, Inc.
Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip
Contact: Anthony Moore (417) 773-5747
Name Phone
74120 Zip
596-7457

| Container No. | Type | Total Quantity | Unit |
|---------------|-----------|----------------|-----------|
| | <u>DT</u> | <u>6787</u> | <u>cu</u> |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly identified and labeled for transportation according to applicable regulations.

[Signature] 4/11/19
Signature Shipment Date

Transporter

Inc. Driver Name (Print): Jim Dallas
Expressway Tag No. DHV 733 State: MO
USDOT No. 899 748

I hereby certify that the above material was picked up at the generator site listed above.

[Signature] 4/10/19
Driver Signature Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

[Signature] 4/10/19
Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

[Signature] 4/10/19
Signature Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A. E. L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-RENTAL
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 04/11/2019 TIME IN: 07:07:59
DATE OUT: 04/11/2019 TIME OUT: 07:21:06

INBOUND TICKET Number: 01-00682090

SCALE 1 GROSS WT. 30040 LB
SCALE 2 TARE WT. 14240 LB
NET WEIGHT 15800 LB

| Qty | Description | Amount |
|-------|-------------|--------|
| 7.900 | Bulk Soilds | 150.10 |

State Fee 9.88
NET CHARGE AMOUNT: 159.98

x JMD 11/19

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

Rental

74103
Zip

74120
Zip

8) 596-7457

Manifest Job No. MN348COT02

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway

Springfield MO 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
|---------------|------|----------------|------|

01

7.900
cy

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Signature

4/11/19
Ship Date

Transporter

Environmental Landfill, Inc.
1455 E. Chestnut Expressway

Driver Name (Print): Jim Dallas

Tag No. PHV 737 State: IW

USDOT No. 899 799

I hereby certify that the above material was picked up at the generator site listed above.

Jim Dallas 4/11/19
Driver Signature Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Jim Dallas 4/11/19
Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Signature

4-11-19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-PU
Reference: MN348COT02
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 04/18/2019 TIME IN: 12:30:13
DATE OUT: 04/18/2019 TIME OUT: 12:44:14

INBOUND TICKET Number: 01-00683322

SCALE 1 GROSS WT. 12980 LB
SCALE 2 TARE WT. 9860 LB
NET WEIGHT 3120 LB

Qty Description Amount
0.000 Bulk Solids 0.00
4.000 Solid Drum(s) 160.00

State Fee 1.95
NET CHARGE AMOUNT: 161.95

X

I hereby certify that the above material was picked up at the
generator site listed above.

Alvin Walden 4/18/19
Driver Signature Ship Date

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

P/u

74103
Zip
74120
Zip
) 596-7457

Manifest Job No. MN348COT02
Bill to Name: Environmental Works, Inc.
Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip
Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|-------|----------------|------|
| 4 | DRUMS | | 6 |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly
disposed of for transportation according to applicable regulations.

Alvin Walden 4/18/19
Signature Shipment Date

Transporter

Environmental Landfill, Inc.
1455 E. Chestnut Expressway
Springfield, MO 65802

Driver Name (Print): Alvin Walden
Tag No. OK-673 State: OK
USDOT No. _____

I hereby certify that the above named material was delivered without
incident to the destination listed below.

Alvin Walden 4/18/19
Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

[Signature] 4/18/19
Signature Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-55
Reference: MN348COT03
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 04/17/2019 TIME IN: 11:09:17
DATE OUT: 04/17/2019 TIME OUT: 11:25:35

INBOUND TICKET Number: 01-00683097

SCALE 1 GROSS WT. 46500 LB
SCALE 2 TARE WT. 29280 LB
NET WEIGHT 17220 LB

| Qty | Description | Amount |
|-------|---------------------|--------|
| 8.610 | Liquid Density 8.33 | 661.51 |

State Fee 10.76
NET CHARGE AMOUNT: 672.27

X

Springfield, MO 65802

I hereby certify that the above material was picked up at the generator site listed above.

Jim Dallas 4/17/19
Driver Signature Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Jim Dallas 4/17/19
Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent Signature

[Signature] 4/17/19
Signature Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

K 74103
City Zip

K 74120
City Zip

18) 596-7457
Phone

Manifest Job No. MN348COT03

Bill to Name: Environmental Works Inc.

Address: 1455 E. Chestnut Expressway
Springfield OK 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | Tank | 8.610 | G |

This material is hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

[Signature] 4/16/19
Signature Shipment Date

Transporter

Works Inc.
Expressway
Springfield, MO 65802

Driver Name (Print): Jim Dallas
Tag No. U8A1SW State: MO
USDOT No. 933327

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent Signature

[Signature] 4/17/19
Signature Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King
Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-55
Reference: MN348COT03
Generator: CITY OF TULSA

Street: 118 N LANSING
City/State: TULSA, OK 74120

DATE IN: 04/17/2019 TIME IN: 13:13:19
DATE OUT: 04/17/2019 TIME OUT: 13:40:37

INBOUND TICKET Number: 01-00683147

SCALE 1 GROSS WT. 47800 LB
SCALE 2 TARE WT. 29240 LB
NET WEIGHT 18560 LB

Qty Description Amount
9.280 Liquid Density 8.33 712.98
1.000 Washout 195.00

State Fee 11.60
NET CHARGE AMOUNT: 919.58

X

I hereby certify that the above material was picked up at the generator site listed above.

Jim Dallas 4/17/19
Driver Signature Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Jim Dallas 4/17/19
Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Micki King 4-17-19
Signature Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

SS

Manifest Job No. MN348COT03

Bill to Name: Environmental Works Inc.

Address: 1455 E. Chestnut Expressway
Springfield OK 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

< 74103
Zip

< 74120
Zip

8) 596-7457

Container No. Type Total Quantity Unit

1 Tank 9.287 6

hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Jim Dallas 4/16/19
Signature Shipment Date

Transporter

Environmental Works Inc.
Expressway
65802

Driver Name (Print): Jim Dallas
Tag No. 08A K5W State: MO
USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

Jim Dallas 4/17/19
Driver Signature Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Jim Dallas 4/17/19
Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Micki King 4-17-19
Signature Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-55
Reference: MN348COT03
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 04/17/2019 TIME IN: 09:34:59
DATE OUT: 04/17/2019 TIME OUT: 09:50:40

INBOUND TICKET Number: 01-00683055

SCALE 1 GROSS WT. 48180 LB
SCALE 2 TARE WT. 29380 LB
NET WEIGHT 18800 LB

| Qty | Description | Amount |
|-------|---------------------|--------|
| 9.400 | Liquid Density 8.33 | 722.20 |
| | State Fee 11.75 | |
| | NET CHARGE AMOUNT: | 733.95 |

X

Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

K 74103
City Zip

K 74120
City Zip

(918) 596-7457
Phone

Manifest Job No. MN348COT03

Bill to Name: Environmental Works Inc.

Address: 1455 E. Chestnut Expressway
Springfield OK 65802
City State Zip

Contact: Anthony Moore (417) 773-5747
Name Phone

SS

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
| | TRNK | 9.400 | G |

Hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly identified for transportation according to applicable regulations.

Michelle
Signature

4/16/19
Shipment Date

Transporter

Environmental Works Inc.
Expressway
65802

Driver Name (Print): Jim Dallas
Tag No. 08A K5W State: MO
USDOT No. 933 327

I hereby certify that the above material was picked up at the generator site listed above.

Jim Dallas
Driver Signature
4/17/19
Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Jim Dallas
Driver Signature
4/17/19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Micki King
Signature
4-17-19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Laura King

Deposit: Micki King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-55
Reference: MN348COT03
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 04/01/2019 TIME IN: 15:58:22
DATE OUT: 04/01/2019 TIME OUT: 16:12:08

INBOUND TICKET Number: 01-00680500

SCALE 1 GROSS WT. 48940 LB
SCALE 2 TARE WT. 29620 LB
NET WEIGHT 19320 LB

Qty Description Amount
9.660 Liquid Density 8.33 742.18

State Fee 12.08
NET CHARGE AMOUNT: 754.26

X

City, State Zip: Springfield, MO 65802

I hereby certify that the above material was picked up at the generator site listed above.

Driver Signature: [Signature] Ship Date: 4/1/19

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature: [Signature] Delivery Date: 4/1/19

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Signature: [Signature] Receipt Date: 4-1-19

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

Manifest

Job No. MN348COT03

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway

Springfield MO 65802
City State Zip

Contact: Anthony Moore 417-773-8747
Name Phone

Container Total
No. Type Quantity Unit

water 0
Pink 9.660

This hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Signature: [Signature]

Shipment Date: 4/1/19

Transporter

Driver Name (Print): Jim Dallas

Tag No. 68A K5W State: MO

USDOT No. 933327

I hereby certify that the above material was picked up at the generator site listed above.

Driver Signature: [Signature] Ship Date: 4/1/19

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature: [Signature] Delivery Date: 4/1/19

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Signature: [Signature] Receipt Date: 4-1-19

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-55
Reference: MN348COT03
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 04/02/2019 TIME IN: 07:23:31
DATE OUT: 04/02/2019 TIME OUT: 07:37:29

INBOUND TICKET Number: 01-00680530

SCALE 1 GROSS WT. 44080 LB
SCALE 2 TARE WT. 29580 LB
NET WEIGHT 14500 LB

| Qty | Description | Amount |
|-------|---------------------|--------|
| 7.250 | Liquid Density 8.33 | 557.02 |

State Fee 9.06
NET CHARGE AMOUNT: 566.08

X

Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

Manifest

Job No. MN348COT03

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore 417-773-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|-------------|----------------|----------|
| | <u>Tank</u> | <u>7.25</u> | <u>6</u> |

This hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

Signature

4/1/19
Ship Date

Transporter

Driver Name (Print): Jim Dallas

Tag No. 68 ABW State: MO

USDOT No. 9333 27

I hereby certify that the above material was picked up at the generator site listed above.

I hereby certify that the above named material was delivered without incident to the destination listed below.

Driver Signature

4-1-19
Ship Date

Driver Signature

4-2-19
Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Signature

4/2/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-55
Reference: MN348COT03
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 04/02/2019 TIME IN: 15:23:52
DATE OUT: 04/02/2019 TIME OUT: 15:55:54

INBOUND TICKET Number: 01-00680701

SCALE 1 GROSS WT. 50120 LB
SCALE 2 TARE WT. 29540 LB
NET WEIGHT 20580 LB

| Qty | Description | Amount |
|--------|---------------------|--------|
| 10.290 | Liquid Density 8.33 | 790.58 |
| 1.000 | Washout | 195.00 |

State Fee 12.86
NET CHARGE AMOUNT: 998.44

X

American Environmental Landfill, Inc.

Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

Manifest Job No. MN348COT03

Bill to Name: Environmental Works, Inc.

Address: 1455 E. Chestnut Expressway
Springfield MO 65802
City State Zip

Contact: Anthony Moore 417-713-5747
Name Phone

74103
City Zip
74120
City Zip
918-590-7457
Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|------|----------------|------|
|---------------|------|----------------|------|

| | | | |
|----------|-------------|---------------|----------|
| <u>1</u> | <u>Tank</u> | <u>10.290</u> | <u>G</u> |
|----------|-------------|---------------|----------|

a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly condition for transportation according to applicable regulations.

Signature

Shipment Date 4/10/19

Transporter

Driver Name (Print): Jim Dallas

Tag No. MO A15W State: MO

USDOT No. 933 327

Environmental Works Inc.
1455 E. Chestnut Expressway
40 US802

I hereby certify that the above material was picked up at the generator site listed above.

Jim Dallas 4/2/19
Driver Signature Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Jim Dallas 4/2/19
Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

Signature

Receipt Date 4/2/19

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

AMERICAN ENVIRON. LANDFILL
A.E.L.
1420 W. 35TH ST., SUITE B
TULSA, OK. 74107-3814

Weighed: Micki King

Deposit: Laura King

BILL TO: 348
Environmental Works
1455 E. Chestnut Exp
Springfield MO 65802
HAULER: Cash Customer

Vehicle ID: 348-55
Reference: MN348COT03
Generator: CITY OF TULSA

Street: 118 N LANSING

City/State: TULSA, OK 74120

DATE IN: 04/02/2019 TIME IN: 11:54:53
DATE OUT: 04/02/2019 TIME OUT: 12:09:01

INBOUND TICKET Number: 01-00680625

SCALE 1 GROSS WT. 51200 LB
SCALE 2 TARE WT. 29860 LB
NET WEIGHT 21340 LB

| Qty | Description | Amount |
|--------|---------------------|--------|
| 10.670 | Liquid Density 8.33 | 819.78 |

State Fee 13.34
NET CHARGE AMOUNT: 833.12

X

City, State Zip: Springfield, MO 65802

I hereby certify that the above material was picked up at the generator site listed above.

Jim Dallas 4/2/19
Driver Signature Ship Date

I hereby certify that the above named material was delivered without incident to the destination listed below.

Jim Dallas 4/2/19
Driver Signature Delivery Date

Destination

American Environmental Landfill, Inc.
212 N. 177th W Ave.
Sand Springs, OK 74063

Phone: (918) 245-7786
Fax: (918) 245-7774
Permit No: 3557021

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is accurate.

Laura King Micki King Raven Blunt
Name of Authorized Agent

[Signature]
Signature

4/2/19
Receipt Date

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain

American Environmental Landfill, Inc.
Leading the Industry in Environmental Compliance

Hazardous Waste Manifest

Generator

Manifest

Job No. MN348COT03

Bill to Name: Environmental Works Inc.

Address: 1455 E. Chestnut Expressway

Springfield MO 65802
City State Zip

Contact: Anthony Moore 417-713-5747
Name Phone

| Container No. | Type | Total Quantity | Unit |
|---------------|-------------|----------------|----------|
| | <u>Tank</u> | | <u>6</u> |

This hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly conditioned for transportation according to applicable regulations.

[Signature]
Signature

4/1/19
Shipment Date

Transporter

Driver Name (Print): Jim Dallas

Tag No. 68 A15W State: MO

USDOT No. 933 327

White - Destination Retention • Yellow - Return to Bill to • Pink - Transporter Retain • Goldenrod - Generator Retain



NHIW CERTIFICATION

Please read instructions prior to completing this form.

Generator Name: City of Tulsa

Mailing Address: 175 East 2nd Street City Tulsa State OK Zip 74103

Point of Generation Address: 118 N. Lansing City Tulsa State OK Zip 74120

Generator Contact: Michelle Barnett Title Dep Chief - Econ Develop Telephone 918-596-7457

DETAILED WASTE DESCRIPTION

Waste Name: Brick Floor Pavers and Bedding Materials

If waste was generated out-of-state, is it classified as hazardous in the state of origin? Yes No NA- Okla. waste

Approximate amount of waste to be disposed:

Disposal frequency:

Physical characteristics:

100 Tons Pounds One-time Weekly Solid Liquid

Cubic yards Drum Monthly Annually Sludge Combination

Other _____

Method used to determine waste is non-hazardous: Analysis Generator knowledge Both

Process generating waste (be specific and use additional sheets if necessary):

Brick floor pavers from industrial facility that used PCBs and petroleum hydrocarbons. COCs include PCBs, TPH, heavy metals, and PAHs. Historically the property was used as a steel foundry and forge from 1939 through 1962. The property was later used to produce heat exchangers and had a concrete reservoir, a forge, and welding and fabrication shops. The facility has not be utilized in several years and will be demolished in 2019.

DESIGNATED RECEIVING LANDFILL

Name: American Environmental Landfill Permit #: 3557021

GENERATOR CERTIFICATION

I understand this form must be signed by the original waste generator or other persons authorized by 27A O.S. §2-10-501(H).

To the best of my knowledge, I certify:

- ◆ The information contained herein is accurate, complete, and representative of the waste to be disposed;
- ◆ The waste identified above is not a characteristically hazardous waste as identified by 40 CFR 261, Subpart C, is not a listed hazardous waste as identified by 40 CFR 261, Subpart D or contaminated with a listed hazardous waste, and is not otherwise identified as a hazardous waste by the Department of Environmental Quality; and
- ◆ This waste will be managed in accordance with all applicable statutes and rules of the Department of Environmental Quality.

K. Michelle Barnett
Generator Signature

K. Michelle Barnett

Dep Chief - Econ Develop 2.27.19



American Environmental Landfill, Inc.
"Leading the Industry in Environmental Compliance"

(MUST BE FILLED OUT COMPLETELY)

For more information, please call American Environmental Landfill, Inc. at (918)245-7786

A. GENERATOR INFORMATION

1. Generator Name City of Tulsa
 2. Point of Generation 118 N. Lansing
 3. City Tulsa
 State OK Zip Code 74120
 4. Phone 918-596-7457
 5. Fax _____
 6. State Waste Code NA

B. CUSTOMER BILLING INFORMATION

1. Billed to Name Environmental Works, Inc.
 2. Address 9529 E. 55th Place, Suite A
 3. City Tulsa
 State OK Zip Code 74145
 4. Phone 918-879-4499
 5. Fax _____
 6. Contact Anthony Moore
 7. Title Senior Project Manager

ALL BLANKS MUST BE FILLED. IF NOT APPLICABLE PLEASE PUT N/A

C. WASTE STREAM INFORMATION

1. Common Name of Waste Brick Floor Pavers and Bedding Materials
 2. Detailed Description of Process Generating Waste and Material Description Brick floor pavers from industrial facility that used PCBs and petroleum hydrocarbons. COCs include PCBs, TPH, heavy metals, and PAHs. The property was previously used as a steel foundry and forge, with heat exchangers, concrete reservoir, and welding and fabrication shops. The property has not been used in several years and will be demolished in 2019.

3. Industrial Generator Yes No
 4. Municipal Generator Yes No
 5. Physical State at 70° Solid Semisolid Liquid Powder Combination
 6. Odor Yes No Describe _____
 7. Color brown 8. pH Range 6-8
 9. Flash Point NA 10. Reactive Yes No With: _____
 11. Free Liquid Yes No 12. Water content % by volume 0 13. Viscosity NA
 14. Is the analytical attached derived from testing a representative sample IAW 40 CFR 261? Yes No
 15. Does the waste contain radioactive or U.S.D.O.T. hazardous waste materials? Yes No

D. SUPPLEMENTAL INFORMATION

None MSDS Analytical Data Process Knowledge Number of pages attached 243

E. SHIPPING INFORMATION

1. Packaging Bulk Liquid Bulk Solid Drum Other _____ Shipping Frequency one time
 2. Estimated Volume 100 Gallons Yards Drums Other _____

F. GENERATOR / CUSTOMER CERTIFICATION

I hereby certify that all information submitted and all attached documents contain true and accurate descriptions of this waste. No deliberate or willful omissions of composition or properties exist, and all known or suspected hazards have been disclosed. I further certify that the waste is not designated a Hazardous Waste as defined by the USEPA in 40 CFR 261, nor does it contain PCBs regulated under TSCA 40 CFR 761.

I, Michelle Barnett am employed by the City of Tulsa and am authorized to sign this request for _____
 (Company Name) *K. Michelle Barnett* (Signature) 2.27.19 (Date)

LANDFILL USE ONLY (DO NOT WRITE IN THIS SPACE)

Compliance Officer _____
 Date _____ Approved Rejected
 Additional Information _____ Current WDA on file Yes No
 Job # _____



NHIW CERTIFICATION

Please read instructions prior to completing this form.

Generator Name: City of Tulsa

Mailing Address: 175 East 2nd Street City Tulsa State OK Zip 74103

Point of Generation Address: 118 N. Lansing City Tulsa State OK Zip 74120

Generator Contact: Michelle Barnett Title Dep Chief - Econ Develop Telephone 918-596-7457

DETAILED WASTE DESCRIPTION

Waste Name: Impacted soil, asphalt, and concrete

If waste was generated out-of-state, is it classified as hazardous in the state of origin? Yes No NA- Okla. waste

Approximate amount of waste to be disposed:

Disposal frequency:

Physical characteristics:

300 Tons Pounds One-time Weekly Solid Liquid

Cubic yards Drum Monthly Annually Sludge Combination

Other _____

Method used to determine waste is non-hazardous: Analysis Generator knowledge Both

Process generating waste (be specific and use additional sheets if necessary):

Shallow soil, concrete, and asphalt from industrial facility that used PCBs and petroleum hydrocarbons. COCs include PCBs, TPH, heavy metals, and PAHs. Historically the property was used as a steel foundry and forge from 1939 through 1962. The property was later used to produce heat exchangers and had a concrete reservoir, a forge, and welding and fabrication shops. The facility has not been utilized in several years and will be demolished in 2019.

DESIGNATED RECEIVING LANDFILL

Name: American Environmental Landfill Permit #: 3557021

GENERATOR CERTIFICATION

I understand this form must be signed by the original waste generator or other persons authorized by 27A O.S. §2-10-501(H).

To the best of my knowledge, I certify:

- ◆ The information contained herein is accurate, complete, and representative of the waste to be disposed;
- ◆ The waste identified above is not a characteristically hazardous waste as identified by 40 CFR 261, Subpart C, is not a listed hazardous waste as identified by 40 CFR 261, Subpart D or contaminated with a listed hazardous waste, and is not otherwise identified as a hazardous waste by the Department of Environmental Quality; and
- ◆ This waste will be managed in accordance with all applicable statutes and rules of the Department of Environmental Quality.

Generator Signature

Michelle Barnett

Dep Chief - Econ Develop 3/5/19



American Environmental Landfill, Inc.
"Leading the Industry in Environmental Compliance"

(MUST BE FILLED OUT COMPLETELY)

For more information, please call American Environmental Landfill, Inc. at (918)245-7786

A. GENERATOR INFORMATION

1. Generator Name City of Tulsa
 2. Point of Generation 118 N. Lansing
 3. City Tulsa
 State OK Zip Code 74120
 4. Phone 918-596-7457
 5. Fax _____
 6. State Waste Code _____

B. CUSTOMER BILLING INFORMATION

1. Billed to Name Environmental Works, Inc.
 2. Address 1455 E. Chestnut Expressway
 3. City Springfield
 State MO Zip Code 65802
 4. Phone 417-890-9500
 5. Fax _____
 6. Contact Anthony Moore
 7. Title Senior Project Manager

ALL BLANKS MUST BE FILLED. IF NOT APPLICABLE PLEASE PUT N/A

C. WASTE STREAM INFORMATION

1. Common Name of Waste Impacted soil, asphalt, and concrete
 2. Detailed Description of Process Generating Waste and Material Description Shallow soil, asphalt, and concrete from industrial facility that used PCBs and petroleum hydrocarbons. COCs include PCBs, TPH, heavy metals, and PAHs. The property was previously used as a steel foundry and forge, with heat exchangers, concrete reservoir, and welding and fabrication shops. The property has not been used in several years and will be demolished in 2019.

3. Industrial Generator Yes No
 4. Municipal Generator Yes No
 5. Physical State at 70° Solid Semisolid Liquid Powder Combination
 6. Odor Yes No Describe _____
 7. Color brown, black, gray 8. pH Range 6-8
 9. Flash Point NA 10. Reactive Yes No With: _____
 11. Free Liquid Yes No 12. Water content % by volume 0 13. Viscosity NA
 14. Is the analytical attached derived from testing a representative sample IAW 40 CFR 261? Yes No
 15. Does the waste contain radioactive or U.S.D.O.T. hazardous waste materials? Yes No

D. SUPPLEMENTAL INFORMATION

None MSDS Analytical Data Process Knowledge Number of pages attached 289

E. SHIPPING INFORMATION

1. Packaging Bulk Liquid Bulk Solid Drum Other _____ Shipping Frequency _____
 2. Estimated Volume 300 Gallons Yards Drums Other _____

F. GENERATOR / CUSTOMER CERTIFICATION

I hereby certify that all information submitted and all attached documents contain true and accurate descriptions of this waste. No deliberate or willful omissions of composition or properties exist, and all known or suspected hazards have been disclosed. I further certify that the waste is not designated a Hazardous Waste as defined by the USEPA in 40 CFR 261, nor does it contain PCBs regulated under TSCA 40 CFR 761.

I, Michelle Barnett am employed by the City of Tulsa and am authorized to sign this request for the City of Tulsa 3.5.19
 (Company Name) (Signature) (Date)

LANDFILL USE ONLY (DO NOT WRITE IN THIS SPACE)

Compliance Officer _____
 Date _____ Approved Rejected
 Additional Information _____ Current WDA on file Yes No
 Job # _____



NHIW CERTIFICATION

Please read instructions prior to completing this form.

Generator Name: City of Tulsa

Mailing Address: 175 East 2nd Street City Tulsa State OK Zip 74103

Point of Generation Address: 118 N. Lansing City Tulsa State OK Zip 74120

Generator Contact: Michelle Barnett Title Dep Chief - Econ Develop Telephone 918-596-7457

DETAILED WASTE DESCRIPTION

Waste Name: Petroleum impacted groundwater

If waste was generated out-of-state, is it classified as hazardous in the state of origin? Yes No NA- Okla. waste

Approximate amount of waste to be disposed:

Disposal frequency:

Physical characteristics:

3,000 Tons Pounds One-time Weekly Solid Liquid
 Cubic yards Drum Monthly Annually Sludge Combination
 Other gallons

Method used to determine waste is non-hazardous: Analysis Generator knowledge Both

Process generating waste (be specific and use additional sheets if necessary):

Shallow groundwater from industrial facility that used PCBs and petroleum hydrocarbons. COCs include TPH and metals.
 Historically the property was used as a steel foundry and forge from 1939 through 1962. The property was later used to produce heat exchangers and had a concrete reservoir, a forge, and welding and fabrication shops. The facility has not been utilized in several years and will be demolished in 2019.

DESIGNATED RECEIVING LANDFILL

Name: American Environmental Landfill Permit #: 3557021

GENERATOR CERTIFICATION

I understand this form must be signed by the original waste generator or other persons authorized by 27A O.S. §2-10-501(H).

To the best of my knowledge, I certify:

- ◆ The information contained herein is accurate, complete, and representative of the waste to be disposed;
- ◆ The waste identified above is not a characteristically hazardous waste as identified by 40 CFR 261, Subpart C, is not a listed hazardous waste as identified by 40 CFR 261, Subpart D or contaminated with a listed hazardous waste, and is not otherwise identified as a hazardous waste by the Department of Environmental Quality; and
- ◆ This waste will be managed in accordance with all applicable statutes and rules of the Department of Environmental Quality.


 Generator Signature

K. Michelle Barnett

Dep Chief - Econ Develop 4.1.19



American Environmental Landfill, Inc.
"Leading the Industry in Environmental Compliance"

(MUST BE FILLED OUT COMPLETELY)

For more information, please call American Environmental Landfill, Inc. at (918)245-7786

A. GENERATOR INFORMATION

1. Generator Name City of Tulsa
 2. Point of Generation 118 N. Lansing
 3. City Tulsa
 State OK Zip Code 74120
 4. Phone 918-596-7457
 5. Fax _____
 6. State Waste Code _____

B. CUSTOMER BILLING INFORMATION

1. Billed to Name Environmental Works, Inc.
 2. Address 1455 E. Chestnut Expressway
 3. City Springfield
 State MO Zip Code 65802
 4. Phone 417-890-9500
 5. Fax _____
 6. Contact Anthony Moore
 7. Title Senior Project Manager

ALL BLANKS MUST BE FILLED. IF NOT APPLICABLE PLEASE PUT N/A

C. WASTE STREAM INFORMATION

1. Common Name of Waste Petroleum impacted groundwater
 2. Detailed Description of Process Generating Waste and Material Description Shallow groundwater from industrial facility that used PCBs and petroleum hydrocarbons. COCs include TPH and metals. The property was previously used as a steel foundry and forge, with heat exchangers, concrete reservoir concrete reservoir, and welding and fabrication shops. The property has not been used in several years and will be demolished in 2019.

3. Industrial Generator Yes No
 4. Municipal Generator Yes No
 5. Physical State at 70° Solid Semisolid Liquid Powder Combination
 6. Odor Yes No Describe petroleum-like
 7. Color gray 8. pH Range 7.6-7.9
 9. Flash Point >158 10. Reactive Yes No With: _____
 11. Free Liquid Yes No 12. Water content % by volume 100 13. Viscosity NA
 14. Is the analytical attached derived from testing a representative sample IAW 40 CFR 261? Yes No
 15. Does the waste contain radioactive or U.S.D.O.T. hazardous waste materials? Yes No

D. SUPPLEMENTAL INFORMATION

None MSDS Analytical Data Process Knowledge Number of pages attached 83

E. SHIPPING INFORMATION

1. Packaging Bulk Liquid Bulk Solid Drum Other gallons Shipping Frequency one time
 2. Estimated Volume 3,000 Gallons Yards Drums Other _____

F. GENERATOR / CUSTOMER CERTIFICATION

I hereby certify that all information submitted and all attached documents contain true and accurate descriptions of this waste. No deliberate or willful omissions of composition or properties exist, and all known or suspected hazards have been disclosed. I further certify that the waste is not designated a Hazardous Waste as defined by the USEPA in 40 CFR 261, nor does it contain PCBs regulated under TSCA 40 CFR 761.

I, Michelle Barnett am employed by City of Tulsa and am authorized to sign this request for City of Tulsa Michelle Barnett 4.1.19
 (Company Name) (Signature) (Date)

LANDFILL USE ONLY (DO NOT WRITE IN THIS SPACE)

Compliance Officer _____
 Date _____ Approved Rejected
 Additional Information _____ Current WDA on file Yes No
 Job # _____