

Annual Groundwater Compliance Monitoring Report

Bothell Paint, Bothell Hertz, and Bothell Landing Sites Bothell, Washington

Prepared For:

City of Bothell 18415 101st Avenue NE Bothell, WA 98011

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Prepared By:

Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

John Kane, LHG President, Principal

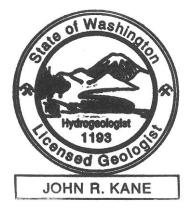




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Attachment A – Agreed Order Schedule of Deliverables for Bothell Paint, Bothell Hertz, Bothell Landing Attachment B – Ecology Approved Compliance Monitoring Plans for Bothell Paint, Bothell Hertz, Bothell Landing

Attachment C - Ecology Approved Compliance Monitoring Schedule for Bothell Paint, Bothell Hertz, Bothell Landing

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1.0 INTRODUCTION

Kane Environmental, Inc. (Kane Environmental) has prepared this Annual Groundwater Compliance Monitoring Report to satisfy the Agreed Order requirements for DE15748, DE15747 & DE15746, regarding quarterly groundwater monitoring activities performed in 2019/2020 at the Bothell Paint and Decorating Site (Bothell Paint), Bothell Former Hertz Facility (Bothell Hertz), and Bothell Landing Sites, located in Bothell, Washington. This Annual Groundwater Compliance Monitoring Report is identified as Deliverable No. 5 in the respective Agreed Orders for the three Sites (see Attachment A). The Site vicinities are displayed in Figure 1 and the location of the Sites relative to surrounding properties are shown in Figure 2.

1.1 Background

Background information, including physical characteristics and location, historical development, and previous environmental investigations for the Bothell Paint, Bothell Hertz, and Bothell Landing are described below.

1.1.1 Bothell Paint

The Bothell Paint Site is situated south of Bothell Way NE and west of NE 180th St in Bothell, Washington. According to available information, the Site was developed by at least 1914 and has historically contained mixed commercial development including automobile repair and dealership, a retail paint and flooring business, and a sand blasting operation. The Site also formerly contained a gasoline/Stoddard solvent underground storage tank (UST) which was reportedly removed in 1988. HWA Geosciences (HWA) conducted subsurface investigations throughout the Site between 2008 and 2016 to assess potential contamination associated with former Site operations and the former UST. The investigations reportedly revealed that total petroleum hydrocarbons (TPH) as gasoline, diesel, and heavy oil, benzene, toluene, ethylbenzene, and xylenes (BTEX), select metals including arsenic, cadmium, lead, and mercury, halogenated volatile organic compounds (HVOCs), and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) were present in soil and or groundwater throughout the Site, often at concentrations exceeding Model Toxics Control Act (MTCA) cleanup levels (HWA, 2017a).

Several interim remedial actions were reportedly conducted throughout the Site to address soil and groundwater contamination in 2010, 2013, and 2014. Following the interim remedial actions on the Site, the following chemicals of concern (COCs) were identified:

Soil: Gasoline- and motor oil-range petroleum hydrocarbons

Groundwater: Diesel- and oil-range petroleum hydrocarbons, and arsenic.

According to the Cleanup Action Plan (CAP) for the Site, the selected remedial alternative to address residual soil and groundwater contamination on the Site was compliance monitoring, monitored natural



attenuation (MNA), compliance with cleanup standards, statistical and MNA-based analysis, contingency planning, and five year periodic Site reviews (Ecology, 2018b).

1.1.2 Bothell Hertz

The Bothell Hertz Site is situated on vacant lot south of Main St and east of 98th Ave NE, west of Bothell Way NE and extends south of the SR 522 Roadway to a grassed area north of the Park at Bothell Landing and west of 98th Ave NE. The Site is also located just south of the Bothell Service Center Simon and Son (BSCSS) site, which contained a former drycleaner and is listed on the Washington State Department of Ecology (Ecology) Confirmed or Suspected Contaminated Sites List with HVOC contaminated soil and groundwater. According to historical information, the Site was developed by at least 1918 and historically contained automobile repair and dealerships, fueling operations, and equipment rental. All buildings were reportedly removed from the Site by May 2010. Three leaking underground storage tanks (LUST) were reportedly removed from the Site in 1993 which were reported to have formerly contained kerosene, diesel fuel, and leaded gasoline. Subsurface investigations were conducted throughout the Site between 2008 and 2016 to assess potential subsurface contamination associated with former Site operations and the former USTs. The investigations also sought to evaluate whether HVOC contamination from the BSCSS site had migrated laterally to the south/southwest to impact the Site. The investigations reportedly found TPH as gasoline, diesel, and heavy oil, BTEX, HVOCs, and arsenic contamination in soil and or groundwater throughout the Site (HWA, 2017b).

HWA reportedly conducted interim remedial actions in 2010, 2012, and 2013 to address soil and groundwater contamination on the Site. Following the interim remedial actions on the Site, the following COCs were identified:

Soil: HVOCs from the BSCSS site to the north.

Groundwater: Gasoline-, diesel-, and motor oil-range petroleum hydrocarbons, arsenic, HVOCs associated with the BSCSS site to the north.

According to the CAP for the Site, the selected remedial alternative to address residual soil and groundwater contamination on the Site was compliance monitoring, monitored natural attenuation (MNA), compliance with cleanup standards, statistical and MNA-based analysis, contingency planning, and five year periodic Site reviews (Ecology, 2018c).

1.1.3 Bothell Landing

The Bothell Landing Site is located on a vacant parcel between Bothell Way NE and Ne 180th St in Bothell, Washington. According to available materials, between the 1930's and 1970's the Site contained two service stations, located in the northeastern and northwestern corners of the Site. USTs associated with these stations were reportedly removed in 1970. More recently the Site contained mixed commercial



development including restaurants, and multi-unit retail structures. All buildings were reportedly removed from the Site in 2010 (HWA, 2018c).

During roadway expansion work in 1998, five USTs and associate petroleum contaminated soils were discovered in the northern portion of the Site. After a portion of soils were excavated, Kleinfelder conducted Site investigation activities in 1999 and discovered TPH as gasoline, diesel, and heavy oil, and benzene contamination in soil and groundwater on the Site. The Site filed for a restrictive covenant and received a soil only No Further Action (NFA) determination in 2002, but the NFA was rescinded in 2006 due to changing cleanup levels. HWA conducted subsurface investigation activities between 2007 and 2016. Analytical results indicated that TPH as gasoline, diesel, and heavy oil, BTEX, PAHs, lead, arsenic and HVOCs were present in soil and or groundwater throughout the Site. Petroleum, BTEX, PAHs, and metals were reportedly attributed to on-Site sources and historical operations while the HVOCs were reportedly associated with the up-gradient Ultra Custom Care Cleaners site which was responsible for the remediation of migrating HVOCs under a separate AO (HWA 2018c).

HWA reportedly conducted interim remedial actions in 2010 and from 2013 to 2017 to address soil and groundwater contamination on the Site. Following the interim remedial actions on the Site, the following COCs were identified:

Soil: Gasoline-range petroleum hydrocarbons and benzene.

Groundwater: Arsenic.

According to the CAP for the Site, the selected remedial alternative to address residual soil and groundwater contamination on the Site was engineering controls (capping under roadways) and institutional controls (environmental covenants restricting access to soil and ground water) with compliance monitoring for ground water with option to remove arsenic from the covenant if monitoring shows naturally elevated concentrations unrelated to historical or current contamination at the Site (Ecology, 2018a).

1.2 Scope of Work

Kane Environmental was approved by the City of Bothell (the Client) to complete Quarterly Compliance Groundwater Monitoring scope of work at all three Sites to comply with the requirements outlined in each Site's respective Agreed Order (AO) listed below. The groundwater monitoring activities were performed in compliance with the Ecology-approved Compliance Monitoring Plans for each site (see Attachment B), and in accordance with an Ecology-approved quarterly monitoring schedule (see Attachment C).

- Bothell Paint AO No. DE 15748, effective May 31, 2018
- Bothell Hertz AO No. DE 15747, effective May 31, 2018
- Bothell Landing AO No. DE 15746, effective date June 11, 2018



Kane Environmental performed the following tasks to complete this scope of work:

- **Sample Collection:** Groundwater samples were collected from select monitoring wells at each Site. Surface water samples were also collected from Horse Creek in association with the Bothell Paint Site. Groundwater monitoring wells at each Site are associated with previous remedial operations and current activities being conducted by Kane Environmental.
- **Chemical Analysis:** Groundwater samples collected from the Bothell Paint, Bothell Hertz, and Bothell Landing Sites were analyzed for one or more of the following chemical constituents by an analytical laboratory accredited by the Washington State Department of Ecology (Ecology):
 - Diesel and Heavy-Oil Range Hydrocarbons by Method NWTPH-Dx/Dx Ext;
 - o Total and Dissolved Arsenic by EPA Method 200.8;
 - Dissolved Manganese by EPA Method 200.8;
 - Dissolved gases by RSK 175;
 - Nitrate by EPA Method 353.2;
 - Sulfate by Method ASTM D516-11; and,
 - Total alkalinity by Method SM 2320B.

Surface water samples collected from Horse Creek in association with the Bothell Paint Site were analyzed for one or more of the following chemical constituents by an analytical laboratory accredited by the Washington State Department of Ecology (Ecology):

- Gasoline Range Hydrocarbons by Method NWTPH-Gx;
- o Diesel and Heavy-Oil Range Hydrocarbons by Method NWTPH-Dx/Dx Ext; and,
- HVOCs by EPA Method 8260.



2.0 SUBSURFACE CONDITIONS

2.1 Geologic Setting

Geologic site conditions for Bothell Paint, Bothell Hertz, and Bothell Landing have been assessed based on previous subsurface investigations conducted at each site and from adjacent properties. A summary for the geologic condition at each site is discussed below.

2.1.1 Bothell Paint

According to previous subsurface investigations at the Site, soils at the Paint Site consist of loose gravelly and silty sand fill material at depths extending to approximately 22 feet below the ground surface (bgs). Underlying the fill, peat was encountered from approximately 10 to 21 feet bgs. Below the peat, an organic and silty clay, as well as a silt sand were observed at depths extending from 21 to 38 feet bgs.

2.1.2 Bothell Hertz

Information collected from soil borings at the Hertz Site indicate the Site generally contains a gravelly sand fill extending from approximately 5 to 13 feet bgs. The fill at the Site is likely associated with dredged spoils from the realignment of the Sammamish River in the 1960s (HWA, 2008). A small alluvial unit of silty sand was identified below the fill. Deposits and interbeds of peat were observed at depths extending from 15 to 21 feet bgs. The peat layer overlies an additional alluvial unit of stiff silt and clay.

2.1.3 Bothell Landing

Subsurface information collected from soil borings at the Site indicate the Site contains approximately 5 to 8 feet of a silty sand fill above a thick zone of alluvial deposits. Fill material placed at the Site is likely associated with dredged spoils from the realignment of the Sammamish River in the 1960s (HWA, 2008). The alluvium consists of primarily sand and silt that were observed containing interbeds of peat in zones extending below 10 feet bgs.

2.2 Hydrogeologic Setting

Groundwater conditions for each Site were based off information collected from previous subsurface investigations and from groundwater elevation measurements collected during quarterly groundwater sampling events. The depth of groundwater fluctuates seasonally and with distance from the Sammamish River. The general groundwater flow direction for each Site is generally south towards the Sammamish River. Groundwater conditions for each Site are summarized below.

2.2.1 Bothell Paint

Groundwater was encountered in a previous environmental investigation from approximately 2 to 9 feet bgs. Artesian conditions were encountered at the southwest portion of the Site (HWA, 2017a). Groundwater



measurements collected by Kane Environmental in 2019 were observed to extend from approximately 1.4 feet to 12.16 feet below the top of well casings throughout the Site (see Table 1).

2.2.2 Bothell Hertz

Groundwater was encountered in a previous environmental investigation from approximately 5 to 8 feet bgs (HWA, 2017b). Kane Environmental observed the depth to groundwater in monitoring wells during 2019 sampling events to be approximately 5.8 to 10.35 feet below the top of well casings throughout the Site (see Table 2).

2.2.3 Bothell Landing

Groundwater was encountered in a previous environmental investigation at approximately 3 to 9 feet bgs (HWA, 2018c). Depth to groundwater measurements collected throughout 2019 by Kane Environmental indicate that groundwater was situated approximately 5.02 to 9.60 feet below the top of well casings throughout the Site (see Table 3).



3.0 FIELD METHODOLOGY

3.1 Sampling Location

Groundwater monitoring and sampling activities were conducted by Kane Environmental at each Site between March 2019 and October 2019. Four quarters of groundwater monitoring were conducted at each Site in 2019 (March 2019, May 2019, July 2019, and October 2019). Compliance monitoring wells were previously selected for each Site in their respective Compliance Monitoring Plans from HWA, completed in 2018 (HWA, 2018a; HWA, 2018b; HWA, 2018d, respectively) Samples were collected from monitoring wells to assess potential impacts to groundwater following remedial activities at each Site.

Descriptions for sampling locations at the Bothell Paint, Bothell Hertz, and Bothell Landing Sites are discussed in detail below.

3.1.1 Bothell Paint Sampling Locations

The Bothell Paint Site contains five groundwater monitoring wells which are included in groundwater compliance monitoring: BPMW-2R, BPMW-6, BC-10, BC-11R, BPMW-1. Two of these wells (BPMW-2R and BC-11R) are replacement wells which were installed in November 2018 as close to their original locations as was feasible. Following two quarters of results below Site-specific cleanup levels (See Section 5.1), monitoring well BC-10 was removed from the list of compliance monitoring wells, and only four groundwater monitoring wells were sampled during the final two sampling events of the quarter. See Figure 3 for a depiction of the monitoring well locations.

In addition to four quarters of groundwater sampling, one surface water sampling event including three sampling locations within Horse Creek was conducted in March of 2019. Sample location S1 was located within the open channel portion of Horse Creek, just south of the culvert under SR 522. Sample S2 was located just north of the culvert under SR 522, and sample S3 was located approximately 160 feet north of the culvert under SR 522. See Figure 4 for a depiction of the sampling locations.

3.1.2 Bothell Hertz Sampling Locations

The Bothell Hertz site contains seven groundwater monitoring wells which are included in groundwater compliance monitoring: HZ-MW-1, HZ-MW-4, HZ-MW-12, HZ-MW-17, HZ-MW-19, BC-16, and BLMW-8R. One of these wells (BLMW-8R) is a replacement well which was installed in November 2018. See Figure 5 for a depiction of the monitoring well locations.

3.1.3 Bothell Landing Sampling Locations

The Bothell Landing site contains three groundwater monitoring wells which are included in groundwater compliance monitoring: MW-1, BL-MW-11, and BL-MW-12. See Figure 4 for a depiction of the monitoring well locations. See Figure 6 for a depiction of the monitoring well locations.



3.2 Monitoring Well Sampling Methods

Groundwater sample collection methodology was consistent between all three Sites. Prior to collecting groundwater samples, the depth to groundwater at each well was measured with a decontaminated electric water interface probe. Groundwater collected from the well was sampled using a peristaltic pump with new polyethylene tubing that was inserted and extended to at least 1-foot off the bottom of each well. Field parameters, including pH, temperature, conductivity, redox potential, and dissolved oxygen were recorded and allowed to stabilize for three consecutive readings prior to collecting each groundwater was placed into appropriate laboratory-supplied, pre-cleaned and preserved containers for analysis. Samples were labeled and placed into an ice-filled cooler. Groundwater samples were transported under standard chain-of-custody procedures to OnSite Environmental in Redmond, Washington, or Fremont Analytical in Seattle, Washington, both Ecology-accredited analytical laboratories.

Groundwater monitoring well sampling nomenclature identified each sample with the well identification number, followed by a "W". For example, sample "BC-16:W" was a groundwater sample collected from monitoring well BC-16.

3.3 Surface Water Sampling Methods

During the March 2019 sampling event, three surface water samples were collected from Horse Creek as a component of the Bothell Paint Site compliance monitoring. Unfiltered surface water samples were collected by directly placing the mouth of an appropriate laboratory-supplied, pre-cleaned container to a depth slightly below the surface of Horse Creek and allowing it to fill; laboratory-supplied containers which contained a preservative were filled by decanting from an unpreserved container. A new container was used at each sampling location.

Surface monitoring well sampling nomenclature identified each sample with the well identification number, followed by a "W". For example, sample "S-3:W" was a surface sample collected from location S-3.



4.0 ANALYTICAL METHODS

Following collection, groundwater or surface water samples were placed in a cooler and submitted to OnSite Environmental laboratory in Redmond, Washington or Fremont Analytical Laboratory in Seattle, WA.

4.1 Bothell Paint Analytical Methods

Groundwater samples collected from the Bothell Paint Site during 2019 were analyzed for the following:

- Diesel and Heavy-Oil Range Hydrocarbons by Method NWTPH-Dx/Dx Ext;
- Total and Dissolved Arsenic by EPA Method 200.8;
- Dissolved Manganese by EPA Method 200.8;
- Dissolved gases by RSK 175;
- Nitrate by EPA Method 353.2;
- Sulfate by Method ASTM D516-11; and,
- Total alkalinity by Method SM 2320B.

Surface water samples collected from Horse Creek during March of 2019 were analyzed for the following:

- Gasoline Range Hydrocarbons by Method NWTPH-Gx;
- Diesel and Heavy-Oil Range Hydrocarbons by Method NWTPH-Dx/Dx Ext; and,
- HVOCs by EPA Method 8260.

All analyses were performed in accordance with the analytical laboratories' in-house Quality Assurance/Quality Control Plans. Sample analyses were performed in compliance with EPA analytical methods and Ecology guidelines. Samples were analyzed within specified holding times. All detection limits were within method requirements and no factors appeared to adversely affect data quality.

4.2 Bothell Hertz Analytical Methods

Groundwater samples collected from the Bothell Hertz Site were analyzed for the following:

- Diesel and Heavy-Oil Range Hydrocarbons by Method NWTPH-Dx/Dx Ext;
- Total and Dissolved Arsenic by EPA Method 200.8;
- Dissolved Manganese by EPA Method 200.8;
- Dissolved gases by RSK 175;
- Nitrate by EPA Method 353.2;
- Sulfate by Method ASTM D516-11; and,



• Total alkalinity by Method SM 2320B.

All analyses were performed in accordance with the analytical laboratories' in-house Quality Assurance/Quality Control Plans. Sample analyses were performed in compliance with EPA analytical methods and Ecology guidelines. Samples were analyzed within specified holding times. All detection limits were within method requirements and no factors appeared to adversely affect data quality.

4.3 Bothell Landing Analytical Methods

Groundwater samples collected from the Bothell Landing Site were analyzed for the following:

- Diesel and Heavy-Oil Range Hydrocarbons, by Method NWTPH-Dx/Dx Ext; and,
- Total and Dissolved Arsenic by EPA Method 200.8.

Additionally, during the March 2019 sampling event, BL-MW-12 was also analyzed for:

• Select polyaromatic hydrocarbons (PAHs) by EPA Method 8270 (SIM).

All analyses were performed in accordance with the analytical laboratories' in-house Quality Assurance/Quality Control Plans. Sample analyses were performed in compliance with EPA analytical methods and Ecology guidelines. Samples were analyzed within specified holding times. All detection limits were within method requirements and no factors appeared to adversely affect data quality

4.4 Laboratory QA/QC Procedures

Internal test methods run by the laboratory to ensure data accuracy and reproducibility include method blanks, laboratory control standards, sample duplicates, matrix spikes, and matrix spike duplicates.



5.0 RESULTS

Detailed below is a summary of data from groundwater samples collected from the Bothell Paint, Bothell Hertz, and Bothell Landing Sites, as well as surface water analytical results collected from the Bothell Paint Site. The type of analysis performed at each well, along with contaminant concentrations have been described for each site. Additionally, laboratory analytical reports containing results for the groundwater samples discussed below are included in Attachment D. These results are also summarized in Table 1 through Table 4. Monitoring wells were sampled in the following months: March 2019, May 2019, July 2019, and October 2019.

5.1 Bothell Paint Analytical Results

Analytical results for the Bothell Paint Site from the 2019 sampling events are described below. See Tables 1 and 4 for the analytical results.

5.1.1 Petroleum

Three of the five monitoring wells sampled in 2019 were analyzed for diesel and heavy oil range petroleum hydrocarbons (BPMW-2R, BPMW-6, and BC-10). BP-MW-6 reported two quarters where heavy oil was detected at concentrations above the laboratory reporting limit, 500 micrograms per liter (ug/L) in May 2019 and 740 ug/L in October 2019. Both of these concentrations were at or above the Site-specific cleanup level (500 ug/L). Neither diesel or heavy oil were detected above the laboratory reporting limit at BPMW-6 in the March 2019 or July 2019 sampling events. At BPMW-2R, diesel and heavy oil range petroleum hydrocarbons were only detected above the laboratory reporting limit in the March 2019 sampling event, and at concentrations (122 ug/L and 219 ug/L, respectively) below the Site-specific cleanup level (500 ug/L). Neither diesel or heavy oil were detected above the laboratory reporting limit at BPMW-2R during the May 2019, July 2019, or October 2019 sampling events. Diesel and heavy oil were not detected above the laboratory reporting limit at BPMW-2R during the laboratory reporting limit at BC-10 during the March 2019 and May 2019 sampling events. Per the Compliance Monitoring Plan (HWA, 2018a), following these results, this location was removed from compliance monitoring.

5.1.2 Arsenic

Total and dissolved arsenic were analyzed for at four of the five compliance monitoring wells in 2019 (BPMW-6, BC-10, BC-11R, and BPMW-1). BPMW-1 reported detections of total and dissolved arsenic above the Site-specific cleanup level (10 ug/L) in all four quarters of 2019, with the exception of March 2019 when the dissolved fraction reported a concentration of 4.83 ug/L. Monitoring well BPMW-6 reported detections of total and dissolved arsenic in all four quarters of 2019. Two of these events, March 2019 and July 2019 contained concentrations of both total and dissolved arsenic above the Site-specific cleanup level. Arsenic was not detected above the laboratory reporting limit during any of the 2019 sampling events at BC-10 or BC-11R.



5.1.3 Surface Water

Three surface water samples were collected from Horse Creek during the March 2019 sampling event. No gasoline, diesel, or heavy oil range petroleum hydrocarbons were detected above the laboratory reporting limit in any of the samples analyzed. Additionally, no HVOCs were detected above the laboratory reporting limit in any of the samples analyzed

5.2 Bothell Hertz Analytical Results

Analytical results for the Bothell Hertz Site from the 2019 sampling events are described below. See Table 2 for the analytical results.

5.2.1 Petroleum

Three of the seven monitoring wells sampled in 2019 were analyzed for diesel and heavy oil range petroleum hydrocarbons (HZ-MW-19, BC-16, and BLMW-8R). HZ-MW-19 reported detections of diesel in three of the four quarters (March 2019, May 2019, and October 2019) at concentrations ranging between 210 ug/L to 410 ug/L, all below the Site-specific cleanup level (500 ug/L). Heavy oil was only detected above the laboratory reporting limit during the October 2019 sampling event at a concentration of 950 ug/L, above the Site-specific cleanup level. Diesel was not detected above the laboratory reporting limit in any of the samples collected from BC-16. Heavy oil was detected in three quarters (March 2019, May 2019, and July 2019) with July 2019 reporting a concentration of 540 ug/L, above the Site-specific cleanup level. Heavy oil was not detected above the laboratory reporting level. BLMW-8R reported detectable concentrations of diesel in the May 2019 and July 2019 sampling events at concentrations of 400 ug/L and 470 ug/L, respectively, both below the Site-specific cleanup level (500 ug/L). Heavy oil was detected in all four quarters at concentrations ranging between 234 ug/L to 1,000 ug/L, with the May 2019, July 2019, and October 2019 sampling events reporting concentrations greater than the Site-specific cleanup level (500 ug/L).

5.2.2 Arsenic

Analysis for total and dissolved arsenic was conducted at each well at the Bothell Hertz site. Monitoring wells HZ-MW-1, HZ-MW-4, HZ-MW-17, HZ-MW-19, and BC-16 did not report any detections of total or dissolved arsenic with the exception of BC-16 in March 2019, when the total fraction of arsenic was detected at a concentration of 2.56 ug/L, well below the Site-specific cleanup level of 10 ug/L. HZ-MW-12 reported detectable concentrations of total and dissolved arsenic in all four quarters except for March 2019, when only the total fraction of arsenic was detected above the laboratory reporting limit. Concentrations ranged between 2.89 ug/L to 4.60 ug/L, all below the Site-specific cleanup level. BLMW-8R reported detectable concentrations of total and dissolved arsenic during the May 2019, July 2019, and October 2019. Only the October 2019 sampling event contained concentrations of total and dissolved arsenic (27 ug/L and 16 ug/L, respectively) in exceedance of the Site-specific cleanup level.



5.3 Bothell Landing Analytical Results

Analytical results for the Bothell Landing Site from the 2019 sampling events are described below. See Table 3 for the analytical results.

5.3.1 Petroleum

All three compliance monitoring wells on the Site were analyzed for diesel and heavy oil range petroleum hydrocarbons during sampling in 2019. Diesel was not detected above the laboratory reporting limit in any of the samples analyzed during the four quarters of 2019. MW-1 contained one quarter (July 2019) in which heavy oil was detected at a concentration above the laboratory reporting limit (470 ug/L) but at a concentration below the Site-specific cleanup level (500 ug/L). BL-MW-11 reported detectable concentrations of heavy oil in three of the four sampling events of 2019 with concentrations ranging between 159 ug/L to 510 ug/L. Only May 2019 contained a concentration of heavy oil above the Site-specific cleanup level. BL-MW-12 reported detectable concentrations of heavy oil during two sampling events (March 2019 and July 2019), with only July 2019 containing a concentration of heavy oil (790 ug/L) in exceedance of the Site-specific cleanup level.

5.3.2 Arsenic

Total and dissolved arsenic analysis was performed at each well at the Bothell Landing Site. MW-1 did not report any detections of total or dissolved arsenic above the laboratory reporting limit in any of the samples analyzed in 2019. BL-MW-11 reported detections of total and dissolved arsenic in all four quarters of 2019. Only July 2019 and October 2019 contained concentrations of total and dissolved arsenic, ranging between 21 ug/l to 30 ug/L, all above the Site-specific cleanup level (10 ug/L). BL-MW-12 reported detectable concentrations of total and dissolved arsenic in two of the four quarters of 2019 sampling (March 2019 and July 2019). In March of 2019 only the concentration of total arsenic (17.7 ug/L) was above the Site-specific cleanup level, while the dissolved fraction reported a concentration of 3.6 ug/L. In July of 2019 both the total and dissolved fractions of arsenic reported concentrations (16 ug/L and 14 ug/L, respectively) in exceedance of the Site-specific cleanup level.

5.3.2 PAHs

During the March 2019 sampling event, the sample collected from BL-MW-12 was also analyzed for select PAHs including naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene. No analytes were detected above the laboratory reporting limit in the sample analyzed.



6.0 DISCUSSION

The Bothell Paint Site contains five wells which were sampled during 2019 for compliance monitoring. Site COCs in groundwater are diesel and heavy oil range petroleum hydrocarbons and arsenic. Heavy oil was only detected at concentrations above the Site-specific cleanup level in one well located on the Site, BPMW-6. Heavy oil concentrations at this well have fluctuated between non-detect to just above the Site-specific cleanup level. Arsenic was detected in groundwater at concentrations above the Site-specific cleanup level in two of the five compliance monitoring wells, BPMW-6 and BPMW-1. Similar to heavy oil, arsenic concentrations at BPMW-6 have fluctuated between above and below the Site-specific cleanup level for both the total and dissolved fractions. BPMW-1 has reported exceedances of arsenic in groundwater during every monitoring event of 2019. Concentrations at this well have also fluctuated throughout 2019 and do not appear to follow a specific trend. Based on these results, heavy oil and arsenic contaminated groundwater remains on Site and appears to be concentrated in the central portion of the Site. Kane Environmental will continue compliance monitoring at the Site until eight quarters of monitoring have been completed.

The Bothell Hertz Site contains seven monitoring which were sampled during 2019 for compliance monitoring. Site COCs in groundwater are diesel and heavy oil range petroleum hydrocarbons and arsenic. Three monitoring wells contained at least one sampling event where heavy oil was detected at a concentration greater than the Site-specific cleanup level. Two of these locations, HZ-MW-19 and BC-16 only reported one exceedance of heavy oil. Samples collected from BLMW-8R reported exceedances of heavy oil in groundwater during the final three quarters of the year. The concentrations of heavy oil in groundwater on the Site do not appear to follow any specific trend. Arsenic was detected at a concentration greater than the Site-specific cleanup level in only one sampling event at one well throughout the entire Site, BLMW-8R during October 2019. Based on these results, it appears as though heavy oil contamination in groundwater remains on Site and is primarily concentrated near BLMW-8R, with sporadic exceedances located in the western and southern portions of the Site. Arsenic contaminated groundwater may also exist in the proximity of BLMW-8R. Kane Environmental will continue compliance monitoring at the Site until eight quarters of monitoring have been completed.

The Bothell Landing Site contains three monitoring wells which were sampled during 2019 for compliance monitoring. Site COCs in groundwater are diesel and heavy oil range petroleum hydrocarbons and arsenic. During the four quarters of sampling only two exceedances of heavy oil were detected in groundwater on the Site. BL-MW-11 reported a heavy oil concentration of 510 ug/L in May of 2019 and BL-MW-12 reported a concentration of 790 ug/L in July of 2019, both just above the Site-specific cleanup level (500 ug/L). Arsenic was detected at concentrations greater than the Site-specific cleanup level at BL-MW-11 during July 2019 and October 2019, and at BL-MW-12 during the March 2019 and July 2019 sampling events. Based on these results it appears as though arsenic and low-level heavy oil contaminated groundwater is

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sporadically located in the southern portion of the Site, south of SR 522. Kane Environmental will continue compliance monitoring at the Site until eight quarters of monitoring have been completed.



7.0 LIMITATIONS

Kane Environmental has performed this work in general accordance with generally accepted professional practices using the standard of the industry today, for the nature and conditions of the work completed in the same locality and at the same time as the work was performed, and with the terms and conditions as set forth in our proposal.

Kane Environmental shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time the report was prepared. Facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time the work was performed. This Annual Groundwater Compliance Monitoring Report does not include other services not specifically described in the scope of work in Section 1.2 of this report. Conclusions were made within the operative constraints of the scope of work, budget, and schedule for this project.

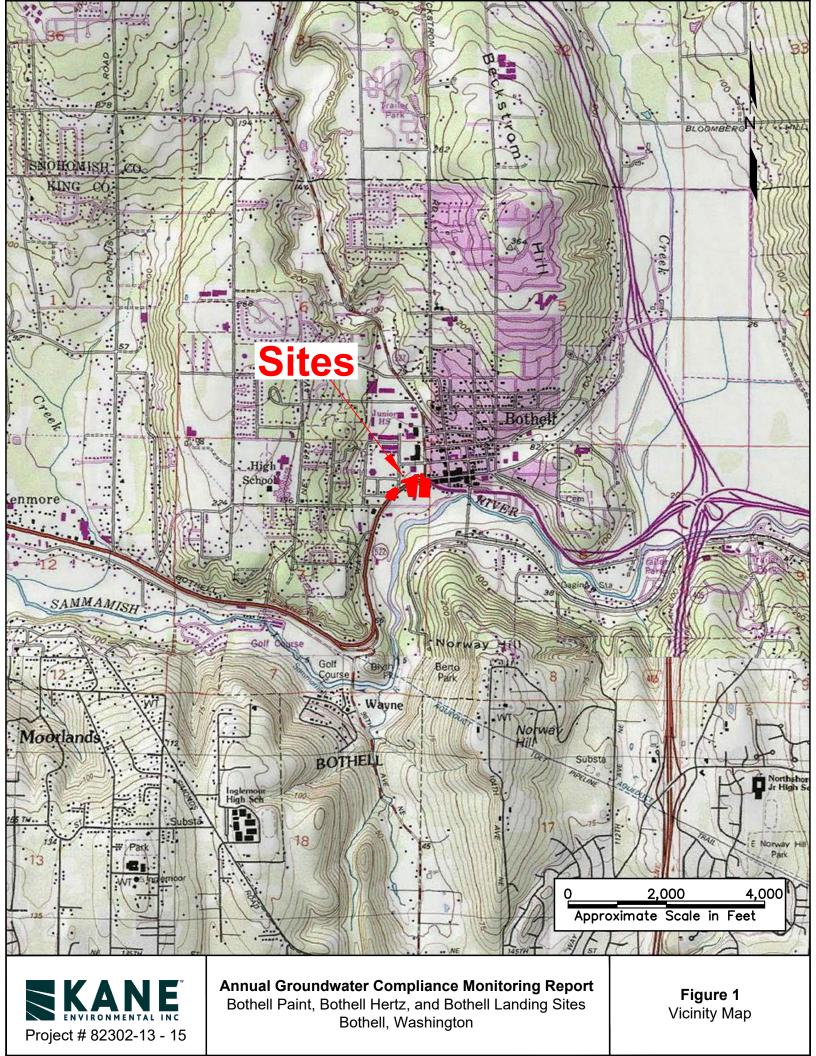
Our assessment of the property may change as new data become available, either from persons familiar with the site or during additional site studies, exploration or sampling. This report is intended for the exclusive use of the City of Bothell, and its designated assignees, for specific application to the referenced property. It is not meant to represent a legal opinion. No other warranty, express or implied, is made.

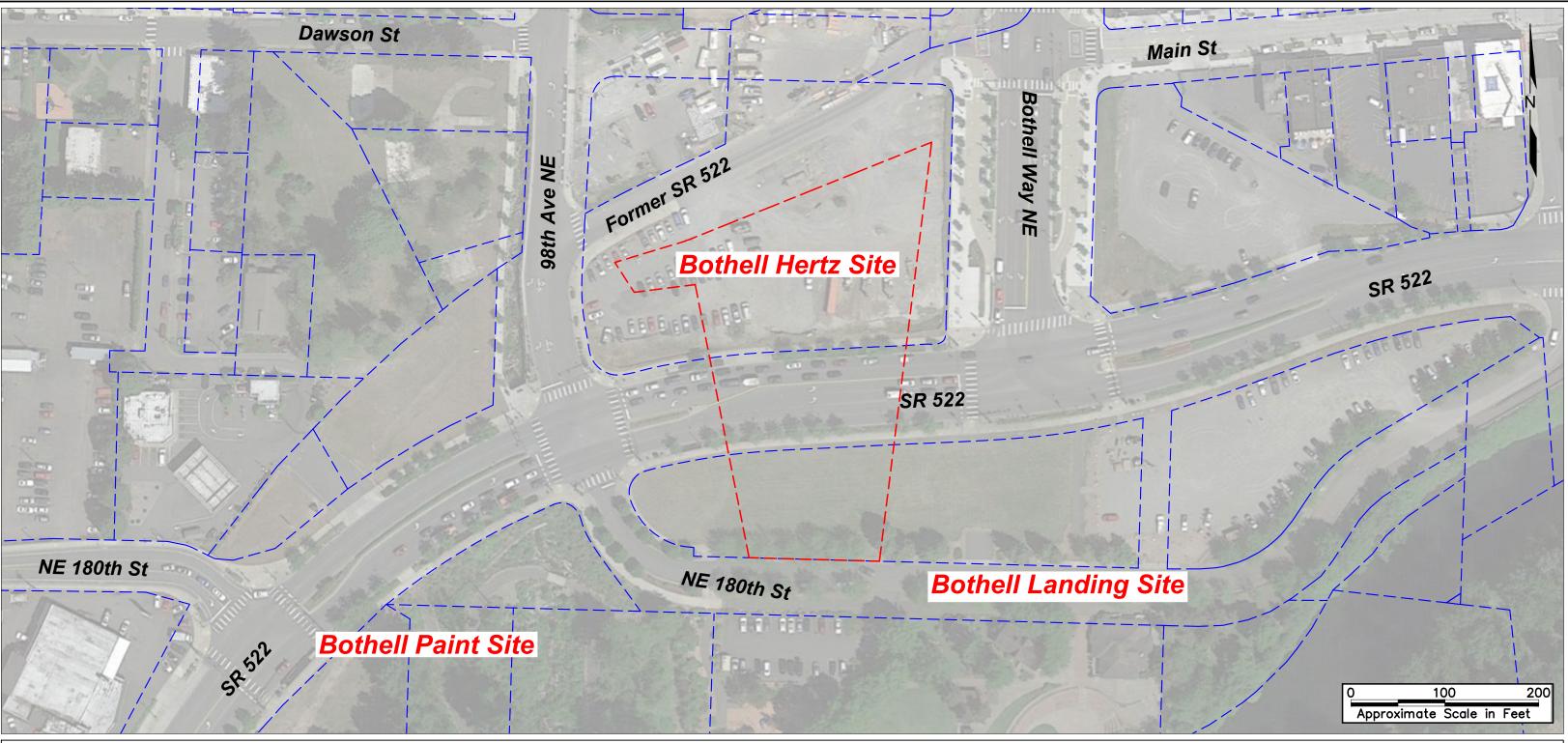


8.0 **REFERENCES**

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- HWA Geosciences, Inc., August 10, 2017 (HWA 2017b). Draft Final Remedial Investigation / Feasibility Study, Bothell Former Hertz Facility, Bothell, Washington. Prepared for City of Bothell.
- HWA Geosciences, Inc., January 2, 2018 (HWA, 2018a). *Compliance Ground Water Monitoring Plan, Bothell Paint and Decorating Site, Bothell, Washington*. Prepared for City of Bothell.
- HWA Geosciences, Inc., January 2, 2018 (HWA, 2018b). *Compliance Ground Water Monitoring Plan, Bothell Former Hertz Facility, Bothell, Washington.* Prepared for City of Bothell.
- HWA Geosciences, Inc., May 24, 2018 (HWA 2018c). *Final Remedial Investigation / Feasibility Study, Bothell Landing Site, Bothell, Washington.* Prepared for City of Bothell.
- HWA Geosciences, Inc., June 5, 2018 (HWA, 2018d). *Compliance Ground Water Monitoring Plan, Bothell Landing Site, Bothell, Washington*. Prepared for City of Bothell.
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- Washington State Department of Ecology, May 29, 2018 (Ecology 2018b). *Final Cleanup Action Plan, Bothell Paint and Decorating Site, Bothell, Washington.*
- Washington State Department of Ecology, May 29, 2018 (Ecology 2018c). *Final Cleanup Action Plan, Bothell Former Hertz Facility, Bothell, Washington.*

FIGURES



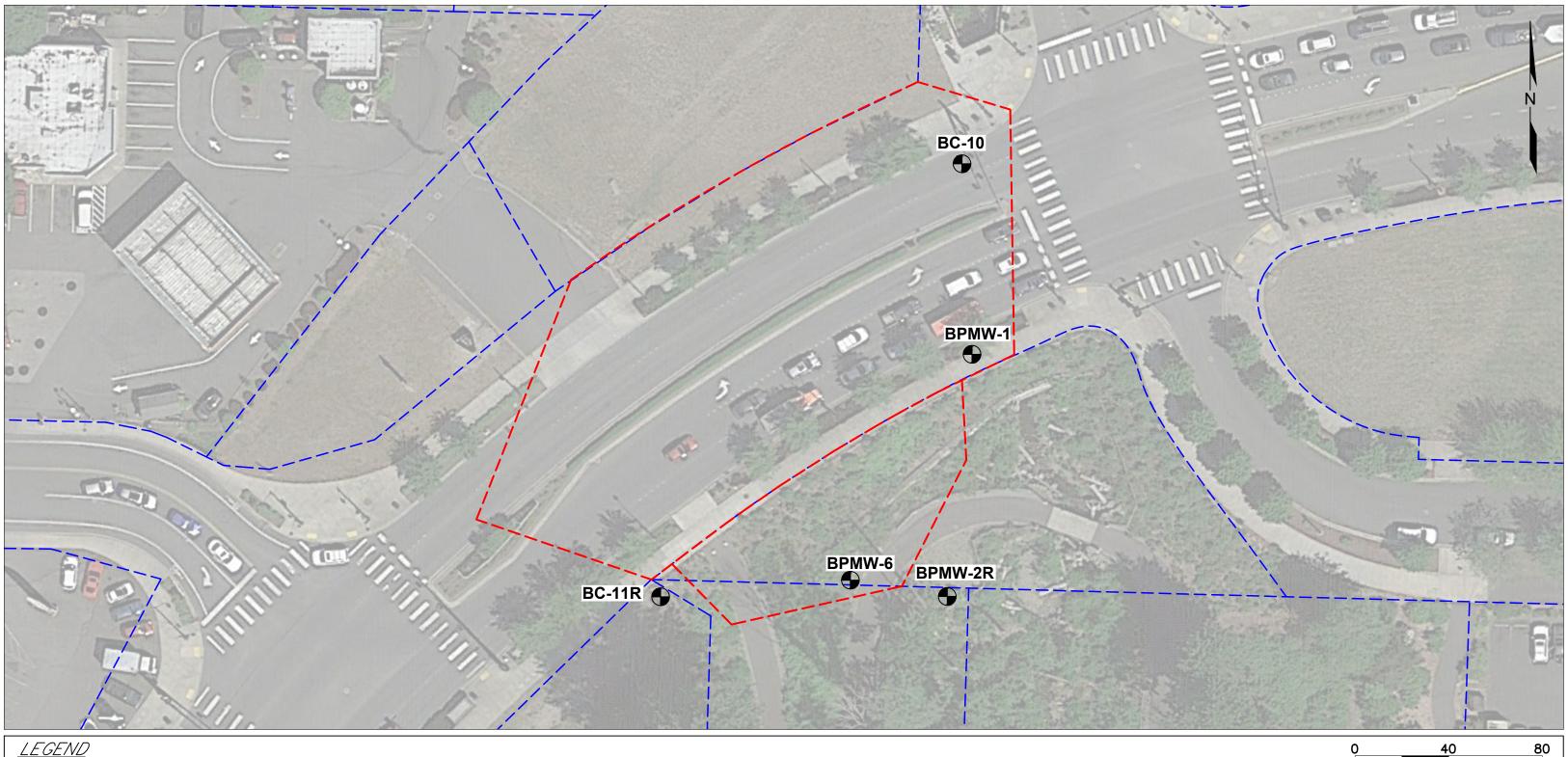


<u>LEGEND</u>

- --- Approximate Location of King County parcel boundary
- — Approximate Location of Institutional Control Area



Figure 2 Area Site Plan



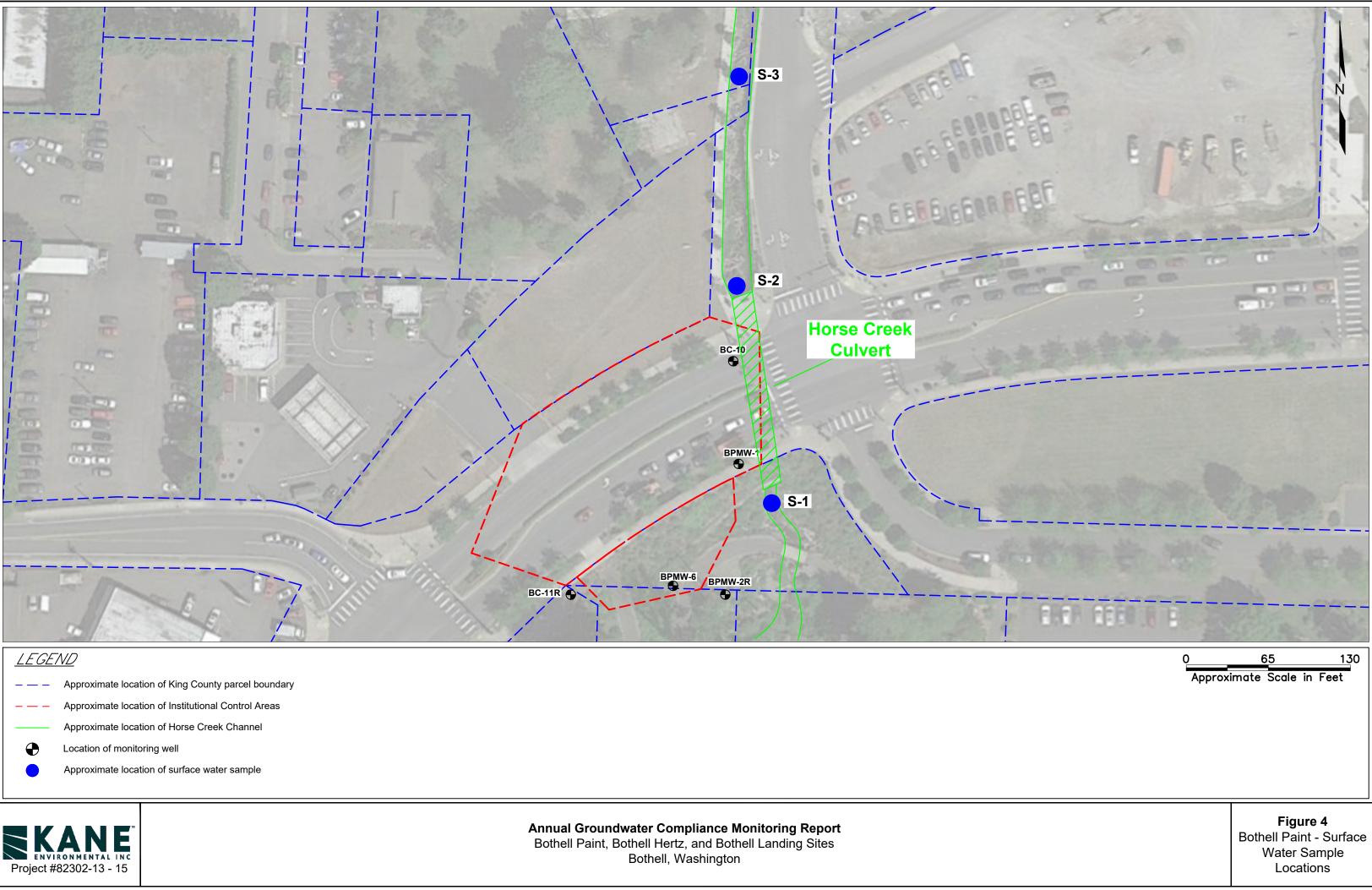
<u>LEGEND</u>

- Approximate location of King County parcel boundary
- Approximate location of Institutional Control Areas
- $\mathbf{\mathbf{O}}$ Location of monitoring well

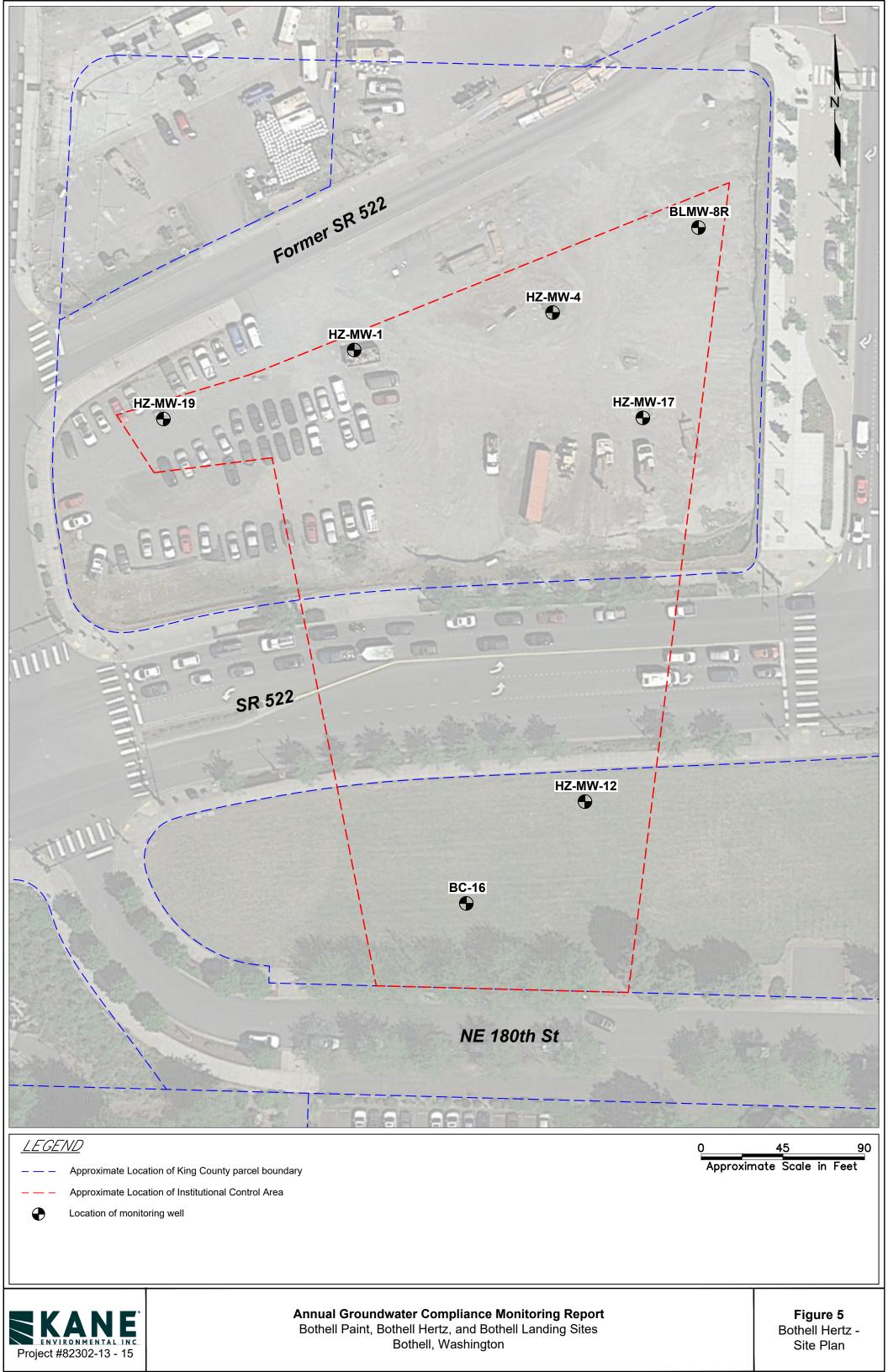


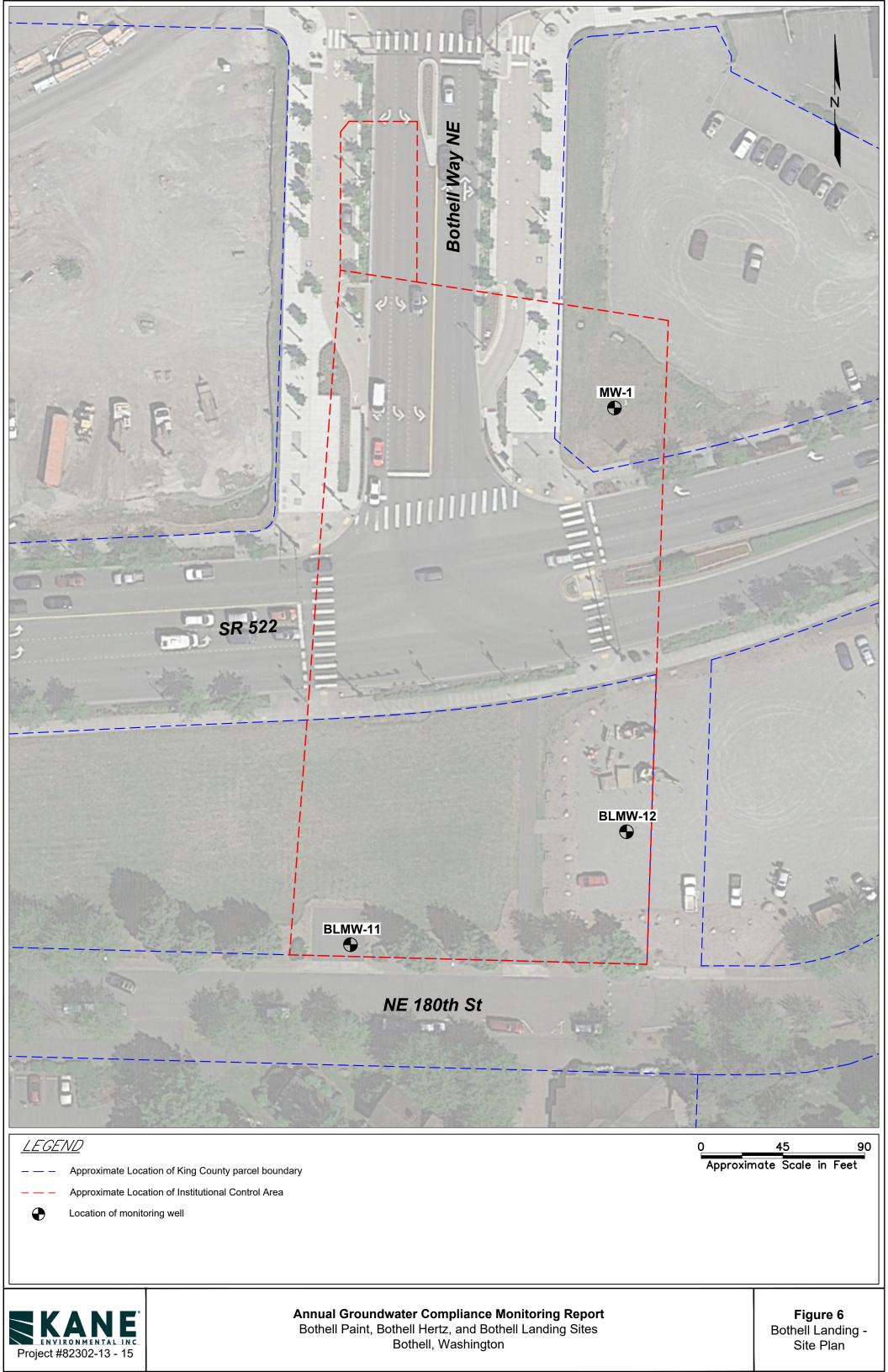
Approximate Scale in Feet

Figure 3 Bothell Paint - Site Plan











TABLES

Table 1 2019 - Compliance Groundwater Sampling . Bothell Paint Site Bothell, Washington

Semple ID	Sample Date	Approximate Depth to Goundwater, to	Dieser Range	Heavy Oil Rance	^T otal ¹⁰⁰ O'ganics	Dissolved	Totay	Dissolved	Total Dissolved	Total	Dissolved	Talai	Dissolved	Dissorted han	Semi-Volatile O'Ganis Compounde O'Ganis	Volatile Oganic Compours	Methane	Witrate las Mirro	Sulfate	Ferrous Iran	Total Athalinity C.	DH CaCo3	Dissolved Oxygen	Oxidation Reduce:	^{cuon Polentia} Conductivity	
		Feet Below Ground Surface	ug/L	ug/L		enic g/L	Cadr ug		Chromium ug/L		ead g/L		cury g/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	mV	uS/cm	
	0/7/0040			040		-	5	/L			-	u	-				0.054	-0.400	1.07	0.5	447	7.47	0.40	04.7	0.40	4
	3/7/2019	5.5*	122 ^b	219	-	-	-	-		-	-	-	-	94	-	-	0.651	<0.100	1.87	0.5	117	7.47	0.19	-64.7	240	4
BPMW-2R:W	5/20/2019 7/18/2019	7.98* 8.46*	<260 <260	<420 <420	-	-	-	-		-	-	-	-	60 92	-	-	0.66	0.055	<5.0 <5.0	0.5	110 110	7.25 7.14	0.26	-120.9 38.9	235 258.7	4
	10/10/2019	8.50*	<260	<420	-	-	-	-		-	-	-	-	92 120	-	-	0.9	<0.050	<5.0 <5.0	0.5	110	7.14	0.07	-78.5	256.7	4
	3/7/2019	2.25	<50.3	<101	- 14.7	13.8		-			-	-	-	27.7	-	-	2.25		< <u>5.0</u> 5.18	0.5	25.7	5.68	0.32	98.9	159.2	4
	5/20/2019	1.4	<270	500	9.3	8.4	-	-		-	-	-	-	21.1	-	-	1.8	10 ^e 25	<5.0	0.5	44.0	5.87	0.32	32.8	359.6	1
BPMW-6:W	7/18/2019	3.14	<300	<490	44.0	38.0	-	-		-		-	-	130	-	-	5.9	<0.050	<5.0	1.5	120.0	6.06	0.44	109.9	382.4	
	10/10/2019	2.71	<290	740	9.1	5.8	-	-		-	-	-	-	190	-	-	4.4	<u><0.030</u> 9.1	<5.0	1.0	120.0	6.2	0.07	99.5	364	
	3/15/2019	9.42	<50.3	<101	<1.75		-	-		-	_	-	-	194			0.0872	<0.10	6.22	3.0	167	6.62	0.23	-1	351	
BC-10:W	5/23/2019	10.9	<260	<410	<3.3	<3.0	_	-		_	-	-	-	150	-		0.23	<0.050	6	4.0	160	6.27	0.28	-149	348.8	
	3/7/2019	10.06	-		<1.75		-	-		-	-	-	-	-	-	-	-	-	-	2.0	-	6.44	0.26	-4.8	467.4	1
	5/20/2019	11.06	-	-	<3.3	<3.0	-	-		-	-	-	-	-	-	-	-	-	-	4.0	-	6.22	0.33	-45.7	461.9	1
BC-11R	7/18/2019	11.87	-	-	<3.3	<3.0	-	-		-	-	-	-	-	-	-	-	-	-	2.5	-	6.13	0.07	50	509.6	
	10/10/2019	11.7	-	-	<3.3	<3.0	-	-		-	-	-	-	-	-	-	-	-	-	1.0	-	6.51	0.01	-20.8	482.9	
	3/7/2019	12.56	-	-	12.9	4.83	-	-		-	-	-	-	-	-	-	-	-	-	2.5	-	6.52	0.24	0.4	515.6	1
BPMW-1	5/23/2019	12.35	-	-	22.0	11.0	-	-		-	-	-	-	-	-	-	-	-	-	3.0	-	6.21	0.37	-162.7	514.9	1
BLIMA-1	7/19/2019	12.42	-	-	14.0	12.0	-	-		-	-	-	-	-	-	-	-	-	-	2.5	-	6.56	0.08	-23.3	535.6	1
	10/10/2019	12.16	-	-	17.0	15.0	-	-		-	-	-	-	-	-	-	-	-	-	2.0	-	6.62	0	-43.9	509	
Site Spe	Site Specific Cleanup Level + 500 5		500	1	10																				1	
MTCA Method A	A or Method B (Cleanup Level^	500	500	5	5.0	5.	0	50	1	15	2	.0	(2,240)	Varies#	Varies#	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	

Notes:

All results reported in ug/L (micrograms per liter), or mg/L (milligrams per liter)

ug/L = micrograms per liter [equivalent to parts per billion (ppb)]

mg/L = milligrams per liter [equivalent to parts per million (ppp)] Bold concentrations are detectable concentrations, below their Site Specific Cleanup Level (if available). Shaded and Bold concentrations are detectable concentrations, exceeding their Site Specific Cleanup Level

nd = No analytes detected above the laboratory reporting limit. See laboratory analytical report for full list of results # = Various cleanup levels for multiple analytes. See laboratory analytical report for full list of analytes

* = Well is angled at approximately 47 degree angle
 b = Identified as Diesel Range Organics, indicating the presence of unresolved compounds eluting from dodecane through tetracosane (~C12-C24).
 SR = Minor detections of other VOCs or SVOCs, at concentrations below state cleanup levels. See analytical report for specific detections.

- = Not analyzed

^ = MTCA Method B Cleanup Level in parentheses

+ = Site specific cleanup level as established in Cleanup Action Plan dated May 29, 2018

Table 2 2019 - Compliance Groundwater Sampling . Bothell Hertz Site Bothell, Washington

Sample ID	Samulo Date	oy ^y log ^g log	Diesel Range	Heavy Oil As.	⁷ ota/	Dissolved period	/ ^{ej} lo ₂ Cadmium	, ^{/ej} o ₂ / Chro	Dissolved	reologia/	p Dissolved	Volar Dissonied Mercury	Dissolved No.	Semi Volatije Compounds Oganis	Volatile Og	Methan	Mitale las Mirro	Sulfate	Ferrous hon	Total Alkalinin,	PH THE CACOS	Dissolved One	Oxidation	Conductivity
		Ground Surface	ug/L	ug/L	u	g/L	ug/L	ц	g/L	ug	ŋ/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	mV	uS/cm
	9/5/2019	6.5	-	-	<1.75	<1.75		-	-	-	-		-	-	-	-	-	-	0.0	-	6.18	5.59	152.5	149.3
HZ-MW-1:W	5/21/2019	6.81	-	-	<3.3	<3.0		-	-	-	-		-	-	-	-	-	-	0.0	-	5.99	7	66.7	159.6
112-10100-1.00	7/16/2019	7.2	-	-	<3.0	<3.0		-	-	-	-		-	-	-	-	-	-	0.0	-	6.23	7.98	158.3	203.4
	10/16/2019	7.45	-	-	<3.3	<3.0		-	-	-	-		-	-	-	-	-	-	0.0	-	6.4	3.56	148.7	200.1
	3/5/2019	5.8	-	-	<1.75	<1.75		-	-	-	-		-	-	-	-	-	-	0.0	-	6.27	0.24	133.6	486.1
HZ-MW-4:W	5/21/2019	6.37	-	-	<3.3	<3.0		-	-	-	-		-	-	-	-	-	-	0.5	-	6.1	0.35	26.2	426.1
112-10100-4.00	7/16/2019	7.2	-	-	<3.0	<3.0		-	-	-	-		-	-	-	-	-	-	0.0	-	6.05	4.65	114.6	396
	10/11/2019	7.13	-	-	<3.3	<3.0		-	-	-	-		-	-	-	-	-	-	0.0	-	6.37	1.88	100.1	353.8
	3/6/2019	8.33	-	-	2.89	<1.75		-	-	-	-		-	-	-	-	-	-	1.0	-	6.37	0.59	-66.9	1,063
HZ-MW-12:W	5/22/2019	9.46	-	-	4.20	3.20		-	-	-	-		-	-	-	-	-	-	5.0	-	6.01	0.26	-115.3	1,151
	7/19/2019	10.35	-	-	4.60	3.90		-	-	-	-		-	-	-	-	-	-	1.5	-	6.14	0.09	9.7	1,220
	10/9/2019	10.7	-	-	4.40	3.80		-	-	-	-		-	-	-	-	-	-	2.0	-	6.38	0.03	-39.3	1,133
	3/5/2019	7.1	-	-	<1.75	<1.75		-	-	-	-		-	-	-	-	-	-	3.5	-	6.76	0.13	-24.9	269.6
HZ-MW-17:W	5/23/2019	7.08	-	-	<3.3	<3.0		-	-	-	-		-	-	-	-	-	-	1.5	-	6.31	1.02	-79.6	304
	7/17/2019	7.63	-	-	<3.0	<3.0		-	-	-	-		-	-	-	-	-	-	2.0	-	6.65	0.07	-12.1	8.44
	10/11/2019	7.7	-	-	<3.3	<3.0		-	-	-	-		-	-	-	-	-	-	0.5	-	6.98	0.73	41.4	340.5
	3/5/2019	6.00	210 ^b	<98.5	-	-		-	-	-	-		136	-	-	0.0332	0.414 ^H	8.98	2.0	162	5.94	0.33	77.7	221.1
HZ-MW-19:W	5/21/2019	6.25	410	<420	<3.3	<3.0		-	-	-	-		720	-	-	0.11	0.14	17	4.0	180	5.87	0.31	-11	330.9
	7/16/2019	7.1	<260	<420	<3.0	<3.0		-	-	-	-		850	-	-	0.035	< 0.050	44	2.0	210	6.09	0.12	45.9	520.9
	10/16/2019	6.8	340	950	<3.3	<3.0		-	-	-	-		840	-	-	0.018	< 0.050	48	1.5	190	6.33	0.04	15.9	486.5
	3/6/2019	3.78	<50.4	179	2.56	<1.75		-	-	-	-		3,760	-	-	3.44	0.31	270	3.0	371	6.37	0.44	-31	1,118
BC-16:W	5/22/2019	5.89	<260	450	<3.3	<3.0		-	-	-	-		4,600	-	-	2.1	0.27	260	4.5	510	6.09	0.35	-114.1	1,292
	7/19/2019	7.63	<260	540	<3.3	<3.0		-	-	-	-		4,800	-	-	8.9	< 0.050	160	2.0	560	6.15	0.84	39.7	1,347
	10/11/2019	8.32	<270	<440	<3.3	<3.0		-	-	-	-		3,900	-	-	6	< 0.050	61	1.0	520	6.36	0.32	-35.3	1,150
	3/6/2019	7.72	<49.5	234	-	-		-	-	-	-		3,480	-	-	4.26	<0.100	1.7	2.5	348	6.74	0.31	-64.4	669.8
BLMW-8R:W	5/21/2019	7.91	400	720	7.10	5.60		-	-	-	-		2,400	-	-	2.90	0.14	<5.0	3.0	310	6.46	0.27	-101.8	602.6
	7/17/2019	8.34 8.34	470	1,000	8.10	6.50		-	-	-	-		2,700	-	-	3.30	<0.050	<5.0	2.0	340	6.36	0.06	-27.4	746
Site One	10/11/2019		<270	720	27	16		-	-	-	-		2,600	-	-	1.9	<0.050	<5.0	1.5	370	6.97	0.07	-90.5	776
-	ecific Cleanup I		500	500		10	5.0	+ .	-0		F	2.0	(0.0.40)	Martall	Maximul	<i>u</i> /-	··· /-	··· /-						
MTCA Method A	or Method B	Jieanup Levein	500	500	5	5.0	5.0		50	1	5	2.0	(2,240)	Varies#	Varies#	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Notes:

All results reported in ug/L (micrograms per liter), or mg/L (milligrams per liter) ug/L = micrograms per liter [equivalent to parts per billion (ppb)]

mg/L = milligrams per liter [equivalent to parts per million (ppm)]

Bold concentrations are detectable concentrations, below their Site Specific Cleanup Level (if available). Shaded and Bold concentrations are detectable concentrations, exceeding their Site Specific Cleanup Level

nd = No analytes detected above the laboratory reporting limit. See laboratory analytical report for full list of results

= Various cleanup levels for multiple analytes. See laboratory analytical report for full list of analytes

b = Identified as Diesel Range Organics, indicating the presence of unresolved compounds eluting from dodecane through tetracosane (~C12-C24).

H = Holding times for preparation or analysis exceeded **SR** = Minor detections of other VOCs or SVOCs, at concentrations below state cleanup levels. See analytical report for specific detections.

- = Not analyzed

A = MTCA Method B Cleanup Level in parentheses
 + = Site specific cleanup level as established in Cleanup Action Plan dated May 29, 2018

Table 3 Compliance Groundwater Sampling Bothell Landing Site Bothell, Washington

Sample ID	Semple Date	Approvinate Depth to Groumotrater	Diesel Range	Heavy Oil Ra.	Totay	Dissolved	^T ota,	Dissoured	^T ota/ Dissolve	^T ot _{ial}	Dissolved	Total	Dissolved	Naphthalene	T-Moethymaphie	2-Methylhaphi.	Other Semi-Volatile Compound	Other Volatile Otons	Ferrous Iron	ht	Dissolved Organ	Oxidation Reduction Potemics	Conductivity	
		Feet Below	ug/L	ug/L	Ars		Cadi		Chromium		ead	Merc	,	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L		mg/L	mV	uS/cm	
		Ground Surface	ug/	ug/L	ug	ı/L	ug	ŋ/L	ug/L	L	g/L	ug	/L	ug/L	ug/L	ug/L	ug/L	49/L	ing/E		ing/L		40/0111	
	3/11/2019	5.85	<52.8	<106	<1.75	<1.75	-	-		-	-	-	-	-	-	-	-	-	2.0	6.37	0.32	33.3	428.1	
MW-1:W	5/24/2019	6.38	<260	<420	<3.3	<3.0	-	-		-	-	-	-	-	-	-	-	I	2.0	6.05	0.39	-77.3	488.9	
10100-1.00	7/17/2019	7.05	<260	470	<3.3	<3.0	-	-		-	-	-	-	-	-	-	-	-	3.0	6.26	0.19	5.9	586	
	10/8/2019	6.72	<250	<400	<3.3	<3.0	-	-		-	-	-	-	-	-	-	-	-	2.0	6.49	0.04	-8.8	512	
	3/6/2019	5.02	<50.5	159	6.97	3.58	-	-		-	-	-	-	-	-	-	-	-	1.5	6.56	0.27	-49.1	388.8	
BL-MW-11:W	5/22/2019	8.31	<260	510	7.9	7.6	-	-		-	-	-	-	-	-	-	-	-	2.5	6.17	0.25	-82.2	404.7	
	7/19/2019	9.44	<260	<420	27	21	-	-		-	-	-	-	-	-	-	-	-	2.0	6.33	0.06	-28.9	589.6	
	10/9/2019	9.44	<260	450	30	24	-	-		-	-	-	-	-	-	-	-	-	1.5	6.59	0.14	-100.5	601	
	3/11/2019	7.75	<53.1	114	17.7	3.6	-	-		-	-	-	-	<0.100	<0.100	<0.100	-	-	2.5	6.02	0.27	52.2	207.5	
BL-MW-12:W	5/22/2019	8.25	<260	<420	<3.3	<3.0	-	-		-	-	-	-	-	-	-	-	-	2.5	5.39	0.49	85.8	70.2	
	7/22/2019	9.52	<260	790	16.0	14.0	-	-		-	-	-	-	-	-	-	-	1	2.0	5.91	0.04	84.8	500.3	
	10/9/2019	9.6	<250	<400	<3.3	<3.0	-	-		-	-	-	-	-	-	-	-	-	0	5.83	0.13	171.4	66.3	
Site Spe	ecific Cleanup L	.evel +	500	500	1	0																		
MTCA Method A	or Method B C	Cleanup Level^	500	500	5	0	5	.0	50		15	2.	0	160	(1.51)	32	Varies#	Varies#	n/a	n/a	n/a	n/a	n/a	

Notes:

All results reported in ug/L (micrograms per liter), or mg/L (milligrams per liter)

ug/L = micrograms per liter [equivalent to parts per billion (ppb)] mg/L = milligrams per liter [equivalent to parts per million (ppm)]

Bold concentrations are detectable concentrations, below their Site Specific Cleanup Level (if available).

Shaded and Bold concentrations are detectable concentrations, exceeding their Site Specific Cleanup Level

nd = No analytes detected above the laboratory reporting limit. See laboratory analytical report for full list of results

= Various cleanup levels for multiple analytes. See laboratory analytical report for full list of analytes

b = Identified as Diesel Range Organics, indicating the presence of unresolved compounds eluting from dodecane through tetracosane (~C12-C24).

SR = Minor detections of other VOCs or SVOCs, at concentrations below state cleanup levels. See analytical report for specific detections.

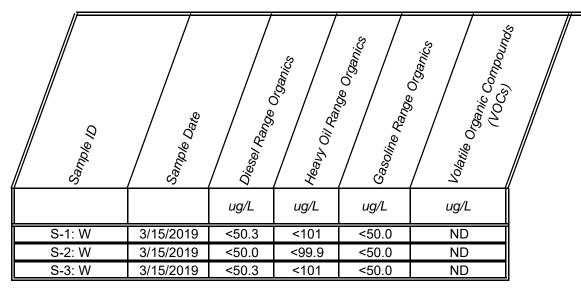
- = Not analyzed

^ = MTCA Method B Cleanup Level in parentheses

* - Result from analysis by EPA Method 8260. Concentration of 160 ug/L reported from analysis by EPA Method 8270

+ = Site specific cleanup level as established in Cleanup Action Plan dated May 24, 2018

Table 42019 - Compliance Surface Water SamplingBothell Paint SiteBothell, Washington



Notes:

All results reported in ug/L (micrograms per liter), or mg/L (milligrams per liter)

ug/L = micrograms per liter [equivalent to parts per billion (ppb)]

mg/L = milligrams per liter [equivalent to parts per million (ppm)]

ND = No analytes detected above the laboratory reporting limit. See laboratory analytical report for full list of results



ATTACHMENT A AGREED ORDER SCHEDULE OF DELIVERABLES FOR BOTHELL PAINT, BOTHELL HERTZ, BOTHELL LANDING

EXHIBIT D

Bothell Paint & Decorating Facility Schedule of Deliverables

<u>Deliverables.</u>	Due Date							
Draft Institutional Control (IC) Plan; Draft Environmental Covenant(s); and a Title Report	Within 120 days after the effective date of the Agreed Order							
Final IC Plan and Final Environmental Covenant(s)	Within 30 days of receipt of Ecology comments on the Draft IC Plan and Draft Environmental Covenant(s).							
Record Final Environmental Covenant(s) with King County Auditor	Within 5 days after Ecology's approval of the Final IC Plan or Ecology's signature as grantee of the Final Environmental Covenant(s), whichever occurs last.							
Start ground water monitoring	Within 90 days after final CAP is approved							
Combined TPH/MNA/Arsenic ground water monitoring	Quarterly for two years, then modify based on results and consultation with Ecology							
	Duration: 5 years unless a different action is triggered by the decision tree shown in table 1 of the dCAP							
Combined TPH/MNA/Arsenic ground water	90 days after 4 th quarter sampling							
monitoring reports	Annually for a minimum of 5 years unless a different action is triggered by the decision tree shown in table 1 of the dCAP							
Progress reports	Every 3 months unless Ecology authorizes less frequent reporting							

EXHIBIT D

Bothell Former Hertz Facility Schedule of Deliverables

Deliverables.	<u>Due Date</u>								
Draft Institutional Control (IC) Plan; Draft Environmental Covenant(s); and a Title Report	Within 120 days after the effective date of the Agreed Order								
Final IC Plan and Final Environmental Covenant(s)	Within 30 days of receipt of Ecology comments on the Draft IC Plan and Draft Environmental Covenant(s).								
Record Final Environmental Covenant(s) with King County Auditor	Within 5 days after Ecology's approval of the Final IC Plan or Ecology's signature as granted of the Final Environmental Covenant(s), whichever occurs last.								
Start ground water monitoring	Within 90 days after final CAP is approved								
Combined TPH/MNA/Arsenic ground water monitoring	Quarterly for two years, then modify based on results and consultation with Ecology Duration: 5 years unless a different action is triggered by the decision tree shown in table 1 of the dCAP								
Combined TPH/MNA/Arsenic ground water monitoring reports	90 days after 4 th quarter sampling Annually for a minimum of 5 years unless a different action is triggered by the decision tree shown in table 1 of the dCAP								
Progress reports	Every 3 months unless Ecology authorizes less frequent reporting								

EXHIBIT D

Bothell Landing Facility Schedule of Deliverables

Deliverables.	Due Date
Draft Institutional Control (IC) Plan; Draft Environmental Covenant(s); and a Title Report	Within 120 days after the effective date of the Agreed Order
Final IC Plan and Final Environmental Covenant(s)	Within 30 days of receipt of Ecology comments on the Draft IC Plan and Draft Environmental Covenant(s).
Record Final Environmental Covenant(s) with King County Auditor	Within 5 days after Ecology's approval of the Final IC Plan or Ecology's signature as grantee of the Final Environmental Covenant(s), whichever occurs last.
Start ground water monitoring	Within 90 days after final CAP is approved
Combined TPH/Arsenic ground water monitoring	Quarterly for two years, then modify based on results and consultation with Ecology
Combined TPH/Arsenic ground water monitoring reports	90 days after 4 th quarter sampling
Progress reports	Every 3 months unless Ecology authorizes less frequent reporting



ATTACHMENT B ECOLOGY APPROVED COMPLIANCE MONITORING PLANS FOR BOTHELL PAINT, BOTHELL HERTZ, BOTHELL LANDING

3.0 SAMPLING PROCESS DESIGN

3.1 SAMPLING APPROACH

Compliance monitoring after the cleanup will include existing monitoring wells with documented past impacts, as summarized in Table 3-1. A one-time sampling event of the Horse Creek stormwater facility will also be conducted.

Table 3-1A Sampling Approach – Ground Water INITIAL ROUND

Sample type	Sampling location	Sampling Frequency / Rationale	Analytes
Point of	BPMW-6	Initial Round	Total petroleum hydrocarbons, diesel and oil
Compliance	BPMW-2R* BC-10		range (TPH-D, TPH-O)
			Nitrate, manganese (soluble), sulfate, methane, alkalinity
			Volatile Organic compounds (VOCs)
			Semivolatile Organic compounds (SVOCs)
			Total and dissolved metals (arsenic, cadmium, chromium, lead, mercury)
			Field parameters: dissolved oxygen, redox
			potential, pH, conductivity, temperature,
			ferrous iron

Table 3-1B Sampling Approach – Ground Water SUBSEQUENT ROUNDS

Sampling location	Sampling Frequency / Rationale	Analytes
rbons – Ground	Water	
BPMW-6 BPMW-2R* BC-10	Quarterly for two years, then modify based on results and consultation with Ecology Duration: 5 years	Total petroleum hydrocarbons, diesel and oil range TPH-D, TPH-O, nitrate, manganese (soluble), sulfate, methane, alkalinity.
BC-10 will be monitored for two quarters to confirm compliance, results exceed cleanup levels, monitoring will be the same as other wells.		Field parameters: dissolved oxygen, redox potential, pH, conductivity, temperature, ferrous iron
rbons – Storm V	Vater	
See Figure 2	One time event	Total petroleum hydrocarbons, gasoline, diesel and oil range, BTEX TPH-G/BTEX, TPH-D, TPH-O, HVOCs
Vater		
BPMW-1 BPMW-6 BC-10 BC-11	Same as petroleum hydrocarbon, but with additional quarterly monitoring for two years if TPH decreases to be in compliance** BC-10 will be monitored for two quarters to confirm compliance, if results exceed cleanup levels, monitoring will be the same as	Total Arsenic Dissolved Arsenic Field parameters
	Iocation rbons – Ground BPMW-6 BPMW-2R* BC-10 rbons – Storm V See Figure 2 Vater BPMW-1 BPMW-6 BC-10	IocationRationalerbons – Ground WaterBPMW-6Quarterly for two years, then modify based on results and consultation with EcologyBC-10Duration: 5 yearsBC-10BC-10 will be monitored for two quarters to confirm compliance, if results exceed cleanup levels, monitoring will be the same as other wells.rbons – Storm WaterSee Figure 2See Figure 2One time eventWaterSame as petroleum hydrocarbon, but with additional quarterly monitoring for two years if TPH decreases to be in compliance** BC-10 will be monitored for two quarters to confirm compliance, if results exceed cleanup levels, monitoring for two years if TPH decreases to be in compliance, if results exceed cleanup levels, monitoring for two years if TPH decreases to be in compliance, if results exceed cleanup levels, if the same as purce of two years if TPH decreases to confirm compliance, if results exceed cleanup levels,

* BPMW-2R is a replacement well to be installed 30 to 35 feet northwest of BPMW-2, which was located in the middle of the newly constructed Horse Creek and therefore decommissioned.

** If compliance monitoring from the Site shows that the arsenic remains at elevated concentrations for eight quarters of monitoring, with no other detections of petroleum hydrocarbon or solvent contamination, this data can be used to demonstrate that the elevated concentrations represents a locally high natural

3.0 SAMPLING PROCESS DESIGN

3.1 SAMPLING APPROACH

Compliance monitoring after the cleanup will include existing monitoring wells with documented past impacts, as summarized in Table 3-1.

Sample type	Sampling location	Sampling Frequency / Rationale	Analytes
Point of Compliance	HZMW-19 BLMW-8 BC-16	Initial Round	Total petroleum hydrocarbons, diesel and oi range (TPH-D, TPH-O)
	HZMW-1 HZMW-4 HZMW-12		Nitrate, manganese (soluble), sulfate, methane, alkalinity
	HZMW-17		Volatile Organic compounds (VOCs)
			Semivolatile Organic compounds (SVOCs)
			Total and dissolved metals (arsenic, cadmium, chromium, lead, mercury)
			Field parameters: dissolved oxygen, redox potential, pH, conductivity, temperature, ferrous iron

Table 3-1A Sampling Approach – Ground Water INITIAL ROUND

Table 3-1B Sampling Approach – Ground Water SUBSEQUENT ROUNDS

Sample type	Sampling location	Sampling Frequency / Rationale	Analytes
Petroleum hydroca	rbons – Ground	I Water	•
Point of Compliance	HZMW-19 BLMW-8 BC-16	Quarterly for two years, then modify based on results and consultation with Ecology Duration: 5 years	Total petroleum hydrocarbons, diesel and oil range TPH-D, TPH-O, nitrate, manganese (soluble), sulfate, methane, alkalinity.
Arsenic – Ground V	Vator		Field parameters: dissolved oxygen, redox potential, pH, conductivity, temperature, ferrous iron
Point of compliance	HZMW-1 HZMW-4 HZMW-12 HZMW-17 BC-16	Same as petroleum hydrocarbon, but with additional quarterly monitoring for two years if TPH decreases to be in compliance** BC-10 will be monitored for two quarters to confirm compliance, if results exceed cleanup levels, monitoring will be the same as other wells.	Total Arsenic Dissolved Arsenic Field parameters

* If compliance monitoring from the Site shows that the arsenic remains at elevated concentrations for eight quarters of monitoring, with no other detections of petroleum hydrocarbon or solvent contamination, this data can be used to demonstrate that the elevated concentrations represents a locally high natural background for arsenic. Based on this evidence, a request can be made to remove the institutional controls for ground water at the site and discontinue monitoring.

Figure 1 shows the well locations. The objective of the ground water sampling is to confirm that all COCs have met cleanup levels in ground water. Cleanup levels are provided in the cleanup action plan. The initial round of sampling will include a wider suite of analytes, to confirm the COC list. Note, however, that solvents are being addressed under separate agreements for the source sites, Bothell Service Center and Ultra Custom Cleaners.

Descriptions of the specific sampling methods for the above activities are presented in Sections 3.2. In addition, all sampling will be conducted in accordance with standard operating procedures.

8

LANDING – To include in A. A list of on-site activities that have taken place during this quarter

During a meeting with Jerome Cruz, Ching Pi and John Kane, Naphthalene, 1-Methylnaphthalene, and 2-Methylnaphthalene will continued to be included in compliance groundwater monitoring for one well, BL-MW-12 only. Concentrations of these chemicals were above their respective MTCA cleanup standard.

Table 3-1B Sampling Approach - Ground Water SUBSEQUENT ROUNDS

Sample type	Sampling location	Sampling Frequency / Rationale	Analytes
Arsenic			
Point of compliance	BLMW-11 BLMW-12 MW-1	Quarterly for two years, then modify based on results and consultation with Ecology*	Total Arsenic Dissolved Arsenic Total petroleum hydrocarbons, diesel and oil range TPH-D, TPH-O Field parameters

* If compliance monitoring from the Site shows that the arsenic remains at elevated concentrations for eight quarters of monitoring, with no other detections of petroleum hydrocarbon contamination, this data can be used to demonstrate that the elevated concentrations represents a locally high natural background for arsenic. Based on this evidence, a request can be made to remove the institutional controls for ground water at the site and discontinue monitoring.

F. A list of deliverables for the upcoming quarter if different from the schedule.

Same as the schedule

EXHIBIT D

ne as the schedule		
EX	HIBIT D Naph	halene,
	anding Facility of Deliverables 1-Methylnaph	Thalene, E Thalene, E 2-Methylnephthelere
Deliverables.	Due Date	2-MethyInsphere
Draft Institutional Control (IC) Plan; Draft Environmental Covenant(s); and a Title Report	Within 120 days after the effective date of the Agreed Order	
Final IC Plan and Final Environmental Covenant(s)	Within 30 days of receipt of Ecology comments on the Draft IC Plan and Draft Environmental Covenant(s).	
Record Final Environmental Covenant(s) with King County Auditor	Within 5 days after Ecology's approval of the Final IC Plan or Ecology's signature as grantee of the Final Environmental Covenant(s), whichever occurs last.	
Start ground water monitoring	Within 90 days after final CAP is approved	
Combined TPH/Arsenic ground water monitoring	Quarterly for two years, then modify based on results and consultation with Ecology	
Combined TPH/Arsenic ground water monitoring reports	90 days after 4 th quarter sampling	
Progress reports	Every 3 months unless Ecology authorizes less frequent reporting	

Bothell Landing Facility Schedule of Deliverables



ATTACHMENT C ECOLOGY APPROVED COMPLIANCE MONITORING SCHEDULE FOR BOTHELL PAINT, BOTHELL HERTZ, BOTHELL LANDING

From:	Cruz, Jerome (ECY)
То:	<u>Jeff Jensen; John Kane</u>
Cc:	Nduta Mbuthia; Wang, Ching-Pi (ECY)
Subject:	[EXTERNAL] RE: Kane Environmental Compliance Sampling Schedule for Hertz-Landing -Paint
Date:	Thursday, April 4, 2019 7:57:32 AM

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

"

Jeff and John,

Let's proceed with your revised schedule below. The CMP calls for 8 quarters, but let's analyze the results and discuss if additional monitoring is necessary, if the City is willing to accept institutional controls with periodic reviews as the final remedy.

Let me know if you all agree.

Thanks,

Jerome

- Winter 2019: March 5, 2019 March 15, 2019
- Spring 2019: May 20, 2019 June 3, 2019
- Summer 2019: July 15, 2019 August 5, 2019
- Fall 2019: October 7, 2019 October 25, 2019
- Winter 2020: January 6, 2020 January 20, 2020



Jerome B. Cruz, Ph.D. Toxics Cleanup Program, Northwest Regional Office 3190 - 160th SE Bellevue, WA 98008 Tel: (425) 649-7094 Fax: (425) 649-7098 Jerome.Cruz@ecy.wa.gov http://www.ecy.wa.gov/programs/tcp/cleanup.html

From: Jeff Jensen [mailto:Jeff@kane-environmental.com]

Sent: Monday, April 1, 2019 4:28 PM

To: Cruz, Jerome (ECY) <JCRU461@ECY.WA.GOV>; John Kane <jkane@kane-environmental.com>
 Cc: Nduta Mbuthia <Nduta.Mbuthia@bothellwa.gov>; Wang, Ching-Pi (ECY)
 <CWAN461@ECY.WA.GOV>

Subject: RE: Kane Environmental Compliance Sampling Schedule for Hertz-Landing -Paint

Jerome,

Just to clarify, the ranges of dates listed for the proposed groundwater sampling events are hard start and stop dates, not a range of dates when sampling will begin. The compliance monitoring for Hertz, Paint, and Landing, as well as the performance monitoring for BSCSS, is anticipated to take a total of three weeks combined. That is why there is the three week range listed for each

quarter/event. We believe the proposed dates listed should provide a representative sampling event for each quarter. However, if you would like us to move some of the dates around we can certainly do that.

I have also attached updated tables which include the field parameters collected during the initial groundwater sampling event. I apologize for not including these in the original table. Going forward we will be sure to include this data in the tables.

As for the surface water data, all results came back non-detect. We will have data tables to deliver to Nduta later today.

Please let me know if you have any additional questions or comments. Thanks,

Jeff Jensen, Project Geologist

Kane Environmental, Inc. | Environmental Issues. Business Solutions. PO Box 31936, Seattle WA 98103 Headquarters 4015 13th Avenue West, Seattle, WA 98119 Direct: 206-673-5731 Cell: 425-344-3707 Toll Free 1-844-529-KANE Jeff@kane-environmental.com www.kane-environmental.com

Seattle, WA | Tacoma, WA | Phoenix, AZ | Nationwide Services

From: Cruz, Jerome (ECY) <<u>JCRU461@ECY.WA.GOV</u>>
Sent: Friday, March 29, 2019 4:06 PM
To: John Kane <<u>jkane@kane-environmental.com</u>>
Cc: Nduta Mbuthia <<u>Nduta.Mbuthia@bothellwa.gov</u>>; Wang, Ching-Pi (ECY)

<<u>CWAN461@ECY.WA.GOV</u>; Jeff Jensen <<u>Jeff@kane-environmental.com</u>>

Subject: RE: Kane Environmental Compliance Sampling Schedule for Hertz-Landing -Paint

Hi John,

Given that the revised sampling schedule provides a range of dates, it still seems off to me because the ranges are so close you could have sampling between rounds that are at least 5 days apart! Since March 9, 2019 is the winter sampling round, could you construct a schedule that keeps to a quarterly interval and also begins and ends at the same period of time so that we can encompass the full seasonal cycle?

Also, since ORP measurements were taken, could you resubmit the Sept-Nov 2018 tables with the ORP or redox measurements (taking out "Draft" mark)? Also, what are the Horse creek stormwater samples showing? This was meant to see if the relocation of the Creek through the Paint site has not resulted in any recontamination by the Paint and BSCSS sites as it flows in this reach.

Thanks,

Jerome



Jerome B. Cruz, Ph.D. Toxics Cleanup Program, Northwest Regional Office 3190 - 160th SE Bellevue, WA 98008 Tel: (425) 649-7094 Fax: (425) 649-7098 Jerome.Cruz@ecy.wa.gov http://www.ecy.wa.gov/programs/tcp/cleanup.html

From: John Kane [mailto:jkane@kane-environmental.com]
Sent: Wednesday, March 27, 2019 1:11 PM
To: Cruz, Jerome (ECY) <<u>JCRU461@ECY.WA.GOV</u>>
Cc: Nduta Mbuthia <<u>Nduta.Mbuthia@bothellwa.gov</u>>; Wang, Ching-Pi (ECY)
<<u>CWAN461@ECY.WA.GOV</u>>; Jeff Jensen <<u>Jeff@kane-environmental.com</u>>; John Kane <<u>jkane@kane-environmental.com</u>>;
Subject: Kane Environmental Compliance Sampling Schedule for Hertz-Landing -Paint

Jerome,

We have addressed your comments in red below:

• Attached progress report says Winter sampling was to occur in January, yet the schedule letter says it was completed in March. Why was this delayed? Is winter sampling the second round of compliance monitoring?

Per the email exchange between me (John Kane) and yourself on Friday February 8, 2019, sampling was to be conducted in February (See attached). Unfortunately the snow prevented us from starting when we had originally planned (2/11/19). Additionally, per my notes on the meeting between John Kane, Ching Pi, and yourself on February 1, 2019, groundwater sampling around the ERH system at the BSCSS site was to occur before the Paint, Hertz, and Landing sampling event. This, coupled with the bad weather, pushed the sampling into early March. Sampling in March represents the Winter 2019 Quarter especially due to the amount of snow and rain during mid to late February 2019.

• Attached report also says an end of the year report was to be submitted as part of the compliance monitoring reporting. I can't find any in my files.

Attached email correspondence from 10/26 & 10/29 between yourself and Nduta which

discusses this point.

• What do you consider as the first round of sampling? Winter 2019? My records say the first round occurred on Sept. 6, 2018 (Hertz and Landing), and Nov. 20, 2018 (Paint). Also, if you consider March 9, 2019 as a quarter of monitoring, the next round proposed on April-22-May, 2019, seems too soon.

Winter 2019 is considered the first Quarter of Quarterly Monitoring. The first groundwater sampling event (in September and November 2018) was considered the "Initial Round". We can push the second Quarter to the weeks of May 20, 2019 – June 3, 2019. The goal of the sampling schedule is meant to encompass all groundwater monitoring at the BSCSS, and the Paint, Hertz, and Landing sites. How does this look?:

- Winter 2019: March 5, 2019 March 15, 2019
- **Spring 2019**: May 20, 2019 June 3, 2019
- Summer 2019: July 15, 2019 August 5, 2019
- **Fall 2019**: October 7, 2019 October 25, 2019
- Winter 2020: January 6, 2020 January 20, 2020
- Winter 2019 dates seem too soon after Fall 2018 (Oct, then December is less than a quarter).

Please see the amended proposed schedule above.

• What about Horse Creek sampling at the Paint site as required in the Paint CMP? When will this be done or has this been done?

The surface water sampling in Horse Creek was conducted in March as a part of the Winter Quarter sampling event.

• First round of results (Sept-Nov 2018): Why is redox potential or ORP not reported as required in the XCMP for the three sites? If omitted, please include this measurement in the compliance sampling program. Also, the tables submitted say Draft on them. Were the data validated by the analytical lab? Can you include the analytical reports in the submissions?

We have always collected redox potential and ORP (along with the other required field

parameters). I will be sure the field parameter data is included in all future tables. The original tables were submitted for review as a draft just in case requests to alter the formatting were made. The "Draft" mark can be removed. All data was reviewed and validated by the analytical laboratory. I will be sure that Nduta gets all of the laboratory analytical reports to include in the submissions.

• I would like to know if Kane Environmental will offer some interpretation and/or discussion on the results to account for the persistent high arsenic in groundwater. I would like to know if they expect this to be Ecology's scope of work.

We would prefer to hold off on making any interpretations or discussions on the data until we have completed more quarterly monitoring events and collected more data.

Let us know if you have any additional comments or questions.

John Kane, CEO/President Kane Environmental, Inc. Environmental Issues. Business Solutions. 4015 13th Avenue West Seattle, WA 98119

Tel 206-691-0476 Cell 206-715-2779 Toll Free 1-844-529-KANE jkane@kane-environmental.com www.kane-environmental.com

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ATTACHMENT A LABORATORY ANALYTICAL REPORTS



3600 Fremont Ave. N. Seattle, WA 98103 T: (206) 352-3790 F: (206) 352-7178 info@fremontanalytical.com

Kane Environmental, Inc. Jeff Jensen 4015 13th Ave W. Seattle, WA 98103

RE: Paint Work Order Number: 1903087

March 14, 2019

Attention Jeff Jensen:

Fremont Analytical, Inc. received 4 sample(s) on 3/7/2019 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext. Dissolved Gases by RSK-175 Dissolved Metals by EPA Method 200.8 Ion Chromatography by EPA Method 300.0 Total Metals by EPA Method 200.8 Total Alkalinity by SM 2320B

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005 ORELAP Certification: WA 100009-007 (NELAP Recognized)



CLIENT: Project: Work Order:	Kane Environmental, Inc. Paint 1903087	Work Order S	Sample Summary
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1903087-001	BPMW-2R:W	03/07/2019 11:50 AM	03/07/2019 4:07 PM
1903087-002	BPMW-6:W	03/07/2019 1:05 PM	03/07/2019 4:07 PM
1903087-003	BC-11R:W	03/07/2019 2:02 PM	03/07/2019 4:07 PM
1903087-004	BPMW-1:W	03/07/2019 3:03 PM	03/07/2019 4:07 PM



Case Narrative

WO#: **1903087** Date: **3/14/2019**

CLIENT:Kane Environmental, Inc.Project:Paint

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers & Acronyms



WO#: **1903087** Date Reported: **3/14/2019**

Qualifiers:

- * Flagged value is not within established control limits
- B Analyte detected in the associated Method Blank
- D Dilution was required
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- I Analyte with an internal standard that does not meet established acceptance criteria
- J Analyte detected below Reporting Limit
- N Tentatively Identified Compound (TIC)
- Q Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- (<20%RSD, <20% Drift or minimum RRF)
- S Spike recovery outside accepted recovery limits
- ND Not detected at the Reporting Limit
- R High relative percent difference observed

Acronyms:

%Rec - Percent Recovery **CCB** - Continued Calibration Blank CCV - Continued Calibration Verification **DF** - Dilution Factor HEM - Hexane Extractable Material **ICV** - Initial Calibration Verification LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate MB or MBLANK - Method Blank MDL - Method Detection Limit MS/MSD - Matrix Spike / Matrix Spike Duplicate PDS - Post Digestion Spike Ref Val - Reference Value **RL - Reporting Limit RPD** - Relative Percent Difference SD - Serial Dilution SGT - Silica Gel Treatment SPK - Spike Surr - Surrogate



Client: Kane Environmental, Inc. Project: Paint			(Collectior	Date:	3/7/201	9 11:50:00 AM	
Lab ID: 1903087-001 Client Sample ID: BPMW-2R:W	Matrix: Groundwater							
Analyses	Result	RL	Qual	Units	DF	Da	te Analyzed	
Dissolved Gases by RSK-175				Batch ID: R50033 Analyst: AD				
Methane	0.651	0.0863	D	mg/L	10	3/14/	2019 12:36:00 PM	
Diesel and Heavy Oil by NWTPH-	Dx/Dx Ext.			Batcl	Batch ID: 23765 Analyst: DW		Analyst: DW	
Diesel (Fuel Oil)	ND	49.7		µg/L	1	3/13/	2019 1:30:58 AM	
Diesel Range Organics (C12-C24)	122	49.7		µg/L	1	3/13/	2019 1:30:58 AM	
Heavy Oil	219	99.4		µg/L	1	3/13/	2019 1:30:58 AM	
Surr: 2-Fluorobiphenyl	79.5	50 - 150		%Rec	1	3/13/	2019 1:30:58 AM	
Surr: o-Terphenyl	83.6	50 - 150		%Rec	1	3/13/	2019 1:30:58 AM	
NOTES:								
DRO - Indicates the presence of unresolve	ed compounds el	uting from dod	ecane throu	gh tetracosa	ne (~C12	2-C24).		
lon Chromatography by EPA Meth	od 300.0			Batcl	h ID: 23	3719	Analyst: TN	
Nitrate (as N)	ND	0.100		mg/L	1	3/8/2	019 9:59:00 PM	
Sulfate	1.87	0.300		mg/L	1	3/8/2	019 9:59:00 PM	
Dissolved Metals by EPA Method	200.8			Batcl	n ID: 23	3798	Analyst: WC	
Manganese	94.0	2.00		µg/L	1	3/13/	2019 3:03:20 PM	
Total Alkalinity by SM 2320B				Batcl	n ID: R	50025	Analyst: ME	
Alkalinity, Total (As CaCO3)	117	2.50		mg/L	1	3/12/	2019 8:20:00 AM	



Client: Kane Environmental, Inc. Project: Paint			(Collectior	Date: 3	3/7/2019 1:05:00 PM		
Lab ID: 1903087-002	Matrix: Groundwater							
Client Sample ID: BPMW-6:W Analyses	Result	Result RL Qual Units DF Date Analyzed						
Dissolved Gases by RSK-175				Batcl	n ID: R5	0033 Analyst: AD		
Methane	2.25	0.173	D	mg/L	20	3/14/2019 1:25:00 PM		
Diesel and Heavy Oil by NWTPH-D	<u>k/Dx Ext.</u>			Batcl	n ID: 237	765 Analyst: DW		
Diesel (Fuel Oil)	ND	50.3		μg/L	1	3/13/2019 2:00:29 AM		
Heavy Oil	ND	101		µg/L	1	3/13/2019 2:00:29 AM		
Surr: 2-Fluorobiphenyl	82.7	50 - 150		%Rec	1	3/13/2019 2:00:29 AM		
Surr: o-Terphenyl	39.1	50 - 150	S	%Rec	1	3/13/2019 2:00:29 AM		
S - Outlying surrogate recovery(ies) observe effect.	·	analysis was p	erformed wi		ults indica n ID: 237			
Nitrate (as N)	8.59	1.00	DH	mg/L	10	3/12/2019 3:31:00 PM		
Nitrate (as N)	10.0	0.100	Е	mg/L	1	3/8/2019 10:22:00 PM		
Sulfate	5.18	0.300		mg/L	1	3/8/2019 10:22:00 PM		
NOTES:								
E - Estimated value. The amount exceeds the	ne linear workin	ig range of the	instrument.					
Dissolved Metals by EPA Method 2	<u>00.8</u>			Batcl	n ID: 237	798 Analyst: WC		
Arsenic	13.8	1.75		µg/L	1	3/13/2019 3:19:25 PM		
Manganese	27.7	2.00		µg/L	1	3/13/2019 3:19:25 PM		
Total Metals by EPA Method 200.8				Batcl	n ID: 237	755 Analyst: WC		
Arsenic	14.7	1.75		µg/L	1	3/8/2019 5:52:07 PM		
Total Alkalinity by SM 2320B				Batcl	n ID: R5	0025 Analyst: ME		
Alkalinity, Total (As CaCO3)	25.7	2.50		mg/L	1	3/12/2019 8:20:00 AM		



Client:	Kane Environmental, Inc.	Collection Date: 3/7/2019 2:02:00 PM						
Project:	Paint							
Lab ID:	1903087-003	Matrix: Groundwater						
Client Sa	ample ID: BC-11R:W							
Analyse	S	Result	RL	Qual	Units	DF	Date Analyzed	
Dissolv	red Metals by EPA Method 2	200.8			Batch	n ID: 237	98 Analyst: WC	
Arsenic		ND	1.75		µg/L	1	3/13/2019 3:23:26 PM	
<u>Total N</u>	letals by EPA Method 200.8	3			Batch	n ID: 237	55 Analyst: WC	
Arsenic		ND	1.75		µg/L	1	3/8/2019 5:56:09 PM	



Client:	Kane Environmental, Inc.	Collection Date: 3/7/2019 3:03:00 PM					
Project:							
Lab ID:	1903087-004				Matrix: G	oundwa	iter
Client Sa	ample ID: BPMW-1:W						
Analyses	6	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolv</u>	ed Metals by EPA Method 2	00.8			Batch	n ID: 237	798 Analyst: WC
Arsenic		4.83	1.75		μg/L	1	3/13/2019 3:35:30 PM
<u>Total N</u>	letals by EPA Method 200.8				Batch	n ID: 237	755 Analyst: WC
Arsenic		12.9	1.75		µg/L	1	3/8/2019 6:00:11 PM



	3087 e Environmental, Inc. t					-		Y REPOR by SM 2320
Sample ID MB-R50025	SampType:	MBLK		Units: mg/L	Prep Date: 3/12/2	2019	RunNo: 5002	5
Client ID: MBLKW	Batch ID:	R50025			Analysis Date: 3/12/2	2019	SeqNo: 9818	50
Analyte	Re	esult RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit	RPD Ref Val	%RPD I	RPDLimit Qual
Alkalinity, Total (As CaCC	93)	ND 2.50						
Sample ID LCS-R50025	SampType:	LCS		Units: mg/L	Prep Date: 3/12/2	2019	RunNo: 5002	5
Client ID: LCSW	Batch ID:	R50025			Analysis Date: 3/12/2	2019	SeqNo: 9818	51
Analyte	Re	esult RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit	RPD Ref Val	%RPD I	RPDLimit Qual
Alkalinity, Total (As CaCC	93)	103 2.50	100.0	0	103 80 120			
Sample ID 1903027-029	BDUP SampType:	DUP		Units: mg/L	Prep Date: 3/12/2	2019	RunNo: 5002	5
Client ID: BATCH	Batch ID:	R50025			Analysis Date: 3/12/2	2019	SeqNo: 9818	53
Analyte	Re	esult RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit	RPD Ref Val	%RPD I	RPDLimit Qual
Alkalinity, Total (As CaCC	93)	172 2.50				172.0	0	20
Sample ID 1903068-021	BDUP SampType:	DUP		Units: mg/L	Prep Date: 3/12/2	2019	RunNo: 5002	5
Client ID: BATCH	Batch ID:	R50025			Analysis Date: 3/12/2	2019	SeqNo: 9818	71
Analyte	Re	esult RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit	RPD Ref Val	%RPD I	RPDLimit Qual
Alkalinity, Total (As CaCC	03)	132 2.50				132.7	0.258	20



Work Order:	1903087								QC S	SUMMA	RY REF	PORT
CLIENT:		nmental, Inc.						lon Ch	romatogra	nhy hy FP	A Methor	4 300 C
Project:	Paint								nomatogra	рпу бу ст		1 300.0
Sample ID LCS-23	3719	SampType: LCS			Units: mg/L		Prep Da	te: 3/6/20 ⁴	19	RunNo: 498	374	
Client ID: LCSW	1	Batch ID: 23719					Analysis Da	te: 3/6/20	19	SeqNo: 977	7978	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N) NOTES:	an initial calibratio	0.443	0.100	0.7500	0	59.1	90	110				S*
Sample ID MB-23		on verification. Samples w SampType: MBLK	nii be nagge		Units: mg/L		Pren Da	te: 3/6/20 ⁴	19	RunNo: 49 8	374	
Client ID: MBLK		Batch ID: 23719			onno. mg/L		Analysis Da			SeqNo: 977		
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)		ND	0.100									*
NOTES:												
* - Flagged value	e is not within est	ablished control limits.										
* - Flagged value Sample ID 190305		ablished control limits. SampType: DUP			Units: mg/L		Prep Da	te: 3/6/20 ⁴	19	RunNo: 498	374	
	55-015BDUP				Units: mg/L		Prep Da Analysis Da			RunNo: 49 8 SeqNo: 97 7		
Sample ID 190305	55-015BDUP	SampType: DUP	RL	SPK value	Units: mg/L	%REC	Analysis Da	te: 3/6/20 ⁻				Qual
Sample ID 190305 Client ID: BATCH	55-015BDUP	SampType: DUP Batch ID: 23719	RL 0.100	SPK value	-		Analysis Da	te: 3/6/20 ⁻	19	SeqNo: 977	7981	Qual *
Sample ID 190305 Client ID: BATCH Analyte Nitrate (as N) NOTES:	55-015BDUP H	SampType: DUP Batch ID: 23719 Result		SPK value	-		Analysis Da	te: 3/6/20 ⁻	19 RPD Ref Val	SeqNo: 977 %RPD	7981 RPDLimit	
Sample ID 190305 Client ID: BATCH Analyte Nitrate (as N) NOTES:	55-015BDUP H e is not within est	SampType: DUP Batch ID: 23719 Result 0.411		SPK value	-		Analysis Da LowLimit	te: 3/6/20 ⁻	19 RPD Ref Val 0.4110	SeqNo: 977 %RPD	7 981 RPDLimit 20	
Sample ID 190305 Client ID: BATCH Analyte Nitrate (as N) NOTES: * - Flagged value	55-015BDUP H e is not within est 55-015BMS	SampType: DUP Batch ID: 23719 Result 0.411 rablished control limits.		SPK value	SPK Ref Val	%REC	Analysis Da LowLimit	te: 3/6/20 ' HighLimit te: 3/6/20 '	19 RPD Ref Val 0.4110 19	SeqNo: 97 %RPD 0	7981 RPDLimit 20	
Sample ID 190305 Client ID: BATCH Analyte Nitrate (as N) NOTES: * - Flagged value Sample ID 190305	55-015BDUP H e is not within est 55-015BMS	SampType: DUP Batch ID: 23719 Result 0.411 ablished control limits. SampType: MS			SPK Ref Val	%REC	Analysis Da LowLimit Prep Da Analysis Da	te: 3/6/20' HighLimit te: 3/6/20' te: 3/6/20'	19 RPD Ref Val 0.4110 19	SeqNo: 977 %RPD 0 RunNo: 498	7981 RPDLimit 20 874 7982	
Sample ID 190305 Client ID: BATCH Analyte Nitrate (as N) NOTES: * - Flagged value Sample ID 190305 Client ID: BATCH	55-015BDUP H e is not within est 55-015BMS	SampType: DUP Batch ID: 23719 Result 0.411 ablished control limits. SampType: MS Batch ID: 23719	0.100		SPK Ref Val	%REC	Analysis Da LowLimit Prep Da Analysis Da	te: 3/6/20' HighLimit te: 3/6/20' te: 3/6/20'	19 RPD Ref Val 0.4110 19 19	SeqNo: 977 %RPD 0 RunNo: 498 SeqNo: 977	7981 RPDLimit 20 374 7982	*
Sample ID 190305 Client ID: BATCH Analyte Nitrate (as N) NOTES: * - Flagged value Sample ID 190305 Client ID: BATCH Analyte	55-015BDUP H e is not within est 55-015BMS H	SampType: DUP Batch ID: 23719 Result 0.411 ablished control limits. SampType: MS Batch ID: 23719 Result	0.100 RL	SPK value	SPK Ref Val	%REC	Analysis Da LowLimit Prep Da Analysis Da LowLimit	te: 3/6/20 HighLimit te: 3/6/20 te: 3/6/20 HighLimit 120	19 RPD Ref Val 0.4110 19 19 RPD Ref Val	SeqNo: 977 %RPD 0 RunNo: 498 SeqNo: 977	7981 RPDLimit 20 374 7982 RPDLimit	*
Sample ID 190305 Client ID: BATCH Analyte Nitrate (as N) NOTES: * - Flagged value Sample ID 190305 Client ID: BATCH Analyte Nitrate (as N)	55-015BDUP H e is not within est 55-015BMS H 55-015BMSD	SampType: DUP Batch ID: 23719 Result 0.411 ablished control limits. SampType: MS Batch ID: 23719 Result 1.18	0.100 RL	SPK value	SPK Ref Val Units: mg/L SPK Ref Val 0.4110	%REC %REC 103	Analysis Da LowLimit Prep Da Analysis Da LowLimit 80	te: 3/6/20 HighLimit te: 3/6/20 te: 3/6/20 HighLimit 120 te: 3/6/20	19 RPD Ref Val 0.4110 19 RPD Ref Val 19	SeqNo: 977 %RPD 0 RunNo: 498 SeqNo: 977 %RPD	7981 RPDLimit 20 374 7982 RPDLimit	*
Sample ID 190305 Client ID: BATCH Analyte Nitrate (as N) NOTES: * - Flagged value Sample ID 190305 Client ID: BATCH Analyte Nitrate (as N) Sample ID 190305	55-015BDUP H e is not within est 55-015BMS H 55-015BMSD	SampType: DUP Batch ID: 23719 Result 0.411 ablished control limits. SampType: MS Batch ID: 23719 Result 1.18 SampType: MSD	0.100 RL	SPK value 0.7500	SPK Ref Val Units: mg/L SPK Ref Val 0.4110	%REC %REC 103	Analysis Da LowLimit Prep Da Analysis Da LowLimit 80 Prep Da Analysis Da	te: 3/6/20' HighLimit te: 3/6/20' te: 3/6/20' HighLimit 120 te: 3/6/20' te: 3/6/20'	19 RPD Ref Val 0.4110 19 RPD Ref Val 19	SeqNo: 977 %RPD 0 RunNo: 498 SeqNo: 977 %RPD RunNo: 498	7981 RPDLimit 20 374 7982 RPDLimit	*



Work Ord CLIENT: Project:	der:	1903087 Kane Enviro Paint	onmental, Ir	IC.						lon Ch	QC S	SUMMA phy by EP		
Sample ID	19030	55-015BMSD	SampType	e: MSD			Units: mg/L		Prep Date	e: 3/6/201	9	RunNo: 49	874	
Client ID:	BATCH	4	Batch ID:	23719					Analysis Date	e: 3/6/201	9	SeqNo: 97	7983	
Analyte				Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID	190305	55-016BDUP	SampType	e: DUP			Units: mg/L		Prep Date	e: 3/6/201	9	RunNo: 49	874	
Client ID:	BATCH	4	Batch ID:	23719					Analysis Date	e: 3/7/201	9	SeqNo: 97	7995	
Analyte			I	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N NOTES: * - Flagge	,	e is not within es	tablished cont	1.39 trol limits.	0.200						1.398	0.574	20	D*
Sample ID	19030	55-016BMS	SampType	e: MS			Units: mg/L		Prep Date	e: 3/6/201	9	RunNo: 49	874	
Client ID:	BATCH	4	Batch ID:	23719			_		Analysis Date	e: 3/7/201	9	SeqNo: 97	7998	
Analyte			I	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N	N)			2.98	0.200	1.500	1.398	105	80	120				D
Sample ID	LCS-2	3719	SampType	e: LCS			Units: mg/L		Prep Date	e: 3/6/201	9	RunNo: 49	924	
Client ID:	LCSW		Batch ID:	23719					Analysis Date	e: 3/8/201	9	SeqNo: 97	8987	
Analyte			I	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N	N)			0.687	0.100	0.7500	0	91.6	90	110				
Sulfate				3.44	0.300	3.750	0	91.8	90	110				
Sample ID	MB-23	719	SampType	e: MBLK			Units: mg/L		Prep Date	e: 3/6/201	9	RunNo: 49	924	
Client ID:	MBLK	w	Batch ID:	23719					Analysis Date	e: 3/8/201	9	SeqNo: 97	8988	
Analyte			I	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N Sulfate	N)			ND ND	0.100 0.300									

Work Order: 1903087 CLIENT: Kane Enviro	onmental, Inc.							QC S	SUMMA	RY REF	POR
Project: Paint	onnental, inc.						lon Ch	romatogra	phy by EP	A Method	d 300.
Sample ID 1903055-015BDUP	SampType: DUP			Units: mg/L		Prep Date	e: 3/6/20 1	9	RunNo: 49 9	924	
Client ID: BATCH	Batch ID: 23719					Analysis Date	e: 3/8/20 1	9	SeqNo: 978	3992	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N) Sulfate	0.394 5.87	0.100 0.300						0.3940 5.884	0 0.255	20 20	Н
Sample ID 1903055-015BMS	SampType: MS			Units: mg/L		Prep Date	e: 3/6/20 1	9	RunNo: 499	924	
Client ID: BATCH	Batch ID: 23719					Analysis Date	e: 3/8/20 1	9	SeqNo: 978	3993	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)	1.04	0.100	0.7500	0.3940	86.0	80	120				Н
Sulfate	9.32	0.300	3.750	5.884	91.6	80	120				
Sample ID 1903055-015BMSD	SampType: MSD			Units: mg/L		Prep Date	e: 3/6/20 1	9	RunNo: 49 9	924	
Client ID: BATCH	Batch ID: 23719					Analysis Date	e: 3/8/20 1	9	SeqNo: 978	3994	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)	1.09	0.100	0.7500	0.3940	92.4	80	120	1.039	4.52	20	Н
Sulfate	9.59	0.300	3.750	5.884	98.8	80	120	9.320	2.83	20	
Sample ID 1903055-016BDUP	SampType: DUP			Units: mg/L		Prep Date	e: 3/6/20 1	9	RunNo: 499	924	
Client ID: BATCH	Batch ID: 23719					Analysis Date	e: 3/9/20 1	9	SeqNo: 979	9002	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)	1.37	0.200						1.368	0.146	20	DH
Sulfate	6.86	0.600						6.830	0.380	20	D
Sample ID 1903055-016BMS	SampType: MS			Units: mg/L		Prep Date	e: 3/6/20 1	9	RunNo: 49 9	924	
Client ID: BATCH	Batch ID: 23719					Analysis Date	e: 3/9/20 1	9	SeqNo: 979	9003	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)	2.93	0.200	0.7500	1.368	209	80	120				DSH





CLIENT:	1903087 Kane Enviro Paint	nmental, Inc.						QC Ion Chromatogra	SUMMARY R	_
Sample ID 1903055	-016BMS	SampType: MS			Units: mg/L		Prep Date	: 3/6/2019	RunNo: 49924	
Client ID: BATCH		Batch ID: 23719					Analysis Date	: 3/9/2019	SeqNo: 979003	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit RPD Ref Val	%RPD RPDLi	nit Qual
Sulfate		14.3	0.600	3.750	6.830	199	80	120		DS
Sample ID MB-2377	77	SampType: MBLK			Units: mg/L		Prep Date	: 3/11/2019	RunNo: 49986	
Client ID: MBLKW		Batch ID: 23777					Analysis Date	: 3/12/2019	SeqNo: 980776	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit RPD Ref Val	%RPD RPDLi	nit Qual
Nitrate (as N)		ND	0.100							
Sample ID LCS-237	77	SampType: LCS			Units: mg/L		Prep Date	: 3/11/2019	RunNo: 49986	
Client ID: LCSW		Batch ID: 23777					Analysis Date	: 3/12/2019	SeqNo: 980777	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit RPD Ref Val	%RPD RPDLi	nit Qual
Nitrate (as N)		0.709	0.100	0.7500	0	94.5	90	110		
Sample ID 1903068	-002BDUP	SampType: DUP			Units: mg/L		Prep Date	: 3/11/2019	RunNo: 49986	
Client ID: BATCH		Batch ID: 23777					Analysis Date	: 3/12/2019	SeqNo: 980779	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit RPD Ref Val	%RPD RPDLi	nit Qual
Nitrate (as N)		ND	0.200					0		20 DH
Sample ID 1903068	-002BMS	SampType: MS			Units: mg/L		Prep Date	: 3/11/2019	RunNo: 49986	
Client ID: BATCH		Batch ID: 23777					Analysis Date	: 3/12/2019	SeqNo: 980780	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit RPD Ref Val	%RPD RPDLi	nit Qual
Nitrate (as N)		1.38	0.200	1.500	0	92.3	80	120		DH



Work Order:	1903087								00.5	SUMMA	RYRFF	ORT
CLIENT:	Kane Enviro	nmental, Inc.					-	_				
Project:	Paint						I	on Chi	omatograp	ohy by EP	A Method	1 300.0
Sample ID 1903	068-002BMSD	SampType: MSD			Units: mg/L		Prep Date:	3/11/20	19	RunNo: 49	986	
Client ID: BATC	СН	Batch ID: 23777					Analysis Date:	3/12/20	19	SeqNo: 980	0781	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	ighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)		1.45	0.200	1.500	0	96.4	80	120	1.384	4.38	20	DH
Sample ID 1903	068-005BDUP	SampType: DUP			Units: mg/L		Prep Date:	3/11/20	19	RunNo: 499	986	
Client ID: BATC	СН	Batch ID: 23777					Analysis Date:	3/12/20	19	SeqNo: 980	0786	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	ighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)		ND	0.200						0		20	DH
Sample ID 1903	068-005BMS	SampType: MS			Units: mg/L		Prep Date:	3/11/20	19	RunNo: 499	986	
Client ID: BATC	СН	Batch ID: 23777					Analysis Date:	3/12/20	19	SeqNo: 980	0789	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	ighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)		1.43	0.200	1.500	0.1020	88.7	80	120				DH



Work Order: 1903087								QC S	SUMMA	RY REF	' ORT
CLIENT: Kane Enviro	onmental, Inc.						Die	colved Me	tale by ED	A Mothod	4 200 8
Project: Paint							DIS	solved Met	Lais by EF	A Method	1 200.0
Sample ID MB-23798	SampType: MBLK			Units: µg/L		Prep Date	e: 3/13/20	19	RunNo: 500	016	
Client ID: MBLKW	Batch ID: 23798					Analysis Date	e: 3/13/20	19	SeqNo: 981	1695	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.75									
Manganese	ND	2.00									
Sample ID LCS-23798	SampType: LCS			Units: µg/L		Prep Date	e: 3/13/20	19	RunNo: 500	016	
Client ID: LCSW	Batch ID: 23798					Analysis Date	e: 3/13/20	19	SeqNo: 981	1696	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	99.8	1.75	100.0	0	99.8	85	115				
Manganese	105	2.00	100.0	0	105	85	115				
Sample ID 1903087-001BDUP	SampType: DUP			Units: µg/L		Prep Date	e: 3/13/20	19	RunNo: 500	016	
Client ID: BPMW-2R:W	Batch ID: 23798					Analysis Date	e: 3/13/20	19	SeqNo: 981	1698	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.75						0		30	
Manganese	92.9	2.00						94.04	1.24	30	
Sample ID 1903087-001BMS	SampType: MS			Units: µg/L		Prep Date	e: 3/13/20	19	RunNo: 500	016	
Client ID: BPMW-2R:W	Batch ID: 23798					Analysis Date	e: 3/13/20	19	SeqNo: 981	1699	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	519	1.75	500.0	0.9435	104	70	130				
Manganese	610	2.00	500.0	94.04	103	70	130				
Sample ID 1903087-001BMSD	SampType: MSD			Units: µg/L		Prep Date	e: 3/13/20	19	RunNo: 500	016	
Client ID: BPMW-2R:W	Batch ID: 23798					Analysis Date	e: 3/13/20	19	SeqNo: 981	1700	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	520	1.75	500.0	0.9435	104	70	130	518.9	0.284	30	
										Dee	15 of



Work Order: CLIENT: Project:	1903087 Kane Envirc Paint	onmental, Inc.						Dis	QC S solved Met	SUMMA tals by EP		-
•	87-001BMSD V-2R:W	SampType: MSD Batch ID: 23798			Units: µg/L		Prep Dat Analysis Dat			RunNo: 500 SeqNo: 98 1	-	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese		650	2.00	500.0	94.04	111	70	130	610.4	6.34	30	
Sample ID MB-23	3782FB	SampType: MBLK			Units: µg/L		Prep Dat	te: 3/13/20)19	RunNo: 500	016	
Client ID: MBLK	Ŵ	Batch ID: 23798					Analysis Dat	te: 3/13/20)19	SeqNo: 981	1706	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic Manganese		ND ND	1.75 2.00									



Work Order:190308CLIENT:Kane EProject:Paint	7 nvironmental, Inc.				QC SUMMARY REPORT Total Metals by EPA Method 200.3
Sample ID MB-23755	SampType: MBLK			Units: µg/L	Prep Date: 3/8/2019 RunNo: 49935
Client ID: MBLKW	Batch ID: 23755				Analysis Date: 3/8/2019 SeqNo: 979307
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	1.75			
Sample ID LCS-23755	SampType: LCS			Units: µg/L	Prep Date: 3/8/2019 RunNo: 49935
Client ID: LCSW	Batch ID: 23755				Analysis Date: 3/8/2019 SeqNo: 979310
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	103	1.75	100.0	0	103 85 115
Sample ID 1903074-001DD	JP SampType: DUP			Units: µg/L	Prep Date: 3/8/2019 RunNo: 49935
Client ID: BATCH	Batch ID: 23755				Analysis Date: 3/8/2019 SeqNo: 979312
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	3.26	1.75			3.704 12.7 30
Sample ID 1903074-001DM	S SampType: MS			Units: µg/L	Prep Date: 3/8/2019 RunNo: 49935
Client ID: BATCH	Batch ID: 23755				Analysis Date: 3/8/2019 SeqNo: 979313
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	569	1.75	500.0	3.704	113 70 130
Sample ID 1903074-001DM	SD SampType: MSD			Units: µg/L	Prep Date: 3/8/2019 RunNo: 49935
Client ID: BATCH	Batch ID: 23755				Analysis Date: 3/8/2019 SeqNo: 979314
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	579	1.75	500.0	3.704	115 70 130 568.7 1.83 30

Work Order:1903087CLIENT:Kane EnviroProject:Paint	onmental, Inc.					I	Diesel and	-	SUMMAF Oil by NW		
Sample ID MB-23765	SampType: MBLK			Units: µg/L		Prep Date	: 3/11/2019		RunNo: 499	977	
Client ID: MBLKW	Batch ID: 23765					Analysis Date	3/12/2019		SeqNo: 980	0531	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit RPD	Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	50.1									
Heavy Oil	ND	100									
Surr: 2-Fluorobiphenyl	64.3		80.23		80.2	50	150				
Surr: o-Terphenyl	65.2		80.23		81.2	50	150				
Sample ID LCS-23765	SampType: LCS			Units: µg/L		Prep Date	: 3/11/2019		RunNo: 499	977	
Client ID: LCSW	Batch ID: 23765					Analysis Date	3/12/2019		SeqNo: 980	0532	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit RPD	Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	729	50.3	1,006	0	72.5	65	135				
Surr: 2-Fluorobiphenyl	66.9		80.50		83.1	50	150				
Surr: o-Terphenyl	62.9		80.50		78.1	50	150				
Sample ID 1903064-001BDUP	SampType: DUP			Units: µg/L		Prep Date	3/11/2019		RunNo: 49 9	977	
Client ID: BATCH	Batch ID: 23765					Analysis Date	3/12/2019		SeqNo: 981	126	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit RPD	Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	54.1						0		30	
Heavy Oil	275	108						234.4	16.1	30	
Surr: 2-Fluorobiphenyl	61.4		86.61		70.9	50	150		0		
Surr: o-Terphenyl	70.7		86.61		81.7	50	150		0		
Sample ID 1903076-001AMS	SampType: MS			Units: µg/L		Prep Date	: 3/11/2019		RunNo: 499)77	
Client ID: BATCH	Batch ID: 23765					Analysis Date	3/12/2019		SeqNo: 981	129	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD	Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	6,850	50.1	1,001	5,757	109	65	135				Е
Surr: 2-Fluorobiphenyl	73.6		80.09		91.9	50	150				
Surr: o-Terphenyl	72.2		80.09		90.1	50	150				





Work Order: CLIENT: Project:	1903087 Kane Enviro Paint	onmental, Inc.						Diesel	QC S and Heavy	SUMMAI Oil by NW		
Sample ID 19030	76-001AMS	SampType: MS			Units: µg/L		Prep Da	te: 3/11/2	019	RunNo: 49	977	
Client ID: BATC	н	Batch ID: 2376	5				Analysis Da	te: 3/12/2	019	SeqNo: 98	1129	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
NOTES: E - Estimated va	alue. The amoun	t exceeds the linear v	vorking range of	the instrumen	t.							
Sample ID 19030	76-001AMSD	SampType: MSD			Units: µg/L		Prep Da	te: 3/11/2	019	RunNo: 49	977	
Client ID: BATC	н	Batch ID: 2376	65				Analysis Da	te: 3/12/2	019	SeqNo: 98	1130	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)		7,050	49.9	997.8	5,757	130	65	135	6,848	2.91	30	E
Surr: 2-Fluorobi	phenyl	53.5		79.83		67.1	50	150		0		
Surr: o-Terphen	yl	84.2		79.83		105	50	150		0		
NOTES: E - Estimated va	alue. The amoun	t exceeds the linear v	vorking range of	the instrumen	t.							
Sample ID 19030	86-001ADUP	SampType: DUP			Units: µg/L		Prep Da	te: 3/11/2	019	RunNo: 49	977	
Client ID: BATC	н	Batch ID: 2376	5				Analysis Da	te: 3/13/2	019	SeqNo: 98	1143	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)		ND	49.8						0		30	
Heavy Oil		ND	99.6						0		30	
Surr: 2-Fluorobi	phenyl	67.1		79.71		84.2	50	150		0		
Surr: o-Terphen	yl	67.4		79.71		84.6	50	150		0		



Work Orde CLIENT: Project:		onmental, Inc.						SUMMARY REF	
Sample ID MI	B-R50033A BLKW	SampType: MBLK Batch ID: R50033			Units: mg/L		Date: 3/13/2019 Date: 3/13/2019	RunNo: 50033 SeqNo: 981993	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLin	nit HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Methane		ND	0.00863						
Sample ID LC	CS-R50033A	SampType: LCS			Units: mg/L	Prep	Date: 3/13/2019	RunNo: 50033	
Client ID: LC	CSW	Batch ID: R50033				Analysis	Date: 3/13/2019	SeqNo: 981992	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLin	nit HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Methane		1,040	0.00863	1,000	0	104	70 130		
Sample ID 19	903064-001DREP	SampType: REP			Units: mg/L	Prep	Date: 3/13/2019	RunNo: 50033	
Client ID: BA	АТСН	Batch ID: R50033				Analysis	Date: 3/13/2019	SeqNo: 981982	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLin	nit HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Methane NOTES: E - Estimate	ed value. The amoun	1.72 t exceeds the linear work	0.00863 ing range of	the instrument	t.		1.446	17.6 30	E
Sample ID MI	B-R50033B	SampType: MBLK			Units: mg/L	Prep	Date: 3/14/2019	RunNo: 50033	
Client ID: MI	BLKW	Batch ID: R50033			-	Analysis	Date: 3/14/2019	SeqNo: 982411	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLin	nit HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Methane		ND	0.00863						
Sample ID LC	CS-R50033B	SampType: LCS			Units: mg/L	Prep	Date: 3/14/2019	RunNo: 50033	
Client ID: LC	csw	Batch ID: R50033				Analysis	Date: 3/14/2019	SeqNo: 982410	
		Result	RL	SPK value	SPK Ref Val	%REC LowLin	nit HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Analyte									



Work Order: CLIENT: Project:	1903087 Kane Enviro Paint	onmental, Inc.				QC SUMMARY REPORT Dissolved Gases by RSK-175
Sample ID 19030 Client ID: BATC		SampType: REP Batch ID: R50033			Units: mg/L	/L Prep Date: 3/14/2019 RunNo: 50033 Analysis Date: 3/14/2019 SeqNo: 982400
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Methane		4.44	0.173			4.260 4.14 30 DE

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Sample Log-In Check List

С	lient Name:	KANE	Work Order Num	ber: 1903087		
Lo	ogged by:	Brianna Barnes	Date Received:	3/7/2019	4:07:00 PM	
Cha	nin of Custo	dy				
		stody complete?	Yes 🗸	No 🗌	Not Present	
2.	How was the s	ample delivered?	<u>Client</u>			
Log	ı In					
-	Coolers are pr	esent?	Yes 🗸	No 🗌		
5.	0001010 0.0 p.					
4.	Shipping conta	ainer/cooler in good condition?	Yes 🗹	No 🗌		
5.		present on shipping container/cooler? nents for Custody Seals not intact)	Yes	No 🗌	Not Required 🗹	
6.	Was an attem	pt made to cool the samples?	Yes 🗸	No 🗌	NA 🗌	
7.	Were all items	received at a temperature of $>0^{\circ}$ C to 10.0° C*	Yes 🖌	No 🗌		
8.	Sample(s) in p	proper container(s)?	Yes 🖌	No 🗌		
9.	Sufficient sam	ple volume for indicated test(s)?	Yes 🖌	No 🗌		
10.	Are samples p	properly preserved?	Yes 🖌	No 🗌		
11.	Was preserva	tive added to bottles?	Yes 🗹	No 🗌	NA 🗌	
40	la thara haada			added to dissol	ved metals volume.	
		pace in the VOA vials? s containers arrive in good condition(unbroken)?	Yes ∟ Yes ✔	No 🖵	NA 🗔	
		ork match bottle labels?	Yes 🗸			
17.						
15.	Are matrices of	correctly identified on Chain of Custody?	Yes 🖌	No 🗌		
16.	Is it clear what	t analyses were requested?	Yes 🗹	No 🗌		
17.	Were all holdir	ng times able to be met?	Yes 🖌	No 🗌		
Spe	cial Handliı	ng (if applicable)				
		ified of all discrepancies with this order?	Yes	No 🗌	NA 🔽	
	Person N					
	By Whon			hone 🗌 Fax	In Person	
	Regardin	1				
	_	structions:				
19	Additional rem	arks:				

Item Information

Item #	Temp °C
Cooler	2.5
Sample	6.3
Temp Blank	3.0

^{*} Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

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MAN WAR	3600 Fren	3600 Fremont Ave N.	Chain of Custody Record &	dy Record	& Labora	Laboratory Services Agreement
Fremon	Seattle, Tel: 20	Seattle, WA 98103 Tel: 206-352-3790	Date: 377/19	Page: 1 of:	1	Laboratory Project No (internal): 1903097
		Fax: 206-352-7178	Project Name: PaliVH		spec	Special Remarks:
cient: Kane Environ Munta	Ital		Project No: 82302 - B			ಭಟನವರ ಪಡೆತ ಕಾರಕಾರ್ಥನನ ಎನ್ನು . ಇನ್ನು ಇನ್ನಿಗಳು ನಿರ್ದೇಶ
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CITY. STATE. ZID: SCATTLE, WA 98/19	6118p		Location: BOTTINEU			the second s
Telephone: (201) Vg 0470	ath		REPORT TO (PM): JUFF JUNSON		Sam	Sample Disposal: Return to client Disposal by lab (after 30 days)
			PMEMAIL: JEFF@ LAVIE - CMV/VON MUL	WMW MONINN	Mtal. UNM	
		Susa Hala un	1000	Organic	1 .	
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10 *Matrix: A = Air: AO = Aqueous, B = Bulk, O:	= Other, P = Produc	t, S = Soil, SD =	O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water,	inking Water, GW = Ground Water,	nd Water, SW = Storm Water,	n Water, WW = Waste Water Turn-ground Time:
: MTCAS RCRA-8	Priority Pollutants	TAL Individu	Individual: Ag AV AS B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn		Mo Na Ni Pb Sb Se	sr sn Ti Ti U V Zn
***Anions (Circle): Nitrate Nitrite	Chloride Su	Sulfate Bromide	de O-Phosphate Fluoride N	Nitrate+Nitrite	- Sen - Long and Long - Div	3 Dav
	enter into this A backside of this /	greement with Agreement.	h Fremont Analytical or behalf of t	he Client named abov	ve and that I have	
	Date/Time	Eont		1-6-	Yosac .	1007 Dext Day
Relinquished x	Date/Time		× ×		Date/ IIme	Same Day [specify]
COC 1.2 - 2.22.17			www.fremontanalytical.com	nalytical.com		Page 1 of

Page 1 of	rtical.com	www.fremontanalytical.com			COC 1.2 - 2.22.17	ဥ Γ
Same Day (specify)	v Date/Time	× ×		Date/Time	Relinquished x	×R
1007 In Next Day	- 3-7 1 Oate Time		E cont	3AA/19	× MULL	×R
	lient named above and that I hav	I represent that Land authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.	Agreement with Agreement.	enter into this packside of this	I represent that and authorized to enter into this Agreement v each of the terms on the front and backside of this Agreement.	
- 3 Dav	Nitrate+Nitrite	O-Phosphate Fluoride Nitrate	Sulfate) Bromide	Chloride	***Anions (Circle): Nitrate Nitrite	1 *
Se Sr Sn Ti Ti U V Zn	Hg K Mg Mn Mo Na Ni Pb Sb Se	Be Ca Cd Co Cr		ants	MIGA-S RCRA-8	1 1
SW = Storm Water, WW = Waste Water Turn-around Time:		*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water,	uct, S = Soil, SD = Se	= Other, P = Prod	atrix: A = Air, AQ = Aqueous, B = Bulk, O	*
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Comments	NET 101 40 (00 10	201 10 20 10 20 10 10 00 00 000 000	Sample Type Time (Matrix)*	Sample S Date	Sample Name	10
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λ	vivon mental. Lim	PMEMAIL: JEFFQ KAME - UNVIVON MUN			X.	Fax:
Sample Disposal: Return to client Chisposal by lab (after 30 days)	S	REPORT TO (PM): JUST JUNSUN		4710	Telephone: (2011) VI91 0470	-
edits per JJ 3/7/2019 mm		Location: BOTTINGU		98119	city, state, zip: SCOTTIC, WA 98119	0
		collected by: MA FJJ		~	Address: 4015 13th Ave W	>
		Project No: 82302 - 13		ntal	client: Kane Environ MUNTA	0
Special Remarks:			Fax: 206-352-7178		Analytical.	
Laboratory Project No (internal): 1903087	Page: 1 of: 1	Date: 377/19	Seattle, WA 98103 Tel: 206-352-3790	_	Fremonu	
Laboratory Services Agreement	80	Chain of Custody Record	3600 Fremont Ave N.	3		
						Ĺ



3600 Fremont Ave. N. Seattle, WA 98103 T: (206) 352-3790 F: (206) 352-7178 info@fremontanalvtical.com

Kane Environmental, Inc. Jeff Jensen 4015 13th Ave W. Seattle, WA 98103

RE: Bothell Paint Work Order Number: 1903225

March 22, 2019

Attention Jeff Jensen:

Fremont Analytical, Inc. received 4 sample(s) on 3/15/2019 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext. Dissolved Gases by RSK-175 Dissolved Metals by EPA Method 200.8 Gasoline by NWTPH-Gx Ion Chromatography by EPA Method 300.0 Total Metals by EPA Method 200.8 Total Alkalinity by SM 2320B Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005 ORELAP Certification: WA 100009-007 (NELAP Recognized)



CLIENT: Project: Work Order:	Kane Environmental, Inc. Bothell Paint 1903225	Work Order S	Sample Summary
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1903225-001	BC-10:W	03/15/2019 10:15 AM	03/15/2019 12:30 PM
1903225-002	S-1:W	03/15/2019 10:45 AM	03/15/2019 12:30 PM
1903225-003	S-2:W	03/15/2019 10:58 AM	03/15/2019 12:30 PM
1903225-004	S-3:W	03/15/2019 11:08 AM	03/15/2019 12:30 PM



Case Narrative

WO#: **1903225** Date: **3/22/2019**

CLIENT:Kane Environmental, Inc.Project:Bothell Paint

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers & Acronyms



 WO#:
 1903225

 Date Reported:
 3/22/2019

Qualifiers:

- * Flagged value is not within established control limits
- B Analyte detected in the associated Method Blank
- D Dilution was required
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- I Analyte with an internal standard that does not meet established acceptance criteria
- J Analyte detected below Reporting Limit
- N Tentatively Identified Compound (TIC)
- Q Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- (<20%RSD, <20% Drift or minimum RRF)
- S Spike recovery outside accepted recovery limits
- ND Not detected at the Reporting Limit
- R High relative percent difference observed

Acronyms:

%Rec - Percent Recovery **CCB** - Continued Calibration Blank **CCV** - Continued Calibration Verification **DF** - Dilution Factor HEM - Hexane Extractable Material ICV - Initial Calibration Verification LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate MB or MBLANK - Method Blank MDL - Method Detection Limit MS/MSD - Matrix Spike / Matrix Spike Duplicate PDS - Post Digestion Spike Ref Val - Reference Value **RL - Reporting Limit RPD** - Relative Percent Difference SD - Serial Dilution SGT - Silica Gel Treatment SPK - Spike Surr - Surrogate



 Work Order:
 1903225

 Date Reported:
 3/22/2019

Client: Kane Environmental, Inc. Project: Bothell Paint				Collection	Dat	t e: 3/15/2019 10:15:00 AM
Lab ID: 1903225-001				Matrix: G	roun	dwater
Client Sample ID: BC-10:W					loun	uwalei
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dissolved Gases by RSK-175				Batch	n ID:	R50238 Analyst: AD
Methane	0.0872	0.00863		mg/L	1	3/22/2019 12:42:00 PM
Ethene	ND	0.0151		mg/L	1	3/22/2019 12:42:00 PM
Ethane	ND	0.0162		mg/L	1	3/22/2019 12:42:00 PM
Diesel and Heavy Oil by NWTPH-D	Dx/Dx Ext.			Batch	n ID:	23870 Analyst: DW
Diesel (Fuel Oil)	ND	50.3		µg/L	1	3/21/2019 3:26:08 AM
Heavy Oil	ND	101		µg/L	1	3/21/2019 3:26:08 AM
Surr: 2-Fluorobiphenyl	94.1	50 - 150		%Rec	1	3/21/2019 3:26:08 AM
Surr: o-Terphenyl	103	50 - 150		%Rec	1	3/21/2019 3:26:08 AM
Ion Chromatography by EPA Meth	<u>nod 300.0</u>			Batch	n ID:	23831 Analyst: GM
Nitrate (as N)	ND	0.100		mg/L	1	3/15/2019 7:07:00 PM
Sulfate	6.22	0.300		mg/L	1	3/15/2019 7:07:00 PM
Dissolved Metals by EPA Method	<u>200.8</u>			Batch	n ID:	23888 Analyst: WC
Arsenic	ND	1.75		μg/L	1	3/20/2019 11:52:17 AM
Manganese	194	2.00		µg/L	1	3/20/2019 11:52:17 AM
Total Metals by EPA Method 200.	<u>8</u>			Batch	n ID:	23889 Analyst: WC
Arsenic	ND	1.75		µg/L	1	3/20/2019 1:29:26 PM
Total Alkalinity by SM 2320B				Batch	n ID:	R50150 Analyst: ME
Alkalinity, Total (As CaCO3)	167	2.50		mg/L	1	3/18/2019 9:30:00 AM



 Work Order:
 1903225

 Date Reported:
 3/22/2019

Client: Kane Environmental, Inc. Project: Bothell Paint			(Collectior	n Date:	3/15/20	019 10:45:00 AM
Lab ID: 1903225-002 Client Sample ID: S-1:W				Matrix: W	/ater		
Analyses	Result	RL	Qual	Units	DF	Da	te Analyzed
Diesel and Heavy Oil by NWTPH-D	x/Dx Ext.			Batc	h ID: 2	3870	Analyst: DW
Diesel (Fuel Oil)	ND	50.3		µg/L	1	3/21/	/2019 3:55:35 AM
Heavy Oil	ND	101		µg/L	1	3/21/	/2019 3:55:35 AM
Surr: 2-Fluorobiphenyl	97.7	50 - 150		%Rec	1	3/21/	/2019 3:55:35 AM
Surr: o-Terphenyl	104	50 - 150		%Rec	1	3/21/	/2019 3:55:35 AM
Gasoline by NWTPH-Gx				Batc	h ID: 2	3914	Analyst: KT
Gasoline	ND	50.0		μg/L	1	3/21/	/2019 11:27:49 PM
Surr: Toluene-d8	101	65 - 135		%Rec	1	3/21/	/2019 11:27:49 PM
Surr: 4-Bromofluorobenzene	97.9	65 - 135		%Rec	1	3/21/	/2019 11:27:49 PM
Volatile Organic Compounds by E	PA Method	<u>8260C</u>		Batc	h ID: 2	3914	Analyst: KT
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	3/21	/2019 11:27:49 PM
Chloromethane	ND	2.00	Q	µg/L	1		/2019 11:27:49 PM
Vinyl chloride	ND	0.200	<u>a</u>	μg/L	1		/2019 11:27:49 PM
Bromomethane	ND	1.00		µg/L	1		/2019 11:27:49 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1		/2019 11:27:49 PM
Chloroethane	ND	1.00		μg/L	1		/2019 11:27:49 PM
1,1-Dichloroethene	ND	1.00		μg/L	1		/2019 11:27:49 PM
Methylene chloride	ND	1.00		μg/L	1		/2019 11:27:49 PM
trans-1,2-Dichloroethene	ND	1.00		μg/L	1		/2019 11:27:49 PM
1,1-Dichloroethane	ND	1.00		μg/L	1		/2019 11:27:49 PM
2,2-Dichloropropane	ND	2.00		μg/L	1		/2019 11:27:49 PM
cis-1,2-Dichloroethene	ND	1.00		μg/L	1		/2019 11:27:49 PM
Chloroform	ND	1.00		μg/L	1		/2019 11:27:49 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		μg/L	1		/2019 11:27:49 PM
1,1-Dichloropropene	ND	1.00		μg/L	1		/2019 11:27:49 PM
Carbon tetrachloride	ND	1.00		μg/L	1		/2019 11:27:49 PM
1,2-Dichloroethane (EDC)	ND	1.00		μg/L	1		/2019 11:27:49 PM
Benzene	ND	1.00		μg/L	1		/2019 11:27:49 PM
Trichloroethene (TCE)	ND	0.500			1		/2019 11:27:49 PM
1,2-Dichloropropane	ND	1.00		μg/L μg/L	1		/2019 11:27:49 PM
Bromodichloromethane	ND	1.00		µg/∟ µg/L	1		/2019 11:27:49 PM
Dibromomethane	ND	1.00		µg/∟ µg/L	1		/2019 11:27:49 PM
cis-1,3-Dichloropropene	ND	1.00		µg/∟ µg/L	1		/2019 11:27:49 PM
Toluene	ND	1.00		µg/∟ µg/L	1		/2019 11:27:49 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/∟ µg/L	1		/2019 11:27:49 PM
1,1,2-Trichloroethane	ND	1.00		μg/L	1		/2019 11:27:49 PM
		1.00		۳9′ L		0,21	20.011.21.40110



 Work Order:
 1903225

 Date Reported:
 3/22/2019

Client: Kane Environmental, Inc. Project: Bothell Paint				Collectior	Date:	3/15/2019 10:45:00 AM
Lab ID: 1903225-002				Matrix: W	ater	
Client Sample ID: S-1:W						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by E	PA Method	8260C		Batc	n ID: 2	3914 Analyst: KT
<u></u>		01000				,
1,3-Dichloropropane	ND	1.00		µg/L	1	3/21/2019 11:27:49 PM
Tetrachloroethene (PCE)	ND	1.00		μg/L	1	3/21/2019 11:27:49 PM
Dibromochloromethane	ND	1.00		µg/L	1	3/21/2019 11:27:49 PM
1,2-Dibromoethane (EDB)	ND	0.250		μg/L	1	3/21/2019 11:27:49 PM
Chlorobenzene	ND	1.00		μg/L	1	3/21/2019 11:27:49 PM
1,1,1,2-Tetrachloroethane	ND	1.00		μg/L	1	3/21/2019 11:27:49 PM
Ethylbenzene	ND	1.00		µg/L	1	3/21/2019 11:27:49 PM
m,p-Xylene	ND	1.00		μg/L	1	3/21/2019 11:27:49 PM
o-Xylene	ND	1.00		µg/L	1	3/21/2019 11:27:49 PM
Bromoform	ND	2.00		µg/L	1	3/21/2019 11:27:49 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	3/21/2019 11:27:49 PM
Bromobenzene	ND	1.00		µg/L	1	3/21/2019 11:27:49 PM
2-Chlorotoluene	ND	1.00		µg/L	1	3/21/2019 11:27:49 PM
4-Chlorotoluene	ND	1.00		µg/L	1	3/21/2019 11:27:49 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	3/21/2019 11:27:49 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	3/21/2019 11:27:49 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	3/21/2019 11:27:49 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	3/21/2019 11:27:49 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	3/21/2019 11:27:49 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	3/21/2019 11:27:49 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	3/21/2019 11:27:49 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	3/21/2019 11:27:49 PM
Surr: Dibromofluoromethane	98.0	45.4 - 152		%Rec	1	3/21/2019 11:27:49 PM
Surr: Toluene-d8	105	40.1 - 139		%Rec	1	3/21/2019 11:27:49 PM
Surr: 1-Bromo-4-fluorobenzene	99.2	64.2 - 128		%Rec	1	3/21/2019 11:27:49 PM
NOTES:						

NOTES:



 Work Order:
 1903225

 Date Reported:
 3/22/2019

Client: Kane Environmental, Inc. Project: Bothell Paint				Collectior	n Dat	e: 3/15/20	019 10:58:00 AM
Lab ID: 1903225-003				Matrix: W	/ater		
Client Sample ID: S-2:W							
Analyses	Result	RL	Qual	Units	DF	Da	ate Analyzed
Diesel and Heavy Oil by NWTPH-D	x/Dx Ext.			Batc	h ID:	23870	Analyst: DW
Diesel (Fuel Oil)	ND	50.0		µg/L	1	3/21/	/2019 5:24:01 AM
Heavy Oil	ND	99.9		µg/L	1	3/21/	/2019 5:24:01 AM
Surr: 2-Fluorobiphenyl	98.1	50 - 150		%Rec	1	3/21/	/2019 5:24:01 AM
Surr: o-Terphenyl	106	50 - 150		%Rec	1	3/21/	/2019 5:24:01 AM
Gasoline by NWTPH-Gx				Batc	h ID:	23914	Analyst: KT
Gasoline	ND	50.0		μg/L	1	3/22	/2019 12:28:57 AM
Surr: Toluene-d8	99.8	65 - 135		%Rec	1	3/22	/2019 12:28:57 AM
Surr: 4-Bromofluorobenzene	97.5	65 - 135		%Rec	1	3/22	/2019 12:28:57 AM
Volatile Organic Compounds by El	PA Method	<u>8260C</u>		Batc	h ID:	23914	Analyst: KT
Dichlorodifluoromethane (CFC-12)	ND	1.00		μg/L	1	3/22	/2019 12:28:57 AM
Chloromethane	ND	2.00	Q	µg/L	1		/2019 12:28:57 AM
Vinyl chloride	ND	0.200	-	µg/L	1		/2019 12:28:57 AM
Bromomethane	ND	1.00		µg/L	1		/2019 12:28:57 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1		/2019 12:28:57 AM
Chloroethane	ND	1.00		µg/L	1		/2019 12:28:57 AM
1,1-Dichloroethene	ND	1.00		µg/L	1		/2019 12:28:57 AM
Methylene chloride	ND	1.00		μg/L	1		/2019 12:28:57 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1		/2019 12:28:57 AM
1,1-Dichloroethane	ND	1.00		µg/L	1		/2019 12:28:57 AM
2,2-Dichloropropane	ND	2.00		μg/L	1	3/22	/2019 12:28:57 AM
cis-1,2-Dichloroethene	ND	1.00		μg/L	1	3/22	/2019 12:28:57 AM
Chloroform	ND	1.00		µg/L	1		/2019 12:28:57 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1		/2019 12:28:57 AM
1,1-Dichloropropene	ND	1.00		μg/L	1	3/22	/2019 12:28:57 AM
Carbon tetrachloride	ND	1.00		μg/L	1		/2019 12:28:57 AM
1,2-Dichloroethane (EDC)	ND	1.00		μg/L	1		/2019 12:28:57 AM
Benzene	ND	1.00		μg/L	1		/2019 12:28:57 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1		/2019 12:28:57 AM
1,2-Dichloropropane	ND	1.00		µg/L	1		/2019 12:28:57 AM
Bromodichloromethane	ND	1.00		μg/L	1		/2019 12:28:57 AM
Dibromomethane	ND	1.00		μg/L	1		/2019 12:28:57 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1		/2019 12:28:57 AM
Toluene	ND	1.00		µg/L	1		/2019 12:28:57 AM
trans-1,3-Dichloropropylene	ND	1.00		μg/L	1		/2019 12:28:57 AM
1,1,2-Trichloroethane	ND	1.00		μg/L	1		/2019 12:28:57 AM



 Work Order:
 1903225

 Date Reported:
 3/22/2019

Client: Kane Environmental, Inc. Project: Bothell Paint				Collection	n Date:	3/15/2019 10:58:00 AM
Lab ID: 1903225-003				Matrix: W	/ater	
Client Sample ID: S-2:W				•		
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Analyses	Result	RL	Quai	Units		Date Analyzeu
Volatile Organic Compounds by E	PA Method	8260C		Batc	h ID: 23	914 Analyst: KT
1,3-Dichloropropane	ND	1.00		µg/L	1	3/22/2019 12:28:57 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	3/22/2019 12:28:57 AM
Dibromochloromethane	ND	1.00		µg/L	1	3/22/2019 12:28:57 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	3/22/2019 12:28:57 AM
Chlorobenzene	ND	1.00		µg/L	1	3/22/2019 12:28:57 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	3/22/2019 12:28:57 AM
Ethylbenzene	ND	1.00		µg/L	1	3/22/2019 12:28:57 AM
m,p-Xylene	ND	1.00		µg/L	1	3/22/2019 12:28:57 AM
o-Xylene	ND	1.00		µg/L	1	3/22/2019 12:28:57 AM
Bromoform	ND	2.00		µg/L	1	3/22/2019 12:28:57 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	3/22/2019 12:28:57 AM
Bromobenzene	ND	1.00		µg/L	1	3/22/2019 12:28:57 AM
2-Chlorotoluene	ND	1.00		µg/L	1	3/22/2019 12:28:57 AM
4-Chlorotoluene	ND	1.00		µg/L	1	3/22/2019 12:28:57 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	3/22/2019 12:28:57 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	3/22/2019 12:28:57 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	3/22/2019 12:28:57 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	3/22/2019 12:28:57 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	3/22/2019 12:28:57 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	3/22/2019 12:28:57 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	3/22/2019 12:28:57 AM
1,2,3-Trichlorobenzene	ND	4.00		μg/L	1	3/22/2019 12:28:57 AM
Surr: Dibromofluoromethane	97.6	45.4 - 152		%Rec	1	3/22/2019 12:28:57 AM
Surr: Toluene-d8	104	40.1 - 139		%Rec	1	3/22/2019 12:28:57 AM
Surr: 1-Bromo-4-fluorobenzene	98.8	64.2 - 128		%Rec	1	3/22/2019 12:28:57 AM
NOTES:						



 Work Order:
 1903225

 Date Reported:
 3/22/2019

Client: Kane Environmental, Inc. Project: Bothell Paint				Collectior	Date:	3/15/2019 11:08:00 AM
Lab ID: 1903225-004				Matrix: W	/ater	
Client Sample ID: S-3:W						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
			4000	•••••		
Diesel and Heavy Oil by NWTPH-D	<u>x/Dx Ext.</u>			Batcl	n ID: 23	870 Analyst: DW
Diesel (Fuel Oil)	ND	50.3		µg/L	1	3/21/2019 5:53:30 AM
Heavy Oil	ND	101		µg/L	1	3/21/2019 5:53:30 AM
Surr: 2-Fluorobiphenyl	98.8	50 - 150		%Rec	1	3/21/2019 5:53:30 AM
Surr: o-Terphenyl	107	50 - 150		%Rec	1	3/21/2019 5:53:30 AM
Gasoline by NWTPH-Gx				Batcl	n ID: 23	914 Analyst: KT
Gasoline	ND	50.0		µg/L	1	3/22/2019 12:59:32 AM
Surr: Toluene-d8	99.6	65 - 135		%Rec	1	3/22/2019 12:59:32 AM
Surr: 4-Bromofluorobenzene	98.8	65 - 135		%Rec	1	3/22/2019 12:59:32 AM
Volatile Organic Compounds by El	PA Method	<u>8260C</u>		Batcl	n ID: 23	914 Analyst: KT
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
Chloromethane	ND	2.00	Q	µg/L	1	3/22/2019 12:59:32 AM
Vinyl chloride	ND	0.200		µg/L	1	3/22/2019 12:59:32 AM
Bromomethane	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
Chloroethane	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
1,1-Dichloroethene	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
Methylene chloride	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
trans-1,2-Dichloroethene	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
1,1-Dichloroethane	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	3/22/2019 12:59:32 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
Chloroform	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
Carbon tetrachloride	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
1,2-Dichloroethane (EDC)	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
Benzene	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
Trichloroethene (TCE)	ND	0.500		μg/L	1	3/22/2019 12:59:32 AM
1,2-Dichloropropane	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
Bromodichloromethane	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
Dibromomethane	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
cis-1,3-Dichloropropene	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
Toluene	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
trans-1,3-Dichloropropylene	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
1,1,2-Trichloroethane	ND	1.00		µg/∟ µg/L	1	3/22/2019 12:59:32 AM
.,.,		1.00		۳9′ –	•	



 Work Order:
 1903225

 Date Reported:
 3/22/2019

Client: Kane Environmental, Inc. Project: Bothell Paint			(Collectior	n Date:	3/15/2019 11:08:00 AM
Lab ID: 1903225-004 Client Sample ID: S-3:W			I	Matrix: W	/ater	
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by E	PA Method	8260C		Batcl	h ID: 23	8914 Analyst: KT
1,3-Dichloropropane	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
Dibromochloromethane	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
1,2-Dibromoethane (EDB)	ND	0.250		μg/L	1	3/22/2019 12:59:32 AM
Chlorobenzene	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
1,1,1,2-Tetrachloroethane	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
Ethylbenzene	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
m,p-Xylene	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
o-Xylene	ND	1.00		μg/L	1	3/22/2019 12:59:32 AM
Bromoform	ND	2.00		µg/L	1	3/22/2019 12:59:32 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
Bromobenzene	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
2-Chlorotoluene	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
4-Chlorotoluene	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	3/22/2019 12:59:32 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	3/22/2019 12:59:32 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	3/22/2019 12:59:32 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	3/22/2019 12:59:32 AM
Surr: Dibromofluoromethane	97.4	45.4 - 152		%Rec	1	3/22/2019 12:59:32 AM
Surr: Toluene-d8	104	40.1 - 139		%Rec	1	3/22/2019 12:59:32 AM
Surr: 1-Bromo-4-fluorobenzene	100	64.2 - 128		%Rec	1	3/22/2019 12:59:32 AM
NOTES:						

NOTES:



Work Order:	1903225									00.9	SUMMAI		ORT
CLIENT:	Kane Environ	mental, In	с.										
Project:	Bothell Paint									Tot	al Alkalini	ty by SM	2320B
Sample ID: MB-R5	60150	SampType	BLK			Units: mg/L		Prep Date	e: 3/18/20)19	RunNo: 501	150	
Client ID: MBLK	w	Batch ID:	R50150					Analysis Date	e: 3/18/20	19	SeqNo: 984	1592	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As	s CaCO3)		ND	2.50									
Sample ID: LCS-R	50150	SampType	LCS			Units: mg/L		Prep Date	e: 3/18/20	19	RunNo: 501	150	
Client ID: LCSW		Batch ID:	R50150					Analysis Date	e: 3/18/20	19	SeqNo: 984	4593	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As	s CaCO3)		105	2.50	100.0	0	105	80	120				
Sample ID: 190319	94-001CDUP	SampType	: DUP			Units: mg/L		Prep Date	e: 3/18/20	19	RunNo: 501	150	
Client ID: BATCH	4	Batch ID:	R50150					Analysis Date	e: 3/18/20	19	SeqNo: 984	4595	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As	s CaCO3)		393	2.50						388.3	1.23	20	

Fremont
Analytical

Work Order: 1903225								00 5		RY REF	OR.
	vironmental, Inc.						lon Ch	romatogra			-
Project: Bothell Pa	aint							nomatogra		A Method	1 200
Sample ID: MB-23831	SampType: MBLK			Units: mg/L		Prep Date	e: 3/14/20)19	RunNo: 50	091	
Client ID: MBLKW	Batch ID: 23831					Analysis Date	e: 3/15/20)19	SeqNo: 98	3211	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)	ND	0.100									
Sulfate	ND	0.300									
Sample ID: LCS-23831	SampType: LCS			Units: mg/L		Prep Date	e: 3/14/20)19	RunNo: 50	091	
Client ID: LCSW	Batch ID: 23831					Analysis Date	e: 3/15/20)19	SeqNo: 98	3201	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)	0.713	0.100	0.7500	0	95.1	90	110				
Sulfate	3.58	0.300	3.750	0	95.6	90	110				
Sample ID: 1903196-001ADUP	SampType: DUP			Units: mg/L		Prep Date	e: 3/14/20)19	RunNo: 50	091	
Client ID: BATCH	Batch ID: 23831					Analysis Date	e: 3/15/20)19	SeqNo: 98	3205	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)	6.97	1.00						6.990	0.287	20	DH
Sulfate	28.8	3.00						28.94	0.381	20	D
Sample ID: 1903196-001AMS	SampType: MS			Units: mg/L		Prep Date	e: 3/14/20)19	RunNo: 50	091	
Client ID: BATCH	Batch ID: 23831					Analysis Date	e: 3/15/20)19	SeqNo: 98	3206	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)	14.7	1.00	7.500	6.990	103	80	120				DH
Sulfate	67.1	3.00	37.50	28.94	102	80	120				D
Sample ID: 1903196-001AMSD	SampType: MSD			Units: mg/L		Prep Date	e: 3/14/20)19	RunNo: 50	091	
Client ID: BATCH	Batch ID: 23831					Analysis Date	e: 3/15/20)19	SeqNo: 98	3207	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)	15.4	1.00	7.500	6.990	112	80	120	14.74	4.25	20	DH
										Pa	de 13



Work Order:	1903225								00.5	SUMMAF		ORT
CLIENT:	Kane Enviror	nmental, Inc.							-			
Project:	Bothell Paint							lon Ch	romatogra	ohy by EP	A Method	1 300.0
Sample ID: 19031	96-001AMSD	SampType: MSD			Units: mg/L		Prep Da	te: 3/14/20	19	RunNo: 500	91	
Client ID: BATC	н	Batch ID: 23831					Analysis Da	te: 3/15/20	19	SeqNo: 983	207	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate		70.3	3.00	37.50	28.94	110	80	120	67.06	4.69	20	D



Work Order:1903225CLIENT:Kane EnvirProject:Bothell Pair	onmental, Inc. nt						Dis	QC S solved Met	SUMMAI		-
Sample ID: MB-23888	SampType: MBLK			Units: µg/L		Prep Date	e: 3/20/20	19	RunNo: 501	174	
Client ID: MBLKW	Batch ID: 23888					Analysis Date	e: 3/20/20	19	SeqNo: 98	5077	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.75									
Manganese	ND	2.00									
Sample ID: LCS-23888	SampType: LCS			Units: µg/L		Prep Date	e: 3/20/20	19	RunNo: 501	174	
Client ID: LCSW	Batch ID: 23888					Analysis Date	e: 3/20/20	19	SeqNo: 98	5080	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	95.9	1.75	100.0	0	95.9	85	115				
Manganese	101	2.00	100.0	0	101	85	115				
Sample ID: 1903105-023DDUP	SampType: DUP			Units: µg/L		Prep Date	e: 3/20/20	19	RunNo: 501	174	
Client ID: BATCH	Batch ID: 23888					Analysis Date	e: 3/20/20	19	SeqNo: 98	5082	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.75						0		30	
Manganese	48.6	2.00						47.21	2.90	30	
Sample ID: 1903105-023DMS	SampType: MS			Units: µg/L		Prep Date	e: 3/20/20	19	RunNo: 501	174	
Client ID: BATCH	Batch ID: 23888					Analysis Date	e: 3/20/20	19	SeqNo: 98	5083	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	483	1.75	500.0	0	96.5	70	130				
Manganese	568	2.00	500.0	47.21	104	70	130				
Sample ID: 1903105-023DMSD	SampType: MSD			Units: µg/L		Prep Date	e: 3/20/20	19	RunNo: 501	174	
Client ID: BATCH	Batch ID: 23888					Analysis Date	e: 3/20/20	19	SeqNo: 98	5084	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	472	1.75	500.0	0	94.4	70	130	482.5	2.16	30	
.										Pa	ne 15 of



Work Order: CLIENT: Project:	1903225 Kane Enviror Bothell Paint							Dis	QC S	SUMMAF		
Sample ID: 19031 Client ID: BATC		SampType: MSD Batch ID: 23888			Units: µg/L		Prep Da Analysis Da	ite: 3/20/20 ite: 3/20/20		RunNo: 501 SeqNo: 985		
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese		558	2.00	500.0	47.21	102	70	130	568.2	1.72	30	
Sample ID: MB-23	873FB	SampType: MBLK			Units: µg/L		Prep Da	ite: 3/20/20	019	RunNo: 501	74	
Client ID: MBLK	W	Batch ID: 23888					Analysis Da	ite: 3/20/20)19	SeqNo: 985	6088	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic Manganese		ND ND	1.75 2.00									



Work Order:	1903225								QCS	SUMMAI		PORT
CLIENT:	Kane Enviro	onmental, Inc.							•			-
Project:	Bothell Pair	nt							Total Me	tals by EP	A Method	a 200.8
Sample ID: MB-23	3889	SampType: MBLK			Units: µg/L		Prep Date	e: 3/20/2	019	RunNo: 50 *	176	
Client ID: MBLK	W	Batch ID: 23889					Analysis Date	e: 3/20/2	019	SeqNo: 98	5196	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		ND	1.75									
Sample ID: LCS-2	3889	SampType: LCS			Units: µg/L		Prep Date	e: 3/20/2	019	RunNo: 50	176	
Client ID: LCSW	1	Batch ID: 23889					Analysis Date	e: 3/20/2	019	SeqNo: 98	5197	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		93.9	1.75	100.0	0	93.9	85	115				
Sample ID: 19032	22-001ADUP	SampType: DUP			Units: µg/L		Prep Date	e: 3/20/2	019	RunNo: 50	176	
Client ID: BATC	н	Batch ID: 23889					Analysis Date	e: 3/20/2	019	SeqNo: 98	5199	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		3.12	1.75						3.036	2.62	30	
Sample ID: 19032	22-001AMS	SampType: MS			Units: µg/L		Prep Date	e: 3/20/2	019	RunNo: 50	176	
Client ID: BATC	н	Batch ID: 23889					Analysis Date	e: 3/20/2	019	SeqNo: 98	5200	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		549	1.75	500.0	3.036	109	70	130				
Sample ID: 19032	22-001AMSD	SampType: MSD			Units: µg/L		Prep Date	e: 3/20/2	019	RunNo: 50	176	
Client ID: BATC	н	Batch ID: 23889					Analysis Date	e: 3/20/2	019	SeqNo: 98	5201	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		563	1.75	500.0	3.036	112	70	130	548.9	2.45	30	

Work Order:1903225CLIENT:Kane EnviroProject:Bothell Pair	onmental, Inc.						Diesel	QC S and Heavy	SUMMAI Oil by NW		
Sample ID: MB-23870	SampType: MBLK			Units: µg/L		Prep Dat	te: 3/18/20)19	RunNo: 501	59	
Client ID: MBLKW	Batch ID: 23870					Analysis Dat	te: 3/19/20)19	SeqNo: 984	794	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	49.8									
Heavy Oil	ND	99.7									
Surr: 2-Fluorobiphenyl	78.7		79.72		98.7	50	150				
Surr: o-Terphenyl	84.5		79.72		106	50	150				
Sample ID: LCS-23870	SampType: LCS			Units: µg/L		Prep Dat	te: 3/18/20)19	RunNo: 501	59	
Client ID: LCSW	Batch ID: 23870					Analysis Dat	te: 3/19/20)19	SeqNo: 984	858	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	685	50.2	1,003	0	68.3	65	135				
Surr: 2-Fluorobiphenyl	72.6		80.24		90.5	50	150				
Surr: o-Terphenyl	67.2		80.24		83.7	50	150				
Sample ID: 1903260-001BDUP	SampType: DUP			Units: µg/L		Prep Dat	te: 3/18/20)19	RunNo: 501	59	
Client ID: BATCH	Batch ID: 23870					Analysis Dat	te: 3/19/20)19	SeqNo: 984	859	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	49.8						0		30	
Heavy Oil	ND	99.6						0		30	
Surr: 2-Fluorobiphenyl	159		79.67		199	50	150		0		S
Surr: o-Terphenyl	171		79.67		214	50	150		0		S
NOTES: S - Outlying surrogate recovery(ies) observed.										
Sample ID: LCSD-23870	SampType: LCSD			Units: µg/L		Prep Dat	te: 3/18/20)19	RunNo: 50 1	59	
Client ID: LCSW02	Batch ID: 23870			r-9, =		Analysis Dat			SeqNo: 98		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	•		RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	750	49.6	992.7	0	75.6	65	135	684.6	9.12	30	





Work Order:	1903225								QCS	SUMMAI	RY REF	ORT
CLIENT:	Kane Enviror	nmental, Inc.						Diasol	and Heavy			
Project:	Bothell Paint							Diesei	and neavy			
Sample ID: LCSD-	-23870	SampType: LCSD			Units: µg/L		Prep Da	te: 3/18/20	19	RunNo: 501	59	
Client ID: LCSW	/02	Batch ID: 23870					Analysis Da	te: 3/21/20	19	SeqNo: 985	5736	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: o-Terphen	yl	73.7		79.41		92.8	50	150		0		
Sample ID: 19032	06-001BDUP	SampType: DUP			Units: µg/L		Prep Da	te: 3/18/20	19	RunNo: 501	59	
Client ID: BATCI	н	Batch ID: 23870					Analysis Da	te: 3/21/20	19	SeqNo: 985	5738	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)		ND	49.8						0		30	
Heavy Oil		379	99.6						352.6	7.11	30	
Surr: 2-Fluorobip	phenyl	85.2		79.65		107	50	150		0		
Surr: o-Terphen	yl	76.1		79.65		95.5	50	150		0		

Fremont
Analytical

Work Order: CLIENT: Project:	1903225 Kane Envirc Bothell Pain	onmental, Inc. t								SUMMAI solved Gas		
Sample ID: MB-R	50238	SampType: ME	BLK		Units: mg/L		Prep Date	e: 3/22/20	19	RunNo: 502	238	
Client ID: MBLK	W	Batch ID: R5	50238				Analysis Date	e: 3/22/20	19	SeqNo: 986	6737	
Analyte		Resu	ılt RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane		N	D 0.00863									
Ethene		N	D 0.0151									
Ethane		N	D 0.0162									
Sample ID: LCS-R	50238	SampType: LC	s		Units: mg/L		Prep Date	e: 3/22/20	19	RunNo: 502	238	
Client ID: LCSW		Batch ID: R5	50238				Analysis Date	e: 3/22/20	19	SeqNo: 986	6736	
Analyte		Resu	ılt RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane		1,00	0 0.00863	1,000	0	100	70	130				
Ethene		97	4 0.0151	1,000	0	97.4	70	130				
Ethane		99	0.0162	1,000	0	99.3	70	130				
Sample ID: 19032	25-001EREP	SampType: RE	EP		Units: mg/L		Prep Date	e: 3/22/20	19	RunNo: 502	238	
Client ID: BC-10	:W	Batch ID: R5	50238		_		Analysis Date	e: 3/22/20	19	SeqNo: 986	6725	
Analyte		Resu	ılt RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane		0.099	0.00863						0.08718	13.5	30	
Ethene		N	D 0.0151						0		30	
Ethane		N	D 0.0162						0		30	



Work Order: CLIENT: Project:	1903225 Kane Enviro Bothell Pain		NC.							QC S	Gasoline		
Sample ID: LCS-2	3914	SampType	e: LCS			Units: µg/L		Prep Date	e: 3/21/20	19	RunNo: 502	212	
Client ID: LCSW	1	Batch ID:	23914					Analysis Date	e: 3/21/20	19	SeqNo: 986	6202	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			512	50.0	500.0	0	102	65	135				
Surr: Toluene-d	8		25.4		25.00		102	65	135				
Surr: 4-Bromoflu	uorobenzene		24.7		25.00		98.6	65	135				
Sample ID: LCSD	-23914	SampType	e: LCSD			Units: µg/L		Prep Date	e: 3/21/20	19	RunNo: 502	212	
Client ID: LCSW	/02	Batch ID:	23914					Analysis Date	e: 3/21/20	19	SeqNo: 986	5203	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			489	50.0	500.0	0	97.8	65	135	511.8	4.56	20	
Surr: Toluene-d	8		25.3		25.00		101	65	135		0		
Surr: 4-Bromoflu	uorobenzene		24.8		25.00		99.0	65	135		0		
Sample ID: MB-23	3914	SampType	e: MBLK			Units: µg/L		Prep Date	e: 3/21/20	19	RunNo: 502	212	
Client ID: MBLK	W	Batch ID:	23914					Analysis Date	e: 3/21/20	19	SeqNo: 986	6204	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			ND	50.0									
Surr: Toluene-d	8		25.0		25.00		100	65	135				
Surr: 4-Bromoflu	uorobenzene		24.6		25.00		98.6	65	135				
Sample ID: 19032	25-002BDUP	SampType	e: DUP			Units: µg/L		Prep Date	e: 3/21/20	19	RunNo: 502	212	
Client ID: S-1:W	,	Batch ID:	23914					Analysis Date	e: 3/21/20	19	SeqNo: 986	6195	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline			ND	50.0						0		30	
Surr: Toluene-d	8		25.1		25.00		101	65	135		0		
Surr: 4-Bromoflu	uorobenzene		24.5		25.00		97.9	65	135		0		



Work Order: CLIENT: Project:	1903225 Kane Envirc Bothell Pain	onmental, Inc. It							QC S	SUMMAI Gasoline		-
Sample ID: 19032 Client ID: BATCI		SampType: DUP Batch ID: 23914			Units: µg/L		Prep Dat Analysis Dat	e: 3/21/20		RunNo: 502 SeqNo: 986		
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline		ND	50.0						0		30	
Surr: Toluene-d8	3	25.4		25.00		102	65	135		0		
Surr: 4-Bromoflu	iorobenzene	23.8		25.00		95.4	65	135		0		



Project:

CLIENT: Kane Environmental, Inc. **Bothell Paint**

QC SUMMARY REPORT

Sample ID: LCS-23914	SampType: LCS			Units: µg/L		Prep Da	te: 3/21/20	19	RunNo: 502	213	
Client ID: LCSW	Batch ID: 23914					Analysis Da	te: 3/21/20	19	SeqNo: 986	6224	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	28.7	1.00	20.00	0	144	18.7	171				
Chloromethane	19.0	2.00	20.00	0	95.0	38.5	171				
Vinyl chloride	23.4	0.200	20.00	0	117	48	145				
Bromomethane	43.7	1.00	20.00	0	218	32.5	184				S
Trichlorofluoromethane (CFC-11)	23.7	1.00	20.00	0	118	43.5	149				
Chloroethane	23.6	1.00	20.00	0	118	43.8	168				
1,1-Dichloroethene	22.8	1.00	20.00	0	114	57.5	150				
Methylene chloride	22.1	1.00	20.00	0	111	67.1	131				
trans-1,2-Dichloroethene	22.1	1.00	20.00	0	110	71.7	129				
1,1-Dichloroethane	22.2	1.00	20.00	0	111	67.9	134				
2,2-Dichloropropane	21.0	2.00	20.00	0	105	26.5	185				
cis-1,2-Dichloroethene	21.9	1.00	20.00	0	110	70.2	139				
Chloroform	22.2	1.00	20.00	0	111	66.3	131				
1,1,1-Trichloroethane (TCA)	22.5	1.00	20.00	0	112	63	140				
1,1-Dichloropropene	22.4	1.00	20.00	0	112	69.9	124				
Carbon tetrachloride	22.3	1.00	20.00	0	111	66.2	134				
1,2-Dichloroethane (EDC)	21.9	1.00	20.00	0	109	67	126				
Benzene	22.3	1.00	20.00	0	112	69.3	132				
Trichloroethene (TCE)	23.1	0.500	20.00	0	115	65.2	136				
1,2-Dichloropropane	21.6	1.00	20.00	0	108	70.5	130				
Bromodichloromethane	22.0	1.00	20.00	0	110	67.2	137				
Dibromomethane	21.8	1.00	20.00	0	109	69.3	143				
cis-1,3-Dichloropropene	20.9	1.00	20.00	0	105	62.6	137				
Toluene	22.1	1.00	20.00	0	110	61.3	145				
trans-1,3-Dichloropropylene	20.4	1.00	20.00	0	102	56.5	163				
1,1,2-Trichloroethane	21.1	1.00	20.00	0	106	71.7	131				
1,3-Dichloropropane	21.1	1.00	20.00	0	106	73.5	127				
Tetrachloroethene (PCE)	21.2	1.00	20.00	0	106	47.5	147				
Dibromochloromethane	20.8	1.00	20.00	0	104	67.2	134				
1,2-Dibromoethane (EDB)	20.8	0.250	20.00	0	104	73.6	125				
Chlorobenzene	21.3	1.00	20.00	0	106	73.9	126				



CLIENT: Kane Environmental, Inc.

QC SUMMARY REPORT

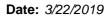
Volatile Organic Compounds by EPA Method 8260C

Sample ID: LCS-23914	SampType: LCS			Units: µg/L		Prep Date	e: 3/21/201	9	RunNo: 502	213	
Client ID: LCSW	Batch ID: 23914					Analysis Date	e: 3/21/201	9	SeqNo: 986	6224	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit I	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.4	1.00	20.00	0	102	76.8	124				
Ethylbenzene	22.9	1.00	20.00	0	115	72	130				
n,p-Xylene	43.3	1.00	40.00	0	108	70.3	134				
o-Xylene	20.9	1.00	20.00	0	105	72.1	131				
Bromoform	19.1	2.00	20.00	0	95.3	55.3	141				
1,1,2,2-Tetrachloroethane	18.8	1.00	20.00	0	93.8	62.9	132				
Bromobenzene	20.3	1.00	20.00	0	102	71	131				
2-Chlorotoluene	24.4	1.00	20.00	0	122	70.8	130				
4-Chlorotoluene	21.8	1.00	20.00	0	109	70.1	131				
1,2,3-Trichloropropane	20.4	1.00	20.00	0	102	67.7	131				
1,2,4-Trichlorobenzene	19.4	2.00	20.00	0	97.0	41	139				
I,3-Dichlorobenzene	21.6	1.00	20.00	0	108	69.5	128				
1,4-Dichlorobenzene	21.8	1.00	20.00	0	109	66.8	119				
1,2-Dichlorobenzene	21.3	1.00	20.00	0	107	69.7	119				
,2-Dibromo-3-chloropropane	21.2	1.00	20.00	0	106	63.1	136				
Hexachloro-1,3-butadiene	19.8	4.00	20.00	0	99.1	58.6	138				
1,2,3-Trichlorobenzene	19.6	4.00	20.00	0	97.8	35.8	155				
Surr: Dibromofluoromethane	24.8		25.00		99.1	45.4	152				
Surr: Toluene-d8	26.2		25.00		105	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.8		25.00		103	64.2	128				
NOTES: S - Outlying spike recovery observ	und (high high) Complete	ara nan da	toot for this on	alutar as further ast	on roquiro	d					
		are non-de			on require			•	Durables 500		
Sample ID: MB-23914	SampType: MBLK			Units: µg/L			e: 3/21/201		RunNo: 502		
Client ID: MBLKW	Batch ID: 23914					Analysis Dat	e: 3/21/201	9	SeqNo: 986	5225	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit I	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00									
Chloromethane	ND	2.00									Q
Vinyl chloride	ND	0.200									

Bromomethane

ND

1.00



Fremont
Analytical

Work Order: 1903225							000	SUMMAI		
CLIENT: Kane Envir	onmental, Inc.						• -			_
Project: Bothell Pair						Volatile	Organic Compoun	ds by EPA	Method	8260C
Sample ID: MB-23914	SampType: MBLK			Units: µg/L		Bron Do	te: 3/21/2019	RunNo: 502	14.2	
				onits. µg/L						
Client ID: MBLKW	Batch ID: 23914					Analysis Da	te: 3/21/2019	SeqNo: 986	6225	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	ND	1.00								
Chloroethane	ND	1.00								
1,1-Dichloroethene	ND	1.00								
Methylene chloride	ND	1.00								
trans-1,2-Dichloroethene	ND	1.00								
1,1-Dichloroethane	ND	1.00								
2,2-Dichloropropane	ND	2.00								
cis-1,2-Dichloroethene	ND	1.00								
Chloroform	ND	1.00								
1,1,1-Trichloroethane (TCA)	ND	1.00								
1,1-Dichloropropene	ND	1.00								
Carbon tetrachloride	ND	1.00								
1,2-Dichloroethane (EDC)	ND	1.00								
Benzene	ND	1.00								
Trichloroethene (TCE)	ND	0.500								
1,2-Dichloropropane	ND	1.00								
Bromodichloromethane	ND	1.00								
Dibromomethane	ND	1.00								
cis-1,3-Dichloropropene	ND	1.00								
Toluene	ND	1.00								
trans-1,3-Dichloropropylene	ND	1.00								
1,1,2-Trichloroethane	ND	1.00								
1,3-Dichloropropane	ND	1.00								
Tetrachloroethene (PCE)	ND	1.00								
Dibromochloromethane	ND	1.00								
1,2-Dibromoethane (EDB)	ND	0.250								
Chlorobenzene	ND	1.00								
1,1,1,2-Tetrachloroethane	ND	1.00								
Ethylbenzene	ND	1.00								
m,p-Xylene	ND	1.00								
o-Xylene	ND	1.00								
,										

Fremont
Analytical

CLIENT: K	903225 íane Environn othell Paint	nental, Ind	с.					Volatile	Organio	QC S Compoun	SUMMA		-
Sample ID: MB-23914	1	SampType	MBLK			Units: µg/L		Prep Da	ite: 3/21/20)19	RunNo: 50	213	
Client ID: MBLKW		Batch ID:	23914					Analysis Da	ite: 3/21/20)19	SeqNo: 98	6225	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform			ND	2.00									
1,1,2,2-Tetrachloroeth	ane		ND	1.00									
Bromobenzene			ND	1.00									
2-Chlorotoluene			ND	1.00									
4-Chlorotoluene			ND	1.00									
1,2,3-Trichloropropane	e		ND	1.00									
1,2,4-Trichlorobenzen	e		ND	2.00									
1,3-Dichlorobenzene			ND	1.00									
1,4-Dichlorobenzene			ND	1.00									
1,2-Dichlorobenzene			ND	1.00									
1,2-Dibromo-3-chlorop	oropane		ND	1.00									
Hexachloro-1,3-butadi	ene		ND	4.00									
1,2,3-Trichlorobenzen	e		ND	4.00									
Surr: Dibromofluoro	methane		24.4		25.00		97.7	45.4	152				
Surr: Toluene-d8			26.1		25.00		104	40.1	139				
Surr: 1-Bromo-4-flue	orobenzene		25.0		25.00		99.9	64.2	128				

NOTES:

Sample ID: 1903225-002BDUP	SampType: DUP			Units: µg/L		Prep Da	te: 3/21/20)19	RunNo: 502	213	
Client ID: S-1:W	Batch ID: 23914					Analysis Da	te: 3/21/20)19	SeqNo: 986	6207	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	Q
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	



CLIENT: Kane Environmental, Inc.

Project: Bothell Paint

QC SUMMARY REPORT

Sample ID: 1903225-002BDUP	SampType: DUP			Units: µg/L		Prep Da	te: 3/21/20)19	RunNo: 502	213	
Client ID: S-1:W	Batch ID: 23914					Analysis Da	ite: 3/21/20)19	SeqNo: 986	6207	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,2-Dichloroethene	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
										Pa	<u>1e 27 o</u>



CLIENT: Kane Environmental, Inc.

Project: Bothell Paint

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1903225-002BDUP	SampType: DUP			Units: µg/L		Prep Da	ate: 3/21/2	019	RunNo: 50	213	
Client ID: S-1:W	Batch ID: 23914					Analysis Da	ate: 3/21/2	019	SeqNo: 98	6207	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.4		25.00		97.6	45.4	152		0		
Surr: Toluene-d8	25.9		25.00		104	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.8		25.00		99.3	64.2	128		0		

NOTES:

Sample ID: 1903230-001BDUP	SampType: DUP			Units: µg/L		Prep Da	ite: 3/21/20)19	RunNo: 502	213	
Client ID: BATCH	Batch ID: 23914					Analysis Da	ite: 3/22/20)19	SeqNo: 986	6211	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	2.00						0		30	Q
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	



CLIENT: Kane Environmental, Inc.

Project: Bothell Paint

QC SUMMARY REPORT

Sample ID: 1903230-001BDUP	SampType: DUP			Units: µg/L		Prep Da	te: 3/21/20)19	RunNo: 502	213	
Client ID: BATCH	Batch ID: 23914					Analysis Da	ite: 3/22/20)19	SeqNo: 986	6211	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Foluene	ND	1.00						0		30	
rans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
										Pa	<u>16 29 o</u>



CLIENT: Kane Environmental, Inc.

Project: Bothell Paint

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1903230-001BDUP SampType: DUP				Units: µg/L		Prep Da	te: 3/21/20)19	RunNo: 50213		
Client ID: BATCH	Batch ID: 23914		Analysis Date: 3/22/2019		SeqNo: 986211						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dichlorobenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	25.2		25.00		101	45.4	152		0		
Surr: Toluene-d8	25.9		25.00		104	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.2		25.00		96.7	64.2	128		0		

NOTES:

Sample ID: 1903253-002AMS	SampType: MS				Units: µg/L		Prep Date:		19	RunNo: 502	213		
Client ID: BATCH	Batch ID:	23914					Analysis Date: 3/22/2019				SeqNo: 986218		
Analyte	I	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Dichlorodifluoromethane (CFC-12)		28.8	1.00	20.00	0	144	33.3	122				S	
Chloromethane		19.5	2.00	20.00	0	97.4	39.7	143					
Vinyl chloride		24.1	0.200	20.00	0	121	41	165					
Bromomethane		48.5	1.00	20.00	0	243	31.5	135				S	
Trichlorofluoromethane (CFC-11)		25.5	1.00	20.00	0	128	54.7	138					
Chloroethane		24.9	1.00	20.00	0	125	49.9	143					
1,1-Dichloroethene		24.7	1.00	20.00	0	124	51.6	164					
Methylene chloride		30.1	1.00	20.00	6.155	120	61.6	135					
trans-1,2-Dichloroethene		23.6	1.00	20.00	0	118	63.5	138					
1,1-Dichloroethane		23.8	1.00	20.00	0	119	55.7	151					
2,2-Dichloropropane		19.6	2.00	20.00	0	97.8	37.7	150					
cis-1,2-Dichloroethene		23.4	1.00	20.00	0.5933	114	60	154					
Chloroform		24.5	1.00	20.00	1.153	117	48.1	140					
1,1,1-Trichloroethane (TCA)		24.3	1.00	20.00	0	121	64.2	146					
1,1-Dichloropropene		24.2	1.00	20.00	0	121	73.8	136					
Carbon tetrachloride		24.3	1.00	20.00	0	122	62.7	146					



Project:

CLIENT: Kane Environmental, Inc. **Bothell Paint**

QC SUMMARY REPORT

Sample ID: 1903253-002AMS	SampType: MS			Units: µg/L		Prep Da	te: 3/21/20	19	RunNo: 502	213	
Client ID: BATCH	Batch ID: 23914					Analysis Da	te: 3/22/20	19	SeqNo: 986	6218	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane (EDC)	23.3	1.00	20.00	0.4049	115	63.4	137				
Benzene	23.8	1.00	20.00	0	119	65.4	138				
Trichloroethene (TCE)	23.8	0.500	20.00	0	119	60.4	134				
1,2-Dichloropropane	23.0	1.00	20.00	0	115	62.6	138				
Bromodichloromethane	23.1	1.00	20.00	0	116	59.4	139				
Dibromomethane	22.6	1.00	20.00	0	113	58.7	148				
cis-1,3-Dichloropropene	21.3	1.00	20.00	0	107	63.8	132				
Toluene	23.2	1.00	20.00	0	116	52	147				
trans-1,3-Dichloropropylene	20.5	1.00	20.00	0	102	57.7	125				
1,1,2-Trichloroethane	22.0	1.00	20.00	0	110	57.5	153				
1,3-Dichloropropane	21.7	1.00	20.00	0	109	54.1	157				
Tetrachloroethene (PCE)	22.0	1.00	20.00	0	110	50.3	133				
Dibromochloromethane	21.2	1.00	20.00	0	106	61.6	139				
1,2-Dibromoethane (EDB)	21.3	0.250	20.00	0	107	63.2	134				
Chlorobenzene	22.3	1.00	20.00	0	111	65.8	134				
1,1,1,2-Tetrachloroethane	21.5	1.00	20.00	0	108	65.4	135				
Ethylbenzene	24.0	1.00	20.00	0	120	64.5	136				
m,p-Xylene	44.8	1.00	40.00	0	112	63.3	135				
o-Xylene	21.8	1.00	20.00	0	109	64.8	150				
Bromoform	19.5	2.00	20.00	0	97.4	57.7	139				
1,1,2,2-Tetrachloroethane	21.0	1.00	20.00	0	105	59.8	146				
Bromobenzene	20.9	1.00	20.00	0	105	69.3	157				
2-Chlorotoluene	25.2	1.00	20.00	0	126	61.7	134				
4-Chlorotoluene	22.6	1.00	20.00	0	113	58.4	134				
1,2,3-Trichloropropane	21.2	1.00	20.00	0	106	62.4	129				
1,2,4-Trichlorobenzene	19.1	2.00	20.00	0	95.4	50.9	133				
1,3-Dichlorobenzene	22.0	1.00	20.00	0	110	58.2	128				
1,4-Dichlorobenzene	22.1	1.00	20.00	0	111	60.1	123				
1,2-Dichlorobenzene	21.6	1.00	20.00	0	108	65.4	133				
1,2-Dibromo-3-chloropropane	24.8	1.00	20.00	0	124	51.8	142				
Hexachloro-1,3-butadiene	19.8	4.00	20.00	0	99.2	58.1	130				



Work Order:1903225CLIENT:Kane EnvirProject:Bothell Pai	ronmental, Inc. nt					Volatile	Organic	QC S Compound	SUMMAF		
Sample ID: 1903253-002AMS	SampType: MS			Units: µg/L		Prep Date	e: 3/21/20	19	RunNo: 502	213	
Client ID: BATCH	Batch ID: 23914					Analysis Date	e: 3/22/20	19	SeqNo: 986	6218	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trichlorobenzene	20.0	4.00	20.00	0	100	57	131				
Surr: Dibromofluoromethane	25.5		25.00		102	45.4	152				
Surr: Toluene-d8	26.0		25.00		104	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.7		25.00		103	64.2	128				
NOTES: S - Outlying spike recovery(ies)	observed.										
Sample ID: 1903253-002AMSD	SampType: MSD			Units: µg/L		Prep Date	e: 3/21/20	19	RunNo: 502	213	
Client ID: BATCH	Batch ID: 23914					Analysis Date	e: 3/22/20	19	SeqNo: 986	6219	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Dichlorodifluoromethane (CFC-12)) 27.6	1.00	20.00	0	138	33.3	122	28.82	4.20	30	S
Chloromethane	19.7	2.00	20.00	0	98.6	39.7	143	19.48	1.23	30	
Vinyl chloride	24.4	0.200	20.00	0	122	41	165	24.12	1.31	30	
Bromomethane	51.3	1.00	20.00	0	256	31.5	135	48.51	5.50	30	S
Trichlorofluoromethane (CFC-11)	25.0	1.00	20.00	0	125	54.7	138	25.54	2.02	30	
Chloroethane	25.1	1.00	20.00	0	125	49.9	143	24.91	0.611	30	
1,1-Dichloroethene	24.2	1.00	20.00	0	121	51.6	164	24.72	2.26	30	
Methylene chloride	33.7	1.00	20.00	6.155	138	61.6	135	30.14	11.0	30	S
trans-1,2-Dichloroethene	23.3	1.00	20.00	0	116	63.5	138	23.60	1.33	30	
1,1-Dichloroethane	23.4	1.00	20.00	0	117	55.7	151	23.81	1.91	30	
2,2-Dichloropropane	19.1	2.00	20.00	0	95.7	37.7	150	19.56	2.20	30	
cis-1,2-Dichloroethene	23.0	1.00	20.00	0.5933	112	60	154	23.36	1.49	30	
Chloroform	24.0	1.00	20.00	1.153	114	48.1	140	24.52	2.30	30	
1,1,1-Trichloroethane (TCA)	23.8	1.00	20.00	0	119	64.2	146	24.27	2.06	30	
1,1-Dichloropropene	24.0	1.00	20.00	0	120	73.8	136	24.23	1.12	30	
Carbon tetrachloride	23.9	1.00	20.00	0	119	62.7	146	24.32	1.80	30	
1,2-Dichloroethane (EDC)	23.0	1.00	20.00	0.4049	113	63.4	137	23.34	1.54	30	
Benzene	23.4	1.00	20.00	0	117	65.4	138	23.79	1.87	30	
Trichloroethene (TCE)	23.2	0.500	20.00	0	116	60.4	134	23.75	2.38	30	
1,2-Dichloropropane	22.6	1.00	20.00	0	113	62.6	138	22.98	1.65	30	



CLIENT: Kane Environmental, Inc.

Project: Bothell Paint

QC SUMMARY REPORT

Sample ID: 1903253-002AMSD	SampType: MSD			Units: µg/L		Prep Dat	e: 3/21/20	19	RunNo: 502	213	
Client ID: BATCH	Batch ID: 23914					Analysis Dat	te: 3/22/20	19	SeqNo: 986	6219	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromodichloromethane	22.8	1.00	20.00	0	114	59.4	139	23.11	1.46	30	
Dibromomethane	22.1	1.00	20.00	0	111	58.7	148	22.64	2.30	30	
cis-1,3-Dichloropropene	21.2	1.00	20.00	0	106	63.8	132	21.33	0.765	30	
Toluene	23.2	1.00	20.00	0	116	52	147	23.20	0.0915	30	
trans-1,3-Dichloropropylene	20.5	1.00	20.00	0	103	57.7	125	20.47	0.340	30	
1,1,2-Trichloroethane	21.6	1.00	20.00	0	108	57.5	153	21.97	1.70	30	
1,3-Dichloropropane	21.5	1.00	20.00	0	107	54.1	157	21.75	1.16	30	
Tetrachloroethene (PCE)	22.0	1.00	20.00	0	110	50.3	133	22.00	0.152	30	
Dibromochloromethane	21.3	1.00	20.00	0	106	61.6	139	21.22	0.235	30	
1,2-Dibromoethane (EDB)	21.2	0.250	20.00	0	106	63.2	134	21.32	0.564	30	
Chlorobenzene	22.2	1.00	20.00	0	111	65.8	134	22.26	0.259	30	
1,1,1,2-Tetrachloroethane	21.2	1.00	20.00	0	106	65.4	135	21.53	1.62	30	
Ethylbenzene	23.8	1.00	20.00	0	119	64.5	136	24.00	0.677	30	
m,p-Xylene	45.1	1.00	40.00	0	113	63.3	135	44.75	0.688	30	
o-Xylene	22.1	1.00	20.00	0	110	64.8	150	21.77	1.31	30	
Bromoform	19.6	2.00	20.00	0	98.2	57.7	139	19.47	0.858	30	
1,1,2,2-Tetrachloroethane	21.0	1.00	20.00	0	105	59.8	146	20.97	0.0905	30	
Bromobenzene	21.0	1.00	20.00	0	105	69.3	157	20.93	0.296	30	
2-Chlorotoluene	25.2	1.00	20.00	0	126	61.7	134	25.22	0.00888	30	
4-Chlorotoluene	22.6	1.00	20.00	0	113	58.4	134	22.56	0.00882	30	
1,2,3-Trichloropropane	20.8	1.00	20.00	0	104	62.4	129	21.16	1.68	30	
1,2,4-Trichlorobenzene	19.6	2.00	20.00	0	98.1	50.9	133	19.08	2.76	30	
1,3-Dichlorobenzene	22.3	1.00	20.00	0	111	58.2	128	22.04	0.951	30	
1,4-Dichlorobenzene	22.3	1.00	20.00	0	111	60.1	123	22.14	0.682	30	
1,2-Dichlorobenzene	22.0	1.00	20.00	0	110	65.4	133	21.59	1.72	30	
1,2-Dibromo-3-chloropropane	28.1	1.00	20.00	0	140	51.8	142	24.83	12.3	30	
Hexachloro-1,3-butadiene	20.2	4.00	20.00	0	101	58.1	130	19.83	1.91	30	
1,2,3-Trichlorobenzene	20.1	4.00	20.00	0	101	57	131	20.02	0.557	30	
Surr: Dibromofluoromethane	25.4		25.00		102	45.4	152		0		
Surr: Toluene-d8	26.2		25.00		105	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	25.8		25.00		103	64.2	128		0		



Work Order: CLIENT: Project:	1903225 Kane Environmental, In Bothell Paint								QC SUMMARY REPORT ganic Compounds by EPA Method 8260C					
Sample ID: 19032 Client ID: BATC		MSD 23914			Units: µg/L		Prep Dat Analysis Dat	te: 3/21/20		RunNo: 502 SeqNo: 986				
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	,		RPD Ref Val	%RPD	RPDLimit	Qual		

NOTES:

S - Outlying spike recovery(ies) observed.



Sample Log-In Check List

Client Nan	ne: KANE	Work Order Num	ber: 1903225	
Logged by	: Brianna Barnes	Date Received:	3/15/2019	9 12:30:00 PM
Chain of C	<u>Sustody</u>			
1. Is Chair	of Custody complete?	Yes 🖌	No 🗌	Not Present
2. How wa	s the sample delivered?	Client		
<u>Log In</u>				
-	are present?	Yes 🖌	No 🗌	NA 🗌
4. Shippin	g container/cooler in good condition?	Yes 🖌	No 🗌	
	 Seals present on shipping container/cooler? comments for Custody Seals not intact) 	Yes	No 🗌	Not Required 🗹
6. Was an	attempt made to cool the samples?	Yes 🖌	No 🗌	
7. Were a	l items received at a temperature of >0°C to 10.0°C*	Yes 🔽	No 🗌	
8. Sample	(s) in proper container(s)?	Yes 🖌	No 🗌	
9. Sufficie	nt sample volume for indicated test(s)?	Yes 🖌	No 🗌	
10. Are san	nples properly preserved?	Yes 🗹	No 🗌	
11. Was pre	eservative added to bottles?	Yes 🖌	No 🗌	NA 🗌
				NO3 added to 001C
	headspace in the VOA vials?	Yes 🗌	No 🗹	NA 📖
	amples containers arrive in good condition(unbroken)?	Yes 🗹	No 🗌	
14. Does pa	aperwork match bottle labels?	Yes 🗹	No 🗌	
15. Are mat	rices correctly identified on Chain of Custody?	Yes 🖌	No 🗌	
16. Is it clea	ar what analyses were requested?	Yes 🗹	No 🗌	
17. Were al	I holding times able to be met?	Yes 🖌	No 🗌	
<u>Special Ha</u>	andling (if applicable)			
-	ent notified of all discrepancies with this order?	Yes	No 🗌	NA 🔽
Pe	rson Notified: Date			
Ву	Whom: Via:	eMail Ph	one 🗌 Fax	In Person
Re	garding:			
Cli	ent Instructions:			
19. Addition	al remarks:			

Item Information

Item #	Temp ⁰C
Cooler	5.6
Sample	5.3
Temp Blank	2.1

^{*} Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

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	I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to 3 Day	I represent that I am authorized to enter into this Agreement w
il.	O-Phosphate Fluoride Nitrate+Nitrite	***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide
1	Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti TI U V Zn 🗙 Standard	**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Indiv
	P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water Turn-around Time:	*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD
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6 of	thame: Bothell Paint	Analytical Fax: 206-352-7178
36	Date: 3/15/19 Page: 1 of: 1 Laboratory Project No (internal): 003225	TICHIOIL Seattle, WA 98103 Tel: 206-352-3790
1	Chain of Custody Record & Laboratory Services Agreement	30



3600 Fremont Ave. N. Seattle, WA 98103 T: (206) 352-3790 F: (206) 352-7178 info@fremontanalytical.com

Kane Environmental, Inc. Jeff Jensen 4015 13th Ave W. Seattle, WA 98103

RE: Hertz Work Order Number: 1903045

March 12, 2019

Attention Jeff Jensen:

Fremont Analytical, Inc. received 4 sample(s) on 3/5/2019 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext. Dissolved Gases by RSK-175 Dissolved Metals by EPA Method 200.8 Ion Chromatography by EPA Method 300.0 Total Metals by EPA Method 200.8 Total Alkalinity by SM 2320B

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005 ORELAP Certification: WA 100009-007 (NELAP Recognized)



CLIENT: Project: Work Order:	Kane Environmental, Inc. Hertz 1903045	Work Order S	Sample Summary
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1903045-001	HZ-MW-19:W	03/05/2019 12:20 PM	03/05/2019 6:07 PM
1903045-002	HZ-MW-1:W	03/05/2019 2:45 PM	03/05/2019 6:07 PM
1903045-003	HZ-MW-4:W	03/05/2019 3:43 PM	03/05/2019 6:07 PM
1903045-004	HZ-MW-17:W	03/05/2019 4:50 PM	03/05/2019 6:07 PM



Case Narrative

WO#: **1903045** Date: **3/12/2019**

CLIENT:Kane Environmental, Inc.Project:Hertz

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers & Acronyms



WO#: **1903045** Date Reported: **3/12/2019**

Qualifiers:

- * Flagged value is not within established control limits
- B Analyte detected in the associated Method Blank
- D Dilution was required
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- I Analyte with an internal standard that does not meet established acceptance criteria
- J Analyte detected below Reporting Limit
- N Tentatively Identified Compound (TIC)
- Q Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- (<20%RSD, <20% Drift or minimum RRF)
- S Spike recovery outside accepted recovery limits
- ND Not detected at the Reporting Limit
- R High relative percent difference observed

Acronyms:

%Rec - Percent Recovery **CCB** - Continued Calibration Blank CCV - Continued Calibration Verification **DF** - Dilution Factor HEM - Hexane Extractable Material **ICV** - Initial Calibration Verification LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate MB or MBLANK - Method Blank MDL - Method Detection Limit MS/MSD - Matrix Spike / Matrix Spike Duplicate PDS - Post Digestion Spike Ref Val - Reference Value **RL - Reporting Limit RPD** - Relative Percent Difference SD - Serial Dilution SGT - Silica Gel Treatment SPK - Spike Surr - Surrogate



Client: Kane Environmental, Inc.		Collection Date: 3/5/2019 12:20:00 PM						
Project: Hertz								
Lab ID: 1903045-001			N	latrix: G	roun	dwater		
Client Sample ID: HZ-MW-19:W								
Analyses	Result	RL	Qual	Units	DF	Date Analyzed		
Dissolved Gases by RSK-175				Batch	h ID:	R49857 Analyst: AD		
Methane	0.0332	0.00863		mg/L	1	3/6/2019 3:37:00 PM		
Diesel and Heavy Oil by NWTPH-D	<u>k/Dx Ext.</u>			Batch	h ID:	23739 Analyst: DW		
Diesel (Fuel Oil)	ND	49.2		µg/L	1	3/9/2019 12:36:18 AM		
Diesel Range Organics (C12-C24)	210	49.2		μg/L	1	3/9/2019 12:36:18 AM		
Heavy Oil	ND	98.5		μg/L	1	3/9/2019 12:36:18 AM		
Surr: 2-Fluorobiphenyl	92.4	50 - 150		%Rec	1	3/9/2019 12:36:18 AM		
Surr: o-Terphenyl	93.2	50 - 150		%Rec	1	3/9/2019 12:36:18 AM		
NOTES:								
DRO - Indicates the presence of unresolved	compounds el	uting from dode	ecane throug	gh tetracosa	ne (~	C12-C24).		
Ion Chromatography by EPA Metho	od 300.0			Batch	h ID:	23738 Analyst: TN		
Nitrate (as N)	0.414	0.100	н	mg/L	1	3/7/2019 11:46:00 PM		
Nitrate (as N)	0.429	0.100	*	mg/L	1	3/6/2019 9:43:00 PM		
Sulfate	8.98	0.300		mg/L	1	3/7/2019 11:46:00 PM		
NOTES:								
* - Flagged value is not within established co	ontrol limits.							
Dissolved Metals by EPA Method 200.8 Batch ID: 23752 Analyst: W						23752 Analyst: WC		
Manganese	136	2.00		µg/L	1	3/8/2019 2:21:53 PM		
Total Alkalinity by SM 2320B				Batch ID: R49913 Analyst: M				
Alkalinity, Total (As CaCO3)	162	2.50		mg/L	1	3/7/2019 11:00:00 AM		



Client: Kane Environmental, Inc. Collection Date: 3/5/2019 2:45:00 PM Desired: Userte						3/5/2019 2:45:00 PM			
Project:	Hertz								
Lab ID:	1903045-002				Matrix: G	roundwa	iter		
Client Sa	ample ID: HZ-MW-1:W								
Analyse	S	Result	RL	Qual	Units	DF	Date Analyzed		
Dissolv	Dissolved Metals by EPA Method 200.8				Batch ID: 23752 Analyst: WC				
Arsenic		ND	1.75		µg/L	1	3/8/2019 2:46:06 PM		
<u>Total N</u>	letals by EPA Method 200.8				Batch	n ID: 237	755 Analyst: WC		
Arsenic		ND	1.75		µg/L	1	3/8/2019 4:31:02 PM		



Client: Kane Environmental, Inc. Collection Date: 3/5/2019 3:43:00 PM Desired: Userter							3/5/2019 3:43:00 PM		
Project:	Hertz								
Lab ID:	1903045-003				Matrix: G	roundwa	ter		
Client Sa	ample ID: HZ-MW-4:W								
Analyse	s	Result	RL	Qual	Units	DF	Date Analyzed		
Dissolv	Dissolved Metals by EPA Method 200.8				Batch ID: 23752 Analyst: WC				
Arsenic		ND	1.75		µg/L	1	3/8/2019 2:50:08 PM		
<u>Total N</u>	Ietals by EPA Method 200.8				Batch	n ID: 237	755 Analyst: WC		
Arsenic		ND	1.75		µg/L	1	3/8/2019 4:35:04 PM		



Client:	Kane Environmental, Inc.	nmental, Inc. Collection Date: 3/5/2019 4:50:00 PM								
Project:	Hertz									
Lab ID:	1903045-004	Matrix: Groundwater								
Client Sa	ample ID: HZ-MW-17:W									
Analyse	S	Result	RL	Qual	Qual Units DF Date Analyze					
Dissolv	red Metals by EPA Method 2	200.8			Batch	n ID: 237	752 Analyst: WC			
Arsenic		ND	1.75		μg/L	1	3/8/2019 2:54:10 PM			
<u>Total M</u>	letals by EPA Method 200.8	<u>1</u>			Batch	n ID: 237	755 Analyst: WC			
Arsenic		2.96	1.75		µg/L	1	3/8/2019 4:39:06 PM			



CLIENT:	1903045 Kane Envirc Hertz	onmental, In	C.								SUMMAI al Alkalini		-
Sample ID MB-R49	913	SampType				Units: mg/L		Prep Date:			RunNo: 499		
Client ID: MBLKW Analyte	I	Batch ID: F	R49913 Result	RL	SPK value	SPK Ref Val	%REC	Analysis Date: LowLimit H			SeqNo: 978 %RPD	RPDLimit	Qual
Alkalinity, Total (As	CaCO3)		ND	2.50									
Sample ID LCS-R4	9913	SampType	LCS			Units: mg/L		Prep Date:	3/7/2019)	RunNo: 499	913	
Client ID: LCSW		Batch ID:	R49913					Analysis Date:	3/7/2019)	SeqNo: 978	3794	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	ighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As	CaCO3)		101	2.50	100.0	0	101	80	120				
Sample ID 1903027	7-028BDUP	SampType	DUP			Units: mg/L		Prep Date:	3/7/2019)	RunNo: 499	913	
Client ID: BATCH		Batch ID:	R49913					Analysis Date:	3/7/2019)	SeqNo: 978	3796	
Analyte		F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	ighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As	CaCO3)		371	2.50						373.1	0.669	20	



Work Order:	1903045								QC	SUMMA	RY REF	POR
CLIENT:	Kane Enviror	nmental, Inc.						lon Ch	romotoara	nhy hy ED	A Mothod	1 200
Project:	Hertz								romatogra		A Method	1 300.
Sample ID LCS-23	719	SampType: LC	s		Units: mg/L		Prep Da	ite: 3/6/20	19	RunNo: 498	374	
Client ID: LCSW		Batch ID: 23	719				Analysis Da	ate: 3/6/20	19	SeqNo: 977	7978	
Analyte		Resu	ilt R	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vitrate (as N) NOTES:	, initial and investion	0.44			0	59.1	90	110				S*
Sample ID MB-237		n verification. Sam SampType: ME		ged with a .	Units: mg/L		Brop Do	nte: 3/6/20	10	RunNo: 498	74	
Client ID: MBLKV		Batch ID: 23			onits. Ing/L		Analysis Da		-	SeqNo: 977		
Analyte		Resu		L SPK value	SPK Ref Val	%REC	-		RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)		N	D 0.10	0								*
NOTES:	ic not within oct	ablished control lin	nite									
* - Flagged value	15 HOL WILLING ESIG		mis.									
		SampType: DU			Units: mg/L		Prep Da	ite: 3/6/20	19	RunNo: 498	374	
Sample ID 190305	5-015BDUP		JP		Units: mg/L		Prep Da Analysis Da			RunNo: 498 SeqNo: 97 7		
Sample ID 190305 Client ID: BATCH	5-015BDUP	SampType: DU	JP 719	L SPK value	Units: mg/L SPK Ref Val	%REC	Analysis Da	ate: 3/6/20				Qual
Sample ID 190305 Client ID: BATCH Analyte	5-015BDUP	SampType: DU Batch ID: 23	JP 1 719 Ilt R		-		Analysis Da	ate: 3/6/20	19	SeqNo: 977	7981	Qual
Sample ID 1903055 Client ID: BATCH Analyte Nitrate (as N) NOTES:	5-015BDUP	SampType: DU Batch ID: 23 Resul	JP 5 719 Ilt R 1 0.10		-		Analysis Da	ate: 3/6/20	19 RPD Ref Val	SeqNo: 977 %RPD	7981 RPDLimit	
Sample ID 1903053 Client ID: BATCH Analyte Nitrate (as N) NOTES: * - Flagged value	5-015BDUP	SampType: DU Batch ID: 23 Resul	JP 1719 11 R 1 0.10 mits.		-		Analysis Da LowLimit	ate: 3/6/20	19 RPD Ref Val 0.4110	SeqNo: 977 %RPD	7 981 RPDLimit 20	
Sample ID 1903053 Client ID: BATCH Analyte Nitrate (as N) NOTES: * - Flagged value Sample ID 1903053	5-015BDUP is not within esta	SampType: DU Batch ID: 23 Resul 0.41 ablished control lin SampType: MS	JP 1719 11 R 1 0.10 mits.		SPK Ref Val	%REC	Analysis Da LowLimit	ate: 3/6/20 HighLimit tte: 3/6/20	19 RPD Ref Val 0.4110 19	SeqNo: 97 %RPD 0	7981 RPDLimit 20	
Sample ID 1903055 Client ID: BATCH Analyte Nitrate (as N) NOTES:	5-015BDUP is not within esta	SampType: DU Batch ID: 23 Resul 0.41 ablished control lin SampType: MS	JP 7719 1lt R 1 0.10 mits. 5 7719	0	SPK Ref Val	%REC	Analysis Da LowLimit Prep Da Analysis Da	ate: 3/6/20 HighLimit Ate: 3/6/20 ate: 3/6/20	19 RPD Ref Val 0.4110 19	SeqNo: 977 %RPD 0 RunNo: 498	7981 RPDLimit 20 874 7982	*
Sample ID 1903053 Client ID: BATCH Analyte Nitrate (as N) NOTES: * - Flagged value Sample ID 1903053 Client ID: BATCH	5-015BDUP is not within esta	SampType: DU Batch ID: 23 Resul 0.41 ablished control lin SampType: MS Batch ID: 23	JP 1719 1 0.10 mits. 5 1719	0 L SPK value	SPK Ref Val	%REC	Analysis Da LowLimit Prep Da Analysis Da	ate: 3/6/20 HighLimit Ate: 3/6/20 ate: 3/6/20	19 RPD Ref Val 0.4110 19 19	SeqNo: 977 %RPD 0 RunNo: 498 SeqNo: 977	7981 RPDLimit 20 874 7982	Qual * Qual
Sample ID 1903053 Client ID: BATCH Analyte Nitrate (as N) NOTES: * - Flagged value Sample ID 1903053 Client ID: BATCH Analyte	5-015BDUP is not within esta	SampType: DU Batch ID: 23 Resul 0.41 ablished control lin SampType: MS Batch ID: 23 Resul	JP 3719 1 0.10 mits. 5 3719 11 R 8 0.10	0 L SPK value	SPK Ref Val	%REC	Analysis Da LowLimit Prep Da Analysis Da LowLimit 80	nte: 3/6/20 HighLimit nte: 3/6/20 nte: 3/6/20 HighLimit	19 RPD Ref Val 0.4110 19 19 RPD Ref Val	SeqNo: 977 %RPD 0 RunNo: 498 SeqNo: 977	7981 RPDLimit 20 374 7982 RPDLimit	*
Sample ID 1903053 Client ID: BATCH Analyte Nitrate (as N) NOTES: * - Flagged value Sample ID 1903053 Client ID: BATCH Analyte Nitrate (as N)	5-015BDUP is not within esta 5-015BMS	SampType: DU Batch ID: 23 Resul 0.41 ablished control lin SampType: MS Batch ID: 23 Resul 1.18 SampType: MS	JP 3719 1 0.10 mits. 5 3719 11 R 8 0.10	0 L SPK value	SPK Ref Val Units: mg/L SPK Ref Val 0.4110	%REC %REC 103	Analysis Da LowLimit Prep Da Analysis Da LowLimit 80	tte: 3/6/20 HighLimit tte: 3/6/20 tte: 3/6/20 HighLimit 120 tte: 3/6/20	19 RPD Ref Val 0.4110 19 RPD Ref Val 19	SeqNo: 977 %RPD 0 RunNo: 498 SeqNo: 977 %RPD	7981 RPDLimit 20 374 7982 RPDLimit	*
Sample ID 1903053 Client ID: BATCH Analyte Nitrate (as N) NOTES: * - Flagged value Sample ID 1903053 Client ID: BATCH Analyte Nitrate (as N)	5-015BDUP is not within esta 5-015BMS	SampType: DU Batch ID: 23 Resul 0.41 ablished control lin SampType: MS Batch ID: 23 Resul 1.18 SampType: MS	JP 5719 1 0.10 mits. 5 5719 1t R 8 0.10 5D 5719	0 L SPK value 0 0.7500	SPK Ref Val Units: mg/L SPK Ref Val 0.4110	%REC %REC 103	Analysis Da LowLimit Prep Da Analysis Da LowLimit 80 Prep Da Analysis Da	ate: 3/6/20 HighLimit Ate: 3/6/20 Ate: 3/6/20 HighLimit 120 Ate: 3/6/20 Ate: 3/6/20	19 RPD Ref Val 0.4110 19 RPD Ref Val 19	SeqNo: 977 %RPD 0 RunNo: 498 SeqNo: 977 %RPD RunNo: 498	7981 RPDLimit 20 374 7982 RPDLimit	*



Work Ord								QC	SUMMA	RY REF	PORT
CLIENT:		nmental, Inc.						lon Chromatogra	nhy by FP	A Methor	1 300.0
Project:	Hertz							-			
•	1903055-015BMSD	SampType: MSD			Units: mg/L		Prep Date:		RunNo: 49 8		
Client ID: E	BATCH	Batch ID: 23719					Analysis Date:		SeqNo: 97	7983	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID 1	1903055-016BDUP	SampType: DUP			Units: mg/L		Prep Date:	3/6/2019	RunNo: 49	874	
Client ID: E	ВАТСН	Batch ID: 23719					Analysis Date:	3/7/2019	SeqNo: 97	7995	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N) NOTES: * - Flagged) d value is not within est	1.39	0.200					1.398	0.574	20	D*
00	1903055-016BMS	SampType: MS			Units: mg/L		Prep Date:	3/6/2019	RunNo: 49	874	
Client ID: E	ВАТСН	Batch ID: 23719			-		Analysis Date:	3/7/2019	SeqNo: 97	7998	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N))	2.98	0.200	1.500	1.398	105	80	120			D
Sample ID	WB-23738	SampType: MBLK			Units: mg/L		Prep Date:	3/7/2019	RunNo: 49	893	
Client ID:	MBLKW	Batch ID: 23738					Analysis Date:	3/7/2019	SeqNo: 97	8395	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N))	ND	0.100								
Sulfate		ND	0.300								
Sample ID	LCS-23738	SampType: LCS			Units: mg/L		Prep Date:	3/7/2019	RunNo: 49	893	
Client ID: L	LCSW	Batch ID: 23738					Analysis Date:	3/7/2019	SeqNo: 97	8396	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N))	0.700	0.100	0.7500	0	93.3	90	110			
Sulfate		3.49	0.300	3.750	0	93.1	90	110			

Work Order:1903045CLIENT:Kane EnviroProject:Hertz	onmental, Inc.						lon Ch	QC S	SUMMAI		
Sample ID 1903045-001BDUP	SampType: DUP			Units: mg/L		Prep Da	te: 3/7/20 ⁴	19	RunNo: 498	393	
Client ID: HZ-MW-19:W	Batch ID: 23738					Analysis Da	te: 3/8/20 ⁴	19	SeqNo: 978	3398	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N) Sulfate	0.420 9.08	0.100 0.300						0.4140 8.983	1.44 1.02	20 20	Н
Sample ID 1903045-001BMS	SampType: MS			Units: mg/L		Prep Da	te: 3/7/20 4	19	RunNo: 498	393	
Client ID: HZ-MW-19:W	Batch ID: 23738					Analysis Da	te: 3/8/20 ⁻	19	SeqNo: 978	3399	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)	1.15	0.100	0.7500	0.4140	98.7	80	120				Н
Sulfate	13.0	0.300	3.750	8.983	106	80	120				
Sample ID 1903045-001BMSD	SampType: MSD			Units: mg/L		Prep Da	te: 3/7/20 ⁴	19	RunNo: 498	393	
Client ID: HZ-MW-19:W	Batch ID: 23738					Analysis Da	te: 3/8/20 ⁻	19	SeqNo: 978	3400	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)	1.16	0.100	0.7500	0.4140	99.9	80	120	1.154	0.777	20	Н
Sulfate	13.1	0.300	3.750	8.983	109	80	120	12.97	0.936	20	
Sample ID 1903068-021BDUP	SampType: DUP			Units: mg/L		Prep Da	te: 3/7/20 ⁴	19	RunNo: 498	393	
Client ID: BATCH	Batch ID: 23738					Analysis Da	te: 3/8/20 ⁴	19	SeqNo: 978	3426	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)	ND	0.100						0		20	
Sulfate	15.1	0.300						14.96	0.713	20	Е

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Fremont

Analytical

Work Order: 1	903045								2.00	SUMMAI		PORT
CLIENT: K	Kane Enviror	nmental, Inc.										
Project: +	Hertz							Ion Ch	romatogra	phy by EP	A Metho	d 300.
Sample ID 1903068-	021BMS	SampType: MS			Units: mg/L		Prep Dat	te: 3/7/201	19	RunNo: 49	893	
Client ID: BATCH		Batch ID: 23738					Analysis Dat	te: 3/8/20 1	19	SeqNo: 97	8403	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)		0.718	0.100	0.7500	0	95.7	80	120				
Sulfate		18.9	0.300	3.750	14.96	104	80	120				Е
NOTES: E - Estimated value	e. The amount	exceeds the linear worki	ng range of	the instrumen	t.							
Sample ID LCS-237	19	SampType: LCS			Units: mg/L		Prep Dat	te: 3/6/201	19	RunNo: 49	924	
Client ID: LCSW		Batch ID: 23719					Analysis Dat	te: 3/8/201	19	SeqNo: 97	8987	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)		0.687	0.100	0.7500	0	91.6	90	110				
Sample ID MB-2371	9	SampType: MBLK			Units: mg/L		Prep Dat	ie: 3/6/201	19	RunNo: 49	924	
Client ID: MBLKW		Batch ID: 23719					Analysis Dat	te: 3/8/201	19	SeqNo: 97	8988	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)		ND	0.100									
Sample ID 1903055-	015BDUP	SampType: DUP			Units: mg/L		Prep Dat	ie: 3/6/201	19	RunNo: 49	924	
Client ID: BATCH		Batch ID: 23719					Analysis Dat	te: 3/8/20 1	19	SeqNo: 97	8992	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)		0.394	0.100						0.3940	0	20	Н
Sample ID 1903055-	015BMS	SampType: MS			Units: mg/L		Prep Dat	ie: 3/6/20 1	19	RunNo: 49	924	
Client ID: BATCH		Batch ID: 23719					Analysis Dat	te: 3/8/201	19	SeqNo: 97	8993	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual





Work Orde	er:	1903045 Kane Enviro	onmental, In	c.										-
Project:		Hertz								Ion Ch	romatograp	ony by EP	A Method	300.0
Sample ID 19	90305	5-015BMSD	SampType	MSD			Units: mg/L		Prep Date	e: 3/6/201	9	RunNo: 49	924	
Client ID: B	ватсн	ł	Batch ID:	23719					Analysis Date	e: 3/8/201	9	SeqNo: 97	8994	
Analyte			F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N))			1.09	0.100	0.7500	0.3940	92.4	80	120	1.039	4.52	20	Н
Sample ID 19	90305	5-016BDUP	SampType	DUP			Units: mg/L		Prep Date	e: 3/6/201	9	RunNo: 49	924	
Client ID: B	ватсн	ł	Batch ID:	23719					Analysis Date	: 3/9/201	9	SeqNo: 97	9002	
Analyte			F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N))			1.37	0.200						1.368	0.146	20	DH
Sample ID 19	90305	5-016BMS	SampType	MS			Units: mg/L		Prep Date	e: 3/6/201	9	RunNo: 49	924	
Client ID: B	ватсн	ł	Batch ID:	23719					Analysis Date	e: 3/9/201	9	SeqNo: 97	9003	
Analyte			F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N))			2.93	0.200	0.7500	1.368	209	80	120				DSH



Work Order: 1903045								QCS	SUMMA	RY REF	PORT
CLIENT: Kane Enviro	onmental, Inc.						Dia			A Mothor	1 200 0
Project: Hertz							DIS	ssolved Met	tais by EP	A method	a 200.0
Sample ID MB-23752	SampType: MBLK			Units: µg/L		Prep Date	e: 3/8/20	19	RunNo: 499	911	
Client ID: MBLKW	Batch ID: 23752					Analysis Date	e: 3/8/20	19	SeqNo: 978	8761	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.75									
Manganese	ND	2.00									
Sample ID LCS-23752	SampType: LCS			Units: µg/L		Prep Date	e: 3/8/20	19	RunNo: 499	911	
Client ID: LCSW	Batch ID: 23752					Analysis Date	e: 3/8/20	19	SeqNo: 978	8762	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	97.9	1.75	100.0	0	97.9	85	115				
Manganese	101	2.00	100.0	0	101	85	115				
Sample ID 1903045-001ADUP	SampType: DUP			Units: µg/L		Prep Date	e: 3/8/20	19	RunNo: 499	9 11	
Client ID: HZ-MW-19:W	Batch ID: 23752					Analysis Date	e: 3/8/20	19	SeqNo: 978	8766	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	1.75						0		30	
Manganese	138	2.00						135.9	1.91	30	
Sample ID 1903045-001AMS	SampType: MS			Units: µg/L		Prep Date	e: 3/8/20	19	RunNo: 499	911	
Client ID: HZ-MW-19:W	Batch ID: 23752					Analysis Date	e: 3/8/20	19	SeqNo: 978	8767	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	508	1.75	500.0	0	102	70	130				
Manganese	630	2.00	500.0	135.9	98.8	70	130				
Sample ID 1903045-001AMSD	SampType: MSD			Units: µg/L		Prep Date	e: 3/8/20	19	RunNo: 499	911	
Client ID: HZ-MW-19:W	Batch ID: 23752					Analysis Date	e: 3/8/20	19	SeqNo: 978	8768	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	537	1.75	500.0	0	107	70	130	508.1	5.47	30	
										Doo	0 15 0



Work Order: CLIENT: Project:	1903045 Kane Envirc Hertz	onmental, Ir	ıc.						Dis	QC Ssolved Met	SUMMAI		
Sample ID 19030	45-001AMSD	SampTyp	e: MSD			Units: µg/L		Prep Da	ite: 3/8/20	19	RunNo: 49	911	
Client ID: HZ-M	W-19:W	Batch ID:	23752					Analysis Da	ate: 3/8/20	19	SeqNo: 97	8768	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese			648	2.00	500.0	135.9	102	70	130	629.8	2.86	30	
Sample ID MB-2	3732FB	SampTyp	e: MBLK			Units: µg/L		Prep Da	nte: 3/8/20	19	RunNo: 49	911	
Client ID: MBLK	ŚW	Batch ID:	23752					Analysis Da	ate: 3/8/20 ⁻	19	SeqNo: 97	8785	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			ND	1.75									
Manganese NOTES: Filter Blank			ND	2.00									



Work Order: CLIENT: Project:	1903045 Kane Environ Hertz	mental, Ind	с.							QC S Total Met	SUMMAI		
Sample ID MB-23	755	SampType:	BLK			Units: µg/L		Prep Date	3/8/201	9	RunNo: 499	935	
Client ID: MBLK	N	Batch ID:	23755					Analysis Date	3/8/201	9	SeqNo: 979	9307	
Analyte		R	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			ND	1.75									
Sample ID LCS-2	3755	SampType:	LCS			Units: µg/L		Prep Date	3/8/201	9	RunNo: 49 9	935	
Client ID: LCSW		Batch ID:	23755					Analysis Date	3/8/201	9	SeqNo: 979	9310	
Analyte		R	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			103	1.75	100.0	0	103	85	115				
Sample ID 190307	74-001DDUP	SampType:	DUP			Units: µg/L		Prep Date	3/8/201	9	RunNo: 499	935	
Client ID: BATCH	1	Batch ID:	23755					Analysis Date	3/8/201	9	SeqNo: 979	9312	
Analyte		R	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			3.26	1.75						3.704	12.7	30	
Sample ID 190307	74-001DMS	SampType:	MS			Units: µg/L		Prep Date	3/8/201	9	RunNo: 499	935	
Client ID: BATCH	1	Batch ID:	23755					Analysis Date	3/8/201	9	SeqNo: 979	9313	
Analyte		R	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			569	1.75	500.0	3.704	113	70	130				
Sample ID 190307	74-001DMSD	SampType:	MSD			Units: µg/L		Prep Date	3/8/201	9	RunNo: 499	935	
Client ID: BATCH	1	Batch ID:	23755					Analysis Date	3/8/201	9	SeqNo: 979	9314	
Analyte		R	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			579	1.75	500.0	3.704	115	70	130	568.7	1.83	30	

Work Order: 1903045								00.5	SUMMAI		PORT
CLIENT: Kane Env	vironmental, Inc.										
Project: Hertz							Diesel a	and Heavy	Oil by NW	TPH-Dx/I	Dx Ext
Sample ID MB-23739	SampType: MBLK			Units: µg/L		Prep Date	e: 3/7/201	9	RunNo: 49	925	
Client ID: MBLKW	Batch ID: 23739					Analysis Date	e: 3/8/201	9	SeqNo: 979	9037	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	50.3									
Heavy Oil	ND	101									
Surr: 2-Fluorobiphenyl	78.5		80.49		97.5	50	150				
Surr: o-Terphenyl	84.0		80.49		104	50	150				
Sample ID LCS-23739	SampType: LCS			Units: µg/L		Prep Date	e: 3/7/201	9	RunNo: 49	925	
Client ID: LCSW	Batch ID: 23739					Analysis Date	e: 3/8/201	9	SeqNo: 979	9038	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	736	49.9	998.1	0	73.8	65	135				
Surr: 2-Fluorobiphenyl	68.6		79.85		85.9	50	150				
Surr: o-Terphenyl	67.8		79.85		84.9	50	150				
Sample ID 1903036-001BDUP	SampType: DUP			Units: µg/L		Prep Date	e: 3/7/201	9	RunNo: 49	925	
Client ID: BATCH	Batch ID: 23739					Analysis Date	e: 3/8/201	9	SeqNo: 979	9046	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	53.6						0		30	
Heavy Oil	ND	107						0		30	
Surr: 2-Fluorobiphenyl	73.7		85.69		86.1	50	150		0		
Surr: o-Terphenyl	78.5		85.69		91.6	50	150		0		
Sample ID 1903036-001BMS	SampType: MS			Units: µg/L		Prep Date	e: 3/7/201	9	RunNo: 49	925	
Client ID: BATCH	Batch ID: 23739					Analysis Date	e: 3/8/201	9	SeqNo: 979	9047	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	769	49.8	995.5	24.40	74.8	65	135				
Surr: 2-Fluorobiphenyl	72.2		79.64		90.7	50	150				
Surr: o-Terphenyl	67.5		79.64		84.8	50	150				





CLIENT: K	903045 ane Enviroi ertz	nmental, Inc.						Diesel	QC S and Heavy	SUMMAI Oil by NW		-
Sample ID 1903036-0	01BMS	SampType: MS			Units: µg/L		Prep Da	te: 3/7/201	19	RunNo: 499	925	
Client ID: BATCH		Batch ID: 23739					Analysis Da	te: 3/8/201	19	SeqNo: 979	9047	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID 1903036-0	01BMSD	SampType: MSD			Units: µg/L		Prep Da	te: 3/7/201	19	RunNo: 499	925	
Client ID: BATCH		Batch ID: 23739					Analysis Da	te: 3/8/201	19	SeqNo: 979	9048	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)		691	50.3	1,007	24.40	66.2	65	135	768.7	10.7	30	
Surr: 2-Fluorobipher	nyl	66.9		80.54		83.1	50	150		0		
Surr: o-Terphenyl		63.4		80.54		78.7	50	150		0		



Work Orde CLIENT: Project:		nmental, Inc.								SUMMAI solved Gas		
Sample ID M	B-R49857A	SampType: MBLK			Units: mg/L		Prep Da	te: 3/6/20	19	RunNo: 49	857	
Client ID: M	BLKW	Batch ID: R49857					Analysis Da	te: 3/6/20	19	SeqNo: 97	7539	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane		ND	0.00863									
Sample ID LC	CS-R49857A	SampType: LCS			Units: mg/L		Prep Da	te: 3/6/20	19	RunNo: 49	857	
Client ID: LO	csw	Batch ID: R49857					Analysis Da	te: 3/6/20	19	SeqNo: 97	7538	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane		778	0.00863	1,000	0	77.8	70	130				
Sample ID 19	02354-001CREP	SampType: REP			Units: mg/L		Prep Da	te: 3/6/20	19	RunNo: 49	857	
Client ID: B	АТСН	Batch ID: R49857					Analysis Da	te: 3/6/20	19	SeqNo: 97	7534	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane NOTES: E - Estimate	ed value. The amount	0.891 exceeds the linear worki	0.00863 ng range of	the instrument	t.				0.9117	2.32	30	E
Sample ID M	B-R49857B	SampType: MBLK			Units: mg/L		Prep Da	te: 3/6/20	19	RunNo: 49	857	
Client ID: M	BLKW	Batch ID: R49857			-		Analysis Da	te: 3/6/20	19	SeqNo: 97	7540	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane		ND	0.00863									
Sample ID M	B-R49857C	SampType: MBLK			Units: mg/L		Prep Da	te: 3/6/20	19	RunNo: 49	857	
Client ID: M	BLKW	Batch ID: R49857					Analysis Da	te: 3/6/20	19	SeqNo: 97	7541	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
		ND	0.00863									



Sample Log-In Check List

С	lient Name:	KANE	Work Order Numb	per: 1903045	
Lo	ogged by:	Clare Griggs	Date Received:	3/5/2019	6:07:00 PM
<u>Cha</u>	ain of Cust	ody			
1.	Is Chain of C	ustody complete?	Yes 🖌	No 🗌	Not Present
2.	How was the	sample delivered?	<u>Client</u>		
Log	ı In				
-	Coolers are p	present?	Yes 🖌	No 🗌	
0.					
4.	Shipping con	tainer/cooler in good condition?	Yes 🖌	No 🗌	
5.		ls present on shipping container/cooler? nments for Custody Seals not intact)	Yes	No 🗌	Not Required 🗹
6.	Was an atten	npt made to cool the samples?	Yes 🖌	No 🗌	
7.	Were all item	is received at a temperature of $>0^{\circ}C$ to $10.0^{\circ}C^{*}$	Yes 🖌	No 🗌	
8.	Sample(s) in	proper container(s)?	Yes 🖌	No 🗌	
9.	Sufficient sar	nple volume for indicated test(s)?	Yes 🖌	No 🗌	
10.	Are samples	properly preserved?	Yes 🖌	No 🗌	
11.	Was preserva	ative added to bottles?	Yes	No 🗸	NA 🗌
12.	Is there head	lspace in the VOA vials?	Yes	No 🔽	
		es containers arrive in good condition(unbroken)?	Yes 🖌	No 🗌	
14.	Does paperw	ork match bottle labels?	Yes 🖌	No 🗌	
15.	Are matrices	correctly identified on Chain of Custody?	Yes 🖌	No 🗌	
		at analyses were requested?	Yes 🖌	No 🗌	
17.	Were all hold	ling times able to be met?	Yes 🖌	No 🗌	
Spe	cial Handl	ing (if applicable)			
		otified of all discrepancies with this order?	Yes	No 🗌	NA 🔽
		Notified: Date			
	By Who			one 🗌 Fax	In Person
	Regardi				
	Client Ir	nstructions:			
19.	Additional rer	marks:			

Item Information

Item #	Temp °C
Cooler	2.1
Sample	1.9
Temp Blank	0.6

^{*} Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

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Image: Construction of the term of te	ss, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water,
Indextor Sample Disposal: Return to client Report To (PM): SER @ VarW - CM/VD/W/W/HTU. Sample Disposal: Return to client PM Email: REPORT OF (PM): Sample Disposal: Return to client PM Email: REPORT OF (PM): Sample Disposal: Return to client PM Email: REPORT OF (PM): Sample Disposal: Return to client PM Email: REPORT OF (PM): Sample Disposal: Return to client PM Email: REPORT OF (PM): Sample Disposal: Return to client PM Email: REPORT OF (PM): Sample Disposal: Return to client PM Email: REPORT OF (PM): Sample Disposal: Return to client PM Email: REPORT OF (PM): Sample Disposal: Return to client PM Email: REPORT OF (PM): Sample Disposal: Return to client PM Email: REPORT OF (PM): Sample Disposal: Return to client PM Email: REPORT OF (PM): Sample Disposal: Return to client PM Email: Return to client Return to client Return to client PM Email: Return to client Return to client Return to client PM Email: Return to client Return to client Return to client	
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Project No: 82802 - VS	Fane Environmental Project No: 82302 - 15
Project Name: HWTB	http://www.com
Date: 3/5/19 Page: 1 of: 1 Laboratory Project No (internal): 1903045	Tel: 206-352-3790 Date: 3/5/19
Chain of Custody Record & Laboratory Services Agreement	3600 Fremont Ave N.



3600 Fremont Ave. N. Seattle, WA 98103 T: (206) 352-3790 F: (206) 352-7178 info@fremontanalytical.com

Kane Environmental, Inc. Jeff Jensen 4015 13th Ave W. Seattle, WA 98103

RE: Hertz Work Order Number: 1903064

March 14, 2019

Attention Jeff Jensen:

Fremont Analytical, Inc. received 3 sample(s) on 3/6/2019 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext. Dissolved Gases by RSK-175 Dissolved Metals by EPA Method 200.8 Ion Chromatography by EPA Method 300.0 Total Metals by EPA Method 200.8 Total Alkalinity by SM 2320B

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005 ORELAP Certification: WA 100009-007 (NELAP Recognized)



CLIENT: Project: Work Order:	Kane Environmental, Inc. Work Order Sample Sum Hertz 1903064								
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received						
1903064-001	BL-MW-8R:W	03/06/2019 10:05 AM	03/06/2019 5:00 PM						
1903064-002	BC-16:W	03/06/2019 12:20 PM	03/06/2019 5:00 PM						
1903064-003	HZ-MW-12:W	03/06/2019 3:40 PM	03/06/2019 5:00 PM						



Case Narrative

WO#: **1903064** Date: **3/14/2019**

CLIENT:Kane Environmental, Inc.Project:Hertz

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers & Acronyms



WO#: **1903064** Date Reported: **3/14/2019**

Qualifiers:

- * Flagged value is not within established control limits
- B Analyte detected in the associated Method Blank
- D Dilution was required
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- I Analyte with an internal standard that does not meet established acceptance criteria
- J Analyte detected below Reporting Limit
- N Tentatively Identified Compound (TIC)
- Q Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- (<20%RSD, <20% Drift or minimum RRF)
- S Spike recovery outside accepted recovery limits
- ND Not detected at the Reporting Limit
- R High relative percent difference observed

Acronyms:

%Rec - Percent Recovery **CCB** - Continued Calibration Blank CCV - Continued Calibration Verification **DF** - Dilution Factor HEM - Hexane Extractable Material **ICV** - Initial Calibration Verification LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate MB or MBLANK - Method Blank MDL - Method Detection Limit MS/MSD - Matrix Spike / Matrix Spike Duplicate PDS - Post Digestion Spike Ref Val - Reference Value **RL - Reporting Limit RPD** - Relative Percent Difference SD - Serial Dilution SGT - Silica Gel Treatment SPK - Spike Surr - Surrogate



Client: Kane Environmental, Inc. Project: Hertz			(Collection	Date: 3	8/6/2019 10:05:00 AM
Lab ID: 1903064-001			I	Matrix: G	roundwa	ater
Client Sample ID: BL-MW-8R:W						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dissolved Gases by RSK-175				Batch	n ID: R5	0033 Analyst: AD
Methane	4.26	0.173	D	mg/L	20	3/14/2019 12:02:00 PM
Diesel and Heavy Oil by NWTPH-D	x/Dx Ext.			Batch	n ID: 237	765 Analyst: DW
Diesel (Fuel Oil)	ND	49.5		µg/L	1	3/12/2019 3:07:18 PM
Heavy Oil	234	99.0		µg/L	1	3/12/2019 3:07:18 PM
Surr: 2-Fluorobiphenyl	80.6	50 - 150		%Rec	1	3/12/2019 3:07:18 PM
Surr: o-Terphenyl	83.6	50 - 150		%Rec	1	3/12/2019 3:07:18 PM
Ion Chromatography by EPA Meth	<u>od 300.0</u>			Batch	ו ID: 237	738 Analyst: TN
Nitrate (as N)	ND	0.100		mg/L	1	3/8/2019 8:15:00 AM
Sulfate	1.70	0.300		mg/L	1	3/8/2019 8:15:00 AM
Dissolved Metals by EPA Method 2	<u>200.8</u>			Batch	n ID: 237	752 Analyst: WC
Manganese	3,480	20.0	D	µg/L	10	3/8/2019 6:04:14 PM
Total Alkalinity by SM 2320B				Batch	n ID: R49	9914 Analyst: ME
Alkalinity, Total (As CaCO3)	348	2.50		mg/L	1	3/8/2019 8:30:00 PM



Client: Kane Environmental, Inc.				Collectior	n Date: 3	8/6/2019 12:20:00 PM			
Project: Hertz Lab ID: 1903064-002		Matrix: Groundwater							
Client Sample ID: BC-16:W		induix. Groundwater							
Analyses	Result	Result RL Qu			DF	Date Analyzed			
Dissolved Gases by RSK-175				Batc	h ID: R5	0033 Analyst: AD			
Methane	3.44	0.173	D	mg/L	20	3/14/2019 12:31:00 PM			
Diesel and Heavy Oil by NWTPH-D	<u>x/Dx Ext.</u>			Batc	h ID: 237	765 Analyst: DW			
Diesel (Fuel Oil)	ND	50.4		µg/L	1	3/12/2019 5:07:37 PM			
Heavy Oil	179	101		µg/⊑ µg/L	1	3/12/2019 5:07:37 PM			
Surr: 2-Fluorobiphenyl	78.4	50 - 150		%Rec	1	3/12/2019 5:07:37 PM			
Surr: o-Terphenyl	82.0	50 - 150		%Rec	1	3/12/2019 5:07:37 PM			
Ion Chromatography by EPA Meth	<u>od 300.0</u>			Batc	h ID: 237	738 Analyst: TN			
Nitrate (as N)	0.310	0.500	JD	mg/L	5	3/8/2019 1:42:00 AM			
Sulfate	270	15.0	D	mg/L	50	3/12/2019 3:59:00 AM			
NOTES: Diluted due to matrix.									
Dissolved Metals by EPA Method 2	200.8			Batc	h ID: 237	752 Analyst: WC			
Arsenic	ND	1.75		µg/L	1	3/8/2019 3:38:33 PM			
Manganese	3,760	20.0	D	μg/L	10	3/8/2019 6:08:16 PM			
Total Metals by EPA Method 200.8	<u> </u>			Batc	h ID: 237	755 Analyst: WC			
Arsenic	2.56	1.75		μg/L	1	3/8/2019 4:47:10 PM			
Total Alkalinity by SM 2320B				Batc	h ID: R4	9914 Analyst: ME			
Alkalinity, Total (As CaCO3)	371	2.50		mg/L	1	3/8/2019 8:30:00 PM			



Client:	Kane Environmental, Inc.			Collection Date: 3/6/2019 3:40:00 PM							
Project:	Hertz										
Lab ID:	1903064-003		Matrix: Groundwater								
Client Sa	ample ID: HZ-MW-12:W										
Analyses		Result	RL Qual Units DF		DF	Date Analyzed					
Dissolv	red Metals by EPA Method 2	00.8			Batch	n ID: 237	752 Analyst: WC				
Arsenic		ND	1.75		μg/L	1	3/8/2019 3:42:35 PM				
<u>Total</u> M	letals by EPA Method 200.8				Batch	n ID: 237	755 Analyst: WC				
Arsenic		2.89	1.75		µg/L	1	3/8/2019 4:59:39 PM				



CLIENT:	1903064 Kane Envirc Hertz	onmental, Inc.							-	SUMMAI al Alkalini		
Sample ID MB-R49	914	SampType: MBLK			Units: mg/L		Prep Date	e: 3/8/20 2	19	RunNo: 49	914	
Client ID: MBLKW	I	Batch ID: R49914	4				Analysis Date	e: 3/8/20 °	19	SeqNo: 978	3806	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As	CaCO3)	ND	2.50									
Sample ID LCS-R4	9914	SampType: LCS			Units: mg/L		Prep Date	e: 3/8/20	19	RunNo: 49	914	
Client ID: LCSW		Batch ID: R49914	4				Analysis Date	e: 3/8/20 4	19	SeqNo: 978	3807	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As	CaCO3)	101	2.50	100.0	0	101	80	120				
Sample ID 190305	5-011BDUP	SampType: DUP			Units: mg/L		Prep Date	e: 3/8/20 '	19	RunNo: 49	914	
Client ID: BATCH		Batch ID: R49914	4				Analysis Date	e: 3/8/20 4	19	SeqNo: 97	3809	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As	CaCO3)	396	2.50						393.1	0.615	20	
Sample ID 1903055	5-028BDUP	SampType: DUP			Units: mg/L		Prep Date	e: 3/8/20 4	19	RunNo: 49	914	
Client ID: BATCH		Batch ID: R49914	4				Analysis Date	e: 3/8/20 *	19	SeqNo: 978	3824	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As	CaCO3)	182	2.50						182.4	0	20	

Original



Work Order: 1903064								QC S	SUMMAR	RY REF	PORT
CLIENT: Kane Envir Project: Hertz	onmental, Inc.						lon Ch	romatograj	phy by EP.	A Method	d 300.0
Sample ID MB-23738	SampType: MBLK			Units: mg/L		Prep Dat	ie: 3/7/20	19	RunNo: 498	893	
Client ID: MBLKW	Batch ID: 23738					Analysis Dat	te: 3/7/20	19	SeqNo: 978	8395	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N) Sulfate	ND ND	0.100 0.300									
Sample ID LCS-23738	SampType: LCS			Units: mg/L		Prep Dat	ie: 3/7/20	19	RunNo: 498	893	
Client ID: LCSW	Batch ID: 23738					Analysis Dat	te: 3/7/20	19	SeqNo: 978	B396	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)	0.700	0.100	0.7500	0	93.3	90	110				
Sulfate	3.49	0.300	3.750	0	93.1	90	110				
Sample ID 1903045-001BDUP	SampType: DUP			Units: mg/L		Prep Dat	ie: 3/7/20	19	RunNo: 49893		
Client ID: BATCH	Batch ID: 23738					Analysis Dat	te: 3/8/20	19	SeqNo: 978	8398	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)	0.420	0.100						0.4140	1.44	20	Н
Sulfate	9.08	0.300						8.983	1.02	20	
Sample ID 1903045-001BMS	SampType: MS			Units: mg/L		Prep Dat	te: 3/7/20	19	RunNo: 498	893	
Client ID: BATCH	Batch ID: 23738			_		Analysis Dat	te: 3/8/20	19	SeqNo: 978	8399	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)	1.15	0.100	0.7500	0.4140	98.7	80	120				Н
Sulfate	13.0	0.300	3.750	8.983	106	80	120				
Sample ID 1903045-001BMSD	SampType: MSD			Units: mg/L		Prep Dat	ie: 3/7/20	19	RunNo: 498	893	
Client ID: BATCH	Batch ID: 23738					Analysis Dat	te: 3/8/20	19	SeqNo: 978	8400	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N)	1.16	0.100	0.7500	0.4140		80	120	1.154	0.777	20	Н



Work Orc									QC S	SUMMA	RY REF	ORT
CLIENT:	Kane Envi	ironmental, Inc.									A Matha	1 200 0
Project:	Hertz							ion Chro	omatogra	phy by EP		1 300.0
Sample ID	1903045-001BMSD	SampType: MSD			Units: mg/L		Prep Date:	3/7/2019	I	RunNo: 498	393	
Client ID:	ВАТСН	Batch ID: 23738					Analysis Date:	3/8/2019		SeqNo: 978	3400	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit F	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate		13.1	0.300	3.750	8.983	109	80	120	12.97	0.936	20	
Sample ID	1903068-021BDUP	SampType: DUP			Units: mg/L		Prep Date:	3/7/2019	I	RunNo: 498	393	
Client ID:	ВАТСН	Batch ID: 23738					Analysis Date:	3/8/2019		SeqNo: 978	3426	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit F	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N	1)	ND	0.100						0		20	
Sulfate		15.1	0.300						14.96	0.713	20	E
NOTES: E - Estima	ated value. The amou	unt exceeds the linear workir	ng range of	the instrument	t.							
Sample ID	1903068-021BMS	SampType: MS			Units: mg/L		Prep Date:	3/7/2019	I	RunNo: 498	393	
Client ID:	ВАТСН	Batch ID: 23738					Analysis Date:	3/8/2019		SeqNo: 978	3403	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit F	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate (as N	1)	0.718	0.100	0.7500	0	95.7	80	120				
Sulfate		18.9	0.300	3.750	14.96	104	80	120				Е
NOTES: E - Estima	ated value. The amou	unt exceeds the linear workir	ng range of	the instrument	t.							
Sample ID	LCS-23776	SampType: LCS			Units: mg/L		Prep Date:	3/11/201	9	RunNo: 499	967	
Client ID:	LCSW	Batch ID: 23776					Analysis Date:	3/11/201	9	SeqNo: 980	0182	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit F	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate		3.49	0.300	3.750	0	93.0	90	110				
Sample ID	MB-23776	SampType: MBLK			Units: mg/L		Prep Date:	3/11/201	9	RunNo: 499	967	
Client ID:	MBLKW	Batch ID: 23776					Analysis Date:	3/11/201	9	SeqNo: 980	0184	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit F	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate		ND	0.300									
											D	- 40 - 40



Work Or CLIENT: Project:		1903064 Kane Enviro Hertz	onmental, In	C.						lon Ch	QC S	SUMMA phy by EP		
Sample ID MB-23776		SampType: MBLK				Units: mg/L		Prep Date: 3/11/2019			RunNo: 49967			
Client ID: MBLKW		Batch ID:	23776					Analysis Date			SeqNo: 98	0184		
Analyte			F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sample ID	D 1903027-005BDUP		SampType	DUP			Units: mg/L		Prep Date	e: 3/11/20	19	RunNo: 49	967	
Client ID:	D: BATCH		Batch ID:	23776				Analysis Date: 3/11/2019			SeqNo: 980186			
Analyte			F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate				5.77	0.600						5.750	0.382	20	D
Sample ID	190302	7-005BMS	SampType	MS			Units: mg/L		Prep Date	e: 3/11/20	19	RunNo: 49	967	
Client ID:	BATCH E		Batch ID:	23776					Analysis Date: 3/11/2019			SeqNo: 980187		
Analyte			F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate NOTES:		e recovery/ies)	observed A du	10.7	0.600	7.500	5.750 similar results indica	65.9	80 sible matrix of	120				DS
		27-005BMSD	SampType	•			Units: mg/L			e: 3/11/20	10	RunNo: 49	967	
Client ID:			Batch ID:				onno. mg/L		Analysis Date			SeqNo: 98		
Analyte			F	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate NOTES:		e recovery(ies)	observed A du	10.9	0.600	7.500	5.750 similar results indica	68.9	80 sible matrix ef	120	10.69	2.05	20	DS
-	• •	27-019BDUP	SampType	•			Units: mg/L	ang a poor		e: 3/11/20	10	RunNo: 49	967	
Client ID:			Batch ID:				Cinto. mg/L		Analysis Date			SeqNo: 98		
Analyte				Result	RL	SPK value	SPK Ref Val	%REC			RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate				2.86	0.600						2.930	2.49	20	D



Work Order:	1903064 Kane Environmental, Inc.						QC SUMMARY REPORT					
CLIENT:												
Project:	Hertz					Ion Chromatography by EPA Method 300.0						
Sample ID 190302	27-019BMS	SampType: MS			Units: mg/L		Prep Date:	3/11/2019	RunNo: 49967			
Client ID: BATCH	4	Batch ID: 23776					Analysis Date:	3/12/2019	SeqNo: 980207			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	lighLimit RPD Ref V	al %RPD RPDLim	it Qual		
Sulfate		9.30	0.600	7.500	2.930	84.9	80	120		D		



Work Order: 1903064						QC S		ORT
CLIENT: Kane Enviro	onmental, Inc.					•	-	-
Project: Hertz						Dissolved Meta	als by EPA Method	200.8
Sample ID MB-23752	SampType: MBLK			Units: µg/L	Prep Date: 3	/8/2019	RunNo: 49911	
Client ID: MBLKW	Batch ID: 23752				Analysis Date: 3	/8/2019	SeqNo: 978761	
Analyte	Result	RL	SPK value	SPK Ref Val	6REC LowLimit High	Limit RPD Ref Val	%RPD RPDLimit	Qual
Arsenic	ND	1.75						
Manganese	ND	2.00						
Sample ID LCS-23752	SampType: LCS			Units: µg/L	Prep Date: 3	/8/2019	RunNo: 49911	
Client ID: LCSW	Batch ID: 23752				Analysis Date: 3	/8/2019	SeqNo: 978762	
Analyte	Result	RL	SPK value	SPK Ref Val	6REC LowLimit High	Limit RPD Ref Val	%RPD RPDLimit	Qual
Arsenic	97.9	1.75	100.0	0	97.9 85	115		
Manganese	101	2.00	100.0	0	101 85	115		
Sample ID 1903045-001ADUP	SampType: DUP			Units: µg/L	Prep Date: 3	/8/2019	RunNo: 49911	
Client ID: BATCH	Batch ID: 23752				Analysis Date: 3	/8/2019	SeqNo: 978766	
Analyte	Result	RL	SPK value	SPK Ref Val	6REC LowLimit High	Limit RPD Ref Val	%RPD RPDLimit	Qual
Arsenic	ND	1.75				0	30	
Manganese	138	2.00				135.9	1.91 30	
Sample ID 1903045-001AMS	SampType: MS			Units: µg/L	Prep Date: 3	/8/2019	RunNo: 49911	
Client ID: BATCH	Batch ID: 23752				Analysis Date: 3	/8/2019	SeqNo: 978767	
Analyte	Result	RL	SPK value	SPK Ref Val	6REC LowLimit High	Limit RPD Ref Val	%RPD RPDLimit	Qual
Arsenic	508	1.75	500.0	0	102 70	130		
Manganese	630	2.00	500.0	135.9	98.8 70	130		
Sample ID 1903045-001AMSD	SampType: MSD			Units: µg/L	Prep Date: 3	/8/2019	RunNo: 49911	
Client ID: BATCH	Batch ID: 23752				Analysis Date: 3	/8/2019	SeqNo: 978768	
Analyte	Result	RL	SPK value	SPK Ref Val	6REC LowLimit High	Limit RPD Ref Val	%RPD RPDLimit	Qual
Arsenic	537	1.75	500.0	0	107 70	130 508.1	5.47 30	
							Dam	40 - 40



Work Order: CLIENT: Project:	1903064 Kane Envirc Hertz	onmental, li	nc.						Dis	QC S solved Met	SUMMAI		
Sample ID 19030	45-001AMSD	SampTyp	e: MSD			Units: µg/L		Prep Da	nte: 3/8/20 *	19	RunNo: 49 9	911	
Client ID: BATC	н	Batch ID:	23752					Analysis Da	ate: 3/8/20 ⁴	19	SeqNo: 978	3768	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese			648	2.00	500.0	135.9	102	70	130	629.8	2.86	30	
Sample ID MB-23	3732FB	SampTyp	e: MBLK			Units: µg/L		Prep Da	ite: 3/8/20	19	RunNo: 49 9	911	
Client ID: MBLK	ŚW	Batch ID:	23752					Analysis Da	ate: 3/8/20 ⁴	19	SeqNo: 978	3785	
Analyte			Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			ND	1.75									
Manganese NOTES: Filter Blank			ND	2.00									



	3064 e Environmental, Inc. tz					• -	SUMMARY REP etals by EPA Method	-
Sample ID MB-23755	SampType: MBLK			Units: µg/L	Prep [Date: 3/8/2019	RunNo: 49935	
Client ID: MBLKW	Batch ID: 23755				Analysis [Date: 3/8/2019	SeqNo: 979307	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimi	t HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Arsenic	ND	1.75						
Sample ID LCS-23755	SampType: LCS			Units: µg/L	Prep [Date: 3/8/2019	RunNo: 49935	
Client ID: LCSW	Batch ID: 23755				Analysis [Date: 3/8/2019	SeqNo: 979310	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimi	t HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Arsenic	103	1.75	100.0	0	103 85	5 115		
Sample ID 1903074-001	DDUP SampType: DUP			Units: µg/L	Prep [Date: 3/8/2019	RunNo: 49935	
Client ID: BATCH	Batch ID: 23755				Analysis [Date: 3/8/2019	SeqNo: 979312	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimi	t HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Arsenic	3.26	1.75				3.704	12.7 30	
Sample ID 1903074-001	DMS SampType: MS			Units: µg/L	Prep [Date: 3/8/2019	RunNo: 49935	
Client ID: BATCH	Batch ID: 23755				Analysis [Date: 3/8/2019	SeqNo: 979313	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimi	t HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Arsenic	569	1.75	500.0	3.704	113 70	0 130		
Sample ID 1903074-001	DMSD SampType: MSD			Units: µg/L	Prep [Date: 3/8/2019	RunNo: 49935	
Client ID: BATCH	Batch ID: 23755				Analysis [Date: 3/8/2019	SeqNo: 979314	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimi	t HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Arsenic	579	1.75	500.0	3.704	115 70	0 130 568.7	1.83 30	

Work Order: 1903064								20	SUMMA		
CLIENT: Kane Envir	ronmental, Inc.						D ' I	• -			-
Project: Hertz							Diesel a	and Heavy		IPH-DX/	DX EX
Sample ID MB-23765	SampType: MBLK			Units: µg/L		Prep Dat	e: 3/11/20	19	RunNo: 499	977	
Client ID: MBLKW	Batch ID: 23765					Analysis Dat	e: 3/12/20	19	SeqNo: 980	0531	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	50.1									
Heavy Oil	ND	100									
Surr: 2-Fluorobiphenyl	64.3		80.23		80.2	50	150				
Surr: o-Terphenyl	65.2		80.23		81.2	50	150				
Sample ID LCS-23765	SampType: LCS			Units: µg/L		Prep Dat	e: 3/11/20	19	RunNo: 499	977	
Client ID: LCSW	Batch ID: 23765					Analysis Dat	e: 3/12/20	19	SeqNo: 980	0532	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	729	50.3	1,006	0	72.5	65	135				
Surr: 2-Fluorobiphenyl	66.9		80.50		83.1	50	150				
Surr: o-Terphenyl	62.9		80.50		78.1	50	150				
Sample ID 1903064-001BDUP	SampType: DUP			Units: µg/L		Prep Dat	e: 3/11/20	19	RunNo: 499	977	
Client ID: BL-MW-8R:W	Batch ID: 23765					Analysis Dat	e: 3/12/20	19	SeqNo: 98′	1126	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	54.1						0		30	
Heavy Oil	275	108						234.4	16.1	30	
Surr: 2-Fluorobiphenyl	61.4		86.61		70.9	50	150		0		
Surr: o-Terphenyl	70.7		86.61		81.7	50	150		0		
Sample ID 1903076-001AMS	SampType: MS			Units: µg/L		Prep Dat	e: 3/11/20	19	RunNo: 499	977	
Client ID: BATCH	Batch ID: 23765					Analysis Dat	e: 3/12/20	19	SeqNo: 98′	1129	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	6,850	50.1	1,001	5,757	109	65	135				Е
Surr: 2-Fluorobiphenyl	73.6		80.09		91.9	50	150				
Surr: o-Terphenyl	72.2		80.09		90.1	50	150				





Work Order:	1903064								00.9	SUMMA		
CLIENT:	Kane Enviro	onmental, Inc.							-			
Project:	Hertz							Diesel	and Heavy	Oil by NW	TPH-Dx/	Dx Ext
Sample ID 19030	76-001AMS	SampType: I	MS		Units: µg/L		Prep Da	te: 3/11/2	019	RunNo: 499	977	
Client ID: BATCH	H	Batch ID:	23765				Analysis Da	te: 3/12/2	019	SeqNo: 98	1129	
Analyte		Re	sult RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
NOTES: E - Estimated va	lue. The amoun	t exceeds the line	ear working range	of the instrumen	t.							
Sample ID 19030	76-001AMSD	SampType: I	MSD		Units: µg/L		Prep Da	te: 3/11/2	019	RunNo: 499	977	
Client ID: BATCH	н	Batch ID:	23765				Analysis Da	te: 3/12/2	019	SeqNo: 98	1130	
Analyte		Re	sult RL	_ SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)		7,0)50 49.9	997.8	5,757	130	65	135	6,848	2.91	30	Е
Surr: 2-Fluorobip	ohenyl	5	3.5	79.83		67.1	50	150		0		
Surr: o-Terpheny	yl	8	4.2	79.83		105	50	150		0		
NOTES: E - Estimated va	lue. The amoun	t exceeds the line	ear working range	of the instrumen	t.							
Sample ID 190308	86-001ADUP	SampType: I	DUP		Units: µg/L		Prep Da	te: 3/11/2	019	RunNo: 499	977	
Client ID: BATCH	H	Batch ID:	23765				Analysis Da	te: 3/13/2	019	SeqNo: 98'	1143	
Analyte		Re	sult RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			ND 49.8	3					0		30	
Heavy Oil			ND 99.6	6					0		30	
Surr: 2-Fluorobip	ohenyl	6	7.1	79.71		84.2	50	150		0		
Surr: o-Terpheny	yl	6	7.4	79.71		84.6	50	150		0		



Work Orde CLIENT: Project:		vironmental, Inc.						SUMMARY REF	
Sample ID N	/IB-R50033A /IBLKW	SampType: MBLK Batch ID: R50033			Units: mg/L		Date: 3/13/2019 Date: 3/13/2019	RunNo: 50033 SeqNo: 981993	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLin	nit HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Methane		ND	0.00863						
Sample ID L	CS-R50033A	SampType: LCS			Units: mg/L	Prep	Date: 3/13/2019	RunNo: 50033	
Client ID: L	CSW	Batch ID: R50033				Analysis	Date: 3/13/2019	SeqNo: 981992	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLin	nit HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Methane		1,040	0.00863	1,000	0	104 7	70 130		
Sample ID 1	903064-001DREP	SampType: REP			Units: mg/L	Prep	Date: 3/13/2019	RunNo: 50033	
Client ID: B	BL-MW-8R:W	Batch ID: R50033				Analysis	Date: 3/13/2019	SeqNo: 981982	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLin	nit HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Methane NOTES: E - Estimat	ted value. The amo	1.72 bunt exceeds the linear work	0.00863 ing range of	the instrument	t.		1.446	17.6 30	E
Sample ID N	/B-R50033B	SampType: MBLK			Units: mg/L	Prep	Date: 3/14/2019	RunNo: 50033	
Client ID: N	MBLKW	Batch ID: R50033			-	Analysis	Date: 3/14/2019	SeqNo: 982411	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLin	nit HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Methane		ND	0.00863						
Sample ID L	-CS-R50033B	SampType: LCS			Units: mg/L	Prep	Date: 3/14/2019	RunNo: 50033	
Client ID: L	CSW	Batch ID: R50033				Analysis	Date: 3/14/2019	SeqNo: 982410	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC LowLin	nit HighLimit RPD Ref Val	%RPD RPDLimit	Qual
/ indiyio									



Work Order:	1903064								QC S	SUMMA		PORT
CLIENT:	Kane Enviro	nmental, Inc.							Dias			
Project:	Hertz								DISS	solved Gas	ses by Ra	SK-175
Sample ID 19030	64-001DREP	SampType: REP			Units: mg/L		Prep Dat	ie: 3/14/2	019	RunNo: 500	033	
Client ID: BL-M	W-8R:W	Batch ID: R50033					Analysis Dat	te: 3/14/2	019	SeqNo: 982	2400	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methane		4.44	0.173						4.260	4.14	30	DE

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Sample Log-In Check List

Cl	ient Name:	KANE	Work Order Num	ber: 1903064	
Lo	gged by:	Clare Griggs	Date Received:	3/6/2019	5:00:00 PM
<u>Cha</u>	in of Cust	ody			
1.	Is Chain of C	ustody complete?	Yes 🖌	No 🗌	Not Present
2.	How was the	sample delivered?	<u>Client</u>		
Log	In				
-	Coolers are p	present?	Yes 🔽	No 🗌	
			_	_	
4.	Shipping con	tainer/cooler in good condition?	Yes 🔽	No 🗌	_
		Is present on shipping container/cooler? ments for Custody Seals not intact)	Yes	No 🗌	Not Required 🗹
6.	Was an atten	npt made to cool the samples?	Yes 🖌	No 🗌	
7.	Were all item	s received at a temperature of >0°C to 10.0°C*	Yes 🖌	No 🗌	
8.	Sample(s) in	proper container(s)?	Yes 🖌	No 🗌	
9.	Sufficient sar	nple volume for indicated test(s)?	Yes 🖌	No 🗌	
10.	Are samples	properly preserved?	Yes 🖌	No 🗌	
11.	Was preserva	ative added to bottles?	Yes 🖌	No 🗌	NA 🗌
			_		HNO3
12.	Is there head	space in the VOA vials?	Yes	No 🗹	
13.	Did all sampl	es containers arrive in good condition(unbroken)?	Yes 🖌	No	
14.	Does paperw	ork match bottle labels?	Yes 🖌	No	
15.	Are matrices	correctly identified on Chain of Custody?	Yes 🖌	No 🗌	
16.	Is it clear what	at analyses were requested?	Yes 🖌	No 🗌	
17.	Were all hold	ing times able to be met?	Yes 🗹	No 🗌	
<u>Spe</u>	<u>cial Handl</u>	ing (if applicable)			
		otified of all discrepancies with this order?	Yes	No 🗌	NA 🔽
	Person	Notified: Date			
	By Who	m: Via:	🗌 eMail 🗌 Ph	one 🗌 Fax	In Person
	Regardi	ng:			
	Client Ir	nstructions:			
19.	Additional rer	narks:			I

Item Information

Item #	Temp ⁰C
Cooler	2.5
Sample	4.7

^{*} Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

	3600 Fremont Ave N.	Chain of Custody Record &	Laboratory Services Agreement
Fiemon	Seattle, WA 98103 Tel: 206-352-3790	90 Date: 314/19 Page: 1 of: 1	Laboratory Project No (internal): 0030004
Analytical	Fax: 206-352-7178	Project Name: HUAZ	Special Remarks:
cient: Fare environmental	ACM	Project No: 87307 45	una a sura estánszigéseg sé adot gistarozó el asolaszepülj. A sura a sura estánszigéseg sé adot gistarozó el asolaszegi a serence a sora están el asola a
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city. State. Zip: SUDITIES WIT	PNBR	Location: BOTTNUL	unania job davia da, su sotika to zotike ve gue ve preve preve por cote trou en
Telephone: MOW WAI OHTO	J.	REPORT TO (PM): JUA JUNSUM	Sample Disposal: Return to client Disposal by lab (after 30 days)
Бах.		14 Univer Marinan Main Full	-COM
n besight in u. an paramanan dara 4 1 p. Ngeberah dara dara dara d			
addinar weyne o'n ei al dalaf de merine fore. An fersenen mande de de sign verfit "An	Sample Sample S	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	estimate of the second s
BLMW-BR:N	1005	× × D× X	× Mnj lab filter jac
	1270	GN X XTOX X	X Diss-MnjTiDAsjlabfiltu
3 HZ - MW-12:W	3/10 1540 6	SW X TD	AS 'S Labo Filter
4			
5	रानि हिल्ला - इन्हें, हिल्ला नेती का में रहेकी		the second start of the forest of the second of the second s
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7			
9	하는 고서도 눈길, 신날한 신나 소신 데		· · · · · · · · · · · · · · · · · · ·
10			
*Matrix: A = Air, AQ = Aqueous, B = Bulk, O: **Metals (Circle): MTCA-5 RCRA-8 P	Soi	SL=Solid, W=Water, UW=UNINKINg Water, GW=Ground Water, As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni	sb Se Sr Sn Ti TI U V Zn
Nitrite	Chloride Sulfate	Phosphate Fluoride Nitrate+Nitrite	
I represent that I am authorized to enter into this Agreement v each of the terms on the front and backside of this Agreement.	enter into this Agreemer backside of this Agreeme	I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.	I have verified Client's agreement to
x MUM	Date/Time 03/DU/19	1700 × Harden Steer	1/9 1700 Next Day
Relinquished x	Date/Time	Received Date/Time	Same Day (specify)
COC 1.2 - 2.22.17		www.fremontanalytical.com	Page 1 of



3600 Fremont Ave. N. Seattle, WA 98103 T: (206) 352-3790 F: (206) 352-7178 info@fremontanalytical.com

Kane Environmental, Inc. Jeff Jensen 4015 13th Ave W. Seattle, WA 98103

RE: Landing Work Order Number: 1903065

March 14, 2019

Attention Jeff Jensen:

Fremont Analytical, Inc. received 1 sample(s) on 3/6/2019 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext. Dissolved Metals by EPA Method 200.8 Total Metals by EPA Method 200.8

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005 ORELAP Certification: WA 100009-007 (NELAP Recognized)



CLIENT: Project: Work Order:	Kane Environmental, Inc. Landing 1903065	Work Order Sample Summary
Lab Sample ID	Client Sample ID	Date/Time Collected Date/Time Received

1903065-001

BL-MW-11:W

03/06/2019 2:25 PM

03/06/2019 5:00 PM



Case Narrative

WO#: **1903065** Date: **3/14/2019**

CLIENT:Kane Environmental, Inc.Project:Landing

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers & Acronyms



WO#: **1903065** Date Reported: **3/14/2019**

Qualifiers:

- * Flagged value is not within established control limits
- B Analyte detected in the associated Method Blank
- D Dilution was required
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- I Analyte with an internal standard that does not meet established acceptance criteria
- J Analyte detected below Reporting Limit
- N Tentatively Identified Compound (TIC)
- Q Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- (<20%RSD, <20% Drift or minimum RRF)
- S Spike recovery outside accepted recovery limits
- ND Not detected at the Reporting Limit
- R High relative percent difference observed

Acronyms:

%Rec - Percent Recovery **CCB** - Continued Calibration Blank CCV - Continued Calibration Verification **DF** - Dilution Factor HEM - Hexane Extractable Material **ICV** - Initial Calibration Verification LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate MB or MBLANK - Method Blank MDL - Method Detection Limit MS/MSD - Matrix Spike / Matrix Spike Duplicate PDS - Post Digestion Spike Ref Val - Reference Value **RL - Reporting Limit RPD** - Relative Percent Difference SD - Serial Dilution SGT - Silica Gel Treatment SPK - Spike Surr - Surrogate



Analytical Report

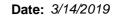
 Work Order:
 1903065

 Date Reported:
 3/14/2019

Client: Kane Environmental, Inc.				Collectior	n Dat	e: 3/6/2019 2:25:00 PM
Project: Landing Lab ID: 1903065-001				Matrix: G	roun	dwater
Client Sample ID: BL-MW-11:W						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-D	<u>(/Dx Ext.</u>			Batcl	h ID:	23765 Analyst: DW
Diesel (Fuel Oil)	ND	50.5		µg/L	1	3/12/2019 8:05:49 PM
Heavy Oil	159	101		µg/L	1	3/12/2019 8:05:49 PM
Surr: 2-Fluorobiphenyl	83.0	50 - 150		%Rec	1	3/12/2019 8:05:49 PM
Surr: o-Terphenyl	88.0	50 - 150		%Rec	1	3/12/2019 8:05:49 PM
Dissolved Metals by EPA Method 2	<u>00.8</u>			Batcl	h ID:	23752 Analyst: WC
Arsenic	3.58	1.75		µg/L	1	3/8/2019 3:46:37 PM
Total Metals by EPA Method 200.8				Batcl	h ID:	23755 Analyst: WC
Arsenic	6.97	1.75		µg/L	1	3/8/2019 5:03:41 PM



Work Order: CLIENT: Project:	1903065 Kane Enviror Landing	nmental, Inc							Dis	QC S	SUMMAI		
Sample ID MB-237		SampType:	MBLK			Units: µg/L		Prep Da	te: 3/8/20	19	RunNo: 49	911	
Client ID: MBLKV	v	Batch ID:	23752					Analysis Da	te: 3/8/20	19	SeqNo: 97	8761	
Analyte		R	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			ND	1.75									
Sample ID LCS-23	752	SampType:	LCS			Units: µg/L		Prep Da	te: 3/8/20	19	RunNo: 49	911	
Client ID: LCSW		Batch ID:	23752					Analysis Da	te: 3/8/20	19	SeqNo: 97	8762	
Analyte		R	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			97.9	1.75	100.0	0	97.9	85	115				
Sample ID 190304	5-001ADUP	SampType:	DUP			Units: µg/L		Prep Da	te: 3/8/20	19	RunNo: 49	911	
Client ID: BATCH		Batch ID:	23752					Analysis Da	te: 3/8/20	19	SeqNo: 97	8766	
Analyte		R	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			ND	1.75						0		30	
Sample ID 190304	5-001AMS	SampType:	MS			Units: µg/L		Prep Da	te: 3/8/20	19	RunNo: 49	911	
Client ID: BATCH		Batch ID:	23752					Analysis Da	te: 3/8/20	19	SeqNo: 97	8767	
Analyte		R	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			508	1.75	500.0	0	102	70	130				
Sample ID 190304	5-001AMSD	SampType:	MSD			Units: µg/L		Prep Da	te: 3/8/20	19	RunNo: 49	911	
Client ID: BATCH		Batch ID:	23752					Analysis Da	te: 3/8/20	19	SeqNo: 97	8768	
Analyte		R	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			537	1.75	500.0	0	107	70	130	508.1	5.47	30	





Work Order:	1903065								00.5			PORT	
CLIENT: Kane Environmental, Inc.							QC SUMMARY REPORT						
Project:	Landing							Dissolv	ed Met	als by EP	A Method	3 200.8 t	
Sample ID MB-23	3732FB	SampType: MBLK			Units: µg/L		Prep Date:	3/8/2019		RunNo: 499	911		
Client ID: MBLK	W	Batch ID: 23752					Analysis Date	3/8/2019		SeqNo: 978	8785		
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit RPD	Ref Val	%RPD	RPDLimit	Qual	
Arsenic		ND	1.75										
NOTES:													

Filter Blank



Work Order:1903065CLIENT:Kane EnvProject:Landing	ironmental, Inc.				QC SUMMARY REPOR Total Metals by EPA Method 200
Sample ID MB-23755	SampType: MBLK			Units: µg/L	Prep Date: 3/8/2019 RunNo: 49935
Client ID: MBLKW	Batch ID: 23755				Analysis Date: 3/8/2019 SeqNo: 979307
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	1.75			
Sample ID LCS-23755	SampType: LCS			Units: µg/L	Prep Date: 3/8/2019 RunNo: 49935
Client ID: LCSW	Batch ID: 23755				Analysis Date: 3/8/2019 SeqNo: 979310
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	103	1.75	100.0	0	103 85 115
Sample ID 1903074-001DDUP	SampType: DUP			Units: µg/L	Prep Date: 3/8/2019 RunNo: 49935
Client ID: BATCH	Batch ID: 23755				Analysis Date: 3/8/2019 SeqNo: 979312
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	3.26	1.75			3.704 12.7 30
Sample ID 1903074-001DMS	SampType: MS			Units: µg/L	Prep Date: 3/8/2019 RunNo: 49935
Client ID: BATCH	Batch ID: 23755				Analysis Date: 3/8/2019 SeqNo: 979313
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	569	1.75	500.0	3.704	113 70 130
Sample ID 1903074-001DMSD	SampType: MSD			Units: µg/L	Prep Date: 3/8/2019 RunNo: 49935
Client ID: BATCH	Batch ID: 23755				Analysis Date: 3/8/2019 SeqNo: 979314
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	579	1.75	500.0	3.704	115 70 130 568.7 1.83 30

Work Order:1903CLIENT:KaneProject:Land	e Environmental, Inc.						Diesel a	QC S and Heavy	SUMMAI Oil by NW		
Sample ID MB-23765	SampType: MBLK			Units: µg/L		Prep Dat	e: 3/11/20)19	RunNo: 49	977	
Client ID: MBLKW	Batch ID: 23765					Analysis Dat	e: 3/12/20)19	SeqNo: 980	0531	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	50.1									
Heavy Oil	ND	100									
Surr: 2-Fluorobiphenyl	64.3		80.23		80.2	50	150				
Surr: o-Terphenyl	65.2		80.23		81.2	50	150				
Sample ID LCS-23765	SampType: LCS			Units: µg/L		Prep Dat	e: 3/11/20)19	RunNo: 499	977	
Client ID: LCSW	Batch ID: 23765					Analysis Dat	e: 3/12/20)19	SeqNo: 980	0532	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	729	50.3	1,006	0	72.5	65	135				
Surr: 2-Fluorobiphenyl	66.9		80.50		83.1	50	150				
Surr: o-Terphenyl	62.9		80.50		78.1	50	150				
Sample ID 1903064-001E	BDUP SampType: DUP			Units: µg/L		Prep Dat	e: 3/11/20)19	RunNo: 499	977	
Client ID: BATCH	Batch ID: 23765					Analysis Dat	e: 3/12/20)19	SeqNo: 98	1126	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	54.1						0		30	
Heavy Oil	275	108						234.4	16.1	30	
Surr: 2-Fluorobiphenyl	61.4		86.61		70.9	50	150		0		
Surr: o-Terphenyl	70.7		86.61		81.7	50	150		0		
Sample ID 1903076-001	MS SampType: MS			Units: µg/L		Prep Dat	e: 3/11/20)19	RunNo: 499	977	
Client ID: BATCH	Batch ID: 23765					Analysis Dat	e: 3/12/20)19	SeqNo: 98	1129	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	6,850	50.1	1,001	5,757	109	65	135				Е
Surr: 2-Fluorobiphenyl	73.6		80.09		91.9	50	150				
Surr: o-Terphenyl	72.2		80.09		90.1	50	150				





Work Order: CLIENT: Project:	1903065 Kane Enviro Landing	nmental, Inc.						Diesel	QC S and Heavy	SUMMAI Oil by NW		-
Sample ID 19030	•	SampType: N	ЛS		Units: µg/L		Prep Da	te: 3/11/2	019	RunNo: 49	977	
Client ID: BATC	н	Batch ID: 2	23765				Analysis Da	te: 3/12/2	019	SeqNo: 98	1129	
Analyte		Res	sult RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
NOTES: E - Estimated va	alue. The amoun	t exceeds the line	ear working range o	f the instrumen	t.							
Sample ID 19030	76-001AMSD	SampType: N	ISD		Units: µg/L		Prep Da	te: 3/11/2	019	RunNo: 49	977	
Client ID: BATC	н	Batch ID: 2	23765				Analysis Da	te: 3/12/2	019	SeqNo: 98	1130	
Analyte		Res	sult RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)		7,0	950 49.9	997.8	5,757	130	65	135	6,848	2.91	30	Е
Surr: 2-Fluorobi	phenyl	5	3.5	79.83		67.1	50	150		0		
Surr: o-Terphen	yl	84	4.2	79.83		105	50	150		0		
NOTES:												
E - Estimated va	alue. The amoun	t exceeds the line	ear working range o	f the instrumen	t.							
Sample ID 19030	86-001ADUP	SampType: [DUP		Units: µg/L		Prep Da	te: 3/11/2	019	RunNo: 49	977	
Client ID: BATC	н	Batch ID: 2	23765				Analysis Da	te: 3/13/2	019	SeqNo: 98	1143	
Analyte		Res	sult RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)			ND 49.8						0		30	
Heavy Oil		I	ND 99.6						0		30	
Surr: 2-Fluorobi	phenyl	6	7.1	79.71		84.2	50	150		0		
Surr: o-Terphen	vl	6	7.4	79.71		84.6	50	150		0		



Sample Log-In Check List

CI	lient Name: KANE	Work Order Num	ber: 1903065	
Lo	ogged by: Clare Griggs	Date Received:	3/6/2019 5:00:00) PM
Cha	ain of Custody			
	Is Chain of Custody complete?	Yes 🖌	No 🗌 Not	Present
2.	How was the sample delivered?	Client		
<u>Log</u>	a In			
-	Coolers are present?	Yes 🖌	No 🗌	
0.				
4.	Shipping container/cooler in good condition?	Yes 🖌	No 🗌	
5.	Custody Seals present on shipping container/ (Refer to comments for Custody Seals not int	/cooler? Yes 🗌 act)	No 🗌 Not F	Required 🗹
6.	Was an attempt made to cool the samples?	Yes 🗸	No 🗌	
7.	Were all items received at a temperature of	>0°C to 10.0°C* Yes ✔	No 🗌	NA 🗌
8.	Sample(s) in proper container(s)?	Yes ✔	No 🗌	
9.	Sufficient sample volume for indicated test(s)	? Yes 🗹	No 🗌	
10.	Are samples properly preserved?	Yes 🖌	No 🗌	
11.	Was preservative added to bottles?	Yes 🖌	No 🗌	NA 🗌
40	Is there headspace in the VOA viale?	Yes	No 🖌	HNO3 NA 🗌
	. Is there headspace in the VOA vials? Did all samples containers arrive in good con-			
-	Does paperwork match bottle labels?	Yes 🔽		
45	Are matrices correctly identified on Chain of C	Custody? Yes 🖌	No 🗌	
	Is it clear what analyses were requested?	Yes V		
	Were all holding times able to be met?	Yes 🔽		
	ecial Handling (if applicable)	sic order?		NA 🔽
18.	. Was client notified of all discrepancies with th		No 🗌	
	Person Notified:			
	By Whom:	Via: 🗌 eMail 🗌 Pr	none 🗌 Fax 🔄 In F	erson
	Regarding:			
	Client Instructions:			

Item Information

Item #	Temp ⁰C
Cooler	2.5
Sample	4.7

^{*} Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

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	3600 Fremont Ave N.	Chain of Custody Record &	Laboratory Services Agreement
Fremon		Date: 2	Laboratory Project No (internal): 1903065
Anniyinal		Project Name: Landing	Special Remarks:
client: Kaine Enviro Inmental	Hay	Project No: 82802 - 14	age
4015	concessors to stabilize the output	collected by: BY	and the province of the structure of the
City. State. Zip: SURANCO WA 98119	0117	Location: BOTNEU	and and 30 dates of meaning of each week line of the feet of the office of the second s
Telephone: 12000 / 1091 0474	T	REPORT TO (PM): DEFT HUNKIN	Sample Disposal: Return to client Disposal by lab (after 30 days)
		PMEmail: KA @ Kane - Chritommental . COM	M
	Sample Sample Ime (N	Sample CA CA <th< th=""><th>Comments</th></th<>	Comments
1 BL MW-11: W	1475	X X ID	lab filtu
2 3 0.800 - Arroy Yell Loop (S. A. V. 1990)	n iz hurana inata ulawa setesan ina inata isan		1991 N
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o se star ar se the Let let a viva 6	14		Ne da Martineza de su cuerto da la cuente estas con Galeria POR est
10			
latrix: A = Air, AQ = Aqueous,	B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment,	SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water,	SW = Storm Water, WW = Waste Water Turn-ground Time:
**Metals (Circle): MTCA-5 RCRA-8	Priority Pollutants TAL	Individual: Ag A As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb	Sb Se Sr Sn Ti Ti U V Zn Standard
***Anions (Circle): Nitrate Nitrite	Chloride Sulfate	Bromide O-Phosphate Fluoride Nitrate+Nitrite	· · · · · · · · · · · · · · · · · · ·
I represent that I am authorized to enter into this Agreement v each of the terms on the front and backside of this Agreement.	o enter into this Agreeme backside of this Agreeme	vith Fremont Analytical on behalf of the Client named a	bove and that I have verified Client's agreement to
	Date/Time 03/00/19	700 × Harloh	6/19 1700 Next Day
Relinquished x	Date/Time	Received C Date/Time	Same Day (specify)
COC 1.2 - 2.22.17		www.fremontanalytical.com	Page 1 of 2



3600 Fremont Ave. N. Seattle, WA 98103 T: (206) 352-3790 F: (206) 352-7178 info@fremontanalytical.com

Kane Environmental, Inc. Jeff Jensen 4015 13th Ave W. Seattle, WA 98103

RE: Landing Work Order Number: 1903152

March 18, 2019

Attention Jeff Jensen:

Fremont Analytical, Inc. received 2 sample(s) on 3/11/2019 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext. Dissolved Metals by EPA Method 200.8 Polyaromatic Hydrocarbons by EPA Method 8270 (SIM) Total Metals by EPA Method 200.8

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005 ORELAP Certification: WA 100009-007 (NELAP Recognized)



CLIENT: Project: Work Order:	Kane Environmental, Inc. Landing 1903152	Work Order S	Sample Summary
Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1903152-001	BL-MW-12:W	03/11/2019 12:10 PM	03/11/2019 3:20 PM

1903152-001 1903152-001 DL-MW-12 1903152-002 MW-1:W

DL-IVIVV 12.00

03/11/2019 12:10 PM03/11/2019 3:20 PM03/11/2019 1:50 PM03/11/2019 3:20 PM



Case Narrative

WO#: **1903152** Date: **3/18/2019**

CLIENT:Kane Environmental, Inc.Project:Landing

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers & Acronyms



WO#: **1903152** Date Reported: **3/18/2019**

Qualifiers:

- * Flagged value is not within established control limits
- B Analyte detected in the associated Method Blank
- D Dilution was required
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- I Analyte with an internal standard that does not meet established acceptance criteria
- J Analyte detected below Reporting Limit
- N Tentatively Identified Compound (TIC)
- Q Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- (<20%RSD, <20% Drift or minimum RRF)
- S Spike recovery outside accepted recovery limits
- ND Not detected at the Reporting Limit
- R High relative percent difference observed

Acronyms:

%Rec - Percent Recovery **CCB** - Continued Calibration Blank CCV - Continued Calibration Verification **DF** - Dilution Factor HEM - Hexane Extractable Material **ICV** - Initial Calibration Verification LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate MB or MBLANK - Method Blank MDL - Method Detection Limit MS/MSD - Matrix Spike / Matrix Spike Duplicate PDS - Post Digestion Spike Ref Val - Reference Value **RL - Reporting Limit RPD** - Relative Percent Difference SD - Serial Dilution SGT - Silica Gel Treatment SPK - Spike Surr - Surrogate



Analytical Report

 Work Order:
 1903152

 Date Reported:
 3/18/2019

Client: Kane Environmental, Inc. Project: Landing	n Dat	t e: 3/11/20	19 12:10:00 PM					
Lab ID: 1903152-001 Client Sample ID: BL-MW-12:W				Matrix: Groundwater				
Analyses	Result	RL	Qual	Units	DF	ite Analyzed		
Diesel and Heavy Oil by NWTPH-D	<u>d/Dx Ext.</u>			Batch	n ID:	23833	Analyst: DW	
Diesel (Fuel Oil)	ND	53.1		µg/L	1	3/15	/2019 10:09:40 PM	
Heavy Oil	114	106		µg/L	1	3/15	/2019 10:09:40 PM	
Surr: 2-Fluorobiphenyl	96.7	50 - 150		%Rec	1	3/15	/2019 10:09:40 PM	
Surr: o-Terphenyl	99.1	50 - 150		%Rec	1	3/15	/2019 10:09:40 PM	
Polyaromatic Hydrocarbons by EP/	A Method 8	<u>3270 (SIM)</u>		Batch	n ID:	23804	Analyst: SB	
Naphthalene	ND	0.100		µg/L	1	3/14	/2019 4:45:08 PM	
2-Methylnaphthalene	ND	0.100		μg/L	1	3/14	/2019 4:45:08 PM	
1-Methylnaphthalene	ND	0.100		µg/L	1	3/14	/2019 4:45:08 PM	
Surr: 2-Fluorobiphenyl	100	44.2 - 171		%Rec	1	3/14	/2019 4:45:08 PM	
Surr: Terphenyl-d14	66.7	17.6 - 136		%Rec	1	3/14	/2019 4:45:08 PM	
Dissolved Metals by EPA Method 2	<u>00.8</u>			Batch	n ID:	23836	Analyst: WC	
Arsenic	3.60	1.75		µg/L	1	3/15	/2019 11:47:25 AM	
Total Metals by EPA Method 200.8				Batch	n ID:	23800	Analyst: WC	
Arsenic	17.7	1.75		µg/L	1	3/13	/2019 5:28:13 PM	



Analytical Report

 Work Order:
 1903152

 Date Reported:
 3/18/2019

Client: Kane Environmental, Inc.				Collectior	n Dat	e: 3/11/2019 1:50:00 PM
Project: Landing Lab ID: 1903152-002				Matrix: G	roun	dwater
Client Sample ID: MW-1:W Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-D	x/Dx Ext.			Batcl	h ID:	23833 Analyst: DW
Diesel (Fuel Oil)	ND	52.8		µg/L	1	3/15/2019 10:39:21 PM
Heavy Oil	ND	106		µg/L	1	3/15/2019 10:39:21 PM
Surr: 2-Fluorobiphenyl	96.4	50 - 150		%Rec	1	3/15/2019 10:39:21 PM
Surr: o-Terphenyl	104	50 - 150		%Rec	1	3/15/2019 10:39:21 PM
Dissolved Metals by EPA Method 2	<u>200.8</u>			Batcl	h ID:	23836 Analyst: WC
Arsenic	ND	1.75		µg/L	1	3/15/2019 12:13:37 PM
Total Metals by EPA Method 200.8	ł			Batcl	h ID:	23800 Analyst: WC
Arsenic	ND	1.75		μg/L	1	3/13/2019 5:32:14 PM



CLIENT:	1903152 Kane Environn Landing	nental, Inc	2.						Dis	QC S solved Met	SUMMA tals by EP		-
Sample ID MB-238	36	SampType:	MBLK			Units: µg/L		Prep Date	: 3/15/20	19	RunNo: 500	074	
Client ID: MBLKW	v	Batch ID:	23836					Analysis Date	: 3/15/20	19	SeqNo: 982	2908	
Analyte		R	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			ND	1.75									
Sample ID LCS-23	836	SampType:	LCS			Units: µg/L		Prep Date	: 3/15/20	19	RunNo: 500	074	
Client ID: LCSW		Batch ID:	23836					Analysis Date	3/15/20	19	SeqNo: 982	2909	
Analyte		R	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			98.6	1.75	100.0	0	98.6	85	115				
Sample ID 1903152	2-001CDUP	SampType:	DUP			Units: µg/L		Prep Date	: 3/15/20	19	RunNo: 500	074	
Client ID: BL-MW	-12:W	Batch ID:	23836					Analysis Date	3/15/20	19	SeqNo: 982	2913	
Analyte		R	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			3.22	1.75						3.600	11.3	30	
Sample ID 1903152	2-001CMS	SampType:	MS			Units: µg/L		Prep Date	: 3/15/20	19	RunNo: 500	074	
Client ID: BL-MW	-12:W	Batch ID:	23836					Analysis Date	3/15/20	19	SeqNo: 982	2914	
Analyte		R	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			510	1.75	500.0	3.600	101	70	130				
Sample ID 1903152	2-001CMSD	SampType:	MSD			Units: µg/L		Prep Date	: 3/15/20	19	RunNo: 500	074	
Client ID: BL-MW	-12:W	Batch ID:	23836					Analysis Date	: 3/15/20	19	SeqNo: 982	2915	
Analyte		R	esult	RL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic			506	1.75	500.0	3.600	100	70	130	509.7	0.745	30	



Work Order: CLIENT:		ronmental, Inc.						Die	QC S			
Project:	Landing											1 200.0
Sample ID MB-23	821FB	SampType: MBLK			Units: µg/L		Prep Da	te: 3/15/2	019	RunNo: 50	074	
Client ID: MBLK	W	Batch ID: 23836					Analysis Da	te: 3/15/2	019	SeqNo: 982	2938	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic NOTES:		ND	1.75									

Filter Blank



Work Order:1903152CLIENT:Kane EnvProject:Landing	ironmental, Inc.				QC SUMMARY REPORT Total Metals by EPA Method 200.8
Sample ID MB-23800	SampType: MBLK			Units: µg/L	Prep Date: 3/13/2019 RunNo: 50035
Client ID: MBLKW	Batch ID: 23800				Analysis Date: 3/13/2019 SeqNo: 982071
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	1.75			
Sample ID LCS-23800	SampType: LCS			Units: µg/L	Prep Date: 3/13/2019 RunNo: 50035
Client ID: LCSW	Batch ID: 23800				Analysis Date: 3/13/2019 SeqNo: 982072
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	98.5	1.75	100.0	0	98.5 85 115
Sample ID 1903137-001DDUP	SampType: DUP			Units: µg/L	Prep Date: 3/13/2019 RunNo: 50035
Client ID: BATCH	Batch ID: 23800				Analysis Date: 3/13/2019 SeqNo: 982074
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	3.05	1.75			3.127 2.51 30
Sample ID 1903137-001DMS	SampType: MS			Units: µg/L	Prep Date: 3/13/2019 RunNo: 50035
Client ID: BATCH	Batch ID: 23800				Analysis Date: 3/13/2019 SeqNo: 982075
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	573	1.75	500.0	3.127	114 70 130
Sample ID 1903137-001DMSD	SampType: MSD			Units: µg/L	Prep Date: 3/13/2019 RunNo: 50035
Client ID: BATCH	Batch ID: 23800				Analysis Date: 3/13/2019 SeqNo: 982076
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	566	1.75	500.0	3.127	113 70 130 573.4 1.26 30

Work Order:19031CLIENT:KaneProject:Landi	Environmental, Inc.						Diesel a	QC S and Heavy	SUMMAI Oil by NW		
Sample ID MB-23833	SampType: MBLK			Units: µg/L		Prep Date	e: 3/14/20)19	RunNo: 50	085	
Client ID: MBLKW	Batch ID: 23833					Analysis Date	e: 3/15/20)19	SeqNo: 98	3077	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	49.9									
Heavy Oil	ND	99.9									
Surr: 2-Fluorobiphenyl	68.7		79.89		86.0	50	150				
Surr: o-Terphenyl	75.9		79.89		95.0	50	150				
Sample ID LCS-23833	SampType: LCS			Units: µg/L		Prep Date	e: 3/14/20)19	RunNo: 50	085	
Client ID: LCSW	Batch ID: 23833					Analysis Date	e: 3/15/20)19	SeqNo: 98	3078	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	702	50.2	1,004	0	70.0	65	135				
Surr: 2-Fluorobiphenyl	75.6		80.31		94.1	50	150				
Surr: o-Terphenyl	70.0		80.31		87.2	50	150				
Sample ID LCSD-23833	SampType: LCSD			Units: µg/L		Prep Date	e: 3/14/20)19	RunNo: 50	085	
Client ID: LCSW02	Batch ID: 23833					Analysis Date	e: 3/15/20)19	SeqNo: 98	3109	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	653	50.0	1,000	0	65.3	65	135	702.3	7.23	30	
Surr: 2-Fluorobiphenyl	77.6		80.00		97.0	50	150		0		
Surr: o-Terphenyl	72.1		80.00		90.2	50	150		0		
Sample ID 1903181-001Bl	DUP SampType: DUP			Units: µg/L		Prep Date	e: 3/14/20)19	RunNo: 50	085	
Client ID: BATCH	Batch ID: 23833					Analysis Date	e: 3/15/20)19	SeqNo: 98	3451	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	6,830	49.5						5,808	16.1	30	E
Heavy Oil	ND	99.1						0		30	
Surr: 2-Fluorobiphenyl	85.8		79.28		108	50	150		0		
Surr: o-Terphenyl	60.1		79.28		75.8	50	150		0		





Work Order: CLIENT: Project:	1903152 Kane Enviro Landing	onmental, Inc.			ſ	• - ·	SUMMARY REF Oil by NWTPH-Dx/I	-
Sample ID 19031 Client ID: BATC		SampType: DUP Batch ID: 23833		Units: µg	L Prep Date: Analysis Date:	3/14/2019 3/15/2019	RunNo: 50085 SeqNo: 983451	
Analyte		Result	RL	SPK value SPK Ref Val	%REC LowLimit H	lighLimit RPD Ref Val	%RPD RPDLimit	Qual
NOTES: E - Estimated va	alue. The amour	nt exceeds the linear working	range of	the instrument.				
Sample ID 19032	11-002BDUP	SampType: DUP		Units: µg	L Prep Date:	3/14/2019	RunNo: 50085	
		Datab ID: 00000			Analusia Data	0/45/0040	Combles 000450	

Client ID: BATCH	Batch ID: 23833					Analysis Da	te: 3/15/20	19	SeqNo: 983	3459	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	50.2						0		30	
Heavy Oil	ND	100						0		30	
Surr: 2-Fluorobiphenyl	78.2		80.30		97.4	50	150		0		
Surr: o-Terphenyl	83.7		80.30		104	50	150		0		

Original

Work Order: CLIENT: Project:	1903152 Kane Environ Landing	mental, Ir	C.				Ро	lyaromat	ic Hydro	QC S ocarbons b	SUMMAF y EPA Met		
Sample ID MB-23	804	SampType	: MBLK			Units: µg/L		Prep Date	e: 3/13/20	19	RunNo: 500)68	
Client ID: MBLK	w	Batch ID:	23804					Analysis Date	e: 3/14/20	19	SeqNo: 982	2829	
Analyte		I	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene 2-Methylnaphthaler 1-Methylnaphthaler Surr: 2-Fluorobip Surr: Terphenyl-	ne Dhenyl		ND ND ND 1.66 1.69	0.0998 0.0998 0.0998	1.996 1.996		83.2 84.6	44.2 17.6	171 136				
Sample ID LCS-2: Client ID: LCSW		SampType Batch ID:			1.000	Units: µg/L	04.0	Prep Date Analysis Date	e: 3/13/20		RunNo: 500 SeqNo: 982		
Analyte		I	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene 2-Methylnaphthaler	20		3.84 4.04	0.100 0.100	4.016 4.016	0 0	95.6 101	30.4 33.2	113 126				
1-Methylnaphthaler Surr: 2-Fluorobip Surr: Terphenyl-o	ne Dhenyl		4.10 1.95 1.67	0.100	4.016 2.008 2.008	0	102 96.9 83.3	30.2 44.2 17.6	119 171 136				
Sample ID LCSD-	23804	SampType	LCSD			Units: µg/L		Prep Date	e: 3/13/20	19	RunNo: 500)68	
Client ID: LCSW	02	Batch ID:	23804					Analysis Date	e: 3/14/20	19	SeqNo: 982	2831	
Analyte		I	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene 2-Methylnaphthaler 1-Methylnaphthaler Surr: 2-Fluorobip	ne		3.73 3.98 4.02 1.98	0.100 0.100 0.100	4.004 4.004 4.004 2.002	0 0 0	93.0 99.3 100 98.9	30.4 33.2 30.2 44.2	113 126 119 171	3.840 4.043 4.100	3.02 1.66 2.06 0	30 30 30 0	

2.002

80.7

17.6

136

Surr: Terphenyl-d14

1.62

0

0





Work Order: 1903152

Project:

CLIENT: Kane Environmental, Inc. Landing

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID 1903125-001CDUP	SampType: DUP			Units: µg/L		Prep Da	ite: 3/13/20	019	RunNo: 500	068	
Client ID: BATCH	Batch ID: 23804					Analysis Da	ite: 3/14/20	019	SeqNo: 982	2833	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	0.100						0		30	
2-Methylnaphthalene	ND	0.100						0		30	
1-Methylnaphthalene	ND	0.100						0		30	
Surr: 2-Fluorobiphenyl	1.88		2.004		93.6	44.2	171		0		
Surr: Terphenyl-d14	1.14		2.004		56.7	17.6	136		0		



Sample Log-In Check List

CI	ient Name:	KANE	Work Order Numb	per: 1903152		
Lo	gged by:	Clare Griggs	Date Received:	3/11/2019	3:20:00 PM	
Cha	in of Cust	ody				
1.	Is Chain of C	ustody complete?	Yes 🗹	No 🗌	Not Present	
2.	How was the	sample delivered?	<u>Client</u>			
<u>Log</u>	In					
-	Coolers are p	present?	Yes 🖌	No 🗌		
4	Chinning con	toiner/cooler in good condition?	Yes ✔	No 🗌		
••		tainer/cooler in good condition?			Not Dogwirod	
5.		ls present on shipping container/cooler? Iments for Custody Seals not intact)	Yes 🗀	No 🗔	Not Required 🗹	
6.	Was an atten	npt made to cool the samples?	Yes 🖌	No 🗌		
7.	Were all item	is received at a temperature of $>0^{\circ}$ C to 10.0° C *	Yes 🖌	No 🗌		
8.	Sample(s) in	proper container(s)?	Yes 🖌	No 🗌		
9.	Sufficient sar	nple volume for indicated test(s)?	Yes 🖌	No 🗌		
10.	Are samples	properly preserved?	Yes 🖌	No 🗌		
11.	Was preserva	ative added to bottles?	Yes	No 🖌	NA 🗌	
12.	Is there head	space in the VOA vials?	Yes	No 🗌	NA 🔽	
13.	Did all sample	es containers arrive in good condition(unbroken)?	Yes 🖌	No 🗌		
14.	Does paperw	ork match bottle labels?	Yes 🗹	No 🗌		
15.	Are matrices	correctly identified on Chain of Custody?	Yes 🖌	No 🗌		
16.	Is it clear what	at analyses were requested?	Yes 🖌	No 🗌		
17.	Were all hold	ing times able to be met?	Yes 🗹	No 🗌		
Spe	cial Handl	ing (if applicable)				
-		otified of all discrepancies with this order?	Yes	No 🗌	NA 🔽	
	Person	Notified: Date				
	By Who	m: Via:	🗌 eMail 🗌 Ph	one 🗌 Fax [In Person	
	Regardi	ng:				
	Client Ir	nstructions:				
19.	Additional rer	narks:				

Item Information

Item #	Temp ⁰C
Cooler	8.4
Sample	9.2
Temp Blank	7.2

^{*} Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

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Received ×	× A DU Bate/Time × A DU BUI/19 1520 × PU	ent that I am authorized to enter into this Agreement with Fremont Anal the terms on the front and backside of this Agreement.	****Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitoite	**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B a Be Ca Cd Co Cr Cu Fe Hg K Mg Mn	*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Gro					2 MW-1:12 3/11 PSB GW X X P	XX	Sample Sample (Control of the control of the contro	23	Report To (PM): JCF	city, state, Zip: SCAPAR, WA 98/19 Location: BOTWII		cient: Fance Environmental Project No: 87302 - 14	Fax: 206-352-7178 Project Name: LOYND IN C	Tel: 206-352-3790 Date: 201111 Page:
Date/Time Same Day (specify)	Date/Time	-		Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti TI U V Zn 🕺 Standard	GW = Ground Water, SW = Storm Water, WW = Waste Water Turn-around Time:					TP Lap filler	TD lab fifter	210 333 354 354 355 354 355 355 355 355 355	NOM MUNTOU. COM	Sample Disposal: C Return to client Disposal by lab (after 30 days)		2- Netry naptraleine	1- Na Tru Maptralene	Special Remarks:	of: Laboratory Project no Internali



May 30, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-13.3 Laboratory Reference No. 1905-267

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on May 20, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely.

David Baumeister Project Manager

Enclosures



Date of Report: May 30, 2019 Samples Submitted: May 20, 2019 Laboratory Reference: 1905-267 Project: 82302-13.3

Case Narrative

Samples were collected on May 20, 2019 and received by the laboratory on May 20, 2019. They were maintained at the laboratory at a temperature of 2° C to 6° C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BPMW-2R:W					
Laboratory ID:	05-267-02					
Diesel Range Organics	ND	0.26	NWTPH-Dx	5-28-19	5-28-19	
Lube Oil Range Organics	ND	0.42	NWTPH-Dx	5-28-19	5-28-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	82	50-150				
Client ID:	BPMW-6:W					
Laboratory ID:	05-267-03					
Diesel Range Organics	ND	0.27	NWTPH-Dx	5-30-19	5-30-19	

Diesel Range Organics	ND	0.27	NWTPH-Dx	5-30-19	5-30-19	
Lube Oil Range Organics	0.50	0.43	NWTPH-Dx	5-30-19	5-30-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	72	50-150				



DIESEL AND HEAVY OIL RANGE ORGANICS **NWTPH-Dx** QUALITY CONTROL

Matrix: Water Units: mg/L (ppm)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0528W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	5-28-19	5-28-19	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	5-28-19	5-28-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	84	50-150				
Laboratory ID:	MB0530W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	5-30-19	5-30-19	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	5-30-19	5-30-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	92	50-150				

					Source	Perce	ent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Recov	ery	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	05-27	77-04									
	ORIG	DUP									
Diesel Range	ND	ND	NA	NA		NA		NA	NA	NA	U1,M1
Lube Oil Range	ND	ND	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						88	83	50-150			
Laboratory ID:	SB05	30W1									
	ORIG	DUP									
Diesel Range	0.907	0.872	NA	NA		NA		NA	4	NA	
Lube Oil Range	ND	ND	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						105	99	50-150			

4

DISSOLVED METALS EPA 200.8

omio: dg/2 (ppo)				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-11R:W					
Laboratory ID:	05-267-01					
Arsenic	ND	3.0	EPA 200.8	5-20-19	5-29-19	
Client ID:	BPMW-2R:W					
Laboratory ID:	05-267-02					
Manganese	60	10	EPA 200.8	5-20-19	5-29-19	
Client ID:	BPMW-6:W					
Laboratory ID:	05-267-03					
Arsenic	8.4	3.0	EPA 200.8	5-20-19	5-29-19	
Manganese	26	10	EPA 200.8	5-20-19	5-29-19	



DISSOLVED METALS EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0520F1					
Arsenic	ND	3.0	EPA 200.8	5-20-19	5-29-19	
Manganese	ND	10	EPA 200.8	5-20-19	5-29-19	

Analyte	Res	sult	Spike	Level	Source Result	-	rcent overy	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE			••••••						2		
Laboratory ID:	05-30	07-02									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA			NA	NA	NA	20	
Manganese	4610	4700	NA	NA			NA	NA	2	20	
MATRIX SPIKES											
Laboratory ID:	05-30	07-02									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	85.2	85.0	80.0	80.0	ND	107	106	75-125	0	20	
Manganese	8520	8280	4000	4000	4610	98	92	75-125	3	20	



TOTAL ARSENIC EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-11R:W					
Laboratory ID:	05-267-01					
Arsenic	ND	3.3	EPA 200.8	5-29-19	5-29-19	
Client ID:	BPMW-6:W					
Laboratory ID:	05-267-03					
Arsenic	9.3	3.3	EPA 200.8	5-29-19	5-29-19	



TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

				Date	Date		
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags	
METHOD BLANK							
Laboratory ID:	MB0529WM1						
Arsenic	ND	3.3	EPA 200.8	5-29-19	5-29-19		

Analyte	Res	sult	Spike	Level	Source Result	-	rcent overy	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-27	77-01									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA			NA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	05-27	77-01									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	123	122	111	111	ND	111	110	75-125	1	20	



DISSOLVED GASES RSK 175

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BPMW-2R:W					
Laboratory ID:	05-267-02					
Methane	660	100	RSK 175	5-28-19	5-28-19	
Client ID:	BPMW-6:W					
Laboratory ID:	05-267-03					
Methane	1800	500	RSK 175	5-28-19	5-28-19	



DISSOLVED GASES RSK 175 QUALITY CONTROL

								Date	Date)	
Analyte		Result		PQL		ethod		Prepared	Analyzed		Flags
METHOD BLANK											
Laboratory ID:		MB0528W1									
Methane		ND		1.0	RS	K 175	5	5-28-19	5-28-1	9	
						_		_			
	_		• •		Source		rcent	Recovery		RPD	
Analyte	Re	sult	Spike	e Level	Result	Rec	covery	Limits	RPD	Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB05	28W1									
	SB	SBD	SB	SBD		SB	SBD				
Methane	4.12	4.32	4.42	4.42	N/A	93	98	75-125	5	25	



SULFATE ASTM D516-11

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BPMW-2R:W					
Laboratory ID:	05-267-02					
Sulfate	ND	5.0	ASTM D516-11	5-22-19	5-22-19	
Client ID:	BPMW-6:W					
Laboratory ID:	05-267-03					
Sulfate	ND	5.0	ASTM D516-11	5-22-19	5-22-19	



SULFATE ASTM D516-11 QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0522W1					
Sulfate	ND	5.0	ASTM D516-11	5-22-19	5-22-19	

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	05-26	67-02							
	ORIG	DUP							
Sulfate	ND	ND	NA	NA	NA	NA	NA	10	
MATRIX SPIKE									
Laboratory ID:	05-26	67-02							
	M	IS	MS		MS				
Sulfate	13	3.1	10.0	ND	131	73-134	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB05	22W1							
	S	В	SB		SB				
Sulfate	9.	93	10.0	NA	99	89-113	NA	NA	



NITRATE (as Nitrogen) EPA 353.2

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BPMW-2R:W					
Laboratory ID:	05-267-02					
Nitrate	0.055	0.050	EPA 353.2	5-21-19	5-21-19	
Client ID:	BPMW-6:W					
Laboratory ID:	05-267-03					
Nitrate	25	0.50	EPA 353.2	5-21-19	5-21-19	



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0521W1					
Nitrate	ND	0.050	EPA 353.2	5-21-19	5-21-19	

			Source	Percent	Recovery		RPD	
Analyte	Result	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE								
Laboratory ID:	05-267-02							
	ORIG DUP							
Nitrate	0.0548 0.0863	NA	NA	NA	NA	45	13	С
MATRIX SPIKE								
Laboratory ID:	05-267-02							
	MS	MS		MS				
Nitrate	2.17	2.00	0.0548	106	90-127	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0521W1							
	SB	SB		SB				
Nitrate	2.07	2.00	NA	104	90-125	NA	NA	



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BPMW-2R:W					
Laboratory ID:	05-267-02					
Total Alkalinity	110	2.0	SM 2320B	5-21-19	5-21-19	
Client ID:	BPMW-6:W					
Laboratory ID:	05-267-03					
Total Alkalinity	44	2.0	SM 2320B	5-21-19	5-21-19	



TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

						Date	Date	9	
Analyte	Result		PQL	Me	ethod	Prepared	Analyz	ed	Flags
METHOD BLANK									
Laboratory ID:		MB0521W1							
Total Alkalinity		ND	2.0	SM	2320B	5-21-19	5-21-19		
				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	05-26	67-02							
	ORIG	DUP							
Total Alkalinity	114	112	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB05	21W1							
	SB		SB		SB				
Total Alkalinity	90.0		100	NA	90	88-110	NA	NA	





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

Reviewed/Date	Received	Relinquished	Received	Relinquished	Received	Relinquished	Signature	T			- 96 °		-1	3 BPMW-U:W	2 BPMW-2R:W	1 BC-11R:W	Lab ID Sample Identification	Samples up. JEA Fand - CNV WONMUNTAL, CUM	- ige	Bothell Paint	Project Number: 82302 - 13:3	Company: Kane Environmental	Analytical Laboratory Iesting Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.onsite-env.com	OnSite Environmental Inc.
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June 4, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-13.3 Laboratory Reference No. 1905-319

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on May 23, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely.

David Baumeister Project Manager

Enclosures



Date of Report: June 4, 2019 Samples Submitted: May 23, 2019 Laboratory Reference: 1905-319 Project: 82302-13.3

Case Narrative

Samples were collected on May 23, 2019 and received by the laboratory on May 23, 2019. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BC-10:W			-		
Laboratory ID:	05-319-01					
Diesel Range Organics	ND	0.26	NWTPH-Dx	5-30-19	5-31-19	
Lube Oil Range Organics	ND	0.41	NWTPH-Dx	5-30-19	5-31-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	88	50-150				



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0530W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	5-30-19	5-30-19	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	5-30-19	5-30-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	92	50-150				

					Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	05-3	07-02								
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	NA	
Lube Oil Range Organics	0.450	0.419	NA	NA		NA	NA	7	NA	
Surrogate:										
o-Terphenyl						97 78	50-150			



DISSOLVED METALS EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-10:W					
Laboratory ID:	05-319-01					
Arsenic	ND	3.0	EPA 200.8	5-23-19	5-29-19	
Manganese	150	10	EPA 200.8	5-23-19	5-29-19	
Client ID:	BP-MW-1:W					
Laboratory ID:	05-319-02					
Arsenic	11	3.0	EPA 200.8	5-23-19	5-29-19	



DISSOLVED METALS EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0523F1					
Arsenic	ND	3.0	EPA 200.8	5-23-19	5-29-19	
Manganese	ND	10	EPA 200.8	5-23-19	5-29-19	

Analyte	Res	sult	Spike	Level	Source Result	-	rcent overy	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE			••••••						2		
Laboratory ID:	05-30	07-02									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA			NA	NA	NA	20	
Manganese	4610	4700	NA	NA			NA	NA	2	20	
MATRIX SPIKES											
Laboratory ID:	05-30	07-02									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	85.2	85.0	80.0	80.0	ND	107	106	75-125	0	20	
Manganese	8520	8280	4000	4000	4610	98	92	75-125	3	20	



TOTAL ARSENIC EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-10:W					
Laboratory ID:	05-319-01					
Arsenic	ND	3.3	EPA 200.8	5-31-19	5-31-19	
Client ID:	BP-MW-1:W					
Laboratory ID:	05-319-02					
Arsenic	22	3.3	EPA 200.8	5-31-19	5-31-19	



TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0531WM1					
ND	3.3	EPA 200.8	5-31-19	5-31-19	
	MB0531WM1	MB0531WM1	MB0531WM1	Result PQL Method Prepared MB0531WM1 MB0531WM1 Method Method<	Result PQL Method Prepared Analyzed MB0531WM1

Analyte	Res	sult	Spike	Level	Source Result	-	rcent overy	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											<u> </u>
Laboratory ID:	05-30	07-02									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA			NA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	05-30	07-02									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	128	130	111	111	ND	116	117	75-125	1	20	



DISSOLVED GASES RSK 175

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-10:W					
Laboratory ID:	05-319-01					
Methane	230	30	RSK 175	6-3-19	6-3-19	



DISSOLVED GASES RSK 175 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0603W1					
Methane	ND	1.0	RSK 175	6-3-19	6-3-19	

Analyte	Re	sult	Spike	Level	Source Result	-	rcent overy	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	01-1	23-01									
	MS	MSD	MS	MSD		MS	MSD				
Methane	9.41	9.08	4.42	4.42	4.20	118	110	75-125	4	25	
Ethane	7.79	7.34	8.32	8.32	ND	94	88	75-125	6	25	
Ethene	5.79	6.37	7.77	7.77	ND	75	82	75-125	10	25	



10

SULFATE ASTM D516-11

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-10:W					
Laboratory ID:	05-319-01					
Sulfate	6.0	5.0	ASTM D516-11	5-28-19	5-28-19	



SULFATE ASTM D516-11 QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0528W1					
Sulfate	ND	5.0	ASTM D516-11	5-28-19	5-28-19	

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	05-33	1-02							
	ORIG	DUP							
Sulfate	23.7	25.1	NA	NA	NA	NA	6	10	
MATRIX SPIKE									
Laboratory ID:	05-33	1-02							
	M	S	MS		MS				
Sulfate	48	.5	20.0	23.7	124	73-134	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB052	28W1							
	SI	В	SB		SB				
Sulfate	8.9	99	10.0	NA	90	89-113	NA	NA	



NITRATE (as Nitrogen) EPA 353.2

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-10:W					
Laboratory ID:	05-319-01					
Nitrate	ND	0.050	EPA 353.2	5-23-19	5-23-19	



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0523W1					
Nitrate	ND	0.050	EPA 353.2	5-23-19	5-23-19	

			Source	Percent	Recovery		RPD	
Analyte	Result	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE								
Laboratory ID:	05-307-02							
	ORIG DUP							
Nitrate	0.274 0.302	NA	NA	NA	NA	10	13	
MATRIX SPIKE								
Laboratory ID:	05-307-02							
	MS	MS		MS				
Nitrate	2.38	2.00	0.274	105	90-127	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0523W1							
	SB	SB		SB				
Nitrate	2.18	2.00	NA	109	90-125	NA	NA	



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-10:W					
Laboratory ID:	05-319-01					
Total Alkalinity	160	2.0	SM 2320B	5-30-19	5-30-19	



TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

						Date	Date	1	
Analyte	Result		PQL	Ме	thod	Prepared	Analyzed		Flags
METHOD BLANK									
Laboratory ID:		MB0530W1							
Total Alkalinity		ND	2.0	SM	2320B	5-30-19	5-30-1	9	
				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD Limit		Flags
DUPLICATE									
Laboratory ID:	05-3 ⁻	19-01							
	ORIG	DUP							
Total Alkalinity	160	160	NA	NA	NA	NA	0	10	
SPIKE BLANK									
Laboratory ID:	SB05	30W1							
	S	В	SB		SB				
Total Alkalinity	92	2.0	100	NA	92	88-109	NA	NA	





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



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Reviewed/Date	Received	Relinquished	Received	Relinquished	Received Wakey Citcow	Relinquished	Signature	7				1	2 BP-MW-1:W	1 BC-10:W	Lab ID Sample Identification	Isabella Graves	Jeff Jensen	BSCER Bothell Paint	82302-13.3	Kane Environmental, Inc.	Phone: (425) 883-3881 • www.onsite-env.com	Analytical Laboratory Testing Services	Environmental Inc	
Reviewed/Date					84	7 Kane Environmental	Company						2 MD AHA 2015	5/23 1150 GW 9	Date Time Sampled Sampled Matrix Z	(other)	Contain	Standard (7 Days)	2 Days 3 Days	Same Day 1 Day	(Check One)	Turnaround Request	Chain of Custody	
					5/03/19 1506	tou 5/23/19 1526	Date Time							×	NWTF NWTF NWTF Volati Halog	iles 826 genated	BTEX	I / SG Cl S 8260C ers Only))		Laboratory Number:	Custody	
Chromatograms with final report \square Electronic Data Deliverables (EDDs) \square	Data Package: Standard 🗌 Level III 🗌 Level IV 🗌					Tab AHEr	Comments/Special Instructions	- BG1					× ×		(with PAHs PCBs Orgar Orgar Chlor Total Total Total HEM	s 8082A nochlori nophosp inated / RGRA N MTCA N MTCA N (oil and	el PAHs (SIM (lo ne Pes) ohorus Acid He Acid He Actals Metals grease) w-level) ticides 8 Pesticide rbicides	081B es 827(8151A SO (N	red M		OR - 319	Page of	



May 30, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-15.3 Laboratory Reference No. 1905-281

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on May 21, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely.

David Baumeister Project Manager

Enclosures



Date of Report: May 30, 2019 Samples Submitted: May 21, 2019 Laboratory Reference: 1905-281 Project: 82302-15.3

Case Narrative

Samples were collected on May 21, 2019 and received by the laboratory on May 21, 2019. They were maintained at the laboratory at a temperature of 2° C to 6° C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-19:W					
Laboratory ID:	05-281-02					
Diesel Range Organics	0.41	0.26	NWTPH-Dx	5-28-19	5-28-19	
Lube Oil Range Organics	ND	0.42	NWTPH-Dx	5-28-19	5-28-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	84	50-150				
Client ID:	BLMW-8R:W					
Laboratory ID:	05-281-04					

Laboratory ID.	05-201-04					
Diesel Range Organics	0.40	0.27	NWTPH-Dx	5-28-19	5-28-19	
Lube Oil Range Organics	0.72	0.42	NWTPH-Dx	5-28-19	5-28-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	85	50-150				



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

Matrix: Water Units: mg/L (ppm)

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0528W1					
ND	0.25	NWTPH-Dx	5-28-19	5-28-19	
ND	0.40	NWTPH-Dx	5-28-19	5-28-19	
Percent Recovery	Control Limits				
84	50-150				
	MB0528W1 ND ND Percent Recovery	MB0528W1 ND 0.25 ND 0.40 Percent Recovery Control Limits	MB0528W1 ND 0.25 NWTPH-Dx ND 0.40 NWTPH-Dx Percent Recovery Control Limits	MB0528W1 NU 0.25 NWTPH-Dx 5-28-19 ND 0.40 NWTPH-Dx 5-28-19 Percent Recovery Control Limits 5-28-19	MB0528W1 ND 0.25 NWTPH-Dx 5-28-19 5-28-19 ND 0.40 NWTPH-Dx 5-28-19 5-28-19 Percent Recovery Control Limits Control Limits Control Limits

					Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	SB05	28W1								
	ORIG	DUP								
Diesel Fuel #2	0.820	0.730	NA	NA		NA	NA	12	NA	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						106 93	50-150			



DISSOLVED METALS EPA 200.8

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-1:W					
Laboratory ID:	05-281-01					
Arsenic	ND	3.0	EPA 200.8	5-21-19	5-29-19	
Client ID:	HZ-MW-19:W					
Laboratory ID:	05-281-02					
Arsenic	ND	3.0	EPA 200.8	5-21-19	5-29-19	
Manganese	720	50	EPA 200.8	5-21-19	5-29-19	
Client ID:	HZ-MW-4:W					
Laboratory ID:	05-281-03					
Arsenic	ND	3.0	EPA 200.8	5-21-19	5-29-19	
Client ID:	BLMW-8R:W					
Laboratory ID:	05-281-04					
Arsenic	5.6	3.0	EPA 200.8	5-21-19	5-29-19	
Manganese	2400	250	EPA 200.8	5-21-19	5-29-19	



5

DISSOLVED METALS EPA 200.8 QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0521F1					
Arsenic	ND	3.0	EPA 200.8	5-21-19	5-29-19	
Manganese	ND	10	EPA 200.8	5-21-19	5-29-19	

Analyte	Bo	sult	Spike	Level	Source Result	-	rcent overv	Recovery Limits	RPD	RPD Limit	Flags
· · · · ·	nea	sun	Эріке	Level	nesun	nec	overy	Linits	nfd	LIIIII	i lays
DUPLICATE											
Laboratory ID:	05-30	07-02									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA		l	NA	NA	NA	20	
Manganese	4610	4700	NA	NA			NA	NA	2	20	
MATRIX SPIKES											
Laboratory ID:	05-30	07-02									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	85.2	85.0	80.0	80.0	ND	107	106	75-125	0	20	
Manganese	8520	8280	4000	4000	4610	98	92	75-125	3	20	



TOTAL ARSENIC EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-1:W					
Laboratory ID:	05-281-01					
Arsenic	ND	3.3	EPA 200.8	5-29-19	5-29-19	
Client ID:	HZ-MW-19:W					
Laboratory ID:	05-281-02					
Arsenic	ND	3.3	EPA 200.8	5-29-19	5-29-19	
Client ID:	HZ-MW-4:W					
Laboratory ID:	05-281-03					
Arsenic	ND	3.3	EPA 200.8	5-29-19	5-29-19	
Client ID:	BLMW-8R:W					
Laboratory ID:	05-281-04					
Arsenic	7.1	3.3	EPA 200.8	5-29-19	5-29-19	



TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0529WM1					
Arsenic	ND	3.3	EPA 200.8	5-29-19	5-29-19	

Analyte	Res	sult	Spike	Level	Source Result	-	rcent overy	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-27	77-01									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA			NA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	05-27	77-01									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	123	122	111	111	ND	111	110	75-125	1	20	



DISSOLVED GASES RSK 175

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-19:W					
Laboratory ID:	05-281-02					
Methane	110	20	RSK 175	5-28-19	5-28-19	
Client ID:	BLMW-8R:W					
Laboratory ID:	05-281-04					
Methane	2900	500	RSK 175	5-28-19	5-28-19	



DISSOLVED GASES RSK 175 QUALITY CONTROL

0 (11)				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
_aboratory ID:	MB0528W1					
Methane	ND	1.0	RSK 175	5-28-19	5-28-19	

Analyte	Re	sult	Spike	Level	Source Result		rcent covery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS Laboratory ID:	SB05	28W1									
Laboratory 12.	SB	SBD	SB	SBD		SB	SBD				
Methane	4.12	4.32	4.42	4.42	N/A	93	98	75-125	5	25	



SULFATE ASTM D516-11

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-19:W					
Laboratory ID:	05-281-02					
Sulfate	17	5.0	ASTM D516-11	5-22-19	5-22-19	
Client ID:	BLMW-8R:W					
Laboratory ID:	05-281-04					
Sulfate	ND	5.0	ASTM D516-11	5-22-19	5-22-19	



SULFATE ASTM D516-11 QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0522W1					
Sulfate	ND	5.0	ASTM D516-11	5-22-19	5-22-19	

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	05-26	67-02							
	ORIG	DUP							
Sulfate	ND	ND	NA	NA	NA	NA	NA	10	
MATRIX SPIKE									
Laboratory ID:	05-26	67-02							
	M	IS	MS		MS				
Sulfate	13	3.1	10.0	ND	131	73-134	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB05	22W1							
	S	В	SB		SB				
Sulfate	9.	93	10.0	NA	99	89-113	NA	NA	



NITRATE (as Nitrogen) EPA 353.2

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
HZ-MW-19:W					
05-281-02					
0.14	0.050	EPA 353.2	5-21-19	5-21-19	
BLMW-8R:W					
05-281-04					
0.14	0.050	EPA 353.2	5-21-19	5-21-19	
	HZ-MW-19:W 05-281-02 0.14 BLMW-8R:W 05-281-04	HZ-MW-19:W 05-281-02 0.14 0.050 BLMW-8R:W 05-281-04	HZ-MW-19:W 05-281-02 0.14 0.050 EPA 353.2 BLMW-8R:W 05-281-04	Result PQL Method Prepared HZ-MW-19:W 05-281-02 5-21-19 5-21-19 0.14 0.050 EPA 353.2 5-21-19 BLMW-8R:W 05-281-04 5-21-19 5-21-19	Result PQL Method Prepared Analyzed HZ-MW-19:W 05-281-02



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0521W1					
Nitrate	ND	0.050	EPA 353.2	5-21-19	5-21-19	

			Source	Percent	Recovery		RPD	
Analyte	Result	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE								
Laboratory ID:	05-267-02							
	ORIG DUP							
Nitrate	0.0548 0.0863	NA	NA	NA	NA	45	13	С
MATRIX SPIKE								
Laboratory ID:	05-267-02							
	MS	MS		MS				
Nitrate	2.17	2.00	0.0548	106	90-127	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0521W1							
	SB	SB		SB				
Nitrate	2.07	2.00	NA	104	90-125	NA	NA	



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-19:W					
Laboratory ID:	05-281-02					
Total Alkalinity	180	2.0	SM 2320B	5-23-19	5-23-19	
Client ID:	BLMW-8R:W					
Laboratory ID:	05-281-04					
Total Alkalinity	310	2.0	SM 2320B	5-23-19	5-23-19	



TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

						Date	Date)	
Analyte		Result	PQL	Me	ethod	Prepared	Analyz	ed	Flags
METHOD BLANK									
Laboratory ID:		MB0523W1							
Total Alkalinity		ND	2.0	SM	2320B	5-23-19	5-23-1	9	
				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	05-30	07-02							
	ORIG	DUP							
Total Alkalinity	508	502	NA	NA	NA	NA	1	10	
SPIKE BLANK									
Laboratory ID:	SB05	23W1							
	S	В	SB		SB				
Total Alkalinity	92	2.0	100	NA	92	88-109	NA	NA	





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

Reviewed/Date	Received	Relinquished	Received	Relinquished	Received	Relinquished	Signature							4 WHENRYMAN BLMIN-BRIN	3 HZ-MM-4:10	2 HZ-MW-19:W	1 +HZ - MIN-1: W	Lab ID Sample Identification	Sampled by: Jeffe Vanne-envivonmental. com	Veft Jen Frn	BOTWELL HWYZ	BUSD 2- 15.3	Kane Envivonmental	14648 NE 950 Street • Heamond, WA 95052 Phone: (425) 883-3881 • www.onsite-env.com	Analytical Laboratory Testing Services	OnSite
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June 4, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-15.3 Laboratory Reference No. 1905-307

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on May 22, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely.

David Baumeister Project Manager

Enclosures



Date of Report: June 4, 2019 Samples Submitted: May 22, 2019 Laboratory Reference: 1905-307 June 482302-15.3

Case Narrative

Samples were collected on May 22, 2019 and received by the laboratory on May 22, 2019. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BC-16:W			•		
Laboratory ID:	05-307-02					
Diesel Range Organics	ND	0.26	NWTPH-Dx	5-30-19	5-31-19	
Lube Oil Range Organics	0.45	0.41	NWTPH-Dx	5-30-19	5-31-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	97	50-150				



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0530W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	5-30-19	5-30-19	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	5-30-19	5-30-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	92	50-150				

					Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	05-3	07-02								
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	NA	
Lube Oil Range Organics	0.450	0.419	NA	NA		NA	NA	7	NA	
Surrogate:										
o-Terphenyl						97 78	50-150			



TOTAL ARSENIC EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-12:W					
Laboratory ID:	05-307-01					
Arsenic	4.2	3.3	EPA 200.8	5-31-19	5-31-19	
Client ID:	BC-16:W					
Laboratory ID:	05-307-02					
Arsenic	ND	3.3	EPA 200.8	5-31-19	5-31-19	



TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0531WM1					
Arsenic	ND	3.3	EPA 200.8	5-31-19	5-31-19	

Analyte	Res	sult	Spike	Level	Source Result	-	rcent overy	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											<u> </u>
Laboratory ID:	05-30	07-02									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA			NA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	05-30	07-02									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	128	130	111	111	ND	116	117	75-125	1	20	



DISSOLVED METALS EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-12:W					
Laboratory ID:	05-307-01					
Arsenic	3.2	3.0	EPA 200.8	5-22-19	5-29-19	
Client ID:	BC-16:W					
Laboratory ID:	05-307-02					
Arsenic	ND	3.0	EPA 200.8	5-22-19	5-29-19	
Manganese	4600	500	EPA 200.8	5-22-19	5-29-19	



DISSOLVED METALS EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0522F1					
Arsenic	ND	3.0	EPA 200.8	5-22-19	5-29-19	
Manganese	ND	10	EPA 200.8	5-22-19	5-29-19	

Analyte	Res	sult	Spike	Level	Source Result	-	rcent overy	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE			••••••						2		
Laboratory ID:	05-30)7-02									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA			NA	NA	NA	20	
Manganese	4610	4700	NA	NA			NA	NA	2	20	
MATRIX SPIKES											
Laboratory ID:	05-30	07-02									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	85.2	85.0	80.0	80.0	ND	107	106	75-125	0	20	
Manganese	8520	8280	4000	4000	4610	98	92	75-125	3	20	



DISSOLVED GASES RSK 175

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-16:W					
Laboratory ID:	05-307-02					
Methane	2100	300	RSK 175	6-3-19	6-3-19	



DISSOLVED GASES RSK 175 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0603W1					
Methane	ND	1.0	RSK 175	6-3-19	6-3-19	

Analyte	Re	sult	Spike	Level	Source Result	-	rcent overy	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	01-1	23-01									
	MS	MSD	MS	MSD		MS	MSD				
Methane	9.41	9.08	4.42	4.42	4.20	118	110	75-125	4	25	
Ethane	7.79	7.34	8.32	8.32	ND	94	88	75-125	6	25	
Ethene	5.79	6.37	7.77	7.77	ND	75	82	75-125	10	25	



SULFATE ASTM D516-11

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-16:W					
Laboratory ID:	05-307-02					
Sulfate	260	100	ASTM D516-11	5-28-19	5-28-19	



SULFATE ASTM D516-11 QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0528W1					
Sulfate	ND	5.0	ASTM D516-11	5-28-19	5-28-19	

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	05-33	1-02							
	ORIG	DUP							
Sulfate	23.7	25.1	NA	NA	NA	NA	6	10	
MATRIX SPIKE									
Laboratory ID:	05-33	1-02							
	M	S	MS		MS				
Sulfate	48	.5	20.0	23.7	124	73-134	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB052	28W1							
	SI	В	SB		SB				
Sulfate	8.9	99	10.0	NA	90	89-113	NA	NA	



NITRATE (as Nitrogen) EPA 353.2

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-16:W					
Laboratory ID:	05-307-02					
Nitrate	0.27	0.050	EPA 353.2	5-23-19	5-23-19	



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0523W1					
Nitrate	ND	0.050	EPA 353.2	5-23-19	5-23-19	

			Source	Percent	Recovery		RPD	
Analyte	Result	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE								
Laboratory ID:	05-307-02							
	ORIG DUP							
Nitrate	0.274 0.302	NA	NA	NA	NA	10	13	
MATRIX SPIKE								
Laboratory ID:	05-307-02							
	MS	MS		MS				
Nitrate	2.38	2.00	0.274	105	90-127	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0523W1							
	SB	SB		SB				
Nitrate	2.18	2.00	NA	109	90-125	NA	NA	



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-16:W					
Laboratory ID:	05-307-02					
Total Alkalinity	510	2.0	SM 2320B	5-23-19	5-23-19	



TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

						Date	Date)	
Analyte		Result	PQL	Ме	ethod	Prepared	Analyz	ed	Flags
METHOD BLANK									
Laboratory ID:		MB0523W1							
Total Alkalinity		ND	2.0	SM	2320B	5-23-19	5-23-1	9	
				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	05-30	07-02							
	ORIG	DUP							
Total Alkalinity	508	502	NA	NA	NA	NA	1	10	
SPIKE BLANK									
Laboratory ID:	SB05	23W1							
	S	В	SB		SB				
Total Alkalinity	92	2.0	100	NA	92	88-109	NA	NA	





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

Reviewed/Date	Received	Relinquished	Received	Relinquished	Received	Relinquished	Signature	5						1	2 BC-IU:W	1 H3-MM-12:W	Lab ID Sample Identification	sett @ Kahe- Environmental. cum	nag	HWFZ	81202 - 15 3	KAM ENVIVONMENTEL		Analytical Laboratory Testing Services	Invironmental Inc
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Reviewed/Date					22	kann 4	Company								1255	1200	Time Sampled	(other)		ard (7 Days)		Day	Working days	Turnaround Request	Cha
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June 3, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-15.3 Laboratory Reference No. 1905-320

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on May 23, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely.

David Baumeister Project Manager

Enclosures



Date of Report: June 3, 2019 Samples Submitted: May 23, 2019 Laboratory Reference: 1905-320 Project: 82302-15.3

Case Narrative

Samples were collected on May 23, 2019 and received by the laboratory on May 23, 2019. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

TOTAL ARSENIC EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	H2-MW-17:W					
Laboratory ID:	05-320-01					
Arsenic	ND	3.3	EPA 200.8	5-31-19	5-31-19	



TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0531WM1					
Arsenic	ND	3.3	EPA 200.8	5-31-19	5-31-19	

Analyte	Res	sult	Spike	Level	Source Result	-	rcent overy	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-30	07-02									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA			NA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	05-30	07-02									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	128	130	111	111	ND	116	117	75-125	1	20	



DISSOLVED ARSENIC EPA 200.8

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	H2-MW-17:W					
Laboratory ID:	05-320-01					
Arsenic	ND	3.0	EPA 200.8	5-23-19	5-29-19	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

DISSOLVED ARSENIC EPA 200.8 QUALITY CONTROL

								Date	Date		
Analyte		Result		PQL	Ме	ethod		Prepared	Analyze	ed	Flags
METHOD BLANK											
Laboratory ID:		MB0523F1									
Arsenic		ND		3.0	EPA	200.8	3	5-23-19	5-29-1	9	
					Source	Pe	rcent	Recovery		RPD	
Analyte	Res	sult	Spike	e Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	05-30	07-02									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA		1	NA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	05-30	07-02									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	85.2	85.0	80.0	80.0	ND	107	106	75-125	0	20	





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

Reviewed/Date	Received	Relinquished	Received	Relinquished	Received MAQUU CISCOU	Relinquished	Signature					4	1 HZ-MW-17: W	Lab ID Sample Identification	ISALPULA GYANES	Jeff Jensen	HCV+7	82302 - 15.3	Kane Environmental, Inc.		Analytical Laboratory Testing Services	INA OnSite
Reviewed/Date					84	Kane Environment al	Company						5/23 1045 GW 2	10.00		Contain	Standard (7 Days)	2 Days 3 Days	Same Day 1 Day	(in working days) (Check One)	Turnaround Request	Chain of Custody
					2621 11/2615	2/13/14	Date Time							NWTF NWTF NWTF Volati Halog	les 826 enated	BTEX	s 82600	>		Laboratory Number:		ustody
Chromatograms with final report	Data Package: Standard Level III Level IV					law filter	Comments/Special Instructions	4					× ×	(with PAHs PCBs Orgar Orgar Chlor Tetal TCLP HEM	Iow-lev 8270D 8082A nochlor nophos inated BCRA MTCA	ine Pest phorus I Acid He Metals Metals) w-level) icides 8 Pesticid rbicides -to-t	081B es 8270 8151A - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2	As	0 2 C C C C C C C C C C C C C C C C C C	0	Page of



June 3, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-14.3 Laboratory Reference No. 1905-306

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on May 22, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely.

David Baumeister Project Manager

Enclosures



Date of Report: June 3, 2019 Samples Submitted: May 22, 2019 Laboratory Reference: 1905-306 Project: 82302-14.3

Case Narrative

Samples were collected on May 22, 2019 and received by the laboratory on May 22, 2019. They were maintained at the laboratory at a temperature of 2° C to 6° C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BLMW-11:W					
Laboratory ID:	05-306-01					
Diesel Range Organics	ND	0.26	NWTPH-Dx	6-3-19	6-3-19	
Lube Oil Range Organics	0.51	0.41	NWTPH-Dx	6-3-19	6-3-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	79	50-150				
Client ID:	BLMW-12:W					

Laboratory ID:	05-306-02					
Diesel Range Organics	ND	0.26	NWTPH-Dx	6-3-19	6-3-19	
Lube Oil Range Organics	ND	0.42	NWTPH-Dx	6-3-19	6-3-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	81	50-150				

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0603W1					
ND	0.25	NWTPH-Dx	6-3-19	6-3-19	
ND	0.40	NWTPH-Dx	6-3-19	6-3-19	
Percent Recovery	Control Limits				
87	50-150				
	MB0603W1 ND ND Percent Recovery	MB0603W1ND0.25ND0.40Percent RecoveryControl Limits	MB0603W1ND0.25NWTPH-DxND0.40NWTPH-DxPercent RecoveryControl Limits	Result PQL Method Prepared MB0603W1 -<	Result PQL Method Prepared Analyzed MB0603W1 -

					Source	Per	cent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Reco	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	SB06	03W1									
	ORIG	DUP									
Diesel Fuel #2	0.898	0.867	NA	NA		N	IA	NA	4	NA	
Lube Oil Range	ND	ND	NA	NA		N	IA	NA	NA	NA	
Surrogate:											
o-Terphenyl						88	89	50-150			



TOTAL ARSENIC EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BLMW-11:W					
Laboratory ID:	05-306-01					
Arsenic	7.9	3.3	EPA 200.8	5-29-19	5-29-19	
Client ID:	BLMW-12:W					
Laboratory ID:	05-306-02					
Arsenic	ND	3.3	EPA 200.8	5-29-19	5-29-19	



TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

								Date	Date	•	
Analyte		Result		PQL	M	ethod		Prepared	Analyz	ed	Flags
METHOD BLANK											
Laboratory ID:	Ν	/IB0529WM1									
Arsenic		ND		3.3	EP/	4 200.8	3	5-29-19	5-29-1	9	
					Source	Per	cent	Recovery		RPD	
Analyte	Re	sult	Spike	e Level	Result	Reco	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	05-2	77-01									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA		Ν	IA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	05-2	77-01									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	123	122	111	111	ND	111	110	75-125	1	20	



DISSOLVED ARSENIC EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BLMW-11:W					
Laboratory ID:	05-306-01					
Arsenic	7.6	3.0	EPA 200.8	5-22-19	5-29-19	
Client ID:	BLMW-12:W					
Laboratory ID:	05-306-02					
Arsenic	ND	3.0	EPA 200.8	5-22-19	5-29-19	



DISSOLVED ARSENIC EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

					Date	Date			
Analyte	Result	PQL	Method		Prepared	Analyzed		Flags	
METHOD BLANK									
Laboratory ID:	MB0522F	1							
Arsenic	ND	3.0	EPA	200.8	5-22-19	5-29-1	9		
			Source	Percent	Recovery		RPD		
Analyte	Result	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags	
DUPLICATE									
Laboratory ID:	05-307-02								
	ORIG DUP								

MATRIX SPIKES

ND

ND

NA

NA

Arsenic

Laboratory ID:	05-307-02 MS MSD										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	85.2	85.0	80.0	80.0	ND	107	106	75-125	0	20	

NA

NA

NA

20





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
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- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
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- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

Reviewed/Date	Received	Relinquished	Received	Relinquished	Received	Relinquished	Signature J J	1				-1	2 BLMW-12:W	1 BLMW-11:W	Lab ID Sample Identification	JEFF@ Kane-environ mental cim	Jeft Jensen - neuron	Botwell Landing	02302 - 14:3	KAME Egyví vorwental	Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.onsite-env.com	Environmental Inc.
Reviewed/Date					(0)	Kane en	Company						5122 1450 0	2/22 1050 1	Date Time Sampled Sampled	(other)		Standard (7 Days)	2 Days		(in working days)	Cha
					E S	envivonm. 5	Date						GW 4	GW H	NWTF	PH-HCI		Brs	3 Days	1 Day		Chain of Custody
					22/19 1604	2113 1004	le Time						\times	×	Volatil Halog	PH-Dx (es 826 enated	Acid C Volatile I1 (Wate	s 8260C)		Laboratory Number:	tody
Chromatograms with final report	Data Package: Standard				1	lab Filter	Comments/Special Instructions								Semiv (with I PAHs PCBs Organ Organ Chlori	olatiles ow-lev 8270D, 8082A ochlori ophosį	8270D, el PAHs /SIM (lor ne Pest phorus F Acid Her	/SIM) w-level) icides 8 Pesticide	081B es 8270			
Electronic Data Deliverables (EDDs)	Level III							- 19-67					× ×	××	TCLP HEM (a) <i>t</i>	grease)					Page M of M



June 4, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-15.3 Laboratory Reference No. 1905-330

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on May 24, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely.

David Baumeister Project Manager

Enclosures



Date of Report: June 4, 2019 Samples Submitted: May 24, 2019 Laboratory Reference: 1905-330 Project: 82302-15.3

Case Narrative

Samples were collected on May 24, 2019 and received by the laboratory on May 24, 2019. They were maintained at the laboratory at a temperature of 2° C to 6° C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-1:W					
Laboratory ID:	05-330-01					
Diesel Range Organics	ND	0.26	NWTPH-Dx	6-3-19	6-3-19	
Lube Oil Range Organics	ND	0.42	NWTPH-Dx	6-3-19	6-3-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	87	50-150				



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

C <i>i</i>				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0603W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	6-3-19	6-3-19	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	6-3-19	6-3-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	87	50-150				

					Source	Perce	ent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Recov	/ery	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	05-33	30-01									
	ORIG	DUP									
Diesel Range	ND	ND	NA	NA		NA	۱.	NA	NA	NA	
Lube Oil Range	ND	ND	NA	NA		NA	۱	NA	NA	NA	
Surrogate:						- -	- -				
o-Terphenyl						87	87	50-150			



DISSOLVED ARSENIC EPA 200.8

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	MW-1:W					
Laboratory ID:	05-330-01					
Arsenic	ND	3.0	EPA 200.8	5-24-19	5-29-19	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

DISSOLVED ARSENIC EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0524F1					
Arsenic	ND	3.0	EPA 200.8	5-24-19	5-29-19	

Analyte	Res	sult	Spike	Level	Source Result	-	rcent overy	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-30	07-02									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA			NA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	05-30	07-02									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	85.2	85.0	80.0	80.0	ND	107	106	75-125	0	20	



TOTAL ARSENIC EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	MW-1:W					
Laboratory ID:	05-330-01					
Arsenic	ND	3.3	EPA 200.8	5-31-19	5-31-19	



TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

							Date	Date		
	Result		PQL	Ме	ethod	I	Prepared	Analyze	ed	Flags
Ν	/B0531WM1									
	ND		3.3	EPA	200.8	1	5-31-19	5-31-1	9	
				Source	Pei	rcent	Recovery		RPD	
Res	sult	Spike	e Level	Result	Rec	overy	Limits	RPD	Limit	Flags
05-30	07-02									
ORIG	DUP									
ND	ND	NA	NA		1	NA	NA	NA	20	
05-30	07-02									
MS	MSD	MS	MSD		MS	MSD				
128	130	111	111	ND	116	117	75-125	1	20	
	Re: 05-30 ORIG ND 05-30 MS	MB0531WM1 ND Result 05-307-02 ORIG DUP ND ND 05-307-02 MS MSD	MB0531WM1 ND Result Spike 05-307-02 ORIG ORIG DUP ND NA 05-307-02 MS	MB0531WM1 ND 3.3 Result Spike Level 05-307-02	MB0531WM1 ND 3.3 EPA Source Source Result Spike Level Result 05-307-02 081G DUP 05-307-02 ND NA NA NA 05-307-02 MS MSD MS MSD	MB0531WM1 ND 3.3 EPA 200.8 Source Per Result Spike Level Result Rec 05-307-02 05 05 05 05 ND NA NA NA M 05-307-02 05 05 05 05 MD NA NA M M 05-307-02 05 05 05 05 05 05-307-02 MS MS MS MS MS	MB0531WM1 ND 3.3 EPA 200.8 Source Percent Result Spike Level Result Recovery 05-307-02 07-02 07-02 07-02 05-307-02 ND ND NA NA NA 05-307-02 05-307-02 MS MS MS MS	Result PQL Method Prepared MB0531WM1	Result PQL Method Prepared Analyze MB0531WM1 ND 3.3 EPA 200.8 5-31-19 5-31-19 ND 3.3 EPA 200.8 5-31-19 5-31-19 Result Spike Level Result Recovery Recovery RPD 05-307-02 010 ND NA NA NA NA NA 05-307-02 05-307-02 ND NA NA NA NA NA 05-307-02 MS MSD MS MS MSD S	Result PQL Method Prepared Analyzet MB0531WM1 MB0531WM1 3.3 EPA 200.8 5-31-19 5-31-19 5-31-19 ND 3.3 EPA 200.8 Percent Recovery RPD RPD Result Spike Level Result Percent Recovery Limits RPD Limit 05-307-02 V V NA NA NA 20 05-307-02 V V NA NA 20 20 05-307-02 MS MSD MS MS MSD VA 20





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

Reviewed/Date	Received	Relinquished	Received	Relinquished	Received	Relinquished	Signature	1								NI: L- MM	Lab ID Sample Identification	Bellid Braves	Jeff Jen Sch	BOTWELL HONTZ	82302 - 15.3	Kant Envivonmental	Analytical Laboratory lesting Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.onsite-env.com	Environmental Inc.	OnSite
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July 30, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-13.3 Laboratory Reference No. 1907-208

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on July 18, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely.

David Baumeister Project Manager

Enclosures



Date of Report: July 30, 2019 Samples Submitted: July 18, 2019 Laboratory Reference: 1907-208 Project: 82302-13.3

Case Narrative

Samples were collected on July 18, 2019 and received by the laboratory on July 18, 2019. They were maintained at the laboratory at a temperature of 2° C to 6° C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BPMW-2R:W					
Laboratory ID:	07-208-01					
Diesel Range Organics	ND	0.26	NWTPH-Dx	7-22-19	7-24-19	
Lube Oil Range Organics	ND	0.42	NWTPH-Dx	7-22-19	7-24-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	89	50-150				
Client ID:	BPMW-6:W					
Laboratory ID:	07-208-02					

	0, 200 02					
Diesel Range Organics	ND	0.30	NWTPH-Dx	7-22-19	7-24-19	
Lube Oil Range Organics	ND	0.49	NWTPH-Dx	7-22-19	7-24-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	82	50-150				



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0722W1					
ND	0.25	NWTPH-Dx	7-22-19	7-23-19	
ND	0.40	NWTPH-Dx	7-22-19	7-23-19	
Percent Recovery	Control Limits				
86	50-150				
	MB0722W1 ND ND Percent Recovery	MB0722W1ND0.25ND0.40Percent RecoveryControl Limits	MB0722W1ND0.25ND0.40NWTPH-DxPercent RecoveryControl Limits	Result PQL Method Prepared MB0722W1 -<	Result PQL Method Prepared Analyzed MB0722W1

Analyte	Res	sult	Spike	Level	Source Result	Perc Reco		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	SB07	22W1									
	ORIG	DUP									
Diesel Fuel #2	1.00	0.873	NA	NA		N	A	NA	14	NA	
Lube Oil Range	ND	ND	NA	NA		N	A	NA	NA	NA	
Surrogate:											
o-Terphenyl						89	86	50-150			



SULFATE ASTM D516-11

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
BPMW-2R:W					
07-208-01					
ND	5.0	ASTM D516-11	7-23-19	7-23-19	
BPMW-6:W					
07-208-02					
ND	5.0	ASTM D516-11	7-23-19	7-23-19	
	BPMW-2R:W 07-208-01 ND BPMW-6:W 07-208-02	BPMW-2R:W 07-208-01 ND 5.0 BPMW-6:W 07-208-02	BPMW-2R:W 07-208-01 ND 5.0 ASTM D516-11 BPMW-6:W 07-208-02	Result PQL Method Prepared BPMW-2R:W 07-208-01 7-208-01 7-23-19 ND 5.0 ASTM D516-11 7-23-19 BPMW-6:W 07-208-02 100-100 100-100	Result PQL Method Prepared Analyzed BPMW-2R:W 07-208-01 7-208-01 7-23-19 7-23-19 ND 5.0 ASTM D516-11 7-23-19 7-23-19 BPMW-6:W 07-208-02



SULFATE ASTM D516-11 QUALITY CONTROL

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0723W1					
ND	5.0	ASTM D516-11	7-23-19	7-23-19	
	MB0723W1	MB0723W1	MB0723W1	Result PQL Method Prepared MB0723W1 MB0723W1 MB0723W1 MB0723W1 MB0723W1	Result PQL Method Prepared Analyzed MB0723W1 MB0723W1

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	07-20	08-01							
	ORIG	DUP							
Sulfate	ND	ND	NA	NA	NA	NA	NA	10	
MATRIX SPIKE									
Laboratory ID:	07-20	08-01							
	Μ	S	MS		MS				
Sulfate	11	.8	10.0	ND	118	73-134	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB07	23W1							
	S	В	SB		SB				
Sulfate	10	.2	10.0	NA	102	89-113	NA	NA	



NITRATE (as Nitrogen) EPA 353.2

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
BPMW-2R:W					
07-208-01					
ND	0.050	EPA 353.2	7-22-19	7-22-19	
BPMW-6:W					
07-208-02					
ND	0.050	EPA 353.2	7-22-19	7-22-19	
	BPMW-2R:W 07-208-01 ND BPMW-6:W 07-208-02	BPMW-2R:W 07-208-01 ND 0.050 BPMW-6:W 07-208-02	BPMW-2R:W 07-208-01 ND 0.050 EPA 353.2 BPMW-6:W 07-208-02	Result PQL Method Prepared BPMW-2R:W 07-208-01 <	Result PQL Method Prepared Analyzed BPMW-2R:W 07-208-01 7-208-01 7-22-19 7-22-19 ND 0.050 EPA 353.2 7-22-19 7-22-19 BPMW-6:W 07-208-02 7-208-02 7-22-19 7-22-19



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0719W1					
ND	0.050	EPA 353.2	7-22-19	7-22-19	
	MB0719W1	MB0719W1	MB0719W1	Result PQL Method Prepared MB0719W1	Result PQL Method Prepared Analyzed MB0719W1

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	07-16	69-02							
	ORIG	DUP							
Nitrate	ND	ND	NA	NA	NA	NA	NA	13	
MATRIX SPIKE									
Laboratory ID:	07-10	69-02							
	N	IS	MS		MS				
Nitrate	2.	14	2.00	ND	107	90-127	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB07	19W1							
	S	B	SB		SB				
Nitrate	1.	97	2.00	NA	99	90-125	NA	NA	



DISSOLVED METALS EPA 200.8

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
BPMW-2R:W					
07-208-01					
92	10	EPA 200.8	7-18-19	7-24-19	
BPMW-6:W					
07-208-02					
38	3.0	EPA 200.8	7-18-19	7-24-19	
130	10	EPA 200.8	7-18-19	7-24-19	
BC-11R:W					
07-208-03					
ND	3.0	EPA 200.8	7-18-19	7-24-19	
	BPMW-2R:W 07-208-01 92 BPMW-6:W 07-208-02 38 130 BC-11R:W 07-208-03	BPMW-2R:W 07-208-01 92 10 BPMW-6:W 07-208-02 38 3.0 130 10 BC-11R:W 07-208-03	BPMW-2R:W 07-208-01 92 10 EPA 200.8 BPMW-6:W 07-208-02 38 3.0 EPA 200.8 38 3.0 EPA 200.8 10 EPA 200.8 10 EPA 200.8 BC-11R:W 07-208-03 07-208-03 07-208-03	Result PQL Method Prepared BPMW-2R:W 07-208-01 <	Result PQL Method Prepared Analyzed BPMW-2R:W 07-208-01



DISSOLVED METALS EPA 200.8 QUALITY COMTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0718F1					
Arsenic	ND	3.0	EPA 200.8	7-18-19	7-24-19	
Manganese	ND	10	EPA 200.8	7-18-19	7-24-19	

					Source	Ре	rcent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Rec	covery	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	07-24	43-01									
	ORIG	DUP									
Arsenic	14.1	13.5	NA	NA			NA	NA	5	20	
Manganese	5340	5130	NA	NA			NA	NA	4	20	
MATRIX SPIKES											
Laboratory ID:	07-24	43-01									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	93.6	97.2	80.0	80.0	14.1	99	104	75-125	4	20	
Manganese	9310	9870	4000	4000	5340	99	113	75-125	6	20	



TOTAL ARSENIC EPA 200.8

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
BPMW-6:W					
07-208-02					
44	3.3	EPA 200.8	7-25-19	7-25-19	
BC-11R:W					
07-208-03					
ND	3.3	EPA 200.8	7-25-19	7-25-19	
	BPMW-6:W 07-208-02 44 BC-11R:W 07-208-03	BPMW-6:W 07-208-02 44 3.3 BC-11R:W 07-208-03	BPMW-6:W 07-208-02 44 3.3 EPA 200.8 BC-11R:W 07-208-03	Result PQL Method Prepared BPMW-6:W 07-208-02 7-25-19 7-25-19 44 3.3 EPA 200.8 7-25-19 BC-11R:W 07-208-03 7-208-03 7-208-03	Result PQL Method Prepared Analyzed BPMW-6:W 07-208-02 7-208-02 7-25-19 7-25-19 44 3.3 EPA 200.8 7-25-19 7-25-19 BC-11R:W 07-208-03 107-208-03 107-208-03 107-208-03



TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

								Date	Date	•	
Analyte		Result		PQL	M	ethod		Prepared	Analyz	ed	Flags
METHOD BLANK											
Laboratory ID:	Ν	/B0725WM [·]	1								
Arsenic		ND		3.3	EPA	A 200.8		7-25-19	7-25-1	9	
					Source	Perc	ent	Recovery		RPD	
Analyte	Re	sult	Spike	e Level	Result	Reco	very	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	07-1	14-07									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA		N	A	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	07-1	14-07									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	134	119	111	111	ND	121	107	75-125	12	20	



DISSOLVED GASES RSK 175

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
BPMW-2R:W					
07-208-01					
1200	200	RSK 175	7-24-19	7-24-19	
BPMW-6:W					
07-208-02					
5900	1000	RSK 175	7-24-19	7-24-19	
	BPMW-2R:W 07-208-01 1200 BPMW-6:W 07-208-02	BPMW-2R:W 07-208-01 1200 200 BPMW-6:W 07-208-02	BPMW-2R:W 07-208-01 1200 200 RSK 175 BPMW-6:W 07-208-02	Result PQL Method Prepared BPMW-2R:W 07-208-01 7-208-01 7-24-19 1200 200 RSK 175 7-24-19 BPMW-6:W 07-208-02 100 100	Result PQL Method Prepared Analyzed BPMW-2R:W 07-208-01 7-208-01 7-24-19 7-24-19 1200 200 RSK 175 7-24-19 7-24-19 BPMW-6:W 07-208-02 100 100 100



DISSOLVED GASES RSK 175 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0724W1					
Methane	ND	1.0	RSK 175	7-24-19	7-24-19	

					Source	Pe	rcent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
MATRIX SPIKES											
Laboratory ID:	01-1	23-01									
	MS	MSD	MS	MSD		MS	MSD				
Methane	9.41	9.08	4.42	4.42	4.20	118	110	75-125	4	25	
Ethane	7.79	7.34	8.32	8.32	ND	94	88	75-125	6	25	
Ethene	5.79	6.37	7.77	7.77	ND	75	82	75-125	10	25	
SPIKE BLANKS											
Laboratory ID:	S	SB									
	SB	SBD	SB	SBD		SB	SBD				
Methane	4.01	4.60	4.42	4.42	N/A	91	104	75-125	14	25	



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

5				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BPMW-2R:W					
Laboratory ID:	07-208-01					
Total Alkalinity	110	2.0	SM 2320B	7-24-19	7-24-19	
Client ID:	BPMW-6:W					
Laboratory ID:	07-208-02					
Total Alkalinity	120	2.0	SM 2320B	7-24-19	7-24-19	



TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

Analyte	-	Result	PQL	Ме	ethod	Date Prepared	Date Analyz		Flags
METHOD BLANK									
Laboratory ID:		MB0724W1							
Total Alkalinity		ND	2.0	SM	2320B	7-24-19	7-24-1	9	
Analyte	Res	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									- 3-
Laboratory ID:	07-20	08-01							
	ORIG	DUP							
Total Alkalinity	110	114	NA	NA	NA	NA	4	10	
SPIKE BLANK									
Laboratory ID:	SB07	24W1							
	S	в	SB		SB				
Total Alkalinity	94	1.0	100	NA	94	88-110	NA	NA	





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

	Reviewed/Date	Received	Relinquished	Received	Relinquished	Received	Relinquished	Signatúre				3 BC-11 R:W	2 BPMIN- W: W	1 BPMW-2R:W	Lab ID Sample Identification	Becka Bralies	The FUSCI	Botwee Paint	Project Number: 120 82302-13,3	Fane Environmental		Analytical Laboratory Testing Services	invinonmental Inc
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14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 26, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-13.3 Laboratory Reference No. 1907-227

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on July 19, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister Project Manager

Enclosures



Date of Report: July 26, 2019 Samples Submitted: July 19, 2019 Laboratory Reference: 1907-227 Project: 82302-13.3

Case Narrative

Samples were collected on July 19, 2019 and received by the laboratory on July 19, 2019. They were maintained at the laboratory at a temperature of 2° C to 6° C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

TOTAL ARSENIC EPA 200.8

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BPMW-1:W					
Laboratory ID:	07-227-01					
Arsenic	14	3.3	EPA 200.8	7-25-19	7-25-19	



TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0725WM1					
Arsenic	ND	3.3	EPA 200.8	7-25-19	7-25-19	

Analyte	Res	sult	Spike	e Level	Source Result		rcent overy	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	07-1 <i>°</i>	14-07									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA			NA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	07-1 <i>°</i>	14-07									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	134	119	111	111	ND	121	107	75-125	12	20	



DISSOLVED ARSENIC EPA 200.8

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BPMW-1:W					
Laboratory ID:	07-227-01					
Arsenic	12	3.0	EPA 200.8	7-19-19	7-24-19	



5

DISSOLVED ARSENIC EPA 200.8 QUALITY CONTROL

								Date	Date		
Analyte		Result		PQL	Me	ethod		Prepared	Analyze	ed	Flags
METHOD BLANK											
Laboratory ID:		MB0719F1									
Arsenic		ND		3.0	EPA	200.8	3	7-19-19	7-24-1	9	
					Source	Pe	rcent	Recovery		RPD	
Analyte	Re	sult	Spike	e Level	Result	Rec	overy	Limits	RPD	Limit	Flags
MATRIX SPIKES											
Laboratory ID:	07-24	43-01									
	MS	MSD	MS	MSD		MS	MSD)			
Arsenic	93.6	97.2	80.0	80.0	14.1	99	104	75-125	4	20	
DUPLICATE											
Laboratory ID:	07-24	43-01									
	ORIG	DUP									
Arsenic	14.1	13.5	NA	NA			NA	NA	5	20	





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical _____
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

Reviewed/Date	Received	Relinquished	Received	Relinquished	Received	Relinquished	Signature	7				b	1 SPMW-1:W	Lab ID Sample Identification	BOCH & BY AVES	JUFT JUNSUN	BOTNUL PAINT	87302-133	Fane ENVÍVEN WUNHAI	Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.onsite-env.com	Environmental Inc.	Anste
Reviewed/Date					0	KANL EN	Company						25H1 6114	Date Time Sampled Sampled	(other)		Standard (7 Days)	2 Days	Same Day	(Check One)	CIIC	Cha
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14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 29, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-15.3 Laboratory Reference No. 1907-169

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on July 16, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister Project Manager

Enclosures



Date of Report: July 29, 2019 Samples Submitted: July 16, 2019 Laboratory Reference: 1907-169 Project: 82302-15.3

Case Narrative

Samples were collected on July 16, 2019 and received by the laboratory on July 16, 2019. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Nitrate (as Nitrogen) EPA 353.2 Analysis

The reported Nitrate results are a calculated value based on the subtraction of Nitrite from the Nitrate plus Nitrite result. The Nitrite analysis, which has a 48-hour holding time, was performed within the holding time. Immediately after this analysis, an aliquot of each sample was preserved with concentrated sulfuric acid and stored at 4 degrees C. The preserved samples were then analyzed within the maximum 28-day holding time for the Nitrate plus Nitrite analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	HZ-MW-19:W					
Laboratory ID:	07-169-02					
Diesel Range Organics	ND	0.26	NWTPH-Dx	7-17-19	7-17-19	
Lube Oil Range Organics	ND	0.42	NWTPH-Dx	7-17-19	7-17-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	79	50-150				



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0717W1					
ND	0.25	NWTPH-Dx	7-17-19	7-17-19	
ND	0.40	NWTPH-Dx	7-17-19	7-17-19	
Percent Recovery	Control Limits				
60	50-150				
	MB0717W1 ND ND Percent Recovery	MB0717W1 ND 0.25 ND 0.40 Percent Recovery Control Limits	MB0717W1 ND 0.25 NWTPH-Dx ND 0.40 NWTPH-Dx Percent Recovery Control Limits	MB0717W1 ND 0.25 NWTPH-Dx 7-17-19 ND 0.40 NWTPH-Dx 7-17-19 Percent Recovery Control Limits	MB0717W1 ND 0.25 NWTPH-Dx 7-17-19 7-17-19 ND 0.40 NWTPH-Dx 7-17-19 7-17-19 Percent Recovery Control Limits Control Limits Control Limits

					Source	Per	cent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Reco	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	SB07	17W1									
	ORIG	DUP									
Diesel Fuel #2	0.953	0.873	NA	NA		Ν	A	NA	9	NA	
Lube Oil Range	ND	ND	NA	NA		N	А	NA	NA	NA	
Surrogate:											
o-Terphenyl						83	79	50-150			



DISSOLVED METALS EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-1:W					
Laboratory ID:	07-169-01					
Arsenic	ND	3.0	EPA 200.8	7-16-19	7-17-19	
Client ID:	HZ-MW-19:W					
Laboratory ID:	07-169-02					
Arsenic	ND	3.0	EPA 200.8	7-16-19	7-17-19	
Manganese	850	50	EPA 200.8	7-16-19	7-17-19	
Client ID:	HZ-MW-4:W					
Laboratory ID:	07-169-03					
Arsenic	ND	3.0	EPA 200.8	7-16-19	7-17-19	



DISSOLVED METALS EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

5 (11)				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0716F1					
Arsenic	ND	3.0	EPA 200.8	7-16-19	7-17-19	
Manganese	ND	10	EPA 200.8	7-16-19	7-17-19	

					Source	Pe	rcent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	07-16	69-03									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA			NA	NA	NA	20	
Manganese	95.2	86.4	NA	NA			NA	NA	10	20	
MATRIX SPIKES											
Laboratory ID:	07-16	69-03									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	79.6	77.0	80.0	80.0	ND	100	96	75-125	3	20	
Manganese	169	165	80.0	80.0	95.2	92	88	75-125	2	20	



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-19:W					
Laboratory ID:	07-169-02					
Total Alkalinity	210	2.0	SM 2320B	7-18-19	7-18-19	



TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

Analyte		Result	PQL	Me	ethod	Date Prepared	Date Analyz		Flags
METHOD BLANK						-			
Laboratory ID:		MB0718W1							
Total Alkalinity		ND	2.0	SM	2320B	7-18-19	7-18-1	9	
				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	· Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	07-18	38-01							
	ORIG	DUP							
Total Alkalinity	340	348	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB07	18W1							
	S	В	SB		SB				
Total Alkalinity	96	5.0	100	NA	96	88-110	NA	NA	



8

TOTAL ARSENIC EPA 200.8

onno. ug/= (ppb)				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-1:W					
Laboratory ID:	07-169-01					
Arsenic	ND	3.0	EPA 200.8	7-17-19	7-17-19	
Client ID:	HZ-MW-19:W					
Laboratory ID:	07-169-02					
Arsenic	ND	3.0	EPA 200.8	7-17-19	7-17-19	
Client ID:	HZ-MW-4:W					
Laboratory ID:	07-169-03					
Arsenic	ND	3.0	EPA 200.8	7-17-19	7-17-19	



101

105

100

100

TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

Arsenic

							Date	Date	•	
Analyte		Result		PQL	Me	ethod	Prepared	Analyz	ed	Flags
METHOD BLANK										
Laboratory ID:	Ν	/IB0717WH1								
Arsenic		ND		3.0	EPA	200.8	7-17-19	7-17-1	19	
					Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike	e Level	Result	Recovery	y Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	07-11	4-15								
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	07-11	4-15								
	MS	MSD	MS	MSD		MS MS	D			

ND

101

105

75-125

4

20



DISSOLVED GASES RSK 175

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-19:W					
Laboratory ID:	07-169-02					
Methane	35	6.0	RSK 175	7-23-19	7-23-19	



DISSOLVED GASES RSK 175 QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0723W1					
Methane	ND	1.0	RSK 175	7-23-19	7-23-19	

Analyte	Re	sult	Spike	Level	Source Result		rcent overy	Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	01-1	23-01									
	MS	MSD	MS	MSD		MS	MSD				
Methane	9.41	9.08	4.42	4.42	4.20	118	110	75-125	4	25	
Ethane	7.79	7.34	8.32	8.32	ND	94	88	75-125	6	25	
Ethene	5.79	6.37	7.77	7.77	ND	75	82	75-125	10	25	



SULFATE ASTM D516-11

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-19:W					
Laboratory ID:	07-169-02					
Sulfate	44	10	ASTM D516-11	7-17-19	7-17-19	



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SULFATE ASTM D516-11 QUALITY CONTROL

Matrix: Water Units: mg/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0717W1					
ND	5.0	ASTM D516-11	7-17-19	7-17-19	
	MB0717W1	MB0717W1	MB0717W1	Result PQL Method Prepared MB0717W1 MB0717W1 Method Method <td>Result PQL Method Prepared Analyzed MB0717W1 MB0717W1</td>	Result PQL Method Prepared Analyzed MB0717W1 MB0717W1

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	07-17	70-01							
	ORIG	DUP							
Sulfate	23.2	21.7	NA	NA	NA	NA	7	10	
MATRIX SPIKE									
Laboratory ID:	07-17	' 0-01							
	Μ	S	MS		MS				
Sulfate	40	.5	20.0	23.2	87	73-134	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB07	17W1							
	S	В	SB		SB				
Sulfate	9.7	76	10.0	NA	98	89-113	NA	NA	



NITRATE (as Nitrogen) EPA 353.2

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-19:W					
Laboratory ID:	07-169-02					
Nitrate	ND	0.050	EPA 353.2	7-22-19	7-22-19	



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

Matrix: Water Units: mg/L

						Date	Date	•	
Analyte		Result	PQL	Me	ethod	Prepared	Analyz	ed	Flags
METHOD BLANK									
Laboratory ID:		MB0719W1							
Nitrate		ND	0.050	EPA	353.2	7-22-19	7-22-1	9	
				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	07-16	69-02							
	ORIG	DUP							
Nitrate	ND	ND	NA	NA	NA	NA	NA	13	
MATRIX SPIKE									
Laboratory ID:	07-16	69-02							
	Ν	IS	MS		MS				
Nitrate	2.	14	2.00	ND	107	90-127	NA	NA	

SPIKE BLANK

Laboratory ID:	SB0719W1							
	SB	SB		SB				
Nitrate	1.97	2.00	NA	99	90-125	NA	NA	





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical _____
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

Reviewed/Date	Received	Relinquished	Received	Relinquished	Received William Kaw	Relinquished	Signature					3 HZ- MW. H:W	M: 61-MM-24 C	M: 1-MM-2+	Lab ID Sample Identification	Bella GIVENCY	Jeff Jensun	BOTMON HOUTZ	92202-15.3	KANE ENVIONMINTAI	Phone: (425) 883-3881 • www.onsite-env.com	Environmental Inc.	in OnSite
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14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 29, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-15.3 Laboratory Reference No. 1907-188

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on July 17, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister Project Manager

Enclosures



Date of Report: July 29, 2019 Samples Submitted: July 17, 2019 Laboratory Reference: 1907-188 Project: 82302-15.3

Case Narrative

Samples were collected on July 17, 2019 and received by the laboratory on July 17, 2019. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Nitrite EPA 353.2 Analysis:

The reported Nitrate results are a calculated value based on the subtraction of Nitrite from the Nitrate plus Nitrite result. The Nitrite analysis, which has a 48-hour holding time, was performed within the holding time. Immediately after this analysis, an aliquot of each sample was preserved with concentrated sulfuric acid and stored at 4 degrees C. The preserved samples were then analyzed within the maximum 28-day holding time for the Nitrate plus Nitrite analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



2

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

Matrix: Water Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	B1MW-8R:W					
Laboratory ID:	07-188-01					
Diesel Range Organics	0.47	0.26	NWTPH-Dx	7-22-19	7-23-19	Ν
Lube Oil Range Organics	1.0	0.42	NWTPH-Dx	7-22-19	7-23-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	86	50-150				



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

Matrix: Water Units: mg/L (ppm)

c <i>i</i>				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0722W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	7-22-19	7-23-19	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	7-22-19	7-23-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	86	50-150				

					Source	Perce	nt	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Recov	ery	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	07-17	79-01									
	ORIG	DUP									
Diesel Range	ND	ND	NA	NA		NA		NA	NA	NA	
Lube Oil Range	ND	ND	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						84	78	50-150			



SULFATE ASTM D516-11

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	B1MW-8R:W					
Laboratory ID:	07-188-01					
Sulfate	ND	5.0	ASTM D516-11	7-23-19	7-23-19	



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SULFATE ASTM D516-11 QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0723W1					
Sulfate	ND	5.0	ASTM D516-11	7-23-19	7-23-19	

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	07-20	08-01							
	ORIG	DUP							
Sulfate	ND	ND	NA	NA	NA	NA	NA	10	
MATRIX SPIKE									
Laboratory ID:	07-20	08-01							
	Ν	1S	MS		MS				
Sulfate	11	1.8	10.0	ND	118	73-134	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB07	23W1							
	S	B	SB		SB				
Sulfate	10).2	10.0	NA	102	89-113	NA	NA	



NITRATE (as Nitrogen) EPA 353.2

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	B1MW-8R:W					
Laboratory ID:	07-188-01					
Nitrate	ND	0.050	EPA 353.2	7-22-19	7-22-19	



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NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0719W1					
Nitrate	ND	0.050	EPA 353.2	7-22-19	7-22-19	

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	07-16	69-02							
	ORIG	DUP							
Nitrate	ND	ND	NA	NA	NA	NA	NA	13	
MATRIX SPIKE									
Laboratory ID:	07-10	69-02							
	Ν	IS	MS		MS				
Nitrate	2.	14	2.00	ND	107	90-127	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB07	19W1							
	S	B	SB		SB				
Nitrate	1.	97	2.00	NA	99	90-125	NA	NA	



8

DISSOLVED METALS EPA 200.8

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	B1MW-8R:W					
Laboratory ID:	07-188-01					
Arsenic	6.5	3.0	EPA 200.8	7-17-19	7-24-19	
Manganese	2700	10	EPA 200.8	7-17-19	7-24-19	
Client ID:	HZ-MW-17:W					
Laboratory ID:	07-188-02					
Arsenic	ND	3.0	EPA 200.8	7-17-19	7-24-19	



DISSOLVED METALS EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0717F1					
Arsenic	ND	3.0	EPA 200.8	7-17-19	7-24-19	
Manganese	ND	10	EPA 200.8	7-17-19	7-24-19	

Analyte	Res	sult	Snike	Level	Source Result		rcent covery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE		Suit	орікс	Level	Result	NO	Jovery	Linits		Linin	- Tidgo
Laboratory ID:	07-24	43-01									
	ORIG	DUP									
Arsenic	14.1	13.5	NA	NA			NA	NA	5	20	
Manganese	5340	5130	NA	NA			NA	NA	4	20	
MATRIX SPIKES											
Laboratory ID:	07-24	43-01									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	93.6	97.2	80.0	80.0	14.1	99	104	75-125	4	20	
Manganese	9310	9870	4000	4000	5340	99	113	75-125	6	20	



TOTAL ARSENIC EPA 200.8

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	B1MW-8R:W					
Laboratory ID:	07-188-01					
Arsenic	8.1	3.3	EPA 200.8	7-25-19	7-25-19	
Client ID:	HZ-MW-17:W					
Laboratory ID:	07-188-02					
Arsenic	ND	3.3	EPA 200.8	7-25-19	7-25-19	



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TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0725WM1					
Arsenic	ND	3.3	EPA 200.8	7-25-19	7-25-19	

Analyte	Res	sult	Spike	e Level	Source Result		rcent overy	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	07-1 <i>°</i>	14-07									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA			NA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	07-1 <i>°</i>	14-07									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	134	119	111	111	ND	121	107	75-125	12	20	



DISSOLVED METHANE RSK 175

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	B1MW-8R:W					
Laboratory ID:	07-188-01					
Methane	3300	500	RSK 175	7-23-19	7-23-19	



13

DISSOLVED METHANE RSK 175 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0723W1					
Methane	ND	1.0	RSK 175	7-23-19	7-23-19	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD RPD Limit		Flags
MATRIX SPIKES											
Laboratory ID:	01-1	23-01									
	MS	MSD	MS	MSD		MS	MSD				
Methane	9.41	9.08	4.42	4.42	4.20	118	110	75-125	4	25	
Ethane	7.79	7.34	8.32	8.32	ND	94	88	75-125	6	25	
Ethene	5.79	6.37	7.77	7.77	ND	75	82	75-125	10	25	



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	B1MW-8R:W					
Laboratory ID:	07-188-01					
Total Alkalinity	340	2.0	SM 2320B	7-18-19	7-18-19	



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TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

Analysia		Desult	POL	Ма	م اله م ما	Date	Date		Flores
Analyte		Result	PQL	IVIE	ethod	Prepared	Analyz	ea	Flags
METHOD BLANK									
Laboratory ID:		MB0718W1							
Total Alkalinity	ND		2.0	SM 2320B		7-18-19	7-18-19		
				Source	Percent	Recovery		RPD	
Analyte	Result		Spike Level	Result Recovery		Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	07-18	38-01							
	ORIG	DUP							
Total Alkalinity	340	348	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB07	18W1							
	S	в	SB		SB				
Total Alkalinity	96	6.0	100	NA	96	88-110	NA	NA	



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Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical _____
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

Reviewed/Date	Received	Relinquished	Received	Relinquished	Received NGCW CLADU	Relinquished	Signafilire					M:EL-MM-2H C	1 BIMW-BP: W	Lab ID Sample Identification	BACH & EVANCES	HAR HMRM	BOTMU HEATZ	87307-15.3	KAINE EVI VINDEN WUL IN HOLI		Analytical Laboratory Testing Services	Environmental Inc
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July 30, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-15.3 Laboratory Reference No. 1907-228

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on July 19, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely.

David Baumeister Project Manager

Enclosures



Date of Report: July 30, 2019 Samples Submitted: July 19, 2019 Laboratory Reference: 1907-228 Project: 82302-15.3

Case Narrative

Samples were collected on July 19, 2019 and received by the laboratory on July 19, 2019. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Nitrate EPA 353.2 Analysis:

The reported Nitrate results are a calculated value based on the subtraction of Nitrite from the Nitrate plus Nitrite result. The Nitrite analysis, which has a 48-hour holding time, was performed within the holding time. Immediately after this analysis, an aliquot of each sample was preserved with concentrated sulfuric acid and stored at 4 degrees C. The preserved samples were then analyzed within the maximum 28-day holding time for the Nitrate plus Nitrite analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

Matrix: Water Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BC-16:W			•	•	
Laboratory ID:	07-228-02					
Diesel Range Organics	ND	0.26	NWTPH-Dx	7-23-19	7-24-19	
Lube Oil Range Organics	0.54	0.42	NWTPH-Dx	7-23-19	7-24-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	91	50-150				



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

Matrix: Water Units: mg/L (ppm)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0723W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	7-23-19	7-23-19	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	7-23-19	7-23-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	76	50-150				

					Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	07-24	43-01								
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	NA	
Lube Oil Range Organics	0.791	0.588	NA	NA		NA	NA	29	NA	
Surrogate:										
o-Terphenyl						91 91	50-150			



SULFATE ASTM D516-11

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-16:W					
Laboratory ID:	07-228-02					
Sulfate	160	50	ASTM D516-11	7-23-19	7-23-19	



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SULFATE ASTM D516-11 QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0723W1					
Sulfate	ND	5.0	ASTM D516-11	7-23-19	7-23-19	

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE	ATE								
Laboratory ID:	07-20	08-01							
	ORIG	DUP							
Sulfate	ND	ND	NA	NA	NA	NA	NA	10	
MATRIX SPIKE									
Laboratory ID:	07-20	08-01							
	Μ	S	MS		MS				
Sulfate	11	.8	10.0	ND	118	73-134	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB07	23W1							
	S	В	SB		SB				
Sulfate	10	.2	10.0	NA	102	89-113	NA	NA	



NITRATE (as Nitrogen) EPA 353.2

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-16:W					
Laboratory ID:	07-228-02					
Nitrate	ND	0.050	EPA 353.2	7-24-19	7-24-19	



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NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0724W1					
Nitrate	ND	0.050	EPA 353.2	7-24-19	7-24-19	

				Source	Percent	Recovery		RPD	
Analyte	alyte Result		Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE	CATE								
Laboratory ID:	07-25	59-01							
	ORIG	DUP							
Nitrate	ND	ND	NA	NA	NA	NA	NA	13	
MATRIX SPIKE									
Laboratory ID:	07-25	59-01							
	Μ	IS	MS		MS				
Nitrate	2.	03	2.00	ND	102	90-127	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB07	24W1							
	S	B	SB		SB				
Nitrate	2.	07	2.00	NA	104	90-125	NA	NA	



DISSOLVED METALS EPA 200.8

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-12:W					
Laboratory ID:	07-228-01					
Arsenic	3.9	3.0	EPA 200.8	7-19-19	7-24-19	
Client ID:	BC-16:W					
Laboratory ID:	07-228-02					
Arsenic	ND	3.0	EPA 200.8	7-19-19	7-24-19	
Manganese	4800	10	EPA 200.8	7-19-19	7-24-19	



DISSOLVED METALS EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0719F1					
Arsenic	ND	3.0	EPA 200.8	7-19-19	7-24-19	
Manganese	ND	10	EPA 200.8	7-19-19	7-24-19	

					Source	Ре	rcent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Rec	covery	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	07-24	43-01									
	ORIG	DUP									
Arsenic	14.1	13.5	NA	NA			NA	NA	5	20	
Manganese	5340	5130	NA	NA			NA	NA	4	20	
MATRIX SPIKES											
Laboratory ID:	07-24	43-01									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	93.6	97.2	80.0	80.0	14.1	99	104	75-125	4	20	
Manganese	9310	9870	4000	4000	5340	99	113	75-125	6	20	



TOTAL ARSENIC EPA 200.8

Matrix: Water Units: ug/L (ppb)

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
HZ-MW-12:W					
07-228-01					
4.6	3.3	EPA 200.8	7-25-19	7-25-19	
BC-16:W					
07-228-02					
ND	3.3	EPA 200.8	7-25-19	7-25-19	
	HZ-MW-12:W 07-228-01 4.6 BC-16:W 07-228-02	HZ-MW-12:W 07-228-01 4.6 3.3 BC-16:W 07-228-02	HZ-MW-12:W 07-228-01 4.6 3.3 EPA 200.8 BC-16:W 07-228-02	Result PQL Method Prepared HZ-MW-12:W 07-228-01 7-25-19 7-25-19 4.6 3.3 EPA 200.8 7-25-19 BC-16:W 07-228-02 1 1	Result PQL Method Prepared Analyzed HZ-MW-12:W 07-228-01 7-25-19 7-25-19 4.6 3.3 EPA 200.8 7-25-19 7-25-19 BC-16:W 07-228-02 1 1 1 1



TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

								Date	Date	•	
Analyte		Result		PQL	M	ethod		Prepared	Analyz	ed	Flags
METHOD BLANK											
Laboratory ID:	Ν	/B0725WM1									
Arsenic		ND		3.3	EP/	4 200.8	}	7-25-19	7-25-1	9	
					Source	Per	cent	Recovery		RPD	
Analyte	Res	sult	Spike	e Level	Result	Reco	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	07-1	14-07									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA		Ν	IA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	07-1 ⁻	14-07									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	134	119	111	111	ND	121	107	75-125	12	20	

DISSOLVED GASES RSK 175

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-16:W					
Laboratory ID:	07-228-02					
Methane	8900	1000	RSK 175	7-24-19	7-24-19	



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DISSOLVED GASES RSK 175 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0724W1					
Methane	ND	1.0	RSK 175	7-24-19	7-24-19	

					Source	Pe	rcent	Recovery		RPD		
Analyte	Re	sult	Spike	Spike Level		Recovery		Limits	RPD	Limit	Flags	
MATRIX SPIKES												
Laboratory ID:	01-1	23-01										
	MS	MSD	MS	MSD		MS	MSD					
Methane	9.41	9.08	4.42	4.42	4.20	118	110	75-125	4	25		
Ethane	7.79	7.34	8.32	8.32	ND	94	88	75-125	6	25		
Ethene	5.79	6.37	7.77	7.77	ND	75	82	75-125	10	25		
SPIKE BLANKS												
Laboratory ID:	SB07	'24W1										
	SB	SBD	SB	SBD		SB	SBD					
Methane	4.01	4.60	4.42	4.42	N/A	91	104	75-125	14	25		



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-16:W					
Laboratory ID:	07-228-02					
Total Alkalinity	560	2.0	SM 2320B	7-24-19	7-24-19	



TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

Analyte	-	Result	PQL	Ме	ethod	Date Prepared	Date Analyz		Flags	
METHOD BLANK										
Laboratory ID:		MB0724W1								
Total Alkalinity		ND	2.0	SM	2320B	7-24-19	7-24-19			
Analyte	Re	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags	
DUPLICATE									- 3-	
Laboratory ID:	07-20	08-01								
	ORIG	DUP								
Total Alkalinity	110	114	NA	NA	NA	NA	4	10		
SPIKE BLANK										
Laboratory ID:	SB07	24W1								
	S	В	SB		SB					
Total Alkalinity	94	l.0	100	NA	94	88-110	NA	NA		





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



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Reviewed/Date	Received	Relinquished	Received	Relinquished	Received	Relinquished	Signature	5						-1	2 gc-1u: W	1 H7-MW-12:W	Lab ID Sample Identification	Bell a Graves	JCFF FUNSUM	Botwell HWTZ	BYJUZ 15,3	KANE ENVIVAN MUNTAI	Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.onsite-env.com	OnSite Environmental Inc.
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14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 26, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-14.3 Laboratory Reference No. 1907-189

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on July 17, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister Project Manager

Enclosures



Date of Report: July 26, 2019 Samples Submitted: July 17, 2019 Laboratory Reference: 1907-189 Project: 82302-14.3

Case Narrative

Samples were collected on July 17, 2019 and received by the laboratory on July 17, 2019. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



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DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-1:W					
Laboratory ID:	07-189-01					
Diesel Range Organics	ND	0.26	NWTPH-Dx	7-22-19	7-23-19	
Lube Oil Range Organics	0.47	0.42	NWTPH-Dx	7-22-19	7-23-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	82	50-150				



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

c <i>i</i>				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0722W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	7-22-19	7-23-19	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	7-22-19	7-23-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	86	50-150				

					Source	Perce	nt	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Recov	ery	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	07-17	79-01									
	ORIG	DUP									
Diesel Range	ND	ND	NA	NA		NA		NA	NA	NA	
Lube Oil Range	ND	ND	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						84	78	50-150			



DISSOLVED ARSENIC EPA 200.8

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	MW-1:W					
Laboratory ID:	07-189-01					
Arsenic	ND	3.0	EPA 200.8	7-17-19	7-24-19	



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DISSOLVED ARSENIC EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0717F1					
Arsenic	ND	3.0	EPA 200.8	7-17-19	7-24-19	

Analyte	Re	sult	Spike	Level	Source Result		rcent covery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE			••••••								
Laboratory ID:	07-24	43-01									
	ORIG	DUP									
Arsenic	14.1	13.5	NA	NA			NA	NA	5	20	
MATRIX SPIKES											
Laboratory ID:	07-24	43-01									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	93.6	97.2	80.0	80.0	14.1	99	104	75-125	4	20	



TOTAL ARSENIC EPA 200.8

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	MW-1:W					
Laboratory ID:	07-189-01					
Arsenic	ND	3.3	EPA 200.8	7-25-19	7-25-19	



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TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

								Date	Date		
Analyte		Result		PQL	Me	thod		Prepared	Analyze	ed	Flags
METHOD BLANK											
Laboratory ID:	Ν	MB0725WM1									
Arsenic		ND		3.3	EPA	200.8	}	7-25-19	7-25-1	9	
					Source	Pei	rcent	Recovery		RPD	
Analyte	Re	sult	Spike	e Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	07-1 ⁻	14-07									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA		1	NA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	07-1 ⁻	14-07									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	134	119	111	111	ND	121	107	75-125	12	20	





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical _____
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



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Invested Report Laboratory Number: 0.7 - 1.8 9 (Invested Report (Invested Report	Reviewed/Date	Received	Relinquished	Received	Relinquished	Received WHW THOU	Relinquished	Sigijature // /							MW-1: W	Lab ID Sample Identification	Sampled by ARAMA GIVANES	Hoyect Manager:	BUTNUM LANDING	Project Number: 82302-14.3	Kane Env winmental		Analytical Laboratory Testing Services	INN OnSite
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14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 26, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-14.3 Laboratory Reference No. 1907-226

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on July 19, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister Project Manager

Enclosures



Date of Report: July 26, 2019 Samples Submitted: July 19, 2019 Laboratory Reference: 1907-226 Project: 82302-14.3

Case Narrative

Samples were collected on July 19, 2019 and received by the laboratory on July 19, 2019. They were maintained at the laboratory at a temperature of 2° C to 6° C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BLMW-11:W					
Laboratory ID:	07-226-01					
Diesel Range Organics	ND	0.26	NWTPH-Dx	7-23-19	7-24-19	
Lube Oil Range Organics	ND	0.42	NWTPH-Dx	7-23-19	7-24-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	81	50-150				



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

Matrix: Water Units: mg/L (ppm)

0 11 /				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0723W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	7-23-19	7-23-19	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	7-23-19	7-23-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	76	50-150				

					Source	Percer	nt	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Recove	ery	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	07-24	43-01									
	ORIG	DUP									
Diesel Range	ND	ND	NA	NA		NA		NA	NA	NA	
Lube Oil Range Organics	0.791	0.588	NA	NA		NA		NA	29	NA	
Surrogate:											
o-Terphenyl						91	91	50-150			



4

TOTAL ARSENIC EPA 200.8

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BLMW-11:W					
Laboratory ID:	07-226-01					
Arsenic	27	3.3	EPA 200.8	7-25-19	7-25-19	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0725WM1					
Arsenic	ND	3.3	EPA 200.8	7-25-19	7-25-19	

Analyte	Res	sult	Spike	e Level	Source Result		rcent overy	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	07-1 <i>°</i>	14-07									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA			NA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	07-1 <i>°</i>	14-07									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	134	119	111	111	ND	121	107	75-125	12	20	



DISSOLVED ARSENIC EPA 200.8

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BLMW-11:W					
Laboratory ID:	07-226-01					
Arsenic	21	3.0	EPA 200.8	7-19-19	7-24-19	



DISSOLVED ARSENIC EPA 200.8 QUALITY CONTROL

• • • • •				501				Date	Date		-
Analyte		Result		PQL	Me	ethod		Prepared	Analyze	ed	Flags
METHOD BLANK											
Laboratory ID:		MB0719F1									
Arsenic		ND		3.0	EPA	200.8	3	7-19-19	7-24-19	9	
	_				Source		rcent	Recovery		RPD	
Analyte	Re	Result S		e Level	Result	Rec	covery	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	07-24	43-01									
	ORIG	DUP									
Arsenic	14.1	13.5	NA	NA			NA	NA	5	20	
MATRIX SPIKES											
Laboratory ID:	07-24	43-01									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	93.6	97.2	80.0	80.0	14.1	99	104	75-125	4	20	





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical _____
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

Reviewed/Date	Received	Relinquished	Received	Relinquished	Received	Relinquished MMLA	Signature							1	MANNAM BLWM-11:M	Lab ID Sample Identification	Bend & GYONVES	HAR SUN SUN	Bonnen Landing	82302-14.3	KANT ENVIONMULADI	Analytical Laboratory lesting Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.onsite-env.com	Environmental Inc.	
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July 30, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-14.3 Laboratory Reference No. 1907-243

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on July 22, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely.

David Baumeister Project Manager

Enclosures



Date of Report: July 30, 2019 Samples Submitted: July 22, 2019 Laboratory Reference: 1907-243 Project: 82302-14.3

Case Narrative

Samples were collected on July 22, 2019 and received by the laboratory on July 22, 2019. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BLMW-12:W					
Laboratory ID:	07-243-01					
Diesel Range Organics	ND	0.26	NWTPH-Dx	7-23-19	7-24-19	
Lube Oil Range Organics	0.79	0.42	NWTPH-Dx	7-23-19	7-24-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	91	50-150				



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0723W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	7-23-19	7-23-19	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	7-23-19	7-23-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	76	50-150				

					Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	07-24	43-01								
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	NA	
Lube Oil Range Organics	0.791	0.588	NA	NA		NA	NA	29	NA	
Surrogate:										
o-Terphenyl						91 91	50-150			



TOTAL ARSENIC EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BLMW-12:W					
Laboratory ID:	07-243-01					
Arsenic	16	3.3	EPA 200.8	7-25-19	7-25-19	



TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0725WM2					
Arsenic	ND	3.3	EPA 200.8	7-25-19	7-25-19	

Analyte	Res	sult	Spike	e Level	Source Result	-	rcent overy	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	07-24	43-01									
	ORIG	DUP									
Arsenic	15.9	14.5	NA	NA			NA	NA	9	20	
MATRIX SPIKES											
Laboratory ID:	07-24	43-01									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	146	139	111	111	15.9	117	111	75-125	5	20	



DISSOLVED ARSENIC EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BLMW-12:W					
Laboratory ID:	07-243-01					
Arsenic	14	3.0	EPA 200.8	7-22-19	7-24-19	



DISSOLVED ARSENIC EPA 200.8 QUALITY CONTROL

Analyte		Result		PQL	Ме	ethod		Date Prepared	Date Analyze	d	Flags
METHOD BLANK											
Laboratory ID:		MB0722F1									
Arsenic		ND		3.0	EPA	200.8	3	7-22-19	7-24-19)	
Analyte	Re	sult	Spike	e Level	Source Result	-	rcent covery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE			-				, <u>,</u>				1
Laboratory ID:	07-24	43-01									
	ORIG	DUP									
Arsenic	14.1	13.5	NA	NA			NA	NA	5	20	
MATRIX SPIKES											
Laboratory ID:	07-24	43-01									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	93.6	97.2	80.0	80.0	14.1	99	104	75-125	4	20	





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

Reviewed/Date	Received	Relinquished	Received	Relinquished	Received	Relinquished AM	Signature								ł	1 BLMW-12:W	Lab ID Sample Identification	Bellia Growel	Higher Manager: High FUNSUN	BOTTWUL LAIN ding	87302-14,3	FAME ENVI VOMMENTALI	Analytical Laboratory lesting Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.onsite-env.com	Environmental Inc.	
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October 18, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-13 Laboratory Reference No. 1910-145

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on October 10, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely.

David Baumeister Project Manager

Enclosures



Date of Report: October 18, 2019 Samples Submitted: October 10, 2019 Laboratory Reference: 1910-145 Project: 82302-13

Case Narrative

Samples were collected on October 10, 2019 and received by the laboratory on October 10, 2019. They were maintained at the laboratory at a temperature of 2° C to 6° C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	BPMW-2R:W			-		
Laboratory ID:	10-145-01					
Diesel Range Organics	ND	0.26	NWTPH-Dx	10-14-19	10-14-19	
Lube Oil Range Organics	ND	0.41	NWTPH-Dx	10-14-19	10-14-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	94	50-150				
Client ID:	BPMW-6:W					

Laboratory ID:	10-145-02					
Diesel Range Organics	ND	0.29	NWTPH-Dx	10-15-19	10-16-19	
Lube Oil Range Organics	0.74	0.46	NWTPH-Dx	10-15-19	10-16-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	57	50-150				



ND

ND

NA

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

Matrix: Water Units: mg/L (ppm)

Lube Oil Range

			DOI			Date	Date		-
Analyte		Result	PQL	Met	hod	Prepared	Analyze	d	Flags
METHOD BLANK									
Laboratory ID:	1	VB1014W1							
Diesel Range Organics		ND	0.25	NWT	PH-Dx	10-14-19	10-14-1	9	
Lube Oil Range Organics	;	ND	0.40	NWT	PH-Dx	10-14-19	10-14-1	9	
Surrogate:	Per	cent Recovery	Control Limit	s					
o-Terphenyl		93	50-150						
Laboratory ID:	1	MB1015W1							
Diesel Range Organics		ND	0.25	NWT	PH-Dx	10-15-19	10-16-1	9	
Lube Oil Range Organics	5	ND	0.40	NWT	PH-Dx	10-15-19	10-16-1	9	
Surrogate:	Per	cent Recovery	Control Limit	s					
o-Terphenyl		75	50-150						
				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	,	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	SB10	14W1							
	ORIG	DUP							
Diesel Fuel #2	1.06	0.863	NA NA		NA	NA	20	NA	

Surrogate: o-Terphenyl					109	87	50-150			
Laboratory ID:	10-14	49-01								
	ORIG	DUP								
Diesel Range Organics	0.758	0.441	NA	NA	NA		NA	53	NA	
Lube Oil Range	ND	ND	NA	NA	NA		NA	NA	NA	
Surrogate:										
o-Terphenyl					92	100	50-150			

NA

NA

NA

NA

NA



SULFATE ASTM D516-11

Matrix: Water Units: mg/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
BPMW-2R:W					
10-145-01					
ND	5.0	ASTM D516-11	10-14-19	10-14-19	
BPMW-6:W					
10-145-02					
ND	5.0	ASTM D516-11	10-14-19	10-14-19	
	BPMW-2R:W 10-145-01 ND BPMW-6:W 10-145-02	BPMW-2R:W 10-145-01 ND 5.0 BPMW-6:W 10-145-02	BPMW-2R:W 10-145-01 ND 5.0 ASTM D516-11 BPMW-6:W 10-145-02	Result PQL Method Prepared BPMW-2R:W 10-145-01 10-145-01 10-14-19 ND 5.0 ASTM D516-11 10-14-19 BPMW-6:W 10-145-02 10-145-02 10-14-19	Result PQL Method Prepared Analyzed BPMW-2R:W 10-145-01 10-145-01 10-14-19 10-14-19 ND 5.0 ASTM D516-11 10-14-19 10-14-19 BPMW-6:W 10-145-02 10-145-02 10-14-19 10-14-19



5

SULFATE ASTM D516-11 QUALITY CONTROL

Matrix: Water Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analvzed	Flags
METHOD BLANK					,	
Laboratory ID:	MB1014W1					
Sulfate	ND	5.0	ASTM D516-11	10-14-19	10-14-19	
		5.0	ASTM D516-11	10-14-19	10-14-19	

			Source	Percent	Recovery		RPD	
Analyte	Result	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE								
Laboratory ID:	10-144-03							
	ORIG DU	Р						
Sulfate	7.37 7.7	4 NA	NA	NA	NA	5	10	
MATRIX SPIKE								
Laboratory ID:	10-144-03							
	MS	MS		MS				
Sulfate	18.3	10.0	7.37	109	73-134	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB1014W1							
	SB	SB		SB				
Sulfate	9.81	10.0	NA	98	89-113	NA	NA	



NITRATE (as Nitrogen) EPA 353.2

Analyzed	Flags
10-16-19	
10-16-19	



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
Nitrate	ND	0.050	EPA 353.2	10-16-19	10-16-19	

			Source	Percent	Recovery		RPD	
Analyte	Result	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE								
Laboratory ID:	10-144-03							
	ORIG DUP							
Nitrate	1.69 1.69	NA	NA	NA	NA	0	13	
MATRIX SPIKE								
Laboratory ID:	10-144-03							
	MS	MS		MS				
Nitrate	3.83	2.00	1.69	107	90-127	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB1016W1							
	SB	SB		SB				
Nitrate	2.08	2.00	NA	104	90-125	NA	NA	



DISSOLVED METALS EPA 200.8

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BPMW-2R:W					
Laboratory ID:	10-145-01					
Manganese	120	10	EPA 200.8	10-10-19	10-11-19	
Client ID:	BPMW-6:W					
Laboratory ID:	10-145-02					
Arsenic	5.8	3.0	EPA 200.8	10-10-19	10-11-19	
Manganese	190	50	EPA 200.8	10-10-19	10-11-19	
Client ID:	BC-11R:W					
Laboratory ID:	10-145-03					
Arsenic	ND	3.0	EPA 200.8	10-10-19	10-11-19	
Client ID:	BPMW-1:W					
Laboratory ID:	10-145-04					
Arsenic	15	3.0	EPA 200.8	10-10-19	10-11-19	



DISSOLVED METALS EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1010F1					
Arsenic	ND	3.0	EPA 200.8	10-10-19	10-11-19	
Manganese	ND	10	EPA 200.8	10-10-19	10-11-19	

					Source	Pe	rcent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	10-08	88-02									
	ORIG	DUP									
Arsenic	4.58	5.94	NA	NA		1	NA	NA	26	20	
Manganese	22.8	24.0	NA	NA		1	NA	NA	5	20	
MATRIX SPIKES											
Laboratory ID:	10-08	88-01									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	92.6	92.6	80.0	80.0	4.58	110	110	75-125	0	20	
Manganese	102	100	80.0	80.0	22.8	99	97	75-125	2	20	



TOTAL ARSENIC EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BPMW-6:W					
Laboratory ID:	10-145-02					
Arsenic	9.1	3.3	EPA 200.8	10-11-19	10-11-19	
Client ID:	BC-11R:W					
Laboratory ID:	10-145-03					
Arsenic	ND	3.3	EPA 200.8	10-11-19	10-11-19	
Client ID:	BPMW-1:W					
Laboratory ID:	10-145-04					
Arsenic	17	3.3	EPA 200.8	10-11-19	10-11-19	



TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

Arsenic

							Date	Date	•	
Analyte		Result		PQL	Ме	ethod	Prepared	Analyz	ed	Flags
METHOD BLANK										
Laboratory ID:	Ν	/B1011WM1								
Arsenic		ND		3.3	EPA	200.8	10-11-19	10-11-	19	
					Source	Percent	,		RPD	
Analyte	Res	sult	Spike	e Level	Result	Recovery	/ Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	09-24	41-05								
	ORIG	DUP								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	09-24	41-05								
	MS	MSD	MS	MSD		MS MS	D			

ND

119

111

75-125

7

20

123

111

111

132



DISSOLVED GASES RSK 175

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BPMW-2R:W					
Laboratory ID:	10-145-01					
Methane	900	10	RSK 175	10-17-19	10-17-19	
Client ID:	BPMW-6:W					
Laboratory ID:	10-145-02					
Methane	4400	50	RSK 175	10-17-19	10-17-19	



DISSOLVED GASES RSK 175 QUALITY CONTROL

					Date	Date	•	
Analyte	Result	PQL	Me	ethod	Prepared	Analyz	ed	Flags
METHOD BLANK								
Laboratory ID:	MB1017W1							
Methane	ND	1.0	RS	K 175	10-17-19	10-17-	19	
			Source	Percent	Recovery		RPD	
Analyte	Result	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
MATRIX SPIKES								
Laboratory ID:	10-144-03							

Laboratory ID.	10-14	44-03									
	MS	MSD	MS	MSD		MS	MSD				
Methane	21.46	21.89	22.11	22.11	ND	97	99	75-125	2	25	



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

5				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BPMW-2R:W					
Laboratory ID:	10-145-01					
Total Alkalinity	110	2.0	SM 2320B	10-15-19	10-15-19	
Client ID:	BPMW-6:W					
Laboratory ID:	10-145-02					
Total Alkalinity	110	2.0	SM 2320B	10-15-19	10-15-19	



TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

Analyte METHOD BLANK	Result		PQL	Ме	ethod	Date Prepared	Date Analyz		Flags
METHOD BLANK									
Laboratory ID:		MB1015W1							
Total Alkalinity		ND	2.0	SM	2320B	10-15-19	10-15-	19	
Analyte	Re	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									- 3-
Laboratory ID:	10-14	45-01							
	ORIG	DUP							
Total Alkalinity	114	114	NA	NA	NA	NA	0	10	
SPIKE BLANK									
Laboratory ID:	SB10	15W1							
	S	B	SB		SB				
Total Alkalinity	92	2.0	100	NA	92	88-110	NA	NA	





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



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Reviewed/Date	Received	Relinquished	Received	Relinquished	Heceived	Relinquished	Signaphre / /				1	4 6PMW-1:W	3 BC-11RIN	ZBPMW-6:W	BPMW -	Lab ID Sample Identification	Sampled by: ACUA ENVOLVES	Project Manager: Jeff JUNSUN	Project Name: Bothill Polint	87302 - 13	Fane Environmental	Phone: (425) 883-3881 • www.onsite-env.com	Analytical Laboratory Testing Services	INA OnSite
Reviewed/Date					RP R	 have the intermental	Company					14/10/17 1345 GW 2	10/10/19 1275 67W 2	10/11/19 1045 CNN 9	10/10/19 0935 GVN 8	Date Time Sampled Sampled Matrix	(other)		Standard (7 Days)	2 Days 3 Days	Same Day 1 Day	(Check One)	Turnaround Request	Chain of Custody
					05 tr 1 bulor/al	10110719 14150	Date Time							×	×	NWTF NWTF NWTF NWTF Volatil Halog	PH-HCII PH-Gx/E PH-Gx PH-Dx (es 8260 enated	D BTEX	/ SG Cle s 8260C	1)		Laboratory Number:	Custody
Chromatograms with final report 📋 Electronic Data Deliverables (EDDs) 🗌	Data Package: Standard Level III Level IV					* Lah filler	Comments/Special Instructions	1-860								(with I PAHS PCBS Organ Organ Chlori Total I Total I NOLP HUGNU UISS UISS	ow-leve 8270D/ 8082A iochlori ophosp nated A RCRA N MTCA N MTCA N MTCA N MTCA N MTCA N MTCA N MTCA N MTCA N MTCA N	Aetals SM Groensel d M d A d A	v-level) cides 80 Pesticide bicides FAH Valava W * HS *	8151A			10-115	Page of



October 16, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-15 Laboratory Reference No. 1910-122

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on October 9, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely.

David Baumeister Project Manager

Enclosures



Date of Report: October 16, 2019 Samples Submitted: October 9, 2019 Laboratory Reference: 1910-122 Project: 82302-15

Case Narrative

Samples were collected on October 9, 2019 and received by the laboratory on October 9, 2019. They were maintained at the laboratory at a temperature of 2° C to 6° C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



DISSOLVED ARSENIC EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-12:W					
Laboratory ID:	10-122-01					
Arsenic	3.8	3.0	EPA 200.8	10-9-19	10-11-19	



DISSOLVED ARSENIC EPA 200.8 QUALITY CONTROL

					Date	Date		
Analyte	Result	PQL	Ме	ethod	Prepared	Analyz	ed	Flags
METHOD BLANK								
Laboratory ID:	MB1009F1							
Arsenic	ND	3.0	EPA	200.8	10-9-19	10-11-	19	
			Source	Percent	Recovery		RPD	
Analyte	Result	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE								

DUPLICATE											
Laboratory ID:	10-08	88-02									
	ORIG	DUP									
Arsenic	4.58	5.94	NA	NA			NA	NA	26	20	С
MATRIX SPIKES											
Laboratory ID:	10-08	88-02									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	92.6	92.6	80.0	80.0	4.58	110	110	75-125	0	20	



TOTAL ARSENIC EPA 200.8

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-12:W					
Laboratory ID:	10-122-01					
Arsenic	4.4	3.3	EPA 200.8	10-11-19	10-11-19	



5

TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

Analvte								Date	Date		
Analyte		Result		PQL	M	ethod	F	Prepared	Analyz	ed	Flags
METHOD BLANK											
Laboratory ID:	Ν	/B1011WM1									
Arsenic		ND		3.3	EPA	A 200.8	} -	10-11-19	10-11-	19	
• • •	_		• "		Source	-	cent	Recovery		RPD	
Analyte	Res	sult	Spike	e Level	Result	Reco	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	09-24	41-05									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA		N	IA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	09-24	41-05									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	132	123	111	111	ND	119	111	75-125	7	20	





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



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October 22, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-15 Laboratory Reference No. 1910-155

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on October 11, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely.

David Baumeister Project Manager

Enclosures



Date of Report: October 22, 2019 Samples Submitted: October 11, 2019 Laboratory Reference: 1910-155 Project: 82302-15

Case Narrative

Samples were collected on October 11, 2019 and received by the laboratory on October 11, 2019. They were maintained at the laboratory at a temperature of 2° C to 6° C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-16:W					
Laboratory ID:	10-155-01					
Diesel Range Organics	ND	0.27	NWTPH-Dx	10-14-19	10-14-19	
Lube Oil Range Organics	ND	0.44	NWTPH-Dx	10-14-19	10-14-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	81	50-150				

Client ID:	BLMW-8R:W					
Laboratory ID:	10-155-02					
Diesel Range Organics	ND	0.27	NWTPH-Dx	10-14-19	10-14-19	
Lube Oil Range Organics	0.72	0.42	NWTPH-Dx	10-14-19	10-14-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	90	50-150				



Date of Report: October 22, 2019 Samples Submitted: October 11, 2019 Laboratory Reference: 1910-155 Project: 82302-15

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB1014W1					
ND	0.25	NWTPH-Dx	10-14-19	10-14-19	
ND	0.40	NWTPH-Dx	10-14-19	10-14-19	
Percent Recovery	Control Limits				
93	50-150				
	MB1014W1 ND ND Percent Recovery	MB1014W1ND0.25ND0.40Percent RecoveryControl Limits	MB1014W1ND0.25NWTPH-DxND0.40NWTPH-DxPercent RecoveryControl Limits	Result PQL Method Prepared MB1014W1 -<	Result PQL Method Prepared Analyzed MB1014W1

					Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	SB10	14W1								
	ORIG	DUP								
Diesel Fuel #2	1.06	0.863	NA	NA		NA	NA	20	NA	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						109 87	50-150			



SULFATE ASTM D516-11

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-16:W					
Laboratory ID:	10-155-01					
Sulfate	61	25	ASTM D516-11	10-17-19	10-17-19	
Client ID:	BLMW-8R:W					
Laboratory ID:	10-155-02					
Sulfate	ND	5.0	ASTM D516-11	10-17-19	10-17-19	



SULFATE ASTM D516-11 QUALITY CONTROL

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1017W1					
Sulfate	ND	5.0	ASTM D516-11	10-17-19	10-17-19	

				Source	Percent	Recovery		RPD	
Analyte	Result		Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-18	38-01							
	ORIG	DUP							
Sulfate	ND	ND	NA	NA	NA	NA	NA	10	
MATRIX SPIKE									
Laboratory ID:	10-18	38-01							
	Μ	IS	MS		MS				
Sulfate	11	.0	10.0	ND	110	73-134	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10	17W1							
	S	В	SB		SB				
Sulfate	9.4	42	10.0	NA	94	89-113	NA	NA	



NITRATE (as Nitrogen) EPA 353.2

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-16:W					
Laboratory ID:	10-155-01					
Nitrate	ND	0.050	EPA 353.2	10-16-19	10-16-19	
Client ID:	BLMW-8R:W					
Laboratory ID:	10-155-02					
Nitrate	ND	0.050	EPA 353.2	10-16-19	10-16-19	



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
Nitrate	ND	0.050	EPA 353.2	10-16-19	10-16-19	

			Source	Percent	Recovery		RPD	
Analyte	Result	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE								
Laboratory ID:	10-144-03							
	ORIG DUP							
Nitrate	1.69 1.69	NA	NA	NA	NA	0	13	
MATRIX SPIKE								
Laboratory ID:	10-144-03							
	MS	MS		MS				
Nitrate	3.83	2.00	1.69	107	90-127	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB1016W1							
	SB	SB		SB				
Nitrate	2.08	2.00	NA	104	90-125	NA	NA	



DISSOLVED METALS EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-16:W					
Laboratory ID:	10-155-01					
Arsenic	ND	3.0	EPA 200.8	10-11-19	10-18-19	
Manganese	3900	250	EPA 200.8	10-11-19	10-18-19	
Client ID:	BLMW-8R:W					
Laboratory ID:	10-155-02					
Arsenic	16	3.0	EPA 200.8	10-11-19	10-18-19	
Manganese	2600	250	EPA 200.8	10-11-19	10-18-19	
Client ID:	HZ-MW-17:W					
Laboratory ID:	10-155-03					
Arsenic	ND	3.0	EPA 200.8	10-11-19	10-18-19	
Client ID:	HZ-MW-4:W					
Laboratory ID:	10-155-04					
Arsenic	ND	3.0	EPA 200.8	10-11-19	10-18-19	



DISSOLVED METALS EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1011F1					
Arsenic	ND	3.0	EPA 200.8	10-11-19	10-18-19	
Manganese	ND	10	EPA 200.8	10-11-19	10-18-19	

					Source	Pe	rcent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	10-21	16-02									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA		I	NA	NA	NA	20	
Manganese	840	830	NA	NA			NA	NA	1	20	
MATRIX SPIKES											
Laboratory ID:	10-21	16-02									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	81.2	77.6	80.0	80.0	ND	102	97	75-125	5	20	
Manganese	1770	1760	1000	1000	840	93	92	75-125	1	20	



TOTAL ARSENIC EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-16:W					
Laboratory ID:	10-155-01					
Arsenic	ND	3.3	EPA 200.8	10-15-19	10-16-19	
Client ID:	BLMW-8R:W					
Laboratory ID:	10-155-02					
Arsenic	27	3.3	EPA 200.8	10-15-19	10-16-19	
Client ID:	HZ-MW-17:W					
Laboratory ID:	10-155-03					
Arsenic	ND	3.3	EPA 200.8	10-15-19	10-16-19	
Client ID:	HZ-MW-4:W					
Laboratory ID:	10-155-04					
Arsenic	ND	3.3	EPA 200.8	10-15-19	10-16-19	



TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

								Date	Date	•	
Analyte	Result			PQL	Method			Prepared	Analyzed		Flags
METHOD BLANK											
Laboratory ID:	Ν	MB1015WM1									
Arsenic		ND		3.3	EP/	A 200.8	8	10-15-19	10-15-	19	
•			0.1		Source	-	rcent	Recovery		RPD	-
Analyte	Res	sult	Spike	e Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	10-17	74-01									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA		١	NA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	10-17	74-01									
	MS	MSD	MS	MSD		MS	MSD	1			
Arsenic	125	125	111	111	ND	112	113	75-125	0	20	



DISSOLVED GASES RSK 175

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
BC-16:W					
10-155-01					
6000	100	RSK 175	10-21-19	10-21-19	
BLMW-8R:W					
10-155-02					
1900	20	RSK 175	10-21-19	10-21-19	
	BC-16:W 10-155-01 6000 BLMW-8R:W 10-155-02	BC-16:W 10-155-01 6000 100 BLMW-8R:W 10-155-02	BC-16:W 10-155-01 6000 100 RSK 175 BLMW-8R:W 10-155-02	Result PQL Method Prepared BC-16:W 10-155-01 100 100 100 100 10-21-19 10-21-19 BLMW-8R:W 10-155-02 10-155-02 100<	Result PQL Method Prepared Analyzed BC-16:W 10-155-01 10-21-19 10-21-19 6000 100 RSK 175 10-21-19 10-21-19 BLMW-8R:W 10-155-02 10-155-02 10-21-19 10-21-19



DISSOLVED GASES RSK 175 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB1021W1					
ND	1.0	RSK 175	10-21-19	10-21-19	
	MB1021W1	MB1021W1	MB1021W1	Result PQL Method Prepared MB1021W1 MB1021W1 <td>Result PQL Method Prepared Analyzed MB1021W1 MB1021W1</td>	Result PQL Method Prepared Analyzed MB1021W1 MB1021W1

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	10-14	44-03									
	MS	MSD	MS	MSD		MS	MSD				
Methane	21.46	21.89	22.11	22.11	ND	97	99	75-125	2	25	
Ethane	40.85	41.34	41.59	41.59	ND	98	99	75-125	1	25	
Ethene	39.05	41.83	38.83	38.83	ND	101	108	75-125	7	25	



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

3				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	BC-16:W					
Laboratory ID:	10-155-01					
Total Alkalinity	520	2.0	SM 2320B	10-15-19	10-15-19	
Client ID:	BLMW-8R:W					
Laboratory ID:	10-155-02					
Total Alkalinity	370	2.0	SM 2320B	10-15-19	10-15-19	



TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

Analyte Result		Result	PQL	Method		Date Prepared	Date Analyzed		Flags
METHOD BLANK									
Laboratory ID:		MB1015W1							
Total Alkalinity	ND		2.0	SM 2320B		10-15-19	10-15-19		
Analyte	Re	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE			•		,				y
Laboratory ID:	10-14	45-01							
	ORIG	DUP							
Total Alkalinity	114	114	NA	NA	NA	NA	0	10	
SPIKE BLANK									
Laboratory ID:	<u>/ ID: SB1015W1</u> SB								
			SB		SB				
Total Alkalinity	92	2.0	100	NA	92	88-110	NA	NA	





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

Reviewed/Date	Received	Relinquished	Received	Relinquished	Received Uttel	Relinquished	signature	7			4	4 HZ-MM-4:M	3 HZ-MW-17:W	2 BUMIN-BR:W	BC-IU:W	Lab ID Sample Identification	Sampled by: BUWA GIVANES	Project Manager: FCR FM8W	Project Name: BOHWULI HWTZ	Project Number: 87302-15	Kane Environmental	Phone: (425) 883-3881 • www.onsite-env.com	Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052	Environmental Inc
Reviewed/Date					1 Onsite	Kara Envivornmental	Company					1305 2	1212 2	1640 7	1905 9	Date Time Sampled Sampled Matrix	(other)	Contain	Standard (7 Days)	2 Days 3 Days	Same Day 1 Day	(Check One)	Turnaround Request (in working days)	Chain of Custody
					10-11-9 1400	tal 10/11/19 1400	Date Time							×	×	NWTF NWTF NWTF Volati Halog	PH-HCI PH-Gx/P PH-Gx PH-Dx (les 826 enated	D BTEX Acid OC Volatile	/ SG Cl ss 82600	0)		Laboratory Number:	Custody
Chromatograms with final report	Data Package: Standard Level III Level IV					Law Fi Her	Comments/Special Instructions	1 + 100						XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		Semin (with PAHs PCBs Organ Organ Chlor Total Total Total Total VOCO HUSY JUSE QUSE DUSE	volatiles low-lev 8270D 8082A nochlor nophos inated RCRA MTCA MTCA MTCA SUVV SUVV SUVV	s 8270D el PAHs /SIM (lo phorus Acid He Metals SUN SUN SUN SUN SUN SUN SUN SUN SUN SUN	VSIM)) w-level) ticides & Pesticid rbicides FUH	3081B les 8270 8 8151A			- 10-155	Page of



October 23, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-15 Laboratory Reference No. 1910-216

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on October 16, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely.

David Baumeister Project Manager

Enclosures



Date of Report: October 23, 2019 Samples Submitted: October 16, 2019 Laboratory Reference: 1910-216 Project: 82302-15

Case Narrative

Samples were collected on October 16, 2019 and received by the laboratory on October 16, 2019. They were maintained at the laboratory at a temperature of 2° C to 6° C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Nitrate (as Nitrogen) EPA 353.2 Analysis

The reported Nitrate results are a calculated value based on the subtraction of Nitrite from the Nitrate plus Nitrite result. The Nitrite analysis, which has a 48-hour holding time, was performed within the holding time. Immediately after this analysis, an aliquot of each sample was preserved with concentrated sulfuric acid and stored at 4 degrees C. The preserved samples were then analyzed within the maximum 28-day holding time for the Nitrate plus Nitrite analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



2

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	HZ-MW-19:W					
Laboratory ID:	10-216-02					
Diesel Range Organics	0.34	0.27	NWTPH-Dx	10-18-19	10-18-19	
Lube Oil Range Organics	0.95	0.43	NWTPH-Dx	10-18-19	10-18-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	90	50-150				



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1018W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	10-18-19	10-18-19	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	10-18-19	10-18-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	103	50-150				

					Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	10-21	16-02								
	ORIG	DUP								
Diesel Range Organics	0.341	ND	NA	NA		NA	NA	NA	NA	
Lube Oil Range Organics	0.945	ND	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						90 97	50-150			



SULFATE ASTM D516-11

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-19:W					
Laboratory ID:	10-216-02					
Sulfate	48	25	ASTM D516-11	10-18-19	10-18-19	



SULFATE ASTM D516-11 QUALITY CONTROL

Matrix: Water Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analvzed	Flags
METHOD BLANK					,	
Laboratory ID:	MB1018W1					
Sulfate	ND	5.0	ASTM D516-11	10-18-19	10-18-19	

				Source	Percent	Recovery		RPD	
Analyte	Res	ult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-21	6-02							
	ORIG	DUP							
Sulfate	48.3	45.8	NA	NA	NA	NA	5	10	
MATRIX SPIKE									
Laboratory ID:	10-21	6-02							
	MS	S	MS		MS				
Sulfate	96.	8	50.0	48.3	97	73-134	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB101	8W1							
	SE	3	SB		SB				
Sulfate	10.	8	10.0	NA	108	89-113	NA	NA	



NITRATE (as Nitrogen) EPA 353.2

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-19:W					
Laboratory ID:	10-216-02					
Nitrate	ND	0.050	EPA 353.2	10-21-19	10-21-19	



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NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

Matrix: Water Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analvzed	Flags
METHOD BLANK	nesut		Method	ricparea	Analyzeu	Tiugo
Laboratory ID:	MB1021W1					
Nitrate	ND	0.050	EPA 353.2	10-21-19	10-21-19	

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-21	16-02							
	ORIG	DUP							
Nitrate	ND	ND	NA	NA	NA	NA	NA	13	
MATRIX SPIKE									
Laboratory ID:	10-21	16-02							
	Μ	IS	MS		MS				
Nitrate	2.:	20	2.00	ND	110	90-127	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10	21W1							
	S	В	SB		SB				
Nitrate	2.	19	2.00	NA	110	90-125	NA	NA	



DISSOLVED METALS EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-1:W					
Laboratory ID:	10-216-01					
Arsenic	ND	3.0	EPA 200.8	10-16-19	10-18-19	
Client ID:	HZ-MW-19:W					
Laboratory ID:	10-216-02					
Arsenic	ND	3.0	EPA 200.8	10-16-19	10-18-19	
Manganese	840	130	EPA 200.8	10-16-19	10-18-19	



DISSOLVED METALS EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016F1					
Arsenic	ND	3.0	EPA 200.8	10-16-19	10-18-19	
Manganese	ND	10	EPA 200.8	10-16-19	10-18-19	

					Source	Pe	rcent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	10-21	6-02									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA		I	NA	NA	NA	20	
Manganese	840	830	NA	NA			NA	NA	1	20	
MATRIX SPIKES											
Laboratory ID:	10-21	6-02									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	81.2	77.6	80.0	80.0	ND	102	97	75-125	5	20	
Manganese	1770	1760	1000	1000	840	93	92	75-125	1	20	



TOTAL ARSENIC EPA 200.8

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
HZ-MW-1:W					
10-216-01					
ND	3.3	EPA 200.8	10-18-19	10-18-19	
HZ-MW-19:W					
10-216-02					
ND	3.3	EPA 200.8	10-18-19	10-18-19	
	HZ-MW-1:W 10-216-01 ND HZ-MW-19:W 10-216-02	HZ-MW-1:W 10-216-01 ND 3.3 HZ-MW-19:W 10-216-02	HZ-MW-1:W 10-216-01 ND 3.3 EPA 200.8 HZ-MW-19:W 10-216-02	Result PQL Method Prepared HZ-MW-1:W 10-216-01 10-216-01 10-18-19 ND 3.3 EPA 200.8 10-18-19 HZ-MW-19:W 10-216-02 10-216-02 10-18-19	Result PQL Method Prepared Analyzed HZ-MW-1:W 10-216-01 10-18-19 10-18-19 ND 3.3 EPA 200.8 10-18-19 10-18-19 HZ-MW-19:W 10-216-02 10-216-02 10-216-02 10-216-02



TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

								Date	Date	•	
Analyte		Result		PQL		Method		Prepared	Analyzed		Flags
METHOD BLANK											
Laboratory ID:	Ν	/B1018WM	1								
Arsenic		ND		3.3	EPA	A 200.8		10-18-19	10-18-	19	
					Source	Perc	cent	Recovery		RPD	
Analyte	Res	sult	Spike	e Level	Result	Reco	very	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	10-2	16-02									
	ORIG	DUP									
Arsenic	ND	ND	NA	NA		N	A	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	10-2 ⁻	16-02									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	108	112	111	111	ND	97	101	75-125	3	20	

DISSOLVED GASES RSK 175

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-19:W					
Laboratory ID:	10-216-02					
Methane	18	1.0	RSK 175	10-22-19	10-22-19	



DISSOLVED GASES RSK 175 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

					Date	Date)	
Analyte	Result	PQL	Me	ethod	Prepared	Analyz	ed	Flags
METHOD BLANK								
Laboratory ID:	MB1022W1							
Methane	ND	1.0	RS	K 175	10-22-19	10-22-	19	
			Source	Percent	Recovery		RPD	
Analyte	Result	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
MATRIX SPIKES								
Laboratory ID:	10 216 02							

Laboratory ID:	10-2	16-02									
	MS	MSD	MS	MSD		MS	MSD				
Methane	32.1	32.3	22.1	22.1	18.3	62	63	75-125	1	25	А



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	HZ-MW-19:W					
Laboratory ID:	10-216-02					
Total Alkalinity	190	2.0	SM 2320B	10-22-19	10-22-19	



TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

Analyte	-	Result	PQL	Ме	ethod	Date Prepared	Date Analyz		Flags
METHOD BLANK									
Laboratory ID:		MB1022W1							
Total Alkalinity		ND	2.0	SM	2320B	10-22-19	10-22-	19	
Analyte	Re	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									1
Laboratory ID:	10-2 ⁻	16-02							
	ORIG	DUP							
Total Alkalinity	188	188	NA	NA	NA	NA	0	10	
SPIKE BLANK									
Laboratory ID:	SB10	22W1							
	S	B	SB		SB				
Total Alkalinity	92	2.0	100	NA	92	88-110	NA	NA	





Data Qualifiers and Abbreviations

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881



October 16, 2019

Jeff Jensen Kane Environmental, Inc. 4015 13th Avenue West Seattle, WA 98119

Re: Analytical Data for Project 82302-14 Laboratory Reference No. 1910-121

Dear Jeff:

Enclosed are the analytical results and associated quality control data for samples submitted on October 9, 2019.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely.

David Baumeister Project Manager

Enclosures



Date of Report: October 16, 2019 Samples Submitted: October 9, 2019 Laboratory Reference: 1910-121 Project: 82302-14

Case Narrative

Samples were collected on October 8 and 9, 2019 and received by the laboratory on October 9, 2019. They were maintained at the laboratory at a temperature of 2° C to 6° C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MW-1:W					
10-121-01					
ND	0.25	NWTPH-Dx	10-10-19	10-11-19	
ND	0.40	NWTPH-Dx	10-10-19	10-11-19	
Percent Recovery	Control Limits				
83	50-150				
BLMW-12:W					
10-121-02					
ND	0.25	NWTPH-Dx	10-10-19	10-11-19	
ND	0.40	NWTPH-Dx	10-10-19	10-11-19	
Percent Recovery	Control Limits				
91	50-150				
BLMW-11:W					
10-121-03					
ND	0.26	NWTPH-Dx	10-10-19	10-11-19	
0.45	0.41	NWTPH-Dx	10-10-19	10-11-19	
Percent Recovery	Control Limits				
	MW-1:W 10-121-01 ND ND Percent Recovery 83 BLMW-12:W 10-121-02 ND ND Percent Recovery 91 BLMW-11:W 10-121-03 ND 0.45	MW-1:W 0.25 ND 0.25 ND 0.40 Percent Recovery Control Limits 83 50-150 BLMW-12:W 0.40 10-121-02 0.25 ND 0.25 ND 0.25 Solution 0.25 ND 0.25 ND 0.40 Percent Recovery Control Limits 91 50-150 BLMW-11:W 50-150 ND 0.26 0.45 0.41	MW-1:W ND 0.25 NWTPH-Dx ND 0.40 NWTPH-Dx Percent Recovery Control Limits 83 50-150 BLMW-12:W 10-121-02 ND 0.25 NWTPH-Dx Percent Recovery 0.25 NWTPH-Dx Percent Recovery Control Limits 91 50-150 BLMW-11:W 50-150 10-121-03 ND 0.26 NWTPH-Dx 0.45 0.41 NWTPH-Dx	MW-1:W ND 0.25 NWTPH-Dx 10-10-19 ND 0.40 NWTPH-Dx 10-10-19 Percent Recovery Control Limits 10-10-19 83 50-150 10-10-19 BLMW-12:W 10-121-02 10-121-02 ND 0.25 NWTPH-Dx ND 0.40 NWTPH-Dx Percent Recovery Control Limits 91 50-150 BLMW-11:W 10-10-19 10-121-03 0.26 ND 0.26 ND 0.26 ND 0.10-10-19	Result PQL Method Prepared Analyzed MW-1:W 10-121-01



Date of Report: October 16, 2019 Samples Submitted: October 9, 2019 Laboratory Reference: 1910-121 Project: 82302-14

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1010W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	10-10-19	10-11-19	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	10-10-19	10-11-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	93	50-150				

					Source	Per	cent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Reco	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	10-12	23-01									
	ORIG	DUP									
Diesel Range	ND	ND	NA	NA		Ν	IA	NA	NA	NA	
Lube Oil Range	ND	ND	NA	NA		N	IA	NA	NA	NA	
Surrogate:											
o-Terphenyl						96	126	50-150			



TOTAL ARSENIC EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	MW-1:W					
Laboratory ID:	10-121-01					
Arsenic	ND	3.3	EPA 200.8	10-11-19	10-11-19	
Client ID:	BLMW-12:W					
Laboratory ID:	10-121-02					
Arsenic	ND	3.3	EPA 200.8	10-11-19	10-11-19	
Client ID:	BLMW-11:W					
Laboratory ID:	10-121-03					
Arsenic	30	3.3	EPA 200.8	10-11-19	10-11-19	



TOTAL ARSENIC EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

								Date	Date		
Analyte		Result		PQL	Method			Prepared	Analyz	ed	Flags
METHOD BLANK											
Laboratory ID:	Ν	/B1011WM1									
Arsenic			3.3	EP/	A 200.8		10-11-19	10-11-	19		
					Source	Perc	cent	Recovery		RPD	
Analyte	Res	sult	Spike	e Level	Result	Recovery		Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	09-24										
	ORIG	DUP									
Arsenic	ND	ND	NA	NA		Ν	A	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	09-24	41-05									
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	132	123	111	111	ND	119	111	75-125	7	20	



DISSOLVED ARSENIC EPA 200.8

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	MW-1:W					
Laboratory ID:	10-121-01					
Arsenic	ND	3.0	EPA 200.8	10-9-19	10-11-19	
Client ID:	BLMW-12:W					
Laboratory ID:	10-121-02					
Arsenic	ND	3.0	EPA 200.8	10-9-19	10-11-19	
Client ID:	BLMW-11:W					
Laboratory ID:	10-121-03					
Arsenic	24	3.0	EPA 200.8	10-9-19	10-11-19	



DISSOLVED ARSENIC EPA 200.8 QUALITY CONTROL

					Date	Date	•	
Analyte	Result	PQL	Ме	ethod	Prepared	Analyz	ed	Flags
METHOD BLANK								
Laboratory ID:	MB1009F1							
Arsenic	ND	3.0	EPA	A 200.8	10-9-19	10-11-19		
			Source	Percent	Recovery		RPD	
Analyte	Result	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE								
Laboratory ID:	10-088-02							

Arsenic	92.6	92.6	80.0	80.0	4.58	110	110	75-125	0	20	
	MS	MSD	MS	MSD		MS	MSD				
Laboratory ID:	10-08	88-02									
MATRIX SPIKES											
Arsenic	4.58	5.94	NA	NA		1	NA	NA	26	20	С
	ORIG	DUP									
Laboratory ID:	10-08	88-02									





Data Qualifiers and Abbreviations

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- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
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- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
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- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
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- X Sample extract treated with a mercury cleanup procedure.
- X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Ζ-

ND - Not Detected at PQL PQL - Practical Quantitation Limit RPD - Relative Percent Difference



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

Reviewed/Date	Received	Relinquished	Received	Relinquished	Received Willy is see	Relinquished MMV	Signature				_1	3 BLMM-11 :N	8 IMIN-12:IN	MW-1:W	Lab ID Sample Identification	Belly Graves	TER JENSEN	Bothall Landing	87362-14	KANE ENVIRONMENTAL	Phone: (425) 883-3881 • www.onsite-env.com	Analytical Laboratory Testing Services	OnSite Environmental Inc
Reviewed/Date					05	Early Environmental	Company					10/9/19 1255 GW 4	H NIB 5611 19/19/19	1355	Sampled Sampled Matrix	(other)	Contain	X Standard (7 Days)	2 Days 3 Days	Same Day 1 Day	(Check One)	Turnaround Request (in working days)	Chain of Custody
					CISI 10 100	10/9/119	Date Time					×	X	×	NWTF NWTF NWTF NWTF Volatil	PH-HCI PH-Gx/ PH-Gx PH-Dx (les 826 enated	D BTEX Acid OC Volatile	/ SG CI is 82600 ers Only))		Laboratory Number:	Custody
Chromatograms with final report $\hfill \square$ Electronic Data Deliverables (EDDs) $\hfill \square$	Data Package: Standard Level III Level IV					Lab Filter	Comments/Special Instructions								(with PAHs PAHs PCBs Orgar Orgar Chlor Total Total Total HEM Chlor	Iow-lev 8270D 8082A nochlor nophos inated RCRA MTCA	ine Pesi phorus Acid He Metals Metals d grease		8081B es 827 88151A			10-121	Page of