

# **Quarterly report, fourth quarter 2019**

RCRA Corrective Action Program
Boeing Renton Facility
Project # 0088880100.2019 The Boeing Company

Prepared for:

The Boeing Company Seattle, Washington

February 17, 2020



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# Prepared by:

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## February 17, 2020

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Wood Environment & Infrastructure Solutions, Inc.



John Long, L.G. L. Hg. Licensed Geologist/Hydrogeologist #1354 Expiration Date: May 23, 2022



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# 1.0 Introduction

This report provides progress reporting in conformance with Section VII.B.1 of Agreed Order No. 8191 (Order) and summarizes cleanup actions and monitoring conducted at the Boeing Renton Facility (the Facility) during the fourth quarter 2019. This work is required under the Resource Conservation and Recovery Act (RCRA) Corrective Action Program being performed at the Facility. Corrective action activities are performed for those solid waste management units (SWMUs), areas of concern (AOCs), and other areas where cleanup actions are ongoing. Monitoring, cleanup activities, and reporting are being conducted as part of the final remedy implementation described in the Engineering Design Report (EDR) (AMEC, 2014). The groundwater monitoring program is detailed in the Addendum to the Compliance Monitoring Plan (Wood, 2019), which contains changes to the revised Compliance Monitoring Plan (Amec Foster Wheeler, 2016a) that superseded the original plan presented in Appendix D of the EDR (AMEC, 2014).

Groundwater monitoring and final cleanup action implementation are being conducted at the following areas (the ongoing remedies for each of these areas are noted in parentheses):

- SWMU-168: (monitored natural attenuation [MNA]);
- SWMU-172 and SWMU-174: (bioremediation, soil vapor extraction [SVE] and monitored attenuation [MA]);
- Building 4-78/79 SWMU/AOC Group: (bioremediation, SVE, MNA, and MA);
- Former Fuel Farm AOC Group: (MNA);
- AOC-001 and AOC-002: (bioremediation and MA);
- AOC-003: (bioremediation and MA);
- AOC-004: (bioremediation and MA);
- AOC-060: (bioremediation and MA);
- AOC-090: (bioremediation and MA);
- Building 4-70: (bioremediation and MA);
- Lot 20/Former Building 10-71 Parcel: (bioremediation and MA); and
- Apron A: (bioremediation and MA).

The background and investigation history for each affected unit or group of units is described in the Cleanup Action Plan (CAP) (AMEC, 2012) and/or EDR (AMEC, 2014). It should be noted that monitoring for the Building 10-71 area and Building 4-70 area is included in this monitoring report to maintain continuity with the monitoring program that has been conducted for these areas for several years and as approved by the Washington State Department of Ecology (Ecology); these two areas are not addressed explicitly in the Compliance Monitoring Plan but are being addressed per Ecology's December 30, 2015, email to Boeing with comments on the revised Compliance Monitoring Plan. Monitoring for Apron A is also included, as semiannual monitoring began in this area starting in the fourth quarter 2016, as reported in the Apron A Investigation Results report (Amec Foster Wheeler, 2016b).

The goals for cleanup of groundwater at the Facility, as described in the CAP, include protection of groundwater for drinking water beneficial use at all areas of the site, and demonstration of protection of surface water beneficial uses at the conditional points of compliance (CPOCs) for each SWMU and AOC. Cleanup goals are discussed for each SWMU and AOC in this report. Discussions of the protection of

groundwater for drinking water beneficial uses compare concentrations of COCs to both the current site specific cleanup levels (CULs) specified in the CAP (which were based primarily on drinking water and protection of surface water beneficial uses) and to proposed updated CULs from the CALIBRE Systems, Inc. (CALIBRE) December 17, 2019, technical memorandum (CALIBRE, 2019a). Analytical data for groundwater presented in the tables are compared to the AOC/SWMU specific CULs specified in the CAP for the respective points of compliance.

#### This quarterly report:

- Describes work completed during the reporting quarter;
- Describes any deviations from corrective action tasks required under the Order and/or CAP;
- Describes revisions to the corrective action schedule;
- Describes work projected to occur during the next quarter, including any planned deviation from the CAP;
- Discusses remediation operation and maintenance activities conducted at the Facility during the reporting period;
- Documents monitoring activities conducted during the quarter;
- Describes and discusses trends in monitoring data;
- Assesses remediation at each area; and
- Assesses attainment of the current CULs at the CPOCs.

This report presents this information for the fourth quarter 2019, the period from October through December 2019.

# 1.1 Quarterly progress reporting

In accordance with the requirements of the Order, corrective action activities were conducted at the Facility, as described in this report. As approved by Ecology in their letter dated November 18, 2015, progress reporting is conducted on a quarterly basis in conjunction with monitoring, operations, and maintenance activities conducted under the CAP.

# 1.1.1 Work completed in the fourth quarter 2019

The following work was completed during the fourth quarter 2019, the period from October through December 2019:

- On October 11, 2019, Boeing removed the pumps from the monitoring wells in AOC-001 and AOC-002, and labeled, bagged, and placed them in storage for potential re-use.
- Groundwater monitoring for the fourth guarter 2019 was completed during November 2019.
- On behalf of Boeing, Wood submitted the third quarter 2019 report to Ecology on November 15, 2019.
- On November 20, 2019, CALIBRE collected groundwater samples from Building 4-78/79 monitoring wells (GW031S and GW244S) and injection wells (B78-11, B78-13, B78-17, B78-18, B78-19, B78-20, and B78-21) as part of the nitrate/sulfate application for cleanup of benzene.
- On November 25, 2019, Holocene Drilling decommissioned (abandoned) monitoring wells GW049S, GW185S, GW186S, GW187S, GW190S, GW191D, GW192S, GW194S, GW195S, GW196D, GW197S,



GW245S, and GW246S) in AOC-001 and AOC-002 in accordance with Ecology well abandonment regulations in Washington Administrative Code 173-160-990, as described in the memo submitted to Ecology on December 21, 2017 (Amec Foster Wheeler, 2017). The source area well, GW193S, was not abandoned. The abandonment of wells was required to accommodate the redevelopment of the northern aircraft apron area (Apron R) surrounding AOC-001 and AOC-002.

on December 17, 2019, Boeing submitted a technical memorandum to Ecology evaluating the CULs for groundwater applicable to the Boeing Renton Facility (CALIBRE, 2019a). This technical memorandum was prepared based on prior discussions with the Ecology site manager regarding changed conditions (elimination of certain COCs which were no longer present, and the promulgation of revised Ecology standards for protection of surface water). The current CULs specified in the CAP were calculated for the various SWMUs and AOCs in the Feasibility Study Work Plan (Geomatrix, 2004). These CULs were developed using the criteria applicable at that time and the consideration of initial concentrations of all compounds detected in source areas. Ecology has made several clarifications and changes to the Model Toxics Control Act (MTCA) since the draft CAP was prepared that are relevant to Facility CULs. Additionally, remedial actions have been implemented that have changed conditions at the Facility in relevant ways. The re-evaluation of CULs was completed to update criteria based on current standards, evaluate only those constituents that now remain in groundwater, and provide standardized CULs for each chemical that would apply to all areas of the Facility.

The important factors that changed are as follows:

- Remedial actions have been implemented Facility-wide and the current data demonstrate that the prior list of COCs has been reduced in many AOCs (i.e., many of the chemicals on the initial COC list for each AOC are no longer present in groundwater);
- The U.S. Environmental Protection Agency has established revised toxicity criteria for TCE, PCE, and arsenic to account for recent scientific studies, and new state and federal standards have been set for arsenic;
- Ecology and the U.S. Environmental Protection Agency published new/revised standards, which
  are now the promulgated criteria set for protection of surface water, considering fish
  consumption and ingestion of potable water;
- The scientific knowledge regarding degradation rates for vinyl chloride (VC) under a variety of conditions has grown, specifically for naturally reducing conditions such as are present at the Facility, where definitive data have been collected demonstrating degradation and attenuation of VC: and
- Ecology has recognized that arsenic is a naturally occurring compound in groundwater and CULs are to be based on background concentrations.

The December 17, 2019, technical memorandum proposed revised CULs based on MTCA criteria for potable water that are demonstrated to be protective of other exposure pathways and promulgated criteria. These proposed revised CULs are referenced herein as *proposed* CULs, while the CULs specified in the CAP are referenced as *current* CULs.

#### 1.1.2 Deviations from required tasks

No deviations from tasks required in the Order occurred during this activity period.



#### 1.1.3 Deviations from CAP

There were no deviations from the CAP during this activity period, and there are no planned deviations from the CAP expected for the next activity period.

#### 1.1.4 Schedule revisions

There were no significant revisions to the schedule for this reporting period and no revisions are expected for the next activity period.

# 1.1.5 Work projected for the next quarter

The following work is projected for the first quarter 2020:

- Reporting will be completed in accordance with the Order, CAP, EDR, and any changes approved by Ecology.
- Performance monitoring is scheduled for mid-March to support the benzene cleanup at Building 4-78/79. Nitrate and sulfate injections may be performed as needed, depending on performance monitoring results.
- Nitrate and sulfate injections may be performed for the Building 4-78/79 area, depending on performance monitoring results.
- Soil with total petroleum hydrocarbons (TPH) exceeding current CULs within unsaturated and smear zones is planned for excavation on the east side of Building 4-79. Groundwater elevations are currently being monitored to determine if water levels will be low enough to allow for sufficient excavations to occur in the second or third guarter 2020.

# 2.0 Groundwater sampling methodology

Groundwater was sampled and analyzed as described in Appendix A. These procedures are in accordance with the methods specified in the revised Compliance Monitoring Plan (Amec Foster Wheeler, 2016a). Table A-1 summarizes the current groundwater monitoring program and constituents of concern (COCs) specified in the CAP and revised in the Addendum to the Compliance Monitoring Plan (Wood, 2019) for all Facility corrective action areas. Table A-2 summarizes the current groundwater monitoring program for the corrective action areas that include MNA or MA as part of the cleanup remedy specified in the CAP. Tables A-1 and A-2 also include Building 4-70, Lot 20/Former Building 10-71, and Apron A, which were not included in the CAP. Any changes or exceptions to the sampling or analytical methods cited in Appendix A during the quarter are described in the applicable subsections in Section 3. The field data sheets, which document the groundwater sample collection and field parameter monitoring for each well sampled during this quarter, are included in Appendix B.

The analytical methods, field duplicate, lab duplicate, and matrix spike/matrix spike duplicate frequencies are specified in the Quality Assurance Project Plan (Amec Foster Wheeler, 2016c). The full analytical reports provided by the laboratory are provided separately on compact disc. The data validation memoranda are included in Appendix C.

# 3.0 Corrective action activities completed during quarter

This section describes the corrective action activities conducted at the Facility during the fourth quarter 2019. Operation of the SVE system at SWMU-172/174 continued during the fourth quarter, as discussed



in Section 3.2.1.2. Quarterly compliance monitoring was conducted in accordance with the Addendum to the Compliance Monitoring Plan (Wood, 2019).

#### 3.1 SWMU-168

SWMU-168 is monitored semiannually during the first and third quarters; therefore, no monitoring was conducted for this area during the fourth quarter 2019.

#### 3.2 SWMU-172 and SWMU-174

This section describes corrective action activities conducted at these two SWMUs. The cleanup remedy for SWMU-172 and SWMU-174 is a combination of bioremediation, SVE, and MA. Figure 1 shows the layout of the groundwater monitoring wells and the remediation system for these SWMUs.

# 3.2.1 Cleanup action activities

#### 3.2.1.1 Installation/construction activities

No installation/construction activities were conducted for these SWMUs during the fourth quarter.

# 3.2.1.2 Soil vapor extraction and bioremediation operations

The SVE system at SWMU-172 and SWMU-174 operated normally during the fourth quarter. Details for system operations are included in the SVE operations and monitoring report prepared by CALIBRE and included as Appendix D.

# 3.2.2 Compliance monitoring plan deviations

No deviations from the Compliance Monitoring Plan occurred for this area during the fourth quarter.

#### 3.2.3 Water levels

Groundwater elevations for the SWMU-172 and SWMU-174 area measured during the fourth quarter 2019 are summarized in Table 1 and shown on Figure 1. The contoured water level elevation data for November 2019 show that groundwater generally flows northeast from SWMU-172 and SWMU-174 toward the Cedar River Waterway, with an approximate hydraulic gradient of 0.011.

#### 3.2.4 Groundwater monitoring results

Groundwater in this area is monitored following the schedules presented in Tables A-1 and A-2 in Appendix A. Results for primary geochemical indicators are presented in Table 2; results for the SWMU-172 and SWMU-174 area COCs are presented in Table 3.

#### 3.2.4.1 Monitored attenuation/geochemical indicators

The geochemical indicator results are presented in Table 2. Total organic carbon (TOC) concentrations ranged from 1.22 milligrams per liter (mg/L) to 29.56 mg/L for all SWMU-172 and SWMU-174 monitoring wells. The pH measurements for all SWMU-172 and SWMU-174 monitoring wells are near neutral. The other natural attenuation parameter results indicate that geochemical conditions were generally uniform; the oxidation/reduction potential (ORP) results during this event appear biased high.

#### 3.2.4.2 COC results for source and downgradient plume areas

Table 3 lists fourth quarter 2019 analytical results for the SWMU-172 and SWMU-174 COCs. Figures 2 and 3 show historical trend plots for tetrachloroethene (PCE), trichloroethene (TCE), VC, and



cis 1,2 dicholoethene (cis-1,2-DCE) in source area wells GW152S and GW153S, and in downgradient plume area wells GW172S and GW173S. Flow generally moves from the vicinity of source area well GW152S to downgradient plume area well GW172S, and from source area well GW153S to downgradient plume area well GW173S. PCE and TCE are the chlorinated solvents that were used at the Facility, and cis-1,2-DCE and VC are breakdown products resulting from biodegradation processes.

As shown in Table 3, cis-1,2-DCE, TCE, PCE, and VC concentrations exceeded the *current* CPOC CULs in the groundwater from both source area and downgradient plume area wells. The detected values for all organic COCs are below 1 microgram per liter ( $\mu$ g/L) for the source area and downgradient plume area wells. As shown in Figures 2 and 3, the concentrations of COCs in groundwater from source area wells GW152S and GW153S and downgradient plume area wells GW172S and GW173S generally remained stable with some fluctuation during the fourth quarter. All cis-1,2-DCE, TCE, and PCE concentrations in groundwater from the source area and downgradient plume area wells meet the MTCA criteria for potable water supply (and the *proposed* CULs); VC remains above the potable water criteria in GW226S at 0.615  $\mu$ g/L.

Arsenic was detected above the *current* CUL in the groundwater from all source area and downgradient plume area wells. As shown in Figure 4, the arsenic concentrations in the groundwater increased in source area well GW153S and decreased in source area well GW152S and both downgradient plume area wells during the fourth quarter sampling event. Copper and lead were detected above their *current* CULs in the groundwater from both source area wells and in all downgradient plume area wells except GW081S.

## 3.2.4.3 COC results for conditional point of compliance area

Results from the CPOC area wells are presented in Table 3 and trend charts for cis-1,2-DCE, TCE, and VC for all CPOC area wells are presented in Figure 5. As shown in Table 3, cis-1,2-DCE was detected above the *current* CUL in the groundwater from all CPOC area wells at concentrations ranging from 0.0546 to 0.659 micrograms per liter (µg/L); TCE was detected above the *current* CUL in the groundwater from GW235I; and VC was detected above the *current* CUL in the groundwater from GW236S. PCE was not detected in the groundwater from the CPOC wells and is not shown in Figure 5. As shown on Figure 5, concentrations of cis-1,2-DCE have exceeded the *current* CUL in the groundwater from CPOC wells since compliance monitoring began, but are generally stable, except for an increase in the cis-1,2-DCE concentration in groundwater from GW232S during the fourth quarter. The concentrations of both TCE and VC generally appear to be stable, except for an increase in the VC concentration in groundwater from GW232S.

Arsenic was detected above the *current* CUL in the groundwater from all CPOC area wells except for GW233I and GW235I, copper was detected above the *current* CUL in the groundwater from all CPOC area wells except for GW233I and GW235I, and lead was detected above the *current* CUL in the groundwater from CPOC wells GW234S and GW236S (Table 3). Figure 6 shows arsenic, copper, and lead concentration trends since the beginning of compliance monitoring in groundwater from the CPOC area wells. As shown in Figure 6, arsenic, copper and lead concentrations in the groundwater from GW236S increased in the fourth quarter of 2019. However, despite this isolated increase in concentration during the fourth quarter of 2019, there are no apparent long-term increasing or decreasing trends in the groundwater from CPOC area wells. The groundwater field data field data sheet noted that there was high turbidity in the sample collected from this well (GW236S). Therefore, the elevated metals concentrations in the groundwater from this well are likely due to the suspended solids present in the groundwater sample due to turbidity and not reflective of the groundwater quality.

While select COC concentrations exceed the *current* CUL in the groundwater from select CPOC wells, all of these COC concentrations were below the applicable MTCA criteria for potable water supply in the groundwater from all CPOC area wells with two exceptions: arsenic at lead at GW234S and GW236S.

# 3.3 Building 4-78/79 SWMU/AOC group

This section describes corrective action activities conducted at the Building 4-78/79 SWMU/AOC Group during the fourth quarter 2019. The cleanup remedy for this SMWU/AOC group is bioremediation, SVE, MNA, and MA. Figure 7 shows the location of groundwater monitoring wells, bioremediation wells, and SVE wells for this area.

# 3.3.1 Cleanup action activities

#### 3.3.1.1 Installation/construction activities

No installation/construction activities were conducted for these SWMUs during the fourth quarter.

#### 3.3.1.2 Soil vapor extraction and bioremediation operations

As previously reported during 2018 monitoring events, the SVE system at Building 4-78/79 SWMU/AOC Group was shut down during the first quarter of 2018, during which rebound testing was implemented. Soil samples were collected during the second quarter 2018 to assess the attainment of current soil CULs, and results were reported in the second quarter monitoring report (Wood, 2018). These CULs were attained with one exception: the sample from 4.5 feet below ground surface at well PP13 had a concentration of total petroleum hydrocarbons as gasoline (TPH-G) of 147 milligrams per kilogram (mg/kg), and the field duplicate was 131 mg/kg, above the current CUL of 30 mg/kg.

A revised work plan (CALIBRE, 2019b) for excavating the soils near PP13 and GW013S was submitted to Ecology on May 8, 2019, in response to a request from Ecology. The investigation described in the work plan was conducted on June 13 and 14, 2019, and the results were submitted to Ecology in November 2019 (CALIBRE 2019c). Groundwater elevations were monitored during the fourth quarter to determine the best time for soil removal activities. As documented in an email to Ecology dated October 22, 2019, the soil excavation work had not been completed because groundwater levels were not low enough before the start of the rainy season to schedule the work. TPH-G concentrations in groundwater continue to be closely monitored.

No new nitrate/sulfate injections have been completed since March 2019. Trend charts for cis-1,2-DCE and benzene in the injection wells are presented in Figure 8, and charts for TCE and VC in the injection wells are presented in Figure 9.

## 3.3.2 Compliance monitoring plan deviations

No deviations from the compliance monitoring plan occurred for this area during the fourth quarter.

#### 3.3.3 Water levels

Table 4 presents the groundwater elevations measured during the fourth quarter 2019 groundwater monitoring event at the Building 4-78/79 SWMU/AOC group. As shown in Figure 7, the observed direction of groundwater flow from the source area during November 2019 is generally to the southwest, with a hydraulic gradient of 0.003.



# 3.3.4 Groundwater monitoring results

Results for primary geochemical indicators are presented in Table 5; results for the COCs for Building 4-78/79 SWMU/AOC Group are presented in Table 6. Groundwater at this area is monitored following the schedule presented in Tables A-1 and A-2 in Appendix A.

#### 3.3.4.1 Natural attenuation/geochemical indicators

The geochemical indicator results are presented in Table 5. In general, source area, downgradient, and CPOC area wells had low levels of dissolved oxygen and biased high ORP readings. Despite the biased ORP readings, it is likely that reducing conditions are present over the area that are generally favorable for reductive dechlorination of chlorinated volatile organic compounds. The pH in all monitoring wells was above 6.0 standard units during the fourth quarter monitoring period. Results for the other primary geochemical indicators were fairly consistent throughout this area. TOC concentrations in source area wells ranged from 7.21 to 126.60 mg/L.

# 3.3.4.2 COC results for source and downgradient plume areas

Table 6 lists fourth quarter 2019 analytical results for the Building 4-78/79 SWMU/AOC Group COCs. The CULs established in the CAP for the CPOC are also presented on Table 6. Figures 10 and 11 are trend charts showing historical trends for COCs for four groundwater monitoring wells that have a history of frequent detections. Trend charts have not been prepared for groundwater monitoring wells or COCs that do not have a history of frequent detections.

As shown in Table 6, benzene, cis-1,2-DCE, and VC were detected in groundwater from several source area wells at concentrations above the *current* CPOC CULs. In source area wells GW039S and GW243I, all COCs were below *current* CULs. TCE was not detected in the groundwater from source area wells. TPH-G was detected in the groundwater from source area well GW031S, at a concentration of 1,540  $\mu$ g/L (the field duplicate concentration was 1560  $\mu$ g/L). TPH-G was also detected in the groundwater from source area well GW033S at a concentration of 247  $\mu$ g/L, below the *current* CPOC CUL. All COCs were non-detect in the groundwater from the downgradient plume area wells.

Figure 10 shows trends for selected COCs for source area wells GW031S and GW033S, and Figure 11 shows trends for selected COCs for source area well GW034S and downgradient plume area well GW209S. COC concentrations in the groundwater from GW031S and GW033S are generally consistent with historical results and trends. The groundwater from GW033S historically had the highest concentrations of cis-1,2-DCE and VC prior to the Duct Bank dewatering project.

COC concentrations in groundwater from source area well GW034S and downgradient plume area well GW209S (Figure 11) remain stable with concentrations below detection, except for the VC concentration in the groundwater from source area well GW034S during the fourth quarter. No new nitrate/sulfate injections have been completed since March 2019.

Concentrations of COCs in the groundwater from select source area wells remain above the MTCA criteria for potable water supply (specifically benzene, VC, and TPH-G). Active treatment is ongoing. Concentrations of COCs for all analytes in all the groundwater from the downgradient plume area wells are below the applicable MTCA criteria for potable water.

#### 3.3.4.3 COC results for conditional point of compliance area

Groundwater monitoring results from the fourth quarter for the CPOC area are summarized in Table 6. Trends for CPOC wells GW143S, GW237S, and GW240D are shown in Figures 12 through 14. Benzene was not detected in groundwater from the CPOC area wells, except GW237S, where it was still below the



current CUL at a concentrations 0.66  $\mu$ g/L (Table 6). As shown in Figure 12, benzene has been sporadically detected in the groundwater from CPOC area well GW237S but has not been detected above the *current* CUL in the groundwater from any of the other CPOC wells. The benzene concentration in the groundwater from CPOC well GW237S was below the *current* CUL during the fourth quarter. For the CPOC area wells, all COCs were below the *proposed* CULs and the MTCA criteria for potable water supply, except for VC at a concentration of 0.34  $\mu$ g/L in the groundwater from CPOC well GW237S.

# 3.4 Former Fuel Farm AOC group

The Former Fuel Farm AOC group is monitored semiannually in May and November. The final remedy for the Former Fuel Farm is MNA.

# 3.4.1 Cleanup action activities

No installation/construction activities were conducted for this cleanup action area during the fourth quarter.

# 3.4.2 Compliance monitoring plan deviations

No deviations from the compliance monitoring plan occurred for this area during the fourth quarter.

#### 3.4.3 Water levels

Groundwater elevations for the Former Fuel Farm AOC Group measured during the fourth quarter 2019 are summarized in Table 7 and shown on Figure 15. Groundwater elevation contours are not shown on Figure 15 due to anomalous measurements.

# 3.4.4 Groundwater monitoring results

Results for primary geochemical indicators are presented in Table 8; results for COCs for the Former Fuel Farm AOC Group are presented in Table 9. Groundwater in this area is monitored following the schedule presented in Tables A-1 and A-2 in Appendix A.

#### 3.4.4.1 Monitored natural attenuation indicators

The geochemical indicator results are presented in Table 8. Results in Table 8 indicate that geochemical conditions are generally consistent throughout the Former Fuel Farm AOC Group. The pH in CPOC area wells GW212S, GW224S, and GW258S were below 6.0 standard units; low pH may interfere with biological degradation of site COCs. The other geochemical indicators indicate that conditions are generally conducive to natural attenuation of the COCs for the Former Fuel Farm AOC Group.

# 3.4.4.2 COC results for source area

Table 9 lists fourth quarter 2019 analytical results for the Former Fuel Farm AOC Group COCs. The CULs established in the CAP are also presented on Table 9. As shown in Table 9, TPH in the diesel and Jet A ranges was not detected above the reporting limit in the groundwater from the single source area well (GW255S).

#### 3.4.4.3 COC results for conditional point of compliance area

CPOC area monitoring results are presented in Table 9. Figure 16 shows trend data for CPOC area wells GW211S, GW221S, and GW224S. Figure 16 shows that the fourth quarter results for these wells are consistent with the historical monitoring results since late 2013.



Samples were analyzed for TPH in the diesel and Jet A ranges both with and without a silica gel cleanup which can be performed on samples to remove polar organic compounds. The results after silica gel cleanup are therefore considered to be more accurate. As shown in Table 9, concentrations of TPH as diesel and Jet A were both lower after silica gel cleanup had been performed (except in the case of the groundwater from GW211S). Generally, detections above the *current* CULs decreased to below the *current* CULs after silica gel cleanup. We propose to continue to analyze samples GW211S, GW221S and GW224S with the silica gel procedure during future sampling events.

#### 3.5 AOC-001 and AOC-002

Apron R near AOC-001 and AOC-002 is under reconstruction, therefore, no monitoring was conducted for this area during the fourth quarter 2019. For more details see Section 1.1.1.

#### 3.6 AOC-003

This section describes corrective action activities conducted at AOC-003 for the fourth quarter 2019. The cleanup remedy for this AOC is bioremediation and MA. Figure 17 shows the location of groundwater monitoring and bioremediation wells at AOC-003, as well as the groundwater elevations measured during this monitoring event.

# 3.6.1 Cleanup action activities

No installation/construction activities were conducted for this cleanup action area during the fourth quarter.

# 3.6.2 Compliance monitoring plan deviations

Groundwater samples were collected from the CPOC area wells during the fourth quarter. Following the schedule presented in Table A-1, source and downgradient area wells are sampled semiannually in the first and third quarters.

#### 3.6.3 Water levels

Table 10 presents the groundwater elevations measured during the fourth quarter 2019 monitoring event at AOC-003 and AOC-092. Figure 17 shows the groundwater elevations from this event. Groundwater flow directions cannot be determined from the available groundwater elevation data.

# 3.6.4 Groundwater monitoring results

Groundwater at AOC-003 is monitored following the schedule presented in Tables A-1 and A-2 in Appendix A. Results for geochemical indicators are presented in Table 11; results for the AOC-003 COCs are presented in Table 12.

#### 3.6.4.1 Monitored attenuation//geochemical indicators

The geochemical indicator results are presented in Table 11. Results in Table 11 indicate that geochemical conditions are generally consistent throughout this AOC and are generally conducive to biodegradation of the COCs for this AOC.

#### 3.6.4.2 COC results for source and downgradient plume areas

Source area and downgradient plume area wells are monitored semiannually in the first and third quarters; therefore, no monitoring for source area or downgradient plume wells was conducted in the fourth quarter.



## 3.6.4.3 COC results for conditional point of compliance area

Groundwater from the two CPOC area wells had no detections of PCE, TCE or cis-1,2-DCE above their respective *current* CULs. VC was detected at concentrations above the *current* CUL in the groundwater from both CPOC wells (GW247S and GW248I), at concentrations of 0.504 and 0.620 µg/L, respectively.

VC concentrations exceed the *proposed* CUL in the groundwater from CPOC wells, as detailed above, and remain above the applicable MTCA criteria for potable water supply in both CPOC wells.

#### 3.7 AOC-004

AOC-004 is monitored semiannually during the first and third quarters; therefore, no monitoring was conducted for this area during the fourth quarter 2019.

#### 3.8 AOC-060

AOC-060 is monitored semiannually during the first and third quarters; therefore, no monitoring was conducted for this area during the fourth quarter 2019.

#### 3.9 AOC-090

AOC-090 is monitored semiannually during the first and third quarters; therefore, no monitoring was conducted for this area during the fourth quarter 2019.

# **3.10 Building 4-70 area**

The Building 4-70 Area is monitored semiannually during the first and third quarters; therefore, no monitoring was conducted for this area during the fourth quarter 2019.

# 3.11 Lot 20/Former Building 10-71 Parcel

This section describes corrective action activities conducted for this area during the fourth quarter 2019. Figure 18 shows the locations of the groundwater monitoring wells and the bioremediation injection system at the Lot 20/Former Building 10-71 Parcel, as well as the groundwater elevations measured during the fourth quarter. The Lot 20/Former Building 10-71 Parcel was not included in the EDR but was later added to the Compliance Monitoring Plan (Amec Foster Wheeler, 2016a) and has been regularly monitored in conjunction with the Facility corrective action areas. The cleanup remedy for the Lot 20/Former Building 10-71 Parcel is bioremediation and MA. This area is monitored semiannually in the second and fourth quarters, in accordance with Table A-1 in Appendix A.

## 3.11.1 Cleanup action activities

No construction or operations work was conducted for the Lot 20/Former Building 10-71 Parcel during the fourth quarter.

#### 3.11.2 Water levels

The groundwater elevations measured during the fourth quarter at the Lot 20/Former Building 10-71 Parcel are presented in Table 13 and on Figure 18. Groundwater contours are not shown on Figure 18 because the three monitoring wells measured are arranged nearly in a straight line and do not provide enough water level data to prepare contours. Based on the fourth quarter water level measurements, the apparent groundwater flow appears to be generally to the northwest.



# 3.11.3 Groundwater monitoring results

Results for primary geochemical indicators for groundwater from the Lot 20/Former Building 10-71 Parcel monitoring wells are presented in Table 14; results for COCs for the Lot 20/Former Building 10-71 Parcel monitoring wells are presented in Table 15. Groundwater in this area is monitored following the schedule presented in Tables A-1 in Appendix A.

#### 3.11.3.1 Monitored attenuation/geochemical indicators

The geochemical indicator results are presented in Table 14. The pH in groundwater from the three monitoring wells (10-71-MW1, 10-71-MW2, and 10-71-MW4) of the Lot 20/Former Building 10-71 Parcel were above or equal to 6 standard units. All remaining parameters in the groundwater from these monitoring wells appear uniform. Results in Table 14 indicate that geochemical conditions are generally consistent throughout this AOC and are generally conducive to biodegradation of the COCs for this AOC.

#### **3.11.3.2 COC results**

Fourth quarter analytical results for the Lot 20/Former Building 10-71 Parcel COCs are presented in Table 15. The concentrations of all of the COCs—cis-1,2-DCE, toluene, TCE, and VC—in the groundwater from Lot 20/Former Building 10-71 Parcel monitoring wells were below detection, and the detection limits are lower than the applicable MTCA criteria for potable water supply.

# 3.12 Apron A area

This section describes corrective action activities conducted at the Apron A area during the fourth quarter 2019. The cleanup remedy proposed for the Apron A area is bioremediation and MA. Figure 19 shows the locations of the groundwater monitoring wells in the Apron A area.

# 3.12.1 Cleanup action activities

No construction or operations work was conducted in the Apron A area during the fourth quarter.

#### 3.12.2 Water levels

The depth to groundwater measured during the fourth quarter at Apron A are presented in Table 16 and on Figure 19. Groundwater elevations are not available because the top of casing elevations were never surveyed. Groundwater flow directions cannot be determined from the available depth to groundwater data.

# 3.12.3 Groundwater monitoring results

Results for primary geochemical indicators for groundwater from groundwater monitoring wells GW262S and GW264S are presented in Table 17; results for COCs from these wells are presented in Table 18. Groundwater in this area is monitored following the schedule presented in Tables A-1 and A-2 in Appendix A.

# 3.12.3.1 Monitored attenuation/geochemical indicators

Geochemical parameters are presented in Table 17. TOC concentrations in the monitoring wells were slightly elevated during the fourth quarter 2019 monitoring event. The other primary geochemical indicators show that reducing conditions were present and that conditions were conducive to biological degradation of the chlorinated volatile organic compounds.

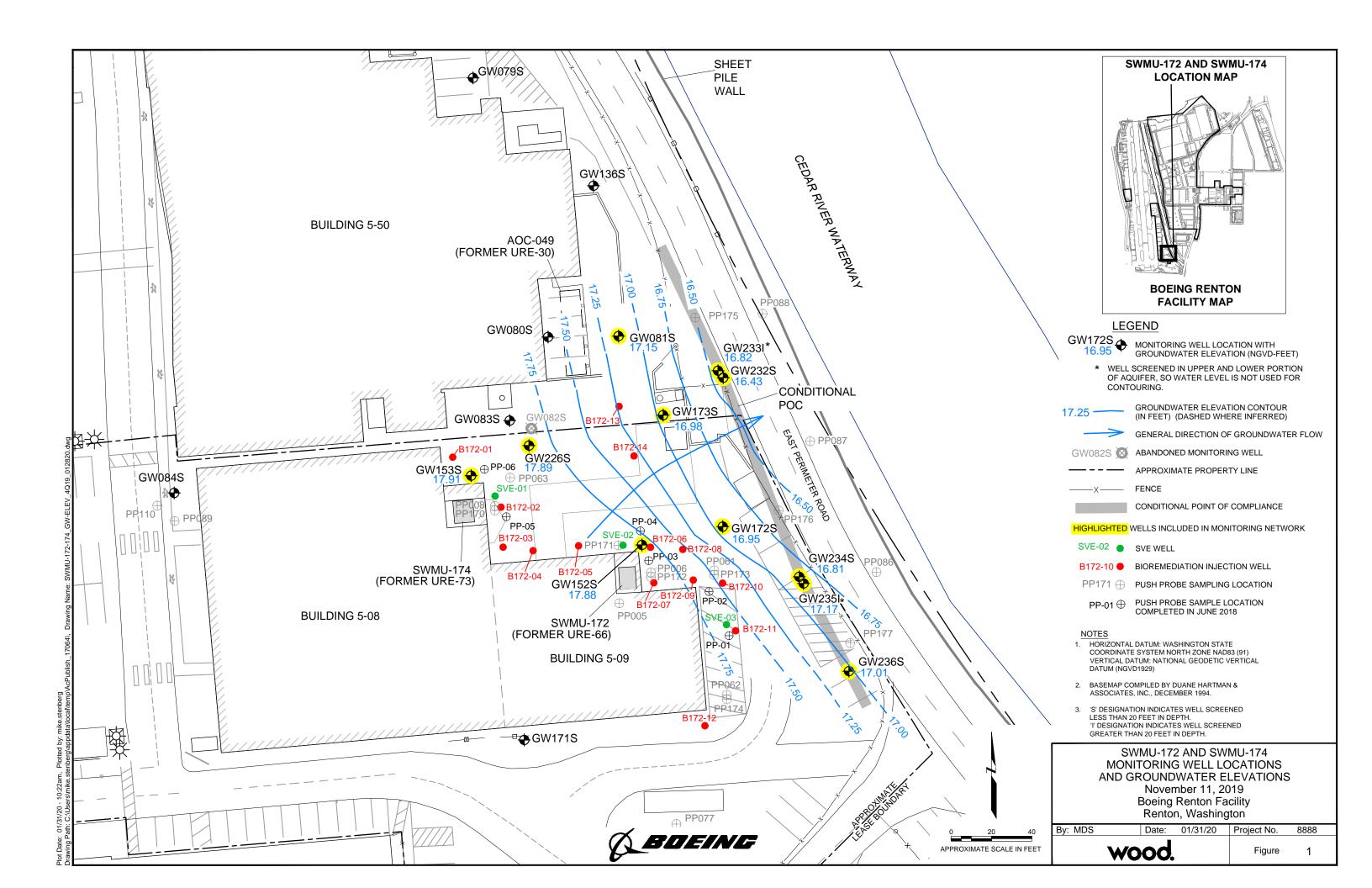
#### **3.12.3.2 COC results**

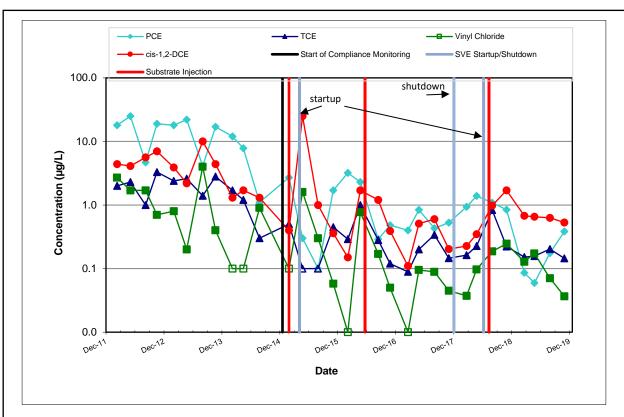
Fourth quarter analytical results for the Apron A COCs (cis-1,2-DCE and VC) are presented in Table 18. Cis-1,2-DCE was not detected in the groundwater from GW262S or GW264S. VC was not detected in the groundwater from monitoring well GW262S, but was detected in the groundwater from monitoring well GW264S at a concentration of 0.38  $\mu$ g/L, which is above the applicable MTCA criteria for potable water supply.

#### 4.0 References

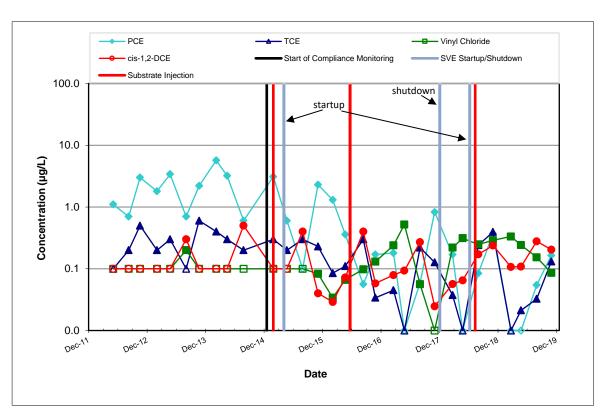
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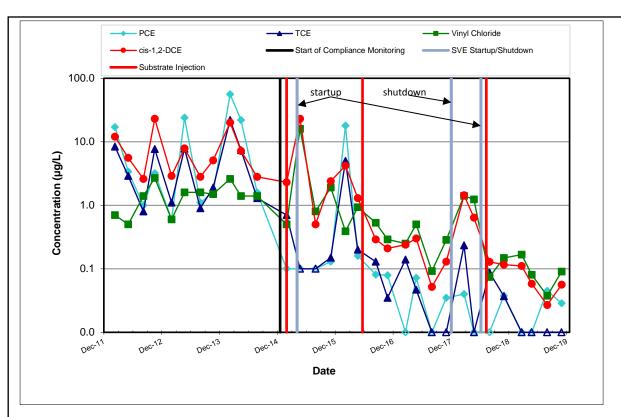


#### **SOURCE AREA WELL GW152S**

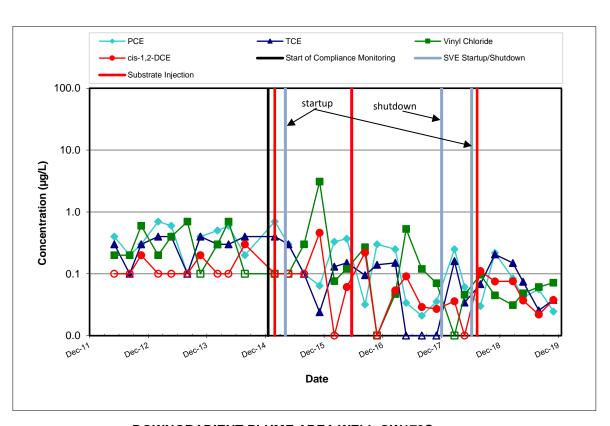


#### **SOURCE AREA WELL GW153S**



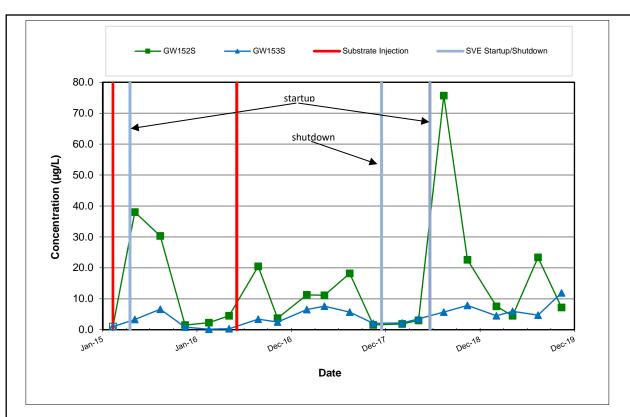


#### **DOWNGRADIENT PLUME AREA WELL GW172S**

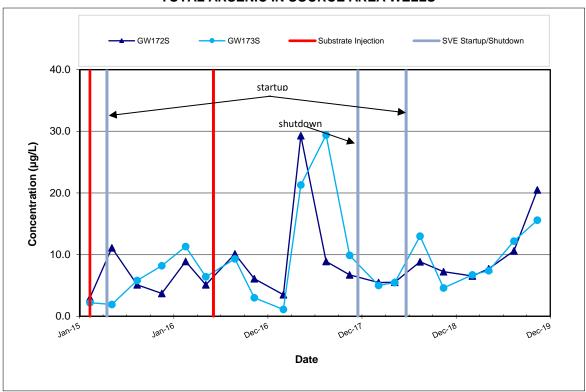


## **DOWNGRADIENT PLUME AREA WELL GW173S**



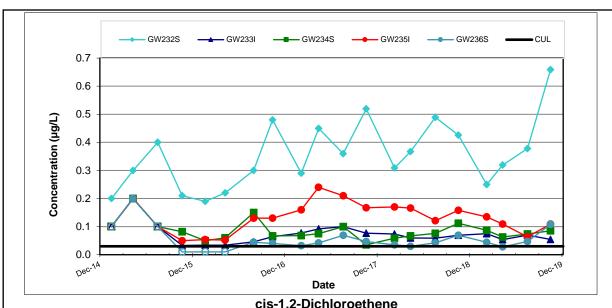


#### **TOTAL ARSENIC IN SOURCE AREA WELLS**

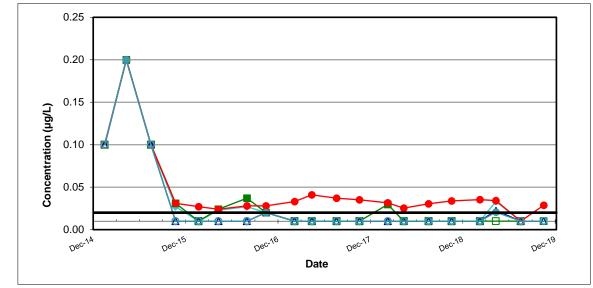


TOTAL ARSENIC IN DOWNGRADIENT PLUME AREA WELLS

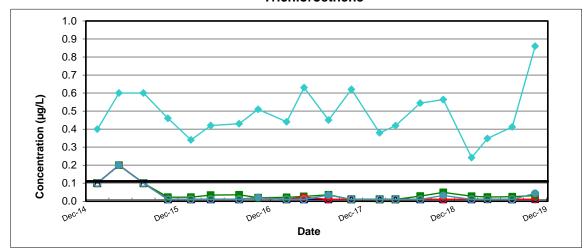








#### **Trichloroethene**



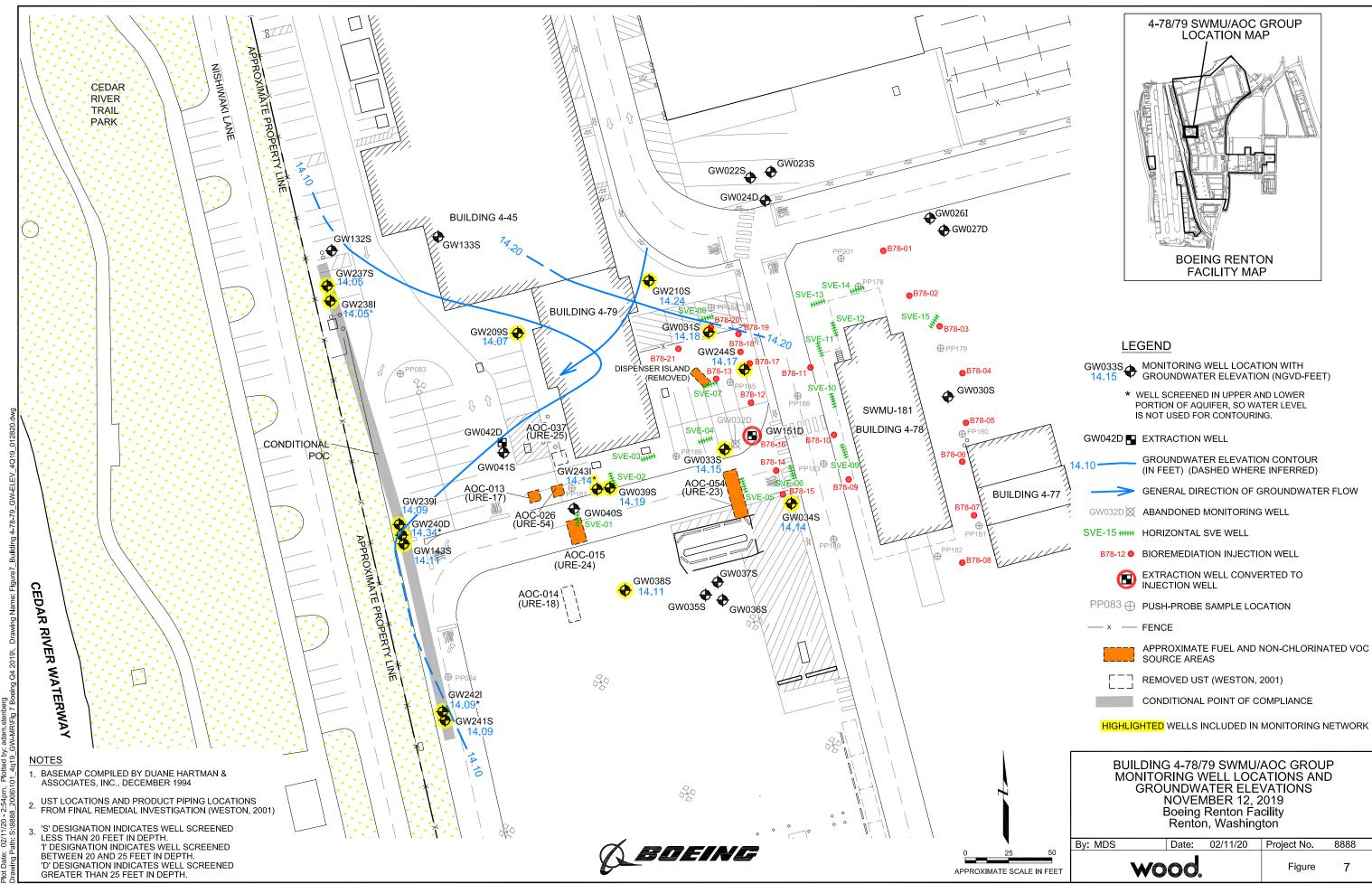
## Vinyl Chloride

Note: non-detected values shown at one-half the reporting limit and graphed with an open symbol.

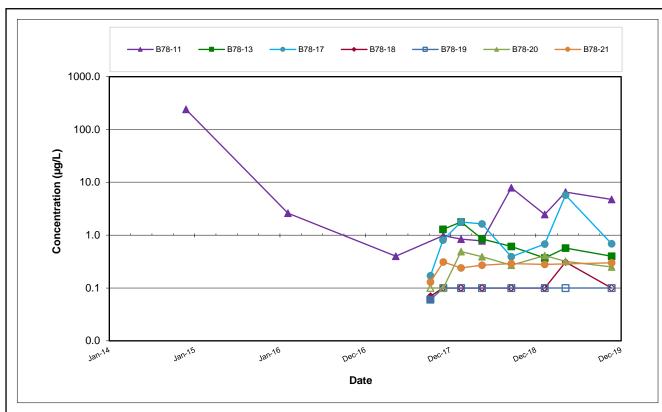


SWMU-172 AND SWMU-174 TREND PLOTS FOR CIS-1,2-DICHLROETHENE, TRICHLOROETHENE, AND VINYL CHLORIDE IN CPOC AREA WELLS **Boeing Renton Facility** Renton, Washington

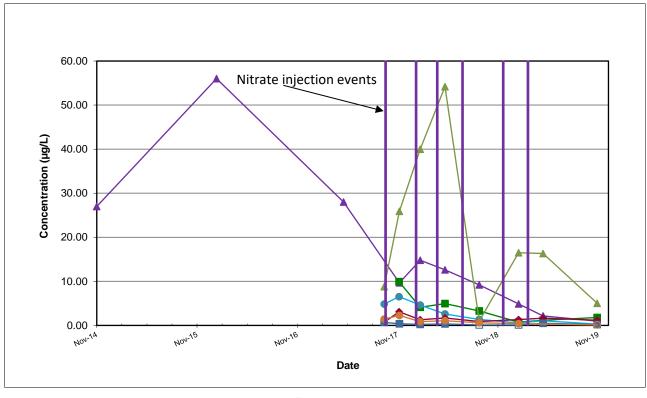
Project No. 8888







cis-1,2-Dichloroethene



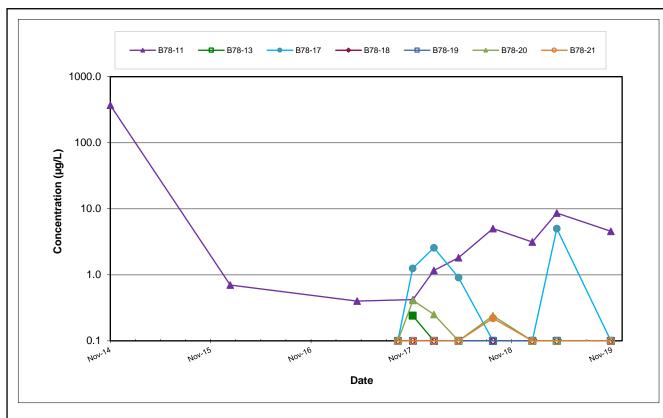
#### Benzene

 $\underline{\text{Note:}} \text{ non-detected values shown at one-half the reporting limit and graphed with an open symbol.}$ 

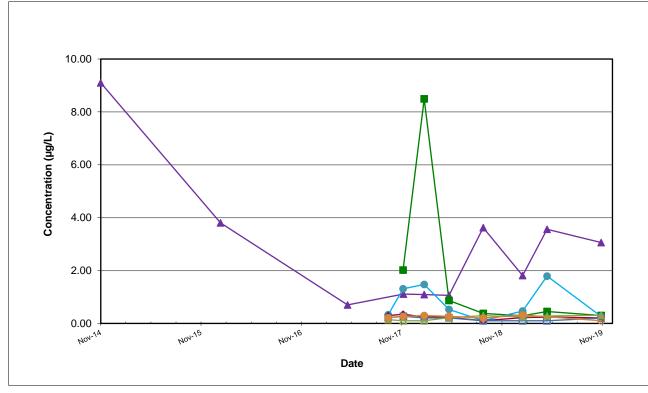


BUILDING 4-78/79 SWMU/AOC GROUP TREND PLOTS FOR CIS-1,2-DICHLOROETHENE AND BENZENE IN INJECTION WELLS Boeing Renton Facility Renton, Washington

Project No. 8888







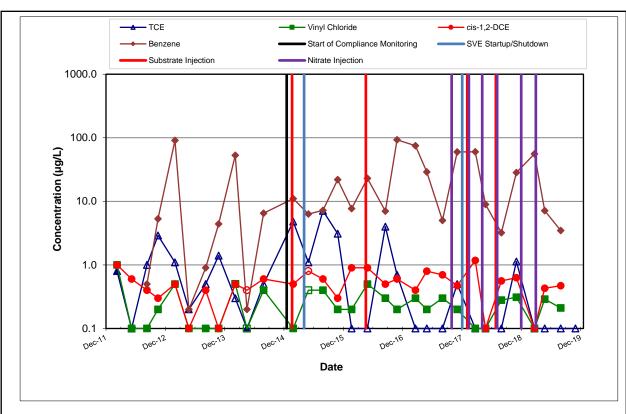
# **Vinyl Chloride**

 $\underline{\underline{\text{Note:}}} \text{ non-detected values shown at one-half the reporting limit and graphed with an open symbol.}$ 

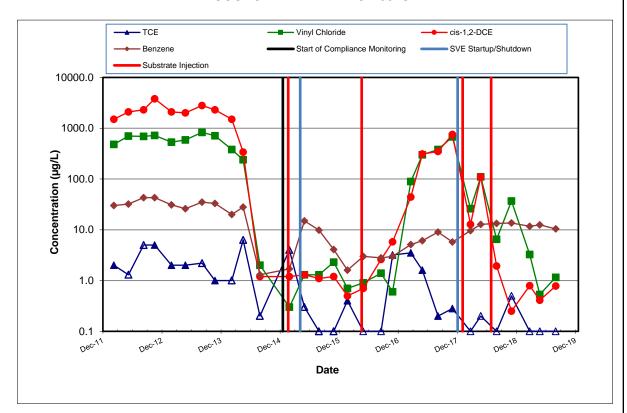


BUILDING 4-78/79 SWMU/AOC GROUP TREND PLOTS FOR TRICHLOROETHENE AND VINYL CHLORIDE IN INJECTION WELLS Boeing Renton Facility Renton, Washington

Project No. 8888



## **SOURCE AREA WELL GW031S**

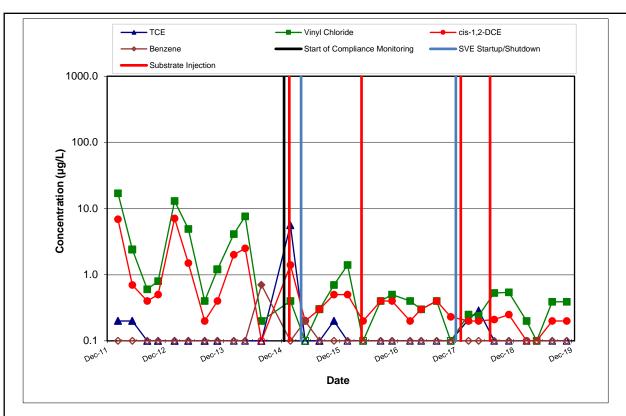


### **SOURCE AREA WELL GW033S**

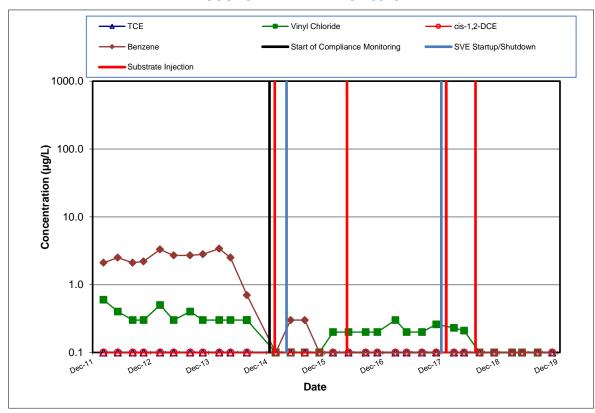
Note: non-detected values shown at one-half the reporting limit and graphed with an open symbol.



BUILDING 4-78/79 SWMU/AOC GROUP TREND PLOTS FOR SOURCE AREA WELLS GW031S AND GW033S Boeing Renton Facility Renton, Washington Project No. 8888



## **SOURCE AREA WELL GW034S**



# **DOWNGRADIENT PLUME AREA WELL GW209S**

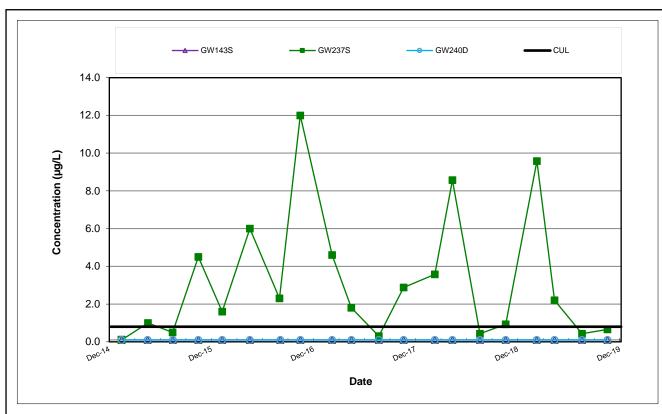
Note: non-detected values shown at one-half the reporting limit and graphed with an open symbol.



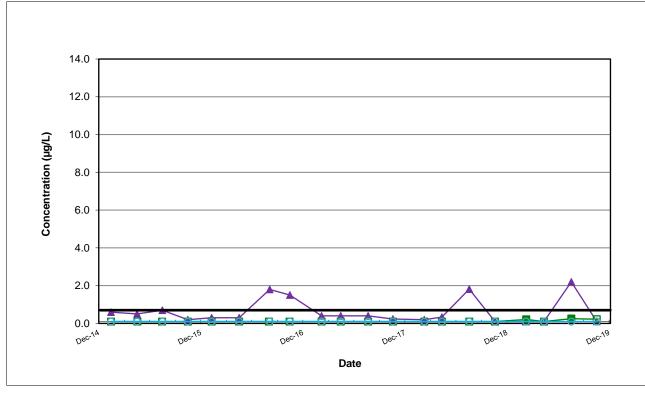
BLDG 4-78/79 SWMU/AOC GROUP TREND PLOTS FOR SOURCE AREA WELL GW034S AND DOWNGRADIENT PLUME AREA WELL GW209S Boeing Renton Facility

Project No. 8888









cis-1,2-Dichloroethene

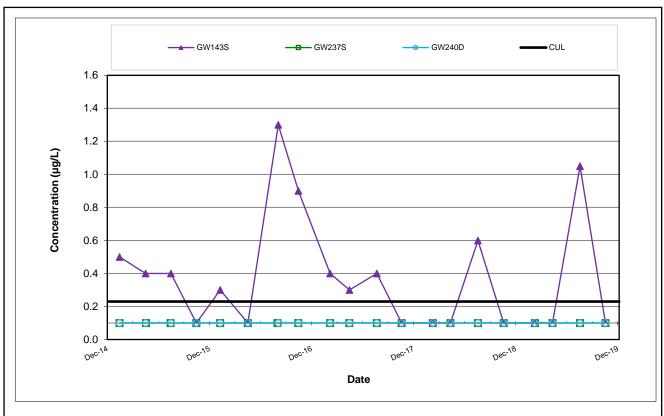
<u>Note</u>: non-detected values shown at one-half the reporting limit and graphed with an open symbol.

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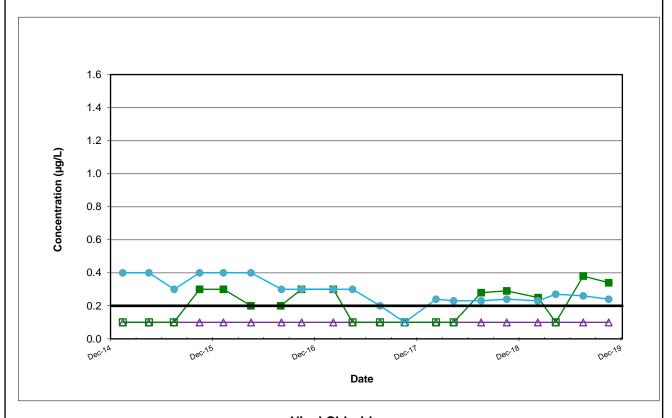
BUILDING 4-78/79 SWMU/AOC GROUP TREND PLOTS FOR BENZENE AND CIS-1,2-DICHLOROETHENE IN CPOC AREA WELLS Boeing Renton Facility Renton, Washington

Project No. 8888





## **Trichloroethene**

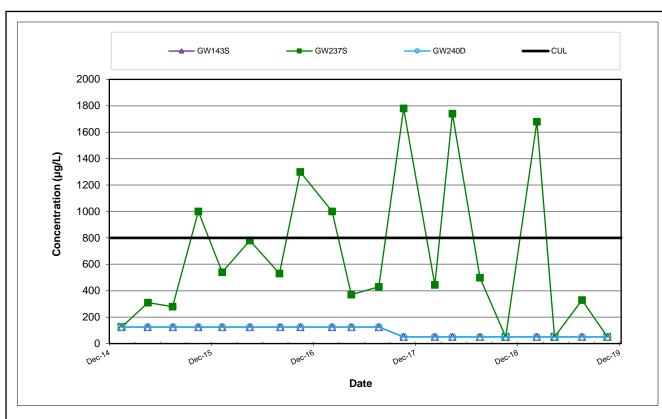


# **Vinyl Chloride**

 $\underline{\text{Note:}} \text{ non-detected values shown at one-half the reporting limit and graphed with an open symbol.}$ 

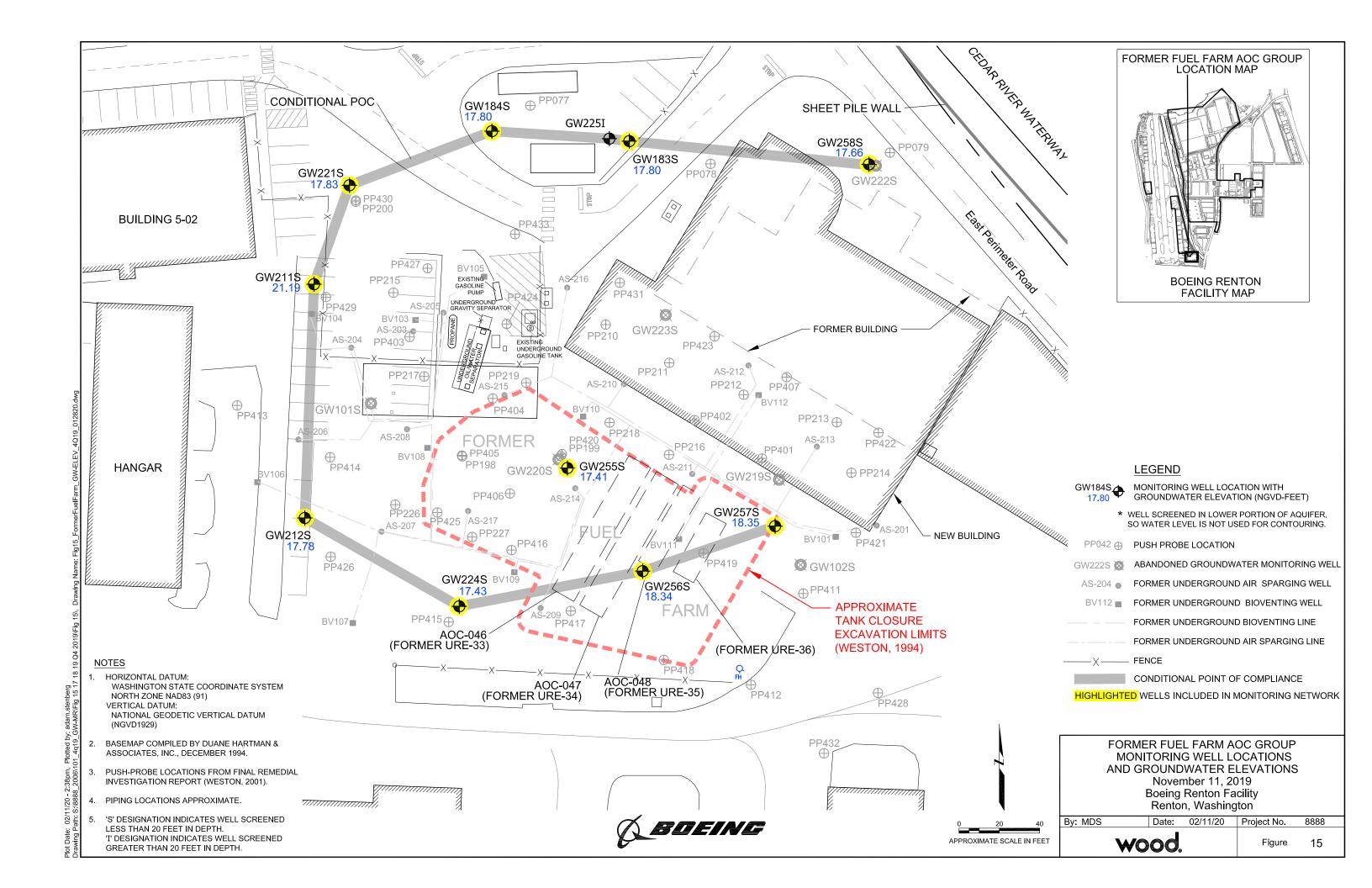


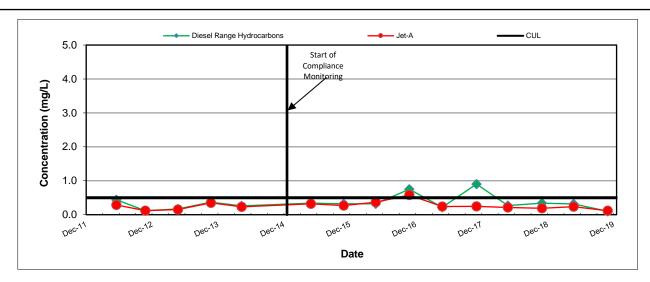




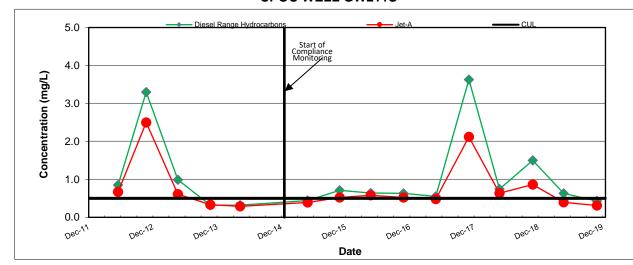
**TPH as Gasoline** 



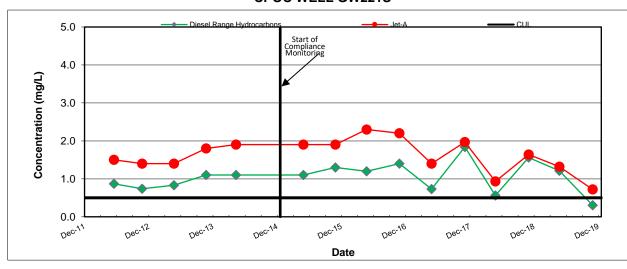




# **CPOC WELL GW211S**



## **CPOC WELL GW221S**

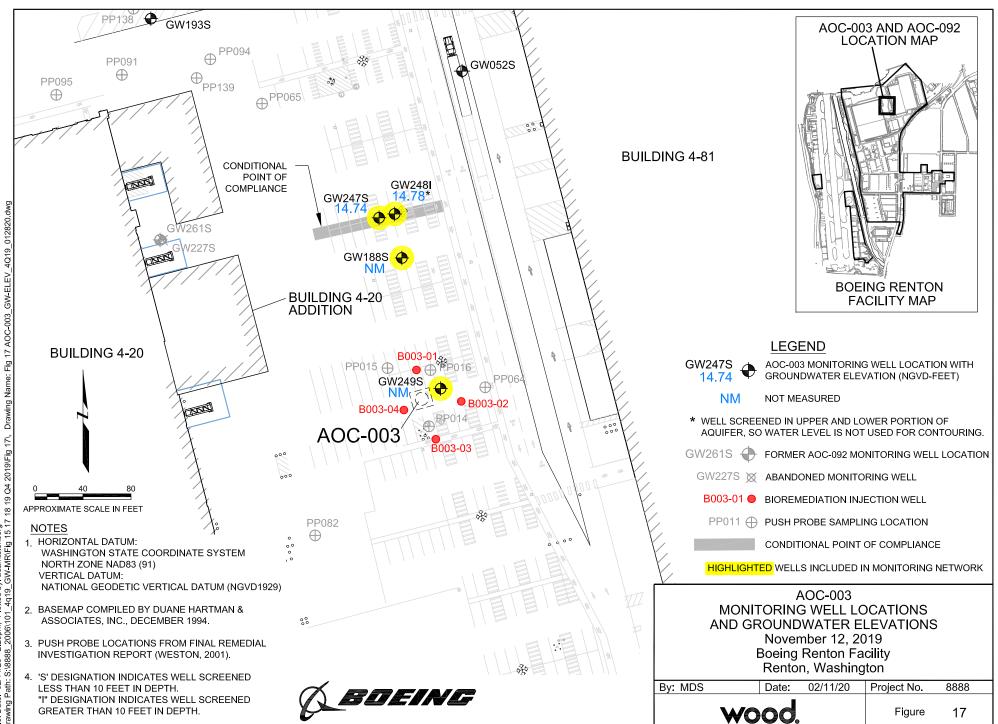


#### **CPOC WELL GW224S**

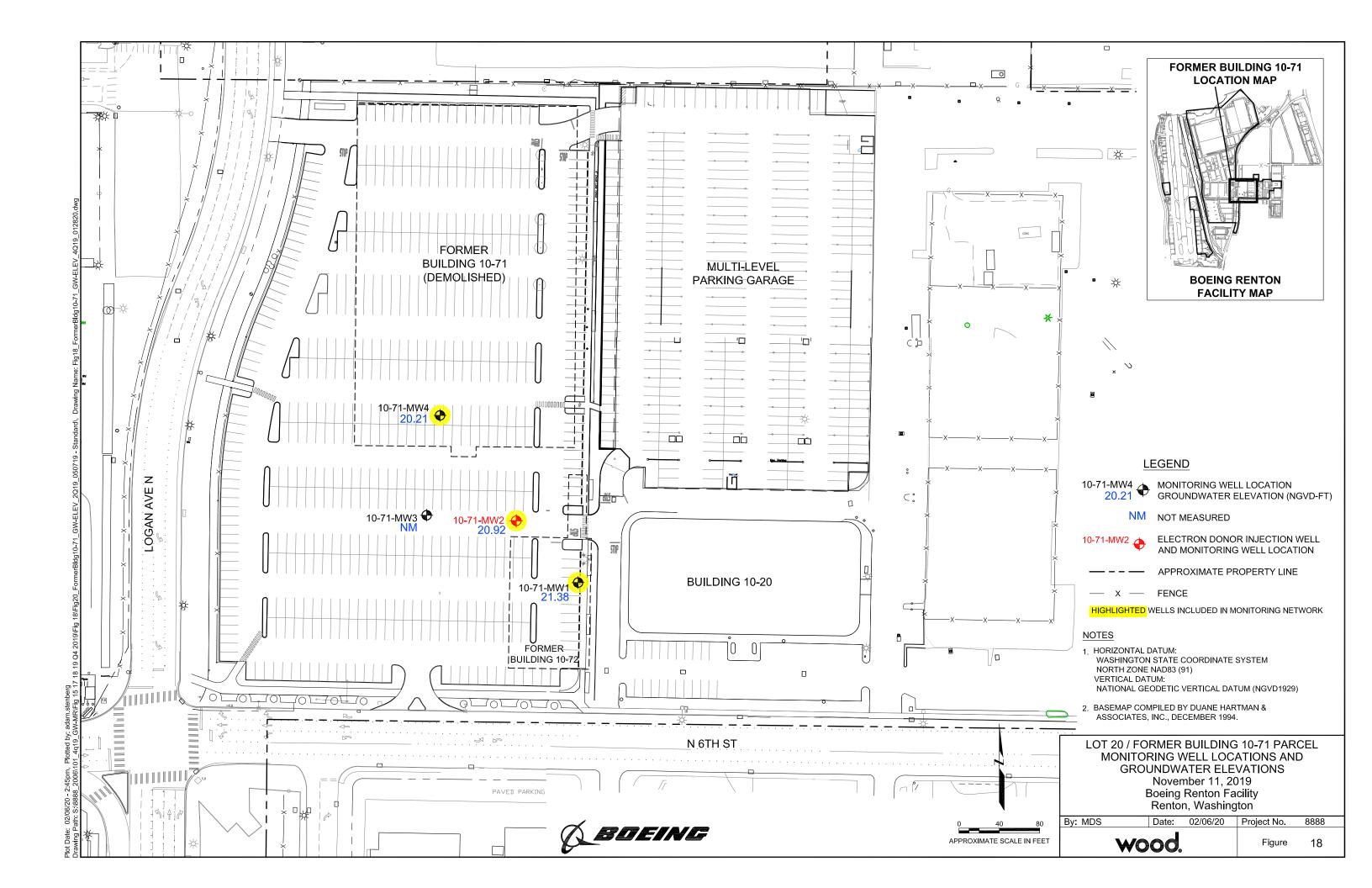


FORMER FUEL FARM AOC GROUP TREND PLOTS FOR CPOC AREA WELLS GW211S, GW221S, AND GW224S Boeing Renton Facility Renton, Washington

Project No. 8888



Plot Date: 02/11/20 - 2:26pm, Plotted by: adam.stenberg Drawing Path: S:\8888 2006\101 4q19 GW-MR\Fig 15 17 18 19 Q4 2019\Fig 17, Drawing Na



# wood.

## **Tables**

# TABLE 1: SWMU-172 and SWMU-174 GROUP GROUNDWATER ELEVATION DATA NOVEMBER 11, 2019

Boeing Renton Facility, Renton, Washington

Well ID <sup>1</sup>	Screen Interval Depth (feet bgs)	TOC Elevation (feet) <sup>2</sup>	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet) <sup>2</sup>
GW081S	5 to 20 <sup>3</sup>	25.91	8.76	17.15
GW152S	5 to 20 <sup>3</sup>	26.98	9.10	17.88
GW153S	5 to 20 <sup>3</sup>	27.47	9.56	17.91
GW172S	8 to 18 <sup>3</sup>	26.44	9.49	16.95
GW173S	8 to 18 <sup>3</sup>	26.51	9.53	16.98
GW226S	5 to 20 <sup>3</sup>	26.86	8.97	17.89
GW232S	4 to 14	24.45	8.02	16.43
GW233I	15 to 25	24.35	7.53	16.82
GW234S	3 to 13	24.95	8.14	16.81
GW235I	15 to 25	24.90	7.73	17.17
GW236S	5 to 15	24.36	7.35	17.01

#### **Notes**

- 1. S = shallow well; I = intermediate well.
- 2. Elevations in feet relative to National Geodetic Vertical Datum of 1929.
- 3. Screen intervals are approximate and based on database listings of the screen interval depths for these wells.

#### **Abbreviations**

bgs = below ground surface

TOC = top of casing

## TABLE 2: SWMU-172 AND SWMU-174 GROUP CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS <sup>1</sup> NOVEMBER 11, 2019

Boeing Renton Facility, Renton, Washington

	Well ID <sup>2</sup>													
		Source Area	1	l	Downgradier	nt Plume Are	a			CPOC Area				
		GW152S			GW152S									
	GW152S	(field dup.)	GW153S	GW081S	GW172S	GW173S	GW226S	GW232S	GW233I	GW234S	GW2351	GW236S		
Specific Conductivity (µS/cm)	150.2	145.4	121.1	167.7	227.8	356.8	283.8	503.0	215.7	240.3	152.6	345.3		
Dissolved Oxygen (mg/L)	1.06	0.95	4.40	2.25	1.73	0.80	0.65	6.93	1.85	0.91	1.18	1.36		
Oxidation/Reduction Potential (mV)	92.9	91.9	94.5	87.8	89.1	56.9	80.2	70.5	64.3	77.0	84.5	6.5		
pH (standard units)	6.28	6.28	6.35	6.36	6.35	6.69	6.52	6.20	6.40	6.47	6.27	6.45		
Temperature (degrees C)	13.20	13.10	14.30	13.20	16.20	11.80	13.20	14.80	10.40	14.90	15.90	15.60		
Total Organic Carbon (mg/L)	29.56	18.21	10.59	4.84	6.90	6.08	28.86	7.89	4.69	27.54	1.22	6.60		

#### **Notes**

- 1. Primary geochemical indicators are measured in the field, with the exception of total organic carbon, which is measured in the laboratory
- 2. S = shallow well; I = intermediate well.

#### **Abbreviations**

 $\mu$ S/cm = microsiemens per centimeter CPOC = conditional point of compliance degrees C = degrees Celsius field dup. = field duplicate mg/L = milligrams per liter mV = millivolts

## TABLE 3: SWMU-172 AND SWMU-174 GROUP CONCENTRATIONS OF CONSTITUENTS OF CONCERN<sup>1, 2</sup> NOVEMBER 11, 2019

Boeing Renton Facility, Renton, Washington

							Well I	D <sup>3</sup>					
	Current		Source Area			wngradier	nt Plume A	rea	CPOC Area				
	Cleanup		GW152S										
	Levels <sup>4</sup>	GW152S	(field dup.)	GW153S	GW081S	GW172S	GW173S	GW226S	GW232S	GW233I	GW234S	GW235I	GW236S
<b>Volatile Organic Compo</b>	unds (µg/L)												
cis-1,2-Dichloroethene	0.03	0.530	0.545	0.204	0.0311	0.0561	0.0378	0.235	0.659	0.0546	0.0850	0.109	0.108
Tetrachloroethene	0.02	0.384	0.372	0.164	0.0663	0.0287	0.0246	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02U
Trichloroethene	0.02	0.145	0.142	0.131	0.02 U	0.02 U	0.0379	0.02 U	0.02 U	0.02 U	0.02 U	0.0287	0.02 U
Vinyl Chloride	0.11	0.0366	0.0522	0.0859	0.02 U	0.0905	0.0720	0.615	0.860	0.02 U	0.0309	0.02 U	0.0437
Total Metals (µg/L)													
Arsenic	1.0	7.18	16.4	11.9	2.69	20.5	15.6	12.0	8.09	0.594	10.1	0.237	36.5
Copper	3.5	16.6	33.4	10.2	1.96	9.25	4.68	15.6	3.85	0.774	33.2	0.573	66.9
Lead	1.0	12.1	26.6	2.76	0.21	7.44	1.36	2.43	0.378	0.100 U	15.5	0.127	117

#### **Notes**

- 1. Data qualifiers are as follows:
  - J = The result is an estimate.
  - U = The analyte was not detected at the reporting limit indicated.
- 2. **Bolded** values exceed the current cleanup levels.
- 3. S = shallow well; I = intermediate well.
- 4. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

#### <u>Abbreviations</u>

μg/L = micrograms per liter CPOC = conditional point of compliance field dup. = field duplicate

#### TABLE 4: BUILDING 4-78/79 SWMU/AOC GROUP GROUNDWATER ELEVATION DATA NOVEMBER 12, 2019

Boeing Renton Facility, Renton, Washington

Well ID <sup>1</sup>	Screen Interval Depth (feet bgs)	TOC Elevation (feet) <sup>2</sup>	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet) <sup>2</sup>
GW031S	5 to 25	19.44	5.26	14.18
GW033S	5 to 25	19.49	5.34	14.15
GW034S	5 to 25	19.65	5.51	14.14
GW038S	5 to 25	19.68	5.57	14.11
GW039S	3.5 to 13.5	19.30	5.11	14.19
GW143S	10 to 15	19.81	5.70	14.11
GW209S	3.5 to 13.3	19.37	5.30	14.07
GW210S	3.5 to 13.3	19.19	4.95	14.24
GW237S	5 to 15	18.85	4.80	14.05
GW238I	5 to 20	18.94	4.89	14.05
GW239I	15 to 20	19.69	5.60	14.09
GW240D	22 to 27	19.81	5.47	14.34
GW241S	4 to 14	20.28	6.19	14.09
GW242I	15 to 20	20.44	6.35	14.09
GW243I	5 to 20	19.49	5.35	14.14
GW244S	5 to 15	19.53	5.36	14.17

#### Notes

- 1. S = shallow well; I = intermediate well; D = deep well.
- 2. Elevations in feet relative to National Geodetic Vertical Datum of 1929.

#### **Abbreviations**

bgs = below ground surface

TOC = top of casing

## TABLE 5: BUILDING 4-78/79 SWMU/AOC GROUP CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS <sup>1</sup> NOVEMBER 12, 2019

Boeing Renton Facility, Renton, Washington

		Well ID <sup>2</sup>												
		Source Area Down												
		GW031S												
	GW031S	(field dup.)	GW033S	GW034S	GW039S	GW243I	GW244S	GW038S	GW209S	GW210S				
Specific Conductivity (µS/cm)	359.1		341.8	259.7	199.4	357.0	383.0	267.9	328.0	274.4				
Dissolved Oxygen (mg/L)	0.95		0.61	0.35	0.42	0.21	1.22	0.55	0.26	0.28				
Oxidation/Reduction Potential (mV)	114.1	NA	111.7	92.4	2.0	-3.3	112.2	87.5	7.0	103.3				
pH (standard units)	6.26		6.30	6.45	6.30	6.30	6.24	6.36	6.48	6.65				
Temperature (degrees C)	13.1		13.7	13.8	16.9	15.6	12.0	12.9	15.3	11.8				
Total Organic Carbon (mg/L)	15.38	15.01	17.51	8.00	7.21	10.84	14.90	19.72	9.27	126.60				

				Well ID <sup>2</sup>			
				CPOC Area			
	GW143S	GW237S	GW238I	GW239I	GW240D	GW241S	GW242I
Specific Conductivity (µS/cm)	306.3	207.0	400.4	294.7	327.3	295.2	290.6
Dissolved Oxygen (mg/L)	0.23	0.42	1.00	0.25	0.20	0.20	0.19
Oxidation/Reduction Potential (mV)	-6.4	12.4	23.8	11.6	3.6	-12.1	-3.4
pH (standard units)	6.41	6.46	6.28	6.38	6.53	6.44	6.43
Temperature (degrees C)	15.00	14.60	15.10	13.10	13.30	15.10	14.30
Total Organic Carbon (mg/L)	9.93	5.06	9.24	10.07	7.31	NA	NA

#### **Notes**

1. Primary geochemical indicators are measured in the field, with the exception of total organic carbon, which is measured in the laboratory.

2. S = shallow well; I = intermediate well; D = deep well.

#### **Abbreviations**

 $\mu \text{S/cm} = \text{microsiemens per centimeter}$ 

CPOC = conditional point of compliance

degrees C = degrees Celsius field dup. = field duplicate mg/L = milligrams per liter

mV = millivolts

NA = not analyzed

# TABLE 6: BUILDING 4-78/79 SWMU/AOC GROUP CONCENTRATIONS OF CONSTITUENTS OF CONCERN <sup>1, 2</sup> NOVEMBER 12, 2019

Boeing Renton Facility, Renton, Washington

					Well ID <sup>3</sup>									
	Current Site	ent Site Source Area												
	Specific Cleanup		GW031S											
	Level <sup>4</sup>	GW031S	(field dup.)	GW033S	GW034S	GW039S	GW243I	GW244S						
<b>Volatile Organic Compounds</b>	(μg/L)													
Benzene	0.80	4.77	4.75	11.5	0.20 U	0.20 U	0.20 U	0.87						
cis-1,2-Dichloroethene	0.70	0.40	0.39	2.78	0.20 U	0.20 U	0.20 U	0.20 U						
Trichloroethene	0.23	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U						
Vinyl Chloride	0.20	0.25	0.27	13	0.39	0.20 U	0.20 U	0.35						
<b>Total Petroleum Hydrocarbo</b>	ns (µg/L)													
TPH-G (C7-C12)	800	1,540	1,560	347	100 U	100 U	100 U	100 U						

		Current Site		Well ID <sup>3</sup>				
		Specific Cleanup	Downgradient Plume Area					
		Level <sup>4</sup>	GW038S	GW209S	GW210S			
<b>Volatile Organic Com</b>	pounds (µg/L)	)						
Benzene		0.80	0.20 U	0.20 U	0.20 U			
cis -1,2-Dichloroeth	ene	0.70	0.20 U	0.20 U	0.20 U			
Trichloroethene		0.23	0.20 U	0.20 U	0.20 U			
Vinyl Chloride		0.20	0.20 U	0.20 U	0.20 U			
<b>Total Petroleum Hyd</b>	rocarbons (µg	/L)						
TPH-G (C7-C12)		800	100 U	100 U	100 U			

		Current Site Specific Cleanup				Well ID <sup>3</sup> CPOC Area							
		Level⁴	GW143S   GW237S   GW238I   GW239I   GW240D   GW241S   GW2										
<b>Volatile Organic Com</b>	pounds (µg/L	)											
Benzene		0.80	0.20 U	0.66	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U				
cis -1,2-Dichloroeth	ene	0.70	0.20 U	0.22	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U				
Trichloroethene		0.23	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U				
Vinyl Chloride		0.20	0.20 U	0.34	0.20 U	0.20 U	0.24	0.20 U	0.20 U				
<b>Total Petroleum Hyd</b>	rocarbons (µg	/L)											
TPH-G (C7-C12)		800	100 U	100 U	100 U	100 U	100 U	100 U	100 U				

#### <u>Notes</u>

- Data qualifiers are as follows:
  - U = The result is an estimate.
  - U = The analyte was not detected at the reporting limit indicated.
- 2. **Bolded** values exceed the current cleanup levels.
- 3. S = shallow well; I = intermediate well.
- 4. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

#### Abbreviations

 $\mu$ g/L = micrograms per liter

 ${\sf CPOC} = {\sf conditional\ point\ of\ compliance}$ 

field dup. = field duplicate

TPH-G = total petroleum hydrocarbons as gasoline

# TABLE 7: FORMER FUEL FARM GROUNDWATER ELEVATION DATA NOVEMBER 11, 2019

Boeing Renton Facility, Renton, Washington

Well ID <sup>1</sup>	Screen Interval Depth (feet bgs)	TOC Elevation (feet) <sup>2</sup>	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet) <sup>2</sup>
GW183S	5.5 to 15	26.58	8.78	17.80
GW184S	5.6 to 15	27.14	9.34	17.80
GW211S	4.8 to 14.7	27.77	6.58	21.19
GW212S	4.9 to 14.8	28.06	10.28	17.78
GW221S	5 to 15	27.93	10.10	17.83
GW224S	5 to 15	27.98	10.55	17.43
GW255S	6 to 16	27.49	10.08	17.41
GW256S	7 to 16	27.22	8.88	18.34
GW257S	8 to 16	27.87	9.52	18.35
GW258S	9 to 16	25.51	7.85	17.66

#### **Notes**

- 1. S = shallow well, I = intermediate well
- 2. Elevations in feet relative to National Geodetic Vertical Datum of 1929.

#### **Abbreviations**

bgs = below ground surface

TOC = top of casing

## TABLE 8: FORMER FUEL FARM CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS 1 NOVEMBER 11, 2019

Boeing Renton Facility, Renton, Washington

		Well ID <sup>2</sup>													
	Source Area						CPOC Area								
								GW224S							
	GW255S	GW183S	GW184S	GW211S	GW212S	GW221S	GW224S	(field dup.)	GW255S	GW256S	GW257S	GW258S			
Specific Conductivity (µS/cm)	192.2	141.7	155.8	238.0	236.8	226.1	258.7	257.2	192.2	150.6	157.1	285.0			
Dissolved Oxygen (mg/L)	0.77	0.61	2.33	0.21	0.60	0.82	0.91	0.78	0.77	0.60	0.84	0.85			
Oxidation/Reduction Potential (mV)	-18.0	17.0	17.9	-39.6	20.1	7.0	-22.9	-22.6	-18.0	4.3	41.1	18.6			
pH (standard units)	6.19	6.33	6.49	6.53	5.77	6.25	5.96	5.94	6.19	6.21	6.08	5.98			
Temperature (degrees C)	14.5	14.2	14.4	12.2	14.5	14.3	14.7	14.7	14.5	16.3	16.1	13.3			

#### <u>Notes</u>

- 1. Primary geochemical indicators are measured in the field.
- 2. S = shallow well; I = intermediate well.

#### **Abbreviations**

μS/cm = microsiemens per centimeter
CPOC = conditional point of compliance
degrees C = degrees Celsius
field dup. = field duplicate
mg/L = milligrams per liter
mV = millivolts

## TABLE 9: FORMER FUEL FARM CONCENTRATIONS OF CONSTITUENTS OF CONCERN 1, 2, 3 NOVEMBER 11, 2019

Boeing Renton Facility, Renton, Washington

								We	ell ID <sup>4</sup>							
	Current	Source Area		CPOC Area												
	Cleanup	7.1.04														
	Levels <sup>5</sup>	GW255S	GW183S	GW184S	GW2	211S	GW212S	GW221S		GW	224S	(field	dup.)	GW256S	GW257S	GW258S
<b>Total Petroleum Hydrocarbo</b>	ns (mg/L)															
TPH-D (C12-C24)	0.5	0.100 U	0.100 U	0.100 U	0.120	0.102	0.100 U	1.65	0.427	1.51	0.303	1.46	0.370	0.100 U	0.100 U	0.100 U
Jet A	0.5	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	1.09	0.309	1.93	0.720	1.80	0.923	0.100 U	0.100 U	0.100 U	

#### Notes

- 1. Data qualifiers are as follows:
  - U = The analyte was not detected at the reporting limit indicated.
- 2. **Bolded** values exceed the current cleanup levels.
- 3. Italicized values are results after silica gel cleanup to remove biogenic interference.
- 4. S = shallow well; I = intermediate well.
- 5. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

#### **Abbreviations**

CPOC = conditional point of compliance

field dup. = field duplicate

mg/L = milligrams per liter

# TABLE 10: AOC-003 GROUNDWATER ELEVATION DATA NOVEMBER 12, 2019

Boeing Renton Facility, Renton, Washington

Well ID <sup>1</sup>	Screen Interval Depth (feet bgs)	TOC Elevation (feet) <sup>2</sup>	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet) <sup>2</sup>
GW188S <sup>3</sup>	3.5 to 13.5	18.78	NM	NM
GW247S	4 to 14	18.91	4.17	14.74
GW248I	10 to 20	18.78	4.00	14.78
GW249S <sup>3</sup>	4 to 14	18.85	NM	NM

#### **Notes**

- 1. S = shallow well; I = intermediate well.
- 2. Elevations in feet relative to National Geodetic Vertical Datum of 1929.
- 3. Depth to water measurement not collected at GW188S and GW249S during the fourth quarter 2019.

#### **Abbreviations**

bgs = below ground surface

NM = not measured

TOC = top of casing

# TABLE 11: AOC-003 CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS NOVEMBER 12, 2019

Boeing Renton Facility, Renton, Washington

	We	Well ID <sup>2</sup>			
	СРО	C Area			
	GW247S	GW248I			
Specific Conductivity (µS/cm)	367.3	434.2			
Dissolved Oxygen (mg/L)	0.19	0.67			
Oxidation/Reduction Potential (mV)	18.9	83.1			
pH (standard units)	6.39	6.36			
Temperature (degrees C)	14.70	11.60			
Total Organic Carbon (mg/L)	10.48	13.32			

#### **Notes**

- 1. Primary geochemical indicators are measured in the field, with the exception of total organic carbon, which is measured in the laboratory.
- 2. S = shallow well; I = intermediate well.

#### **Abbreviations**

µS/cm = microsiemens per centimeter CPOC = conditional point of compliance degrees C = degrees Celsius mg/L = milligrams per liter mV = millivolts

# TABLE 12: AOC-003 CONCENTRATIONS OF CONSTITUENTS OF CONCERN <sup>1, 2</sup> NOVEMBER 12, 2019

Boeing Renton Facility, Renton, Washington

	Current Site	Well	Well ID <sup>3</sup>		
	Specific Cleanup	p CPOC Area			
	Level⁴	GW247S	GW248I		
Volatile Organic Compounds (µg/L)					
cis-1,2-Dichloroethene	0.78	0.0635	0.02 U		
Tetrachloroethene	0.02	0.02 U	0.02 U		
Trichloroethene	0.16	0.148	0.0514		
Vinyl Chloride	0.24	0.504	0.620		

#### **Notes**

- 1. Data qualifiers are as follows:
  - U = The analyte was not detected at the reporting limit indicated.
- 2. **Bolded** values exceed the current cleanup levels.
- 3. S = shallow well; I = intermediate well.
- 4. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

#### **Abbreviations**

 $\mu$ g/L = micrograms per liter

CPOC = conditional point of compliance

# TABLE 13: LOT 20/FORMER BUILDING 10-71 PARCEL GROUNDWATER ELEVATION DATA<sup>1</sup> NOVEMBER 11, 2019

Boeing Renton Facility, Renton, Washington

Well ID	Screen Interval Depth (feet bgs)	TOC Elevation (feet) <sup>2</sup>	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet) <sup>2</sup>
10-71-MW-1	7 to 17	30.07	8.69	21.38
10-71-MW-2	7 to 17	29.88	8.96	20.92
10-71-MW-4	6 to 16	28.97	8.76	20.21

#### **Notes**

- 1. Water levels not measured in monitoring well 10-71-MW-3 so it is not included in this table.
- 2. Elevations in feet relative to National Geodetic Vertical Datum of 1929.

#### **Abbreviations**

bgs = below ground surface

TOC = top of casing

# TABLE 14: LOT 20/FORMER BUILDING 10-71 PARCEL CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS <sup>1</sup> NOVEMBER 11, 2019

Boeing Renton Facility, Renton, Washington

	Well ID				
	10-71-MW1	10-71-MW2	10-71-MW4		
Specific Conductivity (µS/cm)	191.0	166.0	259.7		
Dissolved Oxygen (mg/L)	0.36	1.52	0.37		
Oxidation/Reduction Potential (mV)	-7.8	25.4	-35.9		
pH (standard units)	6.00	6.23	6.21		
Temperature (degrees C)	15.00	14.00	16.10		

#### **Notes**

1. Primary geochemical indicators are measured in the field.

#### **Abbreviations**

 $\mu$ S/cm = microsiemens per centimeter degrees C = degrees Celsius mg/L = milligrams per liter mV = millivolts

# TABLE 15: LOT 20/FORMER BUILDING 10-71 PARCEL CONCENTRATIONS OF CONSTITUENTS OF CONCERN <sup>1, 2</sup> NOVEMBER 11, 2019

Boeing Renton Facility, Renton, Washington

	Well ID							
	10-71-MW1	10-71-MW1 10-71-MW2						
Volatile Organic Compounds (µg/L)								
cis- 1,2-Dichloroethene	0.20 U	0.20 U	0.20 U					
Toluene	0.20 U	0.20 U	0.20 U					
Trichloroethene	0.20 U	0.20 U	0.20 U					
Vinyl Chloride	0.20 U	0.20 U	0.20 U					

#### **Notes**

- 1. Data qualifiers are as follows:
  - U = The analyte was not detected at the reporting limit indicated.
- 2. No current cleanup standards were established for the Building 10-71 Parcel.

#### **Abbreviations**

 $\mu$ g/L = micrograms per liter

na = not established

# TABLE 16: APRON A GROUNDWATER ELEVATION DATA NOVEMBER 11, 2019

Boeing Renton Facility, Renton, Washington

Well ID	Screen Interval Depth (feet bgs)	TOC Elevation (feet) <sup>1</sup>	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet) <sup>1</sup>
GW262S	8 to 18	NA	5.33	NA
GW263S	8 to 18	NA	NM	NA
GW264S	8 to 18	NA	6.04	NA

#### **Notes**

1. Elevations in feet relative to National Geodetic Vertical Datum of 1929.

#### **Abbreviations**

bgs = below ground surface

NA = not available

NM = not measured

TOC = top of casing

# TABLE 17: APRON A CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS <sup>1</sup> NOVEMBER 11, 2019

Boeing Renton Facility, Renton, Washington

		Well ID <sup>2</sup>	
		Source Area Well	s
		GW262S	
	GW262S	(field dup.)	GW264S
Specific Conductivity (µS/cm)	390.6	392.7	683.0
Dissolved Oxygen (mg/L)	0.67	0.60	0.61
Oxidation/Reduction Potential (mV)	-34.7	-38.1	-51.8
pH (standard units)	6.35	6.36	6.28
Temperature (degrees C)	15.20	15.90	16.10
Total Organic Carbon (mg/L)	31.15	31.60	37.98

#### **Notes**

- 1. Primary geochemical indicators are measured in the field, with the exception of total organic carbon, which is measured in the laboratory.
- 2. S = shallow well.

#### **Abbreviations**

µS/cm = microsiemens per centimeter degrees C = degrees Celsius field dup. = field duplicate mg/L = milligrams per liter mV = millivolts

# TABLE 18: APRON A CONCENTRATIONS OF CONSTITUENTS OF CONCERN<sup>1</sup> NOVEMBER 11, 2019

Boeing Renton Facility, Renton, Washington

	Well ID <sup>2</sup>				
	GW262S	GW264S			
Volatile Organic Compounds (μg/L)					
cis- 1,2-Dichloroethene	0.20 U	0.20 U	0.20 U		
Vinyl Chloride	0.20 U	0.20 U	0.38		

#### **Notes**

- 1. Data qualifiers are as follows:
  - U = The analyte was not detected at the reporting limit indicated.
- 2. S = shallow well.

#### **Abbreviations**

 $\mu$ g/L = micrograms per liter

wood.

**Appendix A** 

#### TABLE A-1: GROUNDWATER COMPLIANCE MONITORING SCHEDULE

#### Boeing Renton Facility, Renton, Washington

Cleanup Action	Monitorin	g Frequency <sup>1</sup>	requency <sup>1</sup> Groundwater Monitoring Wells <sup>2</sup>				Additional Water Level					
Area	Quarterly	Semiannual	Cross-Gradient Wells	Source Area Wells	Downgradient Plume Wells	CPOC Wells	Monitoring Wells <sup>3</sup>	Constituents of Concern⁴	Analyses <sup>5</sup>			
SWMU-168		X (1,3)	NA	GW228S <sup>7</sup>	NA	GW229S, GW230I, and GW231S		VC	SW8260C SIM			
SWMU-172/SWMU-174	x		NA	GW152S and GW153S	GW081S, GW172S, GW173S,	GW232S, GW233I, GW234S,		cis -1,2-DCE, PCE, TCE, VC	SW8260C SIM <sup>6</sup>			
					and GW226S	GW235I, and GW236S		Arsenic, copper, and lead	EPA 6020A			
Building 4-78/79	x		NA	GW031S, GW033S, GW034S,	GW038S, GW209S, and GW210S	GW143S, GW237S, GW238I, GW239I, GW240D, GW241S,		VC, TCE, cis -1,2-DCE, benzene	SW8260C <sup>6</sup>			
SWMU/AOC Group	_ ^		INA	GW039S, GW243I, and GW244S	GW0303, GW2093, and GW2103	and GW242I		TPH-gasoline	NWTPH-Gx			
Former Fuel Farm SWMU/AOC Group		X (2,4)	NA	GW255S, GW256S, and GW257S	NA	GW183S, GW184S, GW211S, GW212S, GW221S, GW224S, and GW258S		TPH-jet fuel, TPH-diesel	NWTPH-Dx			
AOC-001/AOC-002 <sup>9</sup>	х	X (1,3)	NA	GW193S <sup>9</sup>	GW190S <sup>8,9</sup> , GW191D <sup>8,9</sup> , GW192S <sup>8,9</sup> ,	GW185S <sup>8,9</sup> , GW195S <sup>8,9</sup> , GW196D <sup>8,9</sup> , GW197S <sup>8,9</sup> , and		Benzene	SW8260C <sup>6</sup>			
AUC-001/AUC-002	(CPOC wells)	(all other wells)	NA NA	GM 1932	and GW246S <sup>8,9</sup>	GW245S <sup>8,9</sup>		TCE, cis -1,2-DCE, 1,1-dichloroethene, VC	SW8260C SIM <sup>6</sup>			
AOC-003	х	X (1,3)	NA	GW249S	GW188S	GW247S and GW248I		PCE, TCE	SW8260C SIM <sup>6</sup>			
AOC-003	(CPOC wells)	(all other wells)	NA NA	GW2493	GW 1003	GW2473 and GW240i		cis -1,2-DCE, VC	SW0200C SIIVI			
AOC-004		X (1,3)	NA	GW250S	NA	GW174S		Lead	EPA 6020A			
AOC-060		X (1,3)	GW012S and GW014S	GW009S	GW147S	GW149S, GW150S, GW252S,	GW010S and GW011D	VC	SW8260C SIM <sup>6</sup>			
7.00 000		X (1,5)		GW	5110055	GW253I, and GW254S		254S		OWO 105 UNIO CWO 115	GW253I, and GW254S	TCE, cis -1,2-DCE
								1,1,2-Trichloroethane, acetone, benzene, toluene, carbon tetrachloride, chloroform, cis -1,2-DCE, trans -1,2-DCE, methylene chloride	SW8260C <sup>6</sup>			
AOC-090		X (1,3)	NA	GW189S	GW175I and GW176S	GW163I, GW165I, GW177I, GW178S, GW179I, GW180S, GW207S. and GW208S		1,1-Dichloroethene, 1,1,2,2-tetrachloroethane, VC, PCE, TCE	SW8260C SIM <sup>6</sup>			
								TPH-gasoline	NWPTH-Gx			
								TPH-diesel, TPH-motor oil	NWTPH-Dx			
Building 4-70 Area		X (1,3)	NA	NA	NA	GW259S and GW260S		TCE, cis -1,2-DCE, VC	SW8260C <sup>6</sup>			
Lot 20/Former Building 10-71		X (2,4)	NA	10-71-MW1, 10-71-MW2, and 10-71-MW4	NA	NA		Toluene, cis-1,2-DCE, TCE, VC	SW8260C <sup>6</sup>			
Apron A		X (2,4)	NA	GW262S and GW264S	NA	NA		cis -1,2-DCE and VC	SW8260C <sup>6</sup>			

- 1. The EDR presents the groundwater monitoring frequency for each SWMU/AOC. For sites with semiannual monitoring frequency, specific quarters when monitoring will be conducted is indicated by 1 for quarter 1, 2 for quarter 2, etc.
- 2. Groundwater monitoring wells are also monitored for groundwater levels.
- 3. Additional wells are monitored for groundwater levels only. 4. In addition to COCs, primary geochemical indicators will be monitored during each regular monitoring event. Geochemical indicators are listed in Table A-2.
- 5. Details of analytical methods are specified in the Quality Assurance Project Plan, which is Appendix E to the Cleanup Action Plan (AMEC, 2012).
- 6. SIM methods will be used if the cleanup level is lower than the reporting limit achieved by the conventional 8021, 8260 or 8270 method. If cleanup levels become higher or if the conventional 8021, 8260 or 8270 methods are updated and able to achieve reporting limits below the cleanup levels, then the conventional method rather than the SIM method will be used.
- 7. GW228S will not be monitored on a semiannual basis only the CPOC wells will be monitored on a semiannual basis for SWMU-168.
- 8. Monitoring wells were abandoned on 11/25/2019 prior to Apron R construction and will be replaced upon completion of construction.
- 9. Groundwater monitoring and sampling will be suspended until completion of construction.

Abbreviations:

AOC = area of concern

cis -1,2-DCE = cis -1,2 dichloroethene COCs = constituents of concern CPOC = conditional point of compliance EDR = Engineering Design Report EPA = Environmental Protection Agency NA = not applicable

PCE = tetrachloroethene SIM = selected ion monitoring SWMU = solid waste management unit TCE = trichloroethene TPH = total petroleum hydrocarbons trans -1,2-DCE = trans -1,2 dichloroethene VC = vinyl chloride

VOCs = volatile organic compounds

#### TABLE A-2: MONITORED NATURAL ATTENUATION/MONITORED ATTENUATION SCHEDULE

#### Boeing Renton Facility, Renton, Washington

					Primary Geochemical Para		
Cleanup Action			ater Monitoring Wells		ig Frequency <sup>3</sup>		
Area	Cross-Gradient Wells	Source Area Wells	Downgradient Plume Wells	CPOC Wells	Indicators	Quarterly	Semiannual
SWMU-168	NA	GW228S <sup>4</sup>	NA	GW229S, GW230I, and GW231S	Dissolved oxygen, pH, ORP, temperature, specific conductance		X (1,3)
SWMU-172/SWMU-174	NA	GW152S and GW153S	GW081S, GW172S, GW173S, and GW226S	GW232S, GW233I, GW234S, GW235I, and GW236S	Dissolved oxygen, pH, ORP, temperature, specific conductance, TOC	X	
Building 4-78/79 SWMU/AOC Group	NA	GW031S, GW033S, GW034S, GW039S, GW243I, and GW244S	GW143S, GW237S, GW238I, GW038S, GW209S, and GW210S GW239I, GW240D, GW241S, and GW242I Bissolved oxygen, pH, ORP, temperature, specific conductance in all wells, TOC in all wells except GW241S and GW242I		х		
Former Fuel Farm SWMU/AOC Group	NA	GW255S, GW256S, and GW257S	NA	GW183S, GW184S, GW211S, GW212S, GW221S, GW224S, and GW258S	Dissolved oxygen, pH, ORP, temperature, specific conductance		X (2,4)
AOC-001/AOC-002 <sup>7</sup>	NA	GW193S <sup>7</sup>	79 1		Dissolved oxygen, pH, ORP, temperature, specific conductance, TOC	X (CPOC wells)	X (1,3) (all other wells)
AOC-003	NA	GW249S	GW188S	GW247S and GW248I	Dissolved oxygen, pH, ORP, temperature, specific conductance, TOC		X (1,3) (all other wells)
AOC-004	NA	GW250S	NA	GW174S	Dissolved oxygen, pH, ORP, temperature, specific conductance		X (1,3)
AOC-060	GW012S and GW014S	GW009S	GW147S	GW149S, GW150S, GW252S, GW253I, and GW254S	Dissolved oxygen, pH, ORP, temperature, specific conductance, TOC		X (1,3)
AOC-090	NA	GW189S GW175I and GW176S GW1785, GW179I, GW180S, GW207S, and GW208S GW208S GW179I, Dissolved oxygen, pH, ORP, temperature, specific conductance, TOC 5			X (1,3)		
Building 4-70 Area	NA	NA	NA	NA GW259S and GW260S Dissolved oxygen, pH, ORP, temperature, specific conductance, TOC			X (1,3)
Lot 20/Former Building 10-71	NA	10-71-MW1, 10-71-MW2, and 10-71-MW4	NA	NA	Dissolved oxygen, pH, ORP, temperature, specific conductance		X (2,4)
Apron A	NA	GW262S and GW264S	NA	NA	Dissolved oxygen, pH, ORP, temperature, specific conductance, TOC		X (2,4)

#### Notes:

- 1. In addition to COCs listed in Table A-1, primary geochemical indicators will be monitored during each regular monitoring event.
- 2. All primary geochemical indicators except TOC are monitored in the field during sampling. TOC is analyzed in the laboratory following methods specified in the Quality Assurance Project Plan, which is Appendix E to the Cleanup Action Plan (AMEC, 2012).
  The primary geochemical indicators differ slightly depending on whether the site is a fuel-related site or a solvent-related site.
  At a fuel related site, TOC is not necessary; at a solvent-related site. TOC is a measure of how much electron donor remains present.
- 3. The EDR presents the groundwater monitoring frequency for each SWMU/AOC. For sites with semiannual monitoring frequency, specific quarters when monitoring will be conducted is indicated by 1 for quarter 1, 2 for quarter 2, etc.
- 4. Primary geochemical parameters will not be collected at GW228S only at CPOC wells that are sampled semiannually.
- 5. TOC will only be analyzed in the groundwater from the source area well (GW189S).
- 6. Monitoring wells were abandoned on 11/25/2019 prior to Apron R construction and will be replaced upon completion of construction.
- 7. Groundwater monitoring and sampling will be suspended until completion of construction.

Abbreviations:

AOC = area of concern

COCs = constituents of concern

CPOC = conditional point of compliance

EDR = Engineering Design Report

NA = not applicable

ORP = oxidation reduction potential

SWMU = solid waste management unit

TOC = total organic carbon

wood.

**Appendix B** 



Project Nam	ie:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/11 /2019@		1047	
Sample Nun	nber:	RGW081S-	191111		Weather:	SC			
Landau Rep		DSB			•				
WATERIEV	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	0)	Describe:	Flush Mount		
		•		•	,		1 Iusii iviount	CW Matan No. (	s 4
DTW Before		8.76	Time:	End Purge:	Flow through ce		1040	GW Meter No.(	•
0 0		11/ 11 /2019		Ē		11/ 11 /2019 @		Gallons Purged:	0.25
Purge water of	iisposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENISYSIEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm) le: Stablizatio	(mg/L)	tors for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1024	13.8	163.0	1.74	6.54	78.9		8.71		
1027	13.6	166.6	1.72	6.43	83.4		8.72		
1030	13.5	167.2	1.79	6.38	86.0		8.72		
1033	13.4	166.9	1.94	6.37	86.8				
1036	13.2	167.0	2.17	6.36	92.6				
1039	13.2	167.7	2.25	6.36	87.8				
SAMPLE CO	LLECTION F	DATA							
Sample Colle			Bailer		Pump/Pump Type	BLADDER			
Made of:		Stainless Stee	_	_	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lura:	Alconox Was	_		DI Water	Dedicated			
(By Numerica		Other	··· 🖳	rup remse	□ Di watei	Dedicated			
	,	turbidity, odor,	chaan atc.):		TAN HIGH TUI	PRIDITY NONS			
Sample Desci	iption (color,	iuroiuny, odor,	, sneen, etc.)		TAIVIIIGII TOI	CDIDITI NONS			
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	13.4	167.8	2.23	6.36	87.9				
2	13.4	167.8	2.24	6.36	87.9				
3	13.4	167.8	2.22	6.36	88.0				
4	13.4	167.9	2.19	6.36	88.0				
						#DIII/01			
Average:	13.4	167.8	2.22	6.36	88.0	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	ER BOTTLE	TYPE (Circle a)	pplicable or write i	non-standard a	nalysis below)	
3				, ,	H-Gx) (BTEX)			WA 🗆	OR 🗆
	<u> </u>		/ \			(8141) (Oil & Gr		WA 🗆	OR 🗆
1	<del>```</del>	•/			dity) (Alkalinity) itrogen) (NH3)	(HCO3/CO3) (C	1) (SO4) (NO	5) (NO2) (F)	
1		le) (WAD Cy			mogen) (NH3)	(1103/1102)			
1	<u> </u>			• /	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (1	Ni) (Ag) (Se) (	Tl) (V) (Zn) (H	g) (K) (Na)
				, , , , , ,					Na) (Hardness) (Silic
	VOC (Boein								
	Methane Eth	nane Ethene A	cetylene						
	others								
Duplicate Sar	nnle No(s):								
•	inpic 110(8).								
Comments:									



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	199	
Event:		Nov-19			Date/Time:	11/11 /2019@		1227	
Sample Nun	nber:	RGW152S-	191111		Weather:	CLEAR			
Landau Rep		DSB			•				
WATERIEV	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	·(O)	Describe:	Flush Mount		
		· ·		•	,		Tiush Woult	CW Mater No. (	s 4
DTW Before		9.1	Time:		Flow through ce		1224	GW Meter No.(	•
		11/ 11 /2019		End Purge:		11/ 11 /2019 @		Gallons Purged:	0.25
Purge water of	iisposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENI SYSIEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	tors for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1207	14.7	194.9	1.77	6.19	106.5		9.11		
			1.40						
1210		195.1		6.24	100.0		9.11		
1213	13.8	180.6	1.28	6.27	97.0		9.11		
1216	13.4	161.3	1.05	6.30	93.4				
1219	13.2	154.1	0.98	6.29	92.6				
1222	13.2	150.2	1.06	6.28	92.9				
CAMDIE CO	LLECTION D								
Sample Colle			Bailer		Pump/Pump Type	RIADDER			
Made of:	cica wiai.	Stainless Ste		_	Teflon	Polyethylene	Other	Dedicated	
	. <del>-</del>		_		-			Dedicated	
Decon Procee		Alconox Was	sh 📙	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other							
Sample Descri	ription (color,	turbidity, odor	sheen, etc.):		GREY HIGH TU	JRBIDITY NONS			
Replicate	Temp (°F/°C)	Cond.	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
	` ′	,	, ,	( 20	, ,	(1410)	(11)	(FC II)	Observations
1	13.1	149.2	1.05	6.28	93.1				
2	13.1	146.9	0.98	6.28	91.7				
3	13.1	145.0	0.94	6.28	91.6				
4	13.1	143.2	0.91	6.28	91.6				
Average:	13.1	146.1	0.97	6.28	92.0	#DIV/0!			
QUANTITY	TVDICALA	NAI VOIC AT	I OWED DE	D DOTTE	TVDF (C:1-	mliaghla an	non standl	nalveie bal	
3					H-Gx) (BTEX)	oplicable or write	uon-stanuaru a	WA   WA	OR 🗆
	` '					(8141) (Oil & G	rease)	WA 🗆	OR 🗆
		/ \		/ \		(HCO3/CO3) (C			= -
1	``	• / \	/ \ / \		itrogen) (NH3)				
		le) (WAD Cy							
1	(Total Metals	) (As) (Sb) (	Ba) (Be) (Ca	a) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Ni) (Ag) (Se) (	(Tl) (V) (Zn) (H	g) (K) (Na)
	(Dissolved M	etals) (As) (Sb	(Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) (	(Ag) (Se) (Tl) (V	/) (Zn) (Hg) (K) (	Na) (Hardness) (Silic
	VOC (Boein								
	Methane Eth	nane Ethene A	cetylene						
	ath a:								
	others								
Duplicate Sar	nple No(s):	Duplicate Lo	cation (DUP1	)					
Comments:									
		DSB				Date:	11/11/2019		



Project Nam	ie:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/11 /2019@		1207	
Sample Nun	nber:	RGW153S-	191111		Weather:	SC			
Landau Rep		DSB			•				
WATERIEV	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES)	)	Damaged (N	0)	Describe:	Flush Mount		
		,		•			Tiush Woult	CW Matan No. (	. 4
DTW Before		9.56	Time:		Flow through ce		1152	GW Meter No.(	•
0 0		11/ 11 /2019		End Purge:		11/ 11 /2019 @		Gallons Purged:	0.25
Purge water of	iisposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENISYSIEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	tors for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1142	14.7	153.5	4.16	6.52	84.9		9.54		
	14.5	152.4	4.51	6.40	90.7		9.54		
1145									
1148	14.4	152.0	4.43	6.38	92.8		9.54		
1151	14.3	152.1	4.40	6.35	94.5				
CAMPLE CO	LIECTIONE								
Sample College	LLECTION D		Bailer		Dayson /Dayson True	DIADDED			
	ctea with:	_	_	_	Pump/Pump Type	_			
Made of:		Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced		Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	,	Other							
Sample Descr	ription (color, t	turbidity, odor,	, sheen, etc.):		TAN MODERA	TE TURBIDITY N	ONS		
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
repriente	(°F/°C)	(uS/cm)	(mg/L)	pii	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	14.2	152.0	4.35	6.35	94.7				
2	14.2								
	17.2	152.0	431	6.35					
3	112	152.0	4.31	6.35	94.7				
	14.2	152.0	4.29	6.34	94.7				
4	14.2				94.7				
4 Average:		152.0	4.29	6.34	94.7	#DIV/0!			
Average:	14.2	152.0 152.0 152.0	4.29 4.30 4.31	6.34 6.34 6.35	94.7 94.8 94.8 94.8	_	non-standard a	nalysis helaw)	
	14.2 14.2 TYPICAL A	152.0 152.0 152.0 NALYSIS AL	4.29 4.30 4.31 LLOWED PE	6.34 6.34 6.35 CR BOTTLE	94.7 94.8 94.8 94.8	#DIV/0!	non-standard a	nalysis below)	OR 🗆
Average:  QUANTITY	14.2 14.2 <b>TYPICAL A</b> (8260-SIM)	152.0 152.0 152.0 NALYSIS AI (8010) (8020	4.29 4.30 4.31 LLOWED PE 0) (NWTPH-	6.34 6.34 6.35 CR BOTTLE	94.7 94.8 94.8 94.8 TYPE (Circle a)	_			OR OR
Average:  QUANTITY	14.2 14.2 <b>TYPICAL A</b> (8260-SIM) (8270D) (PA	152.0 152.0 152.0 NALYSIS AL (8010) (8020 AH) (NWTPH	4.29 4.30 4.31 LLOWED PE D) (NWTPH-H-D) (NWTF	6.34 6.34 6.35 CR BOTTLE G) (NWTPP PH-Dx) (TPP	94.7 94.8 94.8 94.8 TYPE (Circle a) H-Gx) (BTEX) H-HCID) (8081)	oplicable or write i	rease)	WA □ WA □	_
Average:  QUANTITY	14.2 14.2 <b>TYPICAL A</b> (8260-SIM) (8270D) (PA (pH) (Condu	152.0 152.0 152.0 152.0 NALYSIS AI (8010) (8020 AH) (NWTPHactivity) (TDS	4.29 4.30 4.31 LLOWED PE 0) (NWTPH- H-D) (NWTF S) (TSS) (B	6.34 6.34 6.35 CR BOTTLE G) (NWTPH PH-Dx) (TPH-Dx) (TPH-Dx) (Turbio	94.7 94.8 94.8 94.8 TYPE (Circle a) H-Gx) (BTEX) H-HCID) (8081)	(8141) (Oil & Gr (HCO3/CO3) (C	rease)	WA □ WA □	_
Average:  QUANTITY  3	14.2 14.2  TYPICAL A (8260-SIM) (8270D) (PA (pH) (Condu	152.0 152.0 152.0 152.0 NALYSIS AI (8010) (8020 AH) (NWTPHactivity) (TDS	4.29 4.30 4.31 LLOWED PE D) (NWTPH-H-D) (NWTF S) (TSS) (B tal PO4) (To	6.34 6.34 6.35 CR BOTTLE G) (NWTPH PH-Dx) (TPH DOD) (Turbio ttal Kiedahl N	94.7 94.8 94.8 94.8  TYPE (Circle a) H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity)	(8141) (Oil & Gr (HCO3/CO3) (C	rease)	WA □ WA □	_
Average:  QUANTITY  3	14.2  14.2  TYPICAL A  (8260-SIM) (8270D) (PA  (pH) (Condu  (COD) (Total Cyanid  (Total Metals	152.0 152.0 152.0 152.0 NALYSIS AI (8010) (8020 AH) (NWTPH activity) (TDS C5310C) (Totale) (WAD Cy	4.29 4.30 4.31  LLOWED PE 0) (NWTPH-H-D) (NWTF S) (TSS) (B tal PO4) (To ranide) (Free Ba) (Be) (Ca	6.34 6.35 CR BOTTLE G) (NWTPI PH-Dx) (TPI DOD) (Turbic stal Kiedahl N Cyanide) () (Cd) (Co)	94.7 94.8 94.8 94.8  TYPE (Circle a) H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ W3) (NO2) (F)  T1) (V) (Zn) (H	OR □ g) (K) (Na)
Average:  QUANTITY  3	14.2  14.2  TYPICAL A  (8260-SIM)  (8270D) (PA  (pH) (Condu  (COD) (Total Cyanid  (Total Metals  (Dissolved M	152.0 152.0 152.0 152.0 NALYSIS AI (8010) (8020 AH) (NWTPH uctivity) (TDS C5310C) (Tol de) (WAD Cy c) (As) (Sb) (I letals) (As) (Sb)	4.29 4.30 4.31  LLOWED PE 0) (NWTPH-H-D) (NWTF S) (TSS) (B tal PO4) (To ranide) (Free Ba) (Be) (Ca	6.34 6.35 CR BOTTLE G) (NWTPI PH-Dx) (TPI DOD) (Turbic stal Kiedahl N Cyanide) () (Cd) (Co)	94.7 94.8 94.8 94.8  TYPE (Circle a) H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ W3) (NO2) (F)  T1) (V) (Zn) (H	OR □ g) (K) (Na)
Average:  QUANTITY  3	14.2  14.2  TYPICAL A  (8260-SIM)  (8270D) (PA  (pH) (Condu  (COD) (Total Cyanid  (Total Metals  (Dissolved M  VOC (Boein	152.0 152.0 152.0 152.0 152.0 NALYSIS AI (8010) (8020 AH) (NWTPH uctivity) (TDS (C5310C) (Tol de) (WAD Cy c) (As) (Sb) (detals) (As) (Sb ag short list)	4.29 4.30 4.31  LLOWED PE  (I) (NWTPH-H-D) (NWTF (II) (NWTF (III) (IIII) (III)	6.34 6.35 CR BOTTLE G) (NWTPI PH-Dx) (TPI DOD) (Turbic stal Kiedahl N Cyanide) () (Cd) (Co)	94.7 94.8 94.8 94.8  TYPE (Circle a) H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ W3) (NO2) (F)  T1) (V) (Zn) (H	OR □ g) (K) (Na)
Average:  QUANTITY  3	14.2  14.2  TYPICAL A  (8260-SIM)  (8270D) (PA  (pH) (Condu  (COD) (Total Cyanid  (Total Metals  (Dissolved M  VOC (Boein	152.0 152.0 152.0 152.0 NALYSIS AI (8010) (8020 AH) (NWTPH uctivity) (TDS C5310C) (Tol de) (WAD Cy c) (As) (Sb) (I letals) (As) (Sb)	4.29 4.30 4.31  LLOWED PE  (I) (NWTPH-H-D) (NWTF (II) (NWTF (III) (IIII) (III)	6.34 6.35 CR BOTTLE G) (NWTPI PH-Dx) (TPI DOD) (Turbic stal Kiedahl N Cyanide) () (Cd) (Co)	94.7 94.8 94.8 94.8  TYPE (Circle a) H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ W3) (NO2) (F)  T1) (V) (Zn) (H	OR □ g) (K) (Na)
Average:  QUANTITY  3	14.2  14.2  TYPICAL A  (8260-SIM)  (8270D) (PA  (pH) (Condu  (COD) (Total Cyanid  (Total Metals  (Dissolved M  VOC (Boein	152.0 152.0 152.0 152.0 152.0 NALYSIS AI (8010) (8020 AH) (NWTPH uctivity) (TDS (C5310C) (Tol de) (WAD Cy c) (As) (Sb) (detals) (As) (Sb ag short list)	4.29 4.30 4.31  LLOWED PE  (I) (NWTPH-H-D) (NWTF (II) (NWTF (III) (IIII) (III)	6.34 6.35 CR BOTTLE G) (NWTPI PH-Dx) (TPI DOD) (Turbic stal Kiedahl N Cyanide) () (Cd) (Co)	94.7 94.8 94.8 94.8  TYPE (Circle a) H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ W3) (NO2) (F)  T1) (V) (Zn) (H	OR □ g) (K) (Na)
Average:  QUANTITY  3	14.2  14.2  TYPICAL A  (8260-SIM)  (8270D) (PA  (pH) (Condu  (COD) (Total Cyanid  (Total Metals  (Dissolved M  VOC (Boein  Methane Eth	152.0 152.0 152.0 152.0 152.0 NALYSIS AI (8010) (8020 AH) (NWTPH uctivity) (TDS (C5310C) (Tol de) (WAD Cy c) (As) (Sb) (detals) (As) (Sb ag short list)	4.29 4.30 4.31  LLOWED PE  (I) (NWTPH-H-D) (NWTF (II) (NWTF (III) (IIII) (III)	6.34 6.35 CR BOTTLE G) (NWTPI PH-Dx) (TPI DOD) (Turbic stal Kiedahl N Cyanide) () (Cd) (Co)	94.7 94.8 94.8 94.8  TYPE (Circle a) H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ W3) (NO2) (F)  T1) (V) (Zn) (H	OR □ g) (K) (Na)
Average:  QUANTITY  3	14.2  14.2  TYPICAL A  (8260-SIM)  (8270D) (PA  (pH) (Condu  (COD) (Total Cyanid  (Total Metals  (Dissolved M  VOC (Boein	152.0 152.0 152.0 152.0 152.0 NALYSIS AI (8010) (8020 AH) (NWTPH uctivity) (TDS (C5310C) (Tol de) (WAD Cy c) (As) (Sb) (detals) (As) (Sb ag short list)	4.29 4.30 4.31  LLOWED PE  (I) (NWTPH-H-D) (NWTF (II) (NWTF (III) (IIII) (III)	6.34 6.35 CR BOTTLE G) (NWTPI PH-Dx) (TPI DOD) (Turbic stal Kiedahl N Cyanide) () (Cd) (Co)	94.7 94.8 94.8 94.8  TYPE (Circle a) H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ W3) (NO2) (F)  T1) (V) (Zn) (H	OR
Average:  QUANTITY  3	14.2  14.2  TYPICAL A  (8260-SIM)  (8270D) (PA  (pH) (Condu  (COD) (TOO  (Total Cyanid  (Total Metals  (Dissolved M  VOC (Boein  Methane Eth	152.0 152.0 152.0 152.0 152.0 NALYSIS AI (8010) (8020 AH) (NWTPH uctivity) (TDS (C5310C) (Tol de) (WAD Cy c) (As) (Sb) (detals) (As) (Sb ag short list)	4.29 4.30 4.31  LLOWED PE  (I) (NWTPH-H-D) (NWTF (II) (NWTF (III) (IIII) (III)	6.34 6.35 CR BOTTLE G) (NWTPI PH-Dx) (TPI DOD) (Turbic stal Kiedahl N Cyanide) () (Cd) (Co)	94.7 94.8 94.8 94.8  TYPE (Circle a) H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ W3) (NO2) (F)  T1) (V) (Zn) (H	OR □ g) (K) (Na)
Average:  QUANTITY  3  1	14.2  14.2  TYPICAL A  (8260-SIM)  (8270D) (PA  (pH) (Condu  (COD) (TOO  (Total Cyanid  (Total Metals  (Dissolved M  VOC (Boein  Methane Eth	152.0 152.0 152.0 152.0 152.0 NALYSIS AI (8010) (8020 AH) (NWTPH uctivity) (TDS (C5310C) (Tol de) (WAD Cy c) (As) (Sb) (detals) (As) (Sb ag short list)	4.29 4.30 4.31  LLOWED PE  (I) (NWTPH-H-D) (NWTF (II) (NWTF (III) (IIII) (III)	6.34 6.35 CR BOTTLE G) (NWTPI PH-Dx) (TPI DOD) (Turbic stal Kiedahl N Cyanide) () (Cd) (Co)	94.7 94.8 94.8 94.8  TYPE (Circle a) H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ W3) (NO2) (F)  T1) (V) (Zn) (H	OR □ g) (K) (Na)



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 11 /2019@		1307	
Sample Nun	nber:	RGW172S-	191111		Weather:	CLEAR			
Landau Rep	resentative:	DSB							
WATERIEV	/EL/WELL/PI	IRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	0)	Describe:	Flush Mount		
		ì		•	,		Tiush Woult	CW Mater No. (	s 4
DTW Before		9.49	Time:		Flow through ce		1250	GW Meter No.(	•
0 0		11/ 11 /2019		End Purge:		11/ 11 /2019 @		Gallons Purged:	0.25
Purge water of	iisposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENI SYSIEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	tors for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1245	16.2	223.0	1.24	6.37	94.8		9.51		
1248	16.8	223.1	1.42	6.35	93.0		9.52		
1251	16.9	224.4	1.72	6.34	91.6		9.52		
1254	16.0	226.2	1.72	6.34	90.7				
1257	16.2	227.8	1.73	6.35	89.1				
SAMDI E CO	LLECTION I								
Sample Colle			Bailer		Pump/Pump Type	BL ADDER			
Made of:	CICCO W IGHI.	Stainless Stee	_	_	Teflon	Polyethylene	Other	Dedicated	-
	, <u>–</u>		_				i Onici	Dedicated	
Decon Proced		Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	<u> </u>	Other	•				0.170		
Sample Desci	ription (color,	turbidity, odor	sheen, etc.):		TAN MODERA	TE TURBIDITY N	ONS		
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	16.2	228.8	1.75	6.35	88.8				
2	16.3	229.8	1.75	6.35	88.6				
3	16.3	230.7	1.75	6.35	88.4				-
4	16.3	231.6	1.75	6.35	88.3				-
Average:	16.3	230.2	1.75	6.35	88.5	#DIV/0!			
QUANTITY	TYPICAL A	NAL YSIS AI	LOWED PE	ER BOTTLE	TYPE (Circle a)	oplicable or write i	non-standard a	nalysis below)	
3	(8260-SIM)	(8010) (8020	) (NWTPH-	G) (NWTPI	H-Gx) (BTEX)			wa 🗆	OR 🗆
	(8270D) (PA	AH) (NWTPI	H-D) (NWTI	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & Gr	rease)	wa 🗆	OR □
	<u> </u>					(HCO3/CO3) (C	(SO4) (NO	3) (NO2) (F)	
1					itrogen) (NH3)	(NO3/NO2)			
	· ·	le) (WAD Cy		• /	(0) (0) (0)	(NL) (A.) (C.)	AT'	mb (12 (5 )	) (II) (27.)
1	<u> </u>		, , , , ,	, , , , , ,		(Pb) (Mg) (Mn) (I			
	<u> </u>		) (Ba) (Be) (C	(Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (N1) (	(Ag) (Se) (11) (\	(Zn) (Hg) (K) (	Na) (Hardness) (Silic
	VOC (Boein	ng snort list) nane Ethene A	cetylene						
	iviolitatic Ett	mile Ethelle A	cotytone						
	others								
Duplicate Sar	nple No(s):								
Comments:									



Project Nam	ne:	Boeing Ren	ton		Project Number	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/11 /2019@		1007	
Sample Nur	nber:	RGW173S-	191111		Weather:	OC			
Landau Rep		DSB			,				
WATERIEV	VEL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	·(O)	Describe:	Flush Mount		
		,		•	,		Tiushi Wount	CW Mater No. (	s 4
DTW Before		9.53	Time:		Flow through ce		1000	GW Meter No.(	
	Date/Time:	11/ 11 /2019		End Purge:		11/ 11 /2019 @		Gallons Purged:	0.25
Purge water of	iisposed to:		55-gal Drum		Storage Tank	Ground	Uther Other	SITE TREATM	ENI SYSIEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	tors for thro	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
944	15.2	395.3	0.09	6.61	71.1		9.54		
947		388.4	0.12	6.63	66.8		9.54		
950	13.5	380.8	0.19	6.64	64.0		9.54		
953	12.6	371.9	0.36	6.67	60.9				
956	12.0	362.7	0.57	6.68	58.7				
959	11.8	356.8	0.80	6.69	56.9				
	-								
CALLED TO CO									
	LLECTION I		Bailer		D /D T	DIADDED			
Sample Colle	cted with:		_	_	Pump/Pump Type	_			
Made of:		Stainless Stee	_		Teflon	Polyethylene	Other	Dedicated	
Decon Procee		Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other							
Sample Descri	ription (color,	turbidity, odor,	sheen, etc.):		TAN HIGH TUI	RBIDITY NONS			
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
терпеше	(°F/°C)	(uS/cm)	(mg/L)	pii	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	11.8	355.6	0.84	6.69	56.6				
2	11.7	355.3	0.86	6.70	56.5				_
3	11.7	354.9	0.89	6.70	56.4		-		
4	11.7	354.9	0.91	6.70	56.2				
Average:	11.7	355.2	0.88	6.70	56.4	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	ER BOTTLE	TYPE (Circle a)	pplicable or write	non-standard a	nalysis below)	
3	1				H-Gx) (BTEX)			WA 🗆	OR 🗆
	(8270D) (PA	AH) (NWTPH	I-D) (NWTI	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & G	rease)	wa 🗆	or 🗆
	(pH) (Condu	activity) (TDS	S) (TSS) (E	BOD) (Turbi	dity) (Alkalinity)	(HCO3/CO3) (C	Cl) (SO4) (NO	(NO2) (F)	
1					itrogen) (NH3)	(NO3/NO2)			
	<u> </u>	le) (WAD Cy		• /					
1	<u> </u>		, , , , ,	, , , , , ,		(Pb) (Mg) (Mn) (			
1	`		) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (	Na) (Hardness) (Silic
	VOC (Boein		antules a						
	Methane Eth	nane Ethene A	cetylene						
	others								
	2								
Duplicate Sar	mple No(s):								
Comments:	MSMSD Lo	cation							
						Date:	11/11/2019		



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	199	
Event:		Nov-19			Date/Time:	11/11 /2019@		1117	
Sample Nun	nber:	RGW226S-	191111		Weather:	SC			
Landau Rep		DSB			•				
WATERIEV	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	·(O)	Describe:	Flush Mount		
		•		•	,		1 lusii iviount	CW Mater No. (	s 4
DTW Before		8.97	Time:		Flow through ce		1112	GW Meter No.(	•
		11/ 11 /2019		End Purge:		11/ 11 /2019 @		Gallons Purged:	0.25
Purge water of	isposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENTSYSIEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	tors for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1055	15.0	170.6	3.26	6.51	87.5		8.84		
1058		-	2.59	6.46	87.0		8.86		
		170.4							
1101	14.0	182.4	2.47	6.42	88.5		8.87	· <del></del>	
1104	13.7	224.0	1.75	6.32	93.9				
1107	13.3	275.8	0.90	6.42	87.4				
1110	13.2	283.8	0.65	6.52	80.2				
					-				
SAMPLE CO	LLECTION D								
Sample Colle			Bailer		Pump/Pump Type	BLADDER			
Made of:		Stainless Stee	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	<del>-</del>	Alconox Was	_		DI Water	Dedicated	₽ ouiei	Dedicated	
(By Numerica		Other	nı <u>L</u>	1 ap Kilisc	□ Di Watei	Dedicated			
, ,			ahaan ata h		TANIMODEDA	TE TURBIDITY N	ONG		
Sample Desci	ription (color,	turbidity, odor,	sneen, etc.):		TAN MODERA	IE IURBIDII I N	ONS		
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	рН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	13.2	283.9	0.64	6.53	79.3				
2	13.2	284.2	0.63	6.54	78.8				
3	13.2	284.4	0.61		78.2				
				6.55					
4	13.2	284.5	0.60	6.56	77.6				
Average:	13.2	284.3	0.62	6.55	78.5	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	R BOTTLE	TYPE (Circle a)	oplicable or write	non-standard a	nalysis below)	
3	(8260-SIM)	(8010) (8020	) (NWTPH-	G) (NWTPI	H-Gx) (BTEX)			WA □	OR 🗆
	(8270D) (PA	AH) (NWTPI	I-D) (NWTI	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & G	rease)	wa 🗆	OR 🗆
	``	• • • • • • • • • • • • • • • • • • • •	/ / /	/ \	• • • • • • • • • • • • • • • • • • • •	(HCO3/CO3) (C	(SO4) (NO	03) (NO2) (F)	
1			, ,		itrogen) (NH3)	(NO3/NO2)			
1	<u> </u>	(MAD Cy			(C <sub>2</sub> ) (C <sub>2</sub> ) (E <sub>2</sub> )	(Pb) (Mg) (Mn) (I	Ni) (Aa) (Sa) (	(Tl) (W) (7) (II	a) (V) (Na)
1	<u> </u>			, , , , , ,					Na) (Hardness) (Silic
	VOC (Boein		) (Da) (Dc) (C	<i>(Cu)</i> (Co)	(CI) (Cu) (FC) (I	b) (Mg) (Mii) (M) (	(Ag) (Sc) (11) (V	( ) (Zii) (Hg) (K) (	(Ma) (Hardness) (Sinc
	`	nane Ethene A	cetylene						
	others								
Duplicate Sar	nple No(s):								
Comments:									
Signature:		DSB				Date:	11/11/2019		



Project Nam	ne:	Boeing Ren	ton		Project Number	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/11 /2019@		847	
Sample Nun	nber:	RGW232S-	191111		Weather:	FOG			
Landau Rep	resentative:	DSB							
WATERIEV	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	(O)	Describe:	Flush Mount		
		ì		•	,		1 lusii iviount	CW Mater No. (	s 4
DTW Before		8.02	Time:		Flow through ce		0.41	GW Meter No.(	•
	Date/Time:			End Purge:		11/ 11 /2019 @		Gallons Purged:	0.25
Purge water of	isposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENTSYSIEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	tors for throa	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
830	15.8	516.0	4.76	6.53	59.7		8.54		
833		508.0	6.77	6.27	69.5		8.53		
836	15.1	505.0	6.89	6.23	70.6		8.53	· <del></del>	
839	14.8	503.0	6.93	6.20	70.5		8.52		
			_						
CALLED F. CC	T FOTION F								
	LLECTION D		Bailer		D T	DI ADDED			
Sample Colle	cted with:		_	_	Pump/Pump Type				
Made of:		Stainless Stee			Teflon	Polyethylene	Other	Dedicated	
Decon Procee		Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color,	turbidity, odor	, sheen, etc.):	CLEAR COI	LORLESS NONS				
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
Replicate	(°F/°C)	(uS/cm)	(mg/L)	pii	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	14.7	502.0	6.95	6.20	70.5				
2	14.7	502.0	6.93	6.20	70.6				-
3	14.7	502.0	6.91	6.20	70.5				
4	14.6	501.0	6.93	6.19	70.5				
Average:	14.7	501.8	6.93	6.20	70.5	#DIV/0!			
QUANTITY	TYPICALA	NALVSIS AI	TOMED DE	R BOTTI F	TVPE (Circle o	oplicable or write	non-standard a	nalysis below)	
3					H-Gx) (BTEX)	opileable of write i	non-standard a	WA	OR 🗆
	<u> </u>					(8141) (Oil & Gr	rease)	wa 🗆	OR 🗆
	<u> </u>					(HCO3/CO3) (C			
1					itrogen) (NH3)				
	(Total Cyanic	le) (WAD Cy	anide) (Free	Cyanide)					
1	(Total Metals	) (As) (Sb) (	Ba) (Be) (Ca	ı) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (1	Ni) (Ag) (Se) (	Tl) (V) (Zn) (H	g) (K) (Na)
1	(Dissolved M	etals) (As) (Sb	) (Ba) (Be) (G	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (F	b) (Mg) (Mn) (Ni) (	(Ag) (Se) (Tl) (V	V) (Zn) (Hg) (K) (	Na) (Hardness) (Silio
	VOC (Boein								
	Methane Eth	nane Ethene A	cetylene						
	others								
Duplicate Sar	nple No(s):								
Duplicate Sar Comments:	mple No(s):								



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/11 /2019@		917	
Sample Nun	nber:	RGW233I-	191111		Weather:	FOG			
Landau Rep		DSB			,				
WATERIES	VEL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	·(O)	Describe:	Flush Mount		
		,		•	,		1 Iusii iviount	CW Mater No. (	s 4
DTW Before		7.53	Time:		Flow through ce		012	GW Meter No.(	
		11/ 11 /2019		End Purge:		11/ 11 /2019 @		Gallons Purged:	
Purge water of	lisposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENTSYSIEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm) le: Stablizatio	(mg/L)	tors for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
857	13.9	208.0	0.29	6.59	62.9		7.52		
900	13.1	204.6	0.53	6.54	64.0		7.52		
903	-	212.8	1.10	6.46	65.3		7.52		
906	11.3	220.5	1.47	6.42	66.1				
909	10.7	219.8	1.72	6.41	65.3				
912	10.4	215.7	1.85	6.40	64.3				
	-			-					
SAMPLE CO	LLECTION D	)ATA							
Sample Colle			Bailer		Pump/Pump Type	BLADDER			
Made of:	П	Stainless Stee			Teflon	Polyethylene	Other	Dedicated	
Decon Proced	dura:	Alconox Was	_		DI Water	Dedicated			
(By Numerica		Other	" <u>"</u>	rup remse	□ Di water	Dedicated			
, ,		turbidity, odor,	chaan ato):		CLEAR COLOI	DESS NONS			
Sample Desci	ription (color,	iuroiuity, odor,	, sneen, etc.)		CLL/III COLOI	IKESS NONS			
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	10.3	215.3	1.86	6.39	64.5				
2	10.3	214.8	1.87	6.39	64.7				
3	10.3	213.5	1.88	6.39	64.1				
4	10.2	212.7	1.90	6.40	63.7				
						//DH1/01			
Average:	10.3	214.1	1.88	6.39	64.3	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	ER BOTTLE	TYPE (Circle a	oplicable or write	non-standard a	nalysis below)	
3	<u> </u>	` / `	/ \		H-Gx) (BTEX)			WA 🗆	OR 🗆
	<u> </u>		/ \	/ \		(8141) (Oil & Gi		WA 🗆	OR 🗆
1	<u> </u>	•/				(HCO3/CO3) (C	(SO4) (NO	(3) (NO2) (F)	
1		(To (WAD Cy			itrogen) (NH3)	(NO3/NO2)			
1	i i				(Cr) (Cn) (Fe)	(Pb) (Mg) (Mn) (I	Ni) (Ao) (Se) (	Tl) (V) (7n) (H	g) (K) (Na)
1									Na) (Hardness) (Silic
	VOC (Boein		, , , , , , , , , , , , , , , , , , ,	, (, ()	, , , , (* *) (1	, ( 6) () ()	( O) () (**) ( '	/ \ / \\(\frac{\fire}{\figin}}}}}}}{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac}}}}{\frac{\frac{\frac{\frac{\frac{\fir}}{\frac{\frac{\frac{\frac{\frac}}}}}{\firan{\frac{\frac{\frac{\frac{\frac{\frac}}}}}{	, (
	`	nane Ethene A	cetylene						
	others								
Dunlingto C-	male Ma(a).								
Duplicate Sar Comments:	mple No(s):								



Project Nam	ie:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/11 /2019@		1347	
Sample Nun	nber:	RGW234S-	191111		Weather:	CLEAR			
Landau Rep		DSB			•				
WATERIEV	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	·(O)	Describe:	Flush Mount		
		,		•	,		1 lusii iviount	CW Mater No. (	s 4
DTW Before		8.14	Time:		Flow through ce		1220	GW Meter No.(	
-		11/ 11 /2019		End Purge:		11/ 11 /2019 @		Gallons Purged:	
Purge water d	iisposed to:	-	55-gal Drum	. 4	Storage Tank	☐ Ground	Other	SITE TREATM	ENI SYSIEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm) le: Stablizatio	(mg/L)	tors for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
1323	15.7	261.2	0.38	6.39	90.3		8.16		
1326	15.4	256.7	0.37	6.41	87.0		8.17		
1329	15.1	252.3	0.49	6.43	83.9		8.17		
1332	14.8	247.4	0.69	6.45	31.1				
1335	14.8	243.8	0.93	6.46	78.8				
1338	14.9	240.3	0.91	6.47	77.0				
SAMPLE CO	LLECTION D	)ATA							
Sample Collection			Bailer		Pump/Pump Type	BLADDER			
Made of:		Stainless Stee	_	_	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lura:	Alconox Was	_		DI Water	Dedicated			
(By Numerica		Other	··· 및	rup remse	□ Di Water	Dedicated			
	,	turbidity, odor,	chaan ato):		tan HIGH TURE	DIDITY NONS			
Sample Beser	iption (color,	iuroiuity, odor,	, sneen, etc.)		tan mon reki	MDITT IVONS			
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	15.0	240.4	0.91	6.46	77.3				
2	15.0	240.2	0.91	6.46	77.5				
3	15.0	239.4	0.92	6.46	77.7				
4	15.0	237.8	0.93	6.46	77.6			· <del></del>	
						#DIV/01			
Average:	15.0	239.5	0.92	6.46	77.5	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	ER BOTTLE	TYPE (Circle a)	oplicable or write i	non-standard a	nalysis below)	
3					H-Gx) (BTEX)			WA 🗆	OR 🗆
	<u> </u>		/ \	/ \		(8141) (Oil & Gr		WA 🗆	OR 🗆
1	``	•/	/ \ / \	/ \	• • • • • • • • • • • • • • • • • • • •	(NO3/NO2)	1) (SO4) (NO	95) (NO2) (F)	
1	· · · · ·	le) (WAD Cy			itrogen) (NH3)	(1103/1102)			
1	<u> </u>				(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Ni) (Ag) (Se) (	Tl) (V) (Zn) (H	g) (K) (Na)
			, , , , ,	, , , , ,		· · · · · · · · · · · · · · · · · · ·			Na) (Hardness) (Silic
	VOC (Boein				. , . , . , . , .				
	Methane Eth	nane Ethene A	cetylene						
	others								
Duplicate Sar	nnle No(s):								
•	трте тvo(s).								
Comments:									



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/11 /2019@		1407	
Sample Nun	nber:	RGW235I-	191111		Weather:	CLEAR			
Landau Rep		DSB			•				
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	7.73	Time:	•	Flow through ce			GW Meter No.(	s 4
		11/ 11 /2019		End Purge:	-	11/ 11 /2019 @	1402	Gallons Purged:	0.25
Purge water of			55-gal Drum	Ē	Storage Tank	Ground		SITE TREATM	
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	•	(mV)	(NTU)	(ft)	Volume (gal)	Observations
	Purge Goa +/- 3%	ls: Stablizatio +/- 3%	n of Parame +/- 10%	ters for three +/- 0.1 units	e consecutive rea +/- 10 mV	dings within the fo +/- 10%	ollowing limits < 0.3 ft	>/= 1 flow through cell	
1245						1/- 10 / 0		tiir ougii ten	
1345	15.1	150.7	0.27	6.37	83.8		7.71		
1348	15.3	149.9	0.42	6.27	84.9		7.72		
1351	15.5	150.6	0.61	6.25	85.2		7.72		
1354	15.7	151.7	1.05	6.26	85.0				
1357	15.9	152.9	1.12	6.27	85.0				
1400		152.6	1.18	6.27	84.5		-		
1400		132.0	1.10		04.5				
CALLED F. CC									
Sample Colle	LLECTION D		Bailer		Dayner /Dayner Trans	DIADDED			
	cied willi.		_	_	Pump/Pump Type Teflon		Othor	Dodinated	
Made of:	. =	Stainless Stee	_			Polyethylene	Other	Dedicated	
Decon Procee		Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other							
Sample Descri	ription (color,	turbidity, odor,	, sheen, etc.):		CLEAR COLOR	LESS NONS			
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	15.9	152.7	1.18	6.27	84.5				
2	15.9	152.9	1.16	6.28	84.4			-	
3	16.0	152.9	1.15	6.28	84.5				
4	16.0	153.0	1.15	6.28	84.4				
Average:	16.0	152.9	1.16	6.28	84.5	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	ER BOTTLE	TYPE (Circle 21	oplicable or write	non-standard a	nalysis below)	1
3					H-Gx) (BTEX)			wa 🗆	OR 🗆
	(8270D) (PA	AH) (NWTPI	I-D) (NWTI	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & Gi	rease)	wa 🗆	OR 🗆
	(pH) (Condu	activity) (TDS	S) (TSS) (E	BOD) (Turbi	dity) (Alkalinity)	(HCO3/CO3) (C	Cl) (SO4) (NC	3) (NO2) (F)	
1	(COD) (TO	C5310C) (To	tal PO4) (To	tal Kiedahl N	itrogen) (NH3)	(NO3/NO2)			
	•	le) (WAD Cy		_ ·					
1						(Pb) (Mg) (Mn) (1			
	<u> </u>		) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) (	(Ag) (Se) (Tl) (\	/) (Zn) (Hg) (K) (	Na) (Hardness) (Silic
	VOC (Boein	ig short list) nane Ethene A	retylene						
	iviculane Ell	iane Ethene A	ceryiene						
	others								
Duplicate Sar	nple No(s):								
Comments:									
Signature:		DSB				Date:	11/11/2019		



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 11 /2019@		1427	
Sample Nun	nber:	RGW236S-	191111		Weather:	CLEAR			
Landau Rep		DSB			•				
WATERIEV	VEL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	·(O)	Describe:	Flush Mount		
				•	,		1 lusii iviount	CW Mater No. (	s 4
DTW Before		7.35	Time:	End Purge:	Flow through ce		1.426	GW Meter No.(	•
		11/ 11 /2019		_		11/ 11 /2019 @		Gallons Purged:	0.25
Purge water of	iisposed to:	-	55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENI SYSIEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	tors for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1410	15.5	321.8	4.20	6.37	90.4		7.43		
1413	15.6	333.2	2.56	6.42	86.0		7.37		
1416		339.3	2.02	6.44	84.4		7.37	·	
1419	15.7	343.2	1.70	6.44	82.9				
1422	15.7	344.5	1.52	6.45	81.9				
1425	15.6	345.3	1.36	6.45	81.2				
SAMPLE CO	LLECTION D	DATA							
Sample Colle			Bailer		Pump/Pump Type	BLADDER			
Made of:		Stainless Stee		_	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	dura:	Alconox Was	_		DI Water	Dedicated			
(By Numerica		Other	" <u>"</u>	rup remse	□ Di Water	Dedicated			
, ,		turbidity, odor,	ahaan ata ):		OD ANCE HIGH	TURBIDITY NON	J.C		
Sample Descr	ription (color,	iuroiuity, odor,	, sheen, etc.)		OKANGE IIIGI	TORBIDIT I NOI	10		
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	15.6	345.6	1.33	6.46	80.9				
2	15.6	345.7	1.27	6.46	80.7				
3	15.6	345.9	1.23	6.46	80.4				
4	15.6	346.0	1.20	6.46	80.1				
	15.6	345.8	1.26	6.46	80.5	#DIV/0!			
Average:	13.0	٥.٥+ر	1.20	0.40	00.3	π <b>D1</b> V/U:			
QUANTITY						pplicable or write i	non-standard a		
3					H-Gx) (BTEX)	(01.11) (011.0.0		WA L	OR 🗆
		/ \		/ \		(8141) (Oil & Gr		WA D	OR 🗆
1	<u> </u>	• • • • • • • • • • • • • • • • • • • •			fitrogen) (NH3)	(HCO3/CO3) (C	.1) (304) (NO	(NO2) (F)	
		le) (WAD Cy				(1.103/1102)			
1	<u> </u>			• /	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (1	Ni) (Ag) (Se) (	Tl) (V) (Zn) (H	g) (K) (Na)
1	1			, , , , , ,					Na) (Hardness) (Silic
	VOC (Boein	ng short list)							
	Methane Eth	nane Ethene A	cetylene						
	others								
Duplicate Sar	mple No(e):								
	mpic riotsi.								
Comments:	inpic rvo(s).								



Project Nam	ne:	Boeing Ren	ton		Project Number	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/12 /2019@	1045		
Sample Nur	nber:	RGW031S-	191112		Weather:	RAINY, COLD			
Landau Rep	resentative:	BXM							
WATER LEV	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before		5.26	Time:	•	Flow through ce			GW Meter No.(	s HFRON-3
	0 0 0	11/ 12 /2019		End Purge:	_	11/ 12/2019@	1044	Gallons Purged:	
Purge water of		11/12 /201	55-gal Drum	Ĕ	Storage Tank	Ground		SITE TREATM	
ruige water c	nsposed to.		55-gai Diulii		Storage Tank	₽ Ground	- Other	SITE TREATM	ENT STSTEM
m·	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	
Time	(°F/°C) Purge Goa	(uS/cm) ls: Stablizatio	(mg/L) on of Parame	ters for three	(mV) e consecutive rea	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1025	15.2	366.2	0.37	6.31	112.5		5.27		
1028	14.0	360.2	0.58	6.27	113.9		5.26		
1031	13.7	356.7	0.75	6.26	114.5		5.26		
1034		356.6	0.95	6.25	114.4		3.20		-
1037	13.2	357.7	1.04	6.25	114.7				
1040	13.1	359.1	0.95	6.26	114.1				
SAMPLE CO	LLECTION E	OATA							
Sample Colle	cted With:		Bailer		Pump/Pump Type	BLADDER			
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	dure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color,	turbidity, odor,	, sheen, etc.):_	CLEAR, CO	LORLESS, NO S	HEEN, NO ODOR	, DARK FINES		
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	` ′	` /	, ,	(2)		(1410)	(11)	(1411)	Observations
1	13.1	359.4	1.00	6.26	113.8				
2	13.1	359.9	1.02	6.27	113.6				
3	13.1	360.0	1.05	6.28	113.6				
4	13.1	360.7	1.09	6.28	113.6				
Average:	13.1	360.0	1.04	6.27	113.7	#DIV/0!			
QUANTITY	TVPICAL A	NAI VSIS AI	LOWED PE	P ROTTI F	TVPF (Circle a)	oplicable or write i	non-standard a	nalveie halow)	
5		0) (8020) (N				spireable of write i	ion-standard a	WA $\square$	OR 🗆
	` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `					(8141) (Oil & Grea	ase)	wa 🗆	OR 🗆
	`		/ \	/ \		(HCO3/CO3) (C			
1	(COD) (TO	C) (Total PO	4) (Total Kie	dahl Nitroger	n) (NH3) (NO3	/NO2)			
	<u> </u>	le) (WAD Cy		• /					
	<u> </u>			, , , , , ,		(Pb) (Mg) (Mn) (1			
	<u> </u>		o) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) (	(Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (	Na) (Hardness) (Silie
	VOC (Boein		aatrila :: -						
	Methane Eth	nane Ethene A	cetylene						
	others								
Duplicate Sar	mple No(s):	Duplicate Lo	cation (DUP2	)					
Duplicate Sar Comments:	mple No(s):	Duplicate Lo	cation (DUP2	)					



Project Nam	ie:	Boeing Ren	ton		Project Number	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/12 /2019@	1230		
Sample Nun	nber:	RGW033S-	191112		Weather:	OVERCAST, CO	OOL		
Landau Rep		BXM			•				
WATERIEV	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	0)	Describe:	Flush Mount		
		,	Time:	•			1 Iusii Wount	CW Matan No. (	LIEDON 2
DTW Before	0 0 0	5.34			Flow through cel		227	GW Meter No.(	
0 0		11/12 /2019		End Purge:		11/12 /2019@1		Gallons Purged:	
Purge water of	iisposed to:		55-gal Drum	۳	Storage Tank	Ground	Other	SITE TREATM	ENISYSIEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm) ls: Stablizatio	(mg/L) on of Parame	ters for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1207	15.7	379.5	0.18	6.32	120.5		5.37		
1210	14.7	362.5	0.31	6.30	118.2		5.38		-
1213	14.5	358.0	0.32	6.29	117.5		5.39		-
1216	14.3	349.3	0.40	6.30	115.1				
1219	14.2	347.0	0.46	6.30	114.1				
1222	13.9	343.1	0.56	6.29	112.6				
1225	13.7	341.8	0.61	6.30	111.7				
SAMPLE CO	LLECTION D	DATA							
Sample Colle			Bailer		Pump/Pump Type	BLADDER			
Made of:		Stainless Stee	_	PVC	Teflon	Polyethylene	Other	Dedicated	-
Decon Proced	lure:	Alconox Was	sh 🗖	Tap Rinse	DI Water	Dedicated	<u>—</u>	_	
(By Numerica		Other		Tup Tunio		Boundariou			
` -	,		sheen etc.):	CLEAR CO	LORIESS NOS	HEEN, NO ODOR,	SOME DARK	FINES	
Sumple Beser	ipiion (color, t	iaroiany, oaor,	<u> </u>	CEE/III, CO	ECITEESS, IVO S	IIDDIN, ING ODGIN	, SOME DINGE	11125	
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	13.7	341.5	0.63	6.3	111.5				
2	13.7	341.2	0.64	6.3	111.4				
3	13.7	341.0							
4			0.65	6.3					
-	13.7		0.65	6.3	111.3				
A ******	13.7	340.9	0.65	6.3	111.3	#DIV/01			
Average:	13.7				111.3	#DIV/0!			
Average:  QUANTITY	13.7 TYPICAL A	340.9 341.2 NALYSIS AI	0.65 0.64 LLOWED PE	6.3 6.3 <b>ER BOTTLE</b>	111.3 111.2 111.4 TYPE (Circle ap	#DIV/0!	non-standard a	nalysis below)	
	13.7 <b>TYPICAL A</b> (8260) (8010)	340.9 341.2 NALYSIS AI 0) (8020) (N	0.65 0.64 LOWED PE	6.3 6.3 CR BOTTLE	111.3 111.2 111.4 TYPE (Circle ap	oplicable or write i		wa 🗆	OR 🗆
QUANTITY	13.7 <b>TYPICAL A</b> (8260) (8010) (8270) (PAF	340.9 341.2 NALYSIS AI 0) (8020) (N H) (NWTPH-	0.65 0.64 LLOWED PE NWTPH-G) (	6.3 6.3 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-	111.3 111.2 111.4 TYPE (Circle ap ) (BTEX) HCID) (8081) (	oplicable or write i	ase)	WA □ WA □	OR  OR
QUANTITY 5	13.7  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu	340.9 341.2 NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS	0.65  0.64  LOWED PERWYPH-G) ( D) (NWTPH S) (TSS) (B	6.3 6.3 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-I-Dx) (TPH-I-Dx) (Turbic	111.3 111.2 111.4 TYPE (Circle ap ) (BTEX) HCID) (8081) (dity) (Alkalinity)	oplicable or write in (8141) (Oil & Great (HCO3/CO3) (C	ase)	WA □ WA □	_
QUANTITY	13.7  TYPICAL A (8260) (8010) (8270) (PAF (pH) (Conduction) (TOO)	340.9 341.2 NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS	0.65  0.64  LOWED PENWTPH-G) ( D) (NWTPH-S) (TSS) (B 4) (Total Kie	6.3 6.3 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-GOD) (Turbio dahl Nitrogen	111.3 111.2 111.4 TYPE (Circle ap ) (BTEX) HCID) (8081) (	oplicable or write in (8141) (Oil & Great (HCO3/CO3) (C	ase)	WA □ WA □	_
QUANTITY 5	13.7  TYPICAL A (8260) (8010) (8270) (PAH (pH) (Conduction) (TOd (Total Cyanid	340.9 341.2  NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO- de) (WAD Cy	0.65  0.64  LOWED PENWTPH-G) ( D) (NWTPH-S) (TSS) (Bs.) (TSS) (Bs.) (Total Kieranide) (Free	6.3 6.3 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-IOD) (Turbic dahl Nitrogen Cyanide)	111.3 111.2 111.4 TYPE (Circle aporto) (BTEX) HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NO3/	(8141) (Oil & Green (HCO3/CO3) (CV/NO2)	ase) Cl) (SO4) (NO	WA	OR
QUANTITY 5	TYPICAL A (8260) (801) (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals	340.9 341.2  NALYSIS AI 0) (8020) (N H) (NWTPH- ectivity) (TDS C) (Total PO- le) (WAD Cy ) (As) (Sb) (	0.65  0.64  LOWED PE WTPH-G) ( D) (NWTPH S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca	6.3 6.3 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-ISOD) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	111.3 111.2 111.4 TYPE (Circle ap ) (BTEX) HCID) (8081) (dity) (Alkalinity) (dity) (Alkalinity) (NO3,	(8141) (Oil & Great (MCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA  WA  WA  WA  WA  WA  WA  WA  WA  WA	OR □ g) (K) (Na)
QUANTITY 5	TYPICAL A (8260) (801) (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals	340.9 341.2  NALYSIS AI 0) (8020) (N H) (NWTPH- ectivity) (TDS C) (Total PO4 le) (WAD Cy ) (As) (Sb) (setals) (As) (Sb) (Sb)	0.65  0.64  LOWED PE WTPH-G) ( D) (NWTPH S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca	6.3 6.3 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-ISOD) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	111.3 111.2 111.4 TYPE (Circle ap ) (BTEX) HCID) (8081) (dity) (Alkalinity) (dity) (Alkalinity) (NO3,	(8141) (Oil & Great (MCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA  WA  WA  WA  WA  WA  WA  WA  WA  WA	OR
QUANTITY 5	TYPICAL A (8260) (8010) (8270) (PAF (pH) (Conduction) (Total Cyanida (Total Metals) (Dissolved Metals) (Dissolved Metals)	340.9 341.2  NALYSIS AI 0) (8020) (N H) (NWTPH- ectivity) (TDS C) (Total PO4 le) (WAD Cy ) (As) (Sb) (setals) (As) (Sb) (Sb)	0.65  0.64  LOWED PENTPH-G) ( D) (NWTPH-S) (TSS) (B4) (Total Kieranide) (Free Ba) (Be) (Carbo) (Ba) (Be) (Carbo) (Ba) (Be) (Carbo)	6.3 6.3 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-ISOD) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	111.3 111.2 111.4 TYPE (Circle ap ) (BTEX) HCID) (8081) (dity) (Alkalinity) (dity) (Alkalinity) (NO3,	(8141) (Oil & Great (MCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA  WA  WA  WA  WA  WA  WA  WA  WA  WA	OR □ g) (K) (Na)
QUANTITY 5	TYPICAL A (8260) (8010) (8270) (PAF (pH) (Conduction) (Total Cyanida (Total Metals) (Dissolved Metals) (Dissolved Metals)	340.9 341.2  NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 le) (WAD Cy ) (As) (Sb) (setals) (As) (Sb ag short list)	0.65  0.64  LOWED PENTPH-G) ( D) (NWTPH-S) (TSS) (B4) (Total Kieranide) (Free Ba) (Be) (Carbo) (Ba) (Be) (Carbo) (Ba) (Be) (Carbo)	6.3 6.3 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-ISOD) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	111.3 111.2 111.4 TYPE (Circle ap ) (BTEX) HCID) (8081) (dity) (Alkalinity) (dity) (Alkalinity) (NO3,	(8141) (Oil & Great (MCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA  WA  WA  WA  WA  WA  WA  WA  WA  WA	OR □ g) (K) (Na)
QUANTITY 5	TYPICAL A (8260) (8010) (8270) (PAF (pH) (Conduction) (Total Cyanida (Total Metals) (Dissolved Metals) (Dissolved Metals)	340.9 341.2  NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 le) (WAD Cy ) (As) (Sb) (setals) (As) (Sb ag short list)	0.65  0.64  LOWED PENTPH-G) ( D) (NWTPH-S) (TSS) (B4) (Total Kieranide) (Free Ba) (Be) (Carbo) (Ba) (Be) (Carbo) (Ba) (Be) (Carbo)	6.3 6.3 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-ISOD) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	111.3 111.2 111.4 TYPE (Circle ap ) (BTEX) HCID) (8081) (dity) (Alkalinity) (dity) (Alkalinity) (NO3,	(8141) (Oil & Great (MCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA  WA  WA  WA  WA  WA  WA  WA  WA  WA	OR □ g) (K) (Na)
QUANTITY 5	TYPICAL A (8260) (8010) (8270) (PAF (pH) (Conduction) (Total Cyanida (Total Metals) (Dissolved Metals) (Dissolved Metals)	340.9 341.2  NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 le) (WAD Cy ) (As) (Sb) (setals) (As) (Sb ag short list)	0.65  0.64  LOWED PENTPH-G) ( D) (NWTPH-S) (TSS) (B4) (Total Kieranide) (Free Ba) (Be) (Carbo) (Ba) (Be) (Carbo) (Ba) (Be) (Carbo)	6.3 6.3 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-ISOD) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	111.3 111.2 111.4 TYPE (Circle ap ) (BTEX) HCID) (8081) (dity) (Alkalinity) (dity) (Alkalinity) (NO3,	(8141) (Oil & Great (MCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA  WA  WA  WA  WA  WA  WA  WA  WA  WA	OR □ g) (K) (Na)
QUANTITY 5	TYPICAL A (8260) (801) (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	340.9 341.2  NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 le) (WAD Cy ) (As) (Sb) (setals) (As) (Sb ag short list)	0.65  0.64  LOWED PENTPH-G) ( D) (NWTPH-S) (TSS) (B4) (Total Kieranide) (Free Ba) (Be) (Carbo) (Ba) (Be) (Carbo) (Ba) (Be) (Carbo)	6.3 6.3 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-ISOD) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	111.3 111.2 111.4 TYPE (Circle ap ) (BTEX) HCID) (8081) (dity) (Alkalinity) (dity) (Alkalinity) (NO3,	(8141) (Oil & Great (MCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA  WA  WA  WA  WA  WA  WA  WA  WA  WA	OR □ g) (K) (Na)
QUANTITY 5	TYPICAL A (8260) (801) (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	340.9 341.2  NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 le) (WAD Cy ) (As) (Sb) (setals) (As) (Sb ag short list)	0.65  0.64  LOWED PENTPH-G) ( D) (NWTPH-S) (TSS) (B4) (Total Kieranide) (Free Ba) (Be) (Carbo) (Ba) (Be) (Carbo) (Ba) (Be) (Carbo)	6.3 6.3 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-ISOD) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	111.3 111.2 111.4 TYPE (Circle ap ) (BTEX) HCID) (8081) (dity) (Alkalinity) (dity) (Alkalinity) (NO3,	(8141) (Oil & Great (MCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA  WA  WA  WA  WA  WA  WA  WA  WA  WA	OR □ g) (K) (Na)



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 12 /2019@	1320		
Sample Nun	nber:	RGW034S-	191112		Weather:	OVERCAST, CO	OOL		
Landau Rep	resentative:	BXM			•				
WATER LEV	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	5.51	Time:	•	Flow through ce			GW Meter No.(	s HERON-3
	0 0 0	11/ 12 /2019		End Purge:	-	11/ 12 /2019 @	1318	Gallons Purged:	
Purge water d			55-gal Drum	Ē	Storage Tank	Ground		SITE TREATM	
rarge water a			-		_		<del></del>		
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
Time				ters for three		dings within the fo	. ,	>/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1258	16.1	268.3	0.11	6.48	102.6		5.50		
1301	15.7	269.0	0.18	6.46	100.8		5.50		
1304	15.0	266.9	0.22	6.45	98.1		5.51		
1307		265.4	0.24	6.45	96.8				
1310		262.6	0.28	6.45	94.8				
1313	14.1	261.3	0.35	6.45	93.8				
1316	13.8	259.7	0.35	6.45	92.4				
SAMPLE CO	LLECTION D								
Sample Collec	cted With:		Bailer	_	Pump/Pump Type				
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proceed	dure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color,	turbidity, odor,	, sheen, etc.):	CLEAR, CO	LORLESS, NO S	HEEN, NO ODOR			
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
1	(°F/°C)	(uS/cm)	(mg/L)	r	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	13.8	259.4	0.35	6.45	92.1				
2	13.7	259.2	0.35	6.45	92.0				
3	13.7	259.1	0.35	6.45	91.9				
4	13.6	258.8	0.36	6.45	91.6				
						#DIV/01			
Average:	13.7	259.1	0.35	6.45	91.9	#DIV/0!			
QUANTITY						oplicable or write i	on-standard a	nalysis below)	
5	`	0) (8020) (N		`				WA 🗆	OR 🗆
	`		/ \			(8141) (Oil & Grea		WA 🗆	OR 🗆
1	<b>~</b> ` `	•/			•/	(HCO3/CO3) (C	(SO4) (NO	(NO2) (F)	
1		le) (WAD Cy			n) (NH3) (NO3	/1102)			
	<u> </u>			• /	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (1	Ni) (Ag) (Se) (	Tl) (V) (Zn) (H	(g) (K) (Na)
	<u> </u>			, , , , , ,					(Na) (Hardness) (Silie
	VOC (Boein				. , . , . , . , .			, , , , , , , , , , , , , , , , , , , ,	
	Methane Eth	nane Ethene A	cetylene						
	others								
Dunlicate Sar	mple No(s)								
Duplicate Sar Comments:	mple No(s):								



Project Nan	ne:	Boeing Rent	on		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/12 /2019@	1405		
Sample Nur	mber:	RGW038S-	191112		Weather:	OVERCAST, C			
Landau Rep		BXM			,	·			
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES)	)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	5.57	Time:	1332	Flow through ce	ll vol.		GW Meter No.(	s HERON-3
		11/ 12 /2019		End Purge:	•	11/ 12 /2019 @	1401	Gallons Purged:	
Purge water of			55-gal Drum	<u> </u>	Storage Tank	Ground		SITE TREATM	
8	•								
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
Time				ters for three		dings within the fo		>/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1341	15.4	278.2	0.23	6.40	93.9		5.58		
1344	14.9	279.4	0.28	6.36	93.4		5.59		
1347	14.4	277.2	0.35	6.35	92.4		5.60		
1350	13.9	274.5	0.40	6.35	91.2				
1353		271.0	0.49	6.36	89.5				
1356		269.6	0.52	6.36	88.6				
					-				
1359	12.9	267.9	0.55	6.36	87.5				
CAMPIE CC	LI FOTION F								
	OLLECTION D		D-31		D T	DIADDED			
Sample Colle	cted with:	_	Bailer l 🔲	_	Pump/Pump Type	_	Other	D. 1	
Made of:	. E	Stainless Stee	_		Teflon	Polyethylene	Other	Dedicated	
Decon Proce		Alconox Was	h 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other							
Sample Desc	ription (color,	turbidity, odor,	sheen, etc.):	GRAY TINT	T, CLOUDY, DA	RK FINES, NO SH	EEN, NO ODOF	₹	
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	12.9	267.7	0.56	6.36	87.3				
2	12.9	267.5	0.56	6.36	87.4				
3	12.8	267.4	0.58	6.37	87.2				
4	12.8	267.4	0.57	6.37	87.0				
Average:	12.9	267.5	0.57	6.37	87.2	#DIV/0!			
	1					pplicable or write	non-standard a		
5		0) (8020) (N				(0141) (01.0 0	>	WA □	OR  OR
			/ \	/ \		(8141) (Oil & Gre (HCO3/CO3) (O			OR 🗆
1	4 /	• • • • • • • • • • • • • • • • • • • •	/ \ / \		1) (NH3) (NO3		21) (304) (NO	(1102) (1')	
		le) (WAD Cya			, (, (1.55	,			
	<u> </u>				(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (	Ni) (Ag) (Se) (	(Tl) (V) (Zn) (H	g) (K) (Na)
	1								Na) (Hardness) (Sili
	VOC (Boein	g short list)							
	Methane Eth	nane Ethene Ac	etylene						
	others								
	others								
Duplicate Sar	mple No(s):								
Comments:									
Signature:	BXM					Date:	11.12.19		



Project Nam	ie:	Boeing Ren	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 12/2019@	1301		
Sample Nun	nber:	RGW039S-	191112		Weather:	CLOUDY 40S			
Landau Rep	resentative:	SRB							
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)	)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	5.11	Time:	1245	Flow through ce	ll vol.		GW Meter No.(s	s HERON1
		11/ 12 /2019		End Purge:	_	11/ 12 /2019 @	1322	Gallons Purged:	0.5
Purge water of			55-gal Drum	Ĕ	Storage Tank	Ground		SITE TREATM	
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)		(mV)	(NTU)	(ft)	Volume (gal)	Observations
	Purge Goa +/- 3%	ls: Stablizatio +/- 3%		ters for three +/- 0.1 units	e consecutive rea +/- 10 mV	dings within the fo +/- 10%	< 0.3 ft	>/= 1 flow through cell	
1303	16.7	201.0	0.86	6.21		LOW	5.13	<b>g</b>	
1306		200.6	0.61	6.25	9.1	EO II	5.14		
	17.0								
1309	16.9	199.6	0.51	6.27	6.8		5.14		
1312		199.5	0.49	6.29	4.0				
1315	16.8	198.8	0.42	6.29	2.7				
1318	16.8	198.7	0.42	6.29	2.3				
1321	16.9	199.4	0.42	6.30	2.0				
	LLECTION D		Bailer		D /D T	DED DI ADDED			
Sample Colle	cted With:	Stainless Stee		PVC	Pump/Pump Type Teflon	DED BLADDER Polyethylene	Other	Dedicated	
Made of:	. H		_					Dedicated	
Decon Proced		Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	,	Other	1	GI IGHTI V	WELLOW WITH	OR ANGE BARTIO	THE AFER NO.	IO	
Sample Desci	ription (color, t	urbidity, odor,	sheen, etc.):	SLIGHTLY	YELLOW WITH	ORANGE PARTIC	CULATES NO/P	15	
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	рН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	16.8	199.4	0.46	6.30	1.9				
2	16.8								
3		199.4	0.44	6.30	1.9				
	16.9	199.4	0.44	6.30	2.0				
4	16.9 16.9								
4 Average:		199.4	0.42	6.30	2.0	#DIV/0!			
Average:	16.9	199.4 199.2 199.4	0.42 0.42 0.44	6.30 6.30 6.30	2.0 1.9 1.9	_	non-standard a	nalysis helow)	
Average:	16.9 16.9 TYPICAL A	199.4 199.2 199.4 NALYSIS AL	0.42 0.42 0.44 LOWED PE	6.30 6.30 6.30 CR BOTTLE	2.0 1.9 1.9 TYPE (Circle a)	#DIV/0!	non-standard a		OR $\square$
Average:	16.9 16.9 <b>TYPICAL A</b> (8260) (801)	199.4 199.2 199.4 NALYSIS AL 0) (8020) (N	0.42 0.42 0.44 LLOWED PE	6.30 6.30 6.30 CR BOTTLE	2.0 1.9 1.9 TYPE (Circle a) (BTEX)	_		nalysis below) WA  WA  WA	OR OR
Average:	16.9 16.9 <b>TYPICAL A</b> (8260) (8010 (8270) (PAF	199.4 199.2 199.4 NALYSIS AL 0) (8020) (N	0.42 0.42 0.44 LOWED PE	6.30 6.30 6.30 CR BOTTLE (NWTPH-GX) I-DX) (TPH-	2.0 1.9 1.9 TYPE (Circle a) (BTEX) HCID) (8081)	oplicable or write i	ase)	WA 🗆	
Average:	16.9 16.9 17491CAL A (8260) (8010 (8270) (PAH (pH) (Condu	199.4 199.2 199.4 NALYSIS AL 0) (8020) (N H) (NWTPH-I	0.42 0.42 0.44 LOWED PE NWTPH-G) ( D) (NWTPH S) (TSS) (B	6.30 6.30 6.30 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-GOD) (Turbio	2.0 1.9 1.9 TYPE (Circle a) (BTEX) HCID) (8081)	oplicable or write in (8141) (Oil & Great (HCO3/CO3) (C	ase)	WA 🗆	
Average:  QUANTITY  5	16.9 16.9 17YPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Too	199.4 199.2 199.4 NALYSIS AL 0) (8020) (N H) (NWTPH-lactivity) (TDS C) (Total PO4	0.42 0.44  LLOWED PE WTPH-G) ( D) (NWTPH S) (TSS) (B 4) (Total Kie anide) (Free	6.30 6.30 6.30 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-GD) (Turbic dahl Nitroger Cyanide)	2.0 1.9 1.9 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3.	(8141) (Oil & Gree (HCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO	WA	OR
Average:  QUANTITY  5	16.9 16.9 17YPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals	199.4 199.2 199.4 NALYSIS AL 0) (8020) (N H) (NWTPH-lactivity) (TDS C) (Total PO4 le) (WAD Cya)	0.42 0.44  LLOWED PE WTPH-G) ( D) (NWTPH S) (TSS) (B 4) (Total Kie ranide) (Free Ba) (Be) (Ca	6.30 6.30 6.30 6.30 CR BOTTLE NWTPH-GX I-DX) (TPH-GOD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	2.0 1.9 1.9 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3 (Cr) (Cu) (Fe)	(8141) (Oil & Great (HCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:  QUANTITY  5	TYPICAL A (8260) (8014 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M	199.4 199.2 199.4 NALYSIS AL 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 de) (WAD Cya ) (As) (Sb) (I (etals) (As) (Sb	0.42 0.44  LLOWED PE WTPH-G) ( D) (NWTPH S) (TSS) (B 4) (Total Kie ranide) (Free Ba) (Be) (Ca	6.30 6.30 6.30 6.30 CR BOTTLE NWTPH-GX I-DX) (TPH-GOD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	2.0 1.9 1.9 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3 (Cr) (Cu) (Fe)	(8141) (Oil & Great (HCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:  QUANTITY  5	16.9 16.9 16.9 17YPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	199.4 199.2 199.4 NALYSIS AL 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 de) (WAD Cya ) (As) (Sb) (I (etals) (As) (Sb	0.42 0.44  LLOWED PE WTPH-G) ( D) (NWTPH S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.30 6.30 6.30 6.30 CR BOTTLE NWTPH-GX I-DX) (TPH-GOD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	2.0 1.9 1.9 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3 (Cr) (Cu) (Fe)	(8141) (Oil & Great (HCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:  QUANTITY  5	16.9 16.9 16.9 17YPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	199.4 199.2 199.4 NALYSIS AL 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 le) (WAD Cya ) (As) (Sb) (1 etals) (As) (Sb	0.42 0.44  LLOWED PE WTPH-G) ( D) (NWTPH S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.30 6.30 6.30 6.30 CR BOTTLE NWTPH-GX I-DX) (TPH-GOD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	2.0 1.9 1.9 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3 (Cr) (Cu) (Fe)	(8141) (Oil & Great (HCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:  QUANTITY  5	16.9 16.9 16.9 17YPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	199.4 199.2 199.4 NALYSIS AL 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 le) (WAD Cya ) (As) (Sb) (1 etals) (As) (Sb	0.42 0.44  LLOWED PE WTPH-G) ( D) (NWTPH S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.30 6.30 6.30 6.30 CR BOTTLE NWTPH-GX I-DX) (TPH-GOD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	2.0 1.9 1.9 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3 (Cr) (Cu) (Fe)	(8141) (Oil & Great (HCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR
Average:  QUANTITY  5	16.9 16.9 16.9 17YPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	199.4 199.2 199.4 NALYSIS AL 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 le) (WAD Cya ) (As) (Sb) (1 etals) (As) (Sb	0.42 0.44  LLOWED PE WTPH-G) ( D) (NWTPH S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.30 6.30 6.30 6.30 CR BOTTLE NWTPH-GX I-DX) (TPH-GOD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	2.0 1.9 1.9 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3 (Cr) (Cu) (Fe)	(8141) (Oil & Great (HCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:  QUANTITY  5	16.9 16.9 16.9 17YPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	199.4 199.2 199.4 NALYSIS AL 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 le) (WAD Cya ) (As) (Sb) (1 etals) (As) (Sb	0.42 0.44  LLOWED PE WTPH-G) ( D) (NWTPH S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.30 6.30 6.30 6.30 CR BOTTLE NWTPH-GX I-DX) (TPH-GOD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	2.0 1.9 1.9 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3 (Cr) (Cu) (Fe)	(8141) (Oil & Great (HCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:  QUANTITY  5	16.9 16.9 16.9 17YPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	199.4 199.2 199.4 NALYSIS AL 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 le) (WAD Cya ) (As) (Sb) (1 etals) (As) (Sb	0.42 0.44  LLOWED PE WTPH-G) ( D) (NWTPH S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.30 6.30 6.30 6.30 CR BOTTLE NWTPH-GX I-DX) (TPH-GOD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	2.0 1.9 1.9 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3 (Cr) (Cu) (Fe)	(8141) (Oil & Great (HCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)



Project Nam	e <u>:</u>	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 12/2019@	1141		
Sample Num	nber:	RGW143S-	191112		Weather:	CLOUDY 40S			
Landau Repr	resentative:	SRB							
WATER LEV	'EL/WELL/PU	JRGE DATA							
Well Condition	n:	Secure (YES	)	Damaged (N	IO)	Describe:	Flush Mount		
DTW Before	Purging (ft)	5.7	Time:	1110	Flow through ce	ll vol.		GW Meter No.(s	HERON1
Begin Purge:	0 0 0			End Purge:	C	11/ 12 /2019 @	1125	Gallons Purged:	0.5
Purge water d	isposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	pm	(mV)	(NTU)	(ft)	Volume (gal)	Observations
	U					dings within the fo	O	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1114	14.9	296.3	0.19	6.37	6.4	MED	5.75		
1117	14.9	303.9	0.21	6.40	-0.7		5.73		
1120	14.9	304.7	0.22	6.40	-3.5		5.73		
1123	15.0	306.3	0.23	6.41	-6.4				
								· <del></del>	
SAMPLE CO			Bailer		D /D T	DED DI ADDER			
Sample Collec	ctea with:			_		DED BLADDER		D. 1:	
Made of:		Stainless Stee	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	_	Alconox Was	sh 📙	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other							
Sample Descr									
	iption (color, t	turbidity, odor	, sheen, etc.):	SLGIHTLY	YELLOW AND	TURBID WITH RE	D PARTICULA	TES NO/NS	
Replicate	Temp	Cond.	D.O.	SLGIHTLY pH	YELLOW AND	TURBID WITH RE	DTW	TES NO/NS Ferrous iron	Comments/
Replicate									Comments/ Observations
Replicate	Temp	Cond.	D.O.		ORP	Turbidity	DTW	Ferrous iron	
•	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity	DTW	Ferrous iron	
1	Temp (°F/°C)	Cond. (uS/cm) 306.6	D.O. (mg/L)	<b>рН</b> 6.41	ORP (mV)	Turbidity	DTW	Ferrous iron	
1 2	Temp (°F/°C) 15.0	Cond. (uS/cm) 306.6 306.7	D.O. (mg/L) 0.23	<b>pH</b> 6.41  6.41	ORP (mV) 6.8 7.2	Turbidity	DTW	Ferrous iron	
1 2 3	Temp (°F/°C) 15.0 15.0	Cond. (uS/cm) 306.6 306.7 307.0	D.O. (mg/L) 0.23 0.23	6.41 6.41 6.41	ORP (mV) -6.8 -7.2 -7.6	Turbidity	DTW	Ferrous iron	
1 2 3 4 Average:	Temp (°F/°C) 15.0 15.0 15.0 15.1 15.1	Cond. (uS/cm) 306.6 306.7 307.0 307.0 306.8	D.O. (mg/L) 0.23 0.23 0.22 0.22	6.41 6.41 6.41 6.41 6.41	ORP (mV)  -6.8  -7.2  -7.6  -8.0  -7.4	Turbidity (NTU)  #DIV/0!	DTW (ft)	Ferrous iron (Fe II)	
1 2 3 4 Average:	Temp (°F/°C) 15.0 15.0 15.0 15.1 15.0	Cond. (uS/cm) 306.6 306.7 307.0 307.0 306.8	D.O. (mg/L) 0.23 0.23 0.22 0.22 0.23	6.41 6.41 6.41 6.41 6.41 6.41	ORP (mV)  -6.8  -7.2  -7.6  -8.0  -7.4  TYPE (Circle a)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Observations
1 2 3 4 Average:	Temp (°F/°C) 15.0 15.0 15.1 15.0 TYPICAL A (8260) (8010	Cond. (uS/cm) 306.6 306.7 307.0 307.0 306.8 NALYSIS AI 0) (8020) (N	D.O. (mg/L)  0.23  0.23  0.22  0.22  0.23  LLOWED PERWYPH-G) (	6.41 6.41 6.41 6.41 6.41 6.41 CR BOTTLE	ORP (mV)  -6.8  -7.2  -7.6  -8.0  -7.4  TYPE (Circle a) (BTEX)	Turbidity (NTU)  #DIV/0!	DTW (ft)	Ferrous iron (Fe II)  nalysis below)	Observations  OR
1 2 3 4 Average:	Temp (°F/°C) 15.0 15.0 15.1 15.0 TYPICAL A (8260) (8010 (8270) (PAF	Cond. (uS/cm) 306.6 306.7 307.0 307.0 306.8 NALYSIS AI 0) (8020) (N	D.O. (mg/L)  0.23  0.23  0.22  0.22  0.23  LOWED PENTPH-G) (	6.41 6.41 6.41 6.41 6.41 6.WTPH-GX	ORP (mV)  -6.8  -7.2  -7.6  -8.0  -7.4  TYPE (Circle a) ) (BTEX)  -HCID) (8081)	Turbidity (NTU)  #DIV/0!	DTW (ft)  non-standard a	Ferrous iron (Fe II)  nalysis below)  WA  WA  WA	Observations
1 2 3 4 Average:	Temp (°F/°C)  15.0  15.0  15.0  15.1  15.0  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu	Cond. (uS/cm)  306.6  306.7  307.0  307.0  306.8  NALYSIS AI 0) (8020) (N H) (NWTPH- lectivity) (TD:	D.O. (mg/L)  0.23  0.23  0.22  0.22  0.23  LOWED PERMYPH-G) (D) (NWTPH-GS) (TSS) (BS)	6.41 6.41 6.41 6.41 6.41 6.41 6.41 6.41	ORP (mV)  -6.8  -7.2  -7.6  -8.0  -7.4  TYPE (Circle a) ) (BTEX)  -HCID) (8081)	#DIV/0! pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (Green and the second content an	DTW (ft)  non-standard a	Ferrous iron (Fe II)  nalysis below)  WA  WA  WA	Observations  OR
1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.0  15.0  15.0  15.1  15.0  TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu	Cond. (uS/cm)  306.6  306.7  307.0  307.0  306.8  NALYSIS AI 0) (8020) (N H) (NWTPH- lectivity) (TD:	D.O. (mg/L)  0.23  0.23  0.22  0.22  0.23  LOWED PENWTPH-G) ( D) (NWTPH-G) ( ED) (TSS) (ED) (TSS) (ED) (TOTAL Kieles)	6.41 6.41 6.41 6.41 6.7 6.41 6.41 6.41 6.41 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GX H-Dx) (Turbick) Codahl Nitroger	ORP (mV)  -6.8  -7.2  -7.6  -8.0  -7.4  TYPE (Circle a) ) (BTEX)  HCID) (8081) dity) (Alkalinity)	#DIV/0! pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (Green and the second content an	DTW (ft)  non-standard a	Ferrous iron (Fe II)  nalysis below)  WA  WA  WA	Observations  OR
1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.0  15.0  15.0  15.1  15.0  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (TOO (Total Cyanid	Cond. (uS/cm)  306.6  306.7  307.0  307.0  306.8  NALYSIS AI  0) (8020) (NH) (NWTPH- lectivity) (TDS  C) (Total PO- le) (WAD Cy	D.O. (mg/L)  0.23  0.22  0.22  0.23  LOWED PENTTH-G) ( D) (NWTPH-S) (ES) (TSS) (ES) (ES) (ES) (ES) (ES) (ES) (ES) (	pH  6.41 6.41 6.41 6.41 6.41 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbiodal) (Turbiodal)	ORP (mV)  -6.8  -7.2  -7.6  -8.0  -7.4  TYPE (Circle a) ) (BTEX) HCID) (8081) dity) (Alkalinity) a) (NH3) (NO3	#DIV/0! pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (Green and the second content an	DTW (ft)  non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below)  WA  WA  WA  ONLY  WA  ONLY	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.0  15.0  15.0  15.1  15.0  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals)	Cond. (uS/cm)  306.6  306.7  307.0  307.0  306.8  NALYSIS AI (0) (8020) (N (1) (NWTPH- (1) (Total PO- (1) (WAD Cy (1) (As) (Sb) (	D.O. (mg/L)  0.23  0.22  0.22  0.23  LLOWED PENTTH-G) (NWTPH-S) (TSS) (B) (TSS) (TSS) (B) (TSS) (TSS) (B) (TSS) (T	pH  6.41 6.41 6.41 6.41 6.41 6.41 6.41 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbicked) (Turbicked) (Turbicked) (Turbicked) (Cd) (Co)	ORP (mV)  -6.8  -7.2  -7.6  -8.0  -7.4  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (Alkalinity) n) (NH3) (NO3)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (O/NO2)  (Pb) (Mg) (Mn) (	DTW (ft)  non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  OR ON	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.0  15.0  15.0  15.1  15.0  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  306.6  306.7  307.0  307.0  306.8  NALYSIS AI (0) (8020) (NH) (NWTPHactivity) (TDS) (C) (Total POde) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L)  0.23  0.22  0.22  0.23  LLOWED PENWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (E) (E) (E) (E) (E) (E) (E) (E) (E) (E	pH  6.41 6.41 6.41 6.41 6.41 6.41 6.41 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbicked) (Turbicked) (Turbicked) (Turbicked) (Cd) (Co)	ORP (mV)  -6.8  -7.2  -7.6  -8.0  -7.4  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (Alkalinity) n) (NH3) (NO3)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (O/NO2)  (Pb) (Mg) (Mn) (	DTW (ft)  non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  OR ON	Observations  OR □  OR □  OR □  g) (K) (Na)
1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.0  15.0  15.0  15.1  15.0  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  306.6  306.7  307.0  307.0  306.8  NALYSIS AI  0) (8020) (N H) (NWTPH-  lectivity) (TDS C) (Total PO4 le) (WAD Cy de) (As) (Sb) ( letals) (As) (Sb) (	D.O. (mg/L)  0.23  0.22  0.22  0.23  LLOWED PENWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (E) (E) (E) (E) (E) (E) (E) (E) (E) (E	pH  6.41 6.41 6.41 6.41 6.41 6.41 6.41 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbicked) (Turbicked) (Turbicked) (Turbicked) (Cd) (Co)	ORP (mV)  -6.8  -7.2  -7.6  -8.0  -7.4  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (Alkalinity) n) (NH3) (NO3)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (O/NO2)  (Pb) (Mg) (Mn) (	DTW (ft)  non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  OR ON	Observations  OR □  OR □  OR □  g) (K) (Na)
1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.0  15.0  15.0  15.1  15.0  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  306.6  306.7  307.0  307.0  306.8  NALYSIS AI (0) (8020) (NH) (NWTPHactivity) (TDS) (C) (Total POde) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L)  0.23  0.22  0.22  0.23  LLOWED PENWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (E) (E) (E) (E) (E) (E) (E) (E) (E) (E	pH  6.41 6.41 6.41 6.41 6.41 6.41 6.41 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbicked) (Turbicked) (Turbicked) (Turbicked) (Cd) (Co)	ORP (mV)  -6.8  -7.2  -7.6  -8.0  -7.4  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (Alkalinity) n) (NH3) (NO3)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (O/NO2)  (Pb) (Mg) (Mn) (	DTW (ft)  non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  OR ON	Observations  OR □  OR □  OR □  g) (K) (Na)
1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.0  15.0  15.0  15.1  15.0  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm)  306.6  306.7  307.0  307.0  306.8  NALYSIS AI (0) (8020) (NH) (NWTPHactivity) (TDS) (C) (Total POde) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L)  0.23  0.22  0.22  0.23  LLOWED PENWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (E) (E) (E) (E) (E) (E) (E) (E) (E) (E	pH  6.41 6.41 6.41 6.41 6.41 6.41 6.41 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbicked) (Turbicked) (Turbicked) (Turbicked) (Cd) (Co)	ORP (mV)  -6.8  -7.2  -7.6  -8.0  -7.4  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (Alkalinity) n) (NH3) (NO3)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (O/NO2)  (Pb) (Mg) (Mn) (	DTW (ft)  non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  OR ON	Observations  OR □  OR □  OR □  g) (K) (Na)
1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.0  15.0  15.0  15.1  15.0  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  306.6  306.7  307.0  307.0  306.8  NALYSIS AI (0) (8020) (NH) (NWTPHactivity) (TDS) (C) (Total POde) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L)  0.23  0.22  0.22  0.23  LLOWED PENWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (E) (E) (E) (E) (E) (E) (E) (E) (E) (E	pH  6.41 6.41 6.41 6.41 6.41 6.41 6.41 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbicked) (Turbicked) (Turbicked) (Turbicked) (Cd) (Co)	ORP (mV)  -6.8  -7.2  -7.6  -8.0  -7.4  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (Alkalinity) n) (NH3) (NO3)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (O/NO2)  (Pb) (Mg) (Mn) (	DTW (ft)  non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  OR ON	Observations  OR □  OR □  OR □  g) (K) (Na)
1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.0  15.0  15.0  15.1  15.0  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm)  306.6  306.7  307.0  307.0  306.8  NALYSIS AI (0) (8020) (NH) (NWTPHactivity) (TDS) (C) (Total POde) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L)  0.23  0.22  0.22  0.23  LLOWED PENWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (E) (E) (E) (E) (E) (E) (E) (E) (E) (E	pH  6.41 6.41 6.41 6.41 6.41 6.41 6.41 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbicked) (Turbicked) (Turbicked) (Turbicked) (Cd) (Co)	ORP (mV)  -6.8  -7.2  -7.6  -8.0  -7.4  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (Alkalinity) n) (NH3) (NO3)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (O/NO2)  (Pb) (Mg) (Mn) (	DTW (ft)  non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  OR ON	Observations  OR □  OR □  OR □  g) (K) (Na)
1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.0  15.0  15.0  15.1  15.0  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm)  306.6  306.7  307.0  307.0  306.8  NALYSIS AI  0) (8020) (N H) (NWTPHactivity) (TDS C) (Total PO- le) (WAD Cy) ) (As) (Sb) (letals) (As) (Sb ag short list) hane Ethene Activity	D.O. (mg/L)  0.23  0.22  0.22  0.23  LLOWED PENWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (E) (E) (E) (E) (E) (E) (E) (E) (E) (E	pH  6.41 6.41 6.41 6.41 6.41 6.41 6.41 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbicked) (Turbicked) (Turbicked) (Turbicked) (Cd) (Co)	ORP (mV)  -6.8  -7.2  -7.6  -8.0  -7.4  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (Alkalinity) n) (NH3) (NO3)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (O/NO2)  (Pb) (Mg) (Mn) (	DTW (ft)  non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  OR ON	Observations  OR □  OR □  OR □  g) (K) (Na)



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 12/2019@	1021		
Sample Nun	nber:	RGW209S-	191112		Weather:	CLOUDY 40S			
Landau Rep	resentative:	SRB			,				
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES	5)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	5.3	Time:	945	Flow through ce	ll vol.		GW Meter No.(	s HERON1
	Date/Time:				-	11/ 12 /2019 @	1000	Gallons Purged:	0.5
Purge water of			55-gal Drum	Ē	Storage Tank	Ground		SITE TREATM	
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	tous fou thus	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
953	15.1	330.7	0.24	6.48	17.2	LOW	5.30	0	
956	15.2	329.8	0.26	6.48	15.3		5.30		
959	15.3	328.0	0.26	6.48	7.0		5.30		
SAMPLE CO	LLECTION D	ΔΤΔ							
Sample Colle			Bailer		Pump/Pump Type	DED BLADDER			
Made of:		Stainless Ste		_	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	dura:	Alconox Wa	_		DI Water	Dedicated			
(By Numerica	_	Other	311 <u>–</u>	rup remse	□ Di water	Dedicated			
	ii Oraci)								
Sample Decci	rintion (color t	turbidity odor	cheen etc.):	CLEAR COL	ORLESS NO/N				
Sample Descr	ription (color, t	turbidity, odor	, sheen, etc.):	CLEAR CO	LORLESS NO/N	S			
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	CLEAR COI	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
	Temp	Cond.	D.O.		ORP	Turbidity			
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity			
Replicate 1	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	<b>рН</b> 6.47	ORP (mV) 6.4 5.9	Turbidity (NTU)	(ft)		
Replicate  1 2	Temp (°F/°C) 15.3	Cond. (uS/cm) 327.8 327.9	D.O. (mg/L) 0.28 0.27	<b>pH</b> 6.47  6.47	ORP (mV)	Turbidity (NTU)			
Replicate  1 2 3	Temp (°F/°C) 15.3 15.3	Cond. (uS/cm) 327.8 327.9	D.O. (mg/L) 0.28 0.27	<b>pH</b> 6.47  6.47  6.48	ORP (mV) 6.4 5.9	Turbidity (NTU)	(ft)		
Replicate  1 2 3 4 Average:	Temp (°F/°C) 15.3 15.3 15.3 15.3 15.3	Cond. (uS/cm) 327.8 327.9 327.7 328.3 327.9	D.O. (mg/L) 0.28 0.27 0.27 0.27	6.47 6.47 6.48 6.48	ORP (mV)  6.4  5.9  5.4  5.2  5.7	Turbidity (NTU)  #DIV/0!	(ft)	(Fe II)	
Replicate  1 2 3 4 Average:	Temp (°F/°C) 15.3 15.3 15.3 15.3 15.3	Cond. (uS/cm) 327.8 327.9 327.7 328.3 327.9	D.O. (mg/L) 0.28 0.27 0.27 0.27 0.27	pH  6.47  6.47  6.48  6.48  6.48	ORP (mV)  6.4  5.9  5.4  5.2  5.7  TYPE (Circle a)	Turbidity (NTU)	(ft)	(Fe II)	Observations
Replicate  1 2 3 4 Average:	Temp (°F/°C) 15.3 15.3 15.3 15.3 15.3 TYPICAL A (8260) (8010	Cond. (uS/cm) 327.8 327.9 327.7 328.3 327.9 NALYSIS AI 0) (8020) (N	D.O. (mg/L) 0.28 0.27 0.27 0.27 0.27	6.47 6.47 6.48 6.48 6.48 CR BOTTLE	ORP (mV) 6.4 5.9 5.4 5.2 5.7 TYPE (Circle a) (BTEX)	Turbidity (NTU)  #DIV/0!	(ft)	(Fe II)	Observations OR  OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  15.3  15.3  15.3  15.3  15.3  TYPICAL A  (8260) (8010) (8270) (PAF	Cond. (uS/cm)  327.8  327.9  327.7  328.3  327.9  NALYSIS AI  0) (8020) (NH) (NWTPH-	D.O. (mg/L)  0.28  0.27  0.27  0.27  0.27  0.27  LLOWED PENWTPH-G) (NWTPH-G)	pH  6.47 6.48 6.48 6.48 6.48 CR BOTTLE (NWTPH-GX) H-Dx) (TPH-	ORP (mV)  6.4  5.9  5.4  5.2  5.7  TYPE (Circle a) (BTEX)  HCID) (8081)	Turbidity (NTU)  #DIV/0!	non-standard a	nalysis below) WA  WA  WA	Observations
Replicate  1 2 3 4 Average:	Temp (°F/°C)  15.3  15.3  15.3  15.3  15.3  TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu	Cond. (uS/cm) 327.8 327.9 327.7 328.3 327.9 NALYSIS AI 0) (8020) (NH) (NWTPH- lectivity) (TD:	D.O. (mg/L)  0.28  0.27  0.27  0.27  0.27  0.27  0.10  0.27  0.27  0.27  0.27  0.27  0.27  0.27  0.27  0.27  0.27  0.27  0.27	6.47 6.48 6.48 6.48 6.48 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbic	ORP (mV)  6.4  5.9  5.4  5.2  5.7  TYPE (Circle a) (BTEX)  HCID) (8081)	#DIV/0! pplicable or write to (8141) (Oil & Gree) (HCO3/CO3) (Control of the control of the cont	non-standard a	nalysis below) WA  WA  WA	Observations OR  OR
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.3  15.3  15.3  15.3  15.3  TYPICAL A (8260) (8010 (8270) (PAH (pH) (Conduction) (COD) (TOO	Cond. (uS/cm) 327.8 327.9 327.7 328.3 327.9 NALYSIS AI 0) (8020) (NH) (NWTPH- lectivity) (TD:	D.O. (mg/L)  0.28  0.27  0.27  0.27  0.27  0.27  0.10  0.27	6.47 6.48 6.48 6.48 CR BOTTLE (NWTPH-Gx, I-Dx) (TPH-BOD) (Turbic dahl Nitroger	ORP (mV)  6.4  5.9  5.4  5.2  5.7  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity	#DIV/0! pplicable or write to (8141) (Oil & Gree) (HCO3/CO3) (Control of the control of the cont	non-standard a	nalysis below) WA  WA  WA	Observations OR  OR
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.3  15.3  15.3  15.3  15.3  TYPICAL A (8260) (8010 (8270) (PAH (pH) (Conduction (COD) (Tool (Total Cyanide)	Cond. (uS/cm)  327.8  327.9  328.3  327.9  NALYSIS AI  0) (8020) (NH) (NWTPH- lectivity) (TD: C) (Total PO-	D.O. (mg/L)  0.28  0.27  0.27  0.27  0.27  0.27  CLOWED PENWTPH-G) (NWTPH-S) (TSS) (Eds) (Total Kiewanide) (Free	pH  6.47 6.48 6.48 6.48 6.48 CR BOTTLE (NWTPH-Gx) H-Dx) (TPH-BOD) (Turbic Cyanide)	ORP (mV)  6.4  5.9  5.4  5.2  5.7  TYPE (Circle a) (BTEX)  HCID) (8081)  dity) (Alkalinity (Alkalinity)  (Alkalinity) (Alkalinity)	#DIV/0! pplicable or write to (8141) (Oil & Gree) (HCO3/CO3) (Control of the control of the cont	non-standard a	(Fe II)  nalysis below)  WA  WA  WA  O  3) (NO2) (F)	Observations OR OR OR
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.3  15.3  15.3  15.3  15.3  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M	Cond. (uS/cm)  327.8  327.9  327.7  328.3  327.9  NALYSIS AI (0) (8020) (NH) (NWTPH-activity) (TD: (C) (Total POde) (WAD Cy) (As) (Sb) ((etals) (As) (Sb) (St)	D.O. (mg/L)  0.28  0.27  0.27  0.27  0.27  0.27  CLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (TSS) (EVA) (Total Kiewanide) (Free Ba) (Be) (Ca	6.47 6.48 6.48 6.48 6.48 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbic ddhl Nitroger Cyanide) a) (Cd) (Co)	ORP (mV)  6.4  5.9  5.4  5.2  5.7  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (Alkalinity) (NH3) (NO3)  (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write to the process of the control	non-standard at ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   3) (NO2) (F)  T1) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.3  15.3  15.3  15.3  15.3  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  327.8  327.9  328.3  327.9  NALYSIS AI  0) (8020) (N H) (NWTPH- activity) (TD: C) (Total PO- de) (WAD Cy ) (As) (Sb) ( etals) (As) (Sb ag short list)	D.O. (mg/L)  0.28  0.27  0.27  0.27  0.27  0.27  0.27  CLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (Free Paniel) (Free Paniel) (Free Paniel) (Free Paniel) (Ba) (Be) (Carb) (Ba) (Be) (Carb)	6.47 6.48 6.48 6.48 6.48 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbic ddhl Nitroger Cyanide) a) (Cd) (Co)	ORP (mV)  6.4  5.9  5.4  5.2  5.7  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (Alkalinity) (NH3) (NO3)  (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write to the process of the control	non-standard at ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   3) (NO2) (F)  T1) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.3  15.3  15.3  15.3  15.3  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  327.8  327.9  327.7  328.3  327.9  NALYSIS AI (0) (8020) (NH) (NWTPH-activity) (TD: (C) (Total POde) (WAD Cy) (As) (Sb) ((etals) (As) (Sb) (St)	D.O. (mg/L)  0.28  0.27  0.27  0.27  0.27  0.27  0.27  CLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (Free Paniel) (Free Paniel) (Free Paniel) (Free Paniel) (Ba) (Be) (Carb) (Ba) (Be) (Carb)	6.47 6.48 6.48 6.48 6.48 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbic ddhl Nitroger Cyanide) a) (Cd) (Co)	ORP (mV)  6.4  5.9  5.4  5.2  5.7  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (Alkalinity) (NH3) (NO3)  (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write to the process of the control	non-standard at ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   3) (NO2) (F)  T1) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.3  15.3  15.3  15.3  15.3  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  327.8  327.9  328.3  327.9  NALYSIS AI  0) (8020) (N H) (NWTPH- activity) (TD: C) (Total PO- de) (WAD Cy ) (As) (Sb) ( etals) (As) (Sb ag short list)	D.O. (mg/L)  0.28  0.27  0.27  0.27  0.27  0.27  0.27  CLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (Free Paniel) (Free Paniel) (Free Paniel) (Free Paniel) (Ba) (Be) (Carb) (Ba) (Be) (Carb)	6.47 6.48 6.48 6.48 6.48 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbic ddhl Nitroger Cyanide) a) (Cd) (Co)	ORP (mV)  6.4  5.9  5.4  5.2  5.7  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (Alkalinity) (NH3) (NO3)  (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write to the process of the control	non-standard at ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   3) (NO2) (F)  T1) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.3  15.3  15.3  15.3  15.3  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Todal Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm)  327.8  327.9  328.3  327.9  NALYSIS AI  0) (8020) (NH) (NWTPH- activity) (TD: C) (Total PO- de) (WAD Cy ) (As) (Sb) ( etals) (As) (Sb ag short list)	D.O. (mg/L)  0.28  0.27  0.27  0.27  0.27  0.27  0.27  CLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (Free Paniel) (Free Paniel) (Free Paniel) (Free Paniel) (Ba) (Be) (Carb) (Ba) (Be) (Carb)	6.47 6.48 6.48 6.48 6.48 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbic ddhl Nitroger Cyanide) a) (Cd) (Co)	ORP (mV)  6.4  5.9  5.4  5.2  5.7  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (Alkalinity) (NH3) (NO3)  (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write to the control of the control	non-standard at ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   3) (NO2) (F)  T1) (V) (Zn) (H	Observations OR OR OR
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.3  15.3  15.3  15.3  15.3  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  327.8  327.9  328.3  327.9  NALYSIS AI  0) (8020) (NH) (NWTPH- activity) (TD: C) (Total PO- de) (WAD Cy ) (As) (Sb) ( etals) (As) (Sb ag short list)	D.O. (mg/L)  0.28  0.27  0.27  0.27  0.27  0.27  0.27  CLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (Free Paniel) (Free Paniel) (Free Paniel) (Free Paniel) (Ba) (Be) (Carb) (Ba) (Be) (Carb)	6.47 6.48 6.48 6.48 6.48 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbic ddhl Nitroger Cyanide) a) (Cd) (Co)	ORP (mV)  6.4  5.9  5.4  5.2  5.7  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (Alkalinity) (NH3) (NO3)  (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write to the control of the control	non-standard at ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   3) (NO2) (F)  T1) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.3  15.3  15.3  15.3  15.3  TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Too (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm)  327.8  327.9  328.3  327.9  NALYSIS AI  0) (8020) (NH) (NWTPH- activity) (TD: C) (Total PO- de) (WAD Cy ) (As) (Sb) ( etals) (As) (Sb ag short list)	D.O. (mg/L)  0.28  0.27  0.27  0.27  0.27  0.27  0.27  CLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (Free Paniel) (Free Paniel) (Free Paniel) (Free Paniel) (Ba) (Be) (Carb) (Ba) (Be) (Carb)	6.47 6.48 6.48 6.48 6.48 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbic ddhl Nitroger Cyanide) a) (Cd) (Co)	ORP (mV)  6.4  5.9  5.4  5.2  5.7  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (Alkalinity) (NH3) (NO3)  (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write to the control of the control	non-standard at ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   3) (NO2) (F)  T1) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.3  15.3  15.3  15.3  15.3  TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Too (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm)  327.8  327.9  328.3  327.9  NALYSIS AI  0) (8020) (NH) (NWTPH- activity) (TD: C) (Total PO- de) (WAD Cy ) (As) (Sb) ( etals) (As) (Sb ag short list)	D.O. (mg/L)  0.28  0.27  0.27  0.27  0.27  0.27  0.27  CLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (Free Paniel) (Free Paniel) (Free Paniel) (Free Paniel) (Ba) (Be) (Carb) (Ba) (Be) (Carb)	6.47 6.48 6.48 6.48 6.48 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbic ddhl Nitroger Cyanide) a) (Cd) (Co)	ORP (mV)  6.4  5.9  5.4  5.2  5.7  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (Alkalinity) (NH3) (NO3)  (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write to the control of the control	non-standard at ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   3) (NO2) (F)  T1) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR



Project Nan	ne:	Boeing Rent	on		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/12 /2019@	1135		
Sample Nur	mber:	RGW210S-	191112		Weather:	OVERCAST, C	OLD		
Landau Rep	resentative:	BXM							
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES)		Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	4.95	Time:	•	Flow through ce			GW Meter No.(	s HERON-3
	0 0 0	11/12 /2019		End Purge:	•	11/ 12 /2019 @	1134	Gallons Purged:	
Purge water of			55-gal Drum	<u> </u>	Storage Tank	Ground		SITE TREATM	
8	1				-		<del>_</del>		
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
			· · ·	ters for three		dings within the fo		>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1115	14.6	278.7	2.11	6.50	111.3		5.02		_
1118	13.9	276.8	0.21	6.48	112.2		5.02		
1121	12.6	282.4	0.16	6.48	112.9		5.02		
1124	11.8	296.5	0.18	6.59	110.3				
1127		295.5	0.20	6.65	107.1				
1130		287.4	0.27	6.68	103.6				
1133	11.8	274.4	0.28	6.65	103.3				
	LLECTION D		p. 11		D /D	DI ADDED			
Sample Colle	cted With:	_	Bailer	_	Pump/Pump Type	_			
Made of:		Stainless Stee			Teflon	Polyethylene	Other	Dedicated	
Decon Proce		Alconox Was	h 📙	Tap Rinse	DI Water	Dedicated			
(By Numerica	· · ·	Other							
Sample Desc	ription (color, t	urbidity, odor,	sheen, etc.):	BROWN, CI	LOUDY, LOTS C	OF BROWN SOLID	S, NO SHEEN,	NO ODOR	
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	11.8	272.6	0.28	6.65	103.4				
2	11.8	269.3	0.30	6.64	103.9				
3	11.8	268.7	0.29	6.64	103.7				
4	11.8	268.0	0.30	6.63	103.7				
						#DIX/01			
Average:	11.8	269.7	0.29	6.64	103.7	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AL	LOWED PE	ER BOTTLE	TYPE (Circle a)	pplicable or write	non-standard a	nalysis below)	
5		0) (8020) (N						WA 🗆	OR 🗆
	<u> </u>	/ \	/			(8141) (Oil & Gre		WA 🗆	OR 🗆
1	14 /		/ / /		dity) (Alkalinity) n) (NH3) (NO3	(HCO3/CO3) (C	Cl) (SO4) (NO	(3) (NO2) (F)	
1	<del>                                     </del>	e) (WAD Cya			1) (NEIS) (NOS	/1 <b>NO</b> 2)			
	<u> </u>			_ ·	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Ni) (Ag) (Se) (	Tl) (V) (Zn) (H	g) (K) (Na)
									Na) (Hardness) (Silio
		g short list)							
	VOC (Boein								
	<u> </u>	ane Ethene Ac	etylene						
	<u> </u>	ane Ethene Ac	etylene						
	Methane Eth	nane Ethene Ac	etylene						
	<u> </u>	aane Ethene Ac	etylene						
Duplicate Sai	Methane Eth	nane Ethene Ac	etylene						
Duplicate Sar Comments:	Methane Eth	nane Ethene Ac	etylene						



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 12/2019@	1001		
Sample Nun	nber:	RGW237S-	191112		Weather:	CLOUDY 40S			
Landau Rep		SRB							
WATERIEV	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	(0)	Describe:	Flush Mount		
DTW Before		4.8	Time:	• ,	Flow through ce		1 Idali Modifi	GW Meter No.(s	HEDON1
	Date/Time:			End Purge:		11/ 12 /2019 @	947	Gallons Purged:	
Purge water of		11/ 12 /201	55-gal Drum	Ě		Ground		SITE TREATM	
r urge water e	nsposed to.	_	_		-	_			LIVI STSTEM
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
Time	. ,		· · ·	ters for three		dings within the fo		>/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
933	14.5	210.3	0.53	6.50	14.1	LOW	4.80		
936	14.5	209.5	0.51	6.50	14.0		4.80		
939	14.6	206.5	0.44	6.47	12.8		4.80		
942	14.6	206.8	0.42	6.47	12.5				
945		207.0	0.42	6.46	12.4				
943	14.0	207.0	0.42	0.40	12.4				
	LLECTION E								
Sample Colle	cted With:	_	Bailer	_	_	DED BLADDER		<b>.</b>	-
Made of:		Stainless Ste	_	PVC	Teflon	Polyethylene	U Other	Dedicated	
Decon Procee	_	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other							
Sample Desci	ription (color,	turbidity, odor	, sheen, etc.):	SLIGHTLY	YELLOW CLEA	R WITH MINOR P.	ARTICULATES	S SLIGHT ODOR	NO SHEEN
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
1	(°F/°C)	(uS/cm)	(mg/L)	•	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	14.6	207.2	0.41	6.46	12.2				
2	14.6	207.4	0.41	6.46	12.1				
3	14.6	207.7	0.40	6.46	12.0				
4	14.6	207.3	0.40	6.46	12.0				
						//DTT/01			
Average:	14.6	207.4	0.41	6.46	12.1	#DIV/0!			-
QUANTITY	TYPICAL A	NALYSIS AI	LLOWED PE	R BOTTLE	TYPE (Circle a)	oplicable or write i	non-standard a		
5	`	0) (8020) (1						WA 🗆	OR 🗆
		/ \				(8141) (Oil & Gree		WA 🗆	or ⊔
1						(HCO3/CO3) (C	(SO4) (NO	(3) (NO2) (F)	
1	· · · ·	le) (WAD Cy			n) (NH3) (NO3	INU2)			
	· ·		/ \	•	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (1	Vi) (Ag) (Se) (	Tl) (V) (Zn) (H	σ) (K) (Na)
	ì								Na) (Hardness) (Silic
	VOC (Boein		, ( , (=-) (	<u> </u>	. , , ( ) (*	, ( <del>)</del>	( ) ( ) () ( )	/ ( / ( -6) (-1) (	, (, (
	Methane Eth	nane Ethene A	cetylene						
1	ı ——		<del></del>						·
<u> </u>									
	others								
Duplicate Sa	•								
Duplicate Sar	•								
Duplicate Sar Comments: Signature:	•					Date	11.12.19		



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 12/2019@	936		
Sample Nun	nber:	RGW238I-	191112		Weather:	CLOUDY 40S			
Landau Rep	resentative:	SRB							
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES	)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	4.89	Time:	903	Flow through ce	ll vol.		GW Meter No.(	s HERON1
	Date/Time:			End Purge:	_	11/ 12 /2019 @	927	Gallons Purged:	0.5
Purge water of			55-gal Drum	Ē	Storage Tank	Ground		SITE TREATM	
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	tous fou thus	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
907	16.2	377.7	2.21	6.16		LOW	4.91	8	
910		413.6	1.90	6.23	35.7		4.91		
	14.9			6.22			4.91		-
913		413.5	1.86		35.8		4.91		
916		402.3	1.17	6.26	26.9		-		
919	15.0	401.4	1.15	6.26	26.1				
922	15.2	400.4	1.03	6.28	24.3				
925	15.1	400.4	1.00	6.28	23.8				
SAMPLE CO	LLECTION D								
Sample Colle	cted With:		Bailer		Pump/Pump Type	DED BLADDER		_	
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proceed	lure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	al Order)	Other							
Sample Descr	ription (color, t	turbidity, odor,	, sheen, etc.):	SLIGHTLY	YELLOW AND	TURBID SULFURI	C ODOR NO SI	HEEN	
Replicate	Temp (°F/°C)	Cond.	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	15.1	400.5	(mg/L) 0.97	6.28	23.1	(1410)	(11)	(FC II)	Obsci vations
2		400.3	0.97	0.28	23.1				
	15.1	200.5	0.05	6.20					
3	15.1	399.5	0.95	6.29	22.8				
4	15.1	399.8	0.92	6.29	22.8				
4	15.2	399.8 399.9	0.92	6.29	22.8 22.5 22.1	#DW/01			
4 Average:		399.8	0.92	6.29	22.8	#DIV/0!			
	15.2	399.8 399.9 399.9	0.92 0.90 0.94	6.29 6.29 6.29	22.8 22.5 22.1 22.6	#DIV/0!	non-standard a	nalysis below)	
Average:	15.2 15.1 <b>TYPICAL A</b> (8260) (8010	399.8 399.9 399.9 NALYSIS AI 0) (8020) (N	0.92 0.90 0.94 LLOWED PE	6.29 6.29 6.29 CR BOTTLE (NWTPH-Gx)	22.8 22.5 22.1 22.6 TYPE (Circle a) (BTEX)	oplicable or write i		WA 🗆	OR 🗆
Average:	15.2 15.1 <b>TYPICAL A</b> (8260) (8010 (8270) (PAF	399.8 399.9 399.9 NALYSIS AI 0) (8020) (N	0.92 0.90 0.94 LLOWED PE	6.29 6.29 6.29 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-	22.8 22.5 22.1 22.6 TYPE (Circle a) (BTEX) HCID) (8081)	oplicable or write i	ase)	WA 🗆	OR OR
Average:  QUANTITY  5	15.2 15.1 <b>TYPICAL A</b> (8260) (8010 (8270) (PAF (pH) (Condu	399.8 399.9 399.9 NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS	0.92 0.90 0.94 LOWED PE NWTPH-G) ( D) (NWTPH S) (TSS) (B	6.29 6.29 6.29 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-GOD) (Turbic	22.8 22.5 22.1 22.6 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity)	oplicable or write in (8141) (Oil & Great (HCO3/CO3) (C	ase)	WA 🗆	
Average:	15.2 15.1 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (TOO	399.8 399.9 399.9 NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS	0.92 0.90 0.94 LOWED PENTTH-G) ( D) (NWTPH-S) (TSS) (ES) (ES) (ES) (ES) (ES) (ES) (ES) (	6.29 6.29 6.29 CR BOTTLE NWTPH-Gx I-Dx) (TPH-GOD) (Turbic dahl Nitrogen	22.8 22.5 22.1 22.6 TYPE (Circle a) (BTEX) HCID) (8081)	oplicable or write in (8141) (Oil & Great (HCO3/CO3) (C	ase)	WA 🗆	
Average:  QUANTITY  5	15.2 15.1 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Too (Total Cyanid	399.8 399.9 399.9 NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4	0.92 0.90 0.94 LLOWED PE WTPH-G) ( D) (NWTPH-S) (TSS) (ES) (TSS) (ES) 4) (Total Kie anide) (Free	6.29 6.29 6.29 CR BOTTLE (NWTPH-GX) I-Dx) (TPH-GOD) (Turbic dahl Nitrogen Cyanide)	22.8 22.5 22.1 22.6 TYPE (Circle aportion (BTEX) HCID) (8081) dity) (Alkalinity) () (NH3) (NO3)	oplicable or write in (8141) (Oil & Great (HCO3/CO3) (C	ase) Cl) (SO4) (NC	WA	OR
Average:  QUANTITY  5	15.2 15.1 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (TOG (Total Cyanid (Total Metals)	399.8 399.9 399.9 NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO- le) (WAD Cy ) (As) (Sb) (1	0.92 0.90 0.94 LLOWED PE WYPH-G) ( D) (NWTPH- S) (TSS) (B 4) (Total Kie ranide) (Free Ba) (Be) (Ca	6.29 6.29 6.29 CR BOTTLE (NWTPH-GX) I-DX) (TPH-GOD) (Turbic dahl Nitroger Cyanide) (1) (Cd) (Co)	22.8 22.5 22.1 22.6  TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	(8141) (Oil & Great (18141) (O	ase) Cl) (SO4) (NC) Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:  QUANTITY  5	15.2 15.1 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (TOG (Total Cyanid (Total Metals)	399.8 399.9 399.9 NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO <sup>2</sup> le) (WAD Cy ) (As) (Sb) (Setals) (As) (Sb) (Sb)	0.92 0.90 0.94 LLOWED PE WYPH-G) ( D) (NWTPH- S) (TSS) (B 4) (Total Kie ranide) (Free Ba) (Be) (Ca	6.29 6.29 6.29 CR BOTTLE (NWTPH-GX) I-DX) (TPH-GOD) (Turbic dahl Nitroger Cyanide) (1) (Cd) (Co)	22.8 22.5 22.1 22.6  TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	(8141) (Oil & Great (18141) (O	ase) Cl) (SO4) (NC) Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:  QUANTITY  5	15.2 15.1  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	399.8 399.9 399.9 NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO <sup>2</sup> le) (WAD Cy ) (As) (Sb) (Setals) (As) (Sb) (Sb)	0.92 0.90 0.94 LLOWED PE WTPH-G) ( D) (NWTPH-S) (TSS) (B4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.29 6.29 6.29 CR BOTTLE (NWTPH-GX) I-DX) (TPH-GOD) (Turbic dahl Nitroger Cyanide) (1) (Cd) (Co)	22.8 22.5 22.1 22.6  TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	(8141) (Oil & Great (18141) (O	ase) Cl) (SO4) (NC) Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:  QUANTITY  5	15.2 15.1  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	399.8 399.9 399.9  NALYSIS AI 0) (8020) (N H) (NWTPH- ectivity) (TDS C) (Total PO- le) (WAD Cy ) (As) (Sb) (Setals) (As) (Sb) og short list)	0.92 0.90 0.94 LLOWED PE WTPH-G) ( D) (NWTPH-S) (TSS) (B4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.29 6.29 6.29 CR BOTTLE (NWTPH-GX) I-DX) (TPH-GOD) (Turbic dahl Nitroger Cyanide) (1) (Cd) (Co)	22.8 22.5 22.1 22.6  TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	(8141) (Oil & Great (18141) (O	ase) Cl) (SO4) (NC) Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:  QUANTITY  5	15.2 15.1  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	399.8 399.9 399.9  NALYSIS AI 0) (8020) (N H) (NWTPH- ectivity) (TDS C) (Total PO- le) (WAD Cy ) (As) (Sb) (Setals) (As) (Sb) og short list)	0.92 0.90 0.94 LLOWED PE WTPH-G) ( D) (NWTPH-S) (TSS) (B4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.29 6.29 6.29 CR BOTTLE (NWTPH-GX) I-DX) (TPH-GOD) (Turbic dahl Nitroger Cyanide) (1) (Cd) (Co)	22.8 22.5 22.1 22.6  TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	(8141) (Oil & Great (18141) (O	ase) Cl) (SO4) (NC) Ni) (Ag) (Se) (	WA	OR
Average:  QUANTITY  5	15.2 15.1  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	399.8 399.9 399.9  NALYSIS AI 0) (8020) (N H) (NWTPH- ectivity) (TDS C) (Total PO- le) (WAD Cy ) (As) (Sb) (Setals) (As) (Sb) og short list)	0.92 0.90 0.94 LLOWED PE WTPH-G) ( D) (NWTPH-S) (TSS) (B4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.29 6.29 6.29 CR BOTTLE (NWTPH-GX) I-DX) (TPH-GOD) (Turbic dahl Nitroger Cyanide) (1) (Cd) (Co)	22.8 22.5 22.1 22.6  TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	(8141) (Oil & Great (18141) (O	ase) Cl) (SO4) (NC) Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:  QUANTITY 5	15.2 15.1  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu- (COD) (TOO (Total Cyanid (Total Metals) (Dissolved M VOC (Boein Methane Eth	399.8 399.9 399.9  NALYSIS AI 0) (8020) (N H) (NWTPH- ectivity) (TDS C) (Total PO- le) (WAD Cy ) (As) (Sb) (Setals) (As) (Sb) og short list)	0.92 0.90 0.94 LLOWED PE WTPH-G) ( D) (NWTPH-S) (TSS) (B4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.29 6.29 6.29 CR BOTTLE (NWTPH-GX) I-DX) (TPH-GOD) (Turbic dahl Nitroger Cyanide) (1) (Cd) (Co)	22.8 22.5 22.1 22.6  TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	(8141) (Oil & Great (18141) (O	ase) Cl) (SO4) (NC) Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:  QUANTITY  5	15.2 15.1  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu- (COD) (TOO (Total Cyanid (Total Metals) (Dissolved M VOC (Boein Methane Eth	399.8 399.9 399.9  NALYSIS AI 0) (8020) (N H) (NWTPH- ectivity) (TDS C) (Total PO- le) (WAD Cy ) (As) (Sb) (Setals) (As) (Sb) og short list)	0.92 0.90 0.94 LLOWED PE WTPH-G) ( D) (NWTPH-S) (TSS) (B4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.29 6.29 6.29 CR BOTTLE (NWTPH-GX) I-DX) (TPH-GOD) (Turbic dahl Nitroger Cyanide) (1) (Cd) (Co)	22.8 22.5 22.1 22.6  TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	(8141) (Oil & Great (18141) (O	ase) Cl) (SO4) (NC) Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)



Project Nam	e:	Boeing Ren	iton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 12/2019@	1056		
Sample Num	nber:	RGW239I-	191112		Weather:	CLOUDY 40S			
Landau Rep	resentative:	SRB			•				
WATER LEV	/FI/W/FII/DI	IRGE DATA							
Well Condition		Secure (YES	0	Damaged (N	·(O)	Describe:	Flush Mount		
		`	,	• •	•		Tiusii Wount	CW Matan No. (	LIEDONI
DTW Before		5.6	Time:		Flow through ce		1026	GW Meter No.(	
Begin Purge:				End Purge:		11/ 12 /2019 @		Gallons Purged:	0.5
Purge water d	isposed to:	Ш	55-gal Drum		Storage Tank	☐ Ground	Other	SITE TREATM	ENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm) ls: Stablizatio	(mg/L)	tors for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1028	13.0	293.2	0.25	6.33	18.8	MED-LOW	5.63		
1031	13.1	294.6	0.26	6.37	12.5		5.63		
1034	13.1	294.7	0.25	6.38	11.6		5.63		
								-	
SAMPLE CO	LI ECTION D	ΔΤΔ							
Sample Collection			Bailer		Pumn/Pumn Tyne	DED BLADDER			
Made of:		Stainless Ste		PVC	Teflon	Polyethylene	Other	Dedicated	
			_				i ouici	Dedicated	
Decon Proced (By Numerica)	_	Alconox Wa	sn 📋	Tap Rinse	DI Water	Dedicated			
IDV Numerica		Othor							
		Other	-1	CLEAD COL	ODI ESS NONS				
		_	, sheen, etc.):	CLEAR CO	LORLESS NONS				
Sample Descr		_	, sheen, etc.):	CLEAR COI	LORLESS NONS	Turbidity	DTW	Ferrous iron	Comments/
	ription (color, t	turbidity, odor					DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
Sample Descr	Temp	curbidity, odor	D.O.		ORP	Turbidity			
Sample Descr Replicate	Temp (°F/°C)	Cond. (uS/cm) 294.6	D.O. (mg/L)	<b>рН</b> 6.38	ORP (mV)	Turbidity			
Sample Descr Replicate  1 2	Temp (°F/°C) 13.1 13.1	Cond. (uS/cm) 294.6	D.O. (mg/L) 0.27 0.26	<b>pH</b> 6.38  6.39	ORP (mV) 10.9	Turbidity			
Sample Descr Replicate  1 2 3	Temp (°F/°C) 13.1 13.1	Cond. (uS/cm) 294.6 294.6	D.O. (mg/L) 0.27 0.26	<b>pH</b> 6.38  6.39  6.39	ORP (mV) 10.9 10.3	Turbidity			
Replicate  1 2 3 4	Temp (°F/°C) 13.1 13.1 13.1 13.1	Cond. (uS/cm) 294.6 294.6 294.7	D.O. (mg/L) 0.27 0.26 0.26	pH  6.38  6.39  6.39	ORP (mV) 10.9 10.3 9.8 9.3	Turbidity (NTU)			
Sample Descr Replicate  1 2 3	Temp (°F/°C) 13.1 13.1	Cond. (uS/cm) 294.6 294.6	D.O. (mg/L) 0.27 0.26	<b>pH</b> 6.38  6.39  6.39	ORP (mV) 10.9 10.3	Turbidity			
Replicate  1 2 3 4 Average:	Temp (°F/°C) 13.1 13.1 13.1 13.1 13.1	Cond. (uS/cm) 294.6 294.6 294.6 294.7 294.6	D.O. (mg/L) 0.27 0.26 0.26 0.26	6.38 6.39 6.39 6.39	ORP (mV) 10.9 10.3 9.8 9.3 10.1	Turbidity (NTU)	(ft)	(Fe II)	
Replicate  1 2 3 4 Average:	Temp (°F/°C) 13.1 13.1 13.1 13.1 13.1	Cond. (uS/cm) 294.6 294.6 294.7 294.6	D.O. (mg/L) 0.27 0.26 0.26 0.26	6.38 6.39 6.39 6.39 6.39	ORP (mV)  10.9  10.3  9.8  9.3  10.1  TYPE (Circle a)	Turbidity (NTU)  #DIV/0!	(ft)	(Fe II)	
Replicate  1 2 3 4 Average:	Temp (°F/°C) 13.1 13.1 13.1 13.1 13.1 TYPICAL A (8260) (8010	Cond. (uS/cm) 294.6 294.6 294.6 294.7 294.6 NALYSIS AI	D.O. (mg/L) 0.27 0.26 0.26 0.26 0.26	6.38 6.39 6.39 6.39 6.39 CR BOTTLE	ORP (mV)  10.9  10.3  9.8  9.3  10.1  TYPE (Circle a) (BTEX)	Turbidity (NTU)  #DIV/0!	(ft)	(Fe II)	Observations
Replicate  1 2 3 4 Average:	Temp (°F/°C) 13.1 13.1 13.1 13.1 13.1 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Conduction)	Cond. (uS/cm) 294.6 294.6 294.6 294.6 294.6 0) (8020) (NH) (NWTPH-netivity) (TD	D.O. (mg/L)  0.27  0.26  0.26  0.26  0.26  LLOWED PENWTPH-G) (MWTPH-G) (MWTP	6.38 6.39 6.39 6.39 6.39 6.39 1.00 (Turbicod) (Turbicod) (Turbicod)	ORP (mV)  10.9  10.3  9.8  9.3  10.1  TYPE (Circle a)  (BTEX)  HCID) (8081)  dity) (Alkalinity)	#DIV/0!  #DIV/0!  pplicable or write to (8141) (Oil & Green (HCO3/CO3) (Control of the control o	(ft)	nalysis below) WA  WA  WA	Observations OR
Replicate  1 2 3 4 Average:	Temp (°F/°C) 13.1 13.1 13.1 13.1 13.1 13.1 (8260) (8010 (8270) (PAF (pH) (Condu	Cond. (uS/cm) 294.6 294.6 294.6 294.7 294.6 NALYSIS AI 0) (8020) (NH) (NWTPH- activity) (TD. C) (Total PO-	D.O. (mg/L)  0.27  0.26  0.26  0.26  0.26  LLOWED PENWTPH-G) (NWTPH-G) (PD) (NWTPH-G) (PTSS) (PD) (PTSS) (PTSSS) (PTSSS) (PTSSS) (PTSSS) (PTSSS) (PTSSS) (PTSSS) (PTSSS) (	6.38 6.39 6.39 6.39 6.39 CR BOTTLE NWTPH-Gx I-Dx) (TPH-GOD) (Turbic dahl Nitroger	ORP (mV)  10.9  10.3  9.8  9.3  10.1  TYPE (Circle a)  (BTEX)  HCID) (8081)	#DIV/0!  #DIV/0!  pplicable or write to (8141) (Oil & Green (HCO3/CO3) (Control of the control o	(ft)	nalysis below) WA  WA  WA	Observations OR
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C) 13.1 13.1 13.1 13.1 13.1 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Too	Cond. (uS/cm)  294.6  294.6  294.6  294.6  294.6  NALYSIS AI  0) (8020) (NH) (NWTPH- dictivity) (TD:  C) (Total PO- de) (WAD Cy	D.O. (mg/L)  0.27  0.26  0.26  0.26  0.26  LLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (TSS) (Ed) (Total Kiewanide) (Free	6.38 6.39 6.39 6.39 6.39 CR BOTTLE NWTPH-GX I-DX) (TPH-IOD) (Turbid dall Nitroger Cyanide)	ORP (mV)  10.9  10.3  9.8  9.3  10.1  TYPE (Circle a) (BTEX)  HCID) (8081) (4081) (4081) (4081) (508	#DIV/0!  #DIV/0!  pplicable or write in the interval of the in	non-standard and asse)	(Fe II)  nalysis below)  WA  WA  Solution  W	Observations  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  13.1  13.1  13.1  13.1  13.1  TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals)	Cond. (uS/cm)  294.6  294.6  294.6  294.6  294.6  NALYSIS AI  0) (8020) (NH) (NWTPH- dictivity) (TD  C) (Total PO- le) (WAD Cy ) (As) (Sb) (	D.O. (mg/L)  0.27  0.26  0.26  0.26  0.26  LLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (TSS) (Bd) (Total Kielen and General Kielen an	6.38 6.39 6.39 6.39 6.39 6.39 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV)  10.9  10.3  9.8  9.3  10.1  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpretation of the	non-standard and asse) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  13.1  13.1  13.1  13.1  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M	Cond. (uS/cm)  294.6  294.6  294.6  294.6  294.6  NALYSIS AI  0) (8020) (NI  H) (NWTPH-  lectivity) (TD:  C) (Total PO-  le) (WAD Cy  de) (As) (Sb) (etals) (As) (Sb) (sc)	D.O. (mg/L)  0.27  0.26  0.26  0.26  0.26  LLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (TSS) (Bd) (Total Kielen and General Kielen an	6.38 6.39 6.39 6.39 6.39 6.39 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV)  10.9  10.3  9.8  9.3  10.1  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpretation of the	non-standard and asse) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H	Observations  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  13.1  13.1  13.1  13.1  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  294.6  294.6  294.6  294.6  294.6  NALYSIS AI  0) (8020) (NH) (NWTPH-  dictivity) (TD:  C) (Total PO-  le) (WAD Cy  ) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L)  0.27  0.26  0.26  0.26  0.26  CLLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (Proceed) (Proceded) (Proceded) (Proceded) (Proceded) (Proceed) (Proceded) (Proce	6.38 6.39 6.39 6.39 6.39 6.39 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV)  10.9  10.3  9.8  9.3  10.1  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpretation of the	non-standard and asse) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  13.1  13.1  13.1  13.1  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  294.6  294.6  294.6  294.6  294.6  NALYSIS AI  0) (8020) (NI  H) (NWTPH-  lectivity) (TD:  C) (Total PO-  le) (WAD Cy  de) (As) (Sb) (etals) (As) (Sb) (sc)	D.O. (mg/L)  0.27  0.26  0.26  0.26  0.26  LLOWED PENWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (P.	6.38 6.39 6.39 6.39 6.39 6.39 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV)  10.9  10.3  9.8  9.3  10.1  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpretation of the	non-standard and asse) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  13.1  13.1  13.1  13.1  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  294.6  294.6  294.6  294.6  294.6  NALYSIS AI  0) (8020) (NH) (NWTPH-  dictivity) (TD:  C) (Total PO-  le) (WAD Cy  ) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L)  0.27  0.26  0.26  0.26  0.26  LLOWED PENWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (P.	6.38 6.39 6.39 6.39 6.39 6.39 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV)  10.9  10.3  9.8  9.3  10.1  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpretation of the	non-standard and asse) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  13.1  13.1  13.1  13.1  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm)  294.6  294.6  294.6  294.6  294.6  NALYSIS AI  0) (8020) (NH) (NWTPH-  dictivity) (TD:  C) (Total PO-  le) (WAD Cy  ) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L)  0.27  0.26  0.26  0.26  0.26  LLOWED PENWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (P.	6.38 6.39 6.39 6.39 6.39 6.39 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV)  10.9  10.3  9.8  9.3  10.1  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpretation of the	non-standard and asse) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  13.1  13.1  13.1  13.1  13.1  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm)  294.6  294.6  294.6  294.6  294.7  294.6  NALYSIS AI  0) (8020) (NH) (NWTPH- uctivity) (TD: C) (Total PO- le) (WAD Cy ) (As) (Sb) (etals) (As) (Sb) g short list)	D.O. (mg/L)  0.27  0.26  0.26  0.26  0.26  LLOWED PENWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (P.	6.38 6.39 6.39 6.39 6.39 6.39 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV)  10.9  10.3  9.8  9.3  10.1  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpretation of the	non-standard and asse) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  13.1  13.1  13.1  13.1  13.1  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 294.6 294.6 294.6 294.6 294.6 NALYSIS AI 0) (8020) (NI H) (NWTPH- entivity) (TD C) (Total PO- le) (WAD Cy le) (As) (Sb) (letals) (As) (Sb) g short list) hane Ethene A	D.O. (mg/L)  0.27  0.26  0.26  0.26  0.26  LLOWED PENWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (P.	6.38 6.39 6.39 6.39 6.39 6.39 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV)  10.9  10.3  9.8  9.3  10.1  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpretation of the	non-standard and asse) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  13.1  13.1  13.1  13.1  13.1  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 294.6 294.6 294.6 294.6 294.6 NALYSIS AI 0) (8020) (NI H) (NWTPH- entivity) (TD C) (Total PO- le) (WAD Cy le) (As) (Sb) (letals) (As) (Sb) g short list) hane Ethene A	D.O. (mg/L)  0.27  0.26  0.26  0.26  0.26  LLOWED PENWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (NWTPH-G) (P.D) (P.	6.38 6.39 6.39 6.39 6.39 6.39 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV)  10.9  10.3  9.8  9.3  10.1  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpretation of the	non-standard and asse) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H	Observations  OR □  OR □  OR □



Project Nam	ie:	Boeing Ren	iton		Project Numbe	r:	0025217.099.0	199	
Event:		Nov-19			Date/Time:	11/ 12/2019@	1121		
Sample Nun	nber:	RGW240D	- 191112		Weather:	CLOUDY 40S			
Landau Rep		SRB							
WATERIEL	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	0	Damaged (N	·(O)	Describe:	Flush Mount		
DTW Before		`	,	• ,	Flow through ce		Tiushi Mount	GW Mater No. (	c HEDON1
	Date/Time:	5.47	Time:	End Purge:	-	11/ 12 /2019 @	1100	GW Meter No.( Gallons Purged:	S HERONI 0.5
Purge water d		11/ 12 /201	55-gal Drum	Ē	Storage Tank	Ground		SITE TREATM	
ruige water d	nsposed to.		55-gai Diuiii		Storage Talik	⊕ Ground	- Other	SHE IKEAIM	ENTSISIEM
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
Time				ters for three		dings within the fo	. ,	>/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1053	13.3	328.8	0.20	6.53	8.3	MED-LOW	6.10		
1056	13.3	328.8	0.21	6.53	6.2		6.05		
1059	13.3	327.3	0.20	6.53	3.6		6.05		
									_
	. ———								
								·	
SAMPLE CO	LLECTION D								
Sample Collec	cted With:		Bailer		Pump/Pump Type	DED BLADDER			
Made of:		Stainless Ste	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lure:	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	101								
	il Order)	Other							
Sample Descr	,	_	, sheen, etc.):	WHITE AN	D VERY TURBII	D NO/NS			
	ription (color, t	turbidity, odor					DEW		
Sample Descr Replicate	Temp	turbidity, odor	D.O.	WHITE AN	ORP	Turbidity	DTW (ft)	Ferrous iron	Comments/
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)		DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
Replicate 1	Temp (°F/°C)	Cond. (uS/cm) 327.0	D.O. (mg/L)	<b>рН</b> 6.53	ORP (mV)	Turbidity			
Replicate  1 2	Temp (°F/°C) 13.3 13.2	Cond. (uS/cm) 327.0	D.O. (mg/L) 0.20	pH  6.53  6.53	ORP (mV) 2.8 2.2	Turbidity			
Replicate 1	Temp (°F/°C) 13.3 13.2 13.2	Cond. (uS/cm) 327.0 326.6	D.O. (mg/L) 0.20 0.20	6.53 6.53 6.53	ORP (mV)	Turbidity			
Replicate  1 2	Temp (°F/°C) 13.3 13.2	Cond. (uS/cm) 327.0	D.O. (mg/L) 0.20	pH  6.53  6.53	ORP (mV) 2.8 2.2	Turbidity			
Replicate  1 2 3	Temp (°F/°C) 13.3 13.2 13.2	Cond. (uS/cm) 327.0 326.6	D.O. (mg/L) 0.20 0.20	6.53 6.53 6.53	ORP (mV) 2.8 2.2	Turbidity			
Replicate  1 2 3 4 Average:	Temp (°F/°C) 13.3 13.2 13.2 13.2 13.2	Cond. (uS/cm) 327.0 326.6 326.4 326.3	D.O. (mg/L) 0.20 0.20 0.20 0.20	pH  6.53  6.53  6.53  6.53  6.53	ORP (mV)  2.8  2.2  1.4  1.0  1.9	Turbidity (NTU)  #DIV/0!	(ft)	(Fe II)	
Replicate  1 2 3 4 Average:	Temp (°F/°C) 13.3 13.2 13.2 13.2 13.2 TYPICAL A	Cond. (uS/cm) 327.0 326.6 326.4 326.3	D.O. (mg/L) 0.20 0.20 0.20 0.20	pH  6.53  6.53  6.53  6.53  6.53  6.53	ORP (mV)  2.8  2.2  1.4  1.0  1.9  TYPE (Circle a)	Turbidity (NTU)	(ft)	(Fe II)	
Replicate  1 2 3 4 Average:	Temp (°F/°C) 13.3 13.2 13.2 13.2 13.2 TYPICAL A (8260) (8016	Cond. (uS/cm) 327.0 326.6 326.4 326.3 326.6 NALYSIS AI	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  CLLOWED PE	6.53 6.53 6.53 6.53 6.53 CR BOTTLE (NWTPH-GX	ORP (mV)  2.8  2.2  1.4  1.0  1.9  TYPE (Circle ap) (BTEX)	Turbidity (NTU)  #DIV/0!	(ft)	(Fe II)	Observations
Replicate  1 2 3 4 Average:	Temp (°F/°C) 13.3 13.2 13.2 13.2 13.2 13.2 13.2 (8260) (8010) (8270) (PAH (pH) (Conduction)	Cond. (uS/cm) 327.0 326.6 326.4 326.3 326.6 NALYSIS AI 0) (8020) (II	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  LLOWED PENWTPH-G) (MWTPH-G) (MWTPH-	6.53 6.53 6.53 6.53 6.53 6.53 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbication of the content of	ORP (mV)  2.8  2.2  1.4  1.0  1.9  TYPE (Circle a) ) (BTEX)  HCID) (8081) dity) (Alkalinity)	#DIV/0!  #DIV/0!  pplicable or write (8141) (Oil & Gree (HCO3/CO3) (Control of the control of th	non-standard a	nalysis below) WA  WA  WA	Observations OR
Replicate  1 2 3 4 Average:	Temp (°F/°C) 13.3 13.2 13.2 13.2 13.2 13.2 13.2 (8260) (8010 (8270) (PAF (pH) (Condu	Cond. (uS/cm) 327.0 326.6 326.4 326.3 326.6 NALYSIS AI 0) (8020) (II d) (NWTPH- letivity) (TD C) (Total PO	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  CLOWED PENWTPH-G) ( D) (NWTPH-G) ( D) (NWTPH-G) ( D) (TSS) (B	6.53 6.53 6.53 6.53 6.53 CR BOTTLE (NWTPH-Gx I-Dx) (TPH-Gx) (Turbical Nitroger	ORP (mV)  2.8  2.2  1.4  1.0  1.9  TYPE (Circle a)  (BTEX)  HCID) (8081)	#DIV/0!  #DIV/0!  pplicable or write (8141) (Oil & Gree (HCO3/CO3) (Control of the control of th	non-standard a	nalysis below) WA  WA  WA	Observations OR
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C) 13.3 13.2 13.2 13.2 13.2 13.2 13.2 (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Tool (Total Cyanid	Cond. (uS/cm)  327.0  326.6  326.4  326.3  326.6  NALYSIS AI (0) (8020) (1) (1) (NWTPH- (1) (NWTPH- (2) (Total PO- (4) (WAD Cy	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  CLLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (TSS) (Edd) (Total Kiewanide) (Free	pH  6.53  6.53  6.53  6.53  6.53  CR BOTTLE (NWTPH-Gx I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide)	ORP (mV)  2.8  2.2  1.4  1.0  1.9  TYPE (Circle a) (BTEX)  HCID) (8081) (4081) (4081) (4081) (5081)	#DIV/0!  #DIV/0!  pplicable or write (8141) (Oil & Gree (HCO3/CO3) (O/NO2)	non-standard a	(Fe II)  nalysis below)  WA  WA  WA  O  3) (NO2) (F)	Observations  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C) 13.3 13.2 13.2 13.2 13.2 13.2 13.2 (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals	Cond. (uS/cm)  327.0  326.6  326.4  326.3  326.6  NALYSIS AI (0) (8020) (I) (NWTPHetivity) (TD (C) (Total PO- le) (WAD Cy () (As) (Sb) (	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  CLLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (Total Kiewanide) (Free Ba) (Be) (Ca	6.53 6.53 6.53 6.53 6.53 6.53 6.50 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GDD) (Turbical Nitrogen Cyanide) 1) (Cd) (Co)	ORP (mV)  2.8  2.2  1.4  1.0  1.9  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write (8141) (Oil & Gree (HCO3/CO3) (O/NO2)	non-standard at ase) Cl) (SO4) (NO	(Fe II)  malysis below)  WA   WA   3) (NO2) (F)  T1) (V) (Zn) (H	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  13.3  13.2  13.2  13.2  13.2  13.2  13.2  (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M	Cond. (uS/cm)  327.0  326.6  326.4  326.3  326.6  NALYSIS AI  0) (8020) (II  H) (NWTPH-  lectivity) (TD  C) (Total PO-  le) (WAD Cy  ) (As) (Sb) (  letals) (As) (Sl)	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  CLLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (Total Kiewanide) (Free Ba) (Be) (Ca	6.53 6.53 6.53 6.53 6.53 6.53 6.50 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GDD) (Turbical Nitrogen Cyanide) 1) (Cd) (Co)	ORP (mV)  2.8  2.2  1.4  1.0  1.9  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write (8141) (Oil & Gree (HCO3/CO3) (O/NO2)	non-standard at ase) Cl) (SO4) (NO	(Fe II)  malysis below)  WA   WA   3) (NO2) (F)  T1) (V) (Zn) (H	Observations  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  13.3  13.2  13.2  13.2  13.2  13.2  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm) 327.0 326.6 326.4 326.3 326.6 NALYSIS AI 0) (8020) (th) (NWTPH-activity) (TDC) (Total POle) (WAD Cy) (As) (Sb) (getals) (As) (Sling short list)	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  LLOWED PENWTPH-G) (Company of the company of	6.53 6.53 6.53 6.53 6.53 6.53 6.50 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GDD) (Turbical Nitrogen Cyanide) 1) (Cd) (Co)	ORP (mV)  2.8  2.2  1.4  1.0  1.9  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write (8141) (Oil & Gree (HCO3/CO3) (O/NO2)	non-standard at ase) Cl) (SO4) (NO	(Fe II)  malysis below)  WA   WA   3) (NO2) (F)  T1) (V) (Zn) (H	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  13.3  13.2  13.2  13.2  13.2  13.2  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  327.0  326.6  326.4  326.3  326.6  NALYSIS AI  0) (8020) (II  H) (NWTPH-  lectivity) (TD  C) (Total PO-  le) (WAD Cy  ) (As) (Sb) (  letals) (As) (Sl)	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  LLOWED PENWTPH-G) (Company of the company of	6.53 6.53 6.53 6.53 6.53 6.53 6.50 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GDD) (Turbical Nitrogen Cyanide) 1) (Cd) (Co)	ORP (mV)  2.8  2.2  1.4  1.0  1.9  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write (8141) (Oil & Gree (HCO3/CO3) (O/NO2)	non-standard at ase) Cl) (SO4) (NO	(Fe II)  malysis below)  WA   WA   3) (NO2) (F)  T1) (V) (Zn) (H	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  13.3  13.2  13.2  13.2  13.2  13.2  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm) 327.0 326.6 326.4 326.3 326.6 NALYSIS AI 0) (8020) (th) (NWTPH-activity) (TDC) (Total POle) (WAD Cy) (As) (Sb) (getals) (As) (Sling short list)	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  LLOWED PENWTPH-G) (Company of the company of	6.53 6.53 6.53 6.53 6.53 6.53 6.50 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GDD) (Turbical Nitrogen Cyanide) 1) (Cd) (Co)	ORP (mV)  2.8  2.2  1.4  1.0  1.9  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write (8141) (Oil & Gree (HCO3/CO3) (O/NO2)	non-standard at ase) Cl) (SO4) (NO	(Fe II)  malysis below)  WA   WA   3) (NO2) (F)  T1) (V) (Zn) (H	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  13.3  13.2  13.2  13.2  13.2  13.2  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm) 327.0 326.6 326.4 326.3 326.6 NALYSIS AI 0) (8020) (th) (NWTPH-activity) (TDC) (Total POle) (WAD Cy) (As) (Sb) (getals) (As) (Sling short list)	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  LLOWED PENWTPH-G) (Company of the company of	6.53 6.53 6.53 6.53 6.53 6.53 6.50 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GDD) (Turbical Nitrogen Cyanide) 1) (Cd) (Co)	ORP (mV)  2.8  2.2  1.4  1.0  1.9  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write (8141) (Oil & Gree (HCO3/CO3) (O/NO2)	non-standard at ase) Cl) (SO4) (NO	(Fe II)  malysis below)  WA   WA   3) (NO2) (F)  T1) (V) (Zn) (H	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  13.3  13.2  13.2  13.2  13.2  13.2  13.2  TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 327.0 326.6 326.4 326.3 326.6 NALYSIS AI 0) (8020) (th) (NWTPH-activity) (TDC) (Total POle) (WAD Cy) (As) (Sb) (getals) (As) (Sling short list)	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  LLOWED PENWTPH-G) (Company of the company of	6.53 6.53 6.53 6.53 6.53 6.53 6.50 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GDD) (Turbical Nitrogen Cyanide) 1) (Cd) (Co)	ORP (mV)  2.8  2.2  1.4  1.0  1.9  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write (8141) (Oil & Gree (HCO3/CO3) (O/NO2)	non-standard at ase) Cl) (SO4) (NO	(Fe II)  malysis below)  WA   WA   3) (NO2) (F)  T1) (V) (Zn) (H	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  13.3  13.2  13.2  13.2  13.2  13.2  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 327.0 326.6 326.4 326.3 326.6 NALYSIS AI 0) (8020) (II H) (NWTPH- entivity) (TD C) (Total PO le) (WAD Cy totals) (As) (Sb) (tetals) (As) (Sl ug short list) hane Ethene A	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  LLOWED PENWTPH-G) (Company of the company of	6.53 6.53 6.53 6.53 6.53 6.53 6.50 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GDD) (Turbical Nitrogen Cyanide) 1) (Cd) (Co)	ORP (mV)  2.8  2.2  1.4  1.0  1.9  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write (8141) (Oil & Gree (HCO3/CO3) (O/NO2)	non-standard at ase) Cl) (SO4) (NO	(Fe II)  malysis below)  WA   WA   3) (NO2) (F)  T1) (V) (Zn) (H	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  13.3  13.2  13.2  13.2  13.2  13.2  13.2  TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 327.0 326.6 326.4 326.3 326.6 NALYSIS AI 0) (8020) (II H) (NWTPH- entivity) (TD C) (Total PO le) (WAD Cy totals) (As) (Sb) (tetals) (As) (Sl ug short list) hane Ethene A	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  LLOWED PENWTPH-G) (Company of the company of	6.53 6.53 6.53 6.53 6.53 6.53 6.50 CR BOTTLE (NWTPH-Gx H-Dx) (TPH-GDD) (Turbical Nitrogen Cyanide) 1) (Cd) (Co)	ORP (mV)  2.8  2.2  1.4  1.0  1.9  TYPE (Circle a) (BTEX)  HCID) (8081) (dity) (Alkalinity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write (8141) (Oil & Gree (HCO3/CO3) (O/NO2)	non-standard at ase) Cl) (SO4) (NO	(Fe II)  malysis below)  WA   WA   3) (NO2) (F)  T1) (V) (Zn) (H	Observations  OR □  OR □  OR □



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	199	
Event:		Nov-19			Date/Time:	11/ 12/2019@	1231		
Sample Nun	nber:	RGW-241S	191112		Weather:	CLOUDY 40S			
Landau Rep	resentative:	SRB							
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	6.19	Time:	1159	Flow through ce	ll vol.		GW Meter No.(	s HERON1
	Date/Time:			End Purge:		11/ 12 /2019 @	1210	Gallons Purged:	0.5
Purge water d			55-gal Drum	Ē	Storage Tank	Ground		SITE TREATM	
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm) ls: Stablizatio	(mg/L)	tors for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1203	15.1	295.1	0.19	6.43	-6.8	LOW	6.23		
1206	15.0	295.4	0.18	6.43	-8.4		6.23		
									-
1209	15.1	295.2	0.20	6.44	-12.1		6.23		
-	-								
SAMDI E CO	LLECTION D								
Sample Collection			Bailer		Pump/Pump Type	DED BLADDER			
Made of:		Stainless Stee	_	_	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	t	Alconox Was	_		DI Water	Dedicated	<b>—</b> ] Outer	Dedicated	
	_		sn 🖳	rap Kinse	DI Water	Dedicated			
(By Numerica		Other							
Sample Descr			-1 4 - 3 -	OLICITE V	CDAV AND CLO	DUDY NO /NG			
1	ription (color, t	urbidity, odor	, sheen, etc.):	SLIGHTLY	GRAY AND CLO	OUDY NO/NS			
Replicate	Temp	Cond. (uS/cm)	D.O. (mg/L)	SLIGHTLY pH	GRAY AND CLO  ORP  (mV)	OUDY NO/NS  Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity			
	Temp (°F/°C)	Cond. (uS/cm) 295.3	D.O. (mg/L)	<b>рН</b> 6.43	ORP (mV)	Turbidity			
Replicate 1	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity			
Replicate  1 2	Temp (°F/°C) 15.1	Cond. (uS/cm) 295.3 295.0	D.O. (mg/L) 0.20 0.19	pH  6.43  6.43	ORP (mV) -12.4 -12.7	Turbidity			
Replicate  1 2 3	Temp (°F/°C) 15.1 15.1 15.2	Cond. (uS/cm) 295.3 295.0 295.2	D.O. (mg/L) 0.20 0.19	pH  6.43  6.43  6.43	ORP (mV) -12.4 -12.7 -13.1	Turbidity			
Replicate  1 2 3 4 Average:	Temp (°F/°C) 15.1 15.1 15.2 15.2 15.2	Cond. (uS/cm) 295.3 295.0 295.2 295.4 295.2	D.O. (mg/L) 0.20 0.19 0.20 0.19	pH  6.43  6.43  6.43  6.43  6.43	ORP (mV) -12.4 -12.7 -13.1 -13.5 -12.9	Turbidity (NTU)  #DIV/0!	(ft)	(Fe II)	
Replicate  1 2 3 4 Average:	Temp (°F/°C) 15.1 15.1 15.2 15.2 15.2 TYPICAL A	Cond. (uS/cm) 295.3 295.0 295.2 295.4 295.2	D.O. (mg/L) 0.20 0.19 0.20 0.19 0.20	pH  6.43  6.43  6.43  6.43  6.43  6.43	ORP (mV)  -12.4  -12.7  -13.1  -13.5  -12.9  TYPE (Circle a)	Turbidity (NTU)	(ft)	(Fe II)	Observations
Replicate  1 2 3 4 Average:	Temp (°F/°C) 15.1 15.1 15.2 15.2 15.2 TYPICAL A (8260) (8016	Cond. (uS/cm) 295.3 295.0 295.2 295.4 295.2 NALYSIS AI	D.O. (mg/L)  0.20  0.19  0.20  0.19  0.20  LLOWED PERWYPH-G)	pH  6.43 6.43 6.43 6.43 6.43 6.43 CR BOTTLE (NWTPH-GX	ORP (mV) -12.4 -12.7 -13.1 -13.5 -12.9  TYPE (Circle a) (BTEX)	Turbidity (NTU)  #DIV/0!	(ft)	(Fe II)	
Replicate  1 2 3 4 Average:	Temp (°F/°C) 15.1 15.2 15.2 15.2 15.2 TYPICAL A (8260) (8010) (8270) (PAF	Cond. (uS/cm) 295.3 295.0 295.2 295.4 295.2 NALYSIS AI 0) (8020) (N	D.O. (mg/L)  0.20  0.19  0.20  0.19  0.20  CLOWED PENWTPH-G) (NWTPH	6.43 6.43 6.43 6.43 6.43 6.43 6.WTPH-GX	ORP (mV)  -12.4  -12.7  -13.1  -13.5  -12.9  TYPE (Circle a) (BTEX)  HCID) (8081)	Turbidity (NTU)  #DIV/0!	non-standard a	nalysis below) WA  WA  WA	Observations OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  15.1  15.1  15.2  15.2  15.2  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu	Cond. (uS/cm)  295.3  295.0  295.2  295.4  295.2  NALYSIS AI  0) (8020) (NI  I) (NWTPH- Intrivity) (TDS	D.O. (mg/L)  0.20  0.19  0.20  0.19  0.20  0.19  0.20  0.19  0.20  CLOWED PENWTPH-G) (MWTPH-G) (	6.43 6.43 6.43 6.43 6.43 6.43 6.43 6.43	ORP (mV)  -12.4  -12.7  -13.1  -13.5  -12.9  TYPE (Circle a) (BTEX)  HCID) (8081)	#DIV/0!  pplicable or write (8141) (Oil & Gree) (HCO3/CO3) (Control of the control of the contro	non-standard a	nalysis below) WA  WA  WA	Observations OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  15.1  15.1  15.2  15.2  15.2  15.2  TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu	Cond. (uS/cm)  295.3  295.0  295.2  295.4  295.2  NALYSIS AI  0) (8020) (NI  I) (NWTPH- Intrivity) (TDS	D.O. (mg/L)  0.20  0.19  0.20  0.19  0.20  0.19  0.20  0.19  0.20  LLOWED PENWTPH-G) (MYTPH-G) (	6.43 6.43 6.43 6.43 6.43 CR BOTTLE (NWTPH-Gx, I-Dx) (TPH-GOD) (Turbic dahl Nitroger	ORP (mV)  -12.4  -12.7  -13.1  -13.5  -12.9  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity)	#DIV/0!  pplicable or write (8141) (Oil & Gree) (HCO3/CO3) (Control of the control of the contro	non-standard a	nalysis below) WA  WA  WA	Observations OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  15.1  15.2  15.2  15.2  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Too (Total Cyanid (Total Metals	Cond. (uS/cm)  295.3  295.0  295.2  295.4  295.2  NALYSIS AI  (D) (8020) (N  (I) (NWTPH- (activity) (TDS)  (C) (Total PO- (e) (WAD Cy (dAs) (Sb) (	D.O. (mg/L)  0.20  0.19  0.20  0.19  0.20  LLOWED PENWTPH-G) (MWTPH-G) (NWTPH-G) (TSS) (E4) (Total Kiewanide) (Free Ba) (Be) (Ca	6.43 6.43 6.43 6.43 6.43 6.43 6.43 6.43	ORP (mV)  -12.4  -12.7  -13.1  -13.5  -12.9  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (C/NO2)  (Pb) (Mg) (Mn) (1)	non-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  15.1  15.2  15.2  15.2  15.2  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M	Cond. (uS/cm)  295.3  295.0  295.2  295.4  295.2  NALYSIS AI  0) (8020) (N  I) (NWTPH-  (ctivity) (TDS  C) (Total PO4  (e) (WAD Cy  (o) (As) (Sb) (cetals) (As) (Sb) (Sb)	D.O. (mg/L)  0.20  0.19  0.20  0.19  0.20  LLOWED PENWTPH-G) (MWTPH-G) (NWTPH-G) (TSS) (E4) (Total Kiewanide) (Free Ba) (Be) (Ca	6.43 6.43 6.43 6.43 6.43 6.43 6.43 6.43	ORP (mV)  -12.4  -12.7  -13.1  -13.5  -12.9  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (C/NO2)  (Pb) (Mg) (Mn) (1)	non-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  15.1  15.1  15.2  15.2  15.2  15.2  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Tod (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  295.3  295.0  295.2  295.4  295.2  NALYSIS AI (0) (8020) (NI) (NWTPHactivity) (TDS) (C) (Total POde) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L)  0.20  0.19  0.20  0.19  0.20  0.19  0.20  CLOWED PENWTPH-G) (Company (Company Company Company Company Company Company Company (Company Company Co	6.43 6.43 6.43 6.43 6.43 6.43 6.43 6.43	ORP (mV)  -12.4  -12.7  -13.1  -13.5  -12.9  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (C/NO2)  (Pb) (Mg) (Mn) (1)	non-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  15.1  15.1  15.2  15.2  15.2  15.2  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Tod (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  295.3  295.0  295.2  295.4  295.2  NALYSIS AI  0) (8020) (N  I) (NWTPH-  (ctivity) (TDS  C) (Total PO4  (e) (WAD Cy  (o) (As) (Sb) (cetals) (As) (Sb) (Sb)	D.O. (mg/L)  0.20  0.19  0.20  0.19  0.20  0.19  0.20  CLOWED PENWTPH-G) (Company (Company Company Company Company Company Company Company (Company Company Co	6.43 6.43 6.43 6.43 6.43 6.43 6.43 6.43	ORP (mV)  -12.4  -12.7  -13.1  -13.5  -12.9  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (C/NO2)  (Pb) (Mg) (Mn) (1)	non-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  15.1  15.1  15.2  15.2  15.2  15.2  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Tod (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  295.3  295.0  295.2  295.4  295.2  NALYSIS AI (0) (8020) (NI) (NWTPHactivity) (TDS) (C) (Total POde) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L)  0.20  0.19  0.20  0.19  0.20  0.19  0.20  CLOWED PENWTPH-G) (Company (Company Company Company Company Company Company Company (Company Company Co	6.43 6.43 6.43 6.43 6.43 6.43 6.43 6.43	ORP (mV)  -12.4  -12.7  -13.1  -13.5  -12.9  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (C/NO2)  (Pb) (Mg) (Mn) (1)	non-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  15.1  15.2  15.2  15.2  15.2  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Todal Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm)  295.3  295.0  295.2  295.4  295.2  NALYSIS AI (0) (8020) (NI) (NWTPHactivity) (TDS) (C) (Total POde) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L)  0.20  0.19  0.20  0.19  0.20  0.19  0.20  CLOWED PENWTPH-G) (Company (Company Company Company Company Company Company Company (Company Company Co	6.43 6.43 6.43 6.43 6.43 6.43 6.43 6.43	ORP (mV)  -12.4  -12.7  -13.1  -13.5  -12.9  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (C/NO2)  (Pb) (Mg) (Mn) (1)	non-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR □  OR □
Replicate  1 2 3 4 Average:	Temp (°F/°C)  15.1  15.1  15.2  15.2  15.2  15.2  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Tod (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  295.3  295.0  295.2  295.4  295.2  NALYSIS AI (0) (8020) (NI) (NWTPHactivity) (TDS) (C) (Total POde) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L)  0.20  0.19  0.20  0.19  0.20  0.19  0.20  CLOWED PENWTPH-G) (Company (Company Company Com	6.43 6.43 6.43 6.43 6.43 6.43 6.43 6.43	ORP (mV)  -12.4  -12.7  -13.1  -13.5  -12.9  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (C/NO2)  (Pb) (Mg) (Mn) (1)	non-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  15.1  15.2  15.2  15.2  15.2  TYPICAL A (8260) (8016 (8270) (PAH (pH) (Conda (COD) (Too (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm)  295.3  295.0  295.2  295.4  295.2  NALYSIS AI (0) (8020) (NI) (NWTPHactivity) (TDS) (C) (Total POde) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L)  0.20  0.19  0.20  0.19  0.20  0.19  0.20  CLOWED PENWTPH-G) (Company (Company Company Com	6.43 6.43 6.43 6.43 6.43 6.43 6.43 6.43	ORP (mV)  -12.4  -12.7  -13.1  -13.5  -12.9  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (C/NO2)  (Pb) (Mg) (Mn) (1)	non-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  15.1  15.2  15.2  15.2  15.2  TYPICAL A (8260) (8016 (8270) (PAH (pH) (Conda (COD) (Too (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm)  295.3  295.0  295.2  295.4  295.2  NALYSIS AI (0) (8020) (NI) (NWTPHactivity) (TDS) (C) (Total POde) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L)  0.20  0.19  0.20  0.19  0.20  0.19  0.20  CLOWED PENWTPH-G) (Company (Company Company Com	6.43 6.43 6.43 6.43 6.43 6.43 6.43 6.43	ORP (mV)  -12.4  -12.7  -13.1  -13.5  -12.9  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Gree) (HCO3/CO3) (C/NO2)  (Pb) (Mg) (Mn) (1)	non-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR



Project Nam	ne:	Boeing Ren	iton		Project Number	r:	0025217.099.0	199	
Event:		Nov-19			Date/Time:	11/ 12/2019@	1201		
Sample Nun	nber:	RGW-242I-	- 191112		Weather:	CLOUDY 40S			
Landau Rep	resentative:	SRB							
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES	5)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	6.35	Time:	1130	Flow through ce	ll vol.		GW Meter No.(	s HERON1
	Date/Time:			End Purge:	-	11/ 12 /2019 @	1141	Gallons Purged:	0.5
Purge water d			55-gal Drum	Ĕ	Storage Tank	Ground		SITE TREATM	
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)		(mV)	(NTU)	(ft)	Volume (gal)	Observations
	Purge Goa +/- 3%					dings within the fo	ollowing limits < 0.3 ft	>/= 1 flow	
		+/- 3%	+/- 10%	+/- 0.1 units		+/- 10%		through cell	
1134	13.9	292.6	0.18	6.43	5.9	LOW	6.35		
1137	14.3	291.0	0.19	6.44	-1.6		6.35		
1140	14.3	290.6	0.19	6.43	-3.4		6.35		
							_		
					-				
								·	
SAMPLE CO	LLECTION D								
Sample Colle	cted With:		Bailer	_	Pump/Pump Type	DED BLADDER		·	
Made of:		Stainless Ste	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proceed	dure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	al Order)	Other							
		—							
Sample Desci	ription (color, t		, sheen, etc.):	SLIGHTLY	GRAY AND SLI	GHTY TURBID N	O/NS		
		turbidity, odor	· -						
Sample Descr Replicate	Temp	turbidity, odor	D.O.	SLIGHTLY	ORP	Turbidity	DTW	Ferrous iron	Comments/
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)			Ferrous iron (Fe II)	Comments/ Observations
Replicate	Temp (°F/°C)	Cond. (uS/cm) 290.5	D.O. (mg/L)	<b>рН</b> 6.43	ORP (mV)	Turbidity	DTW		
Replicate  1 2	Temp (°F/°C) 14.3	Cond. (uS/cm) 290.5	D.O. (mg/L) 0.20	pH  6.43  6.43	ORP (mV) -3.8 -4.2	Turbidity	DTW		
Replicate 1	Temp (°F/°C)	Cond. (uS/cm) 290.5	D.O. (mg/L)	<b>рН</b> 6.43	ORP (mV)	Turbidity	DTW		
Replicate  1 2	Temp (°F/°C) 14.3	Cond. (uS/cm) 290.5	D.O. (mg/L) 0.20	pH  6.43  6.43	ORP (mV) -3.8 -4.2	Turbidity	DTW		
Replicate  1 2 3	Temp (°F/°C) 14.3 14.3	Cond. (uS/cm) 290.5 290.5	D.O. (mg/L) 0.20 0.20	pH  6.43  6.43  6.44	ORP (mV) -3.8 -4.2 -4.5	Turbidity	DTW		
Replicate  1 2 3 4 Average:	Temp (°F/°C) 14.3 14.3 14.3 14.3 14.3	Cond. (uS/cm) 290.5 290.4 290.4 290.5	D.O. (mg/L) 0.20 0.20 0.20 0.20	6.43 6.43 6.44 6.43	ORP (mV)  -3.8  -4.2  -4.5  -4.8  -4.3	Turbidity (NTU)  #DIV/0!	DTW (ft)	(Fe II)	
Replicate  1 2 3 4	Temp (°F/°C) 14.3 14.3 14.3 14.3 14.3 TYPICAL A	Cond. (uS/cm) 290.5 290.4 290.4 290.5	D.O. (mg/L) 0.20 0.20 0.20 0.20	6.43 6.43 6.44 6.43 6.43 ER BOTTLE	ORP (mV)  -3.8  -4.2  -4.5  -4.8  -4.3  TYPE (Circle a)	Turbidity (NTU)	DTW (ft)	(Fe II)	
Replicate  1 2 3 4 Average:	Temp (°F/°C) 14.3 14.3 14.3 14.3 14.3 TYPICAL A (8260) (8010	Cond. (uS/cm) 290.5 290.4 290.4 290.5 NALYSIS AI	D.O. (mg/L) 0.20 0.20 0.20 0.20 0.20	6.43 6.43 6.44 6.43 6.43 ER BOTTLE (NWTPH-GX	ORP (mV)  -3.8  -4.2  -4.5  -4.8  -4.3  TYPE (Circle a) (BTEX)	Turbidity (NTU)  #DIV/0!	DTW (ft)	(Fe II)	Observations
Replicate  1 2 3 4 Average:	Temp (°F/°C) 14.3 14.3 14.3 14.3 14.3 TYPICAL A (8260) (8010 (8270) (PAF	Cond. (uS/cm)  290.5  290.4  290.5  290.4  290.5  NALYSIS AI  0) (8020) (NH) (NWTPH-	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.10  0.20  0.20  0.20  0.20  0.20  0.20  0.20	6.43 6.43 6.43 6.43 6.43 6.43 ER BOTTLE (NWTPH-GX) H-Dx) (TPH-	ORP (mV)  -3.8  -4.2  -4.5  -4.8  -4.3  TYPE (Circle a) (BTEX)  HCID) (8081)	Turbidity (NTU)  #DIV/0!	DTW (ft)  non-standard a	nalysis below) WA  WA  WA	Observations OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  14.3  14.3  14.3  14.3  14.3  TYPICAL A (8260) (8010 (8270) (PAH (pH) (Conduction)	Cond. (uS/cm)  290.5  290.4  290.5  NALYSIS AI  0) (8020) (NH) (NWTPH- uctivity) (TD:	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  D) (NWTPH-G) (MWTPH-G) (M	6.43 6.43 6.43 6.43 6.43 ER BOTTLE (NWTPH-Gx) H-Dx) (TPH-GOD) (Turbic	ORP (mV)  -3.8  -4.2  -4.5  -4.8  -4.3  TYPE (Circle a) (BTEX)  HCID) (8081)	#DIV/0!  #DIV/0!  pplicable or write (8141) (Oil & Green (HCO3/CO3) (Control of the control of t	DTW (ft)  non-standard a	nalysis below) WA  WA  WA	Observations OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  14.3  14.3  14.3  14.3  14.3  TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu	Cond. (uS/cm)  290.5  290.4  290.5  NALYSIS AI  0) (8020) (NH) (NWTPH- uctivity) (TD:	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  CLOWED PENWTPH-G) ( D) (NWTPH-G) ( D) (TSS) (E	6.43 6.43 6.43 6.43 6.43 ER BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbic dahl Nitroger	ORP (mV)  -3.8  -4.2  -4.5  -4.8  -4.3  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity	#DIV/0!  #DIV/0!  pplicable or write (8141) (Oil & Green (HCO3/CO3) (Control of the control of t	DTW (ft)  non-standard a	nalysis below) WA  WA  WA	Observations OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  14.3  14.3  14.3  14.3  14.3  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Too (Total Cyanid (Total Metals)	Cond. (uS/cm)  290.5  290.4  290.4  290.5  NALYSIS AI (0) (8020) (N H) (NWTPH- (activity) (TD: (C) (Total POde) (de) (WAD Cy () (As) (Sb) (	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  CLLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (TSS) (Eds) (TSS) (Eds) (Total Kiewanide) (Free Ba) (Be) (Ca	pH  6.43 6.44 6.43 6.43 6.43 ER BOTTLE (NWTPH-GX H-Dx) (TPH-GX) (TUrbic Extension (TPH-GX) (T	ORP (mV)  -3.8  -4.2  -4.5  -4.8  -4.3  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (Over 1700)  (Pb) (Mg) (Mn) (100)	DTW (ft)  mon-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:	Temp (°F/°C)  14.3  14.3  14.3  14.3  14.3  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M	Cond. (uS/cm)  290.5  290.4  290.5  290.4  290.5  NALYSIS AI  0) (8020) (NH) (NWTPH- lectivity) (TDS  (C) (Total PO- le) (WAD Cy  (MA) (Sb) (Setals) (As) (Sb) (Setals) (As) (Sb) (Setals)	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  CLLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (TSS) (Eds) (TSS) (Eds) (Total Kiewanide) (Free Ba) (Be) (Ca	pH  6.43 6.44 6.43 6.43 6.43 ER BOTTLE (NWTPH-GX H-Dx) (TPH-GX) (TUrbic Extension (TPH-GX) (T	ORP (mV)  -3.8  -4.2  -4.5  -4.8  -4.3  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (Over 1700)  (Pb) (Mg) (Mn) (100)	DTW (ft)  mon-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:	Temp (°F/°C)  14.3  14.3  14.3  14.3  14.3  14.3  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm) 290.5 290.4 290.4 290.5 NALYSIS AI () (8020) (NH) (NWTPH-activity) (TD: (C) (Total POde) (WAD Cy) (As) (Sb) (detals) (As) (As) (Sb) (detals) (As) (As) (As) (As) (As) (As) (As) (A	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  (mg/L)  0.20  0.2	pH  6.43 6.44 6.43 6.43 6.43 ER BOTTLE (NWTPH-GX H-Dx) (TPH-GX) (TUrbic Extension (TPH-GX) (T	ORP (mV)  -3.8  -4.2  -4.5  -4.8  -4.3  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (Over 1700)  (Pb) (Mg) (Mn) (100)	DTW (ft)  mon-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:	Temp (°F/°C)  14.3  14.3  14.3  14.3  14.3  14.3  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  290.5  290.4  290.5  290.4  290.5  NALYSIS AI  0) (8020) (NH) (NWTPH- lectivity) (TDS  (C) (Total PO- le) (WAD Cy  (MA) (Sb) (Setals) (As) (Sb) (Setals) (As) (Sb) (Setals)	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  (mg/L)  0.20  0.2	pH  6.43 6.44 6.43 6.43 6.43 ER BOTTLE (NWTPH-GX H-Dx) (TPH-GX) (TUrbic Extension (TPH-GX) (T	ORP (mV)  -3.8  -4.2  -4.5  -4.8  -4.3  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (Over 1700)  (Pb) (Mg) (Mn) (100)	DTW (ft)  mon-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:	Temp (°F/°C)  14.3  14.3  14.3  14.3  14.3  14.3  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm) 290.5 290.4 290.4 290.5 NALYSIS AI () (8020) (NH) (NWTPH-activity) (TD: (C) (Total POde) (WAD Cy) (As) (Sb) (detals) (As) (As) (Sb) (detals) (As) (As) (As) (As) (As) (As) (As) (A	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  (mg/L)  0.20  0.2	pH  6.43 6.44 6.43 6.43 6.43 ER BOTTLE (NWTPH-GX H-Dx) (TPH-GX) (TUrbic Extension (TPH-GX) (T	ORP (mV)  -3.8  -4.2  -4.5  -4.8  -4.3  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (Over 1700)  (Pb) (Mg) (Mn) (100)	DTW (ft)  mon-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:	Temp (°F/°C)  14.3  14.3  14.3  14.3  14.3  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Todal Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 290.5 290.4 290.4 290.5 NALYSIS AI () (8020) (NH) (NWTPH-activity) (TD: (C) (Total POde) (WAD Cy) (As) (Sb) (detals) (As) (As) (Sb) (detals) (As) (As) (As) (As) (As) (As) (As) (A	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  (mg/L)  0.20  0.2	pH  6.43 6.44 6.43 6.43 6.43 ER BOTTLE (NWTPH-GX H-Dx) (TPH-GX) (TUrbic Extension (TPH-GX) (T	ORP (mV)  -3.8  -4.2  -4.5  -4.8  -4.3  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (Over 1700)  (Pb) (Mg) (Mn) (100)	DTW (ft)  mon-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR □  OR □
Replicate  1 2 3 4 Average:	Temp (°F/°C)  14.3  14.3  14.3  14.3  14.3  14.3  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm) 290.5 290.4 290.4 290.5 NALYSIS AI () (8020) (NH) (NWTPH-activity) (TD: (C) (Total POde) (WAD Cy) (As) (Sb) (detals) (As) (As) (Sb) (detals) (As) (As) (As) (As) (As) (As) (As) (A	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  (mg/L)  0.20  0.2	pH  6.43 6.44 6.43 6.43 6.43 ER BOTTLE (NWTPH-GX H-Dx) (TPH-GX) (TUrbic Extension (TPH-GX) (T	ORP (mV)  -3.8  -4.2  -4.5  -4.8  -4.3  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (Over 1700)  (Pb) (Mg) (Mn) (100)	DTW (ft)  mon-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:	Temp (°F/°C)  14.3  14.3  14.3  14.3  14.3  TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Tool (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 290.5 290.4 290.4 290.5 NALYSIS AI () (8020) (NH) (NWTPH-activity) (TD: (C) (Total POde) (WAD Cy) (As) (Sb) (detals) (As) (As) (Sb) (detals) (As) (As) (As) (As) (As) (As) (As) (A	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  (mg/L)  0.20  0.2	pH  6.43 6.44 6.43 6.43 6.43 ER BOTTLE (NWTPH-GX H-Dx) (TPH-GX) (TUrbic Extension (TPH-GX) (T	ORP (mV)  -3.8  -4.2  -4.5  -4.8  -4.3  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (Over 1700)  (Pb) (Mg) (Mn) (100)	DTW (ft)  mon-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 5	Temp (°F/°C)  14.3  14.3  14.3  14.3  14.3  TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Tool (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 290.5 290.4 290.4 290.5 NALYSIS AI () (8020) (NH) (NWTPH-activity) (TD: (C) (Total POde) (WAD Cy) (As) (Sb) (detals) (As) (As) (Sb) (detals) (As) (As) (As) (As) (As) (As) (As) (A	D.O. (mg/L)  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  0.20  (mg/L)  0.20  0.2	pH  6.43 6.44 6.43 6.43 6.43 ER BOTTLE (NWTPH-GX H-Dx) (TPH-GX) (TUrbic Extension (TPH-GX) (T	ORP (mV)  -3.8  -4.2  -4.5  -4.8  -4.3  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (Over 1700)  (Pb) (Mg) (Mn) (100)	DTW (ft)  mon-standard a ase) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA   WA   O  O  O  O  O  O  O  O  O  O  O  O  O	Observations  OR □  OR □  OR □



Project Nam	ne:	Boeing Ren	iton		Project Number	er:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 12/2019@	1301		
Sample Nun	nber:	RGW-243I	- 191112		Weather:	CLOUDY 40S			
Landau Rep	resentative:	SRB							
WATER LEV	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	5)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before		5.35	Time:	• ,	Flow through ce			GW Meter No.(s	HERON1
	Date/Time:			End Purge:	•	11/ 12 /2019 @	1245	Gallons Purged:	
Purge water d			55-gal Drum	Ē		Ground		SITE TREATM	
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)		(mV)	(NTU)	(ft)	Volume (gal)	Observations
	Purge Goa +/- 3%	ls: Stablization +/- 3%		ters for three +/- 0.1 units		dings within the fo +/- 10%	ollowing limits < 0.3 ft	>/= 1 flow through cell	
1233	15.5	372.1	0.24	6.34		LOW	5.37	tiii vugii ttii	
1236		364.7	0.19	6.32	12.6		5.37		
1239		358.4	0.19	6.31	8.2		5.37		
-							3.37		
1242	15.6	357.0	0.21	6.30	-3.3				
	<u> </u>								
	LLECTION D								
Sample Colle	cted With:		Bailer		Pump/Pump Type	DED BLADDER		_	
Made of:		Stainless Ste	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	lure:	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color,	turbidity, odor	, sheen, etc.):	SLIGHTLY	GRAY AND CLO	OUDY NO/NS			
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
1	(°F/°C)	(uS/cm)	(mg/L)	•	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	15.7	357.0	0.22	6.30	-3.7				
2	15.7	357.0	0.22	6.30	-4.0				
3	15.7	357.0	0.21	6.30	-4.3				
4	15.7	357.3	0.22	6.30	-4.6				
Average:	15.7	357.1	0.22	6.30	-4.2	#DIV/0!			
QUANTITY	TVPICALA	NAI VCIC AI	I I OWED DE	R ROTTI E	TVPF (Cirolo es	pplicable or write i	non-standard a	nalveje halow)	
5		0) (8020) (1				pplicable of write i	non-standard a	WA $\square$	OR 🗆
	<u> </u>					(8141) (Oil & Grea	ase)	WA 🗆	OR 🗆
	`					(HCO3/CO3) (C			
1	(COD) (TO	C) (Total PO	4) (Total Kie	dahl Nitroger	n) (NH3) (NO3	/NO2)			
	(Total Cyanic	le) (WAD Cy	anide) (Free	Cyanide)					
	ì					(Pb) (Mg) (Mn) (1			
	`		o) (Ba) (Be) (0	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) (	(Ag) (Se) (Tl) (V	(Y) (Zn) (Hg) (K) (	Na) (Hardness) (Silio
	VOC (Boein		a atril						
	Methane Eth	nane Ethene A	cetylene						
1									
	others								
	others								
Duplicate Sar	•								
Duplicate Sar Comments:	•								



Project Nan	ne:	Boeing Rer	nton		Project Numbe	r:	0025217.099.0	199	
Event:		Nov-19			Date/Time:	11/ 12 /2019@	1005		
Sample Nur	nber:	RGW-244S	3 191112		Weather:	CLOUDY, RAIN	ΙΥ		
Landau Rep	resentative:	BXM			-				
WATER LEV	VEL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	5)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before		5.36	Time:		Flow through cel			GW Meter No.(	s HERON-3
	Date/Time:			End Purge:		11/ 11 /2019 @10	003	Gallons Purged:	
Purge water of			55-gal Drum	_	Storage Tank	Ground		SITE TREATM	
8	•		_		_	_	<del>_</del>		
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
	U					dings within the fol	U	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
943	13.6	440.2	0.56	6.32	117.5		5.38		
946	13.3	432.6	0.40	6.31	116.2		5.37		
949	12.8	417.1	0.48	6.28	114.8		5.37		
952	12.3	405.4	0.98	6.26	113.6				
955	12.2	395.2	1.04	6.25	113.1				
958	12.1	386.6	1.15	6.25	112.6				
1001		383.0	1.22	6.24	112.2				
1001	12.0		1.22	0.24	112.2				
SAMPLE CO	LLECTION D	)ATA							
Sample Colle			Bailer		Pump/Pump Type	BLADDER			
Made of:		Stainless Ste		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	dure:	Alconox Wa	sh 🗖	Tap Rinse	DI Water	Dedicated		_	
(By Numerica	_	Other			<u> </u>				
, ,			sheen, etc.):	CLEAR, CO	LORLESS, NO S	HEEN, NO ODOEF	<b>{</b>		
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	12.0	382.5	1.26	6.24	112.2				
2	12.0	382.3	1.28	6.24	112.1				
3	12.0	381.6	1.25	6.24	112.1				
4	12.0	381.2	1.27	6.24	112.0				
Average:	12.0	381.9	1.27	6.24	112.1	#DIV/0!		· <del></del>	
QUANTITY						pplicable or write n	on-standard a		on $\square$
5		, , , , , ,	NWTPH-G) (			(8141) (Oil & Grea	una)	WA □ WA □	OR OR
-	·					(8141) (Oli & Grea (HCO3/CO3) (C			OK 🗀
1					n) (NH3) (NO3)		., (SOT) (NO	(1102) (1)	
	` ` `		yanide) (Free			,			
	(Total Metals	(As) (Sb) (	(Ba) (Be) (Ca	(Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (N	Ni) (Ag) (Se) (	(Tl) (V) (Zn) (H	g) (K) (Na)
	(Dissolved M	etals) (As) (Sl	b) (Ba) (Be) (G	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) (	Ag) (Se) (Tl) (V	V) (Zn) (Hg) (K) (	Na) (Hardness) (Silic
	VOC (Boein								
	Methane Eth	nane Ethene A	cetylene						
	others								
D 1' ( C									
Duplicate Sai	nple No(s):								
Comments:	mple No(s):								



Project Nan	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 11 /2019@	1351		
Sample Nun	nber:	RGW183S-	191111		Weather:	PC 50S			
Landau Rep	resentative:	SRB							
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES	)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	8.78	Time:	1320	Flow through ce	ll vol.		GW Meter No.(s	s HERON1
	Date/Time:			End Purge:	-	11/ 11 /2019 @	1345	Gallons Purged:	0.5
Purge water of	lisposed to:		55-gal Drum		Storage Tank	Ground		SITE TREATM	
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	f 4l	(mV)	(NTU)	(ft)	Volume (gal)	Observations
	+/- 3%	18: Stabilzatio +/- 3%		ters for three +/- 0.1 units	+/- 10 mV	dings within the fo	< 0.3 ft	>/= 1 flow through cell	
1324	13.6	149.9	4.91	6.28		LOW	8.78	8	
1327	13.7	148.9	4.06	6.28	24.9		8.78		
1330		147.7	3.66	6.28	23.9		8.78		
1333		144.4	1.49	6.31	19.7		0.70		
1336		142.6	0.78	6.30	19.6				
-									
1339		142.2	0.64	6.33	18.0				
1342	14.2	141.7	0.61	6.33	17.0				
SAMPLE CO	LLECTION D								
Sample Colle			Bailer		Pump/Pump Type	DED BLADDER			
Made of:		Stainless Stee	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proces	dure:	Alconox Was	sh 🗖	Tap Rinse	DI Water	Dedicated		_	
(By Numerica	ul Order)	Other	_	•		_			
Sample Descr	ription (color, t	urbidity, odor,	sheen, etc.):	SLIGHTLY	GRAY AND TUI	RBID NO/NS			
					0.00				
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	14.4	142.0	0.57	6.32	17.0	( )		( ' ')	
2	14.4	141.8	0.59	6.34					
3	14.4		- 0.07	0.5 .	16.2				
		141.9	0.58	6.34	16.2				
4	14.4	141.9	0.58	6.34	15.7				
4 Average:	14.4	141.9 142.0 141.9	0.58 0.56	6.34 6.34		#DIV/0!			
Average:	14.4	142.0 141.9	0.56	6.34	15.7 15.7 16.2				
	14.4 TYPICAL A	142.0 141.9 NALYSIS AI	0.56 0.58 LOWED PE	6.34 6.34 ER BOTTLE	15.7 15.7 16.2 TYPE (Circle a)	#DIV/0!	non-standard a		OR []
Average:	14.4 <b>TYPICAL A</b> (8260) (801)	142.0 141.9 NALYSIS AI 0) (8020) (N	0.56 0.58 LOWED PE	6.34 6.34 CR BOTTLE NWTPH-Gx)	15.7 15.7 16.2 TYPE (Circle a) (BTEX)	pplicable or write		WA 🗆	OR  OR
Average:	14.4 <b>TYPICAL A</b> (8260) (8010) (8270) (PAF	142.0 141.9 NALYSIS AI 0) (8020) (N H) (NWTPH-	0.56 0.58 LOWED PE IWTPH-G) (	6.34 6.34 CR BOTTLE NWTPH-Gx) I-Dx) (TPH-	15.7 15.7 16.2 TYPE (Circle a) (BTEX) HCID) (8081)	pplicable or write	ase)	WA 🗆	OR OR
Average:	14.4  TYPICAL A (8260) (801) (8270) (PAF (pH) (Condu	142.0 141.9 NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS	0.56 0.58  LOWED PERMYPH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (PMTPH-G) (PMTPH-G	6.34 6.34 CR BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic	15.7 15.7 16.2 TYPE (Circle a) (BTEX) HCID) (8081)	(8141) (Oil & Gre (HCO3/CO3) (C	ase)	WA 🗆	
Average:	14.4  TYPICAL A (8260) (801) (8270) (PAH (pH) (Condu	142.0 141.9 NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS	0.56  0.58  LOWED PERMYPH-G) ( D) (NWTPH-G) ( TOS) (TSS) (B) (Total Kie	6.34 6.34 R BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbio dahl Nitroger	15.7 15.7 16.2 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity)	(8141) (Oil & Gre (HCO3/CO3) (C	ase)	WA 🗆	
Average:	14.4  TYPICAL A (8260) (8010) (8270) (PAF (pH) (Conduction) (TOd (Total Cyanid	142.0 141.9 NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 de) (WAD Cy	0.56  0.58  LOWED PF  WTPH-G) ( D) (NWTPH  S) (TSS) (B  4) (Total Kie  anide) (Free	6.34 6.34 CR BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)	15.7 15.7 16.2 TYPE (Circle ap ) (BTEX) HCID) (8081) dity) (Alkalinity) a) (NH3) (NO3	(8141) (Oil & Gre (HCO3/CO3) (C	ase) Cl) (SO4) (NO	WA	OR 🗆
Average:	14.4  TYPICAL A (8260) (801) (8270) (PAH (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals (Dissolved M	142.0 141.9  NALYSIS AI 0) (8020) (N H) (NWTPH- entivity) (TDS C) (Total PO4 le) (WAD Cy le) (As) (Sb) (setals) (As) (Sb) (Sb)	0.56  0.58  LOWED PE  WTPH-G) ( D) (NWTPH-S) (TSS) (E) (Total Kie anide) (Free Ba) (Be) (Ca	6.34 6.34 CR BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbio dahl Nitroger Cyanide) () (Cd) (Co)	15.7 15.7 16.2 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3)	(8141) (Oil & Gre (HCO3/CO3) (O/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:	TYPICAL A (8260) (801) (8270) (PAH (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	142.0 141.9  NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 le) (WAD Cy ) (As) (Sb) (a etals) (As) (Sb ag short list)	0.56  0.58  LOWED PE WTPH-G) ( D) (NWTPH-G) (TSS) (E) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.34 6.34 CR BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbio dahl Nitroger Cyanide) () (Cd) (Co)	15.7 15.7 16.2 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3)	(8141) (Oil & Gre (HCO3/CO3) (O/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:	TYPICAL A (8260) (801) (8270) (PAH (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	142.0 141.9  NALYSIS AI 0) (8020) (N H) (NWTPH- entivity) (TDS C) (Total PO4 le) (WAD Cy le) (As) (Sb) (setals) (As) (Sb) (Sb)	0.56  0.58  LOWED PE WTPH-G) ( D) (NWTPH-G) (TSS) (E) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.34 6.34 CR BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbio dahl Nitroger Cyanide) () (Cd) (Co)	15.7 15.7 16.2 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3)	(8141) (Oil & Gre (HCO3/CO3) (O/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:	TYPICAL A (8260) (801) (8270) (PAH (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	142.0 141.9  NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 le) (WAD Cy ) (As) (Sb) (a etals) (As) (Sb ag short list)	0.56  0.58  LOWED PE WTPH-G) ( D) (NWTPH-G) (TSS) (E) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.34 6.34 CR BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbio dahl Nitroger Cyanide) () (Cd) (Co)	15.7 15.7 16.2 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3)	(8141) (Oil & Gre (HCO3/CO3) (O/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:	TYPICAL A (8260) (801) (8270) (PAH (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	142.0 141.9  NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 le) (WAD Cy ) (As) (Sb) (a etals) (As) (Sb ag short list)	0.56  0.58  LOWED PE WTPH-G) ( D) (NWTPH-G) (TSS) (E) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.34 6.34 CR BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbio dahl Nitroger Cyanide) () (Cd) (Co)	15.7 15.7 16.2 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3)	(8141) (Oil & Gre (HCO3/CO3) (O/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:  QUANTITY  2	14.4  TYPICAL A (8260) (801) (8270) (PAF (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	142.0 141.9  NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 le) (WAD Cy ) (As) (Sb) (a etals) (As) (Sb ag short list)	0.56  0.58  LOWED PE WTPH-G) ( D) (NWTPH-G) (TSS) (E) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.34 6.34 CR BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbio dahl Nitroger Cyanide) () (Cd) (Co)	15.7 15.7 16.2 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3)	(8141) (Oil & Gre (HCO3/CO3) (O/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
Average:	14.4  TYPICAL A (8260) (801) (8270) (PAF (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	142.0 141.9  NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 le) (WAD Cy ) (As) (Sb) (a etals) (As) (Sb ag short list)	0.56  0.58  LOWED PE WTPH-G) ( D) (NWTPH-G) (TSS) (E) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.34 6.34 CR BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbio dahl Nitroger Cyanide) () (Cd) (Co)	15.7 15.7 16.2 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3)	(8141) (Oil & Gre (HCO3/CO3) (O/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR 🗆



Project Nam	ne:	Boeing Rent	on		Project Number	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 11 /2019@	1405		
Sample Nur	nber:	RGW184S-	191111		Weather:	SUNNY, COOL	ı		
Landau Rep	resentative:	BXM							
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES)	)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	9.34	Time:	•	Flow through cel			GW Meter No.(	s HERON-3
	0 0 0	11/ 11 /2019		End Purge:	_	11/11 /2019 @	1402	Gallons Purged:	
Purge water of			55-gal Drum		Storage Tank	Ground		SITE TREATM	
8	1		C		_		<del>_</del>		
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
				ters for three		dings within the fo		>/= 1 flow	O D D C T T T T T T T T T T T T T T T T T
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1343	14.9	141.3	2.99	6.52	23.6		9.34		
1346	14.7	141.7	3.01	6.51	20.8		9.33		
1349	14.7	147.9	2.88	6.5	21.6		9.33		
1352	14.6	152.6	2.80	6.5	20.8				
1355		155.3	2.45	6.5	19.4				
									_
1358		155.8	2.50	6.5	18.5				
1401	14.4	155.8	2.33	6.49	17.9				
	LLECTION E		D. 11		D (D T	DI (DDED			
Sample Colle	cted With:	_	Bailer	_	Pump/Pump Type	_			
Made of:		Stainless Stee	_		Teflon	Polyethylene	Other	Dedicated	
Decon Procee		Alconox Was	h 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other							
Sample Descri	ription (color, t	urbidity, odor,	sheen, etc.):	CLEAR, CO	LORLESS, NO S	HEEN, NO ODOR			
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	14.4	155.8	2.35	6.49	17.9	, ,	( )	,	
2	14.4				17.5				
			7) 27)		170				
3	14.2	155.8	2.32	6.49	17.9				
	14.3	155.8	2.36	6.49	17.8				
4	14.3	155.8 155.8	2.36	6.49	17.8 17.8				
4 Average:		155.8	2.36	6.49	17.8	#DIV/0!			
	14.3	155.8 155.8 155.8	2.36 2.43 2.37	6.49 6.49 6.49	17.8 17.8 17.9			nalysis below)	
Average:	14.3 14.4 TYPICAL A	155.8 155.8 155.8	2.36 2.43 2.37	6.49 6.49 6.49 ER BOTTLE	17.8 17.8 17.9 <b>TYPE (Circle ap</b>	#DIV/0!		nalysis below) WA	OR
Average:	14.3 14.4 <b>TYPICAL A</b> (8260) (801) (8270) (PAF	155.8 155.8 155.8 NALYSIS AL 0) (8020) (N H) (NWTPH-I	2.36 2.43 2.37 LOWED PE WTPH-G) (	6.49 6.49 6.49 ER BOTTLE (NWTPH-Gx) I-Dx) (TPH-	17.8 17.8 17.9 <b>TYPE (Circle ap</b> ) (BTEX) HCID) (8081) (	#DIV/0!  pplicable or write (8141) (Oil & Gre	non-standard a	WA □ WA □	OR OR
Average:	14.3 14.4 <b>TYPICAL A</b> (8260) (8010 (8270) (PAF (pH) (Condu	155.8 155.8 155.8 NALYSIS AL 0) (8020) (N H) (NWTPH-I	2.36 2.43 2.37 2.0WED PE WTPH-G) ( D) (NWTPH G) (TSS) (B	6.49 6.49 6.49 ER BOTTLE (NWTPH-Gx) H-Dx) (TPH- BOD) (Turbic	17.8 17.8 17.9  TYPE (Circle ap ) (BTEX) HCID) (8081) (dity) (Alkalinity)	#DIV/0!  pplicable or write (8141) (Oil & Green) (HCO3/CO3) (Control of the control of the contr	non-standard a	WA □ WA □	
Average:	14.3 14.4  TYPICAL A (8260) (801) (8270) (PAI (pH) (Condu	155.8 155.8 155.8 155.8 NALYSIS AL 0) (8020) (N H) (NWTPH-I activity) (TDS C) (Total PO4	2.36 2.43 2.37 2.00 PE WTPH-G) ( D) (NWTPH G) (TSS) (B	6.49 6.49 6.49 ER BOTTLE (NWTPH-Gx) 1-Dx) (TPH- BOD) (Turbic cdahl Nitroger	17.8 17.8 17.9 <b>TYPE (Circle ap</b> ) (BTEX) HCID) (8081) (	#DIV/0!  pplicable or write (8141) (Oil & Green) (HCO3/CO3) (Control of the control of the contr	non-standard a	WA □ WA □	
Average:	14.3  14.4  TYPICAL A  (8260) (801) (8270) (PAF  (pH) (Condu  (COD) (Too  (Total Cyanid	155.8 155.8 155.8 155.8 NALYSIS AL 0) (8020) (N H) (NWTPH-I Lectivity) (TDS C) (Total PO4 de) (WAD Cya	2.36 2.43 2.37 LOWED PE WTPH-G) ( D) (NWTPH-G) (TSS) (B L) (Total Kie anide) (Free	6.49 6.49 6.49 ER BOTTLE (NWTPH-Gx) I-Dx) (TPH-GOD) (Turbic dahl Nitroger	17.8 17.9  TYPE (Circle ap.) (BTEX) HCID) (8081) (dity) (Alkalinity) n) (NH3) (NO3/	#DIV/0!  pplicable or write in the interpolation (8141) (Oil & Green (HCO3/CO3) (Oil MO2)	non-standard and asse) Cl) (SO4) (NO	WA □ WA □ 3) (NO2) (F)	OR 🗆
Average:	14.3  14.4  TYPICAL A  (8260) (801) (8270) (PAF  (pH) (Condu (COD) (Total Cyanid (Total Metals)	155.8 155.8 155.8 155.8 NALYSIS AL 0) (8020) (N H) (NWTPH-I activity) (TDS C) (Total PO4 de) (WAD Cya c) (As) (Sb) (I	2.36 2.43 2.37 2.37 2.10WED PE WTPH-G) (NWTPH-G) (TSS) (Bs.) (Total Kie anide) (Free Ba) (Be) (Ca	6.49 6.49 6.49 ER BOTTLE (NWTPH-GX) H-DX) (TPH-BOD) (Turbic Edahl Nitroger Cyanide) a) (Cd) (Co)	17.8 17.9  TYPE (Circle ap.) (BTEX) HCID) (8081) (dity) (Alkalinity) n) (NH3) (NO3/	#DIV/0!  pplicable or write (8141) (Oil & Gre) (HCO3/CO3) (O/NO2)  (Pb) (Mg) (Mn) (1	ase) Cl) (SO4) (NO	WA  WA  WA  WO  WO  WO  WO  WO  WO  WO  WO  WO  WO	OR □
Average:	14.3  14.4  TYPICAL A  (8260) (801) (8270) (PAF  (pH) (Condu (COD) (Total Cyanid (Total Metals)	155.8  155.8  155.8  NALYSIS AL  0) (8020) (N  H) (NWTPH-I  detivity) (TDS  C) (Total PO4  de) (WAD Cya  de) (As) (Sb) (I  detals) (As) (Sb)	2.36 2.43 2.37 2.37 2.10WED PE WTPH-G) (NWTPH-G) (TSS) (Bs.) (Total Kie anide) (Free Ba) (Be) (Ca	6.49 6.49 6.49 ER BOTTLE (NWTPH-GX) H-DX) (TPH-BOD) (Turbic Edahl Nitroger Cyanide) a) (Cd) (Co)	17.8 17.9  TYPE (Circle ap.) (BTEX) HCID) (8081) (dity) (Alkalinity) n) (NH3) (NO3/	#DIV/0!  pplicable or write (8141) (Oil & Gre) (HCO3/CO3) (O/NO2)  (Pb) (Mg) (Mn) (1	ase) Cl) (SO4) (NO	WA  WA  WA  WO  WO  WO  WO  WO  WO  WO  WO  WO  WO	OR 🗆
Average:	14.3 14.4  TYPICAL A (8260) (8010) (8270) (PAF (pH) (Conduction (COD) (Total Cyanid (Total Metals) (Dissolved M VOC (Boein	155.8  155.8  155.8  NALYSIS AL  0) (8020) (N  H) (NWTPH-I  detivity) (TDS  C) (Total PO4  de) (WAD Cya  de) (As) (Sb) (I  detals) (As) (Sb)	2.36 2.43 2.37 2.37 2.40 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.40 2.40 2.40 2.40 2.40 2.40 2.40	6.49 6.49 6.49 ER BOTTLE (NWTPH-GX) H-DX) (TPH-BOD) (Turbic Edahl Nitroger Cyanide) a) (Cd) (Co)	17.8 17.9  TYPE (Circle ap.) (BTEX) HCID) (8081) (dity) (Alkalinity) n) (NH3) (NO3/	#DIV/0!  pplicable or write 1  (8141) (Oil & Gre ) (HCO3/CO3) (Oil / NO2)  (Pb) (Mg) (Mn) (I	ase) Cl) (SO4) (NO	WA  WA  WA  WO  WO  WO  WO  WO  WO  WO  WO  WO  WO	OR □
Average:	14.3 14.4  TYPICAL A (8260) (8010) (8270) (PAF (pH) (Conduction (COD) (Total Cyanid (Total Metals) (Dissolved M VOC (Boein	155.8 155.8 155.8 155.8  NALYSIS AL 0) (8020) (N H) (NWTPH-Inectivity) (TDS C) (Total PO4 de) (WAD Cya 1) (As) (Sb) (Inectals) (As) (Sb	2.36 2.43 2.37 2.37 2.40 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.40 2.40 2.40 2.40 2.40 2.40 2.40	6.49 6.49 6.49 ER BOTTLE (NWTPH-GX) H-DX) (TPH-BOD) (Turbic schall Nitroger Cyanide) a) (Cd) (Co)	17.8 17.9  TYPE (Circle ap.) (BTEX) HCID) (8081) (dity) (Alkalinity) n) (NH3) (NO3/	#DIV/0!  pplicable or write 1  (8141) (Oil & Gre ) (HCO3/CO3) (Oil / NO2)  (Pb) (Mg) (Mn) (I	ase) Cl) (SO4) (NO	WA  WA  WA  WO  WO  WO  WO  WO  WO  WO  WO  WO  WO	OR □
Average:	14.3 14.4  TYPICAL A (8260) (8010) (8270) (PAF (pH) (Conduction (COD) (Total Cyanid (Total Metals) (Dissolved M VOC (Boein	155.8 155.8 155.8 155.8  NALYSIS AL 0) (8020) (N H) (NWTPH-Inectivity) (TDS C) (Total PO4 de) (WAD Cya 1) (As) (Sb) (Inectals) (As) (Sb	2.36 2.43 2.37 2.37 2.40 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.40 2.40 2.40 2.40 2.40 2.40 2.40	6.49 6.49 6.49 ER BOTTLE (NWTPH-GX) H-DX) (TPH-BOD) (Turbic schall Nitroger Cyanide) a) (Cd) (Co)	17.8 17.9  TYPE (Circle ap.) (BTEX) HCID) (8081) (dity) (Alkalinity) n) (NH3) (NO3/	#DIV/0!  pplicable or write 1  (8141) (Oil & Gre ) (HCO3/CO3) (Oil / NO2)  (Pb) (Mg) (Mn) (I	ase) Cl) (SO4) (NO	WA  WA  WA  WO  WO  WO  WO  WO  WO  WO  WO  WO  WO	OR □
Average:	14.3 14.4  TYPICAL A (8260) (8010) (8270) (PAF (pH) (Conduction (COD) (Total Cyanid (Total Metals) (Dissolved M VOC (Boein	155.8 155.8 155.8 155.8  NALYSIS AL 0) (8020) (N H) (NWTPH-Inectivity) (TDS C) (Total PO4 de) (WAD Cya 1) (As) (Sb) (Inectals) (As) (Sb	2.36 2.43 2.37 2.37 2.40 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.40 2.40 2.40 2.40 2.40 2.40 2.40	6.49 6.49 6.49 ER BOTTLE (NWTPH-GX) H-DX) (TPH-BOD) (Turbic schall Nitroger Cyanide) a) (Cd) (Co)	17.8 17.9  TYPE (Circle ap.) (BTEX) HCID) (8081) (dity) (Alkalinity) n) (NH3) (NO3/	#DIV/0!  pplicable or write 1  (8141) (Oil & Gre ) (HCO3/CO3) (Oil / NO2)  (Pb) (Mg) (Mn) (I	ase) Cl) (SO4) (NO	WA  WA  WA  WO  WO  WO  WO  WO  WO  WO  WO  WO  WO	OR □
Average:  QUANTITY  2	14.3  14.4  TYPICAL A  (8260) (801) (8270) (PAF (pH) (Condu (COD) (TOG (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	155.8 155.8 155.8 155.8  NALYSIS AL 0) (8020) (N H) (NWTPH-Inectivity) (TDS C) (Total PO4 de) (WAD Cya 1) (As) (Sb) (Inectals) (As) (Sb	2.36 2.43 2.37 2.37 2.40 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.40 2.40 2.40 2.40 2.40 2.40 2.40	6.49 6.49 6.49 ER BOTTLE (NWTPH-GX) H-DX) (TPH-BOD) (Turbic schall Nitroger Cyanide) a) (Cd) (Co)	17.8 17.9  TYPE (Circle ap.) (BTEX) HCID) (8081) (dity) (Alkalinity) n) (NH3) (NO3/	#DIV/0!  pplicable or write 1  (8141) (Oil & Gre ) (HCO3/CO3) (Oil / NO2)  (Pb) (Mg) (Mn) (I	ase) Cl) (SO4) (NO	WA  WA  WA  WO  WO  WO  WO  WO  WO  WO  WO  WO  WO	OR □
Average:	14.3  14.4  TYPICAL A  (8260) (801) (8270) (PAF (pH) (Condu (COD) (TOG (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	155.8 155.8 155.8 155.8  NALYSIS AL 0) (8020) (N H) (NWTPH-Inectivity) (TDS C) (Total PO4 de) (WAD Cya 1) (As) (Sb) (Inectals) (As) (Sb	2.36 2.43 2.37 2.37 2.40 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.37 2.40 2.40 2.40 2.40 2.40 2.40 2.40 2.40	6.49 6.49 6.49 ER BOTTLE (NWTPH-GX) H-DX) (TPH-BOD) (Turbic schall Nitroger Cyanide) a) (Cd) (Co)	17.8 17.9  TYPE (Circle ap.) (BTEX) HCID) (8081) (dity) (Alkalinity) n) (NH3) (NO3/	#DIV/0!  pplicable or write 1  (8141) (Oil & Gre ) (HCO3/CO3) (Oil / NO2)  (Pb) (Mg) (Mn) (I	ase) Cl) (SO4) (NO	WA  WA  WA  WO  WO  WO  WO  WO  WO  WO  WO  WO  WO	OR □



ne:	Boeing Rent	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
	Nov-19			Date/Time:	11/11 /2019@	1045		
nber:	RGW211S-	191111		Weather:	PARTLY SUNN	Y, COOL		
resentative:	BXM			-				
/EI/WEII/DI	IRGE DATA							
		)	Damaged (N	<u> </u>	Describe:	Fluch Mount		
	· · ·		•			1 Idali Modifi	CW Matan Na (	· HEDON 2
0 0 0				•		1044	-	
			Ē				•	
lisposed to:		55-gal Drum		Storage Tank	☐ Ground	Other	SITE TREATM	ENT SYSTEM
Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
			tous fou thus			. ,	(0)	Observations
+/- 3%	+/- 3%				U	< 0.3 ft		
13.3	276.5	0.33	6.54	-3.8		8.23		
							-	
12.5	257.8	0.26	6.56	-25.1		8.42		
12.4	254.1	0.29	6.55	-29.9		8.30		
12.2	250.7	0.25	6.55	-33.0		8.30		
12.2	243.5	0.22	6.53	-37.2		8.27		
12.2	238.0	0.21	6.53	-39.6		8.27		
						0.27	-	
I I ECTION D								
		Bailer		Pump/Pump Type	BLADDER			
			_			Other	Dedicated	
t						i outer	Bedicated	
		sn 📙	rap Kinse	DI Water	Dedicated			
	ш .	1	DROUBL GI		DV D I DV GOLID	a No opop 1	IO GHEEN	
ription (color, i	urbiaity, odor,	, sneen, etc.):_	BROWN, SI	JGHTLY CLOUI	DY, DARK SOLID	S, NO ODOR, N	IO SHEEN	
Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
12.2	236.6	0.20	6.52	-40.3				
12.2	236.0	0.21		-40.4				
			6.52					
12.2	233.0	0.21	0.52					
	225.2	0.20	6.52	-40.7				
	235.3	0.20	6.52	-40.7				
12.2	235.3 235.9	0.20	6.52		#DIV/0!			
12.2	235.9	0.21	6.52	-40.7 -40.5	#DIV/0!	non-standard a	nalysis below)	
12.2 <b>TYPICAL A</b> (8260) (801)	235.9 NALYSIS AL 0) (8020) (N	0.21 LOWED PE	6.52 CR BOTTLE (NWTPH-Gx)	-40.7 -40.5 TYPE (Circle ap	oplicable or write i		wa 🗆	OR 🗆
12.2 <b>TYPICAL A</b> (8260) (801) (8270) (PAF	235.9 <b>NALYSIS AI</b> 0) (8020) (N H) (NWTPH-I	0.21  LOWED PE  WTPH-G) (  NWTPH	6.52 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-	-40.7 -40.5 TYPE (Circle ap ) (BTEX) HCID) (8081) (	oplicable or write i	ase)	WA □ WA □	OR OR
12.2 <b>TYPICAL A</b> (8260) (801) (8270) (PAF (pH) (Condu	235.9  NALYSIS AL  (0) (8020) (N  H) (NWTPH-I  (ctivity) (TDS	0.21  LOWED PERMYPH-G) ( D) (NWTPH-S) (TSS) (ESS) (ESS)	6.52 CR BOTTLE (NWTPH-Gx) I-Dx) (TPH-GOD) (Turbic	-40.7 -40.5  TYPE (Circle ap ) (BTEX)  HCID) (8081) (dity) (Alkalinity)	(8141) (Oil & Great (HCO3/CO3) (C	ase)	WA □ WA □	
12.2  TYPICAL A (8260) (801) (8270) (PAF (pH) (Condu	235.9  NALYSIS AL  0) (8020) (N  H) (NWTPH-  lectivity) (TDS  C) (Total PO4	D) (NWTPH-S) (ES) (TSS) (ES) (Total Kie	6.52  CR BOTTLE  NWTPH-Gx)  I-Dx) (TPH-GOD) (Turbic dahl Nitrogen	-40.7 -40.5 TYPE (Circle ap ) (BTEX) HCID) (8081) (	(8141) (Oil & Great (HCO3/CO3) (C	ase)	WA □ WA □	
12.2  TYPICAL A (8260) (801) (8270) (PAF (pH) (Cond. (COD) (TOO (Total Cyanid	235.9  NALYSIS AL  0) (8020) (N  I) (NWTPH-lectivity) (TDS  C) (Total PO4  e) (WAD Cy	0.21  LOWED PE  WTPH-G) ( D) (NWTPH- S) (TSS) (B 4) (Total Kie anide) (Free	6.52  CR BOTTLE  (NWTPH-Gx)  I-Dx) (TPH-GOD) (Turbic dahl Nitrogen  Cyanide)	-40.7  -40.5  TYPE (Circle ap ) (BTEX)  HCID) (8081) (dity) (Alkalinity) n) (NH3) (NO3)	(8141) (Oil & Green (HCO3/CO3) (CV/NO2)	ase) I) (SO4) (NO	WA	OR □
TYPICAL A (8260) (801) (8270) (PAF (pH) (Condu (COD) (Tod (Total Cyanid (Total Metals	235.9  NALYSIS AL  (b) (8020) (N  H) (NWTPH-I  (ctivity) (TDS  (c) (Total PO4  (e) (WAD Cyc  () (As) (Sb) (I	0.21  LOWED PF  WTPH-G) ( D) (NWTPF S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca	6.52 CR BOTTLE (NWTPH-GX) I-DX) (TPH-GOD) (Turbic dahl Nitrogen Cyanide) (a) (Cd) (Co)	-40.7 -40.5  TYPE (Circle ap ) (BTEX)  HCID) (8081) (dity) (Alkalinity) (i) (NH3) (NO3) (Cr) (Cu) (Fe) (	(8141) (Oil & Green (HCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ 3) (NO2) (F)  Tl) (V) (Zn) (H	OR □ g) (K) (Na)
TYPICAL A (8260) (801) (8270) (PAF (pH) (Condu (COD) (Tod (Total Cyanid (Total Metals	235.9  NALYSIS AL  (1) (8020) (N  (2) (NWTPH- (3) (1) (TDS (4) (Total PO4 (5) (WAD Cyc (6) (As) (Sb) (I  (7) (ctals) (As) (Sb) (Sb)	0.21  LOWED PF  WTPH-G) ( D) (NWTPF S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca	6.52 CR BOTTLE (NWTPH-GX) I-DX) (TPH-GOD) (Turbic dahl Nitrogen Cyanide) (a) (Cd) (Co)	-40.7 -40.5  TYPE (Circle ap ) (BTEX)  HCID) (8081) (dity) (Alkalinity) (i) (NH3) (NO3) (Cr) (Cu) (Fe) (	(8141) (Oil & Green (HCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ 3) (NO2) (F)  Tl) (V) (Zn) (H	OR □
TYPICAL A (8260) (801) (8270) (PAH (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	235.9  NALYSIS AL  (1) (8020) (N  (2) (NWTPH- (3) (1) (TDS (4) (Total PO4 (5) (WAD Cyc (6) (As) (Sb) (I  (7) (ctals) (As) (Sb) (Sb)	0.21  LOWED PE  IWTPH-G) ( D) (NWTPH- S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.52 CR BOTTLE (NWTPH-GX) I-DX) (TPH-GOD) (Turbic dahl Nitrogen Cyanide) (a) (Cd) (Co)	-40.7 -40.5  TYPE (Circle ap ) (BTEX)  HCID) (8081) (dity) (Alkalinity) (i) (NH3) (NO3) (Cr) (Cu) (Fe) (	(8141) (Oil & Green (HCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ 3) (NO2) (F)  Tl) (V) (Zn) (H	OR □ g) (K) (Na)
TYPICAL A (8260) (801) (8270) (PAH (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	NALYSIS AL  O) (8020) (N  H) (NWTPH-lectivity) (TDS  C) (Total PO4  e) (WAD Cyc)  O) (As) (Sb) (I  etals) (As) (Sb  g short list)	0.21  LOWED PE  IWTPH-G) ( D) (NWTPH- S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.52 CR BOTTLE (NWTPH-GX) I-DX) (TPH-GOD) (Turbic dahl Nitrogen Cyanide) (a) (Cd) (Co)	-40.7 -40.5  TYPE (Circle ap ) (BTEX)  HCID) (8081) (dity) (Alkalinity) (i) (NH3) (NO3) (Cr) (Cu) (Fe) (	(8141) (Oil & Green (HCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ 3) (NO2) (F)  Tl) (V) (Zn) (H	OR □ g) (K) (Na)
TYPICAL A (8260) (801) (8270) (PAH (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	NALYSIS AL  O) (8020) (N  H) (NWTPH-lectivity) (TDS  C) (Total PO4  e) (WAD Cyc)  O) (As) (Sb) (I  etals) (As) (Sb  g short list)	0.21  LOWED PE  IWTPH-G) ( D) (NWTPH- S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.52 CR BOTTLE (NWTPH-GX) I-DX) (TPH-GOD) (Turbic dahl Nitrogen Cyanide) (a) (Cd) (Co)	-40.7 -40.5  TYPE (Circle ap ) (BTEX)  HCID) (8081) (dity) (Alkalinity) (i) (NH3) (NO3) (Cr) (Cu) (Fe) (	(8141) (Oil & Green (HCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ 3) (NO2) (F)  Tl) (V) (Zn) (H	OR □ g) (K) (Na)
TYPICAL A (8260) (801) (8270) (PAH (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	NALYSIS AL  O) (8020) (N  H) (NWTPH-lectivity) (TDS  C) (Total PO4  e) (WAD Cyc)  O) (As) (Sb) (I  etals) (As) (Sb  g short list)	0.21  LOWED PE  IWTPH-G) ( D) (NWTPH- S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.52 CR BOTTLE (NWTPH-GX) I-DX) (TPH-GOD) (Turbic dahl Nitrogen Cyanide) (a) (Cd) (Co)	-40.7 -40.5  TYPE (Circle ap ) (BTEX)  HCID) (8081) (dity) (Alkalinity) (i) (NH3) (NO3) (Cr) (Cu) (Fe) (	(8141) (Oil & Green (HCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ 3) (NO2) (F)  Tl) (V) (Zn) (H	OR □ g) (K) (Na)
TYPICAL A (8260) (801) (8270) (PAF (pH) (Condu (COD) (Tod (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	NALYSIS AL  O) (8020) (N  H) (NWTPH-lectivity) (TDS  C) (Total PO4  e) (WAD Cyc)  O) (As) (Sb) (I  etals) (As) (Sb  g short list)	0.21  LOWED PE  IWTPH-G) ( D) (NWTPH- S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.52 CR BOTTLE (NWTPH-GX) I-DX) (TPH-GOD) (Turbic dahl Nitrogen Cyanide) (a) (Cd) (Co)	-40.7 -40.5  TYPE (Circle ap ) (BTEX)  HCID) (8081) (dity) (Alkalinity) (i) (NH3) (NO3) (Cr) (Cu) (Fe) (	(8141) (Oil & Green (HCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ 3) (NO2) (F)  Tl) (V) (Zn) (H	OR □ g) (K) (Na)
TYPICAL A (8260) (801) (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	NALYSIS AL  O) (8020) (N  H) (NWTPH-lectivity) (TDS  C) (Total PO4  e) (WAD Cyc)  O) (As) (Sb) (I  etals) (As) (Sb  g short list)	0.21  LOWED PE  IWTPH-G) ( D) (NWTPH- S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.52 CR BOTTLE (NWTPH-GX) I-DX) (TPH-GOD) (Turbic dahl Nitrogen Cyanide) (a) (Cd) (Co)	-40.7 -40.5  TYPE (Circle ap ) (BTEX)  HCID) (8081) (dity) (Alkalinity) (i) (NH3) (NO3) (Cr) (Cu) (Fe) (	(8141) (Oil & Green (HCO3/CO3) (C/NO2)	ase) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ 3) (NO2) (F)  Tl) (V) (Zn) (H	OR □ g) (K) (Na)
	Purging (ft) Date/Time: disposed to:  Temp (°F/°C) Purge Goa +/- 3% 13.0 12.5 12.4 12.2 12.2 12.2 12.2 DLLECTION Detected With:  al Order) ription (color, to the color, th	Nov-19     RGW211S-    Date/Time:   BXM     Date/Time:   11/11 /2019     disposed to:       Temp	Nov-19   RGW211S-191111     Dresentative:   BXM	Nov-19   RGW211S-191111   BXM	Nov-19   Date/Time:   RGW211S-191111   Weather:   Meather:   BXM   Weather:   BXM   Weather:   Meather:   Me	Nov-19	Nov-19	Nov-19



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 11/2019@	1135		
Sample Nun	nber:	RGW212S-	191111		Weather:	PARTLY CLOU	JDY, COOL		
Landau Rep	resentative:	BXM							
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES	5)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	10.28	Time:	•	Flow through ce			GW Meter No.(s	s HFRON-3
	Date/Time:			End Purge:	•	11/ 11 /2019 @	1132	Gallons Purged:	
Purge water d		11/ 11 /201	55-gal Drum	Ē	Storage Tank	Ground		SITE TREATM	
i uige water u	nsposed to.				Storage Talik	U Ground		SHE IKEAIW	ENTSTSTEM
mot .	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C) Purge Goa	(uS/cm) ls: Stablizatio	(mg/L) on of Parame	ters for three	(mV) e consecutive rea	(NTU) dings within the fo	(ft) ollowing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1112	14.1	230.2	0.68	5.77	24.9		10.40		
1115	14.2	233.4	0.60	5.77	24.2		10.41		
			0.59		22.2		10.43		
1118		235.6		5.77			10.43		
1121	14.5	236.8	0.60	5.77	20.1				
SAMPLE CO	LLECTION D	OATA							
Sample Collec			Bailer		Pump/Pump Type	BLADDER			
Made of:		Stainless Ste	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lure:	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated	_	<del>_</del>	
	_				<u> </u>				
	ıl Order)	Other							
. •	<i>al Order)</i> ciption (color, 1	Other	sheen etc.):	SLIGHTLY	BROWN SLIGH	TLY CLOUDY. N	O ODOR. NO SI	HEEN	
. •	ŕ		, sheen, etc.):_	SLIGHTLY	BROWN, SLIGH	TLY CLOUDY, N	O ODOR, NO SI	HEEN	
. •	ription (color, t	curbidity, odor	D.O.	SLIGHTLY pH	ORP	Turbidity	DTW	Ferrous iron	Comments/
Sample Descr Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)				Comments/ Observations
Sample Descr	ription (color, t	curbidity, odor	D.O.		ORP	Turbidity	DTW	Ferrous iron	
Sample Descr Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity	DTW	Ferrous iron	
Sample Descri Replicate	Temp (°F/°C)	Cond. (uS/cm) 236.6	D.O. (mg/L)	<b>рН</b> 5.76	ORP (mV)	Turbidity	DTW	Ferrous iron	
Sample Description Replicate  1 2	Temp (°F/°C) 14.6	Cond. (uS/cm)  236.6  235.5	D.O. (mg/L) 0.56	<b>pH</b> 5.76 5.76	ORP (mV) 19.7	Turbidity	DTW	Ferrous iron	
Sample Descr Replicate  1 2 3	Temp (°F/°C) 14.6 14.6	Cond. (uS/cm)  236.6  235.5  236.5	D.O. (mg/L) 0.56 0.54	pH 5.76 5.76 5.76	ORP (mV) 19.7 19.4 19.3	Turbidity	DTW	Ferrous iron	
Replicate  1 2 3 4 Average:	Temp (°F/°C) 14.6 14.6 14.6 14.6	Cond. (uS/cm)  236.6  235.5  236.6  236.3	D.O. (mg/L) 0.56 0.54 0.52 0.52	5.76 5.76 5.76 5.76 5.76	ORP (mV)  19.7  19.4  19.3  19.2  19.4	Turbidity (NTU)  #DIV/0!	DTW (ft)	Ferrous iron (Fe II)	
Replicate  1 2 3 4	Temp (°F/°C) 14.6 14.6 14.6 14.6 14.6	Cond. (uS/cm) 236.6 235.5 236.5 236.6 236.3	D.O. (mg/L) 0.56 0.54 0.52 0.52 0.54	5.76 5.76 5.76 5.76 5.76 5.76	ORP (mV)  19.7  19.4  19.3  19.2  19.4  TYPE (Circle a)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Observations
Replicate  1 2 3 4 Average:	Temp (°F/°C) 14.6 14.6 14.6 14.6 14.6 14.6 14.6 14.6	Cond. (uS/cm)  236.6  235.5  236.5  236.3  NALYSIS AI  (0) (8020) (1)	D.O. (mg/L)  0.56  0.54  0.52  0.52  0.54  LLOWED PE	5.76 5.76 5.76 5.76 5.76 5.76 S.R BOTTLE NWTPH-Gx	ORP (mV)  19.7  19.4  19.3  19.2  19.4  TYPE (Circle a) (BTEX)	Turbidity (NTU)  #DIV/0!	DTW (ft)	Ferrous iron (Fe II)  nalysis below)  WA	Observations
Replicate  1 2 3 4 Average:	Temp (°F/°C) 14.6 14.6 14.6 14.6 14.6 14.6 (8260) (801) (8270) (PAF	Cond. (uS/cm)  236.6  235.5  236.5  236.6  236.3  NALYSIS AI  (D) (8020) (NI) (NWTPH-	D.O. (mg/L)  0.56  0.54  0.52  0.52  0.54  LLOWED PENWTPH-G) (NWTPH-G)	5.76 5.76 5.76 5.76 5.76 5.76 ER BOTTLE NWTPH-Gx 1-Dx) (TPH-	ORP (mV)  19.7  19.4  19.3  19.2  19.4  TYPE (Circle a) (BTEX)  HCID) (8081)	#DIV/0!	DTW (ft)	Ferrous iron (Fe II)  nalysis below)  WA  WA	Observations
Replicate  1 2 3 4 Average:	Temp (°F/°C) 14.6 14.6 14.6 14.6 14.6 14.6 (8260) (801) (8270) (PAF (pH) (Condu	Cond. (uS/cm)  236.6  235.5  236.5  236.6  236.3  NALYSIS AI  0) (8020) (NI  1) (NWTPH-  lectivity) (TD	D.O. (mg/L)  0.56  0.54  0.52  0.52  0.54  LLOWED PENWTPH-G) (D) (NWTPH-G) (NWTPH-G) (D) (D) (NWTPH-G) (D) (D) (D) (D) (D) (D) (D) (D) (D) (D	5.76 5.76 5.76 5.76 5.76 CR BOTTLE NWTPH-GX I-Dx) (TPH-OD) (Turbic	ORP (mV)  19.7  19.4  19.3  19.2  19.4  TYPE (Circle a) (BTEX)  HCID) (8081)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (MCO3/CO3)	DTW (ft)	Ferrous iron (Fe II)  nalysis below)  WA  WA	Observations
Replicate  1 2 3 4 Average:	Temp (°F/°C) 14.6 14.6 14.6 14.6 14.6 14.6 (8260) (801) (8270) (PAF (pH) (Condu	Cond. (uS/cm)  236.6  235.5  236.5  236.6  236.3  NALYSIS AI  (0) (8020) (NI) (NWTPH- detivity) (TDC) (Total PO-	D.O. (mg/L)  0.56  0.54  0.52  0.52  0.54  LLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (D) (NWTPH-G) (D) (Total Kie	5.76 5.76 5.76 5.76 5.76 SR BOTTLE NWTPH-Gx, I-Dx) (TPH-OD) (Turbio dahl Nitroger	ORP (mV)  19.7  19.4  19.3  19.2  19.4  TYPE (Circle a) (BTEX)  HCID) (8081)  dity) (Alkalinity)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (MCO3/CO3)	DTW (ft)	Ferrous iron (Fe II)  nalysis below)  WA  WA	Observations
Replicate  1 2 3 4 Average:	Temp (°F/°C) 14.6 14.6 14.6 14.6 14.6 14.6 (8260) (801) (8270) (PAF (pH) (Condu (COD) (TOO (Total Cyanid	Cond. (uS/cm)  236.6  235.5  236.5  236.6  236.3  NALYSIS AI  (b) (8020) (NI) (NWTPH-  (ctivity) (TD)  (c) (Total PO-  (ce) (WAD Cy	D.O. (mg/L)  0.56  0.54  0.52  0.54  LLOWED PE  NWTPH-G) ( D) (NWTPH  S) (TSS) (B 4) (Total Kie ranide) (Free	5.76 5.76 5.76 5.76 5.76 CR BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbid dahl Nitroger Cyanide)	ORP (mV)  19.7  19.4  19.3  19.2  19.4  TYPE (Circle a) (BTEX)  HCID) (8081)  dity) (Alkalinity) a) (NH3) (NO3	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (MCO3/CO3)	DTW (ft)  mon-standard at ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  Solution	Observations  OR □  OR □
Replicate  1 2 3 4 Average:	Temp (°F/°C)  14.6  14.6  14.6  14.6  14.6  14.6  14.6  (8260) (801) (8270) (PAI (pH) (Condu (COD) (Total Cyanid (Total Metals)	Cond. (uS/cm)  236.6  235.5  236.5  236.6  236.3  NALYSIS AI (0) (8020) (NI) (NWTPH- (ctivity) (TD) (C) (Total PO- (c) (WAD Cy () (As) (Sb) (	D.O. (mg/L)  0.56  0.54  0.52  0.54  LLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (Total Kiewanide) (Free Ba) (Be) (Ca	5.76 5.76 5.76 5.76 5.76 CR BOTTLE NWTPH-GX L-Dx) (TPH-OD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV)  19.7  19.4  19.3  19.2  19.4  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (CV/NO2)	DTW (ft)  mon-standard at ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  3) (NO2) (F)  TI) (V) (Zn) (H	Observations  OR □  OR □
Replicate  1 2 3 4 Average:	Temp (°F/°C)  14.6  14.6  14.6  14.6  14.6  14.6  14.6  (8260) (801) (8270) (PAI (pH) (Condu (COD) (Total Cyanid (Total Metals)	Cond. (uS/cm)  236.6  235.5  236.5  236.6  236.3  NALYSIS AI  (D) (8020) (NI) (NWTPH-  (Intivity) (TD)  (C) (Total PO-  (e) (WAD Cy  (das) (Sb) (etals) (As) (Sb) (etals) (As) (Sb) (Sb)	D.O. (mg/L)  0.56  0.54  0.52  0.54  LLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (Total Kiewanide) (Free Ba) (Be) (Ca	5.76 5.76 5.76 5.76 5.76 CR BOTTLE NWTPH-GX L-Dx) (TPH-OD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV)  19.7  19.4  19.3  19.2  19.4  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (CV/NO2)	DTW (ft)  mon-standard at ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  3) (NO2) (F)  TI) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  14.6  14.6  14.6  14.6  14.6  14.6  TYPICAL A (8260) (801) (8270) (PAF (pH) (Condu (COD) (TOG (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  236.6  235.5  236.5  236.6  236.3  NALYSIS AI  (D) (8020) (NI) (NWTPH-  (Intivity) (TD)  (C) (Total PO-  (e) (WAD Cy  (das) (Sb) (etals) (As) (Sb) (etals) (As) (Sb) (Sb)	D.O. (mg/L)  0.56  0.54  0.52  0.52  0.54  LLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PT) (PT) (PT) (PT) (PT) (PT) (PT) (PT	5.76 5.76 5.76 5.76 5.76 CR BOTTLE NWTPH-GX L-Dx) (TPH-OD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV)  19.7  19.4  19.3  19.2  19.4  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (CV/NO2)	DTW (ft)  mon-standard at ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  3) (NO2) (F)  TI) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  14.6  14.6  14.6  14.6  14.6  14.6  TYPICAL A (8260) (801) (8270) (PAF (pH) (Condu (COD) (TOG (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  236.6  235.5  236.5  236.6  236.3  NALYSIS AI  (NWTPH-  (Intervity) (TD.  (I) (Total PO-  (e) (WAD Cy.)  (As) (Sb) ( etals) (As) (Sb)  (g short list)	D.O. (mg/L)  0.56  0.54  0.52  0.52  0.54  LLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PT) (PT) (PT) (PT) (PT) (PT) (PT) (PT	5.76 5.76 5.76 5.76 5.76 CR BOTTLE NWTPH-GX L-Dx) (TPH-OD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV)  19.7  19.4  19.3  19.2  19.4  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (CV/NO2)	DTW (ft)  mon-standard at ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  3) (NO2) (F)  TI) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  14.6  14.6  14.6  14.6  14.6  14.6  14.6  (8260) (801) (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm)  236.6  235.5  236.5  236.6  236.3  NALYSIS AI  (NWTPH-  (Intervity) (TD.  (I) (Total PO-  (e) (WAD Cy.)  (As) (Sb) ( etals) (As) (Sb)  (g short list)	D.O. (mg/L)  0.56  0.54  0.52  0.52  0.54  LLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PT) (PT) (PT) (PT) (PT) (PT) (PT) (PT	5.76 5.76 5.76 5.76 5.76 CR BOTTLE NWTPH-GX L-Dx) (TPH-OD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV)  19.7  19.4  19.3  19.2  19.4  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (CV/NO2)	DTW (ft)  mon-standard at ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  3) (NO2) (F)  TI) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  14.6  14.6  14.6  14.6  14.6  14.6  TYPICAL A (8260) (801) (8270) (PAF (pH) (Condu (COD) (TOG (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm)  236.6  235.5  236.5  236.6  236.3  NALYSIS AI  (NWTPH-  (Intervity) (TD.  (I) (Total PO-  (e) (WAD Cy.)  (As) (Sb) ( etals) (As) (Sb)  (g short list)	D.O. (mg/L)  0.56  0.54  0.52  0.52  0.54  LLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PT) (PT) (PT) (PT) (PT) (PT) (PT) (PT	5.76 5.76 5.76 5.76 5.76 CR BOTTLE NWTPH-GX L-Dx) (TPH-OD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV)  19.7  19.4  19.3  19.2  19.4  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (CV/NO2)	DTW (ft)  mon-standard at ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  3) (NO2) (F)  TI) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  14.6  14.6  14.6  14.6  14.6  14.6  14.6  (8260) (801) (8270) (PAF (pH) (Cond) (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm)  236.6  235.5  236.5  236.6  236.3  NALYSIS AI  (NWTPH-  (Intervity) (TD.  (I) (Total PO-  (e) (WAD Cy.)  (As) (Sb) ( etals) (As) (Sb)  (g short list)	D.O. (mg/L)  0.56  0.54  0.52  0.52  0.54  LLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PT) (PT) (PT) (PT) (PT) (PT) (PT) (PT	5.76 5.76 5.76 5.76 5.76 CR BOTTLE NWTPH-GX L-Dx) (TPH-OD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV)  19.7  19.4  19.3  19.2  19.4  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (CV/NO2)	DTW (ft)  mon-standard at ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  3) (NO2) (F)  TI) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
Replicate  1 2 3 4 Average:  QUANTITY	Temp (°F/°C)  14.6  14.6  14.6  14.6  14.6  14.6  14.6  (8260) (801) (8270) (PAF (pH) (Cond) (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm)  236.6  235.5  236.5  236.6  236.3  NALYSIS AI  (NWTPH-  (Intervity) (TD.  (I) (Total PO-  (e) (WAD Cy.)  (As) (Sb) ( etals) (As) (Sb)  (g short list)	D.O. (mg/L)  0.56  0.54  0.52  0.52  0.54  LLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PD) (NWTPH-G) (PT) (PT) (PT) (PT) (PT) (PT) (PT) (PT	5.76 5.76 5.76 5.76 5.76 CR BOTTLE NWTPH-GX L-Dx) (TPH-OD) (Turbic dahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV)  19.7  19.4  19.3  19.2  19.4  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) dity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write  (8141) (Oil & Green (HCO3/CO3) (CV/NO2)	DTW (ft)  mon-standard at ase) Cl) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  3) (NO2) (F)  TI) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR



Project Nam	e <u>:</u>	Boeing Ren	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 11 /2019@	1315		
Sample Nun	iber:	RGW221S-	191111		Weather:	SUNNY, COOL			
Landau Repr	resentative:	BXM							
WATER LEV	'EL/WELL/PU	JRGE DATA							
Well Condition	n:	Secure (YES	)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	10.1	Time:	1245	Flow through ce	ll vol.		GW Meter No.(	s HERON-3
Begin Purge:	0 0 0		9 @ 1250	End Purge:		11/ 11/2019@	1313	Gallons Purged:	
Purge water d			55-gal Drum		Storage Tank	Ground		SITE TREATM	-
	, mr		-		ODD	T 1:14			
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
	Purge Goa	ls: Stablizatio	n of Parame		e consecutive rea	dings within the fo	llowing limits	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1253	14.2	196.5	1.72	6.14	27.0		10.1		
1256	14.5	205.3	1.55	6.18	19.6		10.1		
1259	14.7	216.4	1.29	6.22	15.1		10.1	· <del></del>	
1302	14.6	223.6	1.03	6.23	12.4				
1305	14.6	227.3	0.94	6.25	10.4				
1308	14.6	228.1	0.90	6.25	8.8				
			0.82		7.0				
1311	14.3	226.1	0.82	6.25	7.0				
SAMPLE CO	LI ECTION D								
Sample Collection			Bailer		Pump/Pump Type	BLADDER			
Made of:		Stainless Stee	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	ure:	Alconox Was	_	Tap Rinse	DI Water	Dedicated		Dealeanea	
(By Numerica	_	Other	"·· —	rap remse	□ Di Water	Dedicated			
, •	ŕ		sheen etc.):	CLEAR CO	LORLESS NOS	HEEN, NO ODOR			
Sumple Beser	iption (color, t	arolany, odor,		CLL/III, CO	ECITEEDS, 110 B	ILLI, ITO ODOR			
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	14.4	226.0	0.79	6.25	6.6				
2	14.3	225.3	0.77	6.25	6.6				
3	14.3	225.2	0.76	6.25	6.4				
4	14.2	224.7	0.75	6.25	6.4				
						#DIV/01			
Average:	14.3	225.3	0.77	6.25	6.5	#DIV/0!			
QUANTITY						oplicable or write n	on-standard a		
		0) (8020) (N				(01.41) (01.6 C	>	WA L	OR 🗆
2						(8141) (Oil & Grea (HCO3/CO3) (C		WA []	OR $\square$
	*	• • • • • • • • • • • • • • • • • • • •			n) (NH3) (NO3		1) (304) (110	(NO2) (I')	
	` ' `	e) (WAD Cy			, ( -, ( -	,			
					(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (N	Ni) (Ag) (Se) (	Tl) (V) (Zn) (H	g) (K) (Na)
	(Dissolved M	etals) (As) (Sb	) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) (	Ag) (Se) (Tl) (V	V) (Zn) (Hg) (K) (	Na) (Hardness) (Silic
	VOC (Boein	<u> </u>							
	Methane Eth	ane Ethene A	cetylene						
	others								
Duplicate San	nple No(s):								
Comments:									
	RYM						11 11 10		



Project Nar	ne:	Boeing Ren	ton		Project Number	r:	0025217.099.0	199	
Event:		Nov-19			Date/Time:	11/ 11 /2019@	1000		
Sample Nu	mber:	DUP3-	191111		Weather:	PC 50S			
Landau Rep	resentative:	SRB							
WATER LE	VEL/WELL/PI	JRGE DATA							
Well Conditi	on:	Secure (YES	)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)		Time:		Flow through ce	ll vol.		GW Meter No.(s	s HERON1
	Date/Time:	11/ 11 /201	9 @	End Purge:	_	11/ 11 /2019 @		Gallons Purged:	0.5
Purge water	disposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	pm	(mV)	(NTU)	(ft)	Volume (gal)	Observations
	_					dings within the fo	_	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
	_								
		т	TIDI	IC A T	т то т	CW22	10		
		1	JUPL	ICAI	E IUI	RGW224	12		
	_								
						-		·	
	_								
	DLLECTION I								
Sample Colle	ected With:		Bailer	₩		DED BLADDER			
Made of:	<u> </u>	Stainless Ste	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proce	dure:	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numeric	al Order)	Other							
Sample Desc	ription (color,	turbidity, odor	, sheen, etc.):	CLEAR CO	LORLESS NO/N	5			
Parlianta	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Formana inon	Comments/
Replicate	(°F/°C)	(uS/cm)	(mg/L)	рп	(mV)	(NTU)	(ft)	Ferrous iron (Fe II)	Observations
1	14.6	257.9	0.80	5.94	-22.5	, ,	. ,	` ,	
2	14.7	257.6	0.82	5.93	-22.2				
3									
	14.7	257.0	0.77	5.95	-22.8				
4	14.6	256.4	0.74	5.95	-23.0				
Average:	14.7	257.2	0.78	5.94	-22.6	#DIV/0!		· <u></u>	
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
		0) (8020) (1						WA 🗆	OR 🗆
2						(8141) (Oil & Gre		WA 🗆	OR 🗆
	<del>  `` ` ` ` ` </del>	•/				(HCO3/CO3) (C	(SO4) (NC	03) (NO2) (F)	
	1				n) (NH3) (NO3	/NO2)			
-	1	le) (WAD Cy			(C <sub>2</sub> ) (C <sub>2</sub> ) (E-)	(Db) (Ma) (Ma) (	Ni) (An) (Cn) (	T1) (V) (7) (II	a) (V) (Na)
	1				· / · / · / · /	(Pb) (Mg) (Mn) (I			g) (K) (Na) Na) (Hardness) (Sili
	VOC (Boein		) (Ba) (Be) (t	<i>La)</i> (Cu) (Co)	(CI) (Cu) (Fe) (F	b) (Mg) (MII) (MI) (	(Ag) (Se) (11) (Y	(/) (ZII) (Hg) (K) (	Na) (Hardiless) (Sili
	<b>1</b>	nane Ethene A	cetylene						
	- Smalle Du								
	others								
Duplicate Sa	mple No(s):	Duplicate to	RGW224S						
Comments:									
	SRB					Date:	11/11/2019		



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 11 /2019@	1046		
Sample Nur	nber:	RGW224S-	191111		Weather:	PC 50S			
Landau Rep	resentative:	SRB							
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES	)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	10.55	Time:	1018	Flow through ce	ll vol.		GW Meter No.(	s HERON1
Begin Purge:	Date/Time:	11/ 11 /2019	1019	End Purge:	Date/Time:	11/ 11 /2019 @	1041	Gallons Purged:	0.5
Purge water of	disposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	tous fou thus	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1022	15.4	263.1	1.59	6.01	-17.6	LOW	10.67	0	
1025	15.4	264.2	1.64	6.00	-18.9		10.67		
1028		265.6	1.33	6.01	-22.9		10.67		
1031	15.1	263.4	1.08	5.98	-22.9				
1034	14.9	261.4	1.01	5.98	-23.6				
1037	14.7	259.7	0.91	5.96	-23.1				
1040	14.7	258.7	0.91	5.96	-22.9				
	-								
SAMPLE CO	LLECTION I								
Sample Colle	cted With:		Bailer	_	Pump/Pump Type	DED BLADDER			
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	dure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	al Order)	Other							
Sample Descri	ription (color,	turbidity, odor,	sheen, etc.):	CLEAR CO	LORLESS NO/NS	S			
Replicate	Temp (°F/°C)	Cond.	D.O. (mg/L)	рН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	14.7	258.5	0.84	5.95	-22.8	, ,	, ,	, ,	
2	14.7	257.7	0.79	5.95	-22.6				
3	14.7	257.1	0.79	5.94	-22.6				
4	14.7	257.0	0.75	5.94	-22.6				
Average:	14.7	257.6	0.79	5.95	-22.7	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	ER BOTTLE	TYPE (Circle a)	oplicable or write	non-standard a	nalysis below)	-
	(8260) (801	0) (8020) (N	WTPH-G) (	(NWTPH-Gx)	) (BTEX)			WA □	OR 🗌
2	(8270) (PAI	H) (NWTPH-	D) (NWTPH	I-Dx) (TPH-	HCID) (8081)	(8141) (Oil & Gre	ase)	wa 🗆	or □
	<u> </u>	•/			• • • • • • • • • • • • • • • • • • • •	(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
		/ (	/		n) (NH3) (NO3	/NO2)			
	1	le) (WAD Cy			(C) (C) (F)	(DI) (A.E.) (A.E.) (A.E.)	AT') (A ) (C ) :	771) (11) (7) (7)	) (II) (NI )
	1					(Pb) (Mg) (Mn) (I b) (Mg) (Mn) (Ni) (			g) (K) (Na) Na) (Hardness) (Silic
	VOC (Boein		, (Da) (De) (C	<i>-u)</i> ( <i>-u)</i> ( <i>-u)</i>	(C1) (Cu) (1°C) (F	o, (1415) (1411) (141) (	(11) ( 1	) (Lii) (11g) (K) (	, (Hardiness) (Sille
	,	nane Ethene A	cetylene						
	others								
	others								
Duplicate Sar	mple No(s):	Duplicate Lo	cation (DUP3						
Comments:									
Signature:	SRB					Date:	11/11/2019		



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 11 /2019@	1121		
Sample Nun	nber:	RGW255S-	191111		Weather:	PC 50S			
Landau Rep	resentative:	SRB							
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES	)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	10.03	Time:	1037	Flow through ce	ll vol.		GW Meter No.(	s HERON1
	0 0 0	11/ 11 /2019		End Purge:	•	11/ 11 /2019 @	1110	Gallons Purged:	0.5
Purge water of	lisposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm) ls: Stablizatio	(mg/L)	tors for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1051	15.7	233.2	0.60	6.23	-16.2	LOW	10.07		
1054	15.7	229.8	0.57	6.25	-17.5		10.05		
1057		220.3	0.57	6.24	-19.3		10.05		
1100		203.4	0.68	6.23	-19.2				
1103		202.4	0.62	6.22	-18.0				
1106		195.7	0.72	6.21	-18.0				
1109		192.2	0.77	6.19	-18.0				
SAMPLE CO	LLECTION D	OATA							
Sample Colle	cted With:		Bailer		Pump/Pump Type	DED BLADDER			
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	dure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	al Order)	Other							
Sample Descr	ription (color,	turbidity, odor,	sheen, etc.):	CLEAR CO	LORLESS SLIGH	TY PETROLEUM	ODOR NO SHI	EEN	
Replicate	Temp	Cond.	D.O.	рН	ORP	Turbidity	DTW	Ferrous iron	Comments/
	(°F/°C)	(uS/cm)	(mg/L)		(mV)	(NTU)	(ft)	(Fe II)	Observations
1	14.5	191.4	0.73	6.19	-17.7				
2	14.6	191.1	0.76	6.18	-17.3				
3	14.6	191.0	0.74	6.19	-17.7				
4	14.5	191.1	0.73	6.19	-17.8				
Average:	14.6	191.2	0.74	6.19	-17.6	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	ER BOTTLE	TYPE (Circle a)	oplicable or write	non-standard a	nalysis below)	
		0) (8020) (N						wa 🗆	OR 🗆
2	(8270) (PAI	H) (NWTPH-	D) (NWTPH	I-Dx) (TPH-	HCID) (8081)	(8141) (Oil & Gre	ase)	wa 🗆	OR 🗆
	<u> </u>	•/	/ / /			(HCO3/CO3) (C	Cl) (SO4) (NO	(NO2) (F)	
					n) (NH3) (NO3	/NO2)			
	· ·	le) (WAD Cy ) (As) (Sb) (I			(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Ni) (Ao) (Se) (	Tl) (V) (7n) (H	g) (K) (Na)
	1								Na) (Hardness) (Silio
	VOC (Boein					. = / . /	-	/ . / .	
	Methane Eth	nane Ethene A	cetylene						
	others								
	•								
Duplicate Sar	mple No(s):								
Comments:									
Signature:	SRB					Date:	11/11/2019		



J	ne:	Boeing Ren	ton		Project Number	er:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/11 /2019@	1215		
Sample Nun	nber:	RGW256S-	191111		Weather:	PARTLY CLOU	JDY, COOL		
Landau Rep		BXM							
WATERIEV	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	(O)	Describe:	Flush Mount		
		•		•	,		Tiushi Woulit	CW Mater No. (	a HEDON 2
DTW Before	0 0 0	8.88	Time:		Flow through ce		1212	GW Meter No.(	
0 0	Date/Time:	-		End Purge:		11/ 11 /2019 @		Gallons Purged:	
Purge water d	lisposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENTSYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	
Time	(°F/°C)	(uS/cm)	(mg/L)	tous fou thus	(mV)	(NTU) dings within the fo	(ft)	Volume (gal)	Observations
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	>/= 1 flow through cell	
1153	15.9	144.4	0.71	6.18	19.2	, 23,7	8.93		
1156	16.2	146.9	0.66	6.18	12.7		8.93		
1159	16.3	148.4	0.61	6.20	9.1		8.94		-
1202	16.3	149.9	0.55	6.20	6.1		8.93		
1205	16.3	150.6	0.60	6.21	4.3				
	- ———						-		
	LLECTION E		D. 11		D /D	DI ADDED			
Sample Colle	cted With:		Bailer	_	Pump/Pump Type	_			
Made of:		Stainless Stee	_	PVC	Teflon	Polyethylene	U Other	Dedicated	
Decon Proceed	lure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color, t	urbidity, odor	, sheen, etc.):_	CLEAR, CO	LORLESS, NO	DOR, NO SHEEN			
D 1' 4 -	Т	C1	D.O.	11		T	DTW	т.	C
Replicate	Temp (°F/°C)	Cond.	D.O. (mg/L)	рН	ORP	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
-	(°F/°C)	(uS/cm)	(mg/L)	•	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	
1	(°F/°C)	(uS/cm) 150.8	(mg/L) 0.56	6.21	ORP (mV)	•			
1 2	(°F/°C) 16.3 16.3	(uS/cm) 150.8 151.0	(mg/L) 0.56 0.57	•	ORP (mV) 3.9 3.6	•			
1	(°F/°C)	(uS/cm) 150.8	(mg/L) 0.56	6.21	ORP (mV)	•			
1 2	(°F/°C) 16.3 16.3	(uS/cm) 150.8 151.0	(mg/L) 0.56 0.57	6.21	ORP (mV) 3.9 3.6	•			
1 2 3	(°F/°C) 16.3 16.3 16.2	150.8 151.0 151.1	0.56 0.57 0.59	6.21 6.22 6.22	ORP (mV) 3.9 3.6 3.4	•			
1 2 3 4 Average:	(°F/°C)  16.3  16.3  16.2  16.3  16.3	150.8 151.0 151.1 151.3 151.1	(mg/L) 0.56 0.57 0.59 0.59 0.58	6.21 6.22 6.22 6.22 6.22	ORP (mV)  3.9  3.6  3.4  3.4  3.6	(NTU)  #DIV/0!	(ft)	(Fe II)	
1 2 3 4	(°F/°C) 16.3 16.3 16.2 16.3 16.3 TYPICAL A	(uS/cm) 150.8 151.0 151.1 151.3 151.1 NALYSIS AI	(mg/L) 0.56 0.57 0.59 0.59 0.58 LOWED PE	6.21 6.22 6.22 6.22 6.22	ORP (mV)  3.9  3.6  3.4  3.4  3.6  TYPE (Circle a)	(NTU)	(ft)	(Fe II)	Observations
1 2 3 4 Average:	(°F/°C) 16.3 16.3 16.2 16.3 16.3 TYPICAL A (8260) (801)	(uS/cm) 150.8 151.0 151.1 151.3 151.1 NALYSIS AI (0) (8020) (N	(mg/L) 0.56 0.57 0.59 0.59 0.58 LLOWED PE	6.21 6.22 6.22 6.22 6.22 CR BOTTLE NWTPH-GX	ORP (mV)  3.9  3.6  3.4  3.4  3.6  TYPE (Circle a) (BTEX)	#DIV/0!	(ft)	(Fe II)	Observations
1 2 3 4 Average:	16.3 16.2 16.3 16.3 16.3 16.3 16.3 16.3 16.3 (8260) (801) (8270) (PAF	(uS/cm)  150.8  151.0  151.1  151.3  151.1  NALYSIS AI  0) (8020) (NI) (NWTPH-	(mg/L)  0.56  0.57  0.59  0.58  LOWED PERMYTPH-G) (NWTPH	6.21 6.22 6.22 6.22 6.22 CR BOTTLE NWTPH-Gx 1-Dx) (TPH-	ORP (mV)  3.9  3.6  3.4  3.4  3.6  TYPE (Circle a) (BTEX)  HCID) (8081)	(NTU)  #DIV/0!	non-standard a	nalysis below) WA  WA  WA	Observations
1 2 3 4 Average:	(°F/°C)  16.3  16.2  16.3  16.3  16.3  TYPICAL A  (8260) (801) (8270) (PAH  (pH) (Condu	(uS/cm)  150.8  151.0  151.1  151.3  151.1  NALYSIS AI  () (8020) (N  I) (NWTPH- lectivity) (TDS)	0.56 0.57 0.59 0.58 0.58 0.WTPH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (PMTPH-G) (	6.21 6.22 6.22 6.22 6.22 6.22 CR BOTTLE (NWTPH-GX) I-Dx) (TPH-	ORP (mV)  3.9  3.6  3.4  3.4  3.6  TYPE (Circle a) (BTEX)  HCID) (8081)	#DIV/0!  pplicable or write (8141) (Oil & Gree) (HCO3/CO3) (O	non-standard a	nalysis below) WA  WA  WA	Observations
1 2 3 4 Average:	(°F/°C)  16.3  16.3  16.3  16.3  TYPICAL A  (8260) (801) (8270) (PAF  (pH) (Conduction) (TOO	(uS/cm)  150.8  151.0  151.1  151.3  151.1  NALYSIS AI  () (8020) (N  I) (NWTPH- lectivity) (TDS)	(mg/L)  0.56  0.57  0.59  0.58  LOWED PERMYPH-G) (NWTPH-G) (NWTPH-G) (TSS) (EM) (TOTAL Kieles)	6.21 6.22 6.22 6.22 6.22 CR BOTTLE NWTPH-Gx I-Dx) (TPH- DD) (Turbio dahl Nitroger	ORP (mV)  3.9  3.6  3.4  3.4  3.6  TYPE (Circle a) (BTEX)  HCID) (8081)  dity) (Alkalinity	#DIV/0!  pplicable or write (8141) (Oil & Gree) (HCO3/CO3) (O	non-standard a	nalysis below) WA  WA  WA	Observations
1 2 3 4 Average:	16.3 16.3 16.2 16.3 16.3 16.3  TYPICAL A (8260) (801) (8270) (PAH (pH) (Condu (COD) (TOO (Total Cyanid	(uS/cm)  150.8  151.0  151.1  151.3  151.1  NALYSIS AI  (D) (8020) (N (I) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy	(mg/L)  0.56  0.57  0.59  0.58  LOWED PE WTPH-G) ( D) (NWTPH-S) (TSS) (E) 4) (Total Kie anide) (Free	6.21 6.22 6.22 6.22 6.22 CR BOTTLE NWTPH-Gx, I-Dx) (TPH-IOD) (Turbid dahl Nitroger Cyanide)	ORP (mV)  3.9  3.6  3.4  3.4  3.6  TYPE (Circle a) (BTEX)  HCID) (8081)  dity) (Alkalinity)  (NH3) (NO3	#DIV/0!  pplicable or write (8141) (Oil & Gree) (HCO3/CO3) (O	non-standard a ase) Cl) (SO4) (NO	nalysis below) WA  WA  WA  O S3) (NO2) (F)	Observations OR OR
1 2 3 4 Average:	16.3 16.3 16.3 16.3 16.3 16.3 17YPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals	(uS/cm)  150.8  151.0  151.1  151.3  151.1  NALYSIS AI  (i) (8020) (N (ii) (NWTPH- (ictivity) (TDS) (iii) (Total PO4 (iii) (WAD Cy (iii) (As) (Sb) (	(mg/L)  0.56  0.57  0.59  0.58  LOWED PE WTPH-G) ( D) (NWTPH-S) (TSS) (Bs) (Total Kieranide) (Free Ba) (Be) (Ca	6.21 6.22 6.22 6.22 6.22 CR BOTTLE NWTPH-GX I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide)	ORP (mV)  3.9  3.6  3.4  3.4  3.6  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  pplicable or write  (8141) (Oil & Gre ) (HCO3/CO3) (C/NO2)  (Pb) (Mg) (Mn) (1)	non-standard a ase) Cl) (SO4) (NO	(Fe II)  malysis below)  WA   WA   3) (NO2) (F)  TI) (V) (Zn) (H	Observations OR OR
1 2 3 4 Average:	(°F/°C)  16.3  16.3  16.2  16.3  16.3  TYPICAL A  (8260) (801) (8270) (PAF  (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	(uS/cm)  150.8  151.0  151.1  151.3  151.1  NALYSIS AI  (i) (8020) (N (ii) (NWTPH- (ictivity) (TDS) (iii) (Total PO- (iii) (WAD Cy (iii) (As) (Sb) (etals) (As) (Sb) (g short list)	(mg/L)  0.56  0.57  0.59  0.58  LOWED PENTPH-G) ( D) (NWTPH-G) ( Total Kiell (Freel Ba) (Be) (Call (Ca	6.21 6.22 6.22 6.22 6.22 CR BOTTLE NWTPH-GX I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide)	ORP (mV)  3.9  3.6  3.4  3.4  3.6  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  pplicable or write  (8141) (Oil & Gre ) (HCO3/CO3) (C/NO2)  (Pb) (Mg) (Mn) (1)	non-standard a ase) Cl) (SO4) (NO	(Fe II)  malysis below)  WA   WA   3) (NO2) (F)  TI) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
1 2 3 4 Average:	(°F/°C)  16.3  16.3  16.2  16.3  16.3  TYPICAL A  (8260) (801) (8270) (PAF  (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	(uS/cm)  150.8  151.0  151.1  151.3  151.1  NALYSIS AI  (i) (8020) (N (ii) (NWTPH- (ictivity) (TDS (iii) (Total PO- (iii) (WAD Cy (iii) (As) (Sb) ((etals) (As) (Sb) (Sb)	(mg/L)  0.56  0.57  0.59  0.58  LOWED PENTPH-G) ( D) (NWTPH-G) ( Total Kiell (Freel Ba) (Be) (Call (Ca	6.21 6.22 6.22 6.22 6.22 CR BOTTLE NWTPH-GX I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide)	ORP (mV)  3.9  3.6  3.4  3.4  3.6  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  pplicable or write  (8141) (Oil & Gre ) (HCO3/CO3) (C/NO2)  (Pb) (Mg) (Mn) (1)	non-standard a ase) Cl) (SO4) (NO	(Fe II)  malysis below)  WA   WA   3) (NO2) (F)  TI) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
1 2 3 4 Average:	(°F/°C)  16.3  16.3  16.2  16.3  16.3  TYPICAL A  (8260) (801) (8270) (PAF  (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	(uS/cm)  150.8  151.0  151.1  151.3  151.1  NALYSIS AI  (i) (8020) (N (ii) (NWTPH- (ictivity) (TDS) (iii) (Total PO- (iii) (WAD Cy (iii) (As) (Sb) (etals) (As) (Sb) (g short list)	(mg/L)  0.56  0.57  0.59  0.58  LOWED PENTPH-G) ( D) (NWTPH-G) ( Total Kiell (Freel Ba) (Be) (Call (Ca	6.21 6.22 6.22 6.22 6.22 CR BOTTLE NWTPH-GX I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide)	ORP (mV)  3.9  3.6  3.4  3.4  3.6  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  pplicable or write  (8141) (Oil & Gre ) (HCO3/CO3) (C/NO2)  (Pb) (Mg) (Mn) (1)	non-standard a ase) Cl) (SO4) (NO	(Fe II)  malysis below)  WA   WA   3) (NO2) (F)  TI) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
1 2 3 4 Average:	(°F/°C)  16.3  16.2  16.3  16.3  16.3  TYPICAL A (8260) (801) (8270) (PAF (pH) (Cond) (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	(uS/cm)  150.8  151.0  151.1  151.3  151.1  NALYSIS AI  (i) (8020) (N (ii) (NWTPH- (ictivity) (TDS) (iii) (Total PO- (iii) (WAD Cy (iii) (As) (Sb) (etals) (As) (Sb) (g short list)	(mg/L)  0.56  0.57  0.59  0.58  LOWED PENTPH-G) ( D) (NWTPH-G) ( Total Kiell (Freel Ba) (Be) (Call (Ca	6.21 6.22 6.22 6.22 6.22 CR BOTTLE NWTPH-GX I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide)	ORP (mV)  3.9  3.6  3.4  3.4  3.6  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  pplicable or write  (8141) (Oil & Gre ) (HCO3/CO3) (C/NO2)  (Pb) (Mg) (Mn) (1)	non-standard a ase) Cl) (SO4) (NO	(Fe II)  malysis below)  WA   WA   3) (NO2) (F)  TI) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
1 2 3 4 Average:	(°F/°C)  16.3  16.3  16.2  16.3  16.3  TYPICAL A  (8260) (801) (8270) (PAF  (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	(uS/cm)  150.8  151.0  151.1  151.3  151.1  NALYSIS AI  (i) (8020) (N (ii) (NWTPH- (ictivity) (TDS) (iii) (Total PO- (iii) (WAD Cy (iii) (As) (Sb) (etals) (As) (Sb) (g short list)	(mg/L)  0.56  0.57  0.59  0.58  LOWED PENTPH-G) ( D) (NWTPH-G) ( Total Kiell (Freel Ba) (Be) (Call (Ca	6.21 6.22 6.22 6.22 6.22 CR BOTTLE NWTPH-GX I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide)	ORP (mV)  3.9  3.6  3.4  3.4  3.6  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  pplicable or write  (8141) (Oil & Gre ) (HCO3/CO3) (C/NO2)  (Pb) (Mg) (Mn) (1)	non-standard a ase) Cl) (SO4) (NO	(Fe II)  malysis below)  WA   WA   3) (NO2) (F)  TI) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
1 2 3 4 Average:	(°F/°C)  16.3  16.3  16.2  16.3  16.3  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	(uS/cm)  150.8  151.0  151.1  151.3  151.1  NALYSIS AI  (i) (8020) (N (ii) (NWTPH- (ictivity) (TDS) (iii) (Total PO- (iii) (WAD Cy (iii) (As) (Sb) (etals) (As) (Sb) (g short list)	(mg/L)  0.56  0.57  0.59  0.58  LOWED PENTPH-G) ( D) (NWTPH-G) ( Total Kiell (Freel Ba) (Be) (Call (Ca	6.21 6.22 6.22 6.22 6.22 CR BOTTLE NWTPH-GX I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide)	ORP (mV)  3.9  3.6  3.4  3.4  3.6  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  pplicable or write  (8141) (Oil & Gre ) (HCO3/CO3) (C/NO2)  (Pb) (Mg) (Mn) (1)	non-standard a ase) Cl) (SO4) (NO	(Fe II)  malysis below)  WA   WA   3) (NO2) (F)  TI) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR
1 2 3 4 Average:  QUANTITY	(°F/°C)  16.3  16.3  16.2  16.3  16.3  TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	(uS/cm)  150.8  151.0  151.1  151.3  151.1  NALYSIS AI  (i) (8020) (N (ii) (NWTPH- (ictivity) (TDS) (iii) (Total PO- (iii) (WAD Cy (iii) (As) (Sb) (etals) (As) (Sb) (g short list)	(mg/L)  0.56  0.57  0.59  0.58  LOWED PENTPH-G) ( D) (NWTPH-G) ( Total Kiell (Freel Ba) (Be) (Call (Ca	6.21 6.22 6.22 6.22 6.22 CR BOTTLE NWTPH-GX I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide)	ORP (mV)  3.9  3.6  3.4  3.4  3.6  TYPE (Circle a) (BTEX)  HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  pplicable or write  (8141) (Oil & Gre ) (HCO3/CO3) (C/NO2)  (Pb) (Mg) (Mn) (1)	non-standard a ase) Cl) (SO4) (NO	(Fe II)  malysis below)  WA   WA   3) (NO2) (F)  TI) (V) (Zn) (H	Observations  OR  OR  OR  OR  OR  OR  OR  OR  OR  OR



Project Nam	ne:	Boeing Ren	iton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 11 /2019@	1146		
Sample Nun	nber:	RGW257S-	- 191111		Weather:	PC 50S			
Landau Rep	resentative:	SRB							
WATER LEV	VEL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	5)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before		9.52	Time:	• ,	Flow through ce			GW Meter No.(	s HERON1
	Date/Time:			End Purge:		11/ 11 /2019 @	1136	Gallons Purged:	
Purge water of			55-gal Drum			Ground		SITE TREATM	
Ü	-	C1	D.O.		Č	T			
Time	Temp (°F/°C)	Cond. (uS/cm)	(mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
	U					dings within the fo	U	>/= 1 flow	
4440	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1119		155.6	1.41	6.07		LOW	9.52		
1122	15.7	156.0	1.31	6.08	39.0		9.52		
1125	15.9	158.0	0.98	6.09	37.1		9.52		
1128	16.3	158.0	0.84	6.08	39.5				
1131	16.2	157.6	0.90	6.10	38.6				
1134	16.1	157.1	0.84	6.08	41.1				
	-								
SAMPLE CO	LLECTION D	OATA							
Sample Colle	cted With:		Bailer		Pump/Pump Type	DED BLADDER			
Made of:		Stainless Ste	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	dure:	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	al Order)	Other			<u> </u>				
Sample Descr	ription (color,	turbidity, odor	, sheen, etc.):	CLEAR CO	LORLESS NO/NS	3			
			D. O.		ODB		D/DW/		
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	16.2	157.0	0.83	6.08	` ,	LOW	. ,	,	
2	16.2	156.9	0.76	6.02	44.6				
3		156.8	0.79	6.04					
	16.1				43.2				-
4	16.1	156.6	0.76	6.05	42.9				
Average:	16.2	156.8	0.79	6.05	43.0	#DIV/0!			
QUANTITY						pplicable or write i	non-standard a		
	`	0) (8020) (1				(0.1.1)		WA 🗆	OR 🗆
2	<u> </u>	, ,	, ,			(8141) (Oil & Great (HCO3/CO3) (C		WA □	OR □
	<u> </u>	•/			n) (NH3) (NO3		1) (SO4) (NO	3) (NO2) (F)	
		le) (WAD Cy	/ \		-, (1.110) (1.00)	-:)			
	(Total Metals	) (As) (Sb) (	Ba) (Be) (Ca	ı) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (1	Ni) (Ag) (Se) (	Tl) (V) (Zn) (H	g) (K) (Na)
	(Dissolved M	etals) (As) (Sl	b) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) (	(Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (	Na) (Hardness) (Silic
	VOC (Boein								
	Methane Eth	nane Ethene A	cetylene						
	others								
	'								
Duplicate Sar	male Mo(c):								
~	inpic (No(s).								
Comments: Signature:							11/11/2019		



Project Nan	ne:	Boeing Rent	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 11 /2019@	1316		
Sample Nur	mber:	RGW258S-	191111		Weather:	PC 50S			
Landau Rep	resentative:	SRB							
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)	)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	7.85	Time:		Flow through ce	ll vol.		GW Meter No.(	s HERON1
Begin Purge:	Date/Time:	11/ 11 /2019	1245	End Purge:	Date/Time:	11/ 11 /2019 @	1307	Gallons Purged:	0.
Purge water of	disposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
	Purge Goa	ls: Stablizatio	n of Parame		e consecutive rea	dings within the fo	ollowing limits	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1248	13.7	262.4	5.61	5.81	66.1	LOW	7.87		
1251	13.6	266.9	5.11	5.83	60.0		7.87		
1254	13.5	273.2	4.72	5.86	54.3		7.87		
1257	13.5	273.5	4.20	5.87	50.1				
1300	13.6	277.1	3.83	5.89	46.0		_		
1303		283.0	1.21	5.94	28.1				
1306	13.3	285.0	0.85	5.98	18.6				
SAMPLE CO	DLLECTION I	OATA							
Sample Colle	cted With:		Bailer		Pump/Pump Type	DED BLADDER			
Made of:		Stainless Stee	:1	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	dure:	Alconox Was	h 🗖	Tap Rinse	DI Water	Dedicated			
(By Numerica	al Order)	Other							
Sample Desc	ription (color,	turbidity, odor,	sheen, etc.):	SLIGHTLY	GRAY AND TUI	RBID NO/NS			
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
	(°F/°C)	(uS/cm)	(mg/L)	5.00	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	13.2	285.1	0.82	5.99	17.3				
2	13.2	285.0	0.76	5.98	16.4				
3	13.2	285.2	0.74	5.99	14.5				
4	13.2	285.5	0.78	6.00	12.9				
Average:	13.2	285.2	0.78	5.99	15.3	#DIV/0!	-		
QUANTITY	TYPICAL A	NALYSIS AL	LOWED PE	ER BOTTLE	TYPE (Circle a)	oplicable or write	non-standard a	nalysis below)	
		0) (8020) (N						WA 🗆	OR 🗆
2						(8141) (Oil & Gre		WA 🗆	OR □
	<u> </u>	• • • • • • • • • • • • • • • • • • • •	/ / /		aity) (Alkalinity) n) (NH3) (NO3	(HCO3/CO3) (C	(SO4) (NO	(NO2) (F)	
	<u> </u>	le) (WAD Cya			1) (1113) (1103	1102)			
	· ·			•	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (	Ni) (Ag) (Se) (	Tl) (V) (Zn) (H	g) (K) (Na)
	(Dissolved M	etals) (As) (Sb	) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	7) (Zn) (Hg) (K) (	Na) (Hardness) (Sil
	VOC (Boeir	ig short list)							
	Methane Eth	nane Ethene Ac	etylene						
	others								
	'								
Duplicate Sar									
Comments:	MSMSD Lo	cation							
Signature:	SRB					Date:	11/11/2019		



Project Nam	ne:	Boeing Ren	ton		Project Number	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 12/2019@	1501		
Sample Nun	nber:	RGW247S-	191112		Weather:	CLOUDY 40S			
Landau Rep	resentative:	SRB							
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES	)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	4.17	Time:	1430	Flow through ce	ll vol.		GW Meter No.(	s HERON1
	Date/Time:			End Purge:	-	11/ 12 /2019 @	1455	Gallons Purged:	0.5
Purge water of			55-gal Drum	Ē	Storage Tank	Ground		SITE TREATM	
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	4 6 4l	(mV)	(NTU)	(ft)	Volume (gal)	Observations
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	dings within the fo +/- 10%	< 0.3 ft	>/= 1 flow through cell	
1434	15.3	382.1	0.25	6.38		LOW	4.49	8	
1437			0.31	6.39	42.3		4.39		
		375.7							-
1440		370.0	0.32	6.39	37.7		4.32		
1443	14.6	368.7	0.24	6.39	34.4		4.32		
1446	14.6	367.1	0.20	6.39	29.4		4.32		
1449	14.6	366.5	0.19	6.39	21.9				
1452	14.7	367.3	0.19	6.39	18.9				
SAMPLE CO	LLECTION D	OATA							
Sample Colle	cted With:		Bailer		Pump/Pump Type	DED BLADDER			
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	dure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	al Order)	Other							
Sample Descr	ription (color, t	turbidity, odor,	, sheen, etc.):	SLIGHTLY	GRAY CLEAR N	IO/NS			
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
•	(°F/°C)	(uS/cm)	(mg/L)	•	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	14.7	367.3	0.19	6.39	18.2				
2	14.7	368.0	0.19	6.39	17.8				
3	14.8	367.8	0.19	6.39	17.1				
4	14.8	368.0	0.19	6.38	16.0				
Average:	14.8	367.8	0.19	6.39	17.3	#DIV/0!			
QUANTITY	TYPICALA	NALVSIS AT	TOMED DE	R ROTTI E	TVPE (Circle or	oplicable or write i	non-standard a	nalysis helow)	
3		0) (8020) (N			`	pheable of write i	non-standard a	WA $\square$	OR 🗆
	<u> </u>			`		(8141) (Oil & Gr	rease)	WA 🗆	OR 🗆
	(pH) (Condu	ectivity) (TDS	S) (TSS) (B	OD) (Turbi	dity) (Alkalinity)	(HCO3/CO3) (C	(SO4) (NO		
1	(COD) (TO	C) (Total PO	4) (Total Kie	dahl Nitroger	n) (NH3) (NO3	/NO2)			
	` .	le) (WAD Cy							
					· / · / · /	(Pb) (Mg) (Mn) (1			
	(Dissolved M VOC (Boein		)) (Ba) (Be) (C	.a) (Cd) (Co)	(Cr) (Cu) (Fe) (P	o) (Mg) (Mn) (Ni) (	(Ag) (Se) (TI) (\	() (Zn) (Hg) (K) (	Na) (Hardness) (Silic
	,	nane Ethene A	cetylene						
			J						
	others								
D 11 4 C	1.37 ()								
	mnle Noteli								
Duplicate Sar Comments:	mple No(s):								



Event:	e <u>:</u>	Boeing Ren	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
		Nov-19			Date/Time:	11/ 12 /2019@	1500		
Sample Num	ber:	RGW248I-	191112		Weather:	CLOUDY, COO	L		
Landau Repr	esentative:	BXM							
WATER LEV	EL/WELL/PU	JRGE DATA							
Well Condition	n:	Secure (YES	)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before I	Purging (ft)	4.00	Time:	1432	Flow through ce	l vol.		GW Meter No.(s	HERON-3
Begin Purge:	0 0 0			End Purge:	_	11/ 12 /2019 @	1457	Gallons Purged:	
Purge water di			55-gal Drum	Ē	Storage Tank	Ground		SITE TREATM	
8						_			
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
		` /	· 0 /	ters for three		dings within the fo		>/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1437	13.5	424.4	0.23	6.36	93.6		3.99		
1440	13.1	435.7	0.29	6.36	90.8		3.95		
1443	12.7	437.6	0.36	6.36	88.1		3.95		
1446	12.3	438.0	0.44	6.36	86.3				
1449	12.0	437.5	0.53	6.36	85.3				
1452	11.8	436.5	0.58	6.36	84.4				
1455	11.6	434.2	0.67	6.36	83.1				
SAMPLE COI									
Sample Collec	eted With:	_	Bailer	_	Pump/Pump Type	_		_	
N I - 1 C	Ш	Stainless Stee	el 🏻 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Made of:	_				<del></del>	_			
Made of: Decon Proced	ure:	Alconox Was	_	Tap Rinse	DI Water	Dedicated			
				Tap Rinse	DI Water	Dedicated			
Decon Proced	l Order)	Alconox Was	sh 🔲			Dedicated  LOUDY, LIGHT FI	NES, NO SHEE	N, NO ODOR	
Decon Proced	l Order) iption (color, t	Alconox Was Other urbidity, odor,	sh		S, SLIGHTLY CI	LOUDY, LIGHT FII	DTW	Ferrous iron	Comments/
Decon Procedi (By Numerical Sample Descri	l Order) iption (color, t  Temp (°F/°C)	Alconox Was  Other urbidity, odor,  Cond. (uS/cm)	b.O. (mg/L)	COLORLES	S, SLIGHTLY CI  ORP (mV)	LOUDY, LIGHT FI			Comments/ Observations
Decon Procedic (By Numerical Sample Descri Replicate	l Order) iption (color, t  Temp (°F/°C)  11.6	Alconox Was Other urbidity, odor,  Cond. (uS/cm)  434.0	D.O. (mg/L)	pH 6.37	S, SLIGHTLY CI  ORP  (mV)  83.0	LOUDY, LIGHT FII	DTW	Ferrous iron	
Decon Procedo (By Numerical Sample Descri Replicate  1 2	Order	Alconox Was  Other urbidity, odor,  Cond. (uS/cm)  434.0  433.6	D.O. (mg/L)  0.67	PH 6.37 6.36	S, SLIGHTLY CI  ORP (mV)  83.0  82.7	LOUDY, LIGHT FII	DTW	Ferrous iron	
Decon Procedic (By Numerical Sample Descri Replicate	l Order) iption (color, t  Temp (°F/°C)  11.6	Alconox Was Other urbidity, odor,  Cond. (uS/cm)  434.0	D.O. (mg/L)	pH 6.37	S, SLIGHTLY CI  ORP  (mV)  83.0	LOUDY, LIGHT FII	DTW	Ferrous iron	
Decon Procedo (By Numerical Sample Descri Replicate  1 2	Order	Alconox Was  Other urbidity, odor,  Cond. (uS/cm)  434.0  433.6	D.O. (mg/L)  0.67	PH 6.37 6.36	S, SLIGHTLY CI  ORP (mV)  83.0  82.7	LOUDY, LIGHT FII	DTW	Ferrous iron	
Decon Procedic (By Numerical Sample Descri Replicate  1 2 3	l Order) iption (color, t  Temp (°F/°C)  11.6  11.6	Cond. (uS/cm) 434.0 433.6	D.O. (mg/L)  0.67  0.68	pH  6.37  6.36  6.37	ORP (mV) 83.0 82.7	LOUDY, LIGHT FII	DTW	Ferrous iron	
Decon Procedic (By Numerical Sample Descri Replicate  1 2 3 4 Average:	Order	Cond. (uS/cm)  434.0  433.6  432.9	D.O. (mg/L)  0.67  0.68  0.69	COLORLES  pH  6.37  6.36  6.37  6.37  6.37	S, SLIGHTLY CI  ORP (mV)  83.0  82.7  82.5  82.4  82.7	COUDY, LIGHT FII  Turbidity (NTU)  #DIV/0!	DTW (ft)	Ferrous iron (Fe II)	
Decon Procedi (By Numerical Sample Descri Replicate  1 2 3 4 Average:	Order	Alconox Was	D.O. (mg/L)  0.67  0.68  0.69  0.68  LLOWED PE	COLORLES  pH  6.37  6.36  6.37  6.37  6.37  6.37	83.0 82.7 82.5 82.4 82.7	OUDY, LIGHT FII  Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	
Decon Procedi (By Numerical Sample Descri Replicate  1 2 3 4 Average:	Temp (°F/°C) 11.6 11.6 11.6 11.6 11.6 11.6 11.6	Alconox Was  Other urbidity, odor,  Cond. (uS/cm)  434.0  433.6  433.6  433.5  NALYSIS AI  0) (8020) (N	D.O. (mg/L)  0.67  0.68  0.69  0.68  LOWED PE	COLORLES  PH  6.37  6.36  6.37  6.37  6.37  CR BOTTLE  NWTPH-GX	8, SLIGHTLY CI ORP (mV) 83.0 82.7 82.5 82.4 82.7 TYPE (Circle a) (BTEX)	COUDY, LIGHT FII  Turbidity (NTU)  #DIV/0!	DTW (ft)	Ferrous iron (Fe II)	Observations
Decon Procedic (By Numerical Sample Descri Replicate  1 2 3 4 Average:  QUANTITY 3	Temp (°F/°C)  11.6  11.6  11.6  11.6  11.6  11.6  11.6  (8260) (8010)  (8270D) (PA	Alconox Was Other Urbidity, odor, US/cm)  434.0  433.6  433.6  433.5  NALYSIS AI  O) (8020) (Nath) (NWTPH	D.O. (mg/L)  0.67  0.68  0.69  0.68  LLOWED PE	6.37 6.36 6.37 6.37 6.37 6.37 ER BOTTLE NWTPH-Gx PH-Dx) (TPH	S, SLIGHTLY CI  ORP (mV)  83.0  82.7  82.5  82.4  82.7  TYPE (Circle a) (BTEX)  H-HCID) (8081)	COUDY, LIGHT FII  Turbidity (NTU)  #DIV/0!	DTW (ft)	Ferrous iron (Fe II)  malysis below)  WA  WA  WA	Observations  OR   OR
Decon Procedic (By Numerical Sample Describer 1	Temp (°F/°C)  11.6  11.6  11.6  11.6  11.6  (8260) (8010) (8270D) (PA) (COD) (TOO)	Alconox Was	D.O. (mg/L)  0.67  0.68  0.69  0.68  LOWED PENWTPH-G) (M-D) (NWTF	PH  6.37  6.36  6.37  6.37  6.37  6.37  CR BOTTLE  NWTPH-Gx  PH-Dx) (TPH OD) (Turbio dahl Nitroger	S, SLIGHTLY CI  ORP (mV)  83.0  82.7  82.5  82.4  82.7  TYPE (Circle a) (BTEX)  H-HCID) (8081)	#DIV/0!  (8141) (Oil & Gr (HCO3/CO3) (C	DTW (ft)	Ferrous iron (Fe II)  malysis below)  WA  WA  WA	Observations  OR   OR
Decon Procedi (By Numerical Sample Descri Replicate  1 2 3 4 Average:  QUANTITY 3	Temp (°F/°C)  11.6  11.6  11.6  11.6  11.6  (8260) (8010) (8270D) (PA) (COD) (TOO) (Total Cyanid	Alconox Was	D.O. (mg/L)  0.67  0.68  0.69  0.68  LOWED PENTPH-G) (M-D) (NWTF	PH  6.37  6.36  6.37  6.37  6.37  6.37  CR BOTTLE  NWTPH-Gx  PH-Dx) (TPH OD) (Turbio dahl Nitroger  Cyanide)	83.0 82.7 82.5 82.4 82.7 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3	#DIV/0!  #DIV/0!  (8141) (Oil & Gr (HCO3/CO3) (C	DTW (ft)  non-standard at ease)  l) (SO4) (NO	Ferrous iron (Fe II)  malysis below) WA  WA  WA  Solution	Observations  OR □  OR □
Decon Procedic (By Numerical Sample Described Procedical Sample Described Proceding Pr	Temp (°F/°C)  11.6  11.6  11.6  11.6  11.6  (8260) (8010) (8270D) (PA) (pH) (Conduction (COD) (Total Cyanid (Total Metals)	Alconox Was  Other urbidity, odor,  Cond. (uS/cm)  434.0  433.6  433.6  433.5  NALYSIS AI (D) (8020) (N CH) (NWTPH (ctivity) (TDS) (C) (Total PO4 (C) (AS) (Sb) (C)	D.O. (mg/L)  0.67  0.68  0.69  0.68  LOWED PENTPH-G) (M-D) (NWTF S) (TSS) (B4) (Total Kieranide) (Free Ba) (Be) (Ca	PH  6.37  6.36  6.37  6.37  6.37  6.37  CR BOTTLE  NWTPH-GX  PH-DX) (TPH OD) (Turbic dahl Nitroger Cyanide)  () (Cd) (Co)	8, SLIGHTLY CI ORP (mV) 83.0 82.7 82.5 82.4 82.7 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) () (NH3) (NO3)	#DIV/0!  #DIV/0!  (8141) (Oil & Gr (HCO3/CO3) (C/NO2)	DTW (ft)  aon-standard and ease)  l) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  3) (NO2) (F)	Observations  OR □  OR □  OR □
Decon Procedic (By Numerical Sample Described Procedical Sample Described Proceding Pr	Temp (°F/°C)  11.6  11.6  11.6  11.6  11.6  (8260) (8010) (8270D) (PA) (pH) (Conduction) (Total Cyanid (Total Metals) (Dissolved Metals)	Alconox Was  Other urbidity, odor,  Cond. (uS/cm)  434.0  433.6  433.6  432.9  433.5  NALYSIS AI  O) (8020) (N  CH) (NWTPH ectivity) (TDS  C) (Total PO4 e) (WAD Cy  O) (As) (Sb) (Setals) (As) (Sb)	D.O. (mg/L)  0.67  0.68  0.69  0.68  LOWED PENTPH-G) (M-D) (NWTF S) (TSS) (B4) (Total Kieranide) (Free Ba) (Be) (Ca	PH  6.37  6.36  6.37  6.37  6.37  6.37  CR BOTTLE  NWTPH-GX  PH-DX) (TPH OD) (Turbic dahl Nitroger Cyanide)  () (Cd) (Co)	8, SLIGHTLY CI ORP (mV) 83.0 82.7 82.5 82.4 82.7 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) () (NH3) (NO3)	#DIV/0!  #DIV/0!  (8141) (Oil & Gr (HCO3/CO3) (C/NO2)	DTW (ft)  aon-standard and ease)  l) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  3) (NO2) (F)	Observations  OR □  OR □
Decon Procedic (By Numerical Sample Described Procedical Sample Described Proceding Pr	Temp (°F/°C)  11.6  11.6  11.6  11.6  11.6  (8270D) (PA) (pH) (Conduction (COD) (Total Cyanid (Total Metals) (Dissolved Metals) (Dissolved Metals)	Alconox Was  Other urbidity, odor,  Cond. (uS/cm)  434.0  433.6  433.6  432.9  433.5  NALYSIS AI  O) (8020) (N  CH) (NWTPHetivity) (TDS  C) (Total POde) (WAD Cy) (AS) (Sb) (Setals) (As) (Sb) (Setals) (As) (Sb) (Setals) (Sc)	D.O. (mg/L)  0.67  0.68  0.69  0.68  LOWED PERMYPH-G) (M-D) (NWTF S) (TSS) (But anide) (Free Ba) (Be) (Carbon Ba) (Car	PH  6.37  6.36  6.37  6.37  6.37  6.37  CR BOTTLE  NWTPH-GX  PH-DX) (TPH OD) (Turbic dahl Nitroger Cyanide)  () (Cd) (Co)	8, SLIGHTLY CI ORP (mV) 83.0 82.7 82.5 82.4 82.7 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) () (NH3) (NO3)	#DIV/0!  #DIV/0!  (8141) (Oil & Gr (HCO3/CO3) (C/NO2)	DTW (ft)  aon-standard and ease)  l) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  3) (NO2) (F)	Observations  OR □  OR □  OR □
Decon Procedic (By Numerical Sample Described Procedical Sample Described Proceding Pr	Temp (°F/°C)  11.6  11.6  11.6  11.6  11.6  (8270D) (PA) (pH) (Conduction (COD) (Total Cyanid (Total Metals) (Dissolved Metals) (Dissolved Metals)	Alconox Was  Other urbidity, odor,  Cond. (uS/cm)  434.0  433.6  433.6  432.9  433.5  NALYSIS AI  O) (8020) (N  CH) (NWTPH ectivity) (TDS  C) (Total PO4 e) (WAD Cy  O) (As) (Sb) (Setals) (As) (Sb)	D.O. (mg/L)  0.67  0.68  0.69  0.68  LOWED PERMYPH-G) (M-D) (NWTF S) (TSS) (But anide) (Free Ba) (Be) (Carbon Ba) (Car	PH  6.37  6.36  6.37  6.37  6.37  6.37  CR BOTTLE  NWTPH-GX  PH-DX) (TPH OD) (Turbic dahl Nitroger Cyanide)  () (Cd) (Co)	8, SLIGHTLY CI ORP (mV) 83.0 82.7 82.5 82.4 82.7 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) () (NH3) (NO3)	#DIV/0!  #DIV/0!  (8141) (Oil & Gr (HCO3/CO3) (C/NO2)	DTW (ft)  aon-standard and ease)  l) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  3) (NO2) (F)	Observations  OR □  OR □  OR □
Decon Procedic (By Numerical Sample Described Procedic Sample Described Proceding Sample Proceding Sample Described Proceding Sam	Temp (°F/°C)  11.6  11.6  11.6  11.6  11.6  (8270D) (PA) (pH) (Conduction (COD) (Total Cyanid (Total Metals) (Dissolved Metals) (Dissolved Metals)	Alconox Was  Other urbidity, odor,  Cond. (uS/cm)  434.0  433.6  433.6  432.9  433.5  NALYSIS AI  O) (8020) (N  CH) (NWTPHetivity) (TDS  C) (Total POde) (WAD Cy) (AS) (Sb) (Setals) (As) (Sb) (Setals) (As) (Sb) (Setals) (Sc)	D.O. (mg/L)  0.67  0.68  0.69  0.68  LOWED PERMYPH-G) (M-D) (NWTF S) (TSS) (But an ide) (Free Ba) (Be) (Carbon Ba) (C	PH  6.37  6.36  6.37  6.37  6.37  6.37  CR BOTTLE  NWTPH-GX  PH-DX) (TPH OD) (Turbic dahl Nitroger Cyanide)  () (Cd) (Co)	8, SLIGHTLY CI ORP (mV) 83.0 82.7 82.5 82.4 82.7 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) () (NH3) (NO3)	#DIV/0!  #DIV/0!  (8141) (Oil & Gr (HCO3/CO3) (C/NO2)	DTW (ft)  aon-standard and ease)  l) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  3) (NO2) (F)	Observations  OR □  OR □  OR □
Decon Procedic (By Numerical Sample Described Procedical Sample Described Proceding Pr	Temp (°F/°C)  11.6  11.6  11.6  11.6  11.6  (8270D) (PA) (pH) (Conduction (COD) (Total Cyanid (Total Metals) (Dissolved Metals) (Dissolved Metals)	Alconox Was  Other urbidity, odor,  Cond. (uS/cm)  434.0  433.6  433.6  432.9  433.5  NALYSIS AI  O) (8020) (N  CH) (NWTPHetivity) (TDS  C) (Total POde) (WAD Cy) (AS) (Sb) (Setals) (As) (Sb) (Setals) (As) (Sb) (Setals) (Sc)	D.O. (mg/L)  0.67  0.68  0.69  0.68  LOWED PERMYPH-G) (M-D) (NWTF S) (TSS) (But an ide) (Free Ba) (Be) (Carbon Ba) (C	PH  6.37  6.36  6.37  6.37  6.37  6.37  CR BOTTLE  NWTPH-GX  PH-DX) (TPH OD) (Turbic dahl Nitroger Cyanide)  () (Cd) (Co)	8, SLIGHTLY CI ORP (mV) 83.0 82.7 82.5 82.4 82.7 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) () (NH3) (NO3)	#DIV/0!  #DIV/0!  (8141) (Oil & Gr (HCO3/CO3) (C/NO2)	DTW (ft)  aon-standard and ease)  l) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  3) (NO2) (F)	Observations  OR □  OR □  OR □
Decon Procedi (By Numerical Sample Descri Replicate  1 2 3 4 Average:  QUANTITY 3	Temp (°F/°C)  11.6  11.6  11.6  11.6  11.6  11.6  (8260) (8010 (8270D) (PA) (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Mayor Methane Ether)  others	Alconox Was  Other urbidity, odor,  Cond. (uS/cm)  434.0  433.6  433.6  432.9  433.5  NALYSIS AI  O) (8020) (N  CH) (NWTPHetivity) (TDS  C) (Total POde) (WAD Cy) (AS) (Sb) (Setals) (As) (Sb) (Setals) (As) (Sb) (Setals) (Sc)	D.O. (mg/L)  0.67  0.68  0.69  0.68  LOWED PERMYPH-G) (M-D) (NWTF S) (TSS) (But an ide) (Free Ba) (Be) (Carbon Ba) (C	PH  6.37  6.36  6.37  6.37  6.37  6.37  CR BOTTLE  NWTPH-GX  PH-DX) (TPH OD) (Turbic dahl Nitroger Cyanide)  () (Cd) (Co)	8, SLIGHTLY CI ORP (mV) 83.0 82.7 82.5 82.4 82.7 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) () (NH3) (NO3)	#DIV/0!  #DIV/0!  (8141) (Oil & Gr (HCO3/CO3) (C/NO2)	DTW (ft)  aon-standard and ease)  l) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  3) (NO2) (F)	Observations  OR □  OR □  OR □
Decon Procedic (By Numerical Sample Described Procedical Sample Described Proceding Pr	Temp (°F/°C)  11.6  11.6  11.6  11.6  11.6  11.6  (8260) (8010 (8270D) (PA) (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Mayor Methane Ether)  others	Alconox Was  Other urbidity, odor,  Cond. (uS/cm)  434.0  433.6  433.6  432.9  433.5  NALYSIS AI  O) (8020) (N  CH) (NWTPHetivity) (TDS  C) (Total POde) (WAD Cy) (AS) (Sb) (Setals) (As) (Sb) (Setals) (As) (Sb) (Setals) (Sc)	D.O. (mg/L)  0.67  0.68  0.69  0.68  LOWED PERMYPH-G) (M-D) (NWTF S) (TSS) (But an ide) (Free Ba) (Be) (Carbon Ba) (C	PH  6.37  6.36  6.37  6.37  6.37  6.37  CR BOTTLE  NWTPH-GX  PH-DX) (TPH OD) (Turbic dahl Nitroger Cyanide)  () (Cd) (Co)	8, SLIGHTLY CI ORP (mV) 83.0 82.7 82.5 82.4 82.7 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) () (NH3) (NO3)	#DIV/0!  #DIV/0!  (8141) (Oil & Gr (HCO3/CO3) (C/NO2)	DTW (ft)  aon-standard and ease)  l) (SO4) (NO	Ferrous iron (Fe II)  nalysis below) WA  WA  WA  3) (NO2) (F)	Observations  OR □  OR □  OR □



Project Nan	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 11 /2019@	1511		
Sample Nur	nber:	10-71-MW	191111		Weather:	PC 50S			
Landau Rep	resentative:	SRB							
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES	)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	8.69	Time:	1437	Flow through ce	ll vol.		GW Meter No.(	s HERON1
	Date/Time:			End Purge:	•	11/ 11 /2019 @	1503	Gallons Purged:	0.5
Purge water of			55-gal Drum	Ē	Storage Tank	Ground		SITE TREATM	
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	tous fou thus	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1443	14.7	167.1	5.34	5.62	66.8	LOW	8.69	8	
1446	-	190.9	1.04	5.77	23.0		8.69		
1449	15.3	191.7	0.46	5.86	10.6		8.69		
1452	15.3	192.1	0.40	5.93	2.7				
1455	15.3	191.5	0.39	5.99	-4.2				
1458	15.1	191.4	0.36	6.00	-7.0				
1501	15.0	191.0	0.36	6.00	-7.8				
	-								
SAMPLE CO	LLECTION D	OATA							
Sample Colle			Bailer		Pump/Pump Type	DED BLADDER			
Made of:		Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proce	dure:	Alconox Was	sh 🗖	Tap Rinse	DI Water	Dedicated		_	
(By Numerica	al Order)	Other	_	•	<b>4</b>	_			
Sample Desc	ription (color,		sheen, etc.):	CLEAR COI	LORLESS NO/NS	3			
			· · · · · · · ·						
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	15.0	190.9	0.37	5.99	-8.0				
2	14.9	190.8	0.38	5.99	-8.1				
3	14.9	190.7	0.36	5.98	-7.8				
4	14.9	190.7	0.36	5.97	-7.6				
Average:	14.9	190.8	0.37	5.98	-7.9	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	R BOTTLE	TYPE (Circle 91	oplicable or write	non-standard a	nalysis below)	
3		0) (8020) (N			` '	opineuro or write.		WA □	OR 🗆
	<u> </u>			`		(8141) (Oil & G	rease)	WA 🗆	OR 🗆
	(pH) (Condu	activity) (TDS	S) (TSS) (E	OD) (Turbi	dity) (Alkalinity)	(HCO3/CO3) (C	Cl) (SO4) (NO	(NO2) (F)	
1	(COD) (TO	C) (Total PO	l) (Total Kie	dahl Nitroger	n) (NH3) (NO3	/NO2)		·	
	· ·	le) (WAD Cy							
	1					(Pb) (Mg) (Mn) (			
	1		) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (	Na) (Hardness) (Silic
	VOC (Boein		eatylane						
	iviculane Eth	nane Ethene A	Letytene						
	others								
<u></u>									
Duplicate Sar	mple No(s):								
Comments:									
Signature:	SRB					Date:	11/11/2019		



Project Nan	ne:	Boeing Rent	on		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 11/2019@	1500		
Sample Nur	nber:	10-71-MW2	191111		Weather:	PARTLY CLOU	JDY, COOL		
Landau Rep		BXM			•				
WATER LEV	VEL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES)	)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before		8.96	Time:	•	Flow through ce			GW Meter No.(	s HFRON-3
	0 0 0	11/ 11/2019		End Purge:	_	11/ 11 /2019 @	1457	Gallons Purged:	
Purge water of			55-gal Drum	<u> </u>	Storage Tank	Ground		SITE TREATM	
range water t	•				-		<u> </u>	SITE TREATIVE	
Time	Temp (°F/°C)	Cond.	D.O.	pН	ORP (mV)	Turbidity	DTW (ft)	Internal Purge	Comments/
Time		(uS/cm) ls: Stablization	(mg/L) n of Parame	ters for three		(NTU) dings within the fo	. ,	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1437	14.9	168.6	1.82	6.24	38.8		8.96		
1440	14.8	171.7	1.87	6.23	35.4		8.95		
1443	14.4	175.6	1.54	6.25	29.9		8.95		
1446		174.9	1.46	6.26	27.8				_
1449		170.8	1.56	6.26	26.2		· <del></del>		
1452	14.0	166.5	1.65	6.24	26.1				
1455	14.0	166.0	1.52	6.23	25.4		· <del></del>		
									_
SAMPLE CO	LLECTION E								
Sample Colle	cted With:		Bailer		Pump/Pump Type	BLADDER		<u> </u>	
Made of:		Stainless Stee	1 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	dure:	Alconox Was	h 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	al Order)	Other							
Sample Desc	ription (color,	urbidity, odor,	sheen, etc.):	CLEAR, CO	LORLESS, ORA	NGE SOLIDS, NO	SHEEN, NO OI	OOR	
- T	TD.	- C 1	D.O.		ODB	T. 1.1.	DTW	ъ .	
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	14.0	166.1	1.51	6.23	25.4	` ,	,	, ,	
2		166.5	1.50				· <del></del>		
	14.0			6.23	25.3				
3	14.0	166.7	1.51	6.23	25.2				
4	14.0	166.8	1.50	6.23	25.1				
Average:	14.0	166.5	1.51	6.23	25.3	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AL	LOWED PE	ER BOTTLE	TYPE (Circle a)	pplicable or write	non-standard a	nalysis below)	
3	(8260) (801	0) (8020) (N	WTPH-G) (	(NWTPH-Gx	) (BTEX)			WA 🗆	OR 🗆
	(8270D) (PA	AH) (NWTPH	I-D) (NWTI	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & G	rease)	wa 🗆	or □
	(pH) (Condu	ctivity) (TDS	(TSS) (E	BOD) (Turbi	dity) (Alkalinity)	(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
1					n) (NH3) (NO3	/NO2)			
	i i	le) (WAD Cya			(8) (8) (8)	(m) (a.c.) (a.c.) (	7.70 (1 ) (G ) (	m) (1) (1) (1)	
						(Pb) (Mg) (Mn) (			
	VOC (Boein		) (Ба) (Бе) (С	.a) (Ca) (Co)	(Cr) (Cu) (re) (P	b) (Mg) (Mh) (Nl)	(Ag) (Se) (11) (V	(/) (ZII) (Fig) (K) (	Na) (Hardness) (Silio
	`	nane Ethene Ac	etylene						
	201		<i>J</i> 0						
	others								
	1.37.43								
Duplicate Sa	mple No(s):								
Comments:									
Signature:	BXM						11.11.19		



Sample Number: Landau Representative:   SRB   SRB   Secure (YES)   Damaged (No fine in the first of the fi	Mariba   M	Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Landau Representative:   SRB	Pandau Representative   SRH	Event:		Nov-19			Date/Time:	11/ 11 /2019@	1540		
Water Level Lawrence Data   Water Control of Secure (YES)   Damaged (NO)   Describe: Flush Mount  Water Nacy (YES)   Damaged (NO)   Describe: Flush Mount  Water Nacy (HERON)   Date Flux:	Walf Coulino:   Secure (YES)   Damaged (NO)   Describe:   Fluids Mount   Fluids	Sample Nun	nber:	10-71-MW <sup>2</sup>	191111		Weather:	PC 50S			
Damaged   No.   Damaged   No	Well Condition:   Secure (YFS)   Damaged (NO)   Describe:   Flack Mount   Florence Purging (ft)   S.76   Time:   1504   Flow through cell vol.   GW Meter No.(HERON1   Describe:   11/1   1201   5101   Florence   11/1   1201   501   Florence   11/1   501   Florence   11/	Landau Rep	resentative:	SRB							
DTW Before   Purging (ff)   8.76   Time:   1504   Flow through cell   vol.   GW Meter No. (s. HERON1   1513   Gal Darger   Date   Time:   11/ 11 / 2011   Starger   Tank   Ground   Other   Tank   Tank   Tank   Ground   Other   Tank   Tan	DTW Reform   Purging (ff)	WATER LEV	/EL/WELL/PU	JRGE DATA							
Begin Purges   Date/Time   11/ 11 / 201   1510   End Purge   Date/Time   11/ 11 / 2019	Begin Purge:   Date Time:   11	Well Condition	on:	Secure (YES	)	Damaged (N	(O)	Describe:	Flush Mount		
Purge water	Temp	DTW Before	Purging (ft)	8.76	Time:	1504	Flow through ce	ll vol.		GW Meter No.(	s HERON1
Time   Page Goals   Statistical Page Goals   Companie   Companie   Companie   Page Goals   Companie   Compa	Time (FFC) (uSchm) (uSchm) (uSt) pH (myt) (myt) (NTU) (t) (t) volume (gal) volume (gal) volume (gal) your per Coalts: Stabilization of Farameters for friere current veradings within the following limits yet 100 per 15-136 (1-10-4) (1-10	Begin Purge:	Date/Time:	11/ 11 /2019	1510	End Purge:	Date/Time:	11/ 11 /2019 @	1533	Gallons Purged:	0.5
Time	Time	Purge water of	lisposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
Purge Gask   Stabilization of Parameters for three consecutive readings within the following limits   >>-   How   No.3 ft   1   How   No.3 ft	Purge Goals   Sabilization of Parameters for three consecutive readings within the following limits   >>= 1. Now through cell		Temp	Cond.	D.O.	рН	ORP	Turbidity	DTW	Internal Purge	Comments/
1513	1513   15.2   224.4   2.87   6.01   17.0   10W   8.76	Time						. ,			Observations
1513	1513		0					U	O		
1516	1516	1513								um ough cen	
1519	1519		- ———								
1522   16.0   272.3   0.43   6.24   -36.1	1522								-		
1525	1525								8.76		
SAMPLE COLLECTION DATA	1528	1522	16.0		0.43	6.24	-36.1				
SAMPLE COLLECTION DATA	SAMPLE COLLECTION DATA	1525	16.1	267.3	0.38	6.24	-36.6				
SAMPLE COLLECTION DATA   Sample Collected With:	Sample Collected With:	1528	16.1	263.2	0.35	6.22	-36.4				
Sample Collected With:   Bailer   Pump/Pump Type   DED BLADDER   Other   Dedicated	Sample Collected With:	1531	16.1	259.7	0.37	6.21	-35.9				-
Sample Collected With:   Bailer   Pump/Pump Type   DED BLADDER   Other   Dedicated	Sample Collected With:										
Made of:	Made of:         Stainless Steel         □ PVC         □ Teflon         □ Polyethylene         □ Other         □ Dedicated           Decon Procedure:         □ Alconox Wash         □ Tap Rinse         □ DI Water         □ Dedicated           (By Numerical Order)         □ Other           Sample Description (color, turbidity, odor, sheen, etc.): SLIGHLTY GRAY AND TURBID NO/NS           Replicate         Temp (CFFC)         Cond. (uS/cm)         D.O. pH (mV)         Turbidity (NTU)         DTW Ferrous iron (Fe II)         Comments/Observations           1         16.0         259.2         0.35         6.21         -36.4         -36.7	SAMPLE CO	LLECTION D								
Decon Procedure:   Alconox Wash	Decom Procedure:   Alconox Wash   Tap Rinse   DI Water   Dedicated	Sample Colle	cted With:		Bailer		Pump/Pump Type	DED BLADDER		_	
Commentage   Condition   Color   Col	Company   Comp	Made of:		Stainless Stee	:1 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Replicate (°F/°C)         Cond. (us/cm)         D.O. (mg/L)         pH (mV)         ORP (nV)         Turbidity (NTU)         DTW (ft)         Ferrous iron (Fe II)         Comments/Observations           1         16.0         259.2         0.35         6.21         -36.4         -36.7         -36.7         -36.7         -36.2         -36.2         -36.7         -36.2         -36	Sample Description (color, turbidity, odor, sheen, etc.):         SLIGHLTY GRAY AND TURBID NO/NS           Replicate         Temp (eF/°C)         Cond. (uS/cm)         D.O. (mg/L)         pH (mV)         ORP (nTU)         Turbidity (ft)         DTW (Ferrous iron (Fe II)         Comments/Observations           1         1.6.0         259.2         0.35         6.21         -36.4	Decon Procee	lure:	Alconox Was	h 🔲	Tap Rinse	DI Water	Dedicated			
Replicate   Temp   Cond.   (us/cm)   D.O.   pH   (mV)   (nTU)   (nTU)   (ft)   Ferrous iron   Comments/Observations	Replicate   Temp	(By Numerica	al Order)	Other							
(°F/°C) (uS/cm) (mg/L) (mV) (NTU) (ft) (Fe II) Observations  1 16.0 259.2 0.35 6.21 -36.4  2 16.0 258.6 0.33 6.21 -36.7  3 16.0 257.9 0.33 6.21 -36.2  4 16.0 256.1 0.33 6.20 -36.2  Average: 16.0 258.0 0.34 6.21 -36.4 #DIV/0!  QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)  3 (8260) (8010) (8020) (NWTPH-G) (NWTPH-GX) (BTEX) WA □ OR □ (8270D) (PAH) (NWTPH-D) (NWTPH-DX) (TPH-HCID) (8081) (8141) (Oil & Grease) WA □ OR □ (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2)  (Total Cyanide) (WAD Cyanide) (Free Cyanide)  (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (TI) (V) (Zn) (Hg) (K) (Na) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (TI) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silic VOC (Boeing short list)	CFPC   (uS/cm)   (mg/L)   (mV)   (NTU)   (ft)   (Fe II)   Observations	Sample Descr	ription (color, t	urbidity, odor,	sheen, etc.):	SLIGHLTY	GRAY AND TUI	RBID NO/NS			
1 16.0 259.2 0.35 6.21 -36.4 2 16.0 258.6 0.33 6.21 -36.7 3 16.0 257.9 0.33 6.21 -36.2 4 16.0 256.1 0.33 6.20 -36.2 Average: 16.0 258.0 0.34 6.21 -36.4 #DIV/0!  QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)  3 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) (8270D) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease) WA □ OR □ (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Cyanide) (WAD Cyanide) (Free Cyanide) (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silic VOC (Boeing short list)	1 16.0 259.2 0.35 6.21 -36.4 2 16.0 258.6 0.33 6.21 -36.7 3 16.0 257.9 0.33 6.21 -36.2 4 16.0 256.1 0.33 6.20 -36.2 Average: 16.0 258.0 0.34 6.21 -36.4 #DIV/0!    QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)   3 (82.60) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA □ OR □ (8270D) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease) WA □ OR □ (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Cyanide) (WAD Cyanide) (Free Cyanide) (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (TI) (V) (Zn) (Hg) (K) (Na) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (TI) (V) (Zn) (Hg) (K) (Na) (Hardness) (Sili VOC (Boeing short list) Methane Ethene Acetylene	Replicate	•			pН		•			
2 16.0 258.6 0.33 6.21 -36.7  3 16.0 257.9 0.33 6.21 -36.2  4 16.0 256.1 0.33 6.20 -36.2  Average: 16.0 258.0 0.34 6.21 -36.4 #DIV/0!  QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)  3 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA □ OR □  (8270D) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease) WA □ OR □  (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F)  (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2)  (Total Cyanide) (WAD Cyanide) (Free Cyanide)  (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silic VOC (Boeing short list)	2 16.0 258.6 0.33 6.21 -36.7  3 16.0 257.9 0.33 6.21 -36.2  4 16.0 256.1 0.33 6.20 -36.2  Average: 16.0 258.0 0.34 6.21 -36.4 #DIV/0!   QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)  3 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA □ OR □  (8270D) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease) WA □ OR □  (pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F)  (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2)  (Total Cyanide) (WAD Cyanide) (Free Cyanide)  (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)  (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)  (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Sili VOC (Boeing short list)  Methane Ethane Ethene Acetylene	1	16.0	259.2	, ,	6.21	, ,	, ,	,	` ′	
3 16.0 257.9 0.33 6.21 -36.2  Average: 16.0 258.0 0.34 6.21 -36.4 #DIV/0!  QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)  3 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA □ OR □  (8270D) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease) WA □ OR □  (pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (CI) (SO4) (NO3) (NO2) (F)  (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2)  (Total Cyanide) (WAD Cyanide) (Free Cyanide)  (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Poc (Boeing short list))	3 16.0 257.9 0.33 6.21 -36.2  Average: 16.0 258.0 0.34 6.21 -36.4 #DIV/0!    QUANTITY   TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)     3 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA OR (8270D) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (0il & Grease) WA OR OR (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Cyanide) (WAD Cyanide) (Free Cyanide) (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Sili VOC (Boeing short list)										
4 16.0 256.1 0.33 6.20 -36.2  Average: 16.0 258.0 0.34 6.21 -36.4 #DIV/0!  QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)  3 (8260) (8010) (8020) (NWTPH-G) (NWTPH-GX) (BTEX) WA OR (8270D) (PAH) (NWTPH-D) (NWTPH-DX) (TPH-HCID) (8081) (8141) (Oil & Grease) WA OR (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2)  (Total Cyanide) (WAD Cyanide) (Free Cyanide)  (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silic VOC (Boeing short list)	Average: 16.0 258.0 0.34 6.21 -36.4 #DIV/0!    QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)   3 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA OR (8270D) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease) WA OR (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Cyanide) (WAD Cyanide) (Free Cyanide) (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Sili VOC (Boeing short list) Methane Ethane Ethene Acetylene										
QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)  3 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA OR (8270D) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease) WA OR (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2)  (Total Cyanide) (WAD Cyanide) (Free Cyanide)  (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silic VOC (Boeing short list)	QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)  3 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA OR (8270D) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease) WA OR (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Cyanide) (WAD Cyanide) (Free Cyanide) (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Sili VOC (Boeing short list)  Methane Ethane Ethene Acetylene  Duplicate Sample No(s):										
3 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX)  (8270D) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease)  (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F)  (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2)  (Total Cyanide) (WAD Cyanide) (Free Cyanide)  (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)  (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silic VOC (Boeing short list)	3 (8260) (8010) (8020) (NWTPH-G) (NWTPH-GX) (BTEX)  (8270D) (PAH) (NWTPH-D) (NWTPH-DX) (TPH-HCID) (8081) (8141) (Oil & Grease) WA OR OR OR OPEN (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2)  (Total Cyanide) (WAD Cyanide) (Free Cyanide)  (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silia VOC (Boeing short list)  Methane Ethane Ethene Acetylene  Duplicate Sample No(s):	Average:	16.0	258.0	0.34	6.21	-36.4	#DIV/0!			
3 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX)  (8270D) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease)  (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F)  (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2)  (Total Cyanide) (WAD Cyanide) (Free Cyanide)  (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)  (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silic VOC (Boeing short list)	3 (8260) (8010) (8020) (NWTPH-G) (NWTPH-GX) (BTEX)  (8270D) (PAH) (NWTPH-D) (NWTPH-DX) (TPH-HCID) (8081) (8141) (Oil & Grease) WA OR OR OR OPEN (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2)  (Total Cyanide) (WAD Cyanide) (Free Cyanide)  (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silia VOC (Boeing short list)  Methane Ethane Ethene Acetylene  Duplicate Sample No(s):	OHANTITY	TVDICALA	NAI VCIC AI	I OWED DE	D DOTTI E	TVDF (Cirale a)	mliachla an white	non standard a	nalvsis halaw)	
(8270D) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease) WA OR (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Cyanide) (WAD Cyanide) (Free Cyanide) (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silic VOC (Boeing short list)	(8270D) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease) WA OR (pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Cyanide) (WAD Cyanide) (Free Cyanide) (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silin VOC (Boeing short list)  Methane Ethane Ethene Acetylene  Duplicate Sample No(s):						` '	opiicable of write	iioii-staiiuai u a		OR 🗆
(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Cyanide) (WAD Cyanide) (Free Cyanide) (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silic VOC (Boeing short list)	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F)  (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2)  (Total Cyanide) (WAD Cyanide) (Free Cyanide)  (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)  (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Siliv VOC (Boeing short list)  Methane Ethane Ethene Acetylene  others  Duplicate Sample No(s):		`					(8141) (Oil & G	rease)		
(Total Cyanide) (WAD Cyanide) (Free Cyanide) (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silical VOC (Boeing short list)	(Total Cyanide) (WAD Cyanide) (Free Cyanide)  (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)  (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silin VOC (Boeing short list)  Methane Ethane Ethane Ethene Acetylene  others  Duplicate Sample No(s):										
(Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silice VOC (Boeing short list)	(Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silia VOC (Boeing short list)  Methane Ethane Ethane Ethane Ethane Ethane Ethane Ethane Ethane Sample No(s):		(COD) (TO	C) (Total PO4	(Total Kie	dahl Nitroger	n) (NH3) (NO3	/NO2)		· · · · · · · · · · · · · · · · · · ·	
(Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silice VOC (Boeing short list)	(Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silia VOC (Boeing short list)  Methane Ethane Ethane Acetylene  others  Duplicate Sample No(s):		· ·								
VOC (Boeing short list)	VOC (Boeing short list)  Methane Ethane Ethene Acetylene  others  Duplicate Sample No(s):										
	Methane Ethane Ethene Acetylene  others  Duplicate Sample No(s):		ì		) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) (	(Ag) (Se) (Tl) (\	/) (Zn) (Hg) (K) (	Na) (Hardness) (Silio
	Others  Duplicate Sample No(s):		,		etylene						
	Duplicate Sample No(s):			Emelle A	,15110						
	Duplicate Sample No(s):										
others	• • • • • • • • • • • • • • • • • • • •		others								-
Dunlingto Saurala Na(a)	• • • • • • • • • • • • • • • • • • • •	Down!! C	1a NT- ( )								
• • • • • • • • • • • • • • • • • • • •	Commence.	•	ubie ivo(s):								
	Signature: SRB Date: 11/11/2019		- CDD					D /	11/11/2010		



Project Nan	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/ 11 /2019@	905		
Sample Nur	nber:	RGW262S-	191111		Weather:	CLOUDY, COO	L		
Landau Rep	resentative:	BXM			•				
WATERIES	VEL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	0)	Describe:	Flush Mount		
			Time:	•			1 Idaii Wount	CW Matan No. (	· HEDON 1
DTW Before		5.33			Flow through cel		000	GW Meter No.(	
		11/ 11 /2019		End Purge:		11/11 /2019 @		Gallons Purged:	
Purge water of	iisposed to:		55-gal Drum	۳	Storage Tank	Ground	Other	SITE TREATM	ENI SYSIEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	tors for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
840	15.4	455.2	2.36	6.18	-9.3		6.81		PERI ON LOWEST
843		439.1	2.11	6.26	-14.7		7.21		FLOW
									TLOW
846		424.4	1.59	6.27	-17.0		7.80		
849	14.4	408.5	1.41	6.32	-22.6		8.09		
852	15.9	410.1	1.09	6.33	-27.0		8.89		
855	15.0	391.7	0.81	6.35	-30.6		9.27		
858	15.2	390.6	0.67	6.35	-34.7		9.59		
SAMPLE CO	LLECTION D	ΔΤΔ							
Sample Colle			Bailer		Pump/Pump Type	PERI#7			
Made of:	-	Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	t	Alconox Was		Tap Rinse	DI Water	Dedicated	i ouiei	Dedicated	
		·	sn 🗀	rap Kinse	DI Water	Dedicated			
(By Numerica		Other	1	GI IGUT VE			LIDG NO ODO	D NO GHEEN	
Sample Desc	ription (color, t	turbiaity, odor,	sneen, etc.):	SLIGHT YE	LLOW COLOR,	CLEAR, SOME SO	LIDS, NO ODO	R, NO SHEEN	
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	15.4	387.5	0.63	6.35	-35.6				
2	15.9	392.8	0.60	6.35	-37.0				
3	15.9	394.6	0.59						
4				0.30	-38.1				
	15.9	392.9		6.36	-38.1				
Average:	15.9	392.9 392.0	0.57	6.36	-39.2	#DIV/0!			
Average:	15.8	392.0	0.57	6.36	-39.2 -37.5	-			
QUANTITY	15.8 TYPICAL A	392.0 NALYSIS AI	0.57 0.60 LOWED PE	6.36 6.36 CR BOTTLE	-39.2 -37.5	#DIV/0!	non-standard a		
QUANTITY 7	15.8 <b>TYPICAL A</b> (8260) (8010)	392.0 NALYSIS AI 0) (8020) (N	0.57 0.60 LOWED PE	6.36 6.36 CR BOTTLE	-39.2 -37.5 TYPE (Circle ap ) (BTEX)	oplicable or write i		WA □	OR 🗆
QUANTITY	15.8 <b>TYPICAL A</b> (8260) (8010) (8270D) (PA	392.0 NALYSIS AI 0) (8020) (NAH) (NWTPF	0.57 0.60 LOWED PE IWTPH-G) (NWTI	6.36 6.36 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPH	-39.2 -37.5 TYPE (Circle ap ) (BTEX) H-HCID) (8081)	oplicable or write i	rease)	WA □ WA □	OR OR
QUANTITY 7	15.8 <b>TYPICAL A</b> (8260) (8010 (8270D) (PA (pH) (Condu	392.0  NALYSIS AI  0) (8020) (N  AH) (NWTPF  activity) (TDS	0.57  0.60  LOWED PERMITTEN (NWTE (N	6.36 6.36 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPH-Dx) (Turbic	-39.2 -37.5  TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity)	(8141) (Oil & Gr (HCO3/CO3) (C	rease)	WA □ WA □	_
QUANTITY 7	15.8  TYPICAL A (8260) (8010) (8270D) (PA (pH) (Conduction) (TOO	392.0  NALYSIS AI  0) (8020) (N  AH) (NWTPH  detivity) (TDS  C) (Total PO-	0.57  0.60  LOWED PF  WTPH-G) ( I-D) (NWTI  S) (TSS) (E	6.36 6.36 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPH-GOD) (Turbio dahl Nitrogen	-39.2 -37.5 TYPE (Circle ap ) (BTEX) H-HCID) (8081)	(8141) (Oil & Gr (HCO3/CO3) (C	rease)	WA □ WA □	_
QUANTITY 7	15.8  TYPICAL A (8260) (8010) (8270D) (PA) (COD) (TOO (Total Cyanid	392.0  NALYSIS AI 0) (8020) (N AH) (NWTPH detivity) (TDS C) (Total PO4 de) (WAD Cy	0.57 0.60  LOWED PERMITTENS (NOTES) (TSS) (EM) (Total Kielanide) (Free	6.36 6.36 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPH GOD) (Turbic dahl Nitrogen Cyanide)	-39.2  -37.5  TYPE (Circle ap ) (BTEX)  H-HCID) (8081) dity) (Alkalinity) h) (NH3) (NO3)	(8141) (Oil & Gr (HCO3/CO3) (C	rease) Cl) (SO4) (NO	WA	OR 🗆
QUANTITY 7	TYPICAL A (8260) (801) (8270D) (PA (pH) (Condu (COD) (Tod (Total Cyanid (Total Metals	392.0  NALYSIS AI  0) (8020) (N  AH) (NWTPH  activity) (TDS  C) (Total PO-  de) (WAD Cy  ) (As) (Sb) (	0.57  0.60  LOWED PP  IWTPH-G) ( I-D) (NWTI  S) (TSS) (E I) (Total Kie  anide) (Free Ba) (Be) (Ca	6.36 6.36 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPH GOD) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	-39.2 -37.5  TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3.	(8141) (Oil & Gr (HCO3/CO3) (C/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □ g) (K) (Na)
QUANTITY 7	TYPICAL A (8260) (801) (8270D) (PA (pH) (Condu (COD) (Tod (Total Cyanid (Total Metals	392.0  NALYSIS AI  0) (8020) (N  AH) (NWTPH  detivity) (TDS  C) (Total PO-  de) (WAD Cy  de) (As) (Sb) (Setals) (As) (Sb) (Sb)	0.57  0.60  LOWED PP  IWTPH-G) ( I-D) (NWTI  S) (TSS) (E I) (Total Kie  anide) (Free Ba) (Be) (Ca	6.36 6.36 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPH GOD) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	-39.2 -37.5  TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3.	(8141) (Oil & Gr (HCO3/CO3) (C/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □ g) (K) (Na)
QUANTITY 7	TYPICAL A (8260) (8010) (8270D) (PA (pH) (Conduction) (Total Cyanida (Total Metals) (Dissolved M	392.0  NALYSIS AI  0) (8020) (N  AH) (NWTPH  detivity) (TDS  C) (Total PO-  de) (WAD Cy  de) (As) (Sb) (Setals) (As) (Sb) (Sb)	0.57  0.60  LOWED PF  WTPH-G) (NWTI  S) (TSS) (E  ) (Total Kie anide) (Free Ba) (Be) (Ca ) (Ba) (Be) (Ca	6.36 6.36 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPH GOD) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	-39.2 -37.5  TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3.	(8141) (Oil & Gr (HCO3/CO3) (C/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □ g) (K) (Na)
QUANTITY 7	TYPICAL A (8260) (8010) (8270D) (PA (pH) (Conduction) (Total Cyanida (Total Metals) (Dissolved M	392.0  NALYSIS AI  0) (8020) (N  AH) (NWTPH  activity) (TDS  C) (Total PO-2  de) (WAD Cy  1) (As) (Sb) (Setals) (As) (Sb  ag short list)	0.57  0.60  LOWED PF  WTPH-G) (NWTI  S) (TSS) (E  ) (Total Kie anide) (Free Ba) (Be) (Ca ) (Ba) (Be) (Ca	6.36 6.36 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPH GOD) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	-39.2 -37.5  TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3.	(8141) (Oil & Gr (HCO3/CO3) (C/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □ g) (K) (Na)
QUANTITY 7	TYPICAL A (8260) (8010) (8270D) (PA) (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	392.0  NALYSIS AI  0) (8020) (N  AH) (NWTPH  activity) (TDS  C) (Total PO-2  de) (WAD Cy  1) (As) (Sb) (Setals) (As) (Sb  ag short list)	0.57  0.60  LOWED PF  WTPH-G) (NWTI  S) (TSS) (E  ) (Total Kie anide) (Free Ba) (Be) (Ca ) (Ba) (Be) (Ca	6.36 6.36 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPH GOD) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	-39.2 -37.5  TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3.	(8141) (Oil & Gr (HCO3/CO3) (C/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □ g) (K) (Na)
QUANTITY 7	TYPICAL A (8260) (8010) (8270D) (PA (pH) (Conduction) (Total Cyanida (Total Metals) (Dissolved M	392.0  NALYSIS AI  0) (8020) (N  AH) (NWTPH  activity) (TDS  C) (Total PO-2  de) (WAD Cy  1) (As) (Sb) (Setals) (As) (Sb  ag short list)	0.57  0.60  LOWED PF  WTPH-G) (NWTI  S) (TSS) (E  ) (Total Kie anide) (Free Ba) (Be) (Ca ) (Ba) (Be) (Ca	6.36 6.36 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPH GOD) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	-39.2 -37.5  TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3.	(8141) (Oil & Gr (HCO3/CO3) (C/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □ g) (K) (Na)
QUANTITY 7	TYPICAL A (8260) (8010) (8270D) (PA) (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	392.0  NALYSIS AI  0) (8020) (N  AH) (NWTPH  activity) (TDS  C) (Total PO-2  de) (WAD Cy  1) (As) (Sb) (Setals) (As) (Sb  ag short list)	0.57 0.60  LOWED PF [WTPH-G] ( I-D) (NWTI S) (TSS) (E I) (Total Kie anide) (Free Ba) (Be) (Ca ) (Ba) (Be) (Ca	6.36 6.36 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPH GOD) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co) (Ca) (Cd) (Co)	-39.2 -37.5  TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3.	(8141) (Oil & Gr (HCO3/CO3) (C/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □ g) (K) (Na)
QUANTITY 7 2	TYPICAL A (8260) (8010) (8270D) (PA) (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	392.0  NALYSIS AI  0) (8020) (N  AH) (NWTPH  detivity) (TDS  C) (Total PO-  de) (WAD Cy  ) (As) (Sb) (Setals) (As) (Sb  ag short list)  hane Ethene Ac	0.57 0.60  LOWED PF [WTPH-G] ( I-D) (NWTI S) (TSS) (E I) (Total Kie anide) (Free Ba) (Be) (Ca ) (Ba) (Be) (Ca	6.36 6.36 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPH GOD) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co) (Ca) (Cd) (Co)	-39.2 -37.5  TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3.	(8141) (Oil & Gr (HCO3/CO3) (C/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA □ WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR 🗆



Project Nam	ie:	Boeing Ren	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/11 /2019@	800		
Sample Nun	nber:	RGW262S-	191111		Weather:	CLOUDY, COO	L		
Landau Rep	resentative:	BXM							
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES	)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	5.33	Time:	• .	Flow through cel	ll vol.		GW Meter No.(	s HERON -1
	Date/Time:			End Purge:	_	11/ 11 /2019 @ 9	000	Gallons Purged:	
Purge water d			55-gal Drum	Ĭ.	Storage Tank	Ground		SITE TREATM	
range water c	iispos <b>ea</b> to.	_	-			_		SITE TREATING	ENTEREN
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
Time			· 0 /	ters for three		dings within the fo		>/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
		ъ	1.		D CILIC				
		Dι	aplica	ite to	RGW2	262S			
			1						
SAMPLE CO	LLECTION D	OATA							
Sample Colle			Bailer		Pump/Pump Type	PERI#7			
Made of:		Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	lura:	Alconox Was	_	Tap Rinse	DI Water	Dedicated		D carearea	
	_	Other	[	1 ap Kilisc	□ Di watei	Dedicated			
(By Numerica	,	_	1 ()	CI ICHT VE	LI OW COLOD	CLEAR COME CO	LIDG NO ODG	D NO CHEEN	
Sample Desci	iption (color, i	urbiany, odor,	sneen, etc.):_	SLIGHT TE	LLOW COLOR,	CLEAR, SOME SO	LIDS, NO ODC	K, NO SHEEN	
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	рН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	15.8	389.4	0.61	6.35	-36.5				
2	15.9	394.7	0.58	6.35	-37.6				
3	15.9	393.6	0.59	6.36	-38.6				
4	15.9	392.9	0.60	6.36	-39.6				
Average:	15.9	392.7	0.60	6.36	20 1				
0.77				0.50	-38.1	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI				#DIV/0! oplicable or write i	non-standard a	nalysis below)	
QUANTITY 7		NALYSIS AI 0) (8020) (N	LOWED PE	CR BOTTLE	TYPE (Circle ap		non-standard a	nalysis below) WA	OR 🗆
	(8260) (801)	0) (8020) (N	LLOWED PE	CR BOTTLE	TYPE (Circle ap				OR OR
7	(8260) (8010 (8270D) (PA	0) (8020) (NAH) (NWTPF	LOWED PENWTPH-G) (NWTF	CR BOTTLE (NWTPH-Gx) PH-Dx) (TPI	TYPE (Circle ap ) (BTEX) H-HCID) (8081)	oplicable or write i	rease)	WA □ WA □	
7	(8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO	O) (8020) (NAH) (NWTPHactivity) (TDSC) (Total PO4	LOWED PE NWTPH-G) ( H-D) (NWTP S) (TSS) (B 4) (Total Kie	CR BOTTLE (NWTPH-Gx) (PH-Dx) (TPH GOD) (Turbid	TYPE (Circle ap ) (BTEX) H-HCID) (8081)	(8141) (Oil & Gr (HCO3/CO3) (C	rease)	WA □ WA □	
7	(8260) (801) (8270D) (PA (pH) (Condu (COD) (TOd (Total Cyanid	O) (8020) (NAH) (NWTPH activity) (TDS C) (Total PO4 e) (WAD Cy	LOWED PE NWTPH-G) ( H-D) (NWTF S) (TSS) (B 4) (Total Kie ranide) (Free	CR BOTTLE NWTPH-Gx PH-Dx) (TPI GOD) (Turbic dahl Nitroger Cyanide)	TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) h) (NH3) (NO3)	(8141) (Oil & Gr (HCO3/CO3) (C	rease) El) (SO4) (NO	WA	OR □
7	(8260) (801) (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals	0) (8020) (NAH) (NWTPH activity) (TDSC) (Total PO4e) (WAD Cy) (As) (Sb) (1)	LOWED PE NWTPH-G) ( H-D) (NWTF S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca	CR BOTTLE NWTPH-GX PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
7	(8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M	0) (8020) (NAH) (NWTPH (NOTE) (TDS) (Total PO4e) (WAD Cy) (As) (Sb) (Setals) (As) (Sb)	LOWED PE NWTPH-G) ( H-D) (NWTF S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca	CR BOTTLE NWTPH-GX PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
7	(8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	O) (8020) (NAH) (NWTPH activity) (TDSC) (Total PO4ce) (WAD Cyc) (As) (Sb) (setals) (As) (Sb) g short list)	LOWED PE NWTPH-G) ( H-D) (NWTP S) (TSS) (B 4) (Total Kie ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	CR BOTTLE NWTPH-GX PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □
7	(8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	0) (8020) (NAH) (NWTPH activity) (TDS C) (Total PO4e) (WAD Cy) (As) (Sb) (setals) (As) (Sb)	LOWED PE NWTPH-G) ( H-D) (NWTP S) (TSS) (B 4) (Total Kie ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	CR BOTTLE NWTPH-GX PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
7	(8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	O) (8020) (NAH) (NWTPH activity) (TDSC) (Total PO4ce) (WAD Cyc) (As) (Sb) (setals) (As) (Sb) g short list)	LOWED PE NWTPH-G) ( H-D) (NWTP S) (TSS) (B 4) (Total Kie ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	CR BOTTLE NWTPH-GX PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
7	(8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	O) (8020) (NAH) (NWTPH activity) (TDSC) (Total PO4ce) (WAD Cyc) (As) (Sb) (setals) (As) (Sb) g short list)	LOWED PE NWTPH-G) ( H-D) (NWTP S) (TSS) (B 4) (Total Kie ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	CR BOTTLE NWTPH-GX PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
7	(8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	O) (8020) (NAH) (NWTPH activity) (TDSC) (Total PO4ce) (WAD Cyc) (As) (Sb) (setals) (As) (Sb) g short list)	LOWED PE NWTPH-G) ( H-D) (NWTP S) (TSS) (B 4) (Total Kie ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	CR BOTTLE NWTPH-GX PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
7	(8260) (8010) (8270D) (PA (pH) (Conduction) (COD) (TOd (Total Cyanid) (Total Metals) (Dissolved M VOC (Boein) Methane Eth	O) (8020) (NAH) (NWTPH activity) (TDSC) (Total PO4ce) (WAD Cyc) (As) (Sb) (setals) (As) (Sb) g short list)	LOWED PE NWTPH-G) ( H-D) (NWTP S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca cetylene	CR BOTTLE NWTPH-GX PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)
7 2	(8260) (8010) (8270D) (PA (pH) (Conduction) (COD) (TOd (Total Cyanid) (Total Metals) (Dissolved M VOC (Boein) Methane Eth	O) (8020) (NAH) (NWTPH tetrivity) (TDS C) (Total PO4e) (WAD Cy) (As) (Sb) (Setals) (As) (Sb g short list) the same Ethene Action (Name and Ethene (Name and Ethen	LOWED PE NWTPH-G) ( H-D) (NWTP S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca cetylene	CR BOTTLE NWTPH-GX PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	TYPE (Circle ap ) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (	WA	OR □ g) (K) (Na)



Project Nan	ne:	Boeing Ren	nton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-19			Date/Time:	11/11 /2019@	940		
Sample Nur	mber:	RGW264S-	- 191111		Weather:	OVERCAST, CO	OOL		
Landau Rep	resentative:	BXM							
WATERIE	VEL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	9	Damaged (N	(0)	Describe:	Flush Mount		
DTW Before		6.04	Time:	• •	Flow through ce		Tiusii iviount	GW Meter No.(s	HEDON 1
	Date/Time:			End Purge:	_	11/ 11 /2019 @	038	Gallons Purged:	
Purge water of		11/ 11 /201	55-gal Drum	_	Storage Tank	Ground		SITE TREATM	
ruige water t	disposed to.		55-gai Diuiii		Storage Talik	U Ground	- Other	SITE TREATM	ENISISIEM
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
Time				ters for three		dings within the fo	. ,	>/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
918	16.9	676	0.36	6.26	-8.2		6.89		
921	16.1	680	0.37	6.29	-20.5		7.00		
924	15.4	668	0.46	6.29	-30.3		7.05		
927		672	0.55	6.29	-38.5		7.12		
930		672	0.60	6.29	-43.9		7.15		
933	15.8	675	0.60	6.29	-48.8		7.16		
936	16.1	683	0.61	6.28	-51.8				
	DLLECTION I								
Sample Colle	ected With:	_	Bailer	_	Pump/Pump Type	_		_	
Made of:	L L	Stainless Ste	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proce	dure:	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	al Order)	Other							
0 1 5		<del></del>							
Sample Desc	ription (color,	turbidity, odor	, sheen, etc.):	SLIGHTLY	YELLOW, CLEA	AR, NO ODOR, NO	SHEEN		
Replicate	ription (color, r	turbidity, odor	p.O.	SLIGHTLY pH	YELLOW, CLEA	AR, NO ODOR, NO	SHEEN DTW	Ferrous iron	Comments/
								Ferrous iron (Fe II)	Comments/ Observations
	Temp	Cond.	D.O.		ORP	Turbidity	DTW		
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity	DTW		
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	<b>рН</b> 6.28	ORP (mV)	Turbidity	DTW		
Replicate  1 2	Temp (°F/°C) 16.1 16.4	Cond. (uS/cm) 682 683	D.O. (mg/L) 0.59	pH  6.28  6.28	ORP (mV) -52.2 -52.5	Turbidity	DTW		
Replicate  1 2 3	Temp (°F/°C) 16.1 16.4 16.6	Cond. (uS/cm) 682 683	D.O. (mg/L) 0.59 0.59	pH  6.28  6.28  6.28	ORP (mV) -52.2 -52.5	Turbidity	DTW		
Replicate  1 2 3 4 Average:	Temp (°F/°C) 16.1 16.4 16.6 16.8 16.5	Cond. (uS/cm) 682 683 684 687	D.O. (mg/L) 0.59 0.59 0.58 0.58	6.28 6.28 6.28 6.27 6.28	ORP (mV) -52.2 -52.5 -53.0 -53.3 -52.8	Turbidity (NTU)  #DIV/0!	DTW (ft)	(Fe II)	
Replicate  1 2 3 4 Average:	Temp (°F/°C) 16.1 16.4 16.6 16.8 16.5	Cond. (uS/cm) 682 683 684 687 684	D.O. (mg/L) 0.59 0.59 0.58 0.58 0.59	6.28 6.28 6.28 6.27 6.28 ER BOTTLE	ORP (mV)  -52.2  -52.5  -53.0  -53.3  -52.8  TYPE (Circle a)	Turbidity (NTU)	DTW (ft)	(Fe II)	Observations
Replicate  1 2 3 4 Average:	Temp (°F/°C) 16.1 16.4 16.6 16.8 16.5 TYPICAL A (8260) (801)	Cond. (uS/cm) 682 683 684 687 684 NALYSIS AI 0) (8020) (1	D.O. (mg/L) 0.59 0.59 0.58 0.58 0.59 LLOWED PE	6.28 6.28 6.28 6.27 6.28 ER BOTTLE (NWTPH-GX	ORP (mV)  -52.2  -52.5  -53.0  -53.3  -52.8  TYPE (Circle a) (BTEX)	Turbidity (NTU)  #DIV/0!	DTW (ft)	(Fe II)	Observations  OR   OR
Replicate  1 2 3 4 Average:	Temp (°F/°C) 16.1 16.4 16.6 16.8 16.5 TYPICAL A (8260) (801) (8270D) (PA	Cond. (uS/cm) 682 683 684 687 684 NALYSIS AI 0) (8020) (1	D.O. (mg/L) 0.59 0.59 0.58 0.58 0.59 LLOWED PENWTPH-G) (M-D) (NWTF	6.28 6.28 6.28 6.27 6.28 ER BOTTLE (NWTPH-GX)	ORP (mV)  -52.2  -52.5  -53.0  -53.3  -52.8  TYPE (Circle a)  (BTEX)  H-HCID) (8081)	#DIV/0!	DTW (ft)	(Fe II)  nalysis below)  WA  WA  WA	Observations
Replicate  1 2 3 4 Average:	Temp (°F/°C)  16.1  16.4  16.6  16.8  16.5  TYPICAL A (8270D) (PA) (pH) (Condu	Cond. (uS/cm)  682  683  684  687  684  NALYSIS Al (0) (8020) (I AH) (NWTP) (activity) (TD	D.O. (mg/L)  0.59  0.59  0.58  0.58  0.59  LLOWED PENWTPH-G) (NWTPH-G) (NWTP	6.28 6.28 6.27 6.28 ER BOTTLE (NWTPH-Gx PH-Dx) (TPH BOD) (Turbic	ORP (mV)  -52.2  -52.5  -53.0  -53.3  -52.8  TYPE (Circle a)  (BTEX)  H-HCID) (8081)	#DIV/0! pplicable or write to (8141) (Oil & Groot (HCO3/CO3) (Control of the control of the cont	DTW (ft)	(Fe II)  nalysis below)  WA  WA  WA	Observations  OR   OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  16.1  16.4  16.6  16.8  16.5  TYPICAL A (8260) (801) (8270D) (PA (pH) (Conduction) (COD) (TOO	Cond. (uS/cm)  682  683  684  687  684  NALYSIS Al (0) (8020) (I AH) (NWTP) (activity) (TD (C) (Total PO	D.O. (mg/L)  0.59  0.59  0.58  0.58  0.59  LLOWED PENWTPH-G) (NWTPH-G) (NWTP	6.28 6.28 6.28 6.27 6.28 ER BOTTLE (NWTPH-Gx PH-Dx) (TPI BOD) (Turbic dahl Nitroger	ORP (mV)  -52.2  -52.5  -53.0  -53.3  -52.8  TYPE (Circle a) (BTEX)  H-HCID) (8081) dity) (Alkalinity)	#DIV/0! pplicable or write to (8141) (Oil & Groot (HCO3/CO3) (Control of the control of the cont	DTW (ft)	(Fe II)  nalysis below)  WA  WA  WA	Observations  OR   OR
Replicate  1 2 3 4 Average:	Temp (°F/°C)  16.1  16.4  16.6  16.8  16.5  / TYPICAL A (8260) (801) (8270D) (PA (PH) (Condu (COD) (Tod (Total Cyanic (Total Metals)	Cond. (uS/cm)  682  683  684  687  684  NALYSIS Al (0) (8020) (1) (AH) (NWTP) (activity) (TD (C) (Total PO (de) (WAD C) (de) (AS) (Sb) (	D.O. (mg/L)  0.59  0.58  0.58  0.59  LLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (Total Kiewanide) (Free Ba) (Be) (Ca	6.28 6.28 6.28 6.27 6.28 ER BOTTLE (NWTPH-GX PH-DX) (TPH BOD) (Turbic Edahl Nitroger Cyanide) a) (Cd) (Co)	ORP (mV)  -52.2  -52.5  -53.0  -53.3  -52.8  TYPE (Circle a) (BTEX)  H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpolation of the interpo	DTW (ft)  non-standard and rease) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H)	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:	Temp (°F/°C)  16.1  16.4  16.6  16.8  16.5  TYPICAL A (8260) (8010) (8270D) (PA) (COD) (Total Cyanic) (Total Metals) (Dissolved M	Cond. (uS/cm)  682  683  684  687  684  NALYSIS Al (0) (8020) (I AH) (NWTP) (activity) (TD (C) (Total PO (de) (WAD Cy (detals) (As) (Sb) ((etals) (As) (Sb)	D.O. (mg/L)  0.59  0.58  0.58  0.59  LLOWED PENWTPH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (Total Kiewanide) (Free Ba) (Be) (Ca	6.28 6.28 6.28 6.27 6.28 ER BOTTLE (NWTPH-GX PH-DX) (TPH BOD) (Turbic Edahl Nitroger Cyanide) a) (Cd) (Co)	ORP (mV)  -52.2  -52.5  -53.0  -53.3  -52.8  TYPE (Circle a) (BTEX)  H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpolation of the interpo	DTW (ft)  non-standard and rease) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H)	Observations  OR □  OR □
Replicate  1 2 3 4 Average:	Temp (°F/°C)  16.1  16.4  16.6  16.8  16.5  TYPICAL A (8260) (801) (8270D) (P/ (pH) (Condu (COD) (TOd (Total Cyanic (Total Metals (Dissolved M	Cond. (uS/cm)  682  683  684  687  684  NALYSIS Al (0) (8020) (I AH) (NWTP) (activity) (TD (C) (Total PO (de) (WAD Cy (de) (As) (Sb) (detals) (As) (Sl) (ag short list)	D.O. (mg/L)  0.59  0.59  0.58  0.58  0.59  LLOWED PENWTPH-G) (NWTPH-G) (NWTP	6.28 6.28 6.28 6.27 6.28 ER BOTTLE (NWTPH-GX PH-DX) (TPH BOD) (Turbic Edahl Nitroger Cyanide) a) (Cd) (Co)	ORP (mV)  -52.2  -52.5  -53.0  -53.3  -52.8  TYPE (Circle a) (BTEX)  H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpolation of the interpo	DTW (ft)  non-standard and rease) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H)	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:	Temp (°F/°C)  16.1  16.4  16.6  16.8  16.5  TYPICAL A (8260) (801) (8270D) (P/ (pH) (Condu (COD) (TOd (Total Cyanic (Total Metals (Dissolved M	Cond. (uS/cm)  682  683  684  687  684  NALYSIS Al (0) (8020) (I AH) (NWTP) (activity) (TD (C) (Total PO (de) (WAD Cy (detals) (As) (Sb) ((etals) (As) (Sb)	D.O. (mg/L)  0.59  0.59  0.58  0.58  0.59  LLOWED PENWTPH-G) (NWTPH-G) (NWTP	6.28 6.28 6.28 6.27 6.28 ER BOTTLE (NWTPH-GX PH-DX) (TPH BOD) (Turbic Edahl Nitroger Cyanide) a) (Cd) (Co)	ORP (mV)  -52.2  -52.5  -53.0  -53.3  -52.8  TYPE (Circle a) (BTEX)  H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpolation of the interpo	DTW (ft)  non-standard and rease) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H)	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:	Temp (°F/°C)  16.1  16.4  16.6  16.8  16.5  TYPICAL A (8260) (801) (8270D) (P/ (pH) (Condu (COD) (TOd (Total Cyanic (Total Metals (Dissolved M	Cond. (uS/cm)  682  683  684  687  684  NALYSIS Al (0) (8020) (I AH) (NWTP) (activity) (TD (C) (Total PO (de) (WAD Cy (de) (As) (Sb) (detals) (As) (Sl) (ag short list)	D.O. (mg/L)  0.59  0.59  0.58  0.58  0.59  LLOWED PENWTPH-G) (NWTPH-G) (NWTP	6.28 6.28 6.28 6.27 6.28 ER BOTTLE (NWTPH-GX PH-DX) (TPH BOD) (Turbic Edahl Nitroger Cyanide) a) (Cd) (Co)	ORP (mV)  -52.2  -52.5  -53.0  -53.3  -52.8  TYPE (Circle a) (BTEX)  H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpolation of the interpo	DTW (ft)  non-standard and rease) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H)	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:	Temp (°F/°C)  16.1  16.4  16.6  16.8  16.5  / TYPICAL A (8260) (801) (8270D) (PA (COD) (Tod (COD) (Tod (Total Cyanic (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm)  682  683  684  687  684  NALYSIS Al (0) (8020) (I AH) (NWTP) (activity) (TD (C) (Total PO (de) (WAD Cy (de) (As) (Sb) (detals) (As) (Sl) (ag short list)	D.O. (mg/L)  0.59  0.59  0.58  0.58  0.59  LLOWED PENWTPH-G) (NWTPH-G) (NWTP	6.28 6.28 6.28 6.27 6.28 ER BOTTLE (NWTPH-GX PH-DX) (TPH BOD) (Turbic Edahl Nitroger Cyanide) a) (Cd) (Co)	ORP (mV)  -52.2  -52.5  -53.0  -53.3  -52.8  TYPE (Circle a) (BTEX)  H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpolation of the interpo	DTW (ft)  non-standard and rease) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H)	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:	Temp (°F/°C)  16.1  16.4  16.6  16.8  16.5  TYPICAL A (8260) (801) (8270D) (P/ (pH) (Condu (COD) (TOd (Total Cyanic (Total Metals (Dissolved M	Cond. (uS/cm)  682  683  684  687  684  NALYSIS Al (0) (8020) (I AH) (NWTP) (activity) (TD (C) (Total PO (de) (WAD Cy (de) (As) (Sb) (detals) (As) (Sl) (ag short list)	D.O. (mg/L)  0.59  0.59  0.58  0.58  0.59  LLOWED PENWTPH-G) (NWTPH-G) (NWTP	6.28 6.28 6.28 6.27 6.28 ER BOTTLE (NWTPH-GX PH-DX) (TPH BOD) (Turbic Edahl Nitroger Cyanide) a) (Cd) (Co)	ORP (mV)  -52.2  -52.5  -53.0  -53.3  -52.8  TYPE (Circle a) (BTEX)  H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpolation of the interpo	DTW (ft)  non-standard and rease) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H)	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:	Temp (°F/°C)  16.1  16.4  16.6  16.8  16.5  TYPICAL A (8260) (801) (8270D) (P/ (pH) (Cond) (COD) (Tod (Total Cyanic (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm)  682  683  684  687  684  NALYSIS Al (0) (8020) (I AH) (NWTP) (activity) (TD (C) (Total PO (de) (WAD Cy (de) (As) (Sb) (detals) (As) (Sl) (ag short list)	D.O. (mg/L)  0.59  0.59  0.58  0.58  0.59  LLOWED PENWTPH-G) (NWTPH-G) (NWTP	pH  6.28  6.28  6.28  6.27  6.28  ER BOTTLE (NWTPH-GX PH-DX) (TPH BOD) (Turbic Edahl Nitroger Cyanide) a) (Cd) (Co)	ORP (mV)  -52.2  -52.5  -53.0  -53.3  -52.8  TYPE (Circle a) (BTEX)  H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpolation of the interpo	DTW (ft)  non-standard and rease) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H)	Observations  OR □  OR □  OR □
Replicate  1 2 3 4 Average:  QUANTITY 7 2	Temp (°F/°C)  16.1  16.4  16.6  16.8  16.5  TYPICAL A (8260) (801) (8270D) (P/ (pH) (Cond) (COD) (Tod (Total Cyanic (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm)  682  683  684  687  684  NALYSIS Al (0) (8020) (I AH) (NWTP) (activity) (TD (C) (Total PO (de) (WAD Cy (de) (As) (Sb) (detals) (As) (Sl) (ag short list)	D.O. (mg/L)  0.59  0.59  0.58  0.58  0.59  LLOWED PENWTPH-G) (NWTPH-G) (NWTP	pH  6.28  6.28  6.28  6.27  6.28  ER BOTTLE (NWTPH-GX PH-DX) (TPH BOD) (Turbic Edahl Nitroger Cyanide) a) (Cd) (Co)	ORP (mV)  -52.2  -52.5  -53.0  -53.3  -52.8  TYPE (Circle a) (BTEX)  H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0!  #DIV/0!  pplicable or write in the interpolation of the interpo	DTW (ft)  non-standard and rease) Cl) (SO4) (NO	(Fe II)  nalysis below)  WA  WA  Solution  WA  Solution  WA  Solution  WA  Solution  TI) (V) (Zn) (H)	Observations  OR □  OR □  OR □

wood.

# **Appendix C**



#### Memo

From:

Tel:

Fax:

To: John Long, Project Manager

Crystal Thimsen (206) 342-1760 (206) 342-1761

Date: December 11, 2019

Subject: Summary Data Quality Review

November 2019 Boeing Renton Groundwater Sampling

SWMU-172/174

ARI Group Number: 19K0160

This memo presents the summary data quality review of 11 primary groundwater samples, one groundwater field duplicate, and one trip blank sample collected on November 11, 2019. The samples were submitted to Analytical Resources, Inc. (ARI), located in Tukwila, Washington, a laboratory accredited by the Washington State Department of Ecology (Ecology). The samples were analyzed for the following:

Project:

c:

0088880100.2019

Project File

- Volatile organic compounds (VOCs) (cis-1,2-dichloroethene, tetrachloroethene, trichloroethene, and vinyl chloride) by U.S. Environmental Protection Agency (EPA) Method 8260C with selected ion monitoring (SIM);
- Total organic carbon (TOC) by Standard Method (SM) 5310B; and
- Total metals (arsenic, copper, and lead) by EPA Method 6020A.

The samples and the analyses conducted on the samples are listed below.

Sample ID	Laboratory Sample ID	Requested Analyses
RGW232S-191111	19K0160-01	all
RGW233I-191111	19K0160-02	all
RGW173S-191111	19K0160-03	all
RGW081S-191111	19K0160-04	all
RGW226S-191111	19K0160-05	all
RGW153S-191111	19K0160-06	all
RGWDUP1-191111	19K0160-07	all
RGW152S-191111	19K0160-08	all
RGW172S-191111	19K0160-09	all
RGW234S-191111	19K0160-10	all
RGW235I-191111	19K0160-11	all

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Sample ID	Laboratory Sample ID	Requested Analyses
RGW236S-191111	19K0160-12	all
Trip Blank	19K0160-13	VOCs

Data were reviewed in accordance with the appropriate method procedures and criteria documented in the Quality Assurance Project Plan (QAPP) (Amec Foster Wheeler, 2016). The control limits provided in the QAPP are advisory limits; therefore, the most current control limits provided by the laboratory were used to evaluate the quality control data. In cases where the laboratory did not track limits for an analyte, the limits in the QAPP were used.

Holding times, method/trip blanks, surrogate recoveries, laboratory control samples (LCS) and laboratory control sample duplicates (LCSD), matrix spike/matrix spike duplicates (MS/MSD), field duplicates, and reporting limits were reviewed where available to assess compliance with applicable methods. If qualification was required, data were qualified based on the definitions and use of qualifying flags outlined in the EPA guidance documents (EPA, 2014a and b).

ARI received the samples on November 12, 2019. The temperatures of the coolers were recorded upon receipt and were below the maximum acceptable temperature of 6 degrees Celsius.

#### Organic analyses

Samples were analyzed for VOCs. Laboratory data were evaluated for the following parameters:

- 1. Preservation and Holding Times Acceptable
- 2. Blanks Acceptable
- 3. Surrogates Acceptable
- 4. LCS/LCSD Acceptable
- 5. MS/MSD Acceptable except as noted:

The MS/MSD sample for vinyl chloride in data package 19K0160 slightly exceeded the upper spike recovery percentage of 120% at 142% and \$135% in the two samples analyzed. This indicates a slight positive bias in the vinyl chloride analytical results for this data package. The data is not qualified for use.

6. Field Duplicates - Acceptable except as noted

One field duplicate was submitted for each analysis during this sampling event, meeting the project frequency requirement of five percent, or one for every 20 samples. Primary and duplicate results are summarized in the table below. The project-specific control limit for field duplicate relative percent differences (RPDs) is 30 percent for concentrations greater than five times the reporting limit. The RPD is not calculated for results that are less than five times the reporting limit, as indicated on the table below by "NC." In these cases, the absolute value of the difference between the primary and duplicate result should not exceed the value of the reporting limit. The field duplicate RPDs were within the control limits, except for vinyl chloride. Vinyl chloride results were previously qualified due the MS/MSD recoveries; therefore, only the vinyl chloride result for sample RGWDUP1-191111 is qualified as estimated and qualified with a "J" due to the field duplicate RPD.

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Sample ID/ Field Duplicate ID	Analyte	Primary Result (ng/L)	Duplicate Result (ng/L)	Reporting Limit (ng/L)	RPD (%)
RGW152S-191111/ RGWDUP1-191111	vinyl chloride	36.6	52.2	20	35
	cis-1,2-dichloroethene	530	545	20	3
	trichloroethene	145	142	20	2
	tetrachloroethene	384	372	20	3

**Abbreviations** 

ng/L = nanograms per liter

NC = not calculated

RPD = relative percent difference

7. Reporting Limits and Laboratory Flags – Acceptable

#### **Inorganic analyses**

Samples were analyzed for total metals and TOC. Laboratory data were evaluated for the following parameters:

- 1. Preservation and Holding Times Acceptable
- 2. Blanks Acceptable
- 3. LCS- Acceptable
- 4. MS/MSD Acceptable
- 5. Laboratory Duplicates Acceptable
- 6. Field Duplicates Acceptable

One field duplicate was submitted for each analysis during this sampling event, meeting the project frequency requirement of five percent, or one for every 20 samples. Primary and duplicate results are summarized in the table below. The project-specific control limit for field duplicate RPDs is 30 percent for concentrations greater than five times the reporting limit. The RPD is not calculated for results that are less than five times the reporting limit, as indicated on the table below by "NC." In these cases, the absolute value of the difference between the primary and duplicate result should not exceed the value of the reporting limit. The total lead results for samples RGW152S-191111 and RGWDUP1-191111 are qualified as estimated and flagged with a "J."

Sample ID/					RPD	
Field Duplicate ID	Analyte	Primary Result	Duplicate Result	Reporting Limit	(%)	
	TOC	29.56 mg/L	18.21 mg/L	0.50 mg/L	46	
RGW152S-191111/	total arsenic	7.48 µg/L	16.4 μg/L	0.200 µg/L	75	
RGWDUP1-191111	total copper	16.6 μg/L	33.4 μg/L	0.500 µg/L	NC	
	total lead	12.1 μg/L	26.6 μg/L	0.100 µg/L	75	

Abbreviations:

 $\mu$ g/L = micrograms per liter mg/L = milligrams per liter NC = not calculated

RPD = relative percent difference

TOC = total organic carbon

**Commented [MK1]:** Added lead qualifiers to final table; correct?

**Commented [MK2]:** This column was not updated from 2Q.

Commented [MK3]: Data package says RL is 0.400 for GW152S and 1.00 for DUP1; 0.200 is from 2Q; what should it be now?

**Commented [MK4]:** Data package says RL is 1.00 for GW152S and 2.50 for DUP1; 0.500 is from 2Q; what should it be now?

Commented [MK5]: Data package says RL is 0.200 for GW152S and 0.500 for DUP1; 0.100 is from 2Q; what should it be now?

Memo December 11, 2019 Page 4 of 4

7. Reporting Limits and Laboratory Flags – Acceptable

#### Overall assessment of data

The table below summarizes the data assessment. The completeness of work order number 19K0160 is 100 percent. The usefulness of these data was evaluated based on EPA guidance documents listed in the introduction to this report. Few problems were identified, and analytical performance was generally within specified limits. The data meet the project's data quality objectives.

Sample ID	Qualified Analyte	Qualified Result	Units	Qualifier Reason
RGW232S-191111	none			
RGW233I-191111	none			
RGW173S-191111	none			
RGW081S-191111	none			
RGW226S-191111	none			
RGW153S-191111	none			
RGWDUP1-191111	vinyl chloride lead	52.2 J 26.6 J	ng/L µg/L	MS/MSD recovery [????]
RGW152S-191111	lead	12.1 J	μg/L	????
RGW172S-191111	none			
RGW234S-191111	none			
RGW235I-191111	none			
RGW236S-191111	none			
Trip Blank	none			

Abbreviations

μg/L = micrograms per liter

J =the analyte is qualified as estimated

RPD = relative percent difference

#### References

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler), 2016, Quality Assurance Project Plan, Boeing Renton Facility, Renton, Washington: Prepared for the Boeing Company, February.

U.S. Environmental Protection Agency (EPA), 2014a, U.S. EPA National Functional Guidelines for Superfund Organic Methods Data Review: EPA 540-R-014-002, August.

EPA, 2014b, U.S. EPA National Functional Guidelines for Inorganic Superfund Data Review: EPA 540-R-013-001, August.

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**Commented [MK6]:** Not sure what reason is for this qualifier

**Commented [MK7]:** Not sure what reason is for this qualifier



#### Memo

To: John Long, Project Manager Project: 0088880100.2019

From: Crystal Thimsen c: Project File

Tel: (206) 342-1760 Fax: (206) 342-1761 Date: December 16, 2019

Subject: Summary Data Quality Review

November 2019 Boeing Renton Groundwater Sampling

Building 4-78/79 SWMU/AOC Group ARI Work Order Number: 19K0178

This memo presents the summary data quality review of 16 primary groundwater samples, one field duplicate groundwater sample, and two trip blank samples collected on November 12, 2019. The samples were submitted to Analytical Resources, Inc. (ARI), located in Tukwila, Washington, a laboratory accredited by the Washington State Department of Ecology (Ecology). The samples were analyzed for the following:

- Volatile organic compounds (VOCs) (limited suite: benzene, vinyl chloride, cis-1,2-dichloroethene, and trichloroethene) by U.S. Environmental Protection Agency (EPA) Method 8260C;
- Total petroleum hydrocarbons as gasoline (TPH-G) by Ecology Method NWTPH-G; and
- Total organic carbon (TOC) by Standard Method (SM) 5310B-00.

The samples and the analyses conducted on the samples are listed below.

Sample ID	Laboratory Sample ID	Requested Analyses
RGWDUP2-191112	19K0178-01	all
RGW238I-191112	19K0178-02	all
RGW237S-191112	19K0178-03	all
RGW209S-191112	19K0178-04	all
RGW244S-191112	19K0178-05	all
RGW239I-191112	19K0178-06	all
RGW031S-191112	19K0178-07	all
RGW240D-191112	19K0178-08	all
RGW143S-191112	19K0178-09	all
RGW242I-191112	19K0178-10	VOCs and TPH-G
RGW210S-191112	19K0178-11	all
RGW241S-191112	19K0178-12	VOCs and TPH-G
RGW033S-191112	19K0178-13	all

Sample ID	Laboratory Sample ID	Requested Analyses
RGW243I-191112	19K0178-14	all
RGW039S-191112	19K0178-15	all
RGW034S-191112	19K0178-16	all
RGW038S-191112	19K0178-17	all
Trip Blank	19K0178-18	VOCs and TPH-G

Data were reviewed in accordance with the appropriate method procedures and criteria documented in the Quality Assurance Project Plan (QAPP) (Amec Foster Wheeler, 2016). The control limits provided in the QAPP are advisory limits; therefore, the most current control limits provided by the laboratory were used to evaluate the quality control data. In cases where the laboratory did not track limits for an analyte, the limits in the QAPP were used.

Holding times, method/trip blanks, surrogate recoveries, laboratory control samples (LCS) and laboratory control sample duplicates (LCSD), matrix spike/matrix spike duplicates (MS/MSD), field duplicates, and reporting limits were reviewed where available to assess compliance with applicable methods. If qualification was required, data were qualified based on the definitions and use of qualifying flags outlined in EPA guidelines (EPA, 2014a and b).

ARI received the samples on November 13, 2019. The temperatures of the coolers were recorded upon receipt and were below the maximum acceptable temperature of 6 degrees Celsius.

# **Organic analyses**

Samples were analyzed for VOCs and TPH-G. Laboratory data were evaluated for the following parameters:

- 1. Preservation and Holding Times Acceptable
- 2. Blanks Acceptable
- 3. Surrogates Acceptable
- 4. LCS/LCSD Acceptable
- 5. MS/MSD Acceptable
- 6. Field Duplicates Acceptable

One field duplicate was submitted for each analysis during this sampling event, meeting the project frequency requirement of five percent, or one for every 20 samples. Primary and duplicate results are summarized in the table below. The relative percent differences (RPDs) for the field duplicate are within the project-specific control limit of 30 percent for concentrations greater than five times the reporting limit. The RPD is not calculated for results that are less than five times the reporting limit, as indicated on the table below by "NC." In these cases, the absolute value of the difference between the primary and duplicate result should not exceed the value of the reporting limit. As shown in the table below, the field duplicate results are acceptable.

Sample ID/ Field Duplicate ID	Analyte	Primary Result (µg/L)	Duplicate Result (µg/L)	Reporting Limit (µg/L)	RPD (%)
RGW031S-191112/	vinyl chloride	0.25	0.27	0.20	NC
	cis-1,2-dichloroethene	0.40	0.39	0.20	NC
RGWDUP2-191112	benzene	4.77	4.75	0.20	<1
	TPH-G	1,540	1,560	100	1

#### **Abbreviations**

 $\mu$ g/L = micrograms per liter

NC = not calculated

RPD = relative percent difference

TPH-G = total petroleum hydrocarbons as gasoline

7. Reporting Limits and Laboratory Flags – Acceptable

# **Inorganic analyses**

Samples were analyzed for TOC. Laboratory data were evaluated for the following parameters:

- 1. Preservation and Holding Times Acceptable
- 2. Blanks Acceptable
- 3. LCS/LCSD Acceptable
- 4. MS/MSD Acceptable
- 5. Laboratory Duplicates Acceptable
- 6. Field Duplicates Acceptable

One field duplicate was submitted for each analysis during this sampling event, meeting the project frequency requirement of five percent, or one for every 20 samples. Primary and duplicate results are summarized in the table below. The RPDs are acceptable.

Sample ID/ Field Duplicate ID	Analyte	Primary Result (mg/L)	Duplicate Result (mg /L)	Reporting Limit (mg /L)	RPD (%)
RGW031S-190507/ RGWDUP2-190507	TOC	15.38	15.01	0.50	2

#### **Abbreviations**

mg/L = milligrams per liter

RPD = relative percent difference

TOC = total organic carbon

7. Reporting Limits and Laboratory Flags – Acceptable

#### Overall assessment of data

The table below summarizes the data assessment. The completeness of work order number 19K0178 is 100 percent. Evaluation of the usefulness of these data is based on EPA guidance documents identified in the introduction to this report. Few problems were identified, and analytical performance was generally within specified limits. The data meet the project's data quality objectives.

Sample ID	Qualified Analyte
RGWDUP2-190507	none
RGW241S-190507	none
RGW242I-190507	none
RGW240D-190507	none
RGW239I-190507	none
RGW238I-190507	none
RGW210S-190507	none
RGW031S-190507	none
RGW143S-190507	none
RGW237S-190507	none
RGW244S-190507	none
RGW209S-190507	none
RGW034S-190507	none
Trip Blank	none
RGW039S-190508	none
RGW243I-190508	none
RGW033S-190508	none
RGW038S-190508	none
Trip Blank	

## <u>Abbreviations</u>

μg/L = micrograms per liter

J = The value is an estimate

## References

- Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler), 2016, Quality Assurance Project Plan, Boeing Renton Facility, Renton, Washington: Prepared for the Boeing Company, February.
- U.S. Environmental Protection Agency (EPA), 2014a, U.S. EPA National Functional Guidelines for Superfund Organic Methods Data Review: EPA 540-R-014-002, August.
- EPA, 2014b, U.S. EPA National Functional Guidelines for Inorganic Superfund Data Review: EPA 540-R-013-001, August.

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Memo

To: John Long, Project Manager Project: 0088880100.2019

From: Crystal Thimsen c: Project File

Tel: (206) 342-1760 Fax: (206) 342-1761 Date: December 16, 2019

Subject: Summary Data Quality Review

November 2019 Boeing Renton Groundwater Sampling

Former Fuel Farm AOC Group ARI Work Order Number: 19K0167

This memo presents the summary data quality review of 10 primary groundwater samples and one field duplicate collected on November 11, 2019. The samples were submitted to Analytical Resources Inc. (ARI), a Washington State Department of Ecology (Ecology)-accredited laboratory located in Tukwila, Washington. The samples were analyzed for total petroleum hydrocarbons as diesel (TPH-D), plus motor oil (TPH-O) and Jet A (TPH Jet A) ranges by Ecology Method NWTPH-Dx, both with and without silica-gel acid cleanup procedure to determine if concentrations are affected by natural organic material.

The samples and the analyses conducted on the samples are listed below.

Sample ID	Laboratory Sample ID	Requested Analyses
RGWDUP3-191111	19K0167-01 and 02	all
RGW224S-191111	19K0167-03 and 04	all
RGW255S-191111	19K0167-05 and 06	all
RGW211S-191111	19K0167-07 and 08	all
RGW212S-191111	19K0167-09 and 10	all
RGW257S-191111	19K0167-11 and 12	all
RGW256S-191111	19K0167-13 and 14	all
RGW258S-191111	19K0167-15 and 16	all
RGW221S-191111	19K0167-17 and 18	all
RGW183S-191111	19K0167-19 and 20	all
RGW184S-191111	19K0167-21 and 22	all

Data were reviewed in accordance with the appropriate method procedures and criteria documented in the Quality Assurance Project Plan (QAPP) (Amec Foster Wheeler, 2016). The control limits provided in the QAPP are advisory limits; therefore, the most current control limits provided by the laboratory were used to evaluate the quality control data. In cases where the laboratory did not track limits for an analyte, the limits in the QAPP were used.

Memo December 16, 2019 Page 2 of 3

Holding times, method/trip blanks, surrogate recoveries, laboratory control samples (LCS) and laboratory control sample duplicates (LCSD), matrix spike/matrix spike duplicates (MS/MSD), field duplicates, and reporting limits were reviewed where available to assess compliance with applicable methods. If qualification was required, data were qualified based on the definitions and use of qualifying flags outlined in EPA guidelines (EPA, 2014).

ARI received the samples on November 12, 2019. The temperatures of the coolers were recorded upon receipt and were less than the maximum acceptable temperature of 6 degrees Celsius.

# **Organic analyses**

Samples were analyzed for TPH-D plus TPH-O and TPH Jet A ranges. Laboratory data were evaluated for the following parameters:

- 1. Preservation and Holding Times Acceptable
- 2. Blanks Acceptable
- 3. Surrogates Acceptable
- 4. LCS Acceptable
- 5. MS/MSD Acceptable
- 6. Field Duplicates Acceptable

One field duplicate was submitted for each analysis during this sampling event, meeting the project frequency requirement of 5 percent, or one for every 20 samples. Primary and duplicate results are summarized in the table below. The field duplicate relative percent difference (RPD) is within the project-specific control limit of 30 percent for concentrations greater than five times the reporting limit.

Sample ID/ Field Duplicate ID	Analyte	Primary Result (mg/L)	Duplicate Result (mg/L)	Reporting Limit (mg/L)	RPD (%)
	TPH-D C12-C24	1.51	1.46	0.100	3
RGW224S-191111/ RGWDUP3-191111		0.303	0.370	0.100	NC
	TPH Jet A C10-C18	1.93	1.80	0.100	7
		0.720	0.923	0.100	25

## Abbreviations

mg/L = milligrams per liter

RPD = relative percent difference

TPH = total petroleum hydrocarbons

TPH-D = total petroleum hydrocarbons as diesel

7. Reporting Limits and Laboratory Flags – Acceptable

## Overall assessment of data

The table below summarizes the data review. The completeness of ARI work order number 19K0167 is 100 percent. Evaluation of the usefulness of these data is based on EPA guidance documents listed in the introduction to this report. Few problems were identified, and analytical performance was generally within specified limits. The data meet the project's data quality objectives.

Sample ID	Qualified Analyte
RGWDUP3-191111	none
RGW224S-191111	none
RGW255S-191111	none
RGW211S-191111	none
RGW212S-191111	none
RGW257S-191111	none
RGW256S-191111	none
RGW258S-191111	none
RGW221S-191111	none
RGW183S-191111	none
RGW184S-191111	none

# References

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler), 2016, Quality Assurance Project Plan, Boeing Renton Facility, Renton, Washington: Prepared for the Boeing Company, February.

U.S. Environmental Protection Agency (EPA), 2014, U.S. EPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review: EPA 540-R-014-002, August.



#### Memo

To: John Long, Project Manager Project: 0088880100.2019

From: Crystal Thimsen c: Project File

Tel: (206) 342-1760 Fax: (206) 342-1761 Date: December 16, 2019

Subject: Summary Data Quality Review

November 2019 Boeing Renton Groundwater Sampling

AOC-003

ARI Work Order Number: 19K0184

This memo presents the summary data quality review of two primary groundwater samples and one trip blank sample collected on November 12, 2019. The samples were submitted to Analytical Resources, Inc. (ARI), located in Tukwila, Washington, a laboratory accredited by the Washington State Department of Ecology (Ecology).

Samples were analyzed for the following:

- Volatile organic compounds (VOCs) (cis-1,2-dichloroethene, tetrachloroethene, trichloroethene, and vinyl chloride) by U.S. Environmental Protection Agency (EPA) Method 8260C with selected ion monitoring (SIM); and
- Total organic carbon (TOC) by Standard Method (SM) 5310C.

The samples and the analyses conducted on the samples are listed below.

Sample ID	Laboratory Sample ID	Requested Analyses
RGW247S-191112	19K0184-01	all
RGW248I-191112	19K0184-02	all
Trip Blank	19K0184-03	VOCs

Data were reviewed in accordance with the appropriate method procedures and criteria documented in the Quality Assurance Project Plan (QAPP) (Amec Foster Wheeler, 2016). The control limits provided in the QAPP are advisory limits; therefore, the most current control limits provided by the laboratory were used to evaluate the quality control data. In cases where the laboratory did not track limits for an analyte, the limits in the QAPP were used.

Holding times, method/trip blanks, surrogate recoveries, laboratory control samples (LCS) and laboratory control sample duplicates (LCSD), matrix spike/matrix spike duplicates (MS/MSD), field duplicates, and reporting limits were reviewed where available to assess compliance with applicable methods. If qualification was required, data were qualified based on the definitions and use of qualifying flags outlined in the EPA guidance documents (EPA, 2014a and b).

ARI received the samples on November 13, 2019. The temperature of the cooler was recorded upon receipt and was below the maximum acceptable temperature of 6 degrees Celsius. A sample time was not

Memo December 16, 2019 Page 2 of 3

listed on the COC for sample RGW248I-191112; however, a time was indicated on the sample jar labels. The laboratory logged the sample time as the time indicated on the sample jar labels.

# **Organic analyses**

Samples were analyzed for VOCs. Laboratory data were evaluated for the following parameters:

- 1. Preservation and Holding Times Acceptable
- 2. Blanks Acceptable
- 3. Surrogates Acceptable
- 4. LCS/LCSD Acceptable
- 5. MS/MSD Acceptable
- 6. Field Duplicates Acceptable

Field duplicates were not collected at this site during this sampling event. The project frequency requirement of one field duplicate for every 20 samples was achieved with field duplicate samples collected at other sites included in this sampling event

7. Reporting Limits and Laboratory Flags – Acceptable

# **Inorganic analyses**

Samples were analyzed for TOC. Laboratory data were evaluated for the following parameters:

- 1. Preservation and Holding Times Acceptable
- 2. Blanks Acceptable
- 3. LCS Acceptable
- 4. MS/MSD Acceptable

Extra volume was not submitted for project specific MS/MSD analyses. Sample precision is evaluated based on LCS and LCSD recoveries. The MS/MSD project frequency requirement of one MS/MSD for every 20 samples was achieved with extra volume submitted at other sites included in this sampling event.

- 5. Laboratory Duplicates Acceptable
- 6. Field Duplicates Acceptable

Field duplicates were not collected at this site during this sampling event. The project frequency requirement of one field duplicate for every 20 samples was achieved with field duplicate samples collected at other sites included in this sampling event

7. Reporting Limits and Laboratory Flags – Acceptable

## Overall assessment of data

The table below summarizes the data assessment. The completeness of work order number 19K0184 is 100 percent. The usefulness of these data was evaluated based on EPA guidance documents listed in the introduction to this report. Few problems were identified, and analytical performance was generally within specified limits.

Memo December 16, 2019 Page 3 of 3

Sample ID	Qualified Analyte
RGW247S-191112	none
RGW248I-191112	none
Trip Blank	none

## References

- Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler), 2016, Quality Assurance Project Plan, Boeing Renton Facility, Renton, Washington: Prepared for the Boeing Company, February.
- U.S. Environmental Protection Agency (EPA), 2014a, U.S. EPA National Functional Guidelines for Superfund Organic Methods Data Review: EPA 540-R-014-002, August.
- EPA, 2014b, U.S. EPA National Functional Guidelines for Inorganic Superfund Data Review: EPA 540-R-013-001, August.

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#### Memo

To: John Long, Project Manager Project: 0088880100.2019

From: Crystal Thimsen c: Project File

Tel: (206) 342-1760 Fax: (206) 342-1761 Date: December 16, 2019

Subject: Summary Data Quality Review

November 2019 Boeing Renton Groundwater Sampling

Building 10-71 Parcel

ARI Work Order Number: 19K0162

This memo presents the summary data quality review of three primary groundwater samples and one trip blank sample collected on November 11, 2019. The samples were submitted to Analytical Resources, Inc. (ARI), located in Tukwila, Washington, a laboratory accredited by the Washington State Department of Ecology (Ecology). The samples were analyzed for the following:

• Volatile organic compounds (VOCs) (vinyl chloride, cis-1,2-dichloroethene, trichloroethene, and toluene) by U.S. Environmental Protection Agency (EPA) Method 8260C.

The samples and the analyses conducted on the samples are listed below.

Sample ID	Laboratory Sample ID	Requested Analyses
10-71-MW2-191111	19K0162-01	VOCs
10-71-MW1-191111	19K0162-02	VOCs
10-71-MW4-191111	19K0162-03	VOCs
Trip Blank	19K0162-04	VOCs

Data were reviewed in accordance with the appropriate method procedures and criteria documented in the Quality Assurance Project Plan (QAPP) (Amec Foster Wheeler, 2016). The control limits provided in the QAPP are advisory limits; therefore, the most current control limits provided by the laboratory were used to evaluate the quality control data. In cases where the laboratory did not track limits for an analyte, the limits in the QAPP were used.

Holding times, method/trip blanks, surrogate recoveries, laboratory control samples (LCS) and laboratory control sample duplicates (LCSD), matrix spike/matrix spike duplicates (MS/MSD), field duplicates, and reporting limits were reviewed where available to assess compliance with applicable methods. If qualification was required, data were qualified based on the definitions and use of qualifying flags outlined in EPA guidelines (EPA, 2014).

ARI received the samples on November 12, 2019. The temperature of the cooler was recorded upon receipt and was below the maximum acceptable temperature of 6 degrees Celsius .

Memo December 16, 2019 Page 2 of 2

# **Organic analyses**

Samples were analyzed for VOCs. Laboratory data were evaluated for the following parameters:

- 1. Preservation and Holding Times Acceptable
- 2. Blanks Acceptable
- 3. Surrogates Acceptable
- 4. LCS/LCSD Acceptable
- 5. MS/MSD Acceptable

Extra volume was not submitted for project specific MS/MSD analyses. Sample precision is evaluated based on LCS and LCSD recoveries. The MS/MSD project frequency requirement of one MS/MSD for every 20 samples was achieved with extra volume submitted at other sites included in this sampling event.

6. Field Duplicates - Acceptable

Field duplicates were not collected at this site during this sampling event. The project frequency requirement of one field duplicate for every 20 samples was achieved with field duplicate samples collected at other sites included in this sampling event.

7. Reporting Limits and Laboratory Flags – Acceptable

#### Overall assessment of data

The table below summarizes the data assessment. The completeness of work order number 19K0162 is 100 percent. Evaluation of the usefulness of these data is based on EPA guidance documents listed in the introduction to this report. Few problems were identified, and analytical performance was generally within specified limits. The data are not qualified and meet the project's data quality objectives.

Sample ID	Qualified Analyte
10-71-MW2-191111	none
10-71-MW1-191111	none
10-71-MW4-191111	none
Trip Blank	none

#### References

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler), 2016, Quality Assurance Project Plan, Boeing Renton Facility, Renton, Washington: Prepared for the Boeing Company, February.

U.S. Environmental Protection Agency (EPA), 2014, U.S. EPA National Functional Guidelines for Superfund Organic Methods Data Review: EPA 540-R-014-002, August.

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#### Memo

To: John Long, Project Manager Project: 0088880100.2019

From: Crystal Thimsen c: Project File

Tel: (206) 342-1760 Fax: (206) 342-1761 Date: December 11, 2019

Subject: Summary Data Quality Review

November 2019 Boeing Renton Groundwater Sampling

Apron A

ARI Work Order Number: 19K0161

This memo presents the summary data quality review of two primary groundwater samples, one groundwater field duplicate, and one trip blank sample collected on November 11, 2019. The samples were submitted to Analytical Resources, Inc., (ARI), located in Tukwila, Washington, a laboratory accredited by the Washington State Department of Ecology (Ecology). The samples were analyzed for the following:

• Volatile organic compounds (VOCs) (vinyl chloride and cis-1,2-dichloroethene) by U.S. Environmental Protection Agency (EPA) Method 8260C; and

• Total organic carbon (TOC) by Standard Method (SM) 5310B.

The samples and the analyses conducted on the samples are listed below.

Sample ID	Laboratory Sample ID	Requested Analyses
RGWDUP5-191111	19K0161-01	all
RGW262S-191111	19K0161-02	all
RGW264S-191111	19K0161-03	all
Trip Blank	19K0161-04	VOCs

Data were reviewed in accordance with the appropriate method procedures and criteria documented in the Quality Assurance Project Plan (QAPP) (Amec Foster Wheeler, 2016). The control limits provided in the QAPP are advisory limits; therefore, the most current control limits provided by the laboratory were used to evaluate the quality control data. In cases where the laboratory did not track limits for an analyte, the limits in the QAPP were used.

Holding times, method/trip blanks, surrogate recoveries, laboratory control samples (LCS) and laboratory control sample duplicates (LCSD), matrix spike/matrix spike duplicates (MS/MSD), field duplicates, and reporting limits were reviewed where available to assess compliance with applicable methods. If qualification was required, data were qualified based on the definitions and use of qualifying flags outlined in the EPA guidance documents (EPA, 2014a and b).

ARI received the samples on November 12, 2019. The temperature of the coolers were recorded upon receipt and was below the maximum acceptable temperature of 6 degrees Celsius. The laboratory logged the samples with the time on the chain-of-custody and proceeded with analysis.

Memo December 11, 2019 Page 2 of 3

# **Organic analyses**

Samples were analyzed for VOCs. Laboratory data were evaluated for the following parameters:

- 1. Preservation and Holding Times Acceptable
- 2. Blanks Acceptable
- 3. Surrogates Acceptable
- 4. LCS/LCSD Acceptable
- 5. MS/MSD Acceptable

Extra volume was not submitted for project specific MS/MSD analyses. Sample precision is evaluated based on LCS and LCSD recoveries. The MS/MSD project frequency requirement of one MS/MSD for every 20 samples was achieved with extra volume submitted at other sites included in this sampling event.

6. Field Duplicates – Acceptable

One field duplicate, RGWDUP5-191111, was submitted with sample RGW262S-191111. Primary and duplicate samples were analyzed for each analysis during this sampling event, meeting the project frequency requirement of 5 percent, or one for every 20 samples. Primary and duplicate results were below detection; therefore, the field duplicate relative percent difference (RPD) is not calculated for samples in this work order.

7. Reporting Limits and Laboratory Flags – Acceptable

## **Inorganic analyses**

Samples were analyzed for TOC. Laboratory data were evaluated for the following parameters:

- 1. Preservation and Holding Times Acceptable
- 2. Blanks Acceptable
- 3. LCS Acceptable
- 4. MS/MSD Acceptable

Extra volume was not submitted for project specific MS/MSD analyses. Sample precision is evaluated based on LCS and LCSD recoveries. The MS/MSD project frequency requirement of one MS/MSD for every 20 samples was achieved with extra volume submitted at other sites included in this sampling event.

- 5. Laboratory Duplicates Acceptable
- 6. Field Duplicates Acceptable

One field duplicate was submitted for each analysis during this sampling event, meeting the project frequency of five percent, or one for every 20 samples. Primary and duplicate results are summarized in the table below. The RPDs are acceptable.

Sample ID/ Field Duplicate ID Analyte		Primary Result (mg/L)	Duplicate Result (mg/L)	Reporting Limit (mg/L)	RPD (%)	
RGW262S-191111/ RGWDUP5-191111	TOC	31.15	31.60	5.00	1	

#### **Abbreviations**

mg/L = milligrams per liter RPD = relative percent difference TOC = total organic carbon

7. Reporting Limits and Laboratory Flags – Acceptable

#### Overall assessment of data

The table below summarizes the data assessment. The completeness of work order number 19K0161 is 100 percent. The usefulness of these data was evaluated based on EPA guidance documents listed in the introduction to this report. Few problems were identified, and analytical performance was generally within specified limits. The data meet the project's data quality objectives.

Sample ID	Qualified Analyte
RGWDUP5-191111	none
RGW262S-191111	none
RGW264S-191111	none
Trip Blank	none

#### References

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler), 2016, Quality Assurance Project Plan, Boeing Renton Facility, Renton, Washington: Prepared for the Boeing Company, February.

U.S. Environmental Protection Agency (EPA), 2014a, U.S. EPA National Functional Guidelines for Superfund Organic Methods Data Review: EPA 540-R-014-002, August.

EPA, 2014b, U.S. EPA National Functional Guidelines for Inorganic Superfund Data Review: EPA 540-R-013-001, August.

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wood.

**Appendix D** 

# **APPENDIX D**

# Summary of Remedial Actions at the Boeing Renton Facility October - December 2019

Boeing Renton Site Renton, Washington

Prepared for:
The Boeing Company
EHS Remediation

Prepared by: CALIBRE Systems, Inc. Project No. T0014323

February 14, 2020

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## **Acronyms**

AOC Area of Concern °Bx degrees brix

bgs below ground surface

Building 4-78/79 Building 4-78/4-79 SWMU/AOC Group

CALIBRE Systems, Inc.
cfm cubic feet per minute
DAP Diammonium Phosphate

DCA Dichloroethane
DCE Dichloroethene

EDR Engineering Design Report

ERD Enhanced Reductive Dechlorination

ft feet lbs pounds

mg/L milligrams per liter
MgSO4 Magnesium Sulfate
NA not analyzed
NaNO3 Sodium Nitrate
ND non-detect

PCE Tetrachloroethene
PID Photoionization detector
ppbv parts per billion by volume
SVE Soil Vapor Extraction

SWMU Solid Waste Management Unit

TCA Trichloroethane
TCE Trichloroethene

Tech Memo Technical Memorandum

Total Chlorinated Sum of PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, 1,1,1-TCA, and 1,1-DCA

TPH-G Total Petroleum Hydrocarbons-Gasoline

ug/L micorgrams per liter
VC Vinyl Chloride

VOCs Volatile Organic Compounds

VPC Vapor Phase Carbon

#### 1.0 Introduction

CALIBRE Systems, Inc. (CALIBRE) prepared this Technical Memorandum (Tech Memo) for the Boeing Company to summarize remedial actions implemented at the Boeing Renton Facility in the fourth quarter of 2019 (between October 1 and December 31, 2019). The ongoing remedial actions include:

- 1. Operation of one soil vapor extraction (SVE) system located at Solid Waste Management Unit (SWMU) designated as SWMU-172/174;
- Biological treatment to promote Enhanced Reductive Dechlorination (ERD) of volatile organic compounds (VOCs) in groundwater underway at several AOCs located throughout the Renton Facility, and;
- 3. Anaerobic biodegradation of benzene by nitrate/sulfate injections at the 4-78/79 Building.

CALIBRE completed the work described in this Tech Memo to support remedial activities described in the Engineering Design Report (EDR), (AMEC, 2014) as supplemented by a Tech Memo describing the remedial approach for *in situ* biodegradation treatment of benzene in groundwater near the 4-78/79 Building (CALIBRE 2017).

## 1.1 Facility Location and Background

The Boeing Renton Facility is used for assembly of 737 airplanes and is located at the southern end of Lake Washington in Renton, Washington. The location of the Renton Facility and the locations of SWMU-172/174 and Building 4-78/79 within the Facility are shown on Figure 1-1. The locations of the other AOCs and SWMUs where groundwater treatment is ongoing are also included in Figure 1-1.

## 1.2 Objectives and Organization

The objective for this Tech Memo is to summarize work completed in accordance with the EDR in the fourth quarter of 2019. This includes operation and monitoring activities for the SVE system located at SWMU-172/174 and a summary of the ongoing biological treatment and monitoring of groundwater at the following areas:

SWMU-172/174
Building 4-78/4-79 SWMU/AOC Group (Building 4-78/79)
AOC-001/002
AOC-003
Lot 20/Former Building 10-71
AOC-060
AOC-090
Building 4-70, and
Apron A

This Tech Memo is organized as follows: Section 1 – Introduction and Background Section 2 – SVE System Operation and Monitoring

Section 3 – Groundwater Treatment

Section 4 – Conclusions and Recommendations

Section 5 – References

Attachment A – Field Data Sheets

## 2.0 SVE Systems Operation and Monitoring

SVE systems were installed in the Building 4-78/79 and SWMU-172/174 areas and began operation in April 2015. During the last quarter of 2017 photoionization detector (PID) results from both systems had shown low-level VOC concentrations removed at asymptotically low levels. Rebound stabilization tests were conducted in early 2018 followed by collection of soil confirmation samples from both areas in June 2018. Ecology approved the recommended shutdown of the Building 4-78/79 SVE system on November 1, 2018 after review and evaluation of the soil confirmation results for that area (CALIBRE 2018a). Operational modifications have continued at the SWMU-172/174 SVE system to optimize VOC removal for that area. The following sections summarize the operating conditions, operational changes, and performance monitoring/evaluation for the SWMU-172/174 SVE system performed in October to December 2019.

## 2.1 SWMU-172/174 SVE System

The SWMU-172/174 SVE system consists of three vapor extraction wells and a SVE equipment trailer as shown in Figure 2-1. The SVE system is equipped with two vapor-phase GAC vessels, each filled with 1,800 pounds of virgin carbon. The GAC vapor treatment system is configured to run in a lead-lag configuration with vapor from the outlet of the lead vessel passing through the lag vessel. The system historically included two smaller vessels each containing 200 pounds of zeolite impregnated with permanganate for vinyl chloride treatment. As described below, the lag permanganate drum became plugged during the beginning of the fourth quarter 2019 and was taken offline. The lead permanganate drum is still operating within the treatment system. Permanganate treatment was originally included in the design to treat potential vinyl chloride that would not be captured in GAC. Permanganate treatment is not providing any benefit and may be discontinued in the future because vinyl chloride is not present in any of the inlet air streams (Table 2-1).

Routine maintenance including oil changes, drive-belt tensioning and inspection, inspection of the air filter, and inspection of the moisture separator was completed per the Operations Manual (CALIBRE, 2014). System monitoring includes regular monitoring of total organic vapor concentrations with a calibrated PID.

#### 2.1.1 TO-15 Laboratory Analysis of Vapor Samples

No samples for TO-15 analysis were collected during this operating period. Table 2-1 summarizes the TO-15 detections for the SWMU-172/174 SVE system for 15 TO-15 sampling events<sup>1</sup> that have been implemented since system startup.

## 2.1.2 Summary of Operations and Operational Changes

The soil confirmation samples collected in the second quarter of 2018 identified a location between SVE-2 and SVE-3 which still showed elevated PCE levels in soil. During the third quarter of 2018, the SVE system was adjusted to alter the flushing pattern through this area by using SVE-3 as an inlet vent well with continued extraction through SVE-2 and SVE-1. Vapor concentrations, measured with a PID, showed some increase for approximately two weeks during that reporting period. Subsequent measurements during the fourth quarter 2018 reporting period showed vapor concentrations reducing to previous low level detections. Therefore, on December 5, 2018 the SVE system was adjusted to alter the flushing pattern around SVE-2 and SVE-3 by using SVE-1 as an inlet vent well with continued extraction from SVE-2 and reopening SVE-3 to extraction.

At the end of the second quarter 2019 PID readings showed reduced VOC levels at SVE-2 while SVE-1 remained near 0 ppbv. System operational modifications were completed that day (following the collection of samples for TO-15 analysis) to adjust SVE-1 as an inlet vent well with extraction at SVE-2 and SVE-3. The system has continued to operate in this manner during the fourth quarter 2019. Table 2-2 shows the PID readings for the wells in the SWMU 172/174 SVE system. Table 2-3 shows an operational summary for the system.

A brief summary of key changes/events associated with operation of the SWMU 172/174 SVE system is presented below; specific details are only included for weeks when system changes and modifications were implemented. More details on weekly operations are summarized in Table 2-2 and the operational logs included in Appendix A.

- On October 2, 2019 the hose between the 2<sup>nd</sup> carbon vessel and 2<sup>nd</sup> permanganate drum had a crack near the camlock fitting entering the permanganate drum. The system was turned off to repair the hose.
- On October 3, 2019 the repaired hose was installed and limited effluent flow was observed from the permanganate drum indicating this drum had become plugged. The drum was removed from the treatment system and sampled later in October 2019 for waste characterization. The first permanganate drums is still operating between the two carbon vessels.
- On November 20, 2019 the system showed a high vacuum and low flow rate. After inspection of the system, it was observed that the wire cage within the moisture separator had become

<sup>1</sup> Multiple changes to SVE system operations have been implemented over the period where data are shown. Changes to extraction flow rates by SVE wells are used to maximize the VOC mass removal and the corresponding SVE influent concentration is highly dependent on the flow rate from selected wells.

3

- dislodged allowing the float ball to swirl within the chamber and eventually get sucked into the discharge outlet of the separator blocking flow and causing vacuum to increase. The wire cage and float ball were reinstalled on November 20 and 22. Blower oil was changed at this time.
- On December 23, 2019 the system was turned off for the holiday break period and restarted on December 31, 2019.

#### 2.1.3 Mass Removal Estimate

Between April 17, 2015 and December 31, 2019 the SWMU-172/174 SVE system has recovered an estimated 19.4 pounds of VOCs (primarily PCE), as shown in Table 2-3. Approximately 1.1 pounds of VOCs were removed during the current reporting period (fourth quarter 2019) based on the PID measurements collected. The cumulative VOC mass removal for the SWMU-172/174 SVE system is shown in Figure 2-2.

## 2.2 Recommended Next Steps for the SVE Systems

Modifying the SVE system flow at the SWMU-172/174 area at the end of the second quarter 2019 showed increases in VOC mass removal from the system influent. Subsequent monitoring during fourth quarter 2019 showed variable vapor concentrations from SVE-3. Some rebound was observed at this well when the system was shutdown (with the moisture separator/float ball malfunction) and then again following the shutdown period for the holiday break. However, the subsequent site visits and monitoring showed these elevated levels declined within two weeks. During the first few weeks of the first quarter 2020, concentrations have reduced back to low levels at the system (see Table 2-2 and 2-3). In addition, as noted in prior quarterly monitoring reports, the location of this site is adjacent to a paint booth for final assembly of aircraft and parts. Previous monitoring events have shown variability in PID measurements especially when paint odor is present in the area. Boeing has temporarily suspended painting operations in the area and therefore, at least temporarily, upcoming monitoring events should be without potential interference from painting operations. To take advantage of this, modifications for the system will be made to alternate flows between wells as has been done in the past (i.e. SVE-3 is extracting and will be changed to an inlet vent and vice versa for SVE-1). If no significant changes are observed in PID measurements following these modifications the system will be shut down for a rebound test (~ 2 weeks to a month) in order to monitor rebounding at the site. Summa can samples for TO-15 analysis will be collected for the system restart following the planned rebound period.

Additional modifications to the operation of this system should be considered to continue increased mass removal in the area between SVE-2 and SVE-3. These modifications may include opening SVE-1 and SVE-3 as an inlet vent or SVE-1 and SVE-2 as an inlet vent, to focus vapor removal in that area. It may also be beneficial to operate the SVE system in a pulsed mode in order to allow vapor concentrations to rebound followed by running the system for a period of time.

## 3.0 Ongoing Groundwater Treatment

Groundwater treatment is being implemented at several AOCs/SWMUs at the Renton Facility. The primary remedy being implemented is enhanced reductive dechlorination (ERD) of chlorinated solvents in targeted areas. The ERD treatment involves substrate injection using sucrose as a carbon source to stimulate biological degradation of the chlorinated solvents starting in late 2014.

Beginning in late 2017, anaerobic biodegradation of benzene using nitrate and sulfate injections was implemented for a small area at the 4-78/79 Building. As a result of any soil excavations being postponed until drier months, additional nitrate/sulfate samples in groundwater were collected for the benzene treatment area in November 2019 and results are presented in Table 3-1. The November 2019 monitoring results show six of the seven injection wells and both of the monitoring wells with benzene concentrations reduced from May 2019 monitoring (and also reduced from baseline sampling prior to when treatment started in October 2017). Benzene concentrations at these wells range from non-detect to 5.0 ug/L with concentration reductions at approximately 43 to 95 percent of the baseline results. These performance monitoring data indicate biodegradation of benzene is occurring. Benzene increased slightly from baseline concentrations at injection well B78-18 (1.18 ug/L in Nov 2019 and 0.72 ug/L in Oct 2017). The monitoring results also show low concentrations of nitrate with 0.129 mg/L in one injection well and all others were non-detect. Sulfate detections ranged from 0.160 mg/L to 5.65 mg/L.

Based on the positive results, Boeing submitted a recommendation for additional nitrate/sulfate injections in the area (the last nitrate/sulfate injection was March 2019 which was the sixth event). These injections were completed in early first quarter 2020 (seventh event) and performance monitoring data is planned to be collected approximately 30 days after the injection event. This will include the same list of wells sampled in the previous performance monitoring events and the results will be discussed in the first quarter 2020 monitoring report. Additional nitrate/sulfate injections would be completed following evaluation of those monitoring results.

Site wide groundwater sampling was conducted as part of the quarterly monitoring program during this reporting period and the results are discussed in the main text of the quarterly report. Table 3-2 presents a summary of those groundwater monitoring results, by area, related to groundwater treatment/ERD implementation, with recommendations for additional substrate injections at selected areas.

## 4.0 Conclusions and Recommendations

SVE operations were modified at the SWMU-172/174 area at the end of the second quarter 2019 to increase flushing between extraction wells SVE-2 and SVE-3, based on the elevated PCE detections observed during the soil confirmation sampling event in the second quarter of 2018. It is recommended that SVE operations be continued for this area, with additional modifications to include opening of SVE-1 and SVE-2 as inlet vents or SVE-1 and SVE-3 as inlet vents to allow focused vapor removal at SVE-2 and SVE-2. If alternating flows from the SVE wells does not show significant changes in vapor measurements the

3. If alternating flows from the SVE wells does not show significant changes in vapor measurements the

system will be shut down to monitor for any VOC rebound in soil vapor. Samples for TO-15 analysis will be collected following a planned shutdown period.

Groundwater monitoring will continue in accordance with the EDR and approved updates to the monitoring, with supplemental VOC and TOC sampling at selected wells. Performance monitoring data related to benzene treatment at the Building 4-78/79 area collected in the fourth quarter 2019 show a majority of the wells in this treatment area are at benzene concentrations below baseline results, with many wells at 90% reduction from baseline (see Table 3-2). Additional nitrate/sulfate injections were completed in the first quarter 2020. Substrate injections for ERD treatment are recommended at selected wells at the 4-78/79 Building area around well GW033S which has shown an increase in CVOCs from August 2019.

#### 5.0 References

AMEC 2014. Draft Engineering Design Report Boeing Renton Cleanup Action Plan Implementation. Prepared by AMEC Environment & Infrastructure, Inc. for The Boeing Company. July 2014.

CALIBRE 2014. Operations and Maintenance Plan for the Renton Cleanup Action Soil Vapor Extraction Systems. Prepared by CALIBRE Systems, Inc. for The Boeing Company, EHS Remediation. July 2014.

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Ecology 2015. Washington State Water Quality Standards: Human Health Criteria and Implementation Tools. Prepared by the Washington Department of Ecology. Publication no. 14-10-058. January 2015.

USACE 2002. Engineering and Design - Soil Vapor Extraction and Bioventing. Prepared by US Army Corps of Engineers. EM 1110-1-4001. June 2002.

Wood 2019. Quarterly report, third quarter 2019. RCRA Corrective Action Program Boeing Renton Facility. Prepared by Wood and CALIBRE Systems, Inc. for the Boeing Company, EHS Remediation. November 2019.

# **TABLES**

Table 2-1 TO-15 Analytical Results - SWMU-172/174 SVE System Project History

#### SVE System Inlet

SVE System Inlet																
Date	PCE	TCE	cis-1,2- DCE	trans-1,2- DCE	Vinyl Chloride	1,1,1-TCA	1,1-DCA	Acetone	Toluene	m,p-Xylene	Chloroform	o-Xylene	Pentane	Hexane	Total Chlorinated	Total VOCs
4/17/2015	1,500	130	120	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	1,763	1,763
10/13/2015	400	31	13	ND	ND	3.3	ND	ND	ND	ND	ND	ND	ND	ND	447	447
3/8/2016	82	5.4	3.1	ND	ND	ND	ND	ND	1.1	2.2	ND	ND	ND	ND	91	94
6/30/2016	230	18	10	ND	ND	1.8	ND	11	ND	ND	2.4	ND	ND	ND	260	273
9/12/2016	230	16	8.3	ND	ND	1.9	ND	ND	ND	ND	1.2	ND	ND	ND	256	257
12/14/2016	100	6.2	3.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	110	110
5/30/2017 - 30 min	520	220	17	ND	ND	13	2.7	ND	ND	ND	ND	ND	ND	ND	773	773
5/30/2017 - 100 min	530	200	17	ND	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	761	761
5/30/2017 - 225 min	510	130	16	ND	ND	12	ND	ND	ND	ND	ND	ND	ND	ND	668	668
8/16/2017	180	16	7.8	ND	ND	1.7	ND	ND	ND	ND	ND	ND	ND	ND	206	206
12/8/2017 - Rebound																
Start	99	7.6	3.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	110	110
5/22/2018	430	43	13	ND	ND	12	ND	ND	ND	ND	ND	ND	ND	ND	498	498
6/7/2018	160	13	5.4	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	180	180
6/20/2018	170	14	5.7	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	192	192
8/30/2018	110	8.6	3.7	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	122	122
2/13/2019	32	2.2	1.6	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	36	36
6/20/2019	74	6.2	3.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	84	84

SVE-1

				cis-1,2-	trans-1,2-	Vinyl										Total	Total
D	ate	PCE	TCE	DCE	DCE	Chloride	1,1,1-TCA	1,1-DCA	Acetone	Toluene	m,p-Xylene	Chloroform	o-Xylene	Pentane	Hexane	Chlorinated	VOCs
	6/20/2019	10	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	11

SVE-2

				cis-1,2-	trans-1,2-	Vinyl										Total	Total
Da	te	PCE	TCE	DCE	DCE	Chloride	1,1,1-TCA	1,1-DCA	Acetone	Toluene	m,p-Xylene	Chloroform	o-Xylene	Pentane	Hexane	Chlorinated	VOCs
	8/30/2018	180	14	6.1	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	200	200
	2/13/2019	48	3.3	2.8	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	54	54
	6/20/2019	100	9.6	5.1	ND	ND	1.4	ND	ND	1.4	ND	ND	ND	ND	ND	116	118

SVE-3

			cis-1,2-	trans-1,2-	Vinyl										Total	Total
Date	PCE	TCE	DCE	DCE	Chloride	1,1,1-TCA	1,1-DCA	Acetone	Toluene	m,p-Xylene	Chloroform	o-Xylene	Pentane	Hexane	Chlorinated	VOCs
5/30/2017 - 30 min	540	51	18	ND	ND	14	2.6	ND	2.2	ND	ND	ND	ND	ND	626	628
5/30/2017 - 100 min	200	16	6.5	ND	ND	5.5	ND	ND	ND	ND	ND	ND	ND	ND	228	228
8/16/2017	350	30	15	ND	ND	3.5	ND	ND	ND	ND	1.3	ND	ND	ND	399	400
12/8/2017 - Rebound																
Start	170	13	5.8	ND	ND	1.7	ND	ND	ND	ND	ND	ND	ND	ND	191	191
1/19/2018 - 35-Day 60																
Minute Sample	310	30	13	ND	ND	6.9	1.3	ND	ND	ND	1.1	ND	ND	ND	361	362
1/19/2018 - 35-Day 180																
Minute Sample	310	28	12	ND	ND	7.9	1.1	ND	ND	ND	1.1	ND	ND	ND	359	360
3/6/2018 - 80-Day 60																
Min Sample	440	41	15	ND	ND	14	2.2	ND	ND	ND	ND	ND	ND	ND	512	512
3/6/2018 - 80-Day 180																
Min Sample	410	33	13	ND	ND	13	1.6	ND	ND	ND	ND	ND	ND	ND	471	471
5/22/2018	790	66	22	ND	ND	22	ND	ND	ND	ND	ND	ND	ND	ND	900	900
6/7/2018	280	23	9.6	ND	ND	3	ND	ND	ND	ND	ND	ND	ND	ND	316	316
6/20/2018	310	24	11	ND	ND	3.4	ND	ND	ND	ND	ND	ND	ND	ND	348	348

Table 2-1 TO-15 Analytical Results - SWMU-172/174 SVE System Project History

#### **VPC Outlet**

			cis-1,2-	trans-1,2-	Vinyl										Total	Total
Date	PCE	TCE	DCE	DCE	Chloride	1,1,1-TCA	1,1-DCA	Acetone	Toluene	m,p-Xylene	Chloroform	o-Xylene	Pentane	Hexane	Chlorinated	VOCs
4/17/2015	5.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.1	5.1
10/13/2015	ND	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	11
3/8/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6/30/2016	ND	ND	ND	ND	ND	ND	ND	ND	15	1.6	ND	1.2	6.2	1.2	ND	25
9/12/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
12/14/2016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8/16/2017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

#### Notes:

All results are in parts per billion by volume (ppbv).

ND = non-detect

NA = not analyzed

DCE = Dichloroethene

PCE = tetrachloroethene

TCE = trichloroethene

Total Chlorinated = the sum of PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, 1,1,1-TCA, and 1,1-DCA.

Shaded cells are results from 1st Quarter 2019.

Table 2-2 PID Monitoring - SWMU-172/174 SVE System

	Days in Operation							
Date	Since Startup 1	SVE-01	SVE-02	SVE-03	VPC Inlet	VPC Mid	VPC Outlet	Notes
				01200				11000
								Hose between 2nd GAC vessel and 2nd
								KMNO4 drum has crack near camlock.
10/2/2019	1,466	Vent					0	Turned system off to repair hose.
								Onsite to install repaired hose. Took 2nd
10/3/2019	1,467	Vent					0	KMNO4 drum offline as it is plugged.
								Onsite to move KMNO4 drum out of work
10/10/2019	1,474	Vent			0		0	area, will sample it next week.
								System down, pulley belts have torn.
								System off for ~ 2 days. Ordered replacement belts and collected waste
								characterization sample from KMNO4
10/24/2019	1,488	Vent					0	drum for VOCs and SVOCs.
10/24/2013	1,400	VCIIC						Installed replacement belts and turned
								system on. HR meter not working;
								ordered replacement. Readings after 1
10/29/2019	1,493	Vent	86	402	401		0	hour of operating.
	·							
								High vac/low flow; float ball inside
								moisture separator was getting sucked
								into discharge outlet blocking flow and
								causing vacuum to increase. Zip tied cap
								to wire mesh inside moisture separator.
11/20/2019	1,515	Vent		4,832	2,050		0	Changed blower oil.
								System turned off during visit to install
								float ball inside wire cage within moisture
								separator. Restart system. ~ 3 gal
								condensate drained from moisture
11/22/2019	1,517	Vent	2	175	104		0	separator.
							_	~ 3 gal condensate drained from moisture
12/12/2019	1,537	Vent			570		0	separator.
								Shut system down after readings for
								Boeing Christmas break. ~ 3 gal condensate drained from moisture
12/23/2019	1,548	Vont			110		_	separator.
12/23/2019	1,548	venit			110		0	System restart after Boeing Christmas
12/31/2019	1,556	Vent	0	5,839	4,862		n	break.
,,	1,550			3,033	.,502			~ 1.5 gal condensate drained from
1/9/2020	1,565	Vent	204	960	1,082		0	moisture separator.
	, , , , , , , , , , , , , , , , , , , ,				,			~ 7.5 gal condensate drained from
1/17/2020	1,573	Vent			51		0	moisture separator.

#### Notes:

Operational change was made on 6/20/19. Due to reduced concentrations observed at SVE-1 and the influent, SVE-01 was opened as a vent well to promote focused flow towards SVE-02 and SVE-03.

Blank cells - Not all wells were measured with the PID during each sampling event.

<sup>&</sup>lt;sup>1</sup> Days in operation since system startup on April 17, 2015.

Table 2-3 VOC Mass Removal Estimate - SWMU 172/174 SVE System

	PID Reading	Corrected Value	System Flow	Cumulative	VOCs removed in Operating Period Between Monitoring	Cumulative VOC Mass Removed Since Start of SVE Operations in April, 2015
Date	(ppbv)	(PCE) (ppbv) <sup>1</sup>	(cfm)	Runtime Hours	Events (lbs) <sup>2</sup>	(lbs)
9/26/2019	163	94	85	28,248	0.058	18.35
10/2/2019 <sup>3</sup>	163	94	70	28,382	0.021	18.37
10/3/2019	System Down	0	0	28,382	0.000	18.37
10/10/2019	0	0	105	28,550	0.000	18.37
10/24/2019	System Down	0	0	28,833	0.000	18.37
10/29/2019	401	231	86	28,953	0.058	18.43
11/20/2019	2,050	1,180	35	29,481	0.530	18.96
11/22/2019	104	60	105	29,529	0.007	18.96
12/12/2019	570	328	105	30,009	0.402	19.36
12/23/2019	110	63	105	30,273	0.043	19.41
12/31/2019	System Down	0	0	30,273	0.000	19.41
1/9/2020	1,082	623	105	30,489	0.343	19.75
1/17/2020	51	29	105	30,681	0.014	19.76

#### Notes:

PID = photoionization detector ppbv = parts per billion by volume cfm = cubic feet per minute lbs = pounds

TO-15 analysis results showed Tetrachloroethene made up 88% of the total VOCs removed at the influent on 6/20/19.

<sup>&</sup>lt;sup>1</sup> A correction factor of 0.57 has been applied to the PID vapor measurement for VOCs based on the mixture of analytes detected in the TO-15 analysis at the influent sample point from 6/20/19. This number is much higher than the TO-15 results.

<sup>&</sup>lt;sup>2</sup> These are based soley on the PID measurements collected this quarter; the prior TO-15 analyses indicates much lower mass.

<sup>&</sup>lt;sup>3</sup> Previous weeks influent PID reading used to calculate mass removal if that reading was not collected during the site visit.

Table 3-1 - Baseline and Performance Monitoring Groundwater Data; 4-78/79 Benzene Treatment Area

		Sample Depth			cis-1,2-				Benzene		Nitrate		Nitrite		Sulfate	
Sample ID	Date	(ft bgs)	TCE (ug/L)		DCE (ug/L)		VC (ug/L)		(ug/L)		(mg-N/L)		(mg-N/L)		(mg/L)	
Sample 1D	Date	(It bgs)	TCL (ug/L)		DCL (ug/L)		VC (ug/L)		(ug/L)		(IIIg-IN/L)		(IIIg-IN/L)		(IIIg/L)	╁
B78-11-8-113017	11/30/2017	8	0.42		0.98		1.11		9.66		<0.100	U	<0.100	U	1.94	+
B78-11-0-113017	2/14/2018	8	1.16		0.98		1.09		14.8		<0.100	U	<0.100	U	9.22	D
B78-11-021418		8	1.16		0.78		1.06		12.6		<0.100	U	<0.100	U	34.1	D
	5/15/2018											_		-		_
B78-11-180917	9/17/2018	8	5.01		7.90		3.62		9.20		<0.100	U	<0.100	U	23.4	D
B78-11-020719	2/7/2019	8	3.13		2.47		1.81		4.88		<0.100	U	<0.100	U	25.0	D
B78-11-050719	5/7/2019	8	8.60		6.55		3.56		2.15		<0.100	U	<0.100	U	47.0	D
B78-11-112019	11/20/2019	8	4.56		4.75		3.06		0.97		<0.100	U	<0.100	U	5.65	D
B78-13-15-112917	11/29/2017	15	0.24		1.29		2.02		9.92		0.135		<0.100	U	0.652	Τ
B78-13-021418	2/14/2018	15	<0.2	U	1.78		8.49		4.11		<0.100	U	<0.100	U	1.31	+-
B78-13-051518	5/15/2018	15	<0.2	U	0.85		0.87		4.94		0.182	Ť	<0.100	U	4.32	D
B78-13-180917	9/17/2018	15	<0.2	U	0.61		0.38		3.29		<0.100	U	<0.100	U	0.812	Ť
B78-13-020719	2/7/2019	15	<0.2	U	0.37		0.29		0.74		<0.100	U	<0.100	U	0.189	+
B78-13-050719	5/7/2019	15	<0.2	U	0.57		0.45		1.16		<0.100	U	<0.100	U	<0.100	U
B78-13-112019	11/20/2019	15	<0.2	U	0.40		0.30	М	1.81		<0.100	U	<0.100	U	0.354	Ť
3	,, 2025		·	<u> </u>						ш		<u> </u>				-
B78-17-9-100617	10/6/2017	9	<0.2	U	0.17	J	0.33		4.84		-				-	Ι
B78-17-15-112917	11/29/2017	15	1.25		0.81		1.31		6.52		<0.100	U	<0.100	U	17.1	D
B78-17-021418	2/14/2018	15	2.57		1.78		1.47		4.61		<0.100	U	<0.100	U	7.35	D
B78-17-051518	5/15/2018	15	0.91		1.63		0.53		2.60		<0.100	U	<0.100	U	8.66	D
B78-17-180917	9/17/2018	15	<0.2	U	0.39		<0.2	U	1.37		<0.100	U	<0.100	U	9.63	D
B78-17-020719	2/7/2019	15	<0.2	U	0.68		0.47		0.56		0.101		<0.100	U	2.32	
B78-17-050719	5/7/2019	15	5.00		5.72		1.79		1.07		0.101		<0.100	U	4.92	D
B78-17-112019	11/20/2019	15	<0.2	U	0.69		0.26	М	0.28		<0.100	U	<0.100	U	1.32	
					•				•							
B78-18-8-100617	10/6/2017	8	<0.2	U	0.07	J	0.29		0.72		-		-		-	
B78-18-15-112917	11/29/2017	15	<0.2	U	<0.2	U	0.35	М	3.10		<0.100	U	<0.100	U	0.343	
DUP-01-112917	11/29/2017	15	<0.2	U	<0.2	U	0.36		2.96		<0.100	U	<0.100	U	1.68	
B78-18-021418	2/14/2018	15	<0.2	U	<0.2	U	0.24		1.28		<0.100	U	<0.100	U	1.47	
B78-18-051518	5/15/2018	15	<0.2	U	<0.2	U	0.23		1.68		<0.100	U	<0.100	U	27.6	D
B78-18-180917	9/17/2018	15	<0.2	U	<0.2	U	<0.2	ט	0.89		<0.100	U	<0.100	U	7.28	D
B78-18-020719	2/7/2019	15	<0.2	U	<0.2	U	0.22		1.32		<0.100	U	<0.100	U	2.41	D
B78-18-050719	5/7/2019	15	<0.2	U	0.31		0.24		1.66		<0.100	U	<0.100	U	2.44	D
B78-18-112019	11/20/2019	15	<0.2	U	<0.2	U	0.21	M	1.18		<0.100	U	<0.100	U	2.64	D
B78-19-9-100617	10/6/2017	9	-0.2	U	0.00	J	0.22		0.00			1				$\overline{}$
B78-19-9-100617	10/6/2017	15	<0.2 <0.2	U	0.06 <0.2	Ŋ	0.22	М	0.69		<0.100	U	<0.100	U	0.255	+
B78-19-021418	2/14/2018	15	<0.2	U	<0.2	U	0.27	IVI	0.30		<0.100	U	<0.100	U	1.22	+
B78-19-021418	5/15/2018	15	<0.2	U	<0.2	U	0.21		0.23		<0.100	U	<0.100	U	22.4	D
			<0.2	U	<0.2	U	<0.2	U	<0.2	U	<0.100	U		U		屵
B78-19-180917	9/17/2018	15 15		U		U		U		U	<0.100	U	<0.100	U	1.91 2.16	+
B78-19-020719 B78-19-050719	2/7/2019 5/7/2019	15	<0.2	U	<0.2	U	<0.2 <0.2	U		U		U	<0.100	U		D
B78-19-030719	11/20/2019	15	<0.2 <0.2	U	<0.2 <0.2	U	0.2	М	0.50 0.21		<0.100	U	<0.100 <0.100	U	14.2 0.454	屵
676-19-112019	11/20/2019	13	<b>\0.2</b>	U	₹0.2	U	0.2	IVI	0.21		<0.100	U	<0.100	U	0.434	
B78-20-8-100617	10/6/2017	8	<0.2	U	<0.2	U	0.14	J	8.81		-		-		_	Т
B78-20-15-113017	11/30/2017	15	0.41	Ī	<0.2	U	<0.2	U	25.9		2.93	D	<0.100	U	53.9	D
B78-20-021418	2/14/2018	15	0.25		0.49	М	<0.2	U	40.0		<0.100	U	<0.100	U	21.1	D
B78-20-051518	5/15/2018	15	<0.2	U	0.39		0.22		54.2		<0.100	U	<0.100	U	15.5	D
B78-20-180917	9/17/2018	15	0.24	Ť	0.27		0.29		0.98		<0.100	U	<0.100	U	2.39	Ť
B78-20-020719	2/7/2019	15	<0.2	U	0.41	М	0.25		16.5		<0.100	U	<0.100	U	1.89	T
B78-20-050719	5/7/2019	15	<0.2	U	0.32		0.28		16.3		<0.100	U	<0.100	U	4.93	D
0/0-20-030/13																

Table 3-1 - Baseline and Performance Monitoring Groundwater Data; 4-78/79 Benzene Treatment Area

																1
		Sample Depth			cis-1,2-				Benzene		Nitrate		Nitrite		Sulfate	
Sample ID	Date	(ft bgs)	TCE (ug/L)		DCE (ug/L)		VC (ug/L)		(ug/L)		(mg-N/L)		(mg-N/L)		(mg/L)	
B78-21-8-100617	10/6/2017	8	<0.2	U	0.13	J	0.21		1.42		-		-		-	
Dup01-100617	10/6/2017	15	<0.2	U	0.15	J	0.20	J	2.01		-		-		-	
B78-21-15-112917	11/29/2017	15	<0.2	U	0.31	М	0.26		2.27		0.101		<0.100	U	4.43	D
B78-21-021418	2/14/2018	15	<0.2	U	0.24		0.30		0.86		<0.100	U	<0.100	U	1.60	
B78-21-051518	5/15/2018	15	<0.2	U	0.27		0.27		1.08		<0.100	U	<0.100	U	4.59	D
B78-21-180917	9/17/2018	15	0.22		0.29		<0.2	U	0.59		<0.100	U	<0.100	U	3.62	D
B78-21-020719	2/7/2019	15	<0.2	U	0.28		0.32		0.43		0.170		0.161		3.78	D
B78-21-050719	5/7/2019	15	<0.2	U	0.42		<0.2	U	0.80		<0.100	U	<0.100	U	5.73	D
B78-21-112019	11/20/2019	15	<0.2	U	0.30		<0.2	U	<0.2	U	<0.100	U	<0.100	U	5.92	D
	, -, -															1
GW-244S-13-112917	11/29/2017	13	3.48		8.06		5.68		7.97		<0.100	U	<0.100	U	0.753	
GW-244S-021418	2/14/2018	13	1.01		1.25		1.22		5.34		<0.100	U	<0.100	U	1.25	
GW-244S	3/6/2018	13	1.26		2.00		1.56		6.86		-		-		-	
GW-244S-051518	5/15/2018	13	<0.2	U	0.30		0.41		3.89		<0.100	U	<0.100	U	<0.100	U
GW-244S-180917	9/17/2018	13	<0.2	U	0.25		0.38		3.74		<0.100	U	<0.100	U	0.113	
GW-244S	11/13/2018	13	<0.2	U	0.26		0.55		2.95		-		-		-	
GW-244S-020719	2/7/2019	13	<0.2	U	0.26		0.47		1.14		0.101		<0.100	U	0.337	
GW-244S	3/4/2019	13	0.22		0.82		0.86		1.73		-		-		-	
GW-244S-050719	5/7/2019	13	<0.2	U	1.22		1.18		1.13		<0.100	U	<0.100	U	1.45	
GW-244S	5/7/2019	13	<0.2	U	2.03		1.45		1.47		-	Ť	-	Ť	-	
GW-244S	8/13/2019	13	<0.2	U	0.37		0.71		1.77		-		-		-	
GW-244S	11/11/2019	13	<0.2	U	<0.2	U	0.35		0.87		_		-		-	
GW-244S-112019	11/20/2019	13	<0.2	U	<0.2	U	0.50	М	0.41		<0.100	U	<0.100	U	0.160	
	, , , , ,			_						ш,				<u>.                                    </u>		
GW-031S-23-113017	11/30/2017	23	<0.2	U	<0.2	U	<0.2	U	17.6		<0.100	U	<0.100	U	2.54	D
GW-031S-021418	2/14/2018	23	<0.2	U	0.45	М	0.49		21.9		<0.100	U	<0.100	U	3.67	D
DUP-01-021418	2/14/2018	23	<0.2	U	0.46		0.42		21.4		-		-		-	
GW-031S	3/6/2018	23	<0.2	U	1.18		<0.2	U	60.3		-		-		-	
GW-031S-051518	5/15/2018	23	0.36		0.40		0.21		2.68		<0.100	U	<0.100	U	2.95	D
Dup-01-051518	5/15/2018	23	0.32		0.34		0.20		2.64		<0.100	U	<0.100	U	2.87	D
GW-031S-180917	9/17/2018	23	<0.2	U	<0.2	U	0.28		<0.2	U	<0.100	U	<0.100	U	0.499	
Dup-01-180917	9/17/2018	23	<0.2	U	0.21		0.30		<0.2	U	<0.100	U	<0.100	U	0.441	
GW-031S	11/13/2018	23	<0.2	U	0.63		0.31		28.3		-		-		-	
Dup-01	11/13/2018	23	<0.2	U	0.58		0.30		23.8		-		-		-	
GW-031S-020719	2/7/2019	23	<0.2	U	0.51	М	<0.2	U	21.6		<0.100	U	<0.100	U	0.170	
Dup-01-020719	2/7/2019	23	<0.2	U	0.57	М	0.24		22.7		<0.100	U	<0.100	U	0.202	
GW-031S	3/4/2019	23	<0.2	U	<0.2	U	<0.2	U	55.9		-		-		-	
Dup-01	3/4/2019	23	<0.2	U	<0.2	U	<0.2	U	58.6		-		-		-	
GW-031S-050719	5/7/2019	23	<0.2	U	0.22		0.30		1.90		<0.100	U	<0.100	U	1.86	
Dup-01-050719	5/7/2019	23	<0.2	U	0.27		<0.2	U	2.16		<0.100	U	<0.100	U	0.689	
GW-031S	5/7/2019	23	<0.2	U	0.43		0.29		7.13		-		-		-	
Dup-01	5/7/2019	23	<0.2	U	0.38		0.27		6.69		-		-		-	
GW-031S	8/13/2019	23	<0.2	U	0.47		0.21		3.47		-		-		-	T
Dup-01	8/13/2019	23	<0.2	U	0.48		0.22		4.37		-		-		-	t
GW-031S	11/11/2019	23	<0.2	U	0.40		0.25		4.77		-		-		-	1
Dup-01	11/11/2019	23	<0.2	U	0.39		0.27		4.75		-		-		-	T
GW-031S-112019	11/20/2019	23	<0.2	U	<0.2	U	<0.2	U	1.90		<0.100	U	<0.100	U	1.26	t
																1

#### Notes:

U = non-detect

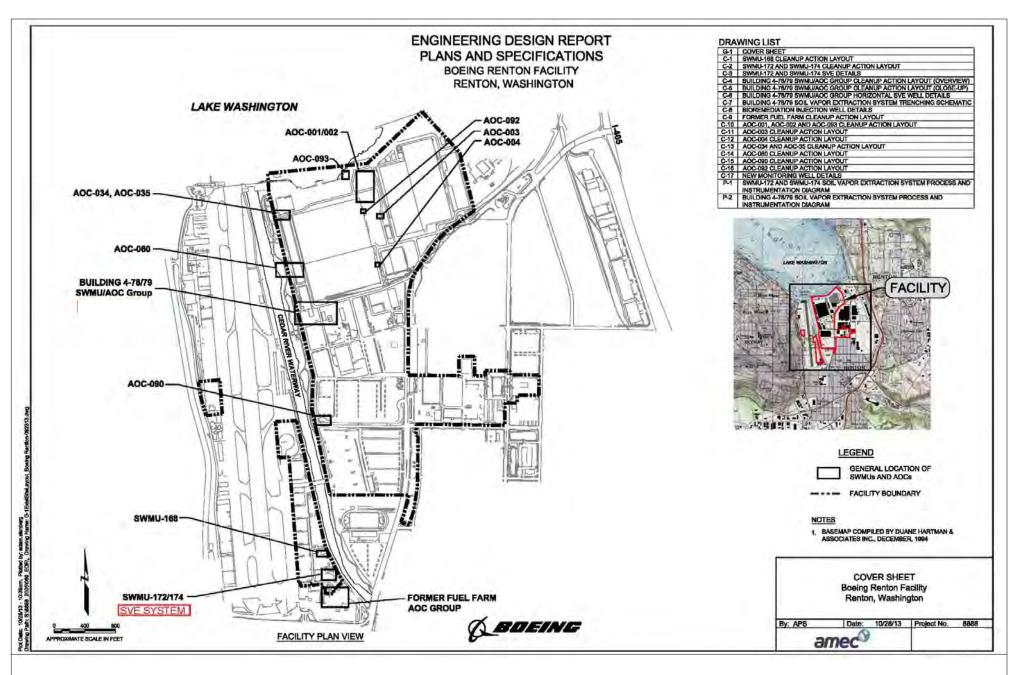
D = dilution

M = Estimated value for a GC/MS analyte detected and confirmed by an analyst but with low spectral match parameters. Samples in italics collected as part of the Renton quarterly groundwater monitoring program.

Table 3-2 Groundwater Monitoring Results Summary November 2019 and Recommended ERD Treatment

GW Treatment Area	Source and down gradient MWs	CPOC wells	Treatment IWs	ERD Treatment Recommendation
SWMU-172/174	PCE and TCE at or less than 0.38 ug/L; cisDCE less than 0.55 ug/L and VC less than 0.61 ug/L.	All detections are at 0.86 ug/L or less.	Prior data Mar 2018, North and South IWS showed total CVOCs range from 0.03 ug/L to 6.90 ug/L. TOC near background.	Detections are very low and less than 1 ug/L throughout the site. Will consider additional injections if beneficial.
Building 4-78/4-79 SWMU/AOC Group	have increased from prior quarter. Recent data show 46 ug/L in Nov 2018, 4.1 ug/L in Mar 2019, 0.94 ug/L in May	Majority of detections are ND; northern well GW237S with cisDCE detection at 0.22 ug/L and VC at 0.34 ug/L, central well GW240D with VC at 0.24 ug/L. Northern well GW237S showed Benzene at 0.66 ug/L.	Prior data May 2017, 4 of 5 wells with low detections where sum of CVOCs are less than 3 ug/L	CVOC detections have increased at source well GW033S. Recommend substrate injection in selected IWs/areas around GW033S. Additional benzene, nitrate, sulfate samples collected in November 2019. Nitrate/sulfate injections recommended for the area around GW-031S and completed in January 2020.
AOC-001/002	Prior data Aug 2019: Source MW: TCE is 0.04 ug/L, cisDCE is 0.99 ug/L and VC is 0.12 ug/L. Down gradient wells less than 3.71 ug/L total CVOCs.	Prior data Aug 2019: All detections below 0.30 ug/L.	Prior data Mar 2018, detections at or below 0.30 ug/L.	Consider injection at infiltration galleries at source (IPRA and IPRB) when area is accessible.
AOC-003	Prior data Aug 2019: All detections are less than 0.40 ug/L.	All detections are less than 0.62 ug/L.	Prior data May 2017 one of four IWs sampled – VC detection less than 0.30 ug/L	Substrate injection to be considered in conjunction with AOC-001/002.
Lot 20 / former 10-71	All wells are ND.	-	-	No action at this time.
AOC-60	Prior data Aug 2019: MW's with detections less than 0.37 ug/L; treatment MWs with total CVOCs less than 5.8 ug/L.	Prior data Aug 2019: Detections less than 0.15 ug/L.	-	Detections are very low throughout the site. Will consider additional injections if beneficial.
AOC – 90	Prior data Aug 2019: Treatment MW at source with total CVOCs at 8.9 ug/L total CVOCs (primarily cisDCE) and down from 27 ug/L in Aug 2018; down gradient wells less than 0.57 ug/L total CVOCs.	Prior data Aug 2019: Detections less than 0.40 ug/L.	-	Detections are very low throughout the site. Will consider additional injections if beneficial.
Apron A	Two of three wells ND; GW264S with VC at 0.38 ug/L.	-	-	Detections are very low throughout the site. Will consider additional injections if beneficial.
Building 4-70	-	Prior data Aug 2019: VC is non- detect; TCE and cisDCE detections less than 0.71 ug/L.	-	No action at this time.

#### **FIGURES**



CALIBRE Systems, Inc.

Figure 1-1 Site Location/ AOC Outlines

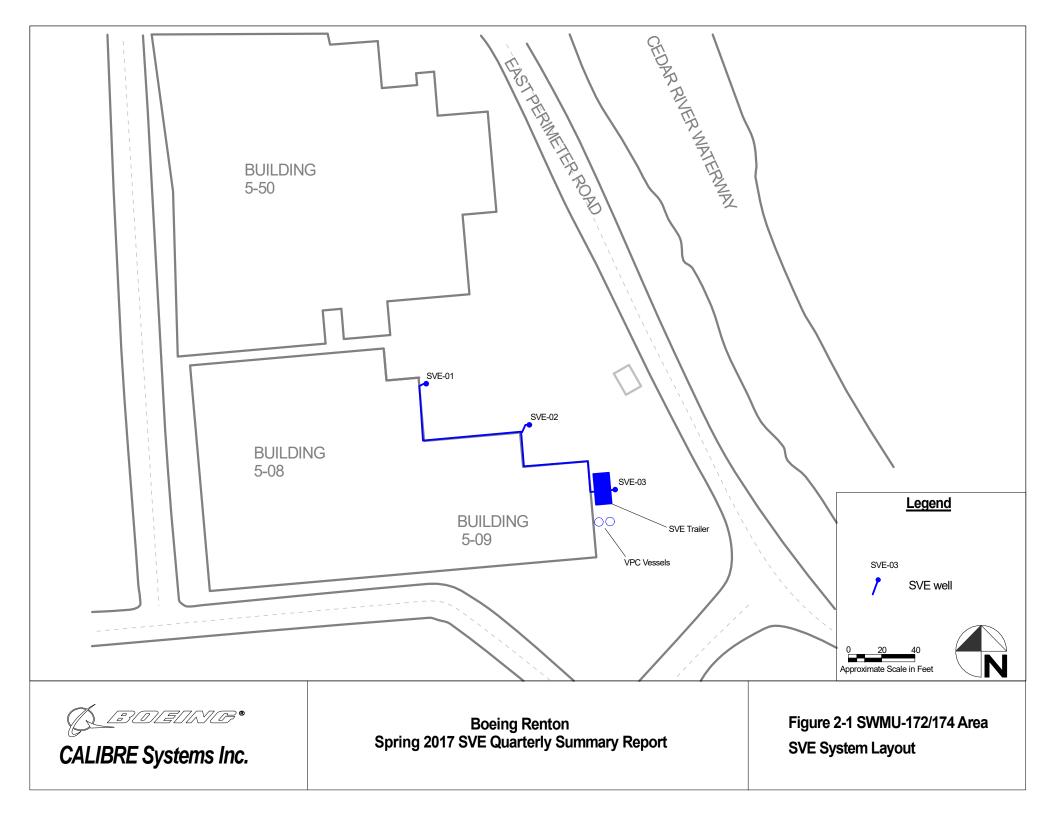
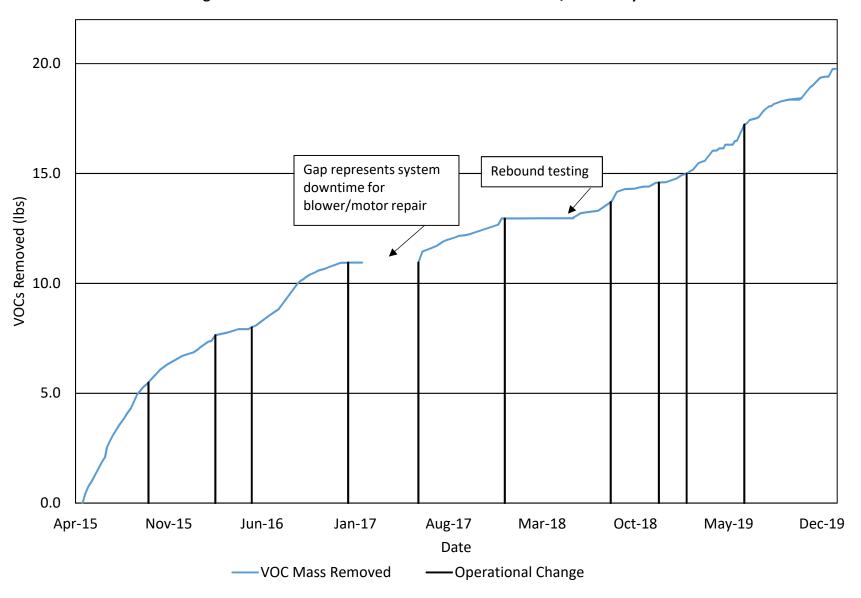


Figure 2-2 Cumulative VOC Mass Removed - SWMU-172/174 SVE System



<sup>\*</sup>SWMU 172/174 SVE system did not run Winter 2017 due to equipment failure.

#### Attachment A: Field Log Forms

Check each 3v	L Well, VI O		Parame	ters - IVIONI	toring interval	is variable.		
nspection Time:	0010	Motor	Hours:	13,5	12.7			
Blower	Current	Value			Oth	er Notes		1-06
√acuum gauge	32"H	20 Hose	between	in 2nd GL	fe dessel of	2nd Pumas	iganas 2 nd pu	mangrate ods
Pressure gauge	75"H	20 Torne	d Sys	tem aff	to report h	100 1 min	iganasa 145501 agn 2nd pu	
System flow rate	70 SCF							
Blower Temperature	146°F							
Temp.at lag VPC discharge								
Other notes: ch	eck oil level,	drive belts, TEFC	motor	fan, any un	usual noise/vit	oration		
					4			
PID Model:	PBRAE	3000		Details:	OPPB 1	0.00 ppm		
Calibration time/	date:			PID check	after monitori	ing:		
Sampling Point	Time	PID Reading (1)	PID	Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate
SVE-01								
SVE-02								
SVE-03								
VPC Inlet								
VPC Midpoint								
VPC Outlet								
Other vapor point								
	Lucia Nicola	the equation <i>Flow Rat</i> (20) (360) 981-560	6			e. tin Neste: Justi		

Inspection Time:	1030	Oper	Motor H	ours:	13	,572.	7	is variable.		
Blower	Current	Value	-		1,2		Oth	er Notes		
Vacuum gauge	38"4		Repa	end	vost e	+ Jook	End	permengen	ati draw aft	line (plugge
Pressure gauge	10"42	0	Rex	ert	System				ati dean off	
System flow rate	105 suf	<sub>0</sub> Λ								
Blower Temperature	9508									
Temp.at lag VPC discharge	Market State									
Other notes: che	eck oil level,	drive bel	ts, TEFC r	notor	fan, any ı	inusual n	ioise/Vit	oration		
PID Model:					Details:					
Calibration time/	date:		-		PID che	ck after r	nonitori	ng:		
Sampling Point	Time	e PID Reading F		PID	Reading (2)	Vac	uum	Flow Rate (gauge)	Differential Pressure	Flow Rate
SVE-01										
SVE-02										
SVE-03										
VPC Inlet										
VPC Midpoint										
VPC Outlet										
Other vapor point										
Flow rate ca  Questions? Call Ju  At the Completion	ustin Neste of a monito	ത (360) <sup>9</sup>	981-5606						n.Neste@calibr	esys.com

Inspection Time:	1015	Motor	Hours:	2743	toring interval			
Blower	Current	Value		101	Oth	er Notes	- 6	
Vacuum gauge	35" H	20	Ongi	te to me	out perma	ingrate dru	m out of me	rk ostu,
Pressure gauge		10 W	ill sa	uple dr	un rett.	week.		
System flow rate	10"H	FM						
Blower Temperature	940F							
Temp.at lag VPC discharge			View Miles	• 10	anian bil	protion		
Other notes: che	eck oil level,	, drive belts, TEFC	motor	ran, any un	usuai noise/vii	oration		
PID Model:	PBRAE	3000		Details:	11	0.00 ppm		
Calibration time/	date: 10/16	1015			after monitor			
Sampling Point	Time	PID Reading (1)	PID	Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate
SVE-01								
SVE-02								
SVE-03								
VPC Inlet		D ppb	DP	Pb				
VPC Midpoint								
VPC Outlet		0 000	OP	opb				
Other vapor point								
Questions? Call I	uetin Neste	(360) 981-5600 pring event scan m	6	ng forms an			n.Neste@calibr	esys.com

) Check each SVE	, won, vi o	Opera	ational P	arame	ters - Moni	toring interval	is variable.		
Inspection Time:	0910		Motor I	Hours:	140	24.1			
Blower	Current	Value				Oth	er Notes		
Vacuum gauge			Sys	stem	down	· Palley	belts ha	nd torn.	
Pressure gauge			(2)	2 day	> , 52 h	rs off)	also s	up hed pen	wanganate
System flow rate			- 1	0	1005 9	20002. N	eline in to	ARI	
Blower Temperature			Trans	e LD	- 5-09-	wel - 102	119		
Temp.at lag VPC discharge Other notes: che	ck oil level,	drive belt							
DID Medal:					Details:		1,000		-9-
PID Model:						after monitor	ing:		
Calibration time/	date:							Difftial	Flow Rat
Sampling Point	Time	PID Re		PID	Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Calculate
SVE-01	and the second								
SVE-02									
SVE-03	1440								
VPC Inlet									
VPC Midpoint									
VPC Outlet									
Other vapor point									
Flow rate cal     Questions? Call Ju     At the Completion	etie Nosto	@ (360) C	91 5606	i onitorir	ng forms an	ferential pressur		n.Neste@calibr	esys.com

Inspection Time:	2830	Operational F Motor	Hours:			not nockin	4)	
Blower	Curren	t Value			Oth	er Notes		-51
Vacuum gauge	3511	tro Pic	feed	up cep	forcement !	oilts. 0	robertal 11	eflacemen
Pressure gauge	8"14	20 Ins	stalled Africa	belts .	eration	er Notes  oilts. 0		
System flow rate	86 50	of out-	0/08	PPb				
Blower Temperature	68 1	IN -	331 /	1 19- =P.  PP5  401 PP5  30 PP5  1400 -P5				
Temp.at lag		SUE 1-	Vens	100 /10		The state of the s		
Other notes: ch	eck oil level	, drive belts, TEFC	motor	fan, any un	usual noise/vi	bration		
	PERE	3000		Details:		10.01 ppm	`	
Calibration time/	date:	29/19 08 30		PID check	after monitor			
Sampling Point	Time	PID Reading (1)			Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rat Calculate
SVE-01		Vent						
SVE-02	0845	66 ppb	52	PP5				
SVE-03	0850	475 pps						
VPC Inlet	0840	432 pps	441	PPb				
VPC Midpoint								
VPC Outlet	0835	O ppb	0 7	pb				
Other vapor point								
O	Luctin Noste	the equation <i>Flow Rate</i>	3			tin Neste: Justii	n.Neste@calibr	esys.com

Inspection Date:	11/20/1	o1 D	ate of	last inspecti	on: 10/29/1	9		
Inspection Date:	-10011	1	ate of	last mapeon	On. I I		-	
Periodic systems	cneck:	essure, moisture s	onarat	or water etc	rane drums			
1) Check flowrate,	, vacuum, pro	inlet, and VPC out	Hot wit	h PID	nage arame			
2) Check each Sv		Onavational P	ומוכיור	otore - Moni	toring interval	is variable.		
Inspection Time:	(330	Motor I	Hours:	Instal	New H	R Mets		
Blower	Current	Value 10 - fixe	Dust	routon)	Oth	er Notes		
Vacuum gauge	35"	Value At notice   Hard 20"Ho Prior	n Va	i 4 Low	Flow	- Ann	- had disc	unectacl
Pressure gauge	o"Hz	O /10"1/20 Wire	nes	a Floret	ball was	gettiny 5	nuked into	discharge
System flow rate	77300	100 2000 0001 150	r of	mostare	separatur	, blocking f	low & come	oing .
Blower Temperature	14708	Vacci			ase, Zipi	fill cap be	CIE ON PI	
Temp.at lag VPC discharge								
Other notes: ch	eck oil level,	drive belts, TEFC	motor	fan, any un	usual noise/vi	bration		
				Dataile		1		-
PID Model:	RAE good	P78		Details:	0.0 PP	6/10-01	PPM	
Calibration time/	date:	20/19 1330		PID check	after monitor	ing:		
Sampling Point	Time	PID Reading (1)	PID	Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated
SVE-01		Vent					1111111	
SVE-02		-						
		4,832 ppb				1		

1345

1330

**VPC** Inlet

**VPC Midpoint** 

**VPC** Outlet Other vapor

point

Questions? Call Justin Nes At the Completion of a mor	te @ (360) 981-5606 litoring event scan monitoring forms and	d email to Justin Neste: Justin.Nes	te@calibresys.com
	Justin Weste	( ton	11/20/19
Signature	Printed Name	Signature	Date

<sup>1.</sup> Flow rate calculated from the equation Flow Rate (cfm) =  $12.24 \times \sqrt{differential}$  pressure.

			arame	n PID. eters - Moni	toring interval	is variable.		
nspection Time:	1200		Hours:					
Blower	Current	Value				er Notes		
/acuum gauge	42"1	170 S45	stem	twine	off to	Plain !	bat bull	back
Pressure gauge	10"4.	20 125	ide	wire	case	within w	bat bull	e percetor
System flow rate	10550	irm Re	ster	re 121	-10			
Blower Temperature	9301		) 90	1 condens	ned from	Separator	tanle	
Temp.at lag VPC discharge			9	U				
Other notes: che	eck oil level	, drive belts, TEFC	motor	fan, any un	usual noise/VII	oration		
				Deteiler		X.		
PID Model:		AE 3000		Details:	OP	Pm 10 pg	>i~	
Calibration time/	date:	1/22/19 12	00		after monitor	7		
Sampling Point	Time	PID Reading (1)	PID	Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated
SVE-01		vent					100	
SVE-02		2pps	Ox	295				
SVE-03		175pps				-		
VPC Inlet		92 ppb	10	4 ppb				
VPC Midpoint								
VPC Outlet		OPPO	C	طوم (				
Other vapor point								
Flow rate ca	alculated from	the equation Flow Rate	(cfm) =	= $12.24 \times \sqrt{dif}$	ferential pressur	e.		

) Check flowrate ) Check each SV	, vacuum, pr ⁄E well, VPC	inlet and	VPC out	tlet with	ו אוט.				
/		Opera	tional P	'arame	ters - Moni	toring interval	is variable.		
Inspection Time:	1300		Motor	Hours:					
Blower	Current	Value		-4		Oth	er Notes		
Vacuum gauge	39"H		~ 7	3 acul	draine	& from s.	eperatur		
Pressure gauge	10" Itz	.0		J					
System flow rate	10554								
Blower Temperature	38°F								
Temp.at lag VPC discharge									
Other notes: ch	eck oil level	, drive belts	s, TEFC	motor	fan, any un	usual noise/vi	bration		
PID Model:			100		Details:				
Calibration time/	date:				PID check	c after monitor	ing:		
Sampling Point	Time	PID Rea	•		Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated
SVE-01									
SVE-02									
SVE-03									
VPC Inlet		510	PPb						
VPC Midpoint									
VPC Outlet		OPP	Ь						
Other vapor point									
	luctin Neste	@ (360) 9	81-5606			ferential pressur		n.Neste@calibr	esys.com

) Check each SVI	_ 11011, 11 2	Opera	ational P	'arame	ters - Moni	toring interval	is variable.		
Inspection Time:	1700		Motor	Hours:					
Blower	Current	t Value				Oth	er Notes		
Vacuum gauge			~	3 gal	lon drai	ued from	Seperato	tank	
Pressure gauge			1	-				gs for B	eeing
System flow					Break				-
rate Blower			7	v Coc )	D1 C001-	*			
Temperature									
Temp.at lag									
VPC discharge Other notes: che	eck oil level	, drive belt	s, TEFC	motor	fan, any un	usual noise/vil	bration		
PID Model:					Details:				
Calibration time/	date:		100		PID check	after monitor	ing:		
Sampling Point	Time	PID Re	9		Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated
SVE-01									
SVE-02									
SVE-03									
VPC Inlet		110	PPb	94	1 PPB				
VPC Midpoint			,						
VPC Outlet									
Other vapor point									
Other vapor point	liculated from	the equation	Flow Rate	(cfm) =	$12.24 \times \sqrt{dif}$	ferential pressur	re.		

Inspection Time: 1115			Motor Hours: Restaurement HR meter not mortains					
Blower	Curren	t Value	Other Notes					
Vacuum gauge	H2"H		System Bestort after Boeing + mas Break					
Pressure gauge	10"14	રહે						
System flow rate	10556	m						
Blower Temperature	85°F							
Temp.at lag VPC discharge		, drive belts, TEF	0	£	verse seige/	ibration		
Otner notes. Ci	leck oil level	, drive beits, i Ei		,,		· · · · · · · · · · · · · · · · · · ·		
	PPB PAE	3000		Details:		66 / 10.01 F	pom	
Calibration time	/ date:	31 1115			c after monito			
Sampling Point	Time	PID Reading (1)	PID	Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rat Calculate
SVE-01		ven	7					
SVE-02		Оррь	00	op5				
SVE-03		5,519pps	5,83	5º) PP5				
VPC Inlet	Burin	L1,800 pps	47	19 ppb	35 min 1	1,862/4686 20	5	
VPC Midpoint								
VPC Outlet							-	
Other vapor point								
	calculated from	the equation Flow Rai	te (cfm) =	= $12.24 \times \sqrt{dif}$	ferential pressi	ire.		