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Quarterly report, fourth quarter 2018

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

Prepared for:

The Boeing Company

Seattle, Washington

February 19, 2019



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Prepared for:

The Boeing Company Seattle, Washington

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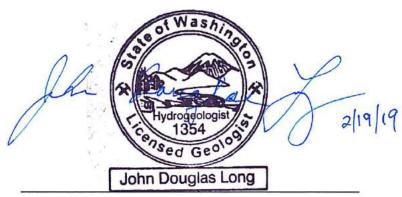
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February 19, 2019

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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 2018. This work is required under the Resource Conservation and Recovery Act (RCRA) Corrective Action Program being performed at the Boeing Renton Facility in Renton, Washington. 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 Second Addendum to the Compliance Monitoring Plan (Amec Foster Wheeler, 2017) which contains changes to the revised Compliance Monitoring Plan (Amec Foster Wheeler, 2016a) that supersede 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-034 and AOC-035: (MNA);
- 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 of 2016, as reported in the Apron A Investigation Results report (Amec Foster Wheeler, 2016b).



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 cleanup levels (CULs) at the conditional points of compliance (CPOCs).

This report presents this information for the fourth quarter of 2018, the period from October through December 2018.

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 2018

The following work was completed during the fourth quarter of 2018, the period from October through December 2018:

- Groundwater monitoring for the fourth guarter of 2018 was completed during November 2018.
- On behalf of Boeing, Wood submitted the Third Quarter 2018 Report to Ecology on October 15, 2018.
- A fifith round of nitrate/sulfate injections was completed in Building 4-78/79 injection wells B78-11, B78-13, and B78-17 through B78-21 in December 2018.

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 of 2019:

- Reporting will be completed in accordance with the Order, CAP, EDR, and any changes approved by Ecology.
- Groundwater sampling and analysis for the first quarter of 2019 will be completed.
- Nitrate and sulfate injections may be performed for the Building 4-78/79 Area depending on performance monitoring results. Performance monitoring to support the benzene plume study is currently scheduled to be conducted during the first quarter of 2019.
- During the first or second quarter, soil samples will be collected from the Building 4-78/79 area as detailed in the work plan submitted to Ecology on December 10, 2018.

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 soil and groundwater sampling methodology, which is described in more detail 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 Second Addendum to the Compliance Monitoring Plan (Amec Foster Wheeler, 2017) for all Facility corrective action areas. Table A-1 also includes Building 4-70, Lot 20/Former Building 10-71, and Apron A, which were not included in the CAP. 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. Table A-2 also includes Building 4-70 and Apron A, which were not specified 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 of 2018. Operation of the SVE systems at the SWMU-172/174 and Building 4-78/79 areas continued during the fourth quarter, as discussed in Sections 3.2.1.2 and 3.3.1.2. Quarterly compliance monitoring was also conducted in accordance with the Second Addendum to the Compliance Monitoring Plan (Amec Foster Wheeler, 2017).

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 of 2018.

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 2018 are summarized in Table 1 and shown on Figure 1. The contoured data for November 2018 show that groundwater generally flows east from SWMU-172 and SWMU-174 toward the Cedar River Waterway, with an approximate horizontal gradient of 0.01.

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. All organic chemicals detected (PCE, TCE, cis 1,2-DCE and VC) are present at levels below the applicable MCLs/MTCA criteria for potable water supply in all wells.

3.2.4.1 Monitored attenuation/geochemical indicators

The geochemical indicator results are presented in Table 2. Total organic carbon (TOC) concentrations ranged from 0.64 milligrams per liter (mg/L) to 55.74 mg/L for all SWMU-172 and SWMU-174 monitoring



wells. The pH measurements in the source area monitoring wells were slightly depressed and near neutral in the downgradient and CPOC area wells. The other natural attenuation parameter results indicate that geochemical conditions were generally uniform and appropriate for reductive dechlorination of chlorinated volatile organic compounds (VOCs); the dissolved oxygen (DO) and oxidation/reduction potential (ORP) results indicate reducing conditions were present.

3.2.4.2 COC results for source and downgradient plume areas

Table 3 lists fourth quarter 2018 analytical results for the SWMU-172 and SWMU-174 COCs. Figures 2 and 3 show historical trend plots for tetrachloroethene (PCE), trichloroethene (TCE), vinyl chloride (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 CULs in the groundwater collected from both 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 GW 153S and downgradient wells GW172S and GW173S generally remained stable during the fourth quarter.

Arsenic was detected above the CUL in all source area and downgradient plume area wells. As shown in Figure 4, the arsenic concentrations in the groundwater from both source area and downgradient wells either decreased or remained stable during the fourth quarter sampling event. Copper was detected above the CUL in the groundwater from source area wells, but concentrations were below the CUL in groundwater from the downgradient plume area wells. Lead was detected above the CUL in the groundwater from source area well GW152S and from downgradient plume well GW172S, but was not detected at concentrations above the CUL in the groundwater from the remaining downgradient plume area wells. Metals concentrations decreased during the fourth quarter after increasing during the third quarter. The observed variations for concentrations of inorganics may be influenced by the naturally occurring reducing conditions or other factors such as turbidity in the sample. 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 at concentrations above the CUL, ranging from 0.0690 to 0.426 micrograms per liter (µg/L) in the groundwater collected from all CPOC area wells; TCE was detected above the CUL in the groundwater from monitoring well GW235I; and VC was detected above the CUL in the groundwater from monitoring well GW232S. PCE was not detected in the groundwater collected 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 CUL in the CPOC wells since compliance monitoring began, but are generally stable. TCE concentrations exceed the CUL in the groundwater from CPOC well GW235I, and VC concentrations exceed the CUL in the groundwater from CPOC well GW232S. The concentrations of both TCE and VC generally appear to be stable. Cleanup levels may need to be re-evaluated based on overly conservative COC concentration assumptions that were made prior to remedial action implementation, but that have changed over time, resulting in an overestimation of total site risk based on current relative concentrations of individual COCs.

Arsenic was detected above the CUL in the groundwater from CPOC area wells GW232S, GW234S, and GW236S. Copper was detected above the CUL in the groundwater from CPOC well GW232S. Lead was not detected above the CUL in the groundwater from CPOC wells (Table 3). Figure 6 shows arsenic, copper, and lead trends since the beginning of compliance monitoring in groundwater from the CPOC area wells.

As shown in Figure 6, though arsenic, copper and lead concentrations appear to vary over time, there are no apparent long-term increasing or decreasing trends in the groundwater collected from CPOC area wells.

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 of 2018. 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

The SVE system at Building 4-78/79 SWMU/AOC Group was shut down during the first quarter, during which rebound testing was implemented. Soil samples were collected during the second quarter to assess the attainment of soil CULs, and results were reported in the second quarter monitoring report (Wood, 2018). On October 18, 2018, Boeing submitted a formal request for approval of the shutdown of the SVE system at Building 4-78/79 SWMU/AOC Group, which Ecology approved on November 1, 2018. Ecology also requested a work plan for excavating the soils near PP13 and GW013S. The work plan was submitted to Ecology on December 10, 2018. Further details are included in the SVE operations and monitoring report prepared by Calibre and included as Appendix D.

A fifth round of nitrate/sulfate injections was performed in December 2018. Groundwater samples will be collected during the first quarter 2019. The results of the performance monitoring are shown in Table 3-1 of Appendix D. Concentrations of benzene and cis-1,2-DCE in the groundwater from all injection wells related to ongoing benzene treatment in this area are shown in Figure 8. As shown in Figure 8, benzene concentrations in groundwater collected from injection wells ranged from below the reporting limit of 0.20 μ g/L to 9.20 μ g/L. As shown in Table 6, the benzene concentration in the source area well GW031S in November 2018 was 28.3 μ g/L. Trend charts for TCE and VC in the injection wells are presented in Figure 9.

The four benzene treatment injection events completed prior to December 2018 were implemented utilizing low target concentrations of nitrate and sulfate applied to each of the injection wells with concentrations of 100, 200, and 400 mg/L in October 2017, January 2018, and April 2018, respectively. The reagent concentration for the July and December 2018 treatment injection event was 800 mg/L for nitrate and 400 mg/L for sulfate to provide additional nitrate and sulfate to the affected area due to the rapid reaction time observed during previous injection events. More detail is provided in Appendix D.

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 2018 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 2018 is generally to the west, with a hydraulic gradient of 0.002.



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. All COCs detected in the down gradient plume and CPOC wells (VC and benzene) are present at levels below the applicable MCLs/MTCA criteria for potable water supply. In the source area, selected wells remain above the MCLs/MTCA standard for potable water supply (specifically for VC, benzene and TPH-GRO) and active treatment is ongoing.

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 DO and ORP, indicating that reducing conditions are present over the area and are generally favorable for reductive dechlorination of chlorinated VOCs. 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 3.50 to 23.21 mg/L.

3.3.4.2 COC results for source and downgradient plume areas

Table 6 lists fourth quarter 2018 analytical results for the Building 4-78/79 SWMU/AOC Group COCs. The CULs established in the CAP 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 their respective CULs, except for groundwater from source area well GW039S and GW243I, for which all COCs were below 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 2,010 μ g/L (the field duplicate concentration was 2,000 μ g/L). TPH-G was also detected in the groundwater from source area wells GW033S and GW243I at concentrations below the CUL.

The only COC detected in the groundwater collected from the downgradient plume area wells was VC, which was detected at a concentration of 0.20 μ g/L in the groundwater collected from downgradient plume area well GW038S. The detection of VC in the groundwater from GW038S is consistent with historical concentrations of VC in the groundwater from this well.

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 collected from GW031S and GW033S are generally consistent with historical results and trends, though the concentration cis-1,2-DCE decreased significantly during the fourth quarter in source area well GW033S. 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 collected from source area well GW034S (Figure 11) are stable. Nitrate and sulfate injections described in Appendix D are continuing, in order to address remaining benzene present between GW210S and GW244S.

Figure 11 shows a trend chart for downgradient plume area well GW209S, which was installed in 2008 and is located west of Building 4-79. Monitoring results for benzene and VC for GW209S decreased in 2015 and have remained low through the fourth quarter 2018 monitoring event, with concentrations of all COCs below reporting limits.

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 detected at a concentration of 0.93 μ g/L, above the CUL, in the groundwater from CPOC area well GW237S; all other benzene results for the CPOC area were below detection. As shown in Figure 12, benzene has been sporadically detected in the groundwater from CPOC area well GW237S and has not been detected in the groundwater from any other CPOC wells at concentrations above the CUL. The benzene concentrations in the groundwater from CPOC well GW237S have remained lower than the concentrations observed during the second quarter. The only other COCs detected in the groundwater from the CPOC area during the fourth quarter was VC at concentrations ranging from 0.21 μ g/L to 0.29 μ g/L in the groundwater from CPOC wells GW237S, GW238I, and GW240D.

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 2018 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 and GW256S was below 6.0 standard units; low pH may interfere with biological degradation of site COCs. However, COCs are below cleanup levels at these wells. 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 2018 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 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. TPH in the diesel and Jet A ranges exceeded the CUL in the groundwater collected from CPOC area wells GW221S and GW224S, and was detected at concentrations below the CUL in CPOC well GW211S. TPH in the diesel range was also detected at concentrations below the CUL in CPOC well GW212S. Figure 16 shows that the fourth quarter results for these wells are consistent with the historical monitoring results since late 2013.

3.5 AOC-001 and AOC-002

This section describes corrective action activities conducted at these AOCs during the fourth quarter of 2018. The cleanup remedy for this corrective action area is bioremediation and MA. Bioremediation commenced for this area in late 2004, following source area excavation. Figure 17 shows the location of groundwater monitoring wells and the bioremediation injection system for AOC-001 and AOC 002, as well as the groundwater elevations measured during this monitoring event.

3.5.1 Cleanup action activities

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

3.5.2 Compliance monitoring plan deviations

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

3.5.3 Water levels

Table 10 presents the groundwater elevations measured during the fourth quarter 2018 monitoring event at AOC-001 and AOC-002. Figure 17 shows the groundwater elevations from this event. Groundwater flow directions cannot be determined from the available groundwater elevation data.

3.5.4 Groundwater monitoring results

Groundwater in this area is monitored following the schedule presented in Tables A-1 and A-2 in Appendix A. Results for primary geochemical indicators are presented in Table 11; results for the AOC-001 and AOC-002 COCs are presented in Table 12. All COCs detected (cis-1,2-DCE and VC) are present at levels below the applicable MCLs/MTCA criteria for potable water supply in all wells; however, concentrations are still greater than current project cleanup levels.

3.5.4.1 Monitored attenuation/geochemical indicators

The geochemical indicator results are presented in Table 11. The pH was near neutral in all CPOC wells and is conducive to microbial activity. Table 11 also suggests that geochemical conditions are appropriate for reductive dechlorination of the COCs in the AOC-001 and AOC-002 CPOC area, as indicated by the reducing conditions, low DO levels, and generally appropriate TOC concentrations.

3.5.4.2 COC results for source and downgradient plume areas

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

3.5.4.3 COC results for conditional point of compliance area

As shown in Table 12, 1,1-dichloroethene, benzene, and TCE concentrations in the groundwater collected from CPOC area wells were either below detection or below the CUL. Concentrations of cis-1,2-DCE were



above the CUL in the groundwater from all CPOC area wells except for GW194S. VC was detected at concentrations above the CUL in the groundwater from all CPOC area wells except GW194S and GW245S.

As shown in Figure 18, aside from the increase in concentrations of cis-1,2-DCE and VC observed in the in the groundwater collected from GW185S in the third and fourth quarters of 2015; concentrations of cis-1,2-DCE and VC in the CPOC area monitoring wells have been generally stable since compliance monitoring began. COPC area wells GW194S and GW245S are not shown on Figure 18 because COCs are generally not detected in the groundwater from these wells. Similarly, the remaining COCs are generally below the CUL in the CPOC area monitoring wells and are not included on Figure 18.

As previously noted, cleanup levels may need to be re-evaluated based on overly conservative COC concentration assumptions that were made prior to remedial action implementation, but that have changed over time, resulting in an over-estimation of total site risk based on current relative concentrations of individual COCs.

3.6 AOC-003

This section describes corrective action activities conducted at AOC-003 for the fourth quarter of 2018. The cleanup remedy for this AOC is bioremediation and MA. Figure 19 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 source and downgradient 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 13 presents the groundwater elevations measured during the fourth quarter 2018 monitoring event at AOC-003 and AOC-092. Figure 19 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 14; results for the AOC-003 COCs are presented in Table 15. The sole COC detected, VC, is present at levels below the applicable MCL/MTCA criteria for potable water supply in all wells.

3.6.4.1 Monitored attenuation//geochemical indicators

The geochemical indicator results are presented in Table 14. Results in Table 14 indicate that geochemical conditions are generally consistent throughout this AOC. The data indicate that conditions are generally conducive to biodegradation of the COCs for this AOC.



3.6.4.2 COC results for source and downgradient plume areas

Groundwater collected from the source area and downgradient plume area wells did not have detections of PCE, TCE or cis-1,2-DCE above their respective CULs. VC was detected above the CUL in the groundwater collected from both source area well GW249S and downgradient plume are well GW188S.

3.6.4.3 COC results for conditional point of compliance area

Groundwater collected from the two CPOC area wells did not have detections of PCE, TCE or cis-1,2-DCE above their respective CULs. VC was detected at concentrations above the CUL in the groundwater collected from CPOC wells GW247S and GW248I, at concentrations of 0.679 and 0.987 µg/L, respectively.

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 of 2018.

3.8 AOC-034 and AOC-035

This section describes corrective action activities conducted at AOC-034 and AOC-035 during the fourth quarter of 2018. The cleanup remedy for these AOCs is MNA. Figure 20 shows the locations of the groundwater monitoring wells at AOC-034 and AOC-035, as well as the groundwater elevations measured during this sampling event.

3.8.1 Cleanup action activities

No construction or operations work was conducted for this AOC during the fourth quarter.

3.8.2 Compliance monitoring plan deviations

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

3.8.3 Water levels

Table 16 presents the groundwater elevations measured during the fourth quarter 2018 monitoring event at AOC-034 and AOC-035. Figure 20 shows the groundwater elevation contours based on the groundwater elevations. Based on these contours, groundwater in the vicinity of AOC-034 and AOC-035 flows to the west-northwest, toward the Cedar River Waterway/Lake Washington, with a horizontal hydraulic gradient of approximately 0.003.

3.8.4 Groundwater monitoring results

Groundwater at this area is monitored following the schedule presented in Tables A-1 and A-2 in Appendix A. Results for geochemical indicators are presented in Table 17; results for COCs are presented in Table 18. All COCs (cis-1,2-DCE and VC) are non detect and therefore below the applicable MCLs/MTCA criteria for potable water supply in all wells.

3.8.4.1 Monitored natural attenuation/geochemical indicators

The geochemical indicator results are presented in Table 17. In general, the results indicate uniform conditions are present across this corrective action area and that conditions are conducive to natural attenuation of chlorinated VOCs, as indicated by the pH, ORP, and DO measurements.

3.8.4.2 COC results for source and cross-gradient plume areas

Table 18 presents the fourth quarter 2018 analytical results for the AOC-034 and AOC-035 groundwater COCs. Trend charts have not been developed for this area, because the COCs are not commonly detected in the AOC-034 and AOC-035 groundwater monitoring wells. As shown in Table 18, neither cis-1,2-DCE nor VC were detected in the groundwater collected from source area well GW217S or cross-gradient plume area well GW216S.

3.8.4.3 COC results for conditional point of compliance area

Table 18 shows that COC concentrations in groundwater from the CPOC area wells were below reporting limits and CULs for the fourth quarter of 2018. This is the eighth consecutive semiannual monitoring event with COC concentrations below CULs in the CPOC area well samples. With 4 years (8 sampling events) of semi-annual data demonstrating that COCs are below CULs, groundwater monitoring at this AOC is no longer necessary and a request to discontinue sampling at this location will be requested by Boeing to Ecology.

3.9 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 of 2018.

3.10 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 of 2018.

3.11 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 of 2018.

3.12 Lot 20/former building 10-71 parcel

This section describes corrective action activities conducted for this area during the fourth quarter 2018. Figure 21 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.

3.12.1 Cleanup action activities

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

3.12.2 Water levels

The groundwater elevations measured during the fourth quarter at the Lot 20/Former Building 10-71 Parcel are presented in Table 19 and on Figure 21. Groundwater contours are not shown on Figure 21 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.

3.12.3 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 20; results for COCs for the Lot 20/Former Building 10-71 Parcel monitoring wells are presented in Table 21. Groundwater in this area is monitored following the schedule presented in Tables A-1 in Appendix A. All COCs detected (TCE and cis-1,2-DCE) are present at levels below the applicable MCLs/MTCA criteria for potable water supply in all wells.

3.12.3.1 Monitored attenuation/geochemical indicators

The geochemical indicator results are presented in Table 20. The pH in groundwater from the Lot 20/Former Building 10-71 Parcel monitoring wells was near neutral and the remaining parameters appear uniform in the groundwater collected from these monitoring wells.

3.12.3.2 COC results

Fourth quarter analytical results for the Lot 20/Former Building 10-71 Parcel COCs are presented in Table 21. The concentrations of all of the COCs—cis-1,2-DCE, toluene, TCE, and VC—in the groundwater collected from Lot 20/Former Building 10-71 Parcel monitoring wells were below detection, except for detections of cis-1,2-DCE and TCE at concentrations of 0.25 and 0.28 μ g/L, respectively, in the groundwater collected from 10-71-MW2.

3.13 Apron A area

This section describes corrective action activities conducted at the Apron A area during the fourth quarter 2018. The cleanup remedy proposed for the Apron A area is bioremediation and MA. Figure 22 shows the locations of the groundwater monitoring wells in the Apron A area.

3.13.1 Cleanup action activities

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

3.13.2 Water levels

The depth to groundwater measured during the fourth quarter at Apron A are presented in Table 22 and on Figure 22. Groundwater elevations are not available because the top of casing elevations were never surveyed.

3.13.3 Groundwater monitoring results

Results for primary geochemical indicators for groundwater from groundwater monitoring wells GW262S and GW264S are presented in Table 23; results for COCs from these wells are presented in Table 24. Groundwater in this area is monitored following the schedule presented in Tables A-1 and A-2 in Appendix A. The sole COC detected, VC, is present at a level below the applicable MCL/MTCA criteria for potable water supply in all wells.

3.13.3.1 Monitored attenuation/geochemical indicators

Geochemical parameters are presented in Table 23. TOC concentrations in the monitoring wells were slightly elevated during the fourth quarter 2018 monitoring event. The other primary geochemical



indicators show that reducing conditions were present and that conditions were conducive to biological degradation of the chlorinated VOCs.

3.13.3.2 COC results

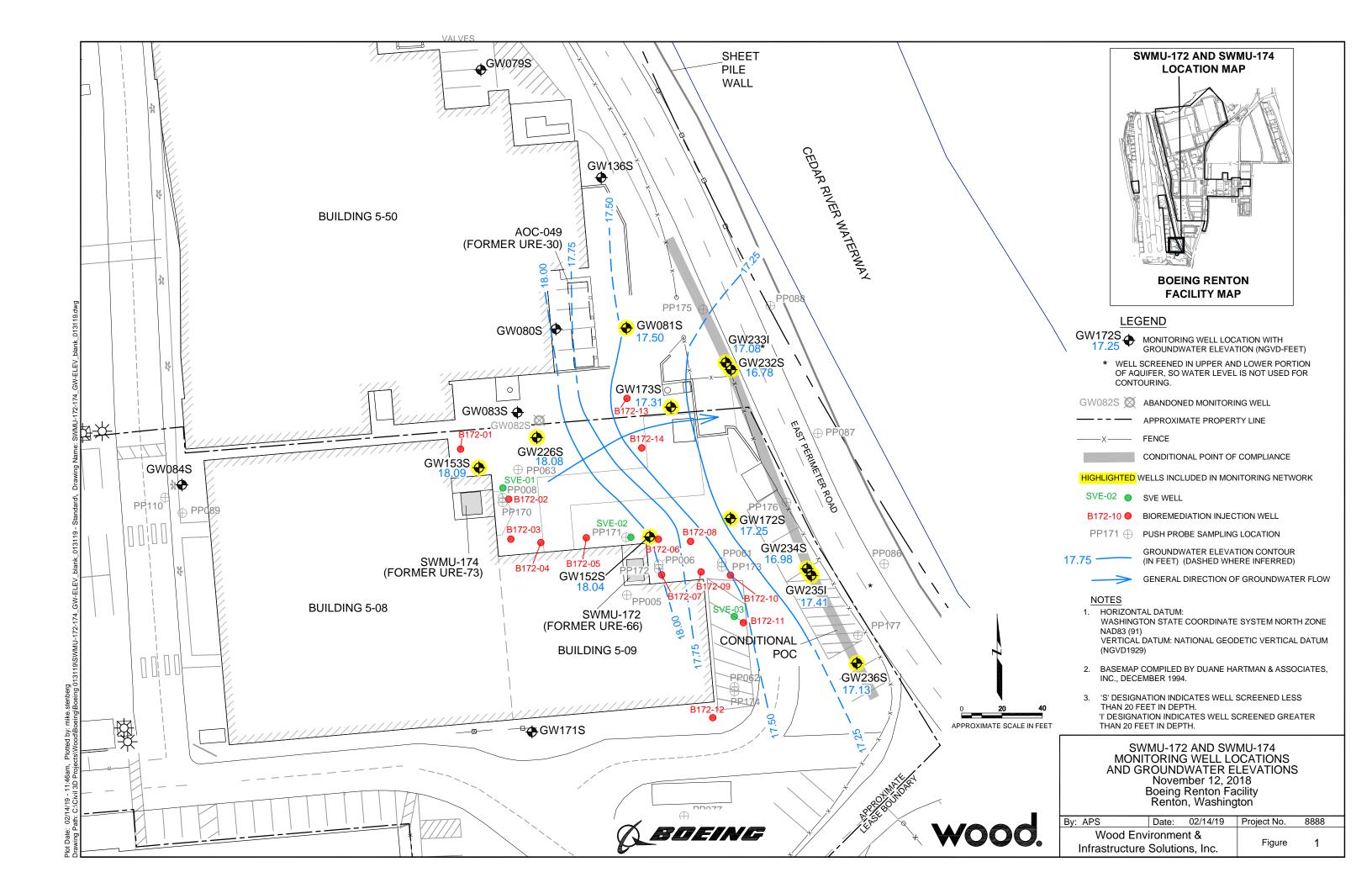
Table 24 lists fourth quarter analytical results for the Apron A COCs: cis-1,2-DCE and VC. Cis-1,2-DCE was not detected in the groundwater collected from either GW262S or GW264S. VC was detected in the groundwater collected from monitoring well GW264S at a concentration of 0.55 µg/L. VC was not detected in the groundwater collected from monitoring well GW262S.

4.0 References

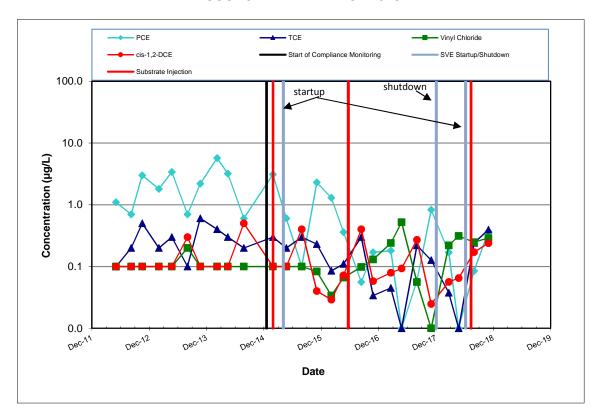
- AMEC Environment & Infrastructure, Inc. (AMEC), 2012, Draft Cleanup Action Plan, Boeing Renton Facility, Renton, Washington: Prepared for The Boeing Company, September.
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- Wood Environment & Infrastructure Solutions, Inc. (Wood), 2018, Quarterly report, second quarter 2018, RCRA Corrective Action Program, Boeing Renton Facility.

wood.

Figures



SOURCE AREA WELL GW152S



SOURCE AREA WELL GW153S

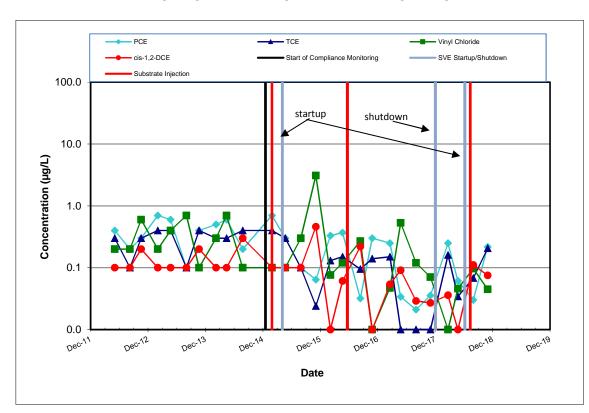
Note: non-detected values shown at one-half the reporting limit



SWMU-172 AND SWMU-174 TREND PLOTS FOR SOURCE AREA WELLS GW152S AND GW153S Boeing Renton Facility Renton, Washington

Figure 2

DOWNGRADIENT PLUME AREA WELL GW172S



DOWNGRADIENT PLUME AREA WELL GW173S

Note: non-detected values shown at one-half the reporting limit



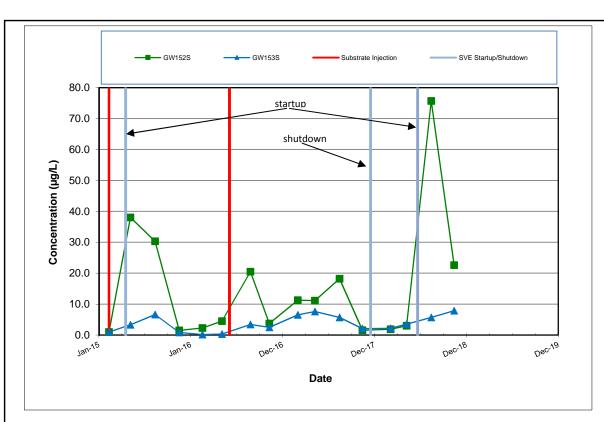
SWMU-172 AND SWMU-174 TREND PLOTS FOR DOWNGRADIENT PLUME AREA WELLS GW172S AND GW173S

Boeing Renton Facility

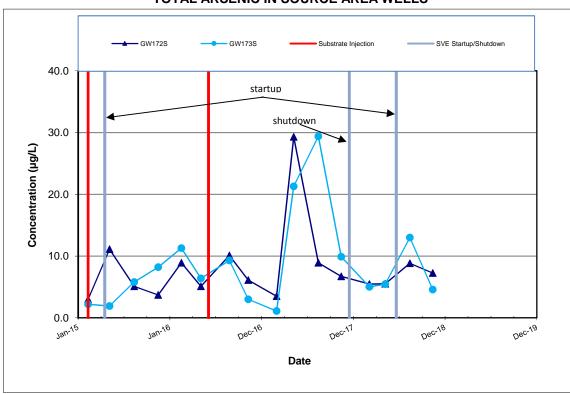
Renton, Washington

Project No. 8888

Figure 3



TOTAL ARSENIC IN SOURCE AREA WELLS



TOTAL ARSENIC IN DOWNGRADIENT PLUME AREA WELLS

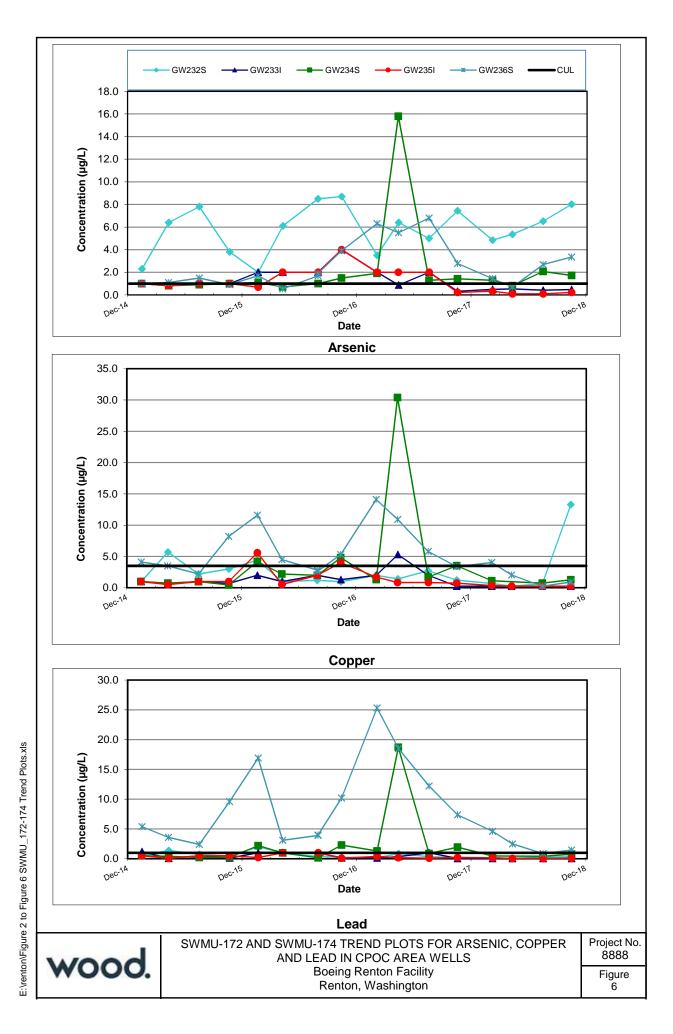
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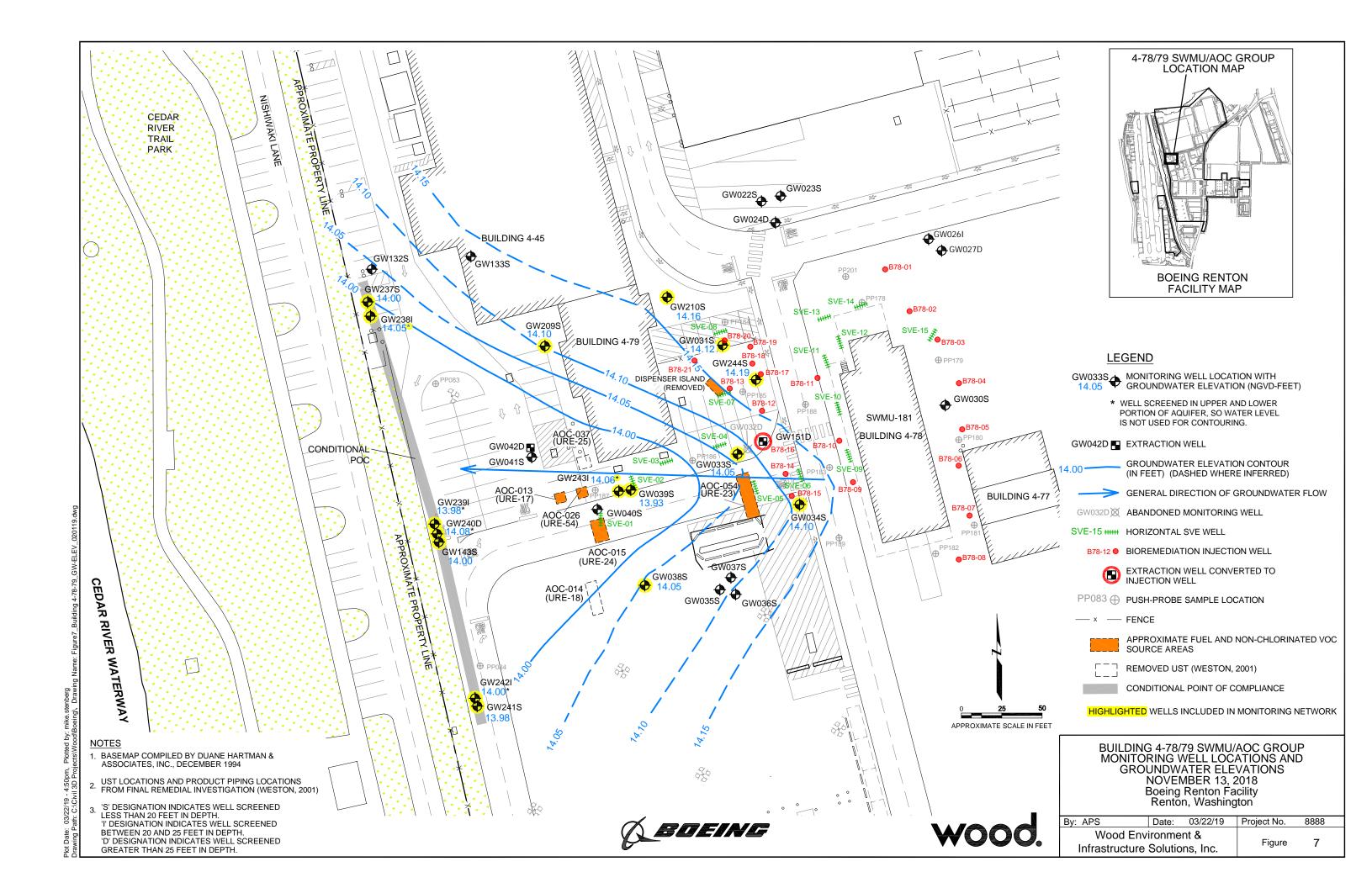


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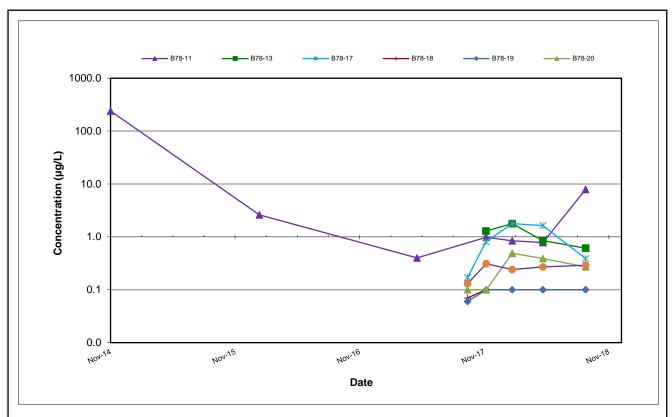
SWMU-172 AND SWMU-174 TREND PLOTS FOR CIS-1,2-DICHLROETHENE, TRICHLOROETHENE, AND VINYL CHLORIDE IN CPOC AREA WELLS Boeing Renton Facility Renton, Washington

Figure 5

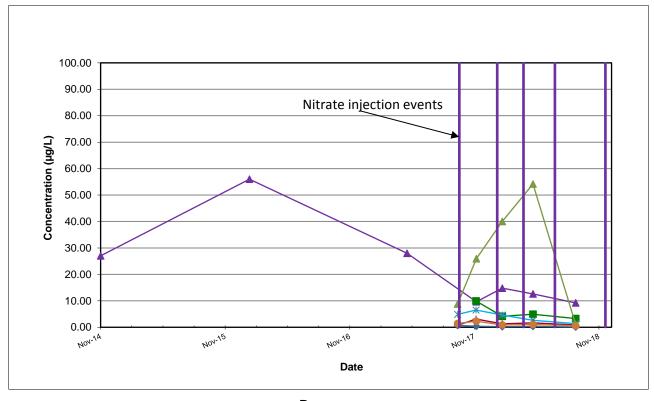








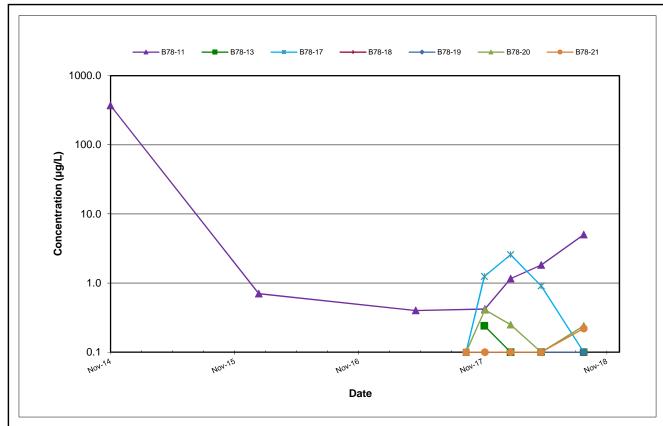
cis-1,2-Dichloroethene



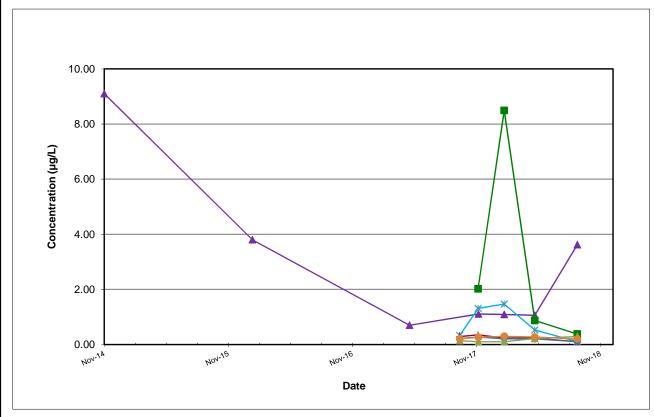
Benzene

 $\underline{\text{Note:}}$ non-detected values shown at one-half the reporting limit





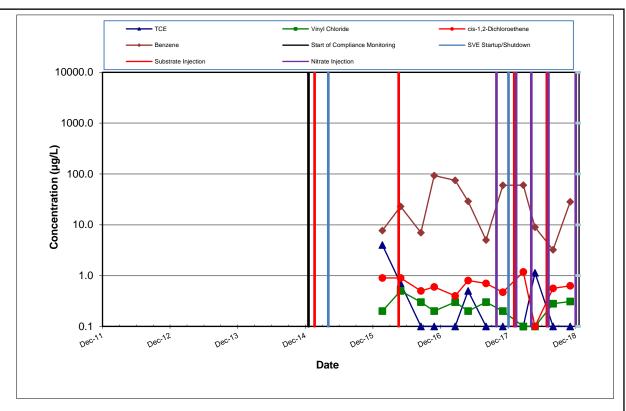
Trichloroethene



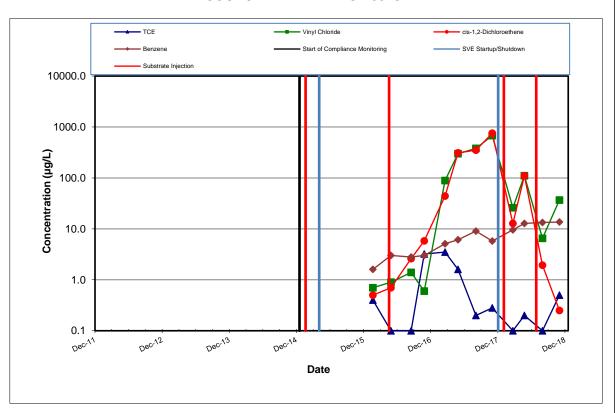
Vinyl Chloride

Note: non-detected values shown at one-half the reporting limit

wood.



SOURCE AREA WELL GW031S

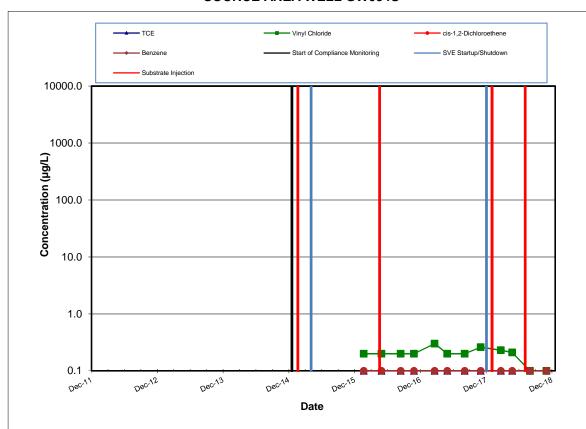


SOURCE AREA WELL GW033S

Note: non-detected values shown at one-half the reporting limit



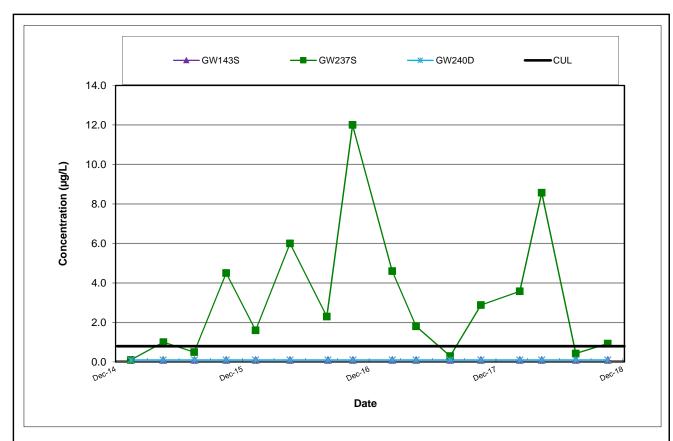
SOURCE AREA WELL GW034S



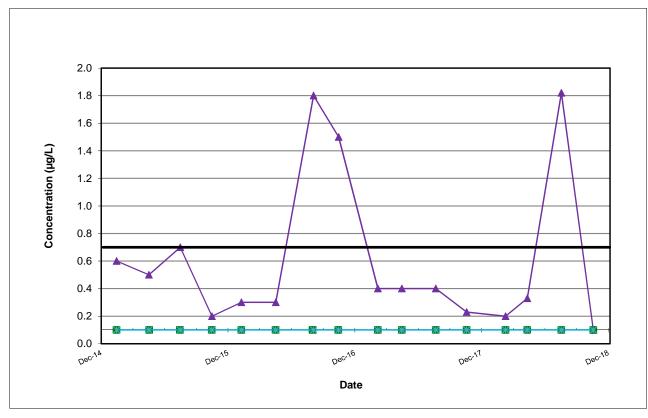
DOWNGRADIENT PLUME AREA WELL GW209S

 $\underline{\text{Note}}\textsc{:}$ non-detected values shown at one-half the reporting limit





Benzene



cis-1,2-Dichloroethene

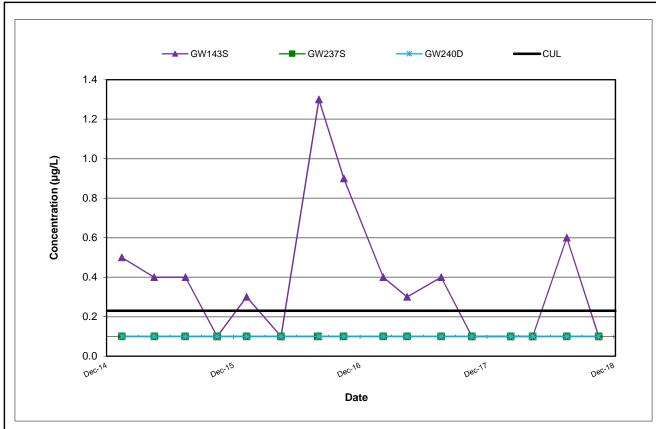
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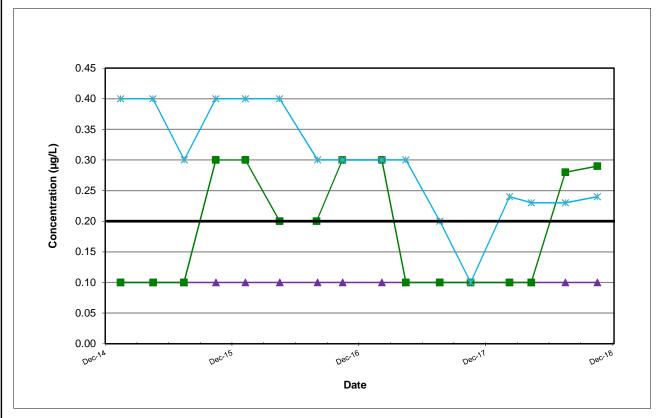
BUILDING 4-78/79 SWMU/AOC GROUP TREND PLOTS FOR BENZENE AND CIS-1,2-DICHLOROETHENE IN CPOC AREA WELLS Boeing Renton Facility Renton, Washington

Project No. 8888

> Figure 12



Trichloroethene



Vinyl Chloride

Note: non-detected values shown at one-half the reporting limit

wood.

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

Project No. 8888

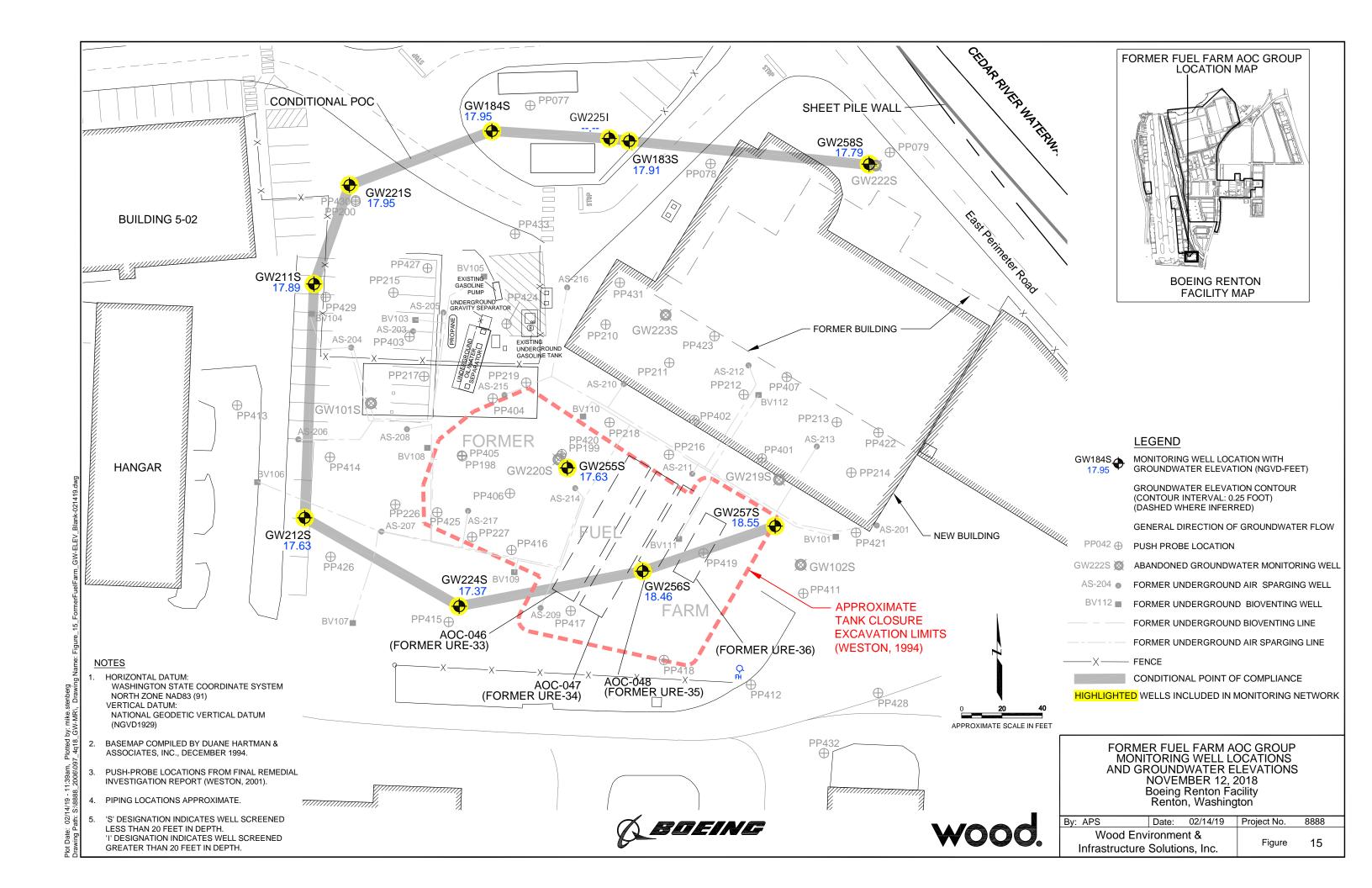
Figure 13

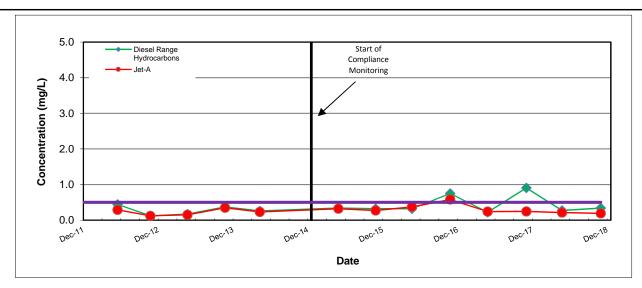
TPH as Gasoline

Note: non-detected values shown at one-half the reporting limit

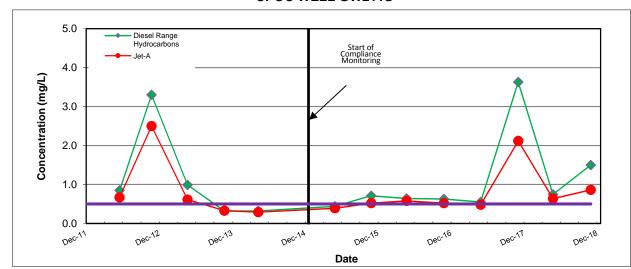
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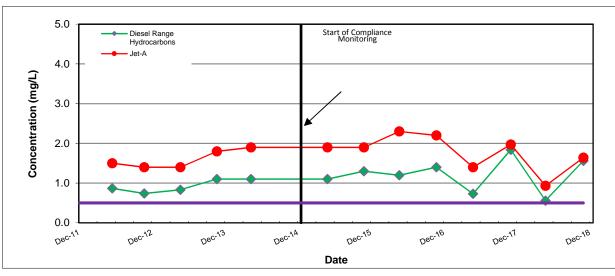




CPOC WELL GW211S



CPOC WELL GW221S



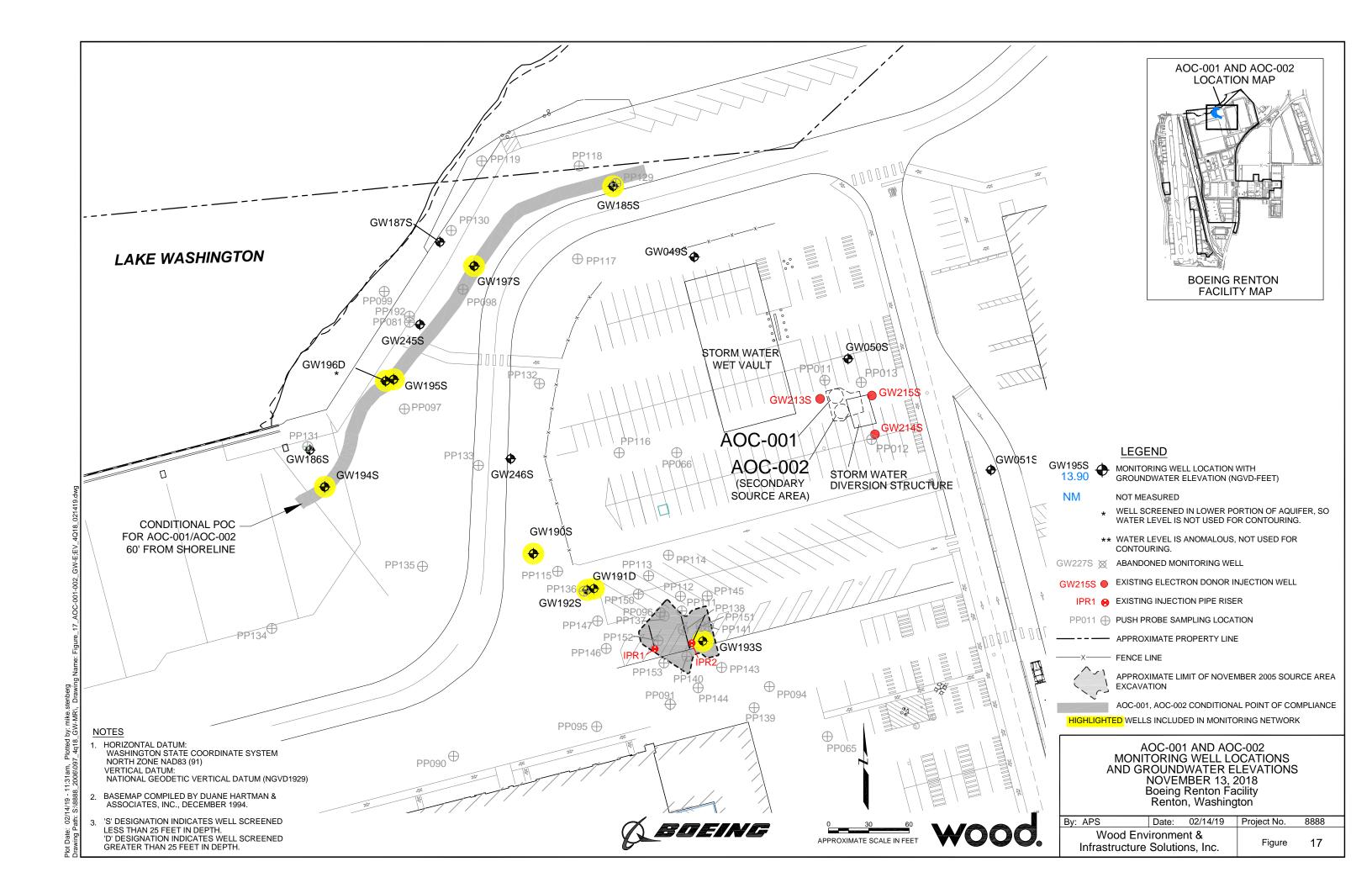
CPOC WELL GW224S

 $\underline{\text{Note}}\textsc{:}$ non-detected values shown at one-half the reporting limit

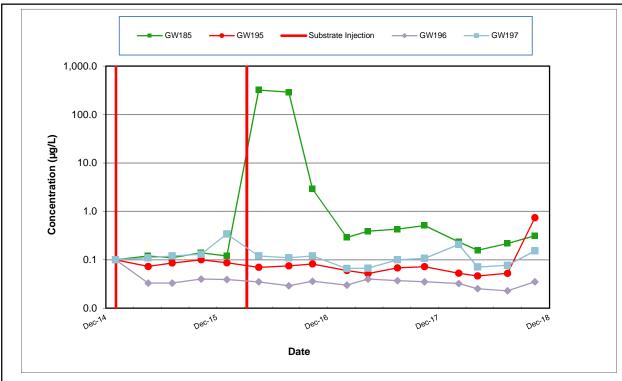


FORMER FUEL FARM AOC GROUP TREND PLOTS FOR CPOC AREA WELLS GW211S, GW221S, AND GW224S Boeing Renton Facility Renton, Washington Project No. 8888

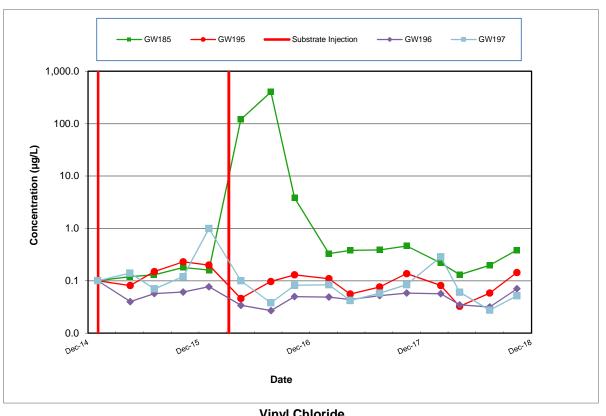
> Figure 16







cis-1,2-Dichloroethene



Vinyl Chloride

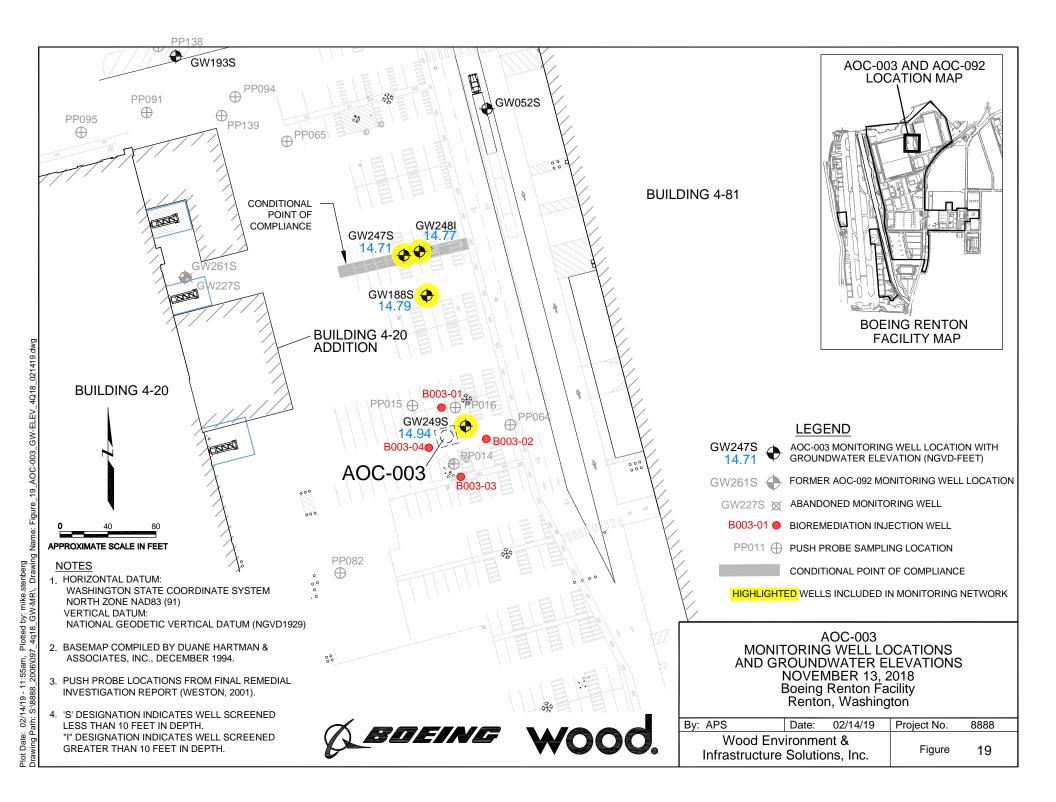
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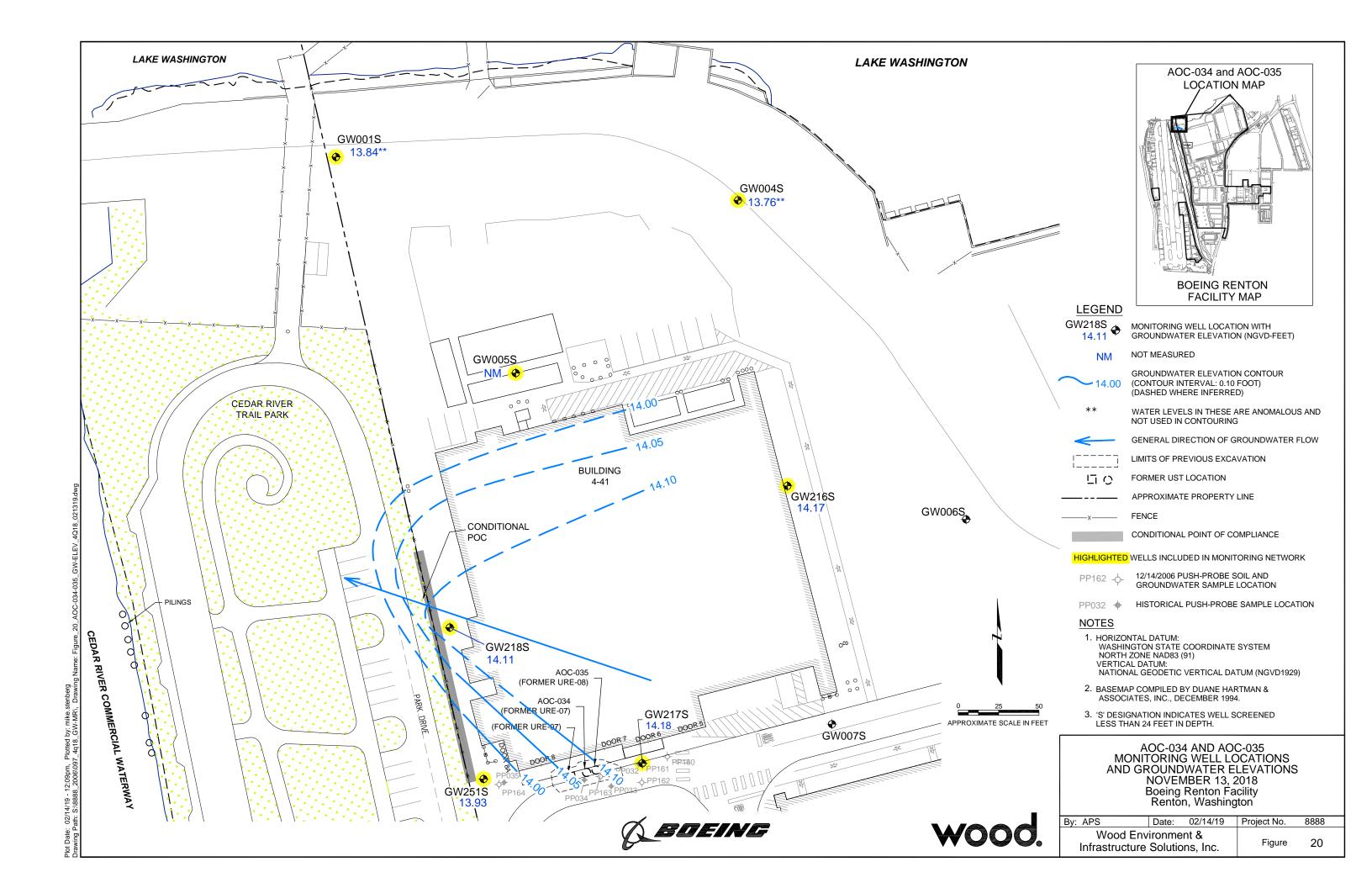


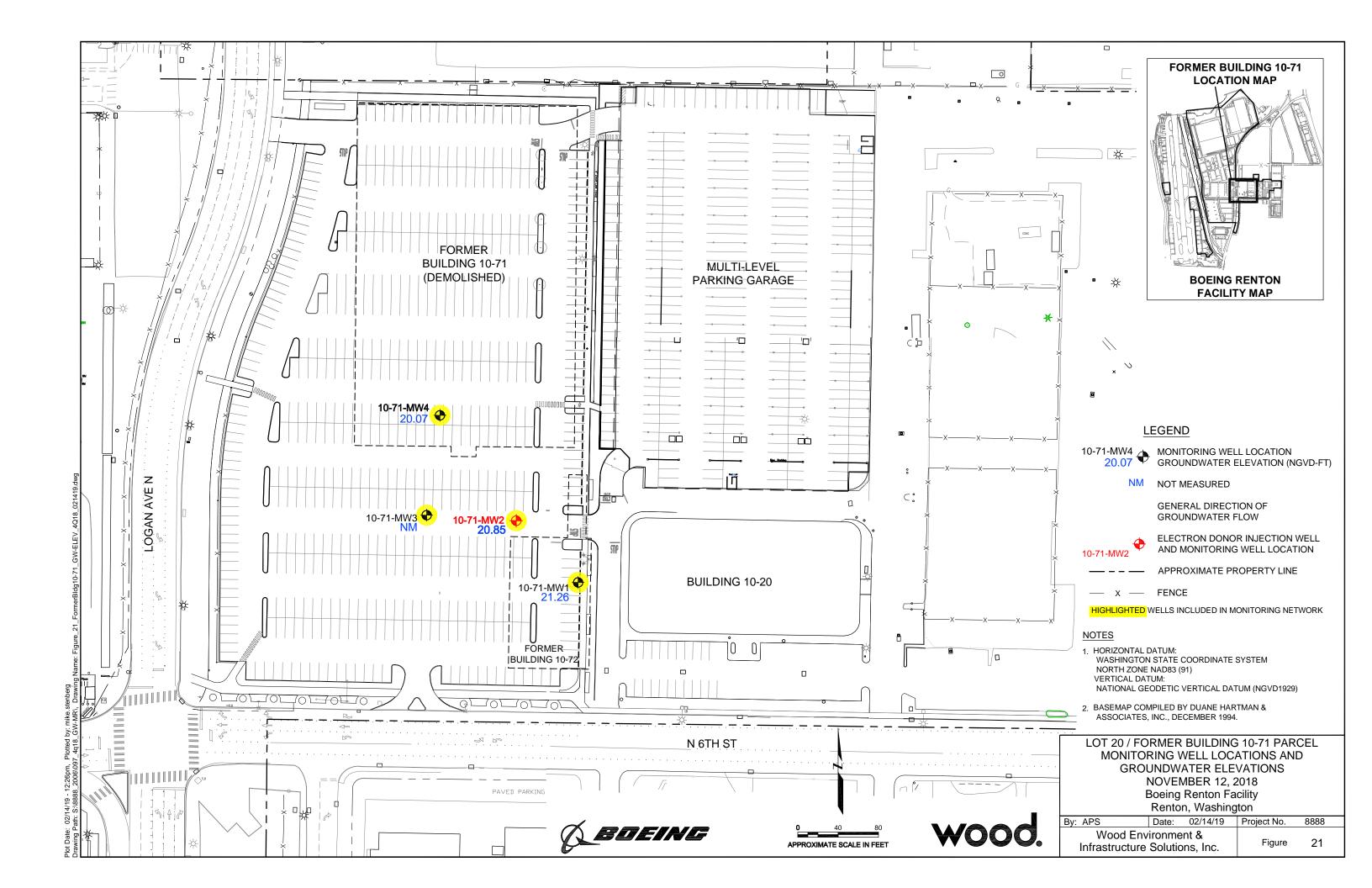
AOC-001 AND 002 TREND PLOTS FOR CIS-1,2-DICHLOROETHENE AND VINYL CHLORIDE IN CPOC AREA WELLS **Boeing Renton Facility** Renton, Washington

Project No. 8888

Figure 18







wood.

Tables

TABLE 1: SWMU-172 and SWMU-174 GROUP GROUNDWATER ELEVATION DATA NOVEMBER 12, 2018

Boeing Renton Facility, Renton, Washington

1	Screen Interval Depth	TOC Elevation	Depth to Groundwater	Groundwater Elevation
Well ID ¹	(feet bgs)	(feet) ²	(feet below TOC)	(feet) ²
GW081S	5 to 20 ³	25.91	8.41	17.50
GW152S	5 to 20 ³	26.98	8.94	18.04
GW153S	5 to 20 ³	27.47	9.38	18.09
GW172S	8 to 18 ³	26.44	9.19	17.25
GW173S	8 to 18 ³	26.51	9.20	17.31
GW226S	5 to 20 ³	26.86	8.78	18.08
GW232S	4 to 14	24.45	7.67	16.78
GW233I	15 to 25	24.35	7.27	17.08
GW234S	3 to 13	24.95	7.97	16.98
GW235I	15 to 25	24.90	7.49	17.41
GW236S	5 to 15	24.36	7.23	17.13

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

TABLE 2: SWMU-172 AND SWMU-174 GROUP CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS ¹ NOVEMBER 12, 2018

Boeing Renton Facility, Renton, Washington

		Well ID ²											
		Source Area		Downgradient Plume Area				CPOC Area					
		GW152S											
	GW152S	(field dup.)	GW153S	GW081S	GW172S	GW173S	GW226S	GW232S	GW233I	GW234S	GW235I	GW236S	
Specific Conductivity (µS/cm)	257.2	257.2	474.8	187.7	443.2	368.8	226.1	457.6	189.4	215.1	138.0	385.4	
Dissolved Oxygen (mg/L)	0.51	0.51	0.81	0.41	0.65	0.54	0.57	2.27	1.78	0.29	0.31	0.48	
Oxidation/Reduction Potential (mV)	-6.2	-6.2	16.4	-25.8	-5.0	-42.6	-42.3	-49.5	4.3	-24.2	-37.1	-66.4	
pH (standard units)	5.60	5.60	5.68	6.41	5.85	6.40	6.36	5.99	6.37	6.32	6.53	6.54	
Temperature (degrees C)	10.80	10.80	12.10	12.40	10.80	11.90	11.20	7.30	12.70	15.20	13.00	13.30	
Total Organic Carbon (mg/L)	10.91	14.18	55.74	4.3	39.64	7.12	6.94	13.16	3.76	1.42	0.64	1.77	

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 field dup. = field duplicate mg/L = milligrams per liter mV = millivolts

TABLE 3: SWMU-172 AND SWMU-174 GROUP CONCENTRATIONS OF CONSTITUENTS OF CONCERN^{1, 2} NOVEMBER 12, 2018

Boeing Renton Facility, Renton, Washington

			Well ID ³										
			Source Area		Downgradient Plume Area				CPOC Area				
	Cleanup		GW152S										
	Level ⁴	GW152S	(field dup.)	GW153S	GW081S	GW172S	GW173S	GW226S	GW232S	GW233I	GW234S	GW235I	GW236S
Volatile Organic Compounds (µg/L)													
cis-1,2-Dichloroethene	0.03	1.7	1.83	0.238	0.0327	0.116	0.0753	0.020 U	0.426	0.0692	0.112	0.158	0.0690
Tetrachloroethene	0.02	0.846	0.756	0.370	0.020 U	0.0376	0.218	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Trichloroethene	0.02	0.223	0.211	0.394	0.020 U	0.0370	0.206	0.020 U	0.020 U	0.020 U	0.020 U	0.0338	0.020 U
Vinyl Chloride	0.11	0.246	0.260	0.289	0.020 U	0.148	0.0448 J	0.0655	0.564	0.020 U	0.0488	0.020 U	0.0323
Total Metals (µg/L)													
Arsenic	1.0	22.6	22.5	7.84	2.20	7.24	4.59	3.44	8.01	0.481	1.72	0.230	3.35
Copper	3.5	4.76	4.44	16.2	0.561	1.77	3.85	2.28	13.3	0.500 U	1.27	0.500 U	0.924
Lead	1.0	2.48 J	1.24 J	0.381	0.100 U	1.13	0.706	0.422	0.338	0.100 U	0.781	0.104	1.48

Notes

- 1. Data qualifiers are as follows:
 - U = The analyte was not detected at the reporting limit indicated.
 - J = The value is an estimate.
- 2. **Bolded** values exceed the cleanup levels.
- 3. S = shallow well; I = intermediate well.
- 4. Cleanup levels obtained from Table 2 of the Cleanup Action Plan.

Abbreviations

 μ g/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 13, 2018

Boeing Renton Facility, Renton, Washington

Well ID ¹	Screen Interval Depth (feet bgs)	TOC Elevation (feet) ²	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet) ²
GW031S	5 to 25	19.44	5.32	14.12
GW033S	5 to 25	19.49	5.44	14.05
GW034S	5 to 25	19.65	5.55	14.10
GW038S	5 to 25	19.68	5.63	14.05
GW039S	3.5 to 13.5	19.30	5.37	13.93
GW143S	10 to 15	19.81	5.81	14.00
GW209S	3.5 to 13.3	19.37	5.27	14.10
GW210S	3.5 to 13.3	19.19	5.03	14.16
GW237S	5 to 15	18.85	4.85	14.00
GW238I	5 to 20	18.94	4.89	14.05
GW239I	15 to 20	19.69	5.71	13.98
GW240D	22 to 27	19.81	5.73	14.08
GW241S	4 to 14	20.28	6.30	13.98
GW242I	15 to 20	20.44	6.44	14.00
GW243I	5 to 20	19.49	5.43	14.06
GW244S	5 to 15	19.53	5.34	14.19

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

TABLE 5: BUILDING 4-78/79 SWMU/AOC GROUP CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS ¹ NOVEMBER 13, 2018

Boeing Renton Facility, Renton, Washington

	Well ID ²											
	Source Area								Downgradient Plume Area			
	GW031S											
	GW031S	(field dup.)	GW033S	GW034S	GW039S	GW243I	GW244S	GW038S	GW209S	GW210S		
Specific Conductivity (µS/cm)	342.9	342.9	357.1	331.8	95.5	399.2	434.8	306.9	419.0	202.7		
Dissolved Oxygen (mg/L)	0.62	0.62	0.39	0.27	1.57	0.59	0.45	0.26	0.16	1.01		
Oxidation/Reduction Potential (mV)	-75.7	-75.7	-46.7	-72.2	82.1	-68.5	-54.3	-60.7	-73.4	22.4		
pH (standard units)	6.25	6.25	6.18	6.34	6.09	6.11	6.17	6.32	6.33	6.05		
Temperature (degrees C)	13.50	13.50	16.30	16.20	17.60	15.10	13.5	17.30	14.01	10.40		
Total Organic Carbon (mg/L)	20.46	20.27	23.21	8.11	3.50	9.77	14.83	9.77	10.32	7.22		

				Well ID ²			
				CPOC Area			
	GW143S	GW237S	GW238I	GW239I	GW240D	GW241S	GW242I
Specific Conductivity (µS/cm)	299.5	298	492	282.8	331	303.4	277.6
Dissolved Oxygen (mg/L)	0.41	0.26	0.14	1.73	0.40	0.32	0.50
Oxidation/Reduction Potential (mV)	-70.7	-49.3	-75.9	-58.8	-63.5	-78.1	-54.2
pH (standard units)	6.34	6.40	6.24	6.12	6.18	6.32	6.24
Temperature (degrees C)	15.00	16.57	13.40	12.10	9.40	14.10	11.90
Total Organic Carbon (mg/L)	9.26	6.50	9.56	10.15	5.13	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

 μ 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

NA = not analyzed

TABLE 6: BUILDING 4-78/79 SWMU/AOC GROUP CONCENTRATIONS OF CONSTITUENTS OF CONCERN ^{1, 2} NOVEMBER 13, 2018

Boeing Renton Facility, Renton, Washington

						Well ID ³ Source Area				
		Cleanup Level ⁴	GW031S	GW031S (field dup.)	GW033S	GW034S	GW039S	GW243I	GW244S	
Volatile Organic Compounds (μg/L)										
Benzene		0.80	28.3 J	23.8 J	13.6	0.20 U	0.20 U	0.20 U	2.95	
cis-1,2-Dichloroethe	ene	0.70	0.63 J	0.58 J	9.35	0.25	0.20 U	0.20 U	0.26	
Trichloroethene		0.23	0.20 U	0.20 U	1.00 U	0.20 U	0.20 U	0.20 U	0.20 U	
Vinyl Chloride		0.20	0.31 J	0.30 J	36.7	0.54	0.20 U	0.20 U	0.55	
Total Petroleum Hyd	rocarbons (µg/L)									
GRO (C7-C12)		800	2010	2000	239	100 U	100 U	106	100 U	

			Well ID ³						
		Cleanup	Downgradient Plume Area						
		Level ⁴	GW038S	GW209S	GW210S				
Volatile Organic Comp	oounds (µg/L)								
Benzene		0.80	0.20 U	0.20 U	0.20 U				
cis -1,2-Dichloroethe	ne	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	0.20 U	0.20 U				
Total Petroleum Hydrocarbons (µg/L)									
GRO (C7-C12)		800	100 U	100 U	100 U				

						Well ID ³			
		Cleanup				CPOC Area			
		Level ⁴	GW143S	GW237S	GW238I	GW239I	GW240D	GW241S	GW242I
Volatile Organic Com	pounds (µg/L)								
Benzene		0.80	0.20 U	0.93	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	0.20 U	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	0.29	0.21	0.20 U	0.24	0.20 U	0.20 U
Total Petroleum Hyd	rocarbons (µg/L)								
GRO (C7-C12)		800	100 U	100 U	100 U	100 U	100 U	100 U	100 U

Notes

- 1. Data qualifiers are as follows:
 - U = The analyte was not detected at the reporting limit indicated.
 - J = The value is an estimate.
- 2. **Bolded** values exceed the cleanup levels.
- 3. S = shallow well; I = intermediate well; D = deep well.
- 4. Cleanup levels obtained from Table 2 of the Cleanup Action Plan.

Abbreviations

 μ g/L = micrograms per liter

CPOC = conditional point of compliance

field dup. = field duplicate

GRO = gasoline range organics

TABLE 7: FORMER FUEL FARM GROUNDWATER ELEVATION DATA NOVEMBER 12, 2018

Boeing Renton Facility, Renton, Washington

Well ID ¹	Screen Interval Depth (feet bgs)	TOC Elevation (feet) ²	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet) ²
GW183S	5.5 to 15	26.58	8.67	17.91
GW184S	5.6 to 15	27.14	9.19	17.95
GW211S	4.8 to 14.7	27.77	9.88	17.89
GW212S	4.9 to 14.8	28.06	10.43	17.63
GW221S	5 to 15	27.93	9.98	17.95
GW224S	5 to 15	27.98	10.61	17.37
GW255S	6 to 16	27.49	9.86	17.63
GW256S	7 to 16	27.22	8.76	18.46
GW257S	8 to 16	27.87	9.32	18.55
GW258S	9 to 16	25.51	7.72	17.79

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

TABLE 8: FORMER FUEL FARM CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS ¹ NOVEMBER 12, 2018

Boeing Renton Facility, Renton, Washington

		Well ID ²											
	Source Area						CPOC Area						
			GW224S										
	GW255S	GW183S	GW184S	GW211S	GW212S	GW221S	GW224S	(field dup.)	GW255S	GW256S	GW257S	GW258S	
Specific Conductivity (µS/cm)	195.1	142.2	134.1	261.8	218.6	219.5	249.9	249.9	195.1	171.4	168.1	294.3	
Dissolved Oxygen (mg/L)	0.15	0.35	1.13	0.14	0.42	0.39	0.4	0.4	0.15	0.41	0.37	0.45	
Oxidation/Reduction Potential (mV)	-1.2	13.4	88.8	-74.7	130.3	12.7	-1.7	-1.7	-1.2	78.9	89.7	-5.0	
pH (standard units)	6.27	6.39	6.14	6.31	5.54	6.06	6.03	6.03	6.27	5.85	6.00	6.16	
Temperature (degrees C)	17.30	13.30	13.30	16.20	15.20	13.50	16.80	16.80	17.30	15.70	16.70	11.90	

Notes

1. Primary geochemical indicators are measured in the field.

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

<u>Abbreviations</u>

 μ 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 9: FORMER FUEL FARM CONCENTRATIONS OF CONSTITUENTS OF CONCERN ^{1, 2} NOVEMBER 12, 2018

Boeing Renton Facility, Renton, Washington

			Well ID ³									
	a.	Source Area					СРОС	Area				
	Cleanup								GW224S			
	Level ⁴	GW255S	GW183S	GW184S	GW211S	GW212S	GW221S	GW224S	(field dup.)	GW256S	GW257S	GW258S
Total Petroleum Hydrocarbons (mg/L)												
DRO (C12-C24)	0.5	0.100 U	0.100 U	0.100 U	0.341	0.109	1.50	1.56	1.56	0.100 U	0.100 U	0.100 U
Jet A	0.5	0.100 U	0.100 U	0.100 U	0.191	0.100 U	0.863	1.64	1.72	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 cleanup levels.
- 3. S = shallow well; I = intermediate well.
- 4. Cleanup levels obtained from Table 2 of the Cleanup Action Plan.

Abbreviations

CPOC = conditional point of compliance DRO = diesel range organics field dup. = field duplicate mg/L = milligrams per liter

TABLE 10: AOC-001 AND AOC-002 GROUNDWATER ELEVATION DATA NOVEMBER 13, 2018

Boeing Renton Facility, Renton, Washington

Well ID ¹	Screen Interval Depth (feet bgs)	TOC Elevation (feet) ²	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet) ²
GW185S	4.5 to 14.5	16.27	2.39	13.88
GW190S	3.0 to 13.0	17.30	NM	NM
GW191D	26.5 to 36.0	17.53	NM	NM
GW192S	5.0 to 9.5	17.54	NM	NM
GW193S	3.0 to 12.8	18.67	NM	NM
GW194S	7.3 to 12.0	16.79	3.24	13.55
GW195S	7.3 to 12.0	16.34	2.58	13.76
GW196D	26.8 to 36.8	16.46	2.57	13.89
GW197S	7.8 to 12.5	16.52	2.25	14.27
GW245S	3.0 to 13.0	16.08	2.38	13.70

Notes

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

Abbreviations

bgs = below ground surface

NM = not measured

TABLE 11: AOC-001 AND AOC-002 CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS¹ NOVEMBER 13, 2018

Boeing Renton Facility, Renton, Washington

		Well ID ²						
		CPOC Area						
	GW185S	GW185S (field dup.)	GW194S	GW195S	GW196D ³	GW197S	GW245S ⁴	
Specific Conductivity (µS/cm)	647	647	663	602.0	385.5	892	398.7	
Dissolved Oxygen (mg/L)	0.40	0.40	0.34	0.77	0.27	0.12	0.12	
Oxidation/Reduction Potential (mV)	-73.1	-73.1	-53.9	-108.4	-55.3	-173.8	-86.8	
pH (standard units)	6.32	6.32	6.13	6.29	6.33	7.08	6.76	
Temperature (degrees C)	13.9	13.9	14.9	16.7	14.8	16.2	15.2	
Total Organic Carbon (mg/L)	12.39	12.39	16.26	16.18	7.59	12	7.00	

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; D = deep well.
- 3. GW196D is installed in a cluster with GW195S, and is screened below a silt layer at 26.8 to 36.8 feet in depth.
- 4. GW245S is both the source area and CPOC well for AOC-093.

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 12: AOC-001 AND AOC-002 CONCENTRATIONS OF CONSTITUENTS OF CONCERN ^{1, 2} NOVEMBER 13, 2018

Boeing Renton Facility, Renton, Washington

		CPOC Area ³						
	Cleanup		GW185S					
	Level ⁴	GW185S	(field dup.)	GW194S	GW195S	GW196D⁵	GW197S	GW245S
Volatile Organic Compounds (µg/L)								
1,1-Dichloroethene	0.057	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Benzene	0.8	0.32	0.27	0.20 U	0.20 U	0.20 U	0.020 U	0.20 U
cis-1,2-Dichloroethene	0.02	0.315	0.343	0.020 U	0.742	0.0351	0.153	0.0222
Trichloroethene	0.02	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Vinyl Chloride	0.05	0.385	0.346	0.020 U	0.144	0.0706	0.0518	0.020 U

Notes

- 1. Data qualifiers are as follows:
 - U = The analyte was not detected at the reporting limit indicated.
- 2. **Bolded** values exceed the cleanup levels.
- 3. S = shallow well; D = deep well.
- 4. Cleanup levels obtained from Table 2 of the Cleanup Action Plan.
- 5. GW196D is installed in a cluster with GW195S, and is screened below a silt layer at 26.8 to 36.8 feet in depth.

Abbreviations

 μ g/L = micrograms per liter

CPOC = conditional point of compliance

field dup. = duplicate field

TABLE 13: AOC-003 GROUNDWATER ELEVATION DATA NOVEMBER 13, 2018

Boeing Renton Facility, Renton, Washington

Well ID ¹	Screen Interval Depth (feet bgs)	TOC Elevation (feet) ²	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet) ²
GW188S ³	3.5 to 13.5	18.78	3.99	14.79
GW247S	4 to 14	18.91	4.20	14.71
GW248I	10 to 20	18.78	4.01	14.77
GW249S	4 to 14	18.85	3.91	14.94

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 during the second quarter 2017.

Abbreviations

bgs = below ground surface

TABLE 14: AOC-003 CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS NOVEMBER 13, 2018

Boeing Renton Facility, Renton, Washington

		Well ID ²				
	Source Area	Downgradient				
	Source Area	ea Plume Area CPC		OC Area		
	GW249S	GW188S	GW247S	GW248I		
Specific Conductivity (µS/cm)	601	571	511	591		
Dissolved Oxygen (mg/L)	0.11	0.11	0.15	0.2		
Oxidation/Reduction Potential (mV)	-92.1	-88.7	-75.2	-87.3		
pH (standard units)	6.41	6.31	6.36	6.33		
Temperature (degrees C)	15.67	15.7	13.91	13.21		
Total Organic Carbon (mg/L)	20.77	11.14	9.88	12.92		

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 15: AOC-003 CONCENTRATIONS OF CONSTITUENTS OF CONCERN ^{1, 2} NOVEMBER 13, 2018

Boeing Renton Facility, Renton, Washington

		Well ID ³			
	Cleanup	Source Area	Downgradient Plume Area	СРОС	: Area
	Level⁴	GW249S	GW188S	GW247S	GW248I
Volatile Organic Compounds (µg/L)					
cis-1,2-Dichloroethene	0.78	0.0829	0.0636	0.102	0.020 U
Tetrachloroethene	0.02	0.020 U	0.020 U	0.020 U	0.020 U
Trichloroethene	0.16	0.020 U	0.020 U	0.0208	0.020 U
Vinyl Chloride	0.24	0.629	0.813	0.679	0.987

Notes

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

Abbreviations

μg/L = micrograms per liter

CPOC = conditional point of compliance

TABLE 16: AOC-034 AND AOC-035 GROUNDWATER ELEVATION DATA NOVEMBER 13, 2018

Boeing Renton Facility, Renton, Washington

Well ID ¹	Screen Interval Depth (feet bgs)	TOC Elevation (feet) ²	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet) ²
GW001S	2 to 12	18.28	4.44	13.84
GW004S	2 to 12	16.66	2.90	13.76
GW005S ³	2 to 12	18.20	4.25	NM
GW216S	4.4 to 14.2	18.90	4.73	14.17
GW217S	3.5 to 13.4	19.20	5.02	14.18
GW218S	3.6 to 13.5	18.01	3.90	14.11
GW251S	4 to 14	17.98	4.05	13.93

Notes

- 1. S = shallow well
- 2. Elevations in feet relative to National Geodetic Vertical Datum of 1929.
- 3. Access to this well was blocked due to construction.

Abbreviations

bgs = below ground surface

TABLE 17: AOC-034 AND AOC-035 CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS ¹ NOVEMBER 13, 2018

Boeing Renton Facility, Renton, Washington

		Well ID ²				
		Downgradient				
	Source Area	Plume Area	СРОС	Area		
	GW217S	GW216S	GW218S	GW251S		
Specific Conductivity (µS/cm)	111.1	252.9	184	126.1		
Dissolved Oxygen (mg/L)	0.32	0.14	0.16	2.07		
Oxidation/Reduction Potential (mV)	0.3	-107.9	-44.0	27.7		
pH (standard units)	6.27	6.57	6.77	6.52		
Temperature (degrees C)	16.40	16.40	13.80	12.60		

Notes

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

Abbreviations

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

TABLE 18: AOC-034 AND AOC-035 CONCENTRATIONS OF CONSTITUENTS OF CONCERN ¹ NOVEMBER 13, 2018

Boeing Renton Facility, Renton, Washington

		Well ID ²				
		Source	Cross-Gradient			
	Cleanup	Area	Plume Area	CPOC Area		
	Level ³	GW217S	GW216S	GW218S	GW251S	
Volatile Organic Compounds (µg/L)						
cis-1,2-Dichloroethene	0.65	0.2 U	0.2 U	0.2 UJ	0.2 U	
Vinyl Chloride	0.29	0.2 U	0.2 U	0.2 UJ	0.2 U	

Notes

- 1. Data qualifiers are as follows:
 - U = The analyte was not detected at the reporting limit indicated.
- 2. S = shallow well
- 3. Cleanup levels obtained from Table 2 of the Cleanup Action Plan.

Abbreviations

 μ g/L = micrograms per liter

CPOC = conditional point of compliance

TABLE 19: LOT 20/FORMER BUILDING 10-71 PARCEL GROUNDWATER ELEVATION DATA NOVEMBER 12, 2018

Boeing Renton Facility, Renton, Washington

Well ID	Screen Interval Depth (feet bgs)	TOC Elevation (feet) ¹	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet) ¹
10-71-MW-1	7 to 17	30.07	8.81	21.26
10-71-MW-2	7 to 17	29.88	9.03	20.85
10-71-MW-4	6 to 16	28.97	8.90	20.07

Notes

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

bgs = below ground surface

TABLE 20: LOT 20/FORMER BUILDING 10-71 PARCEL CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS ¹ NOVEMBER 12, 2018

Boeing Renton Facility, Renton, Washington

		Well ID				
	10-71-MW1	10-71-MW2	10-71-MW4			
Specific Conductivity (µS/cm)	204.1	189	276			
Dissolved Oxygen (mg/L)	1.09	0.28	0.72			
Oxidation/Reduction Potential (mV)	37.0	-16.5	-10.1			
pH (standard units)	5.73	6.02	6.20			
Temperature (degrees C)	13.20	15.90	15.70			

Notes

1. Primary geochemical indicators are measured in the field.

Abbreviations

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

TABLE 21: LOT 20/FORMER BUILDING 10-71 PARCEL CONCENTRATIONS OF CONSTITUENTS OF CONCERN ^{1, 2} NOVEMBER 12, 2018

Boeing Renton Facility, Renton, Washington

	Well ID					
	10-71-MW1	10-71-MW2	10-71-MW4			
Volatile Organic Compounds (μg/L)						
cis- 1,2-Dichloroethene	0.20 U	0.25	0.20 U			
Toluene	0.20 U	0.20 U	0.20 U			
Trichloroethene	0.20 U	0.28	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 cleanup standards have been established for the Building 10-71 Parcel.

Abbreviations

 μ g/L = micrograms per liter

TABLE 22: APRON A GROUNDWATER ELEVATION DATA NOVEMBER 13, 2018

Boeing Renton Facility, Renton, Washington

Well ID	Screen Interval Depth (feet bgs)	TOC Elevation (feet) ¹	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet) ¹
GW262S	8 to 18	NA	5.22	NA
GW263S	8 to 18	NA	5.65	NA
GW264S	8 to 18	NA	6.49	NA

Notes

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

Abbreviations

bgs = below ground surface

NA = not available

TABLE 23: APRON A CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS ¹ NOVEMBER 13, 2018

Boeing Renton Facility, Renton, Washington

	Well ID ²			
	Source Area Wells			
	GW262S			
	GW262S	(field dup.)	GW264S	
Specific Conductivity (µS/cm)	548	548	881	
Dissolved Oxygen (mg/L)	0.97	0.97	0.26	
Oxidation/Reduction Potential (mV)	-61.7	-61.7	-102.4	
pH (standard units)	6.00	6.00	6.25	
Temperature (degrees C)	5.78	5.78	10.70	
Total Organic Carbon (mg/L)	33.32	32.53	34.37	

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 24: APRON A CONCENTRATIONS OF CONSTITUENTS OF CONCERN¹

NOVEMBER 13, 2018

Boeing Renton Facility, Renton, Washington

	Well ID ²			
	GW262S	GW262S (field dup.)	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	0.55	

Notes

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

Abbreviations

 μ g/L = micrograms per liter

wood.

Appendix A

TABLE A-1: GROUNDWATER COMPLIANCE MONITORING SCHEDULE

Boeing Renton Facility, Renton, Washington

Cleanup Action Monito		Monitoring Frequency ¹		Groundwater Monitoring Wells ²		Additional Water Level			
Area	Quarterly	Semiannual	Cross-Gradient Wells	Source Area Wells	Downgradient Plume Wells	CPOC Wells	Monitoring Wells ³	Constituents of Concern ⁴	Analyses ⁵
SWMU-168		X (1,3)	NA	GW228S ⁷	NA	GW229S, GW230I, and GW231S		VC	SW8260C SIM
0.00.00.450.60.00.00.454			GW081S, GW172S, GW173S,	GW232S, GW233I, GW234S,		cis -1,2-DCE, PCE, TCE, VC	SW8260C SIM ⁶		
SWMU-172/SWMU-174	X		NA	GW152S and GW153S	and GW226S	GW235I, and GW236S		Arsenic, copper, and lead	EPA 6020A
Building 4-78/79	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 ⁶	
SWMU/AOC Group	^		NA NA	GW039S, GW243I, and GW244S	GW0363, 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	X X (1,3)	X (1,3) NA	GW193S	GW190S, GW191D, GW192S, and GW246S	GW185S, GW194S, GW195S, GW196D, GW197S, and GW245S		Benzene	SW8260C ⁶	
AGC 001/AGC 002	(CPOC wells) (all other wells					ls)		TCE, cis -1,2-DCE, 1,1-dichloroethene, VC	SW8260C SIM ⁶
AOC-003	AOC-003	NΔ	NA GW249S	GW188S	GW247S and GW248I		PCE, TCE	SW8260C SIM ⁶	
A0C-003							cis -1,2-DCE, VC		
AOC-004		X (1,3)	NA	GW250S	NA	GW174S		Lead	EPA 6020A
AOC-034/AOC-035		X (2,4)	GW216S	GW217S	NA	GW218S and GW251S	GW001S, GW004S, and GW005S	VC, <i>cis</i> -1,2-DCE	SW8260C ⁶
AOC-060	100.000	X (1,3) GW012S and GW014S	W012S and GW014S GW009S	GW147S	GW149S, GW150S, GW252S,	GW010S and GW011D	VC	SW8260C SIM ⁶	
A0C-000		X (1,5)	GW0123 and GW0143	GW0093	GW1473	GW253I, and GW254S	GW010S and GW011D	TCE, cis -1,2-DCE	2440700C 2IIAI
								1,1,2-Trichloroethane, acetone, benzene, toluene, carbon tetrachloride, chloroform, <i>cis</i> -1,2-DCE, <i>trans</i> -1,2-DCE, methylene chloride	SW8260C ⁶
AOC-090 X (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 ⁶		
						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 ⁶
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 ⁶
Apron A		X (2,4)	NA	GW262S and GW264S	NA	NA		cis -1,2-DCE and VC	SW8260C ⁶

Notes

- 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.

Abbreviations:

NA = not applicable

AOC = area of concern cis -1,2-DCE = cis -1,2 dichloroethene COCs = constituents of concern CPOC = conditional point of compliance Cr = chromium EDR = Engineering Design Report EPA = Environmental Protection Agency 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 Parameters ²			
Cleanup Action			ter Monitoring Wells			Monitorin	g Frequency ³	
Area	Cross-Gradient Wells	Source Area Wells	Downgradient Plume Wells	CPOC Wells	Indicators	Quarterly	Semiannual	
SWMU-168	NA	GW228S ⁴	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	Х		
Building 4-78/79 SWMU/AOC Group	NA	GW031S, GW033S, GW034S, GW039S, GW243I, and GW244S	GW038S, GW209S, and GW210S	GW143S, GW237S, GW238I, GW239I, GW240D, GW241S, and GW242I	Dissolved 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	NA	GW193S	GW190S, GW191D, GW192S, and GW246S	GW185S, GW194S, GW195S, GW196D, GW197S, and GW245S	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 (CPOC wells)	X (1,3) (all other wells)	
AOC-004	NA	GW250S	NA	GW174S	Dissolved oxygen, pH, ORP, temperature, specific conductance		X (1,3)	
AOC-034/AOC-035	GW216S	GW217S	NA	GW218S and GW251S	Dissolved oxygen, pH, ORP, temperature, specific conductance		X (2,4)	
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	GW163I, GW165I, GW177I, GW178S, GW179I, GW180S, GW207S, and GW208S	Dissolved oxygen, pH, ORP, temperature, specific conductance, TOC ⁵		X (1,3)	
Building 4-70 Area	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).

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 Name	e <u>:</u>	Boeing Ren	iton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/13 /2018@	1238		
Sample Num	ber:	RGW185S-	181113		Weather:	CLOUDY 40S			
Landau Repr	esentative:	SRB/JHA/0	CEB		•				
WATER LEV	EL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before I	Purging (ft)	2.39	Time:		Flow through cel	l vol.		GW Meter No.(s	1
Begin Purge:			@ 1204	End Purge:	=	11/13 /2018 @	1217	Gallons Purged:	
Purge water di			55-gal Drum	ė.	Storage Tank	Ground		SITE TREATMI	
· ·	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Commontal
Time	(°F/°C)	(uS/cm)	(mg/L)	рп	(mV)	(NTU)	(ft)	Volume (gal)	Comments/ Observations
	U		on of Paramet			dings within the fo	0	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1207	15.9	675.0	0.30	6.43	-48.3	LOW	2.41		
1210	15.3	671.0	0.31	6.43	-63.9		2.41		-
1213	14.4	661.0	0.35	6.41	-70.6		2.41		
1216	13.9	647.0	0.40	6.32	-73.1				
SAMPLE CO									
Sample Collec	eted With:		Bailer			DED BLADDER		—	
Made of:		Stainless Ste	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	_	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
						,,			
(By Numerical	*	Other							
	*	_	, sheen, etc.):	CLEAR CO	LORLESS NO N	S			
	Temp	urbidity, odor,	D.O.	CLEAR COI	ORP	Turbidity	DTW	Ferrous iron	Comments/
Sample Descri	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)		DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
Sample Descri	Temp	urbidity, odor,	D.O.		ORP	Turbidity			
Sample Descri	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity			
Sample Descri	Temp (°F/°C)	Cond. (uS/cm) 646.0	D.O. (mg/L)	рН 6.31	ORP (mV)	Turbidity			
Sample Description Replicate 1 2	Temp (°F/°C) 13.9	Cond. (uS/cm) 646.0	D.O. (mg/L) 0.40	pH 6.31 6.31	ORP (mV) -73.1 -73.2	Turbidity			
Replicate 1 2 3	Temp (°F/°C) 13.9 13.9	Cond. (uS/cm) 646.0 645.0	D.O. (mg/L) 0.40 0.39	pH 6.31 6.31 6.31	ORP (mV) -73.1 -73.2 -73.3	Turbidity			
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.9 13.9 13.9 13.9	Cond. (uS/cm) 646.0 645.0 645.5	D.O. (mg/L) 0.40 0.40 0.39 0.40	6.31 6.31 6.31 6.30 6.31	ORP (mV) -73.1 -73.2 -73.3 -73.4 -73.3	Turbidity (NTU) #DIV/0!	(ft)	(Fe II)	
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.9 13.9 13.9 13.9 13.9	Cond. (uS/cm) 646.0 645.0 645.5	D.O. (mg/L) 0.40 0.39 0.40 0.40	6.31 6.31 6.30 6.31 ER BOTTLE	ORP (mV) -73.1 -73.2 -73.3 -73.4 -73.3 TYPE (Circle a)	Turbidity (NTU)	(ft)	(Fe II)	Observations
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.9 13.9 13.9 13.9 13.9 TYPICAL A (8260) (8010)	Cond. (uS/cm) 646.0 645.0 645.5 NALYSIS AD (8020) (N	D.O. (mg/L) 0.40 0.40 0.39 0.40 0.40 LLOWED PE	6.31 6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-Gx)	ORP (mV) -73.1 -73.2 -73.3 -73.4 -73.3 TYPE (Circle a (BTEX)	#DIV/0!	(ft)	(Fe II) nalysis below) WA	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.9 13.9 13.9 13.9 TYPICAL A (8260) (8010) (8270D) (PA	Cond. (uS/cm) 646.0 645.0 645.5 NALYSIS AI ()) (8020) (N	D.O. (mg/L) 0.40 0.39 0.40 0.40 LLOWED PERMYTPH-G) (H-D) (NWTP	6.31 6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH	ORP (mV) -73.1 -73.2 -73.3 -73.4 -73.3 TYPE (Circle a) (BTEX) H-HCID) (8081)	#DIV/0! pplicable or write:	non-standard a	nalysis below) WA □ WA □	Observations
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.9 13.9 13.9 13.9 13.9 13.9 (8260) (8010) (8270D) (PA (pH) (Condu	Cond. (uS/cm) 646.0 645.0 645.5 NALYSIS AD 0) (8020) (N CM) (NWTPH citivity) (TD:	D.O. (mg/L) 0.40 0.39 0.40 0.40 0.40 ULOWED PENWTPH-G) (H-D) (NWTP	6.31 6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH-OD) (Turbic	ORP (mV) -73.1 -73.2 -73.3 -73.4 -73.3 TYPE (Circle a) (BTEX) H-HCID) (8081)	#DIV/0! #DIV/0! pplicable or write to the second control of the	non-standard a	(Fe II) nalysis below) WA	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.9 13.9 13.9 13.9 13.9 13.9 13.9 (8260) (8010 (8270D) (PA (pH) (Condu	Cond. (uS/cm) 646.0 645.0 645.5 NALYSIS AD 0) (8020) (N CH) (NWTPH activity) (TD: C) (Total PO-	D.O. (mg/L) 0.40 0.39 0.40 0.40 0.40 ULOWED PENWTPH-G) (H-D) (NWTP	6.31 6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen	ORP (mV) -73.1 -73.2 -73.3 -73.4 -73.3 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity)	#DIV/0! #DIV/0! pplicable or write to the second control of the	non-standard a	nalysis below) WA □ WA □	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.9 13.9 13.9 13.9 13.9 13.9 (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals)	Cond. (uS/cm) 646.0 646.0 645.0 645.5 NALYSIS AI 0) (8020) (N AH) (NWTPH ctivity) (TDC) (Total PO- e) (WAD Cy o (As) (Sb) (D.O. (mg/L) 0.40 0.40 0.40 0.40 0.40 LLOWED PENWTPH-G) (H-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (Total Kiewanide) (Free Ba) (Be) (Ca	6.31 6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -73.1 -73.2 -73.3 -73.4 -73.3 TYPE (Circle a (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Grider (HCO3/CO3) (Crider (NO2)) (Pb) (Mg) (Mn) (No.)	non-standard a rease) Cl) (SO4) (NO	nalysis below) WA WA NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.9 13.9 13.9 13.9 13.9 13.9 (8260) (8010 (8270D) (PA (9H) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals)	Cond. (uS/cm) 646.0 646.0 645.0 645.5 NALYSIS Al (0) (8020) (N (NWTPH (ctivity) (TD) (C) (Total PO- (e) (WAD Cy (dAs) (Sb) (etals) (As) (Sb) (etals) (As) (Sb)	D.O. (mg/L) 0.40 0.40 0.40 0.40 0.40 LLOWED PENWTPH-G) (H-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (Total Kiewanide) (Free Ba) (Be) (Ca	6.31 6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -73.1 -73.2 -73.3 -73.4 -73.3 TYPE (Circle a (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Grider (HCO3/CO3) (Crider (NO2)) (Pb) (Mg) (Mn) (No.)	non-standard a rease) Cl) (SO4) (NO	nalysis below) WA WA NO2) (F)	Observations OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.9 13.9 13.9 13.9 13.9 13.9 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Me	Cond. (uS/cm) 646.0 646.0 645.0 645.5 NALYSIS AI ()) (8020) (N () (NWTPI () (Total PO- () (AS) (Sb) (Cetals) (As) (Sb) (getals) (As) (Sb) (Setals) (As) (Setals) (As) (Sb) (Setals) (As) (Sb) (Setals) (As) (Sb) (Setals) (As) (Set	D.O. (mg/L) 0.40 0.40 0.40 0.40 0.40 CLOWED PF WTPH-G) (H-D) (NWTP S) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Case) (Ba) (Be) (Case)	6.31 6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -73.1 -73.2 -73.3 -73.4 -73.3 TYPE (Circle a (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Grider (HCO3/CO3) (Crider (NO2)) (Pb) (Mg) (Mn) (No.)	non-standard a rease) Cl) (SO4) (NO	nalysis below) WA WA NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.9 13.9 13.9 13.9 13.9 13.9 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Me	Cond. (uS/cm) 646.0 646.0 645.0 645.5 NALYSIS Al (0) (8020) (N (NWTPH (ctivity) (TD) (C) (Total PO- (e) (WAD Cy (dAs) (Sb) (etals) (As) (Sb) (etals) (As) (Sb)	D.O. (mg/L) 0.40 0.40 0.40 0.40 0.40 CLOWED PF WTPH-G) (H-D) (NWTP S) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Case) (Ba) (Be) (Case)	6.31 6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -73.1 -73.2 -73.3 -73.4 -73.3 TYPE (Circle a (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Grond (HCO3/CO3) (Crock) (Pb) (Mg) (Mn) (No.)	non-standard a rease) Cl) (SO4) (NO	nalysis below) WA WA NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.9 13.9 13.9 13.9 13.9 13.9 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Me	Cond. (uS/cm) 646.0 646.0 645.0 645.5 NALYSIS AI ()) (8020) (N () (NWTPI () (Total PO- () (AS) (Sb) (Cetals) (As) (Sb) (getals) (As) (Sb) (Setals) (As) (Setals) (As) (Sb) (Setals) (As) (Sb) (Setals) (As) (Sb) (Setals) (As) (Set	D.O. (mg/L) 0.40 0.40 0.40 0.40 0.40 CLOWED PF WTPH-G) (H-D) (NWTP S) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Case) (Ba) (Be) (Case)	6.31 6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -73.1 -73.2 -73.3 -73.4 -73.3 TYPE (Circle a (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Grond (HCO3/CO3) (Crock) (Pb) (Mg) (Mn) (No.)	non-standard a rease) Cl) (SO4) (NO	nalysis below) WA WA NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.9 13.9 13.9 13.9 13.9 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Tod (Total Cyanid (Total Metals) (Dissolved Me VOC (Boein Methane Eth	Cond. (uS/cm) 646.0 646.0 645.0 645.5 NALYSIS AI ()) (8020) (N () (NWTPI () (Total PO- () (AS) (Sb) (Cetals) (As) (Sb) (getals) (As) (Sb) (Setals) (As) (Setals) (As) (Sb) (Setals) (As) (Sb) (Setals) (As) (Sb) (Setals) (As) (Set	D.O. (mg/L) 0.40 0.40 0.40 0.40 0.40 CLOWED PF WTPH-G) (H-D) (NWTP S) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Case) (Ba) (Be) (Case)	6.31 6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -73.1 -73.2 -73.3 -73.4 -73.3 TYPE (Circle a (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Grond (HCO3/CO3) (Crock) (Pb) (Mg) (Mn) (No.)	non-standard a rease) Cl) (SO4) (NO	nalysis below) WA WA NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.9 13.9 13.9 13.9 13.9 13.9 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Me	Cond. (uS/cm) 646.0 646.0 645.0 645.5 NALYSIS AI ()) (8020) (N () (NWTPI () (Total PO- () (AS) (Sb) (Cetals) (As) (Sb) (getals) (As) (Sb) (Setals) (As) (Setals) (As) (Sb) (Setals) (As) (Sb) (Setals) (As) (Sb) (Setals) (As) (Set	D.O. (mg/L) 0.40 0.40 0.40 0.40 0.40 CLOWED PF WTPH-G) (H-D) (NWTP S) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Case) (Ba) (Be) (Case)	6.31 6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -73.1 -73.2 -73.3 -73.4 -73.3 TYPE (Circle a (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Grond (HCO3/CO3) (Crock) (Pb) (Mg) (Mn) (No.)	non-standard a rease) Cl) (SO4) (NO	nalysis below) WA WA NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.9 13.9 13.9 13.9 13.9 13.9 (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Me VOC (Boein Methane Eth	Cond. (uS/cm) 646.0 646.0 645.0 645.5 NALYSIS Al (uS) (NWTP) (C) (Total PO- (e) (WAD Cy (e) (As) (Sb) ((etals) (As) (Sb) (g short list) ane Ethene Ac	D.O. (mg/L) 0.40 0.40 0.40 0.40 0.40 CLOWED PF WTPH-G) (H-D) (NWTP S) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Case) (Ba) (Be) (Case)	pH 6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide) (Cd) (Co) Ca) (Cd) (Co)	ORP (mV) -73.1 -73.2 -73.3 -73.4 -73.3 TYPE (Circle a (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Grond (HCO3/CO3) (Crock) (Pb) (Mg) (Mn) (No.)	non-standard a rease) Cl) (SO4) (NO	nalysis below) WA WA NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.9 13.9 13.9 13.9 13.9 13.9 (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Me VOC (Boein Methane Eth	Cond. (uS/cm) 646.0 646.0 645.0 645.5 NALYSIS Al (uS) (NWTP) (C) (Total PO- (e) (WAD Cy (e) (As) (Sb) ((etals) (As) (Sb) (g short list) ane Ethene Ac	D.O. (mg/L) 0.40 0.40 0.40 0.40 0.40 0.40 LLOWED PENWTPH-G) (H-D) (NWTPH-G) (Free Ba) (Free Ba) (Be) (Cab) (Ba) (Be) (Cab) (Cat) (C	pH 6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide) (Cd) (Co) Ca) (Cd) (Co)	ORP (mV) -73.1 -73.2 -73.3 -73.4 -73.3 TYPE (Circle a (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Grond (HCO3/CO3) (Crock) (Pb) (Mg) (Mn) (No.)	non-standard a rease) Cl) (SO4) (NO	nalysis below) WA WA NO2) (F)	Observations OR □ OR □ OR □



Project Nam	ie:	Boeing Ren	iton		Project Number	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ /2018@	1200		
Sample Nun	nber:	RGWDUP4	181113	-	Weather:	CLOUDY 40S			
Landau Repr	resentative:	SRB/JHA/C	CEB						
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)		Time:		Flow through ce	ll vol.		GW Meter No.(s	. 1
	Date/Time:	11/ 13 /201		End Purge:	•	11/13 /2018 @		Gallons Purged:	
Purge water d			55-gal Drum	Ď	Storage Tank	Ground	Other	SITE TREATM	
C	Т.	Cond.	_		_	TL: 4:4			
Time	Temp (°F/°C)	(uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
	U	ls: Stablizatio	on of Paramet		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	
		DIII				V 11070			
		DUI	PLICA	ALE I	TO RGV	N 185S			
						-	-		
					1	·	-		
SAMPLE CO	LLECTION D	OATA							
Sample Collec	cted With:		Bailer		Pump/Pump Type	2			
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lure:	Alconox Was	sh	Tap Rinse	DI Water	Dedicated			
(By Numerica	A Ondon)				_				
, ,	u Oraer)	Other							
			, sheen, etc.):	CLEAR CO	LORLESS NO N	S			
Sample Descr	ription (color, t	urbidity, odor,							
	ription (color, t	urbidity, odor,	D.O.	CLEAR CO	ORP	Turbidity	DTW (ft)	Ferrous iron	Comments/
Sample Descr Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)		DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
Sample Descr Replicate	Temp (°F/°C) 13.8	Cond. (uS/cm) 644.0	D.O. (mg/L)	рН 6.30	ORP (mV)	Turbidity			
Sample Descr Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity			
Sample Descr Replicate	Temp (°F/°C) 13.8	Cond. (uS/cm) 644.0	D.O. (mg/L)	рН 6.30	ORP (mV)	Turbidity			
Sample Descr Replicate	Temp (°F/°C) 13.8	Cond. (uS/cm) 644.0	D.O. (mg/L) 0.40	pH 6.30 6.30	ORP (mV) -73.8 -73.9	Turbidity			
Replicate 1 2 3	Temp (°F/°C) 13.8 13.8	Cond. (uS/cm) 644.0 644.0	D.O. (mg/L) 0.40 0.39	pH 6.30 6.30 6.30	ORP (mV) -73.8 -73.9 -74.2	Turbidity			
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.8 13.8 13.8 13.8	Cond. (uS/cm) 644.0 644.0 643.0	D.O. (mg/L) 0.40 0.39 0.39 0.39	pH 6.30 6.30 6.30 6.30 6.30	ORP (mV) -73.8 -73.9 -74.2 -74.4 -74.1	Turbidity (NTU) #DIV/0!	(ft)	(Fe II)	
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.8 13.8 13.8 13.8 13.8 13.8	Cond. (uS/cm) 644.0 644.0 643.0 643.8	D.O. (mg/L) 0.40 0.39 0.39 0.39	6.30 6.30 6.30 6.30 6.30 6.30	ORP (mV) -73.8 -73.9 -74.2 -74.4 -74.1 CTYPE (Circle a	Turbidity (NTU)	(ft)	(Fe II)	Observations
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.8 13.8 13.8 13.8 13.8 13.8 13.8	Cond. (uS/cm) 644.0 644.0 643.0 643.8 NALYSIS AI 0) (8020) (N	D.O. (mg/L) 0.40 0.39 0.39 0.39 0.39 LLOWED PE	6.30 6.30 6.30 6.30 6.30 6.30 KR BOTTLE	ORP (mV) -73.8 -73.9 -74.2 -74.4 -74.1 CTYPE (Circle a	#DIV/0!	non-standard a	nalysis below)	Observations OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.8 13.8 13.8 13.8 13.8 13.8 (8260) (8010 (8270D) (PA	Cond. (uS/cm) 644.0 644.0 644.0 643.0 643.8 NALYSIS AI (b) (8020) (NAH) (NWTPE	D.O. (mg/L) 0.40 0.39 0.39 0.39 0.39 LLOWED PERWYPH-G) (M-D) (NWTP	6.30 6.30 6.30 6.30 6.30 CR BOTTLE NWTPH-Gx) PH-Dx) (TPI	ORP (mV) -73.8 -73.9 -74.2 -74.4 -74.1 CTYPE (Circle a) (BTEX) H-HCID) (8081)	#DIV/0! pplicable or write (8141) (Oil & G	non-standard a	nalysis below) WA □ WA □	Observations
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.8 13.8 13.8 13.8 13.8 (8260) (8010) (8270D) (PA) (pH) (Condu	Cond. (uS/cm) 644.0 644.0 644.0 643.0 643.8 NALYSIS AI 0) (8020) (NaH) (NWTPH activity) (TDS)	D.O. (mg/L) 0.40 0.39 0.39 0.39 0.39 LLOWED PENWTPH-G) (M-D) (NWTP	6.30 6.30 6.30 6.30 6.30 6.30 ER BOTTLE NWTPH-GX) PH-DX) (TPPOD) (Turbic	ORP (mV) -73.8 -73.9 -74.2 -74.4 -74.1 CTYPE (Circle a) (BTEX) H-HCID) (8081)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G) (HCO3/CO3) (C	non-standard a	nalysis below) WA □ WA □	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.8 13.8 13.8 13.8 13.8 (8260) (8010 (8270D) (PA (pH) (Condu	Cond. (uS/cm) 644.0 644.0 644.0 643.0 643.8 NALYSIS AI 0) (8020) (N AH) (NWTPH activity) (TD:	D.O. (mg/L) 0.40 0.39 0.39 0.39 0.39 LLOWED PENWTPH-G) (M-D) (NWTP	6.30 6.30 6.30 6.30 6.30 6.30 CR BOTTLE NWTPH-GX) PH-DX) (TPH OD) (Turbic dahl Nitrogen	ORP (mV) -73.8 -73.9 -74.2 -74.4 -74.1 CTYPE (Circle at a company) H-HCID) (8081) dity) (Alkalinity)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G) (HCO3/CO3) (C	non-standard a	nalysis below) WA □ WA □	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.8 13.8 13.8 13.8 13.8 13.8 (8260) (8010 (8270D) (PA (pH) (Conduction) (COD) (TOO (Total Cyanid	Cond. (uS/cm) 644.0 644.0 643.0 643.8 NALYSIS AI (a) (8020) (N (b) (NWTPH (ctivity) (TD) (c) (Total PO-	D.O. (mg/L) 0.40 0.39 0.39 0.39 0.39 LLOWED PENWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (Total Kiewanide) (Free	6.30 6.30 6.30 6.30 6.30 6.30 CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)	ORP (mV) -73.8 -73.9 -74.2 -74.4 -74.1 CTYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) a) (NH3) (NO3.	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G) (HCO3/CO3) (C	non-standard a rease) Cl) (SO4) (NO	nalysis below) WA WA WA O S) (NO2) (F)	Observations OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.8 13.8 13.8 13.8 13.8 13.8 (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals)	Cond. (uS/cm) 644.0 644.0 644.0 643.0 643.8 NALYSIS AI 0) (8020) (N AH) (NWTPH dictivity) (TDS C) (Total PO- e) (WAD Cy o) (As) (Sb) (D.O. (mg/L) 0.40 0.39 0.39 0.39 LLOWED PENTTH-G) (H-D) (NWTPS) (TSS) (B4) (Total Kiew anide) (Free Ba) (Be) (Ca	6.30 6.30 6.30 6.30 6.30 6.30 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -73.8 -73.9 -74.2 -74.4 -74.1 CTYPE (Circle a) (BTEX) H-HCID) (8081) (dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Good (HCO3/CO3) (Cod) (NO2) (Pb) (Mg) (Mn) (1	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA □ WA □ 3) (NO2) (F)	Observations OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.8 13.8 13.8 13.8 13.8 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Mo VOC (Boein	Cond. (uS/cm) 644.0 644.0 644.0 643.0 643.8 NALYSIS AI (D) (8020) (N C) (Total PO- (e) (WAD Cy (o) (As) (Sb) ((etals) (As) (Sb) (g short list)	D.O. (mg/L) 0.40 0.39 0.39 0.39 0.39 LLOWED PENWTPH-G) (Management of the content of the c	6.30 6.30 6.30 6.30 6.30 6.30 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -73.8 -73.9 -74.2 -74.4 -74.1 CTYPE (Circle a) (BTEX) H-HCID) (8081) (dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Good (HCO3/CO3) (Cod) (NO2) (Pb) (Mg) (Mn) (1	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA □ WA □ 3) (NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.8 13.8 13.8 13.8 13.8 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Mo VOC (Boein	Cond. (uS/cm) 644.0 644.0 644.0 643.0 643.8 NALYSIS AI (D) (8020) (N AH) (NWTPH (activity) (TDS) (C) (Total PO- (e) (WAD Cy (das) (Sb) (etals) (As) (Sb) (St)	D.O. (mg/L) 0.40 0.39 0.39 0.39 0.39 LLOWED PENWTPH-G) (Management of the content of the c	6.30 6.30 6.30 6.30 6.30 6.30 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -73.8 -73.9 -74.2 -74.4 -74.1 CTYPE (Circle a) (BTEX) H-HCID) (8081) (dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Good (HCO3/CO3) (Cod) (NO2) (Pb) (Mg) (Mn) (1	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA □ WA □ 3) (NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.8 13.8 13.8 13.8 13.8 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Mo VOC (Boein	Cond. (uS/cm) 644.0 644.0 644.0 643.0 643.8 NALYSIS AI (D) (8020) (N C) (Total PO- (e) (WAD Cy (o) (As) (Sb) ((etals) (As) (Sb) (g short list)	D.O. (mg/L) 0.40 0.39 0.39 0.39 0.39 LLOWED PENWTPH-G) (Management of the content of the c	6.30 6.30 6.30 6.30 6.30 6.30 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -73.8 -73.9 -74.2 -74.4 -74.1 CTYPE (Circle a) (BTEX) H-HCID) (8081) (dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Good (HCO3/CO3) (Cod) (NO2) (Pb) (Mg) (Mn) (1	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA □ WA □ 3) (NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.8 13.8 13.8 13.8 13.8 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Tod (Total Cyanid (Total Metals) (Dissolved Methane Eth	Cond. (uS/cm) 644.0 644.0 644.0 643.0 643.8 NALYSIS AI (D) (8020) (N C) (Total PO- (e) (WAD Cy (o) (As) (Sb) ((etals) (As) (Sb) (g short list)	D.O. (mg/L) 0.40 0.39 0.39 0.39 0.39 LLOWED PENWTPH-G) (Management of the content of the c	6.30 6.30 6.30 6.30 6.30 6.30 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -73.8 -73.9 -74.2 -74.4 -74.1 CTYPE (Circle a) (BTEX) H-HCID) (8081) (dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Good (HCO3/CO3) (Cod) (NO2) (Pb) (Mg) (Mn) (1	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA □ WA □ 3) (NO2) (F)	Observations OR □ OR □ OR □
Replicate Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.8 13.8 13.8 13.8 13.8 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Mo VOC (Boein	Cond. (uS/cm) 644.0 644.0 644.0 643.0 643.8 NALYSIS AI (D) (8020) (N C) (Total PO- (e) (WAD Cy (o) (As) (Sb) ((etals) (As) (Sb) (g short list)	D.O. (mg/L) 0.40 0.39 0.39 0.39 0.39 LLOWED PENWTPH-G) (Management of the content of the c	6.30 6.30 6.30 6.30 6.30 6.30 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -73.8 -73.9 -74.2 -74.4 -74.1 CTYPE (Circle a) (BTEX) H-HCID) (8081) (dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Good (HCO3/CO3) (Cod) (NO2) (Pb) (Mg) (Mn) (1	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA □ WA □ 3) (NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.8 13.8 13.8 13.8 13.8 13.8 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Mo VOC (Boein Methane Eth	Cond. (uS/cm) 644.0 644.0 644.0 643.0 643.8 NALYSIS AI (D) (8020) (N C) (Total PO- (e) (WAD Cy (o) (As) (Sb) ((etals) (As) (Sb) (g short list)	D.O. (mg/L) 0.40 0.39 0.39 0.39 0.39 LLOWED PENWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (Ba) (Be) (Cab) (Ba) (Be) (Cab)	6.30 6.30 6.30 6.30 6.30 6.30 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -73.8 -73.9 -74.2 -74.4 -74.1 CTYPE (Circle a) (BTEX) H-HCID) (8081) (dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Good (HCO3/CO3) (Cod) (NO2) (Pb) (Mg) (Mn) (1	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA □ WA □ 3) (NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.8 13.8 13.8 13.8 13.8 13.8 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Mo VOC (Boein Methane Eth	Cond. (uS/cm) 644.0 644.0 644.0 643.0 643.8 NALYSIS AI (uS/cm) 644.0 644.0 643.0 643.8 (uS/cm) 644.0 644.0 644.0 643.0 643.8 (uS/cm) 644.0 644.0 644.0 643.0 643.8 (uS/cm) 643.8 (uS/cm) 644.0 643.0 643.8 (uS/cm) 643.8 (uS/cm) 643.8 (uS/cm) 644.0 644.0 643.0 643.0 (uS/cm) 643.0 (uS/cm) 643.0 (uS/cm) 644.0 (uS/cm) 643.0 (uS/cm) 643.8 (uS/cm) (uS/cm) 643.0 (uS/cm) (uS/cm) 643.0 (uS/cm) (uS/cm) 643.0 (uS/cm) (uS/cm) 643.0 (uS/cm) (uS/c	D.O. (mg/L) 0.40 0.39 0.39 0.39 0.39 LLOWED PENWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (Ba) (Be) (Cab) (Ba) (Be) (Cab)	6.30 6.30 6.30 6.30 6.30 6.30 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -73.8 -73.9 -74.2 -74.4 -74.1 CTYPE (Circle a) (BTEX) H-HCID) (8081) (dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Good (HCO3/CO3) (Cod) (NO2) (Pb) (Mg) (Mn) (1	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA □ WA □ 3) (NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.8 13.8 13.8 13.8 13.8 13.8 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Mo VOC (Boein Methane Eth	Cond. (uS/cm) 644.0 644.0 644.0 643.0 643.8 NALYSIS AI (uS/cm) 644.0 644.0 643.0 643.8 (uS/cm) 644.0 644.0 644.0 643.0 643.8 (uS/cm) 644.0 644.0 644.0 643.0 643.8 (uS/cm) 643.8 (uS/cm) 644.0 643.0 643.8 (uS/cm) 643.8 (uS/cm) 643.8 (uS/cm) 644.0 644.0 643.0 643.0 (uS/cm) 643.0 (uS/cm) 643.0 (uS/cm) 644.0 (uS/cm) 643.0 (uS/cm) 643.8 (uS/cm) (uS/cm) 643.0 (uS/cm) (uS/cm) 643.0 (uS/cm) (uS/cm) 643.0 (uS/cm) (uS/cm) 643.0 (uS/cm) (uS/c	D.O. (mg/L) 0.40 0.39 0.39 0.39 0.39 LLOWED PENWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (Ba) (Be) (Cab) (Ba) (Be) (Cab)	6.30 6.30 6.30 6.30 6.30 6.30 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -73.8 -73.9 -74.2 -74.4 -74.1 CTYPE (Circle a) (BTEX) H-HCID) (8081) (dity) (Alkalinity) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Good (HCO3/CO3) (Cod) (NO2) (Pb) (Mg) (Mn) (1	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA □ WA □ 3) (NO2) (F)	Observations OR □ OR □ OR □



Project Name	e:	Boeing Ren	nton		Project Numbe	er:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 13 /2018@	1313		
Sample Num	ıber:	RGW194S-	- 181113		Weather:	CLOUDY 40S			
Landau Repr	resentative:	SRB/JHA/0	CEB		·				
WATER LEV	'EL/WELL/PU	JRGE DATA							
Well Conditio	n:	Secure (YES	5)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before l	Purging (ft)	3.24	Time:	1250	Flow through ce	ll vol.		GW Meter No.(s	S 1
Begin Purge:	Date/Time:	11/13/2018	@ 1251	End Purge:	Date/Time:	11/13 /2018 @	1307	Gallons Purged:	0.:
Purge water d	isposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
m.	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) llowing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
1254	16.6	755.0	0.25	6.25	-25.4	LOW	2.92		
1257	15.7	709.0	0.30	6.23	-45.3		2.92		
1300	15.2	683.0	0.33	6.19	-51.2		2.41		
1303	15.0	670.0	0.34	6.16	-52.6				
1306	14.9	663.0	0.34	6.13	-53.9				
					-	-	-		
					-	-			
SAMPLE CO	LLECTION D	OATA							
Sample Collec	eted With:		Bailer		Pump/Pump Type	DED BLADDER			
Made of:		Stainless Ste	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	ure:	Alconox Wa	sh	Tap Rinse	DI Water	Dedicated Dedicated		-74	
(By Numerica	l Order)	Other							
Sample Descr	iption (color, t	turbidity, odor	, sheen, etc.):	CLEAR CO	LORLESS NO N	S			
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	14.8	663.0	0.35	6.13	-54.2	(1120)	(11)	(1011)	observations
2	14.9	662.0	0.35	6.12	-54.4				
3	14.9	663.0	0.35	6.12	-54.7				
	14.8	663.0	0.35						
4 Average:	14.8	662.8	0.35	6.12	-55.1 -54.6	#DIV/0!			
						pplicable or write	non-standard a		OD [
5	`		NWTPH-G) ((8141) (Oil & G	rasca)	WA □	OR OR
						(HCO3/CO3) (C			OK —
1	` `			<u> </u>	n) (NH3) (NO3)		(2.2.)	o, (===) (=)	
	(Total Cyanid	le) (WAD Cy	vanide) (Free	Cyanide)					
						(Pb) (Mg) (Mn) (I			
			o) (Ba) (Be) (C	(Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (Pl	b) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (N	Va) (Hardness) (Silic
	VOC (Boein	ig short list) nane Ethene A	cetylene						
	Michaile Elli	une Ethelle A	coty ione						
	others								
Duplicate San	nle No(s)								
Comments:	ipic 110(s).								
Signature:	CEB					Date:	11/13/2018		



Project Name	e:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 13 /2018@	1346		
Sample Num	ber:	RGW195S-	181113		Weather:	40'S, CLOUDY			
Landau Repr	esentative:	JHA			•				
WATER LEV	EL/WELL/PU	JRGE DATA							
Well Conditio	n:	Secure (YES)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before I	Purging (ft)	2.58	Time:	1320	Flow through cel	l vol.		GW Meter No.(s	S SLOPE 4
Begin Purge:	Date/Time:	11/ 13 /201	8 @ 1324	End Purge:	Date/Time:	11/ 13 /2018 @ 1	345	Gallons Purged:	0.75
Purge water di	isposed 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
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	
1327	16.1	702	0.19	6.26	-82.9	LOW	2.58	< 0.25	
1330	16.3	683	0.25	6.28	-97.2				
1333	16.6	635	0.37	6.29	-102.8		2.58	0.25	
1336	16.5	617	0.51	6.29	-105.5				
1339	16.6	608	0.65	6.29	-107.2		2.58		
1342	16.7	606	0.69	6.28	-107.6				
1344	16.7	602	0.77	6.29	-108.4				
SAMPLE CO			D. II		D /D T	DED DI ADDED			
Sample Collec	eted with:	G(- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Bailer	_		DED BLADDER		D. F	
Made of:		Stainless Ste	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	_	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	,	Other		GT E L E GO					
Sample Descri	iption (color, t	urbidity, odor	, sheen, etc.):_	CLEAR, CC	DLORLESS, NO/N	NS			
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	16.7	602	0.77	6.28	-108.6				
2	16.7	601	0.78	6.29	-108.8				
3	16.7	600	0.79	6.28	-108.9				
4	16.7	599	0.79	6.28	-109.0	_			
Average:	16.7	601	0.78	6.28	-108.8	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS A	LLOWED PE	ER BOTTLE	TYPE (Circle a)	oplicable or write	non-standard a	nalysis below)	
5	(<mark>8260</mark>) (8010)) (8020) (N	WTPH-G) (NWTPH-Gx)	(BTEX)			WA □	OR 🗆
	(8270D) (PA	AH) (NWTPI	H-D) (NWTP	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & G	rease)	WA □	OR 🗆
1						(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
1			anide) (Free		i) (NH3) (NO3/	NU2)			
	`	<u> </u>			(Cr) (Cu) (Fe) ((Pb) (Mg) (Mn) (I	Ni) (Ag) (Se) (Tl) (V) (Zn) (Hs	y) (K) (Na)
									Va) (Hardness) (Silica
	VOC (Boein			, , , , , - =/					, , , , , , , , , , , , , , , , , , , ,
	`	ane Ethene A	cetylene						
	others								
<u> </u>									
Duplicate San	nple No(s):								
Comments:			IHA			Date:	11/13/2018		



Project Name	e:	Boeing Ren	iton		Project Number	r:	0025217.099.0	99	<u>-</u>
Event:		Nov-18			Date/Time:	11/13 /2018@	1353		
Sample Num	nber:	RGW196D	- 181113		Weather:	SUNNY/ W/ CL	OUDS 40S		
Landau Repr	resentative:	SRB/JHA/0	CEB		-				
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Conditio		Secure (YES)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	2.57	Time:	1321	Flow through cell	l vol.		GW Meter No.(s	1
Begin Purge:			@ 1328	End Purge:	=	11/13 /2018 @	1349	Gallons Purged:	
Purge water d			55-gal Drum	Ě	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	ls: Stablizatio +/- 3%		ters for three +/- 0.1 units		lings within the fo +/- 10%	llowing limits < 0.3 ft	>/= 1 flow through cell	
1221								tin ough cen	
1331	14.7	385.3	0.33	6.29		LOW	2.58		
1334	14.8	386.2	0.30	6.30	-14.0		2.58		
1337	14.9	387.3	0.30	6.31	-25.7		2.41		
1340	14.9	388.1	0.28	6.32	-36.2				
1343	14.8	386.7	0.27	6.33	-49.0				- <u> </u>
1346	14.8	386.1	0.27	6.33	-52.5				
1348	14.8	385.5	0.27	6.33	-55.3				
SAMPLE CO	LLECTION D								
Sample Collec	cted With:		Bailer			DED BLADDER			
Made of:		Stainless Ste	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lure:	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color, t	urbidity, odor	, sheen, etc.):	CLEAR CO	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	14.9	385.3	0.26	6.33	-56.1				
2	14.9	385.2	0.26	6.33	-56.8				
3	14.9	385.1	0.26	6.33	-57.4				
4	14.9	385.3	0.26	6.33	-58.0				
Average:	14.9	385.2	0.26	6.33	-57.1	#DIV/0!			
						pplicable or write	non-standard a	wa 🗆	OR 🗆
3	(8260) (8010 (8270D) (PA					(8141) (Oil & G	rease)	WA 🗆	OR 🗆
						(HCO3/CO3) (C			OK —
1	(COD) (TOO	C) (Total PO	4) (Total Kie	dahl Nitrogen	n) (NH3) (NO3/	NO2)		, , , ,	
	(Total Cyanid	e) (WAD Cy	ranide) (Free	Cyanide)					
	(Total Metals)	(As) (Sb) (Ba) (Be) (Ca	(Cd) (Co)	(Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (N	Ni) (Ag) (Se) (Γl) (V) (Zn) (Hg	g) (K) (Na)
	`	/ \ / \	o) (Ba) (Be) (C	(Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (A	Ag) (Se) (Tl) (V)	(Zn) (Hg) (K) (N	(a) (Hardness) (Silica
	VOC (Boein								
	Methane Eth	ane Ethene A	cetylene						
	others								
	others								
Duplicate San									



Project Nam	e:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/13 /2018@	1236		
Sample Num	nber:	RGW197S-	181113		Weather:	40'S, CLOUDY			
Landau Repr	resentative:	JHA							
	EL/WELL/PU								
Well Condition		Secure (YES		Damaged (N			Flush Mount		
DTW Before		2.25			Flow through cel			GW Meter No.(s	
	Date/Time:			End Purge:		11/ 13 /2018 @ 1		Gallons Purged:	
Purge water d	isposed to:		55-gal Drum		Storage Tank	Ground		SITE TREATME	
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	
1217	16.0	889	0.14	6.79	-89.6	LOW	2.25	<0.25	
1220	16.2	893	0.11	7.00	-148.5		2.25	0.25	
1223	16.2	893	0.12	7.02	-154.0				
1226	16.2	890	0.14	7.05	-163.5			0.5	
1229	16.2	889	0.14	7.05	-166.2		2.25		
1232	16.2	889	0.12	7.06	-170.8				
1234	16.2	892	0.12	7.08	-173.8	-			
SAMPLE CO	LLECTION D	OATA							
Sample Collec	cted With:		Bailer		Pump/Pump Type	DED BLADDER			
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Sample Descr Replicate	Temp	urbidity, odor,	sheen, etc.):	pH	OLORLESS, NO/N	Turbidity	DTW	Ferrous iron	Comments/
	(°F/°C)	(uS/cm)	(mg/L)		(mV)	(NTU)	(ft)	(Fe II)	Observations
1	16.2	891	0.12	7.08	-174.1				
2	16.2	892	0.12	7.08	-174.2				
3	16.2	892	0.12	7.08	-174.3				
4	16.2	892	0.13	7.08	-174.4				
Average:	16.2	892	0.12	7.08	-174.3	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
5		0) (8020) (N				•			OR 🗆
	(8270D) (PA	AH) (NWTPI	H-D) (NWTF	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & G	rease)	WA □	OR 🗆
						(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
1					n) (NH3) (NO3/	NO2)			
		e) (WAD Cy			(C _n) (C _n) (E _n) :	Db) (M=) (M) (VI:) (A ~) (Q-) (T1) (M) (7) (II) (V) (Ma)
						Pb) (Mg) (Mn) (1 b) (Mg) (Mn) (Ni) (
	VOC (Boein) (Da) (Dc) (C	u) (Cu) (C0)	(C1) (Cu) (1C) (Ft	// (1418) (1411) (141) (115) (DC) (11) (V	/ (Zii) (11g) (IX) (IV	a, (Hardiless) (SII
	,	ane Ethene Ac	cetylene						
			-						
	others								
Duplicate San	nple No(s):								
Comments:	1								



Project Nam	e:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:	-	Nov-18			Date/Time:	11/13 /2018@			
Sample Nun	nber:	RGW245S-	181113		Weather:	40'S, CLOUDY			
Landau Rep		JHA			•	,			
WATER LEV	/EL/WELL/PU	URGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	IO)	Describe:	Flush Mount		
DTW Before	Purging (ft)	2.38	Time:	1244	Flow through cel	l vol.		GW Meter No.(s	SLOPE 4
Begin Purge:	Date/Time:	11/ 13 /201	8 @ 1248	End Purge:	Date/Time:	11/ 13 /2018 @ 1	1309	Gallons Purged:	0
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)	tors for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
1251	13.3	383.5	0.43	6.77	-50.8	LOW	2.38	<0.25	
1254	14.5	345.8	0.22	6.68	-46.2				
1257	14.9	357.8	0.17	6.74	-55.4			0.25	
1300	15.1	368.6	0.14	6.77	-69.4		2.38		
1303	15.1	375.6	0.13	6.77	-75.1				
1306	15.2	390.3	0.12	6.76	-81.6			0.5	
1308		398.7	0.12	6.76	-86.8				
SAMPLE CO	LLECTION I								
Sample Collec	cted With:		Bailer	_	Pump/Pump Type	DED BLADDER			
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	☐ Other	Dedicated	
Decon Proced	lure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color, t	turbidity, odor,	sheen, etc.):	CLOUDY, 0	COLORLESS, NO)/NS			
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	15.2	399.2	0.13	6.76	-87.5				
2	15.2	399.8	0.13	6.76	-88.1				
3	15.2	400.1	0.12	6.76					
4	15.2	400.4	0.14	6.76					
Average:	15.2	399.9	0.13	6.76	-88.2	#DIV/0!			
DUANTITY	TYPICAL A	NALYSIS AI	LLOWED PE	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
5		0) (8020) (N						WA □	OR 🗆
						(8141) (Oil & G	rease)	wa □	OR 🗆
	(pH) (Condu	activity) (TDS	S) (TSS) (B	OD) (Turbi	dity) (Alkalinity)	(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
1	(COD) (TO	C) (Total PO	4) (Total Kie	dahl Nitroger	n) (NH3) (NO3/	NO2)			
		le) (WAD Cy							
						Pb) (Mg) (Mn) (1			
) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (Pt	o) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (N	la) (Hardness) (Sil
	VOC (Boein	ig short list) nane Ethene Ad	estulano						
	wiemane Eth	iane emene A	ctylelle						
	others								
Ouplicate San	mple No(s):								
Comments:									
Signature:			JHA			Date:	11/13/2018		



Project Nam	e:	Boeing Ren	nton		Project Numbe	r:	0025217.099.0	99	
Event:	ī <u> </u>	Nov-18			Date/Time:	11/ 13 /2018@	1400		
Sample Num	ber:	RGW188S-	181113		Weather:	40s PC			
Landau Rep	resentative:	SRB			•				
WATER LEV	'EL/WELL/P	URGE DATA							
Well Condition	n:	Secure (YES	5)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	3.99	Time:	1310	Flow through cel	ll vol.		GW Meter No.(s	s heron3
Begin Purge:	Date/Time:	11/13/2018	@ 1330	End Purge:	Date/Time:	11/13 /2018 @	1352	Gallons Purged:	0.25
Purge water d	isposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
TP*	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) Illowing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
1333	16.02	570	0.23	6.21	-48.0	LOW	4.01		
1336	16.03	571	0.18	6.23	-61.4		4.02		
1339	15.71	572	0.16	6.25	-72.7		4.03		
1342	15.56	572	0.14	6.27	-79.6		4.03		
1345	15.50	571	0.13	6.30	-83.4				
1348	15.54	571	0.12	6.30	-85.1				
1351	15.65	571	0.11	6.31	-88.7				
SAMPLE CO	LLECTION I	DATA							
Sample Collec	eted With:		Bailer		Pump/Pump Type	ded bladder			
Made of:		Stainless Ste	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	ure:	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	l Order)	Other							
Sample Descr	iption (color,	turbidity, odor	, sheen, etc.):	CLEAR CO	LORLESS NO/N	S			
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O.	pН	ORP (mV)	Turbidity	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1		` ′	(mg/L)	6.21	` ′	(NTU)	(11)	(Fe II)	Observations
1	15.63	571	0.11	6.31	-88.9				
2	15.63	571	0.11	6.31	-89.1				
3	15.65	571	0.11	6.31	-89.5				
4	15.65	571	0.11	6.32	-89.7				
Average:	15.64	571	0.11	6.31	-89.3	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS A	LLOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
3	`	0) (8020) (N		· · · · · · · · · · · · · · · · · · ·				WA 🗆	OR 🗆
						(8141) (Oil & G		WA 🗆	OR 🗆
1					dity) (Alkalinity) n) (NH3) (NO3/	(HCO3/CO3) (C	(SO4) (NO	(NO2) (F)	
1		le) (WAD Cy			i) (NII3) (NO3/	NO2)			
		/ \	/ \		(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
									Na) (Hardness) (Silic
	VOC (Boein	g short list)							
	Methane Eth	ane Ethene A	cetylene						
	others								
	others								
Duplicate San	nple No(s):	_							
Comments:	MSMSD Lo	cation							
Signature:	SRB					Date:	11/13/2018		



Project Nam	ie:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	_
Event:		Nov-18			Date/Time:	11/ 13 /2018@	1320		
Sample Nun	nber:	RGW247S-	181113		Weather:	40s PC			
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)	4.2	Time:	1240	Flow through cel	ll vol.		GW Meter No.(s	heron3
Begin Purge:	Date/Time:	11/13/2018	@ 1250	End Purge:	Date/Time:	11/13 /2018 @	1312	Gallons Purged:	0.25
Purge water d	lisposed 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) Purge Goa	(uS/cm) ls: Stablizatio	(mg/L) on of Paramet	ers for three	(mV) e consecutive read	(NTU) dings within the fo	(ft) ollowing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
1253	14.02	534	0.31	6.28	-37.5	LOW	4.41		
1256	14.18	531	0.26	6.30	-47.0		4.4		
1259	14.10	527	0.19	6.34	-61.9		4.35		
1302	13.98	519	0.19	6.41	-67.8				
1305	14.02	514	0.16	6.36	-72.3				
1308	13.96	513	0.16	6.36	-73.9				
1311	13.91	511	0.15	6.36	-75.2				
SAMPLE CO	LLECTION D								
Sample Colle	cted With:	_	Bailer		Pump/Pump Type	_		_	
Made of:		Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lure	A 1 XX7	.1.	TD.					
	_	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
	ıl Order)	Other			LORLESS NO/N				
, ,	ıl Order)	Other					DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
Sample Descr	al Order) ription (color, t	Other turbidity, odor	, sheen, etc.):_	CLEAR CO	LORLESS NO/N	S Turbidity			
Sample Descri Replicate	ription (color, t Temp (°F/°C)	Other curbidity, odor, Cond. (uS/cm)	D.O. (mg/L)	CLEAR CO	ORP (mV)	S Turbidity			
Sample Descri Replicate	ription (color, t Temp (°F/°C) 13.91	Other curbidity, odor, Cond. (uS/cm)	D.O. (mg/L)	pH 6.36	ORP (mV) -75.6	S Turbidity			
Replicate 1 2	ription (color, to Temp (°F/°C) 13.91	Cond. (uS/cm) 511	D.O. (mg/L) 0.15	PH 6.36 6.36	ORP (mV) -75.6	S Turbidity			
Replicate 1 2 3	ription (color, t Temp (°F/°C) 13.91 13.90 13.84	Cond. (uS/cm) 511 510	D.O. (mg/L) 0.15 0.14	pH 6.36 6.36 6.36	ORP (mV) -75.6 -75.9	S Turbidity			
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.91 13.84 13.86	Cond. (uS/cm) 511 510 510 510	D.O. (mg/L) 0.15 0.14 0.15 0.15 0.15	PH 6.36 6.36 6.36 6.36 6.36	ORP (mV) -75.6 -75.9 -76.3	Turbidity (NTU)	(ft)	(Fe II)	
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.91 13.86 13.88 TYPICAL A	Cond. (uS/cm) 511 510 510 510 NALYSIS Al	D.O. (mg/L) 0.15 0.14 0.15 0.15 0.15	PH 6.36 6.36 6.36 6.36 6.36 CR BOTTLE	ORP (mV) -75.6 -75.9 -76.3 -75.9	Turbidity (NTU) #DIV/0!	(ft)	(Fe II)	
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.91 13.84 13.86 13.88 TYPICAL A (8260) (8010	Cond. (uS/cm) 511 510 510 510 510 NALYSIS AI	D.O. (mg/L) 0.15 0.14 0.15 0.15 0.15 ULOWED PERMYPH-G) (PH 6.36 6.36 6.36 6.36 CR BOTTLE NWTPH-Gx)	ORP (mV) -75.6 -75.9 -76.3 -75.9 TYPE (Circle a) (BTEX)	Turbidity (NTU) #DIV/0!	non-standard a	(Fe II)	Observations
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.91 13.84 13.86 13.88 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu	Cond. (uS/cm) 511 510 510 510 NALYSIS AD () (8020) (NAH) (NWTPHetivity) (TD)	D.O. (mg/L) 0.15 0.14 0.15 0.15 0.15 0.15 0.17 0.18 ULOWED PERMYPH-G) (M-D) (NWTP	CLEAR COLOR pH 6.36 6.36 6.36 6.36 6.36 CR BOTTLE NWTPH-GX) PH-Dx) (TPH OD) (Turbic	ORP (mV) -75.6 -75.9 -76.3 -75.9 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G	non-standard a	nalysis below) WA □ WA □	Observations OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.91 13.90 13.84 13.86 13.88 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu	Cond. (uS/cm) 511 510 510 510 NALYSIS AI 0) (8020) (N AH) (NWTPHetivity) (TDS) C) (Total PO-	D.O. (mg/L) 0.15 0.14 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.15 0.16 UNTPH-G) (M-D) (NWTPH-G) (M-D) (M	CLEAR COLEAR COL	ORP (mV) -75.6 -75.9 -76.3 -75.9 TYPE (Circle a) (BTEX) H-HCID) (8081)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G	non-standard a	nalysis below) WA □ WA □	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.91 13.90 13.84 13.86 13.88 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu	Cond. (uS/cm) 511 510 510 510 NALYSIS AI 0) (8020) (N AH) (NWTPH activity) (TDS C) (Total PO-ce) (WAD Cy	D.O. (mg/L) 0.15 0.14 0.15 0.15 0.15 0.15 0.15 (mg/L) 0.15 0.16 0.17 0.18 0.19 0.1	PH 6.36 6.36 6.36 6.36 6.36 CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)	ORP (mV) -75.6 -75.9 -76.3 -75.9 (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (C	non-standard a rease) Cl) (SO4) (NO	nalysis below) WA WA WA Solution WA Solution WA WA Solution WA	Observations OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.91 13.90 13.84 13.86 13.88 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals)	Cond. (uS/cm) 511 510 510 510 510 NALYSIS AI () (8020) (N AH) (NWTPH (ctivity) (TDS) (C) (Total PO-ce) (WAD Cy) (As) (Sb) (D.O. (mg/L) 0.15 0.14 0.15 0.15 0.15 0.15 0.16 UNTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D)	CLEAR COL pH 6.36 6.36 6.36 6.36 6.36 CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -75.6 -75.9 -76.3 -75.9 (BTEX) H-HCID) (8081) dity) (Alkalinity) () (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (O/NO2) (Pb) (Mg) (Mn) (1)	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.91 13.90 13.84 13.86 13.88 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals)	Cond. (uS/cm) 511 510 510 510 NALYSIS AI () (8020) (NAH) (NWTPHICTIVITY) (TDS) (C) (Total POde) (WAD Cyc) () (As) (Sb) (Setals) (As) (Sb) (State of the current of the content of th	D.O. (mg/L) 0.15 0.14 0.15 0.15 0.15 0.15 0.16 UNTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D) (NWTPH-G) (M-D)	CLEAR COL pH 6.36 6.36 6.36 6.36 6.36 CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -75.6 -75.9 -76.3 -75.9 (BTEX) H-HCID) (8081) dity) (Alkalinity) () (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (O/NO2) (Pb) (Mg) (Mn) (1)	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.91 13.90 13.84 13.86 13.88 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) VOC (Boein	Cond. (uS/cm) 511 510 510 510 NALYSIS AI () (8020) (NAH) (NWTPHICTIVITY) (TDS) (C) (Total POde) (WAD Cyc) () (As) (Sb) (Setals) (As) (Sb) (State of the current of the content of th	D.O. (mg/L) 0.15 0.14 0.15 0.15 0.15 0.15 CLOWED PERMYPH-G) (Mander of the content of the	CLEAR COL pH 6.36 6.36 6.36 6.36 6.36 CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -75.6 -75.9 -76.3 -75.9 (BTEX) H-HCID) (8081) dity) (Alkalinity) () (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (O/NO2) (Pb) (Mg) (Mn) (1)	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.91 13.90 13.84 13.86 13.88 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) VOC (Boein	Cond. (uS/cm) 511 510 510 510 NALYSIS AI 0) (8020) (N H) (NWTPH ctivity) (TDS C) (Total PO- e) (WAD Cy o) (As) (Sb) (cetals) (As) (Sb) g short list)	D.O. (mg/L) 0.15 0.14 0.15 0.15 0.15 0.15 CLOWED PERMYPH-G) (Mander of the content of the	CLEAR COL pH 6.36 6.36 6.36 6.36 6.36 CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -75.6 -75.9 -76.3 -75.9 (BTEX) H-HCID) (8081) dity) (Alkalinity) () (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (O/NO2) (Pb) (Mg) (Mn) (1)	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.91 13.90 13.84 13.86 13.88 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Methane Eth	Cond. (uS/cm) 511 510 510 510 NALYSIS AI 0) (8020) (N H) (NWTPH ctivity) (TDS C) (Total PO- e) (WAD Cy o) (As) (Sb) (cetals) (As) (Sb) g short list)	D.O. (mg/L) 0.15 0.14 0.15 0.15 0.15 0.15 CLOWED PERMYPH-G) (Mander of the content of the	CLEAR COL pH 6.36 6.36 6.36 6.36 6.36 CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -75.6 -75.9 -76.3 -75.9 (BTEX) H-HCID) (8081) dity) (Alkalinity) () (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (O/NO2) (Pb) (Mg) (Mn) (1)	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.91 13.90 13.84 13.86 13.88 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) VOC (Boein	Cond. (uS/cm) 511 510 510 510 NALYSIS AI 0) (8020) (N H) (NWTPH ctivity) (TDS C) (Total PO- e) (WAD Cy o) (As) (Sb) (cetals) (As) (Sb) g short list)	D.O. (mg/L) 0.15 0.14 0.15 0.15 0.15 0.15 CLOWED PERMYPH-G) (Mander of the content of the	CLEAR COL pH 6.36 6.36 6.36 6.36 6.36 CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -75.6 -75.9 -76.3 -75.9 (BTEX) H-HCID) (8081) dity) (Alkalinity) () (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (O/NO2) (Pb) (Mg) (Mn) (1)	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.91 13.90 13.84 13.86 13.88 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Too (Total Cyanid (Total Metals) (Dissolved Methane Eth	Cond. (uS/cm) 511 510 510 510 NALYSIS AI 0) (8020) (N H) (NWTPH ctivity) (TDS C) (Total PO- e) (WAD Cy o) (As) (Sb) (cetals) (As) (Sb) g short list)	D.O. (mg/L) 0.15 0.14 0.15 0.15 0.15 0.15 CLOWED PERMYPH-G) (Mander of the content of the	CLEAR COL pH 6.36 6.36 6.36 6.36 6.36 CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -75.6 -75.9 -76.3 -75.9 (BTEX) H-HCID) (8081) dity) (Alkalinity) () (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (O/NO2) (Pb) (Mg) (Mn) (1)	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □



Project Nam	e:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 13 /2018@	1250		
Sample Num	nber:	RGW248I-	181113		Weather:	40s PC			
Landau Rep	resentative:	SRB			•				
WATER LEV	EL/WELL/P	URGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(0)	Describe:	Flush Mount		
DTW Before	Purging (ft)	4.01	Time:	1218	Flow through cel	l vol.		GW Meter No.(s heron3
Begin Purge:	Date/Time:	11/13/2018	@ 1220	End Purge:		11/13 /2018 @	1242	Gallons Purged:	0.23
Purge water d	isposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
Th.	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C) Purge Goa	(uS/cm) ls: Stablizatio	(mg/L) on of Paramet	ters for three	(mV)	(NTU) dings within the fo	(ft) Illowing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
1223	13.40	633	0.99	6.25	-50.0	LOW	4.05		
1226	13.67	642	0.54	6.31	-76.0		3.95		
1229	13.51	644	0.36	6.33	-83.6		3.95		
1232	12.97	629	0.29	6.35	-88.9				
1235	12.98	601	0.24	6.34	-88.3				
1238	13.12	594	0.22	6.33	-87.1				
1241	13.21	591	0.20	6.33	-87.3				
SAMPLE CO	LLECTION I	DATA							
Sample Collec	cted With:		Bailer		Pump/Pump Type	ded bladder			
Made of:		Stainless Ste	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color,	turbidity, odor	, sheen, etc.):	SLIGHTLY	GRAY AND TU	RBID			
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	13.25	591	0.20	6.33	-87.5				
2	13.26	591	0.19	6.34	-87.7				
3	13.26	591	0.19	6.33	-87.8				
4	13.28	590	0.19	6.34	-88.0				
Average:	13.26	591	0.19	6.34	-87.8	#DIV/0!			
OHANTITY	TVPICAL A	NALVSIS AI	LLOWED PE	ER BOTTLE	TVPE (Circle a	pplicable or write	non-standard a	nalysis helow)	
3		0) (8020) (N			•	ppicable of write	non-sundard a	wa □	OR 🗆
						(8141) (Oil & G	rease)	wa □	OR 🗆
	(pH) (Condu	activity) (TD:	S) (TSS) (B	OD) (Turbi	dity) (Alkalinity)	(HCO3/CO3) (C	Cl) (SO4) (NC	03) (NO2) (F)	
1					n) (NH3) (NO3)	NO2)			
		le) (WAD Cy							
						(Pb) (Mg) (Mn) (1			
	VOC (Boein		у (ва) (ве) (С	a) (Ca) (Co)	(CI) (CU) (Fe) (PI	o) (Mg) (Mn) (N1) (Ag) (Se) (11) (V) (ZII) (Hg) (K) (I	Na) (Hardness) (Silic
		ig short list) iane Ethene A	cetylene						
	others								
Duplicate San Comments:	nple No(s):								
•	CDD					Date	11/12/2019		
Signature:	SRB					Date:	11/13/2018		



Project Nam	e:	Boeing Ren	iton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 13 /2018@			
Sample Num	ıber:	RGW249S-	181113		Weather:	40s PC			
Landau Repi	resentative:	SRB			•				
WATER LEV	'EL/WELL/PI	IRGE DATA							
Well Conditio		Secure (YES)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	3.91	Time:	_	Flow through ce			GW Meter No.(s	heron3
Begin Purge:		11/13/2018	@ 1400	End Purge:	•	11/ 13 /2018 @	1420	Gallons Purged:	0.25
Purge water d			55-gal Drum		Storage Tank	Ground		SITE TREATM	
Ü	_	Cond	_						
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		on of Parame			dings within the fo		>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1403	15.75	651	0.32	6.32	-62.3	LOW	3.87		
1406	15.91	622	0.17	6.36	-79.6	-	3.87		
1409	15.91	614	0.13	6.39	-85.5		3.87		
1412	15.90	609	0.12	6.40	-88.1				
1415	15.81	608	0.11	6.41	-89.7				
1418	15.67	601	0.11	6.41	-92.1	1			-
1410	13.07	001	0.11	0.41	-92.1				
						-	-		
CANDIE CO	LIECTION	NATE A							
SAMPLE CO Sample Collect			Bailer		Pump/Pump Type	, dad bladdar			
Made of:	ieu wiiii.	Stainless Ste		PVC	Teflon	Polyethylene	Other	Dedicated	
						Dedicated	U Other	Dedicated	
Decon Proced	_	Alconox Was	sn 📋	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other		CLICHTLY	VELLOW AND	TURBID WITH RE	ED DADTICHH A	TEC NO/NC	
Sample Desci	iption (color, i	urbiany, odor	, sheen, etc.).	SLIGHTLI	TELLOW AND	TORBID WITH KI	EDFARTICULE	TES NO/NS	
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	15.67	599	0.11	6.41	-92.3	1			
2	15.64	598	0.11	6.42	-92.5				
3	15.63	597	0.11	6.41	-92.8				
4	15.63	596	0.10	6.42	-93.2	1			
Average:	15.64	598	0.11	6.42	-92.7	#DIV/0!			-
						pplicable or write	non-standard a		07.0
3		0) (8020) (N				(0141) (01.0		WA □ WA □	OR OR
						(8141) (Oil & G (HCO3/CO3) (O			OR 🗆
1					n) (NH3) (NO3)		71) (304) (INC	(1 10 2) (F)	
-		e) (WAD Cy			1) (11113) (1103)	1102)			
	`				(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg	g) (K) (Na)
									Va) (Hardness) (Silica
	VOC (Boein	g short list)							
	Methane Eth	ane Ethene A	cetylene						
	others								
Duplicate San	nple No(s):								
Comments:									
Signature:	SRB		<u> </u>	<u> </u>		Date:	11/13/2018		



Project Nam	e:	Boeing Rer	nton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 13 /2018@	1446		
Sample Num	nber:	RGW216S-	- 1811		Weather:	40'S, CLOUDY			
Landau Repr	resentative:	JHA							
WATER LEV	EL/WELL/PU	URGE DATA							
Well Conditio	n:	Secure (YES	5)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	4.73	Time:	1419	Flow through cel	l vol.		GW Meter No.(s SLOPE 4
Begin Purge:	Date/Time:		8 @ 1424	End Purge:		11/ 13 /2018 @ 1	_	Gallons Purged:	0.
Purge water d	isposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
m·	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	
Time	(°F/°C) Purge Goa	(uS/cm) ds: Stablizatio	(mg/L) on of Parame	ters for thre	(mV) e consecutive rea	(NTU) dings within the fo	(ft) llowing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
1427	15.8	299.2	0.31	6.49	-50.6	LOW	4.73	<0.25	
1430	16.1	282.5	0.20	6.59	-74.7				
1433	16.4	262.1	0.17	6.60	-93.7		4.73	0.25	
1436	16.4	256.7	0.16	6.59	-99.9				
1439	16.5	255.4	0.14	6.58	-103.8				
1442	16.5	253.4	0.14	6.58	-107.1			0.5	-
1444		252.9	0.14	6.57	-107.9				
1111	10.1	202.9	0.11	0.57	107.5				
SAMPLE CO	LLECTION I	DATA				<u> </u>			
Sample Collec			Bailer		Pump/Pump Type	DED BLADDER			
Made of:		Stainless Ste	el	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lure:	Alconox Wa	ısh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color, t	turbidity, odor	, sheen, etc.):	CLEAR, CC	LORLESS, NO/N	NS			
Replicate	Temp	Cond. (uS/cm)	D.O.	pН	ORP	Turbidity (NTU)	DTW	Ferrous iron	Comments/
1	(°F/°C)	` /	(mg/L)	6.57	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	16.4	252.8	0.14	6.57	-108.1			· 	-
2	16.4	252.7	0.13	6.57	-108.1				
3	16.4	252.7	0.14	6.57	-108.3				
4	16.4	252.6	0.14	6.57	-108.3				-
Average:	16.4	252.7	0.14	6.57	-108.2	#DIV/0!		· <u></u>	
QUANTITY	TYPICAL A	NALYSIS A	LLOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
3			NWTPH-G) (WA 🗆	OR 🗆
						(8141) (Oil & G		WA □	OR □
1						(HCO3/CO3) (C	Cl) (SO4) (NO	03) (NO2) (F)	
1			yanide) (Free		n) (NH3) (NO3)	NO2)			
					(Cr) (Cu) (Fe) ((Pb) (Mg) (Mn) (1	Ni) (Aσ) (Se) (Tl) (V) (Zn) (H	σ) (K) (Na)
						b) (Mg) (Mn) (Ni) (
	VOC (Boein		, , , , , , , , , , , , , , , , , , ,	, , , , ,					
	Methane Eth	nane Ethene A	cetylene	·					
	-41								
	others								
Duplicate San	nple No(s):								
Comments:									
Signature:			JHA			Date:	11/13/2018		_



Project Name	e:	Boeing Ren	iton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 13 /2018@	1443		
Sample Num	ber:	RGW217S-	181113		Weather:	CLEAR 40S			
Landau Repr	esentative:	SRB/JHA/0	CEB		•				
WATER LEV	EL/WELL/PU	JRGE DATA							
Well Condition	n:	Secure (YES	5)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before I	Purging (ft)	5.02	Time:	1420	Flow through cel	l vol.		GW Meter No.(3
Begin Purge:	Date/Time:	11/13/2018	@ 1421	End Purge:	Date/Time:	11/13/2018	@ 1440	Gallons Purged:	0
Purge water di	isposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O.	pН	ORP (mV)	Turbidity (NTU)	DTW	Internal Purge	Comments/
Time			(mg/L) on of Parame	ters for three	(',	(NTU) dings within the fo	(ft) llowing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
1424	17.1	128.4	0.52	6.54	13.9	LOW	5.02		
1427	16.5	112.4	0.43	6.37	6.7		5.02		
1430	16.5	110.8	0.37	6.30	4.0		5.02		
1433	16.4	110.4	0.34	6.28	0.4				
1436	16.4	110.8	0.33	6.27	0.3				
1439	16.4	111.1	0.32	6.27	0.3				
SAMPLE CO									
Sample Collec	ted With:		Bailer			DED BLADDER			
Made of:		Stainless Ste	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	ure:	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	,	Other							
Sample Descri	iption (color, t	urbidity, odor	, sheen, etc.):	CLEAR CO	LORLESS NO N	S			
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	16.4	111.4	0.31	6.26	-6.1				
2	16.4	112.0	0.31	6.25	-6.6				
3	16.5	112.3	0.31	6.26	-6.9				
4	16.5	112.4	0.32	6.26	-7.8				
Average:	16.5	112.0	0.31	6.26	-6.9	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS A	LLOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write i	non-standard a	nalysis below)	
3			WTPH-G) (•		WA □	OR 🗆
	(8270D) (PA	AH) (NWTPI	H-D) (NWTF	PH-Dx) (TPl	H-HCID) (8081)	(8141) (Oil & Gr	rease)	wa □	OR □
	•					(HCO3/CO3) (C	(SO4) (NO	3) (NO2) (F)	
		<u> </u>	<i></i>		n) (NH3) (NO3/	(NO2)			
			vanide) (Free	_	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (N	Ji) (Ag) (Se) (Fl) (V) (7 n) (H	r) (K) (Na)
						b) (Mg) (Mn) (Ni) (A			
	VOC (Boein								
	Methane Eth	ane Ethene A	cetylene						
	others								
	others								
Duplicate Sam	nple No(s):								
Comments:									
Signature:	CEB					Date:	11/13/2018		



_	ie:	Boeing Ren	iton		Project Number	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 13 /2018@	1520		
Sample Nun	nber:	RGW218S-	181113	-	Weather:	40s PC			
Landau Rep	resentative:	SRB			-				
WATER LEV	/EL/WELL/PI	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	3.9	Time:	1445	Flow through cel	l vol.		GW Meter No.(s	heron3
Begin Purge:	Date/Time:	11/13/2018	@ 1450	End Purge:	Date/Time:	11/13 /2018 @	1515	Gallons Purged:	0.25
Purge water of	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) Purge Goa	(uS/cm) ls: Stablizatio	(mg/L) on of Paramet	ters for three	(mV) e consecutive read	(NTU) dings within the fo	(ft) llowing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
1453	13.35	246	1.21	6.96	27.0	LOW	3.95		
1456	13.66	228	0.39	6.52	8.1		3.98		
1459	13.78	205	0.22	6.54	-9.8		3.98		
1502	13.83	201	0.20	6.61	-21.7		3.98		
1505	13.85	193	0.17	6.68	-33.8				
1508	13.84	187	0.16	6.73	-40.4				
1511	13.80	184	0.16	6.77	-44.0				
SAMPLE CO	LLECTION I								
Sample Colle	cted With:	_	Bailer		Pump/Pump Type	_		_	
Made of:		Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	_	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	,	Other		CL LCLIER V		ELIDDID NO AIG			
Sample Descri	ription (color,	urbiaity, odor	, sneen, etc.):_	SLIGHTLY	YELLOW AND	I URBID NO/NS			
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	13.78	183	0.16	6.78	-45.2				
2	13.78	182	0.16	6.79	-46.3				
3	13.76	170			-40.3				
4		178	0.15	6.79	-47.3				
	13.75	178	0.15	6.79 6.80					
Average:	13.75 13.77				-47.3	#DIV/0!			
Average:	13.77	177 180	0.16 0.16	6.80 6.79	-47.3 -48.0 -46.7	#DIV/0!	non-standard a	nalysis below)	
Average:	13.77 TYPICAL A	177 180 NALYSIS AI	0.16 0.16	6.80 6.79 ER BOTTLE	-47.3 -48.0 -46.7 TYPE (Circle a)		non-standard a	nalysis below) WA	OR 🗆
Average: QUANTITY	13.77 TYPICAL A (8260) (8010 (8270D) (PA	177 180 NALYSIS AI 0) (8020) (N AH) (NWTPH	0.16 0.16 LLOWED PENWTPH-G) (6.80 6.79 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH	-47.3 -48.0 -46.7 TYPE (Circle a) (BTEX) H-HCID) (8081)	pplicable or write:	rease)	WA □ WA □	OR OR
Average: QUANTITY	13.77 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu	177 180 NALYSIS AI 0) (8020) (N AH) (NWTPH activity) (TDS	0.16 0.16 LLOWED PENWTPH-G) (H-D) (NWTP	6.80 6.79 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic	-47.3 -48.0 -46.7 -46.7 -47.3 -48.0 -46.7 -46.7 -46.7 -46.7 -46.7 -46.7 -46.7 -46.7 -46.7 -48.0	(8141) (Oil & G (HCO3/CO3) (C	rease)	WA □ WA □	
Average: QUANTITY	13.77 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu	177 180 NALYSIS AI 0) (8020) (N AH) (NWTPI activity) (TDS C) (Total PO-	0.16 0.16 LLOWED PENWTPH-G) (H-D) (NWTPH-S) (TSS) (B4) (Total Kie	6.80 6.79 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbio dahl Nitrogen	-47.3 -48.0 -46.7 TYPE (Circle a) (BTEX) H-HCID) (8081)	(8141) (Oil & G (HCO3/CO3) (C	rease)	WA □ WA □	
Average: QUANTITY	13.77 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid	177 180 NALYSIS AI 0) (8020) (N AH) (NWTPH activity) (TDS C) (Total PO- le) (WAD Cy	0.16 0.16 LLOWED PENWTPH-G) (H-D) (NWTPS) (TSS) (B4) (Total Kiewanide) (Free	6.80 6.79 CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbio dahl Nitrogen Cyanide)	-47.3 -48.0 -46.7 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3/	(8141) (Oil & G (HCO3/CO3) (C	rease) Cl) (SO4) (NO	WA □ WA □ 3) (NO2) (F)	OR
Average: QUANTITY	TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals)	177 180 NALYSIS AD 0) (8020) (NAH) (NWTPH activity) (TDS C) (Total PO- le) (WAD Cy) (As) (Sb) (0.16 0.16 LLOWED PENWTPH-G) (H-D) (NWTPHS) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Ca	6.80 6.79 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbio dahl Nitrogen Cyanide)) (Cd) (Co)	-47.3 -48.0 -46.7 CTYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3/	(8141) (Oil & G (HCO3/CO3) (O (NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (WA □ WA □ 3) (NO2) (F)	OR □
Average: QUANTITY	TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals) (Dissolved M VOC (Boein	177 180 NALYSIS AI 0) (8020) (N AH) (NWTPH activity) (TDS C) (Total PO- le) (WAD Cy 1) (As) (Sb) (etals) (As) (Sb ag short list)	0.16 0.16 LLOWED PENWTPH-G) (H-D) (NWTPHS) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Cab) (Ba) (Be) (Cab)	6.80 6.79 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbio dahl Nitrogen Cyanide)) (Cd) (Co)	-47.3 -48.0 -46.7 CTYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3/	(8141) (Oil & G (HCO3/CO3) (O (NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (WA □ WA □ 3) (NO2) (F)	OR □
Average: QUANTITY	TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals) (Dissolved M VOC (Boein	177 180 NALYSIS AI 0) (8020) (N AH) (NWTPH 10ctivity) (TDS C) (Total PO- 10e) (WAD Cy 1) (As) (Sb) (10ctals) (As) (Sb) (0.16 0.16 LLOWED PENWTPH-G) (H-D) (NWTPHS) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Cab) (Ba) (Be) (Cab)	6.80 6.79 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbio dahl Nitrogen Cyanide)) (Cd) (Co)	-47.3 -48.0 -46.7 CTYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3/	(8141) (Oil & G (HCO3/CO3) (O (NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (WA □ WA □ 3) (NO2) (F)	OR □
Average: QUANTITY	TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals) (Dissolved M VOC (Boein	177 180 NALYSIS AI 0) (8020) (N AH) (NWTPH activity) (TDS C) (Total PO- le) (WAD Cy 1) (As) (Sb) (etals) (As) (Sb ag short list)	0.16 0.16 LLOWED PENWTPH-G) (H-D) (NWTPHS) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Cab) (Ba) (Be) (Cab)	6.80 6.79 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbio dahl Nitrogen Cyanide)) (Cd) (Co)	-47.3 -48.0 -46.7 CTYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3/	(8141) (Oil & G (HCO3/CO3) (O (NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (WA □ WA □ 3) (NO2) (F)	OR
Average: QUANTITY	TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	177 180 NALYSIS AI 0) (8020) (N AH) (NWTPH activity) (TDS C) (Total PO- le) (WAD Cy 1) (As) (Sb) (etals) (As) (Sb ag short list)	0.16 0.16 LLOWED PENWTPH-G) (H-D) (NWTPHS) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Cab) (Ba) (Be) (Cab)	6.80 6.79 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbio dahl Nitrogen Cyanide)) (Cd) (Co)	-47.3 -48.0 -46.7 CTYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3/	(8141) (Oil & G (HCO3/CO3) (O (NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (WA □ WA □ 3) (NO2) (F)	OR □
Average: QUANTITY	TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals) (Dissolved M VOC (Boein	177 180 NALYSIS AI 0) (8020) (N AH) (NWTPH activity) (TDS C) (Total PO- le) (WAD Cy 1) (As) (Sb) (etals) (As) (Sb ag short list)	0.16 0.16 LLOWED PENWTPH-G) (H-D) (NWTPHS) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Cab) (Ba) (Be) (Cab)	6.80 6.79 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbio dahl Nitrogen Cyanide)) (Cd) (Co)	-47.3 -48.0 -46.7 CTYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3/	(8141) (Oil & G (HCO3/CO3) (O (NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (WA □ WA □ 3) (NO2) (F)	OR □
Average: QUANTITY	TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	177 180 NALYSIS AI 0) (8020) (N AH) (NWTPH activity) (TDS C) (Total PO- le) (WAD Cy 1) (As) (Sb) (etals) (As) (Sb ag short list)	0.16 0.16 LLOWED PENWTPH-G) (H-D) (NWTPHS) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Cab) (Ba) (Be) (Cab)	6.80 6.79 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbio dahl Nitrogen Cyanide)) (Cd) (Co)	-47.3 -48.0 -46.7 CTYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3/	(8141) (Oil & G (HCO3/CO3) (O (NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (WA □ WA □ 3) (NO2) (F)	OR □



Purge water disposed to:	Project Name:		Boeing Ren	ton		Project Number	::	0025217.099.0	99	
MATER LEVEL VICE VICE DATA	Event:		Nov-18			Date/Time:	11/ 13 /2018@	1518		
Mart Re Level L	Sample Numb	er:	RGW251S-	181113	-	Weather:	CLEAR 40S			
Note Condition	Landau Repre	sentative:	SRB/JHA/C	EB		_				
Note Condition	WATER LEVE	L/WELL/PU	RGE DATA							
Purge Nate/Time 1/13/2018)	Damaged (N	(O)	Describe:	Flush Mount		
Purge Nate/Time 1/13/2018	DTW Before Pu	irging (ft)	4.05	Time:	1452	Flow through cel	l vol.	\ <u></u>	GW Meter No.(s	1
Purge water disposed to:						•		1510	_	0.5
Time									_	
Time		-		_		_	Touch! dite.			
1456 13.9	Time				рп				0	
1456 13.9 147.0 2.09 6.33 37.1 LOW 4.04		_						_		
1459 13.2 146.2 2.10 6.46 27.9 4.04					+/- 0.1 units				through cell	
1502 12.7 129.0 2.08 6.53 26.1 4.04	1456	13.9	147.0	2.09	6.33	37.1	LOW	4.04		
1505	1459	13.2	146.2	2.10	6.46	27.9		4.04		
SAMPLE COLLECTION DATA	1502	12.7	129.0	2.08	6.53	26.1		4.04		
SAMPLE COLLECTION DATA	1505	12.6	127.3	2.09	6.52	27.0				
SAMPLE COLLECTION DATA Sample Collected With: □ Bailer □ Pump/Pump Type DED BLADDER Made of: □ Stainless Steel □ PVC □ Teflon □ Polyethylene □ Other □ Dedicated Decon Procedure: □ Alconox Wash □ Tap Rinse □ DI Water □ Dedicated □ Dedicated Sample Description (color, turbidity, odor, sheen, etc.): CLEAR SLIGHT YELLOWISH TINT WITH BROWN PARTICULATES NO NS Replicate Temp (°F/°C) (uS/cm) (mg/L) D.O. pH (mV) Turbidity (ht) DTW Ferrous iron (Fe II) Comments/Observations 1 12.6 125.8 2.05 6.53 27.5 □ DTW (ht) Ferrous iron (Fe II) Observations 3 12.6 125.2 2.04 6.53 27.5 □ DTW (ht) □ D										
Sample Collected With: □ Bailer □ PVC □ Teflon □ Polyethylene □ Other □ Dedicated Made of: □ Stainless Steel □ PVC □ Teflon □ Polyethylene □ Other □ Dedicated Decon Procedure: □ Alconox Wash □ Other Tap Rinse □ DI Water □ Dedicated (By Numerical Order) □ Other □ Other Sample Description (color, turbidity, odor, sheen, etc.): CLEAR SLIGHT YELLOWISH TINT WITH BROWN PARTICULATES NO NS Replicate Replicate	1300	12.0	120.1	2.07	0.52	27.7				
Sample Collected With: □ Bailer □ PVC □ Teflon □ Polyethylene □ Other □ Dedicated Made of: □ Stainless Steel □ PVC □ Teflon □ Polyethylene □ Other □ Dedicated Decon Procedure: □ Alconox Wash □ Other Tap Rinse □ DI Water □ Dedicated (By Numerical Order) □ Other □ Other Sample Description (color, turbidity, odor, sheen, etc.): CLEAR SLIGHT YELLOWISH TINT WITH BROWN PARTICULATES NO NS Replicate Replicate								·		
Sample Collected With: □ Bailer □ PVC □ Teflon □ Polyethylene □ Other □ Dedicated Made of: □ Stainless Steel □ PVC □ Teflon □ Polyethylene □ Other □ Dedicated Decon Procedure: □ Alconox Wash □ Other Tap Rinse □ DI Water □ Dedicated (By Numerical Order) □ Other □ Other Sample Description (color, turbidity, odor, sheen, etc.): CLEAR SLIGHT YELLOWISH TINT WITH BROWN PARTICULATES NO NS Replicate Replicate										
Sample Collected With: □ Bailer □ PVC □ Teflon □ Polyethylene □ Other □ Dedicated Made of: □ Stainless Steel □ PVC □ Teflon □ Polyethylene □ Other □ Dedicated Decon Procedure: □ Alconox Wash □ Other Tap Rinse □ DI Water □ Dedicated (By Numerical Order) □ Other □ Other Sample Description (color, turbidity, odor, sheen, etc.): CLEAR SLIGHT YELLOWISH TINT WITH BROWN PARTICULATES NO NS Replicate Replicate										
Made of: Stainless Steel □ PVC □ Teflon □ Polyethylene □ Other □ Dedicated Decon Procedure: □ Alconox Wash □ Tap Rinse □ DI Water □ Dedicated (By Numerical Order) □ Other □ Other □ Other Sample Description (color, turbidity, odor, sheen, etc.): CLEAR SLIGHT YELLOWISH TINT WITH BROWN PARTICULATES NO NS Replicate Temp (°F)°C) Cond. (uS/cm) D.O. (mg/L) pH ORP (mV) Turbidity (NTU) DTW (ft) Ferrous iron (Fe II) Observations 1 12.6 125.8 2.05 6.53 27.5 □ □ □ □ □ □ □ Oscervations 3 12.6 125.2 2.04 6.53 27.5 □ □ □ □ □ Oscervations				Dailan		D	DED DI ADDED			
Decon Procedure:	_				 -		_	Othor	□ Dadicated	
(By Numerical Order) □ Other Sample Description (color, turbidity, odor, sheen, etc.): CLEAR SLIGHT YELLOWISH TINT WITH BROWN PARTICULATES NO NS Replicate Temp (°F/°C) Cond. (uS/cm) D.O. (mg/L) pH ORP (mV) Turbidity (NTU) DTW (ft) Ferrous iron (Fe II) Comments/Observations 1 12.6 125.8 2.05 6.53 27.5				_				U Otner	Dedicated	
Sample Description (color, turbidity, odor, sheen, etc.): CLEAR SLIGHT YELLOWISH TINT WITH BROWN PARTICULATES NO NS Replicate Temp (°F/°C) Cond. (uS/cm) D.O. (mg/L) pH ORP (mV) Turbidity (NTU) DTW (ft) Ferrous iron (Fe II) Comments/Observations 1 12.6 125.8 2.05 6.53 27.5		_		sh 📋	Tap Rinse	DI Water	Dedicated			
Replicate Temp (°F/°C) (uS/cm) Cond. (ug/L) pH (mV) ORP (nV) Turbidity (NTU) DTW (ft) Ferrous iron (Fe II) Comments/Observations 1 12.6 125.8 2.05 6.53 27.5		,	_	1	CLEAD CLI	CHE VELLOWIG		OWALD A DETICI	H AFFEC NO NO	
(°F/°C) (uS/cm) (mg/L) (mV) (NTU) (ft) (Fe II) Observations 1 12.6 125.8 2.05 6.53 27.5	Sample Descrip	tion (color, ti	urbidity, odor,	sneen, etc.):_	CLEAR SLI	GHI YELLOWIS	H IINI WIIH BK	OWN PARTICE	JLATES NO NS	
2 12.6 125.6 2.04 6.53 27.5 3 12.6 125.2 2.04 6.53 27.5 4 12.6 124.7 2.06 6.53 27.7 Average: 12.6 125.3 2.05 6.53 27.6 #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 □	Replicate				pН					
3 12.6 125.2 2.04 6.53 27.5 4 12.6 124.7 2.06 6.53 27.7 Average: 12.6 125.3 2.05 6.53 27.6 #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 □	1 _	12.6	125.8	2.05	6.53	27.5				
3 12.6 125.2 2.04 6.53 27.5 4 12.6 124.7 2.06 6.53 27.7 Average: 12.6 125.3 2.05 6.53 27.6 #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 □	2	12.6	125.6	2.04	6.53	27.5				
4 12.6 124.7 2.06 6.53 27.7 Average: 12.6 125.3 2.05 6.53 27.6 #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 □	3	12.6	125.2	2.04	6.53	27.5				
Average: 12.6 125.3 2.05 6.53 27.6 #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 □	4									
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 □	-						#DIV/01			
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 □	<u>-</u>									
(8270D) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease) WA ☐ OR ☐							plicable or write	non-standard a		07.0
					-		(0141) (07.0.0			
I I/nH) (Conductivity) (TDS) (TSS) (POD) (Turbidity) (Alkelinity) (HCO2/CO2) (Cl) (SOA) (NO2) (NO2) (F)										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)								.ı, (ט∪4) (NU	<i>3)</i> (1 1 02) (Γ)	
(Total Cyanide) (WAD Cyanide) (Free Cyanide)	1					., (1.110) (1103).	· · · · · · · · · · · · · · · · · · ·			
(Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)			<u> </u>			(Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (N	Ni) (Ag) (Se) (Γl) (V) (Zn) (Hg	g) (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) (Silico										
VOC (Boeing short list)	,	VOC (Boeing	g short list)							
Methane Ethane Ethene Acetylene		Methane Etha	ane Ethene Ac	etylene						
	0	thers								
others		ole No(s):								
Others Duplicate Sample No(s): Comments:	Comments:	• • • • • • • • • • • • • • • • • • • •								



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 13 /2018@	805		
Sample Nun	nber:	RGW262S-	181113		Weather:	40s PC			
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)	5.22	Time:	730	Flow through ce	ll vol.		GW Meter No.(s	s heron3
Begin Purge:	Date/Time:	11/13/2018	@ 735	End Purge:	Date/Time:	11/13 /2018 @	758	Gallons Purged:	0.25
Purge water o	lisposed 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) ls: Stablizatio	(mg/L)	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	
738	10.43	547	2.23	6.06	-74.9	LOW	5.87		
741	9.75	549	1.57	5.99	-69.7		5.95		
744	7.87	547	1.27	5.98	-64.6		5.98		
747	7.32	547	1.21	5.98	-62.8		6.02		
750		547	1.06	5.98	-60.4		6.06		
753	6.21	546	0.92	5.99	-60.7		6.09		
756		548	0.97	6.00	-61.7		6.11		
730	3.70	310	0.57	0.00	01.7		0.11		-
SAMPLE CO	LLECTION I	DATA							
Sample Colle	cted With:		Bailer		Pump/Pump Type	PERI			
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	dure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	· ·	Other							
Sample Descri	ription (color, t	turbidity, odor,	sheen, etc.):	CLEAR SLI	GHTLY YELLO	W NO/NS			
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	5.77	547	0.85	6.00	-61.3				
2	5.29	550	0.89	6.01	-62.3				
3	5.31	548	0.69	6.01	-60.7				
4	4.95	549	0.75	6.02	-61.1				
Average:	5.33	549	0.80	6.01	-61.4	#DIV/0!			
	·								
3) (8020) (N			`	pplicable or write	non-standard a	WA \square	OR 🗆
	`					(8141) (Oil & G	rease)	wa □	OR 🗆
						(HCO3/CO3) (C		03) (NO2) (F)	
1	(COD) (TO	C) (Total PO	4) (Total Kie	dahl Nitrogen) (NH3) (NO3)	NO2)			
		e) (WAD Cy							
						(Pb) (Mg) (Mn) (Ng) (Mg) (Ng) (Mg) (Mg) (Mg) (Mg) (Mg) (Mg) (Mg) (Ng) (Ng) (Ng) (Ng) (Ng) (Ng) (Ng) (N			
	VOC (Boein) (ba) (be) (C	a) (Cu) (Co)	(CI) (Cu) (Fe) (F	5) (NIg) (MIII) (NI) (Ag) (Se) (11) (V) (ZII) (Hg) (K) (I	Va) (Hardness) (Silica
	`	ane Ethene Ac	cetylene						
	others								
Duplicate Sar	nple No(s):	Duplicate Lo	cation (DUP5)					
Comments:	SIGNIGICA	NT DRAWDO	OWN						



Event:	e:	Boeing Rer	nton		Project Numbe	r:	0025217.099.0	99	
~		Nov-18		,	Date/Time:	11/ 13 /2018@			
Sample Num	ber:	RGW263S	- 181113		Weather:	40s PC			
Landau Repre	esentative:	SRB			•				
WATER LEV	EL/WELL/PI	IRGE DATA							
Well Condition		Secure (YES		Damaged (N	(O)	Describe:	Flush Mount		
DTW Before P	Purging (ft)	5.65	Time:		Flow through ce	ll vol.		GW Meter No.(s	heron3
Begin Purge:				End Purge:		11/ 13 /2018 @		Gallons Purged:	0.25
Purge water di	sposed to:		55-gal Drum	— —	Storage Tank	Ground	Other	SITE TREATM	
	Temp	Cond.	D.O.	рH	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	pII	(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	
					-				
		_	* * * * *				~ > **	T 7	
		1	NA'	$\Gamma H R$		VEL ()NI.	Y	
		· ·	, , , , , , , , , , , , , , , , , , , 			· LL ·		•	
CAMPLE COI	LECTION								
SAMPLE COI Sample Collect		DATA	Bailer		Pump/Pump Type	<u> </u>			
Made of:	ieu wiiii.	Stainless Ste		PVC	Teflon	Polyethylene	Other	☐ Dedicated	
Decon Procedu		Alconox Wa		Tap Rinse			U Other	Dedicated	
(By Numerical	_	Other		rap Kilise	DI Water	Dedicated			
Sample Descri		_	choon ataly						
Sample Descri	ption (color, i	urbiaity, odoi	, sheen, etc.).						
Replicate	Temp	G 1	D.O.	TT					
-	(° F /° C)	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
1		(uS/cm)	(mg/L)	рн	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
				рн					
2				рн					
2				рн					
2 3				рн					
2 3 4		(uS/cm)	(mg/L)		(mV)	(NTU)			
2 3	#DIV/0!			#DIV/0!					
2 3 4 Average:		(uS/cm) #DIV/0!	(mg/L)	#DIV/0!	(mV) 	(NTU)	(ft)	(Fe II)	
2 3 4 Average:	TYPICAL A	#DIV/0!	(mg/L)	#DIV/0!	#DIV/0!	(NTU) #DIV/0!	(ft)	(Fe II)	Observations OR OR
2 3 4 Average: QUANTITY: 3 (FYPICAL A (8260) (8010 (8270D) (PA	#DIV/0! **MALYSIS A D) (8020) (1 AH) (NWTP)	#DIV/0! LLOWED PE WWTPH-G) (1 H-D) (NWTP	#DIV/0! CR BOTTLE NWTPH-Gx) 'H-Dx) (TPP	#DIV/0! #TYPE (Circle a) (BTEX) H-HCID) (8081)	#DIV/0! pplicable or write (8141) (Oil & G	non-standard a	nalysis below) WA □ WA □	Observations
2 3 4 Average: QUANTITY 7 3	(8260) (8010 (8270D) (PA	#DIV/0! **MALYSIS A **D) (8020) (19 **AH) (NWTP) **Inctivity) (TD	#DIV/0! LLOWED PE NWTPH-G) (IH-D) (NWTP S) (TSS) (B	#DIV/0! CR BOTTLE NWTPH-Gx) PH-Dx) (TPPOD) (Turbic	#DIV/0! TYPE (Circle a (BTEX) H-HCID) (8081) dity) (Alkalinity)	#DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (C)	non-standard a	nalysis below) WA □ WA □	Observations OR
2 3 4 Average: QUANTITY 3 (1	(8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO	#DIV/0! **NALYSIS A **D) (8020) (I AH) (NWTP) **Inctivity) (TD C) (Total PO	#DIV/0! LLOWED PE NWTPH-G) (I H-D) (NWTP S) (TSS) (B 4) (Total Kie	#DIV/0! CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen	#DIV/0! #TYPE (Circle a) (BTEX) H-HCID) (8081)	#DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (C)	non-standard a	nalysis below) WA □ WA □	Observations OR OR
2 3 4 Average: QUANTITY 3 (1	(8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid	#DIV/0! NALYSIS A D) (8020) (1 AH) (NWTP) Inctivity) (TD C) (Total PO e) (WAD Cy	#DIV/0! LLOWED PE NWTPH-G) (1 H-D) (NWTP S) (TSS) (B 4) (Total Kiec yanide) (Free	#DIV/0! CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)	#DIV/0! #TYPE (Circle a (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3.	#DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (C	non-standard a	nalysis below) WA WA WA O NO2) (F)	Observations OR □ OR □
2 3 4 Average: QUANTITY 3 (1	(8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals)	#DIV/0! **NALYSIS A* **D) (8020) (I* AH) (NWTP) **activity) (TD **C) (Total PO **e) (WAD C) **O) (As) (Sb) (#DIV/0! LLOWED PE NWTPH-G) (I H-D) (NWTP S) (TSS) (B 4) (Total Kied yanide) (Free (Ba) (Be) (Ca	#DIV/0! CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	#DIV/0! TYPE (Circle a (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (Oil (MO2) (Pb) (Mg) (Mn) (Iii)	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □ (C) (K) (Na)
2 3 4 Average: QUANTITY 3 (1	(8260) (8010) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M.	#DIV/0! **MALYSIS A* **D) (8020) (I* AH) (NWTP) **activity) (TD* **C) (Total PO* **e) (WAD Cy* **) (As) (Sb) (etals) (As) (Sl)	#DIV/0! LLOWED PE NWTPH-G) (I H-D) (NWTP S) (TSS) (B 4) (Total Kied yanide) (Free (Ba) (Be) (Ca	#DIV/0! CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	#DIV/0! TYPE (Circle a (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (Oil (MO2) (Pb) (Mg) (Mn) (Iii)	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR □ OR □
2 3 4 Average: QUANTITY 3 (1	(8260) (8010) (PA (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M VOC (Boein	#DIV/0! **MALYSIS A **DIV/0! **NALYSIS A **DIV/0! **NALYSIS A **DIV/0! **NALYSIS A **O) (8020) (I **OHATHORSE **	#DIV/0! LLOWED PENWTPH-G) (IM-D) (NWTPH-G) (IM-D) (NWTPH-G) (IM-D) (TSS) (IM-D) (IM-D) (TSS) (IM-D) (TSS) (IM-D) (TSS) (IM-D) (#DIV/0! CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	#DIV/0! TYPE (Circle a (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (Oil (MO2) (Pb) (Mg) (Mn) (Iii)	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □ (C) (K) (Na)
2 3 4 Average: QUANTITY 3 (1	(8260) (8010) (PA (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M VOC (Boein	#DIV/0! **MALYSIS A* **D) (8020) (I* AH) (NWTP) **activity) (TD* **C) (Total PO* **e) (WAD Cy* **) (As) (Sb) (etals) (As) (Sl)	#DIV/0! LLOWED PENWTPH-G) (IM-D) (NWTPH-G) (IM-D) (NWTPH-G) (IM-D) (TSS) (IM-D) (IM-D) (TSS) (IM-D) (TSS) (IM-D) (TSS) (IM-D) (#DIV/0! CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	#DIV/0! TYPE (Circle a (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (Oil (MO2) (Pb) (Mg) (Mn) (Iii)	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □
2 3 4 Average: QUANTITY 3 (1	(8260) (8010) (PA (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M VOC (Boein	#DIV/0! **MALYSIS A **DIV/0! **NALYSIS A **DIV/0! **NALYSIS A **DIV/0! **NALYSIS A **O) (8020) (I **OHATHORSE **	#DIV/0! LLOWED PENWTPH-G) (IM-D) (NWTPH-G) (IM-D) (NWTPH-G) (IM-D) (TSS) (IM-D) (IM-D) (TSS) (IM-D) (TSS) (IM-D) (TSS) (IM-D) (#DIV/0! CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	#DIV/0! TYPE (Circle a (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (Oil (MO2) (Pb) (Mg) (Mn) (Iii)	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □
2 3 4 Average: QUANTITY 3 () () () () () () () () () () () () ()	(8260) (8010) (PA (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M VOC (Boein	#DIV/0! **MALYSIS A **DIV/0! **NALYSIS A **DIV/0! **NALYSIS A **DIV/0! **NALYSIS A **O) (8020) (I **OHATHORSE **	#DIV/0! LLOWED PENWTPH-G) (IM-D) (NWTPH-G) (IM-D) (NWTPH-G) (IM-D) (TSS) (IM-D) (IM-D) (TSS) (IM-D) (TSS) (IM-D) (TSS) (IM-D) (#DIV/0! CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	#DIV/0! TYPE (Circle a (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (Oil (MO2) (Pb) (Mg) (Mn) (Iii)	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □
2 3 4 Average: QUANTITY 3 () () () () () () () () () () () () ()	(8260) (8010) (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals) (Dissolved M VOC (Boein Methane Eth	#DIV/0! **MALYSIS A **DIV/0! **NALYSIS A **DIV/0! **NALYSIS A **DIV/0! **NALYSIS A **O) (8020) (I **OHATHORSE **	#DIV/0! LLOWED PENWTPH-G) (IM-D) (NWTPH-G) (IM-D) (NWTPH-G) (IM-D) (TSS) (IM-D) (IM-D) (TSS) (IM-D) (TSS) (IM-D) (TSS) (IM-D) (#DIV/0! CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	#DIV/0! TYPE (Circle a (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (Oil (MO2) (Pb) (Mg) (Mn) (Iii)	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □
2 3 4 Average: QUANTITY 3 () () () () () () () () () () () () ()	(8260) (8010) (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals) (Dissolved M VOC (Boein Methane Eth	#DIV/0! **MALYSIS A **DIV/0! **NALYSIS A **DIV/0! **NALYSIS A **DIV/0! **NALYSIS A **O) (8020) (I **OHATHORSE **	#DIV/0! LLOWED PENWTPH-G) (IM-D) (NWTP) S) (TSS) (B) 4) (Total Kieckyanide) (Free Ba) (Be) (Ca) b) (Ba) (Be) (Ca)	#DIV/0! CR BOTTLE NWTPH-Gx) PH-Dx) (TPH OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	#DIV/0! TYPE (Circle a (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (Oil NO2) (Pb) (Mg) (Mn) (I	non-standard a rease) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □



Project Nam	e:	Boeing Ren	nton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 13 /2018@	920		
Sample Num	nber:	RGW264S-	- 181113		Weather:	40s PC			
Landau Repi	resentative:	SRB							
WATER LEV	EL/WELL/PU	JRGE DATA							
Well Conditio	n:	Secure (YES	5)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	6.49	Time:		Flow through cel	ll vol.		GW Meter No.(s	s heron3
Begin Purge:	Date/Time:		@ 850	End Purge:		11/13 /2018 @	912	Gallons Purged:	0.2
Purge water d	isposed 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	on of Parame		e consecutive rea	dings within the fo	llowing limits	>/= 1 flow	0.0000
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/ - 10 mV	+/- 10%	< 0.3 ft	through cell	
853	13.45	860	0.71	6.25	-81.7	LOW	6.6		
856	13.21	867	0.56	6.26	-95.5		6.55		
859	11.66	886	0.50	6.27	-97.1		6.65		
902	12.44	867	0.34	6.25	-102.9		6.65		
905	12.20	871	0.33	6.25	-101.1		6.65		
908	10.92	880	0.26	6.25	-102.9				
911	10.70	881	0.26	6.25	-102.4				
SAMPLE CO	LLECTION I	OATA							
Sample Collec	cted With:		Bailer		Pump/Pump Type	PERI			
Made of:		Stainless Ste	el 🔲	PVC	Teflon	Polyethylene	☐ Other	Dedicated	
Decon Proced	lure:	Alconox Wa	sh	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color, t	turbidity, odor	, sheen, etc.):	CLEAR SLI	GHTLY YELLO	W NO.NS			
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	10.33	877	0.24	6.25	-102.8				
2	10.34	860	0.20	6.25	-103.6				
3	10.88	856	0.17	6.24	-103.9				
4	11.69	847	0.17	6.21	-103.9				
Average:	10.81	860	0.20	6.24	-103.6	#DIV/0!			
QUANTITY	TVDICAL A	NAT VCIC A	I I OWED DI	D ROTTI E	TVDF (Cirolo o	pplicable or write	non standard a	nolveic bolow)	
3	(8260) (8010		NWTPH-G) (,	pplicable of write	non-standard a	WA \square	OR 🗆
	`					(8141) (Oil & G	rease)	wa □	OR 🗆
						(HCO3/CO3) (C		3) (NO2) (F)	
1	(COD) (TO	C) (Total PO	4) (Total Kie	dahl Nitroger	n) (NH3) (NO3)	NO2)			
			vanide) (Free						
						(Pb) (Mg) (Mn) (1			
			o) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (Pl	o) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (N	Na) (Hardness) (Sili
	VOC (Boein Methane Eth	g short list) ane Ethene A	cetylene						
	mediane Elli	e Duielle A							
	others								
Dunlicate Se-	nnle No(s):								
Duplicate San Comments:	ubie Mo(8):								
Cionatura:	CDD					Data	11/12/2019		



Project Name	e <u>:</u>	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	_
Event:		Nov-18			Date/Time:	11/13 /2018@	848		
Sample Num	iber:	RGW031S-	181113		Weather:	CLEAR 30S			
Landau Repr	resentative:	SRB/JHA/C	CEB						
WATER LEV	EL/WELL/PU	JRGE DATA							
Well Condition	n:	Secure (YES)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before I	Purging (ft)	5.32	Time:	823	Flow through cel	l vol.		GW Meter No.(s	1
Begin Purge:			@ 824	End Purge:	=	11/13 /2018 @	840	Gallons Purged:	0.5
Purge water di	isposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATMI	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	
827	14.4	330.0	0.66	6.26	-38.6	LOW	5.32		
830	13.5	341.4	0.72	6.27	-65.0		5.33		
833	13.3	341.5	0.67	6.27	-69.8		5.34		
836	13.4	342.4	0.63	6.25	-75.0				
839	13.5	342.9	0.62	6.25	-75.7				
			0.02	0.20	7017		-		
CAMPIE CO	LLECTIONE								
SAMPLE CO: Sample Collect			Bailer		Pump/Pump Type	DED BLADDER			
Made of:	ica wini.	Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced		Alconox Was	_	Tap Rinse			Li Other	Dedicated	
	ure.	Alcohox was	SII L	rap Kilise	DI Water	Dedicated Dedicated			
(Ry Numerica	l Order)	Other				- ^			
(By Numerical	*	Other	sheen etc.):	CIFAR SU	IGHT YFI I OW	COLOR ORANGE	PARTICI II AT	FS NO NS	
	*		sheen, etc.):	CLEAR, SL	IGHT YELLOW	COLOR, ORANGE	E PARTICULAT	ES, NO NS	
	*		D.O. (mg/L)	CLEAR, SLI	ORP (mV)	COLOR, ORANGE Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
Sample Descri	Temp	urbidity, odor,	D.O.		ORP	Turbidity	DTW	Ferrous iron	
Sample Descri	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity	DTW	Ferrous iron	
Sample Descri	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	рН 6.25	ORP (mV)	Turbidity	DTW	Ferrous iron	
Sample Description Replicate 1 2	Temp (°F/°C) 13.5	Cond. (uS/cm) 344.1 343.8	D.O. (mg/L) 0.65	pH 6.25 6.25	ORP (mV) -76.8	Turbidity	DTW	Ferrous iron	
Replicate 1 2 3 4	Temp (°F/°C) 13.5 13.4 13.4	Cond. (uS/cm) 344.1 343.8 344.7 344.0	D.O. (mg/L) 0.65 0.66 0.65	pH 6.25 6.25 6.25 6.25	ORP (mV) -76.8 -77.6 -78.4 -79.3	Turbidity (NTU)	DTW	Ferrous iron	
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.4 13.4 13.4	Cond. (uS/cm) 344.1 343.8 343.7 344.0 343.9	D.O. (mg/L) 0.65 0.66 0.65 0.65	6.25 6.25 6.25 6.25 6.25	ORP (mV) -76.8 -77.6 -78.4 -79.3 -78.0	Turbidity (NTU) #DIV/0!	DTW (ft)	Ferrous iron (Fe II)	
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A	Cond. (uS/cm) 344.1 343.8 343.7 344.0 343.9	D.O. (mg/L) 0.65 0.66 0.65 0.65	pH 6.25 6.25 6.25 6.25 6.25 6.25	ORP (mV) -76.8 -77.6 -78.4 -79.3 -78.0 TYPE (Circle a)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Observations
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8016)	Cond. (uS/cm) 344.1 343.8 343.7 344.0 343.9 NALYSIS AI 0) (8020) (N	D.O. (mg/L) 0.65 0.66 0.65 0.65 0.65 LLOWED PE	pH 6.25 6.25 6.25 6.25 6.25 6.25 ER BOTTLE NWTPH-Gx)	ORP (mV) -76.8 -77.6 -78.4 -79.3 -78.0 TYPE (Circle a (BTEX)	#DIV/0!	DTW (ft)	Ferrous iron (Fe II) nalysis below) WA	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010) (8270) (PAF	Cond. (uS/cm) 344.1 343.8 343.7 344.0 343.9 NALYSIS AI ()) (8020) (NH) (NWTPH-	D.O. (mg/L) 0.65 0.66 0.65 0.65 0.65 LLOWED PERMYTPH-G) (D) (NWTPH	6.25 6.25 6.25 6.25 6.25 ER BOTTLE NWTPH-Gx)	ORP (mV) -76.8 -77.6 -78.4 -79.3 -78.0 TYPE (Circle a) (BTEX) HCID) (8081)	#DIV/0! pplicable or write:	DTW (ft)	Ferrous iron (Fe II) malysis below) WA WA WA	Observations
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 13.4 (8260) (8010) (8270) (PAH) (pH) (Condu	Cond. (uS/cm) 344.1 343.8 343.7 344.0 343.9 NALYSIS AI 0) (8020) (NI) (NWTPH- lictivity) (TDS)	D.O. (mg/L) 0.65 0.66 0.65 0.65 LLOWED PERMYPH-G) (D) (NWTPH	6.25 6.25 6.25 6.25 6.25 ER BOTTLE NWTPH-Gx) (-Dx) (TPH-OD) (Turbic	ORP (mV) -76.8 -77.6 -78.4 -79.3 -78.0 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity)	#DIV/0! #DIV/0! pplicable or write to the control of the control	DTW (ft)	Ferrous iron (Fe II) nalysis below) WA	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu	Cond. (uS/cm) 344.1 343.8 343.7 344.0 343.9 NALYSIS AI 0) (8020) (N I) (NWTPH- ictivity) (TD: C) (Total PO-	D.O. (mg/L) 0.65 0.66 0.65 0.65 LLOWED PERMYPH-G) (D) (NWTPH-S) (TSS) (B4) (Total Kie	6.25 6.25 6.25 6.25 6.25 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen	ORP (mV) -76.8 -77.6 -78.4 -79.3 -78.0 TYPE (Circle a) (BTEX) HCID) (8081)	#DIV/0! #DIV/0! pplicable or write to the control of the control	DTW (ft)	Ferrous iron (Fe II) malysis below) WA WA WA	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Conduction) (COD) (TOO (Total Cyanid	Cond. (uS/cm) 344.1 343.8 343.7 344.0 343.9 NALYSIS AI (i) (8020) (NI (ii) (NWTPH- (ictivity) (TD: (iii) (Total PO- (iii) (WAD Cy	D.O. (mg/L) 0.65 0.65 0.65 0.65 LLOWED PERMYPH-G) (NWTPH-G) (NWTPH-G) (TSS) (B4) (Total Kieranide) (Free	6.25 6.25 6.25 6.25 6.25 6.25 ER BOTTLE NWTPH-Gx) [-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)	ORP (mV) -76.8 -77.6 -78.4 -79.3 -78.0 TYPE (Circle a) (BTEX) HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write to the control of the control	non-standard a	Ferrous iron (Fe II) malysis below) WA WA WA NO2) (F)	Observations OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals)	Cond. (uS/cm) 344.1 343.8 343.7 344.0 343.9 NALYSIS AI 0) (8020) (N H) (NWTPH- ctivity) (TDS C) (Total PO- e) (WAD Cy o) (As) (Sb) (D.O. (mg/L) 0.65 0.66 0.65 0.65 0.65 LLOWED PERMYPH-G) (D) (NWTPH-G) (NWTPH-G) (D) (NWTPH-G) (D) (TSS) (B) (TSS) (TSS) (B) (TSS) (TSS) (B) (TSS) (TSS) (B) (TSS)	6.25 6.25 6.25 6.25 6.25 6.25 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -76.8 -77.6 -78.4 -79.3 -78.0 TYPE (Circle a (BTEX) HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Great (HCO3/CO3) (Control (HCO3/CO3)) ((Control (HCO3/CO3)) (DTW (ft) non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) VOC (Boein	Cond. (uS/cm) 344.1 343.8 343.7 344.0 343.9 NALYSIS AI 0) (8020) (NI) (NWTPH- lectivity) (TDS C) (Total PO- le) (WAD Cy o) (As) (Sb) (letals) (As) (Sb) (g short list)	D.O. (mg/L) 0.65 0.66 0.65 0.65 0.65 UMTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kietanide) (Free Ba) (Be) (Ca	6.25 6.25 6.25 6.25 6.25 6.25 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -76.8 -77.6 -78.4 -79.3 -78.0 TYPE (Circle a (BTEX) HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Great (HCO3/CO3) (Control (HCO3/CO3)) ((Control (HCO3/CO3)) (DTW (ft) non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) VOC (Boein	Cond. (uS/cm) 344.1 343.8 343.7 344.0 343.9 NALYSIS AI 0) (8020) (NI) (NWTPH- activity) (TDS C) (Total PO- e) (WAD Cy o) (As) (Sb) (etals) (As) (Sb) (D.O. (mg/L) 0.65 0.66 0.65 0.65 0.65 UMTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kietanide) (Free Ba) (Be) (Ca	6.25 6.25 6.25 6.25 6.25 6.25 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -76.8 -77.6 -78.4 -79.3 -78.0 TYPE (Circle a (BTEX) HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Great (HCO3/CO3) (Control (HCO3/CO3)) ((Control (HCO3/CO3)) (DTW (ft) non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) VOC (Boein	Cond. (uS/cm) 344.1 343.8 343.7 344.0 343.9 NALYSIS AI 0) (8020) (NI) (NWTPH- lectivity) (TDS C) (Total PO- le) (WAD Cy o) (As) (Sb) (letals) (As) (Sb) (g short list)	D.O. (mg/L) 0.65 0.66 0.65 0.65 0.65 UMTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kietanide) (Free Ba) (Be) (Ca	6.25 6.25 6.25 6.25 6.25 6.25 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -76.8 -77.6 -78.4 -79.3 -78.0 TYPE (Circle a (BTEX) HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Great (HCO3/CO3) (Control (HCO3/CO3)) ((Control (HCO3/CO3)) (DTW (ft) non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Methane Eth	Cond. (uS/cm) 344.1 343.8 343.7 344.0 343.9 NALYSIS AI 0) (8020) (NI) (NWTPH- lectivity) (TDS C) (Total PO- le) (WAD Cy o) (As) (Sb) (letals) (As) (Sb) (g short list)	D.O. (mg/L) 0.65 0.66 0.65 0.65 0.65 UMTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kietanide) (Free Ba) (Be) (Ca	6.25 6.25 6.25 6.25 6.25 6.25 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -76.8 -77.6 -78.4 -79.3 -78.0 TYPE (Circle a (BTEX) HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Great (HCO3/CO3) (Control (HCO3/CO3)) ((Control (HCO3/CO3)) (DTW (ft) non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) VOC (Boein	Cond. (uS/cm) 344.1 343.8 343.7 344.0 343.9 NALYSIS AI 0) (8020) (NI) (NWTPH- lectivity) (TDS C) (Total PO- le) (WAD Cy o) (As) (Sb) (letals) (As) (Sb) (g short list)	D.O. (mg/L) 0.65 0.66 0.65 0.65 0.65 UMTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kietanide) (Free Ba) (Be) (Ca	6.25 6.25 6.25 6.25 6.25 6.25 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -76.8 -77.6 -78.4 -79.3 -78.0 TYPE (Circle a (BTEX) HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Great (HCO3/CO3) (Control (HCO3/CO3)) ((Control (HCO3/CO3)) (DTW (ft) non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Mo VOC (Boein Methane Eth	Cond. (uS/cm) 344.1 343.8 343.7 344.0 343.9 NALYSIS Al ()) (8020) (N ()) (NWTPH- ()) (Total PO- (e) (WAD Cy ()) (As) (Sb) ((etals) (As) (Sb) (g short list) ane Ethene Ad	D.O. (mg/L) 0.65 0.66 0.65 0.65 0.65 UMTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kietanide) (Free Ba) (Be) (Ca	pH 6.25 6.25 6.25 6.25 6.25 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co) Ca) (Cd) (Co)	ORP (mV) -76.8 -77.6 -78.4 -79.3 -78.0 TYPE (Circle a (BTEX) HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Great (HCO3/CO3) (Control (HCO3/CO3)) ((Control (HCO3/CO3)) (DTW (ft) non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Mo VOC (Boein Methane Eth	Cond. (uS/cm) 344.1 343.8 343.7 344.0 343.9 NALYSIS Al ()) (8020) (N ()) (NWTPH- ()) (Total PO- (e) (WAD Cy ()) (As) (Sb) ((etals) (As) (Sb) (g short list) ane Ethene Ad	D.O. (mg/L) 0.65 0.66 0.65 0.65 0.65 LLOWED PERMYPH-G) (D) (NWTPH-G) (NWTPH-G) (TSS) (Bernalde) (Free Ba) (Be) (Caralde) (Ba) (Ba) (Be) (Caralde) (Car	pH 6.25 6.25 6.25 6.25 6.25 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co) Ca) (Cd) (Co)	ORP (mV) -76.8 -77.6 -78.4 -79.3 -78.0 TYPE (Circle a (BTEX) HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Great (HCO3/CO3) (Control (HCO3/CO3)) ((Control (HCO3/CO3)) (DTW (ft) non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR



Project Name	e:	Boeing Ren	iton		Project Number	:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 13 /2018@	700		
Sample Num	ıber:	RGWDUP2	2 181113	-	Weather:				
Landau Repr	resentative:	SRB/JHA/C	CEB		_				
WATER LEV	'EL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before I	Purging (ft)		Time:		Flow through cell	vol.		GW Meter No.(s	1
Begin Purge:		11/ 13 /201		End Purge:	_	11/13 /2018 @		Gallons Purged:	
Purge water di	isposed to:		55-gal Drum	Ě	Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
C	То	Cand	_		ORP	Turbidity		Internal Purge	
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	(mV)	(NTU)	DTW (ft)	Volume (gal)	Comments/ Observations
			on of Paramet		e consecutive read	lings within the fo		>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
		DIII				U0210			
		DUI	PLICE	\mathbf{A} LE 1	TO RGV	VU318			
							1		
					·		1		·
SAMPLE CO									
Sample Collec	eted With:	_	Bailer	_	Pump/Pump Type			_	
Made of:		Stainless Stee	el 📙	PVC	☐ Teflon	Polyethylene	Other	☐ Dedicated	
Decon Proced		Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	l Order)	☐ Other							
	*	_							
Sample Descri	*	_	, sheen, etc.):	CLEAR, SL	IGHT YELLOW (COLOR, ORANGE	E PARTICULAT	ES, NO NS	
	iption (color, t	_			IGHT YELLOW (COLOR, ORANGE	E PARTICULAT DTW	TES, NO NS Ferrous iron	Comments/
Sample Descri	*	urbidity, odor,	D.O. (mg/L)	CLEAR, SL					Comments/ Observations
	iption (color, t	urbidity, odor,	D.O.		ORP	Turbidity	DTW	Ferrous iron	
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	рН 6.25	ORP (mV)	Turbidity	DTW	Ferrous iron	
Replicate 1 2	Temp (°F/°C) 13.5	Cond. (uS/cm) 344.0	D.O. (mg/L) 0.65	pH 6.25 6.25	ORP (mV) -77.2 -78.1	Turbidity	DTW	Ferrous iron	
Replicate 1 2 3	Temp (°F/°C) 13.5 13.4 13.4	Cond. (uS/cm) 344.0 343.8 343.9	D.O. (mg/L) 0.65 0.66	pH 6.25 6.25 6.26	ORP (mV) -77.2 -78.1 -78.9	Turbidity	DTW	Ferrous iron	
Replicate 1 2 3 4	Temp (°F/°C) 13.5 13.4 13.4	Cond. (uS/cm) 344.0 343.8 343.9 344.1	D.O. (mg/L) 0.65 0.66 0.65	pH 6.25 6.25 6.26 6.26	ORP (mV) -77.2 -78.1 -78.9 -79.7	Turbidity (NTU)	DTW	Ferrous iron	
Replicate 1 2 3	Temp (°F/°C) 13.5 13.4 13.4	Cond. (uS/cm) 344.0 343.8 343.9	D.O. (mg/L) 0.65 0.66	pH 6.25 6.25 6.26	ORP (mV) -77.2 -78.1 -78.9	Turbidity	DTW	Ferrous iron	
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.4 13.4 13.4	Cond. (uS/cm) 344.0 343.8 343.9 344.1	D.O. (mg/L) 0.65 0.66 0.65 0.64	6.25 6.25 6.26 6.26	ORP (mV) -77.2 -78.1 -78.9 -79.7 -78.5	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010)	Cond. (uS/cm) 344.0 343.8 343.9 344.1 344.0 NALYSIS AI 0) (8020) (N	D.O. (mg/L) 0.65 0.66 0.65 0.64 0.65 LLOWED PE	pH 6.25 6.25 6.26 6.26 6.26 ER BOTTLE NWTPH-Gx)	ORP (mV) -77.2 -78.1 -78.9 -79.7 -78.5 CTYPE (Circle ap	Turbidity (NTU) #DIV/0!	DTW (ft)	Ferrous iron (Fe II) nalysis below) WA	Observations OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 13.4 (8260) (8010 (8270) (PAH	Cond. (uS/cm) 344.0 343.8 343.9 344.1 344.0 NALYSIS AI 0) (8020) (NI) (NWTPH-	D.O. (mg/L) 0.65 0.66 0.65 0.64 0.65 LLOWED PERMYTPH-G) (6.25 6.25 6.26 6.26 6.26 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-	ORP (mV) -77.2 -78.1 -78.9 -79.7 -78.5 CTYPE (Circle ap) (BTEX) -HCID) (8081) (#DIV/0! pplicable or write 18141) (Oil & Green	DTW (ft)	Ferrous iron (Fe II) nalysis below) WA □ WA □	Observations
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu	Cond. (uS/cm) 344.0 343.8 343.9 344.1 344.0 NALYSIS AI 0) (8020) (NI) (NWTPH- lictivity) (TDS)	D.O. (mg/L) 0.65 0.66 0.65 0.64 0.65 LLOWED PENWTPH-G) (CD) (NWTPH-S) (BUTS) (BUTS)	6.25 6.25 6.26 6.26 6.26 ER BOTTLE NWTPH-Gx) (-Dx) (TPH-OD) (Turbic	ORP (mV) -77.2 -78.1 -78.9 -79.7 -78.5 CTYPE (Circle approximately continuous) HCID) (8081) (dity) (Alkalinity)	#DIV/0! #DIV/0! pplicable or write to the second control of the	DTW (ft)	Ferrous iron (Fe II) nalysis below) WA	Observations OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu	Cond. (uS/cm) 344.0 343.8 343.9 344.1 344.0 NALYSIS AI 0) (8020) (N I) (NWTPH- ctivity) (TD: C) (Total PO-	D.O. (mg/L) 0.65 0.66 0.65 0.64 0.65 LLOWED PENWTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kie	6.25 6.26 6.26 6.26 6.26 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen	ORP (mV) -77.2 -78.1 -78.9 -79.7 -78.5 CTYPE (Circle ap) (BTEX) -HCID) (8081) (#DIV/0! #DIV/0! pplicable or write to the second control of the	DTW (ft)	Ferrous iron (Fe II) nalysis below) WA □ WA □	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu	Cond. (uS/cm) 344.0 343.8 343.9 344.1 344.0 NALYSIS AI 0) (8020) (NI) (NWTPH- lectivity) (TDS C) (Total PO- e) (WAD Cy	D.O. (mg/L) 0.65 0.66 0.65 0.64 0.65 LLOWED PENWTPH-G) (NWTPH-S) (NWTPH-S) (TSS) (B4) (Total Kiewanide) (Free	6.25 6.25 6.26 6.26 6.26 ER BOTTLE NWTPH-Gx) [-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)	ORP (mV) -77.2 -78.1 -78.9 -79.7 -78.5 CTYPE (Circle application) (BTEX) -HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/10)	#DIV/0! #DIV/0! **plicable or write to the control of the contro	non-standard a	reprove iron (Fe II) malysis below) WA WA WA Malysis below)	Observations OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals)	Cond. (uS/cm) 344.0 343.8 343.9 344.1 344.0 NALYSIS AI 0) (8020) (NI) (NWTPH- ctivity) (TDS C) (Total PO- e) (WAD Cy o (As) (Sb) (D.O. (mg/L) 0.65 0.66 0.65 0.64 0.65 LLOWED PENTPH-G) (NWTPH-S) (TSS) (B 4) (Total Kiewanide) (Free Ba) (Be) (Ca	6.25 6.26 6.26 6.26 6.26 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -77.2 -78.1 -78.9 -79.7 -78.5 CTYPE (Circle application of the company of the com	#DIV/0! #DIV/0! **Policable or write in the control of the contr	DTW (ft) non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals) (Dissolved Metals)	Cond. (uS/cm) 344.0 343.8 343.9 344.1 344.0 NALYSIS AI (D) (8020) (NI) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy (dAs) (Sb) (etals) (As) (Sb) (St)	D.O. (mg/L) 0.65 0.66 0.65 0.64 0.65 LLOWED PENTPH-G) (NWTPH-S) (TSS) (B 4) (Total Kiewanide) (Free Ba) (Be) (Ca	6.25 6.26 6.26 6.26 6.26 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -77.2 -78.1 -78.9 -79.7 -78.5 CTYPE (Circle application of the company of the com	#DIV/0! #DIV/0! **Policable or write in the control of the contr	DTW (ft) non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) VOC (Boein	Cond. (uS/cm) 344.0 343.8 343.9 344.1 344.0 NALYSIS AI (D) (8020) (NI) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy (dAs) (Sb) (etals) (As) (Sb) (St)	D.O. (mg/L) 0.65 0.66 0.65 0.64 0.65 LLOWED PF WTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kie- ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C	6.25 6.26 6.26 6.26 6.26 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -77.2 -78.1 -78.9 -79.7 -78.5 CTYPE (Circle application) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/10) (NH3) (NO3/10) (Cr) (Cu) (Fe) (#DIV/0! #DIV/0! **Policable or write in the control of the contr	DTW (ft) non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) VOC (Boein	Cond. (uS/cm) 344.0 343.8 343.9 344.1 344.0 NALYSIS AI (D) (8020) (NI) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy (o) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L) 0.65 0.66 0.65 0.64 0.65 LLOWED PF WTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kie- ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C	6.25 6.26 6.26 6.26 6.26 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -77.2 -78.1 -78.9 -79.7 -78.5 CTYPE (Circle application) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/10) (NH3) (NO3/10) (Cr) (Cu) (Fe) (#DIV/0! #DIV/0! **Policable or write in the control of the contr	DTW (ft) non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) VOC (Boein	Cond. (uS/cm) 344.0 343.8 343.9 344.1 344.0 NALYSIS AI (D) (8020) (NI) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy (o) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L) 0.65 0.66 0.65 0.64 0.65 LLOWED PF WTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kie- ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C	6.25 6.26 6.26 6.26 6.26 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -77.2 -78.1 -78.9 -79.7 -78.5 CTYPE (Circle application) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/10) (NH3) (NO3/10) (Cr) (Cu) (Fe) (#DIV/0! #DIV/0! **Policable or write in the control of the contr	DTW (ft) non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) VOC (Boein	Cond. (uS/cm) 344.0 343.8 343.9 344.1 344.0 NALYSIS AI (D) (8020) (NI) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy (o) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L) 0.65 0.66 0.65 0.64 0.65 LLOWED PF WTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kie- ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C	6.25 6.26 6.26 6.26 6.26 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -77.2 -78.1 -78.9 -79.7 -78.5 CTYPE (Circle application) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/10) (NH3) (NO3/10) (Cr) (Cu) (Fe) (#DIV/0! #DIV/0! **Policable or write in the control of the contr	DTW (ft) non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Me VOC (Boein Methane Eth	Cond. (uS/cm) 344.0 343.8 343.9 344.1 344.0 NALYSIS AI 0) (8020) (N I) (NWTPH- ctivity) (TDO c) (Total PO- e) (WAD Cy o) (As) (Sb) (etals) (As) (Sb) g short list) ane Ethene Ac	D.O. (mg/L) 0.65 0.66 0.65 0.64 0.65 LLOWED PENTPH-G) (D) (NWTPH-S) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Cab) (Ba) (Be) (Cocetylene	6.25 6.26 6.26 6.26 6.26 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -77.2 -78.1 -78.9 -79.7 -78.5 CTYPE (Circle application) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/10) (NH3) (NO3/10) (Cr) (Cu) (Fe) (#DIV/0! #DIV/0! **Policable or write in the control of the contr	DTW (ft) non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Me VOC (Boein Methane Eth	Cond. (uS/cm) 344.0 343.8 343.9 344.1 344.0 NALYSIS AI (D) (8020) (NI) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy (o) (As) (Sb) (etals) (As) (Sb) (g short list)	D.O. (mg/L) 0.65 0.66 0.65 0.64 0.65 LLOWED PENTPH-G) (D) (NWTPH-S) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Cab) (Ba) (Be) (Cocetylene	6.25 6.26 6.26 6.26 6.26 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -77.2 -78.1 -78.9 -79.7 -78.5 CTYPE (Circle application) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/10) (NH3) (NO3/10) (Cr) (Cu) (Fe) (#DIV/0! #DIV/0! **Policable or write in the control of the contr	DTW (ft) non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 13.5 13.4 13.4 13.4 13.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Me VOC (Boein Methane Eth	Cond. (uS/cm) 344.0 343.8 343.9 344.1 344.0 NALYSIS AI 0) (8020) (N I) (NWTPH- ctivity) (TDO c) (Total PO- e) (WAD Cy o) (As) (Sb) (etals) (As) (Sb) g short list) ane Ethene Ac	D.O. (mg/L) 0.65 0.66 0.65 0.64 0.65 LLOWED PENTPH-G) (D) (NWTPH-S) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Cab) (Ba) (Be) (Cocetylene	6.25 6.26 6.26 6.26 6.26 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -77.2 -78.1 -78.9 -79.7 -78.5 CTYPE (Circle application) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/10) (NH3) (NO3/10) (Cr) (Cu) (Fe) (#DIV/0! #DIV/0! **Policable or write in the control of the contr	DTW (ft) non-standard a ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR



Project Name	e:	Boeing Ren	iton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/13 /2018@	1018		
Sample Num	ber:	RGW033S-	181113		Weather:	CLEAR 30S			
Landau Repr	esentative:	SRB/JHA/C	CEB						
WATER LEV	EL/WELL/PU	JRGE DATA							
Well Condition	n:	Secure (YES)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before I	Purging (ft)	5.44	Time:	954	Flow through cel	l vol.		GW Meter No.(s	1
Begin Purge:		11/13/2018	@ 955	End Purge:	_	11/13 /2018 @	1011	Gallons Purged:	0.5
Purge water di	sposed to:		55-gal Drum		Storage Tank	Ground		SITE TREATMI	ENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	pii	(mV)	(NTU)	(ft)	Volume (gal)	Observations
						dings within the fo	U	>/= 1 flow	
	+/- 3%	+/- 3%		+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
958	16.9	406.8	0.41	6.25	-27.2	LOW	5.44		
1001	16.5	384.2	0.42	6.24	-37.3		5.45		
1004	16.3	359.7	0.40	6.21	-45.7		5.45		
1007	16.3	357.1	0.39	6.18	-46.7				
1010									
							-		
CAMPLE CO	LICTION								
Sample Collec			Bailer		Pumn/Pumn Tyne	DED BLADDER			
Made of:	ica wiiii.	Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procedo		Alconox Was	_	Tap Rinse	—	Dedicated		Dedicated	
Decoil I focus	uic. <u>—</u>	Alcohox was	SII <u></u>	Tap Killse	Di watei	Dedicated			
(Ry Numerical	(Order)	Other				^			
(By Numerical		Other	sheen etc.):	CLEAR CO	OLORLESS NO N	<u>^</u>			
			, sheen, etc.):	CLEAR CO	DLORLESS NO N	<u>S</u>			
			D.O. (mg/L)	CLEAR CO	OLORLESS NO	S Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
Sample Descri	ption (color, t	urbidity, odor,	D.O.		ORP	Turbidity			
Sample Descri	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity			
Sample Descri Replicate	Temp (°F/°C)	Cond. (uS/cm) 356.6	D.O. (mg/L)	pH 6.17	ORP (mV)	Turbidity			
Replicate 1 2 3	Temp (°F/°C) 16.4 16.4	Cond. (uS/cm) 356.6 356.8 356.5	D.O. (mg/L) 0.39 0.38	pH 6.17 6.17 6.17	ORP (mV) -47.5 -47.7 -47.8	Turbidity			
Replicate 1 2 3 4	Temp (°F/°C) 16.4 16.4 16.4	Cond. (uS/cm) 356.6 356.8 356.5 356.4	D.O. (mg/L) 0.39 0.38 0.38	6.17 6.17 6.17 6.17	ORP (mV) -47.5 -47.7 -47.8 -48.0	Turbidity (NTU)			
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.4 16.4 16.4 16.4	Cond. (uS/cm) 356.6 356.8 356.5 356.4 356.6	D.O. (mg/L) 0.39 0.38 0.39 0.39	6.17 6.17 6.17 6.17 6.17	ORP (mV) -47.5 -47.7 -47.8 -48.0 -47.8	Turbidity (NTU) #DIV/0!	(ft)	(Fe II)	
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.4 16.4 16.4 16.4 16.4 TYPICAL A	Cond. (uS/cm) 356.6 356.8 356.5 356.4 356.6 NALYSIS Al	D.O. (mg/L) 0.39 0.38 0.39 0.39	pH 6.17 6.17 6.17 6.17 6.17 6.17	ORP (mV) -47.5 -47.7 -47.8 -48.0 -47.8	Turbidity (NTU)	(ft)	(Fe II)	Observations
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 16.4 16.4 16.4 16.4 16.4 16.4 16.4 (8260) (8010)	Cond. (uS/cm) 356.6 356.5 356.4 356.6 NALYSIS AI (0) (8020) (N	D.O. (mg/L) 0.39 0.38 0.39 0.39 0.39 LLOWED PH	pH 6.17 6.17 6.17 6.17 6.17 6.17 ER BOTTLE NWTPH-Gx)	ORP (mV) -47.5 -47.7 -47.8 -48.0 -47.8 TYPE (Circle a) (BTEX)	Turbidity (NTU) #DIV/0! pplicable or write	(ft)	(Fe II) nalysis below) WA	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 16.4 16.4 16.4 16.4 TYPICAL A (8260) (8010) (8270) (PAH)	Cond. (uS/cm) 356.6 356.8 356.5 356.4 356.6 NALYSIS AI (NWTPH-	D.O. (mg/L) 0.39 0.38 0.39 0.39 LLOWED PH	6.17 6.17 6.17 6.17 6.17 6.17 ER BOTTLE NWTPH-Gx) H-Dx) (TPH-	ORP (mV) -47.5 -47.8 -48.0 -47.8 TYPE (Circle a) (BTEX) HCID) (8081)	#DIV/0! pplicable or write:	non-standard a	nalysis below) WA □ WA □	Observations
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 16.4 16.4 16.4 16.4 16.4 TYPICAL A (8260) (8010) (8270) (PAH) (pH) (Condu	Cond. (uS/cm) 356.6 356.8 356.5 356.4 356.6 NALYSIS AI 0) (8020) (N H) (NWTPH-activity) (TDS)	D.O. (mg/L) 0.39 0.38 0.39 0.39 LLOWED PRINTPH-G) (D) (NWTPH-S) (BS) (TSS) (BS)	6.17 6.17 6.17 6.17 6.17 6.17 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-GOD) (Turbic	ORP (mV) -47.5 -47.7 -47.8 -48.0 -47.8 CTYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity)	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Green (HCO3/CO3) (Co.)	non-standard a	nalysis below) WA □ WA □	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 16.4 16.4 16.4 16.4 16.4 16.4 (8260) (8010 (8270) (PAH (pH) (Condu	Cond. (uS/cm) 356.6 356.8 356.5 356.4 356.6 NALYSIS AI (I) (8020) (NI) (NWTPH- (Intervity) (TDS) (C) (Total PO-	D.O. (mg/L) 0.39 0.38 0.39 0.39 LLOWED PINTPH-G) (D) (NWTPH-G) (B) (TSS) (B) (H) (Total Kie	6.17 6.17 6.17 6.17 6.17 6.17 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-GOD) (Turbio dahl Nitrogen	ORP (mV) -47.5 -47.8 -48.0 -47.8 TYPE (Circle a) (BTEX) HCID) (8081)	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Green (HCO3/CO3) (Co.)	non-standard a	nalysis below) WA □ WA □	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 16.4 16.4 16.4 16.4 16.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu	Cond. (uS/cm) 356.6 356.8 356.5 356.4 356.6 NALYSIS AI (1) (8020) (NI) (NWTPH- (1) (Total PO- (2) (WAD Cy	D.O. (mg/L) 0.39 0.38 0.39 0.39 LLOWED PINTPH-G) (D) (NWTPH-S) (TSS) (B 4) (Total Kie ranide) (Free	pH 6.17 6.17 6.17 6.17 6.17 6.18 ER BOTTLE NWTPH-Gx) H-Dx) (TPH-GOD) (Turbic dahl Nitrogen Cyanide)	ORP (mV) -47.5 -47.7 -47.8 -48.0 -47.8 CTYPE (Circle a) (BTEX) HCID) (8081) (HCID) (8081) (MIX) (NO3/10) (NH3) (NO3/10)	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & Gre (HCO3/CO3) (C	non-standard a ase) Cl) (SO4) (NO	malysis below) WA WA WA NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 16.4 16.4 16.4 16.4 16.4 16.4 (8260) (8010 (8270) (PAH (COD) (TOG (Total Cyanid (Total Metals)	Cond. (uS/cm) 356.6 356.8 356.5 356.4 356.6 NALYSIS AI 0) (8020) (N H) (NWTPH- lectivity) (TDS C) (Total PO- e) (WAD Cy o) (As) (Sb) (D.O. (mg/L) 0.39 0.38 0.39 0.39 LLOWED PF WTPH-G) (D) (NWTPH-G) (TSS) (Bs) (TSS) (TS	pH 6.17 6.17 6.17 6.17 6.17 ER BOTTLE NWTPH-Gx) H-Dx) (TPH-Gx) H-Dx) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -47.5 -47.7 -47.8 -48.0 -47.8 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Green (HCO3/CO3) (Conduction of the conduction of	non-standard a ase) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 16.4 16.4 16.4 16.4 16.4 16.4 (8260) (8010 (8270) (PAH (COD) (TOG (Total Cyanid (Total Metals)	Cond. (uS/cm) 356.6 356.8 356.5 356.4 356.6 NALYSIS AI (D) (8020) (NH) (NWTPHactivity) (TDS) (C) (Total POde) (WAD Cyto) (As) (Sb) (Setals) (As) (Sb) (Setals) (As) (Sb) (Setals) (As) (Sb)	D.O. (mg/L) 0.39 0.38 0.39 0.39 LLOWED PF WTPH-G) (D) (NWTPH-G) (TSS) (Bs) (TSS) (TS	pH 6.17 6.17 6.17 6.17 6.17 ER BOTTLE NWTPH-Gx) H-Dx) (TPH-Gx) H-Dx) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -47.5 -47.7 -47.8 -48.0 -47.8 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Green (HCO3/CO3) (Conduction of the conduction of	non-standard a ase) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 16.4 16.4 16.4 16.4 16.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) (OD) (Boein	Cond. (uS/cm) 356.6 356.8 356.5 356.4 356.6 NALYSIS AI (D) (8020) (NH) (NWTPHactivity) (TDS) (C) (Total POde) (WAD Cyto) (As) (Sb) (Setals) (As) (Sb) (Setals) (As) (Sb) (Setals) (As) (Sb)	D.O. (mg/L) 0.39 0.38 0.39 0.39 LLOWED PI (WTPH-G) (D) (NWTPH-S) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Cas) (Ba) (Be) (Cas)	pH 6.17 6.17 6.17 6.17 6.17 ER BOTTLE NWTPH-Gx) H-Dx) (TPH-Gx) H-Dx) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -47.5 -47.7 -47.8 -48.0 -47.8 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Green (HCO3/CO3) (Conduction of the conduction of	non-standard a ase) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 16.4 16.4 16.4 16.4 16.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) (OD) (Boein	Cond. (uS/cm) 356.6 356.8 356.5 356.4 356.6 NALYSIS AI (D) (8020) (NI) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy (for all Cy) (for al	D.O. (mg/L) 0.39 0.38 0.39 0.39 LLOWED PI (WTPH-G) (D) (NWTPH-S) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Cas) (Ba) (Be) (Cas)	pH 6.17 6.17 6.17 6.17 6.17 ER BOTTLE NWTPH-Gx) H-Dx) (TPH-Gx) H-Dx) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -47.5 -47.7 -47.8 -48.0 -47.8 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Green (HCO3/CO3) (Conduction of the conduction of	non-standard a ase) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 16.4 16.4 16.4 16.4 16.4 TYPICAL A (8260) (8010 (8270) (PAH (COD) (TOO (Total Cyanid (Total Metals) (Dissolved Methane Eth	Cond. (uS/cm) 356.6 356.8 356.5 356.4 356.6 NALYSIS AI (D) (8020) (NI) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy (for all Cy) (for al	D.O. (mg/L) 0.39 0.38 0.39 0.39 LLOWED PI (WTPH-G) (D) (NWTPH-S) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Cas) (Ba) (Be) (Cas)	pH 6.17 6.17 6.17 6.17 6.17 ER BOTTLE NWTPH-Gx) H-Dx) (TPH-Gx) H-Dx) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -47.5 -47.7 -47.8 -48.0 -47.8 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Green (HCO3/CO3) (Conduction of the conduction of	non-standard a ase) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 16.4 16.4 16.4 16.4 16.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) (OD) (Boein	Cond. (uS/cm) 356.6 356.8 356.5 356.4 356.6 NALYSIS AI (D) (8020) (NI) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy (for all Cy) (for al	D.O. (mg/L) 0.39 0.38 0.39 0.39 LLOWED PI (WTPH-G) (D) (NWTPH-S) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Cas) (Ba) (Be) (Cas)	pH 6.17 6.17 6.17 6.17 6.17 ER BOTTLE NWTPH-Gx) H-Dx) (TPH-Gx) H-Dx) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -47.5 -47.7 -47.8 -48.0 -47.8 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Green (HCO3/CO3) (Conduction of the conduction of	non-standard a ase) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 16.4 16.4 16.4 16.4 16.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Me VOC (Boein Methane Eth	Cond. (uS/cm) 356.6 356.8 356.5 356.4 356.6 NALYSIS AI (D) (8020) (NI) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy (for all Cy) (for al	D.O. (mg/L) 0.39 0.38 0.39 0.39 LLOWED PI (WTPH-G) (D) (NWTPH-S) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Cas) (Ba) (Be) (Cas)	pH 6.17 6.17 6.17 6.17 6.17 ER BOTTLE NWTPH-Gx) H-Dx) (TPH-Gx) H-Dx) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -47.5 -47.7 -47.8 -48.0 -47.8 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Green (HCO3/CO3) (Conduction of the conduction of	non-standard a ase) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 16.4 16.4 16.4 16.4 16.4 TYPICAL A (8260) (8010 (8270) (PAH (COD) (TOO (Total Cyanid (Total Metals) (Dissolved Me VOC (Boein Methane Eth	Cond. (uS/cm) 356.6 356.8 356.5 356.4 356.6 NALYSIS AI (D) (8020) (NI) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy (for all Cy) (for al	D.O. (mg/L) 0.39 0.38 0.39 0.39 LLOWED PI (WTPH-G) (D) (NWTPH-S) (TSS) (B4) (Total Kiewanide) (Free Ba) (Be) (Cas) (Ba) (Be) (Cas)	pH 6.17 6.17 6.17 6.17 6.17 ER BOTTLE NWTPH-Gx) H-Dx) (TPH-Gx) H-Dx) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -47.5 -47.7 -47.8 -48.0 -47.8 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Green (HCO3/CO3) (Conduction of the conduction of	non-standard a ase) Cl) (SO4) (NO	(Fe II) nalysis below) WA WA 3) (NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR



Project Nam	e:	Boeing Rer	nton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/13 /2018@	1053		
Sample Num	ıber:	RGW034S	- 181113		Weather:	CLEAR 30S			
Landau Repi	resentative:	SRB/JHA/0	СЕВ						
WATER LEV	EL/WELL/PU	URGE DATA							
Well Conditio	n:	Secure (YES	S)	Damaged (N	IO)	Describe:	Flush Mount		
DTW Before	Purging (ft)	5.55	Time:	1028	Flow through ce	ll vol.		GW Meter No.(s	3
Begin Purge:	Date/Time:	11/13/2018	@ 1029	End Purge:	Date/Time:	11/13 /2018 @	1045	Gallons Purged:	0.
Purge water d	isposed 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
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	
1032	16.4	327.8	0.32	6.35	-38.7	LOW	5.56		
1035	16.2	329.1	0.30	6.36	-50.1		5.56		
1038	16.1	331.7	0.27	6.34	-67.9		5.56		
1041	16.1	331.5	0.27	6.34	-68.8				
1044	16.2	331.8	0.27	6.34	-72.2				
	-								
SAMPLE CO	LLECTION I	OATA							
Sample Collec			Bailer	₩	Pump/Pump Type	DED BLADDER			
Made of:		Stainless Ste	eel 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	ure:	Alconox Wa	ısh	Tap Rinse	DI Water	Dedicated		^	
(By Numerica	l Order)	Other				<u> </u>			
Sample Descr	iption (color,	turbidity, odor	; sheen, etc.):	CLEAR CO	LORLESS NO N	S			
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	16.2	332.2	0.27	6.34	-73.0				
2	16.2	331.9	0.27	6.34	-73.4				
3	16.2	332.0	0.27	6.34	-73.9				
4	16.2	332.4	0.27	6.33	-74.3				
Average:	16.2	332.1	0.27	6.34	-73.7	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS A	LLOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
5	(<mark>8260</mark>) (801	0) (8020) (1	NWTPH-G) (NWTPH-Gx) (BTEX)			WA □	OR 🗆
		/				(8141) (Oil & Gre		WA □	OR 🗆
1	VI / \	2/	/ \ / \	/		(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
1	· · · ·		yanide) (Free		n) (NH3) (NO3)	/NO2)			
			· · ·		(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Ni) (Ag) (Se) (Tl) (V) (Zn) (H:	g) (K) (Na)
									Na) (Hardness) (Sili
	VOC (Boein	g short list)							
	Methane Eth	nane Ethene A	cetylene						
	others								
	outers								
Duplicate San	nple No(s):								
Comments:									
Signature:	CEB					Date:	11/13/2018		



Project Name	e:	Boeing Ren	iton		Project Number	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/13 /2018@	1143		
Sample Num	ber:	RGW038S-	181113		Weather:	CLOUDY 30S			
Landau Repr	esentative:	SRB/JHA/C	CEB		·-				_
WATER LEV	EL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before I	Purging (ft)	5.63	Time:	1106	Flow through cel	l vol.		GW Meter No.(s	1
Begin Purge:		11/13/2018	@ 1108	End Purge:	•	11/13 /2018 @	1122	Gallons Purged:	0.5
Purge water di	sposed to:		55-gal Drum		Storage Tank	Ground		SITE TREATMI	ENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	pii	(mV)	(NTU)	(ft)	Volume (gal)	Observations
	_					dings within the fo	llowing limits	>/= 1 flow	
	+/- 3%	+/- 3%		+/- 0.1 units		+/- 10%		through cell	
1111	17.7	330.0	0.32	6.39	-31.9	LOW	5.63		
1114	17.3	309.0	0.27	6.35	-56.6		5.64		
1117	17.3	308.0	0.28	6.34	-58.5		5.65		
1120	17.3	306.9	0.26	6.32	-60.7				
CAMPLE CO	LICTION								
Sample Collec			Bailer		Pumn/Pumn Tyne	DED BLADDER			
Made of:	ica wiiii.	Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procedo		Alconox Was	_	Tap Rinse	—		U oulei	Dedicated	
Decon Procedi	ure.		SII U	rap Kilise	DI Water	Dedicated			
(Ry Numarica)	l Order)	Other				,,			
(By Numerical		Other	sheen etc.):	CI EAR CO	I ORI ESS NO N				
			, sheen, etc.):	CLEAR CO	LORLESS NO NS	<u> </u>			
			D.O. (mg/L)	CLEAR CO	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
Sample Descri	ption (color, t	urbidity, odor,	D.O.		ORP	Turbidity			
Sample Descri	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity			
Sample Descri Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	рН 6.31	ORP (mV)	Turbidity			
Replicate 1 2 3	Temp (°F/°C) 17.3 17.4	Cond. (uS/cm) 306.0 306.0	D.O. (mg/L) 0.26 0.26	pH 6.31 6.31 6.31	ORP (mV) -62.8 -62.2 -63.2	Turbidity			
Replicate 1 2 3 4	Temp (°F/°C) 17.3 17.3 17.4	Cond. (uS/cm) 306.0 306.3 306.0 305.9	D.O. (mg/L) 0.26 0.26 0.26	6.31 6.31 6.31 6.30	ORP (mV) -62.8 -62.2 -63.2 -63.6	Turbidity (NTU)			
Replicate 1 2 3 4 Average:	Temp (°F/°C) 17.3 17.4 17.4 17.4	Cond. (uS/cm) 306.0 306.3 306.0 305.9 306.1	D.O. (mg/L) 0.26 0.26 0.26 0.26	6.31 6.31 6.31 6.30 6.31	ORP (mV) -62.8 -62.2 -63.2 -63.6 -63.0	Turbidity (NTU) #DIV/0!	(ft)	(Fe II)	
Replicate 1 2 3 4 Average:	Temp (°F/°C) 17.3 17.3 17.4 17.4 17.4 TYPICAL A	Cond. (uS/cm) 306.0 306.3 306.0 305.9 306.1	D.O. (mg/L) 0.26 0.26 0.26 0.26	6.31 6.31 6.30 6.31 ER BOTTLE	ORP (mV) -62.8 -62.2 -63.2 -63.6 -63.0	Turbidity (NTU)	(ft)	(Fe II)	Observations
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 17.3 17.4 17.4 17.4 TYPICAL A (8260) (8010)	Cond. (uS/cm) 306.0 306.3 306.0 305.9 306.1 NALYSIS AI 0) (8020) (N	D.O. (mg/L) 0.26 0.26 0.26 0.26 0.26 LLOWED PR	6.31 6.31 6.30 6.31 ER BOTTLE	ORP (mV) -62.8 -62.2 -63.2 -63.6 -63.0 TYPE (Circle a) (BTEX)	Turbidity (NTU) #DIV/0! pplicable or write	(ft)	(Fe II)	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 17.3 17.4 17.4 17.4 TYPICAL A (8260) (8010) (8270) (PAH)	Cond. (uS/cm) 306.0 306.3 306.0 305.9 306.1 NALYSIS AI ()) (8020) (N	D.O. (mg/L) 0.26 0.26 0.26 0.26 0.26 ULOWED PHOWTPH-G) (D) (NWTPH-G)	6.31 6.31 6.31 6.31 6.31 ER BOTTLE NWTPH-Gx	ORP (mV) -62.8 -62.2 -63.2 -63.6 -63.0 TYPE (Circle a) (BTEX) HCID) (8081)	#DIV/0! pplicable or write (8141) (Oil & Gre	non-standard a	nalysis below) WA □ WA □	Observations
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 17.3 17.4 17.4 17.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu	Cond. (uS/cm) 306.0 306.3 306.0 305.9 306.1 NALYSIS AI 0) (8020) (N I) (NWTPH- ictivity) (TDS)	D.O. (mg/L) 0.26 0.26 0.26 0.26 0.26 ULOWED PRINTPH-G) (D) (NWTPH-S) (B) (TSS) (B)	6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-Gx) I-Dx) (TPH-GOD) (Turbic	ORP (mV) -62.8 -62.2 -63.2 -63.6 -63.0 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gre (HCO3/CO3) (C	non-standard a	nalysis below) WA □ WA □	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 17.3 17.4 17.4 17.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu	Cond. (uS/cm) 306.0 306.3 306.0 305.9 306.1 NALYSIS AI 0) (8020) (N I) (NWTPH- ctivity) (TDS C) (Total PO-	D.O. (mg/L) 0.26 0.26 0.26 0.26 0.26 ULOWED PINATPH-G) (D) (NWTPH-G) (B) (TSS) (B) (H) (Total Kie	6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-Gx I-Dx) (TPH-GOD) (Turbio dahl Nitroger	ORP (mV) -62.8 -62.2 -63.2 -63.6 -63.0 TYPE (Circle a) (BTEX) HCID) (8081)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gre (HCO3/CO3) (C	non-standard a	nalysis below) WA □ WA □	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 17.3 17.4 17.4 17.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (TOO (Total Cyanid	Cond. (uS/cm) 306.0 306.3 306.0 305.9 306.1 NALYSIS AI 0) (8020) (NI) (NWTPH- ctivity) (TDS C) (Total PO- e) (WAD Cy	D.O. (mg/L) 0.26 0.26 0.26 0.26 0.26 LLOWED PINTPH-G) (D) (NWTPH-S) (TSS) (Bd) (Total Kieranide) (Free	pH 6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-Gx I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide)	ORP (mV) -62.8 -62.2 -63.6 -63.6 -63.0 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gre (HCO3/CO3) (Oil NO2)	non-standard a ase) Cl) (SO4) (NO	nalysis below) WA WA Solution	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 17.3 17.4 17.4 17.4 TYPICAL A (8260) (8010 (8270) (PAH (COD) (TOd (Total Cyanid (Total Metals)	Cond. (uS/cm) 306.0 306.3 306.0 305.9 306.1 NALYSIS AI 0) (8020) (N I) (NWTPH- ctivity) (TDS C) (Total PO- e) (WAD Cy o) (As) (Sb) (D.O. (mg/L) 0.26 0.26 0.26 0.26 0.26 0.26 LLOWED PF WYPH-G) (D) (NWTPH-G) (TSS) (Bs) (TSS) (TS	6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-GX H-Dx) (TPH-GX) H-Dx) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	ORP (mV) -62.8 -62.2 -63.6 -63.0 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gree (HCO3/CO3) (CONO2)	non-standard a ase) Cl) (SO4) (NO	ralysis below) WA WA WA Solution WA	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 17.3 17.4 17.4 17.4 TYPICAL A (8260) (8010 (8270) (PAH (COD) (TOd (Total Cyanid (Total Metals)	Cond. (uS/cm) 306.0 306.3 306.0 305.9 306.1 NALYSIS AI (D) (8020) (N (D) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy (dAs) (Sb) (Setals) (As) (Sb) (Setals)	D.O. (mg/L) 0.26 0.26 0.26 0.26 0.26 0.26 LLOWED PF WYPH-G) (D) (NWTPH-G) (TSS) (Bs) (TSS) (TS	6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-GX H-Dx) (TPH-GX) H-Dx) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	ORP (mV) -62.8 -62.2 -63.6 -63.0 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gree (HCO3/CO3) (CONO2)	non-standard a ase) Cl) (SO4) (NO	ralysis below) WA WA WA Solution WA	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 17.3 17.4 17.4 17.4 17.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) (OD) (Boein	Cond. (uS/cm) 306.0 306.3 306.0 305.9 306.1 NALYSIS AI (D) (8020) (N (D) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy (dAs) (Sb) (Setals) (As) (Sb) (Setals)	D.O. (mg/L) 0.26 0.26 0.26 0.26 0.26 LLOWED PI WTPH-G) (D) (NWTPH-S) (TSS) (Bs) (TSS) (Bs) (Bs) (Cas) (Ba) (Be) (Cas)	6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-GX H-Dx) (TPH-GX) H-Dx) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	ORP (mV) -62.8 -62.2 -63.6 -63.0 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gree (HCO3/CO3) (CONO2)	non-standard a ase) Cl) (SO4) (NO	ralysis below) WA WA WA Solution WA	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 17.3 17.4 17.4 17.4 17.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) (OD) (Boein	Cond. (uS/cm) 306.0 306.3 306.0 305.9 306.1 NALYSIS AI (D) (8020) (NI) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy (f) (As) (Sb) (getals) (As) (Sb) (g short list)	D.O. (mg/L) 0.26 0.26 0.26 0.26 0.26 LLOWED PI WTPH-G) (D) (NWTPH-S) (TSS) (Bs) (TSS) (Bs) (Bs) (Cas) (Ba) (Be) (Cas)	6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-GX H-Dx) (TPH-GX) H-Dx) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	ORP (mV) -62.8 -62.2 -63.6 -63.0 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gree (HCO3/CO3) (CONO2)	non-standard a ase) Cl) (SO4) (NO	ralysis below) WA WA WA Solution WA	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 17.3 17.4 17.4 17.4 TYPICAL A (8260) (8010 (8270) (PAH (COD) (TOO (Total Cyanid (Total Metals) (Dissolved Me VOC (Boein Methane Eth	Cond. (uS/cm) 306.0 306.3 306.0 305.9 306.1 NALYSIS AI (D) (8020) (NI) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy (f) (As) (Sb) (getals) (As) (Sb) (g short list)	D.O. (mg/L) 0.26 0.26 0.26 0.26 0.26 LLOWED PI WTPH-G) (D) (NWTPH-S) (TSS) (Bs) (TSS) (Bs) (Bs) (Cas) (Ba) (Be) (Cas)	6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-GX H-Dx) (TPH-GX) H-Dx) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	ORP (mV) -62.8 -62.2 -63.6 -63.0 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gree (HCO3/CO3) (CONO2)	non-standard a ase) Cl) (SO4) (NO	ralysis below) WA WA WA Solution WA	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 17.3 17.4 17.4 17.4 17.4 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) (OD) (Boein	Cond. (uS/cm) 306.0 306.3 306.0 305.9 306.1 NALYSIS AI (D) (8020) (NI) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy (f) (As) (Sb) (getals) (As) (Sb) (g short list)	D.O. (mg/L) 0.26 0.26 0.26 0.26 0.26 LLOWED PI WTPH-G) (D) (NWTPH-S) (TSS) (Bs) (TSS) (Bs) (Bs) (Cas) (Ba) (Be) (Cas)	6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-GX H-Dx) (TPH-GX) H-Dx) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	ORP (mV) -62.8 -62.2 -63.6 -63.0 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gree (HCO3/CO3) (CONO2)	non-standard a ase) Cl) (SO4) (NO	ralysis below) WA WA WA Solution WA	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 17.3 17.4 17.4 17.4 TYPICAL A (8260) (8010 (8270) (PAH (COD) (TOO (Total Cyanid (Total Metals) (Dissolved Mo VOC (Boein Methane Eth	Cond. (uS/cm) 306.0 306.3 306.0 305.9 306.1 NALYSIS AI (D) (8020) (NI) (NWTPH- (ctivity) (TDS) (C) (Total PO- (e) (WAD Cy (f) (As) (Sb) (getals) (As) (Sb) (g short list)	D.O. (mg/L) 0.26 0.26 0.26 0.26 0.26 LLOWED PI WTPH-G) (D) (NWTPH-S) (TSS) (Bs) (TSS) (Bs) (Bs) (Cas) (Ba) (Be) (Cas)	6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-GX H-Dx) (TPH-GX) H-Dx) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	ORP (mV) -62.8 -62.2 -63.6 -63.0 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gree (HCO3/CO3) (CONO2)	non-standard a ase) Cl) (SO4) (NO	ralysis below) WA WA WA Solution WA	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 5	Temp (°F/°C) 17.3 17.4 17.4 17.4 TYPICAL A (8260) (8010 (8270) (PAH (COD) (TOO (Total Cyanid (Total Metals) (Dissolved Mo VOC (Boein Methane Eth	Cond. (uS/cm) 306.0 306.3 306.0 305.9 306.1 NALYSIS AI (0) (8020) (N (1) (NWTPH- (1) (Total PO- (2) (As) (Sb) (Cetals) (As) (Sb) (g short list)	D.O. (mg/L) 0.26 0.26 0.26 0.26 0.26 LLOWED PI WTPH-G) (D) (NWTPH-S) (TSS) (Bs) (TSS) (Bs) (Bs) (Cas) (Ba) (Be) (Cas)	6.31 6.31 6.30 6.31 ER BOTTLE NWTPH-GX H-Dx) (TPH-GX) H-Dx) (Turbic dahl Nitrogen Cyanide) (1) (Cd) (Co)	ORP (mV) -62.8 -62.2 -63.6 -63.0 CTYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gree (HCO3/CO3) (CONO2)	non-standard a ase) Cl) (SO4) (NO	ralysis below) WA WA WA Solution WA	Observations OR OR OR OR OR OR OR OR OR OR



Project Nam	e:	Boeing Ren	nton		Project Numbe	r:	0025217.099.0	99	_
Event:		Nov-18			Date/Time:	11/ 13 /2018@	1036		
Sample Num	nber:	RGW039S-	- 181113		Weather:	40'S, SUNNY			
Landau Repr	resentative:	JHA			•				
WATER LEV	EL/WELL/PU	IRGE DATA							
Well Conditio	n:	Secure (YES	5)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	5.37	Time:	1009	Flow through cel	l vol.		GW Meter No.(s	s SLOPE 4
Begin Purge:	Date/Time:	11/ 13 /201	8 @ 1013	End Purge:	Date/Time:	11/ 1 /2018 @ 10)34	Gallons Purged:	0.75
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) Purge Goa	(uS/cm) ls: Stablizatio	(mg/L) on of Parame	ters for three	(mV)	(NTU) dings within the fo	(ft) Illowing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
1016	16.9	122.7	1.75	6.10	50.1	LOW	5.37	< 0.25	
1019	17.3	109.9	1.65	6.10	56.5				
1022	17.3	102.2	1.65	6.12	61.8		5.37	0.25	
1025	17.5	99.2	1.65	6.12	68.0				
1028	17.6	97.2	1.63	6.10	72.3				
1031	17.6	95.9	1.60	6.10	78.1				
1033	17.6	95.5	1.57	6.09	82.1				
CALIFORNIA CO	L L COTTON D								
SAMPLE CO Sample Collect			Bailer		Pump/Pump Type	DED BLADDER			
Made of:		Stainless Ste		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	 	Alconox Wa	_	Tap Rinse	DI Water	Dedicated		Dearented	
(By Numerica	_	Other	311 [rap Kilise	□ Di Water	Dedicated			
	•	_	, sheen, etc.):	CLEAR, CC	LORLESS, NO/N	NS			
			_						
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	17.7	95.4	1.61	6.09	82.0				
2	17.7	95.4	1.58	6.09	82.3				
3	17.7	95.4	1.64	6.10	82.0				
4	17.7	95.4	1.60	6.10	82.4				
Average:	17.7	95.4	1.61	6.10	82.2	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS A	LLOWED PI	ER BOTTLE	TYPE (Circle a)	pplicable or write	non-standard a		
5	(8260) (8010							WA 🗆	OR 🗆
						(8141) (Oil & Gre		WA 🗆	OR 🗆
1					dity) (Alkalinity) a) (NH3) (NO3/	(HCO3/CO3) (C	(SO4) (NO	5) (NO2) (F)	
			anide) (Free) (1112) (1102)	1102)			
					(Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (1	Ni) (Ag) (Se) (Γl) (V) (Zn) (H ₂	g) (K) (Na)
						o) (Mg) (Mn) (Ni) (
	VOC (Boein	g short list)							
	Methane Eth	ane Ethene A	cetylene						
	others								
Dunlicata San									
Duplicate San									



Time		99	0025217.099.09	:	Project Number		on	Boeing Rent	e:	Project Nam
Landau Representative: JHA			06	11/ 13 /2018@ 9	Date/Time:			Nov-18		Event:
Water Level Well Condition: Secure (YES) Damaged (NO) Describe: Flush Mount				40'S, SUNNY	Weather:		181113	RGW143S-	ber:	Sample Num
Well Condition: Secure (YES)								JHA	esentative:	Landau Repi
DTW Before Purging (ft) 5.81 Time 841 Flow through cell vol. Date/Time: 11/ 13 2018 @ 844 Find Purge: Date/Time: 11/ 13 2018 @ 944 Find Purge: Date/Time: 11/ 13 2018 @ 945 Find Purge: Date/Time: 11/ 12 2018 @ 905 Gallons Purget: Purge water disposed to: S5-gal Drum Storage Tank Ground Other Other Time Temp Cond. Us/Cm) (mg/L) Professional Purget Coals: Statistization of Parameters for three consecutive readings within the following limits Find Purget High Purget Coals: Statistization of Parameters for three consecutive readings within the following limits Find Purget High Purge										
Begin Purge: Date/Time: 11/ 13 7018			Flush Mount	Describe:	O)	Damaged (N		Secure (YES)	n:	Well Conditio
Purge water disposed to:				•	_					
Time (FFC) (uS/cm) (mg/L) pH (oRP (uV) (NTU) (ft) (ft) (volume(gal) (ng/L) (mg/L) (mg/L) (mg/L) (mg/L) (mg/L) (mg/L) (mg/L) (ng/L) (mg/L) (mg/L) (mg/L) (mg/L) (mg/L) (mg/L) (mg/L) (mg/L) (ng/L) (mg/L) (mg		_				End Purge:				
Time CF/C (uS/cm) (mg/L) (mg/L) (mg/L) Observed	SYSTEM	SITE TREATMEN	Other	☐ Ground	Storage Tank		55-gal Drum		sposed to:	Purge water d
Purge Goals: Stabilization of Parameters for three consecutive readings within the following limits x/-10 w x/-3% x/-10% x/-10 w x/-1	Comments/ Observations			•		pН				Time
847	Josefvations					ters for three				Tille
Stant Stan		through cell	< 0.3 ft	+/- 10%	+/- 10 mV	+/- 0.1 units	+/- 10%	+/- 3%	+/- 3%	
853 15.0 295.1 0.30 6.35 -57.5 5.81 0.25 856 15.0 297.3 0.35 6.35 -63.8 859 15.1 298.3 0.36 6.34 -66.4 902 15.1 299.2 0.38 6.34 -68.7 0.5 904 15.0 299.5 0.41 6.34 -70.7 SAMPLE COLLECTION DATA Sample Collected With:		<0.25	5.81	LOW	-28.2	6.33	0.27	274.3	14.9	847
856					-51.0	6.34	0.29	291.6	15.0	850
859		0.25	5.81		-57.5	6.35	0.30	295.1	15.0	853
859					-63.8	6.35	0.35	297.3	15.0	856
902 15.1 299.2 0.38 6.34 -68.7 0.5 904 15.0 299.5 0.41 6.34 -70.7 SAMPLE COLLECTION DATA Sample Collected With:										
SAMPLE COLLECTION DATA Sample Collected With:		0.5								
SAMPLE COLLECTION DATA Sample Collected With: Stainless Steel PVC Teflon Polyethylene Other Dedicated Decon Procedure: Alconox Wash Tap Rinse DI Water Dedicated Beliant Temp Cond. D.O. pH ORP Turbidity DTW Ferrous iron Co ("F/"C") (uS/cm) (mg/L) (mV) (NTU) (ft) (Fe II) Obs 1 15.0 299.6 0.41 6.34 -71.0 2 15.1 299.7 0.41 6.34 -71.2 3 15.1 299.8 0.42 6.34 -71.4 4 15.1 299.8 0.42 6.34 -71.4 Average: 15.1 299.7 0.41 6.34 -71.4 Average: 15.1 299.7 0.41 6.34 -71.4 Average: 15.1 299.8 0.42 6.34 -71.4 Average: 15.1 299.8 0.42 6.34 -71.4 Average: 15.1 299.8 0.41 6.34 -71.4 Average: 15.1 299.7 0.41 6.34 -71.4 Average: 15.1 299.8 0.42 6.34 -71.4 Average: 15.1 299.7 0.41 6.34 -71.4 CUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) 5 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) (8270) (PAH) (NWTPH-D) (NWTPH-D) (TPH-HCID) (8081) (8141) (0il & Grease) WA □ OR □ (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) 1 (COD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (TI) (V) (Zn) (Hg) (K) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (TI) (V) (Zn) (Hg) (K) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (TI) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (TI) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (TI) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (TI) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (TI) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (TI) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (TI) (V)		0.0								
Sample Collected With:					-70.7	0.54	0.41	277.3	13.0	704
Made of:								ATA	LLECTION D	SAMPLE CO
Decom Procedure:		_		DED BLADDER	Pump/Pump Type		Bailer		ted With:	Sample Collec
Cond. Cond		Dedicated	Other	Polyethylene	Teflon	PVC		Stainless Stee		Made of:
Character Corder				Dedicated	DI Water	Tap Rinse	ı 🗇	Alconox Was	ure:	Decon Proced
Replicate Temp (°F)°C) Cond. (uS/cm) D.O. pH (mV) ORP (mV) Turbidity (NTU) DTW (ft) Ferrous iron (Fe II) Co Obs 1 15.0 299.6 0.41 6.34 -71.0 -71.2 -71.2 -71.2 -71.2 -71.4 -71.4 -71.4 -71.4 -71.4 -71.4 -71.4 -71.4 -71.2 -71.4 -71.4 -71.2 -71.4 -71.4 -71.4 -71.4 -71.4 -71.2 -71.4 -71.4 -71.4 -71.4 -71.2 -71.3 #DIV/0! -71.2 -71.4 -71.4 -71.4 -71.4 -71.3 #DIV/0! -71.4 -71.4 -71.4 -71.3 #DIV/0! -71.4 -71.4 -71.4 -71.3 #DIV/0! -71.4 -71.4 -71.3 #DIV/0! -71.4 -71.4 -71.3 #DIV/0! -71.4 -71.4 -71.3 #DIV/0! -71.4 -71.4 -71.4 -71.4 -71.4 -71.4 -71.4 -71.4 -71.4 -71.4 -71.4 -71.4<				_		•	_		· 	By Numerica
Code				S	LORLESS, NO/N	CLEAR, CC	sheen, etc.):	urbidity, odor,	ption (color, t	Sample Descr
1 15.0 299.6 0.41 6.34 -71.0 2 15.1 299.7 0.41 6.34 -71.2 3 15.1 299.8 0.41 6.34 -71.4 4 15.1 299.8 0.42 6.34 -71.4 Average: 15.1 299.7 0.41 6.34 -71.3 #DIV/0! QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) 5 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) (8270) (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) 1 (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) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Cd) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (No) VOC (Boeing short list) Methane Ethane Ethene Acetylene	Comments/	Ferrous iron	DTW	Turbidity	ORP	pН	D.O.	Cond.	Temp	Replicate
2 15.1 299.8 0.41 6.34 -71.4 4 15.1 299.8 0.42 6.34 -71.4 Average: 15.1 299.7 0.41 6.34 -71.3 #DIV/0! CUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) 5 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA □ OR □ (8270) (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) 1 (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) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Methane Ethane Ethene Acetylene	Observations	(Fe II)	(ft)	(NTU)	(mV)		(mg/L)	(uS/cm)	(° F /° C)	
3 15.1 299.8 0.41 6.34 -71.4 4 15.1 299.8 0.42 6.34 -71.4 Average: 15.1 299.7 0.41 6.34 -71.3 #DIV/0! QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) 5 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA □ OR □ (8270) (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) 1 (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) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (Mn) (Mn) (Mn) (Mn) (Mn) (Mn) (Mn) (Mn					-71.0	6.34	0.41	299.6	15.0	1
4 15.1 299.8 0.42 6.34 -71.4 Average: 15.1 299.7 0.41 6.34 -71.3 #DIV/0! QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) 5 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA □ OR □ (8270) (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) 1 (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) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) VOC (Boeing short list) Methane Ethane Ethene Acetylene					-71.2	6.34	0.41	299.7	15.1	2
Average: 15.1 299.7 0.41 6.34 -71.3 #DIV/0! QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) 5 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA OR OR (8270) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease) WA OR OR (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) 1 (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) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) VOC (Boeing short list) Methane Ethane Ethene Acetylene					-71.4	6.34	0.41	299.8	15.1	3
QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) 5 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA OR (8270) (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) 1 (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) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) VOC (Boeing short list) Methane Ethane Ethene Acetylene					-71.4	6.34	0.42	299.8	15.1	4
5 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA □ OR □ (8270) (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) 1 (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) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) VOC (Boeing short list) Methane Ethane Ethene Acetylene				#DIV/0!	-71.3	6.34	0.41	299.7	15.1	Average:
5 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA □ OR □ (8270) (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) 1 (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) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) VOC (Boeing short list) Methane Ethane Ethene Acetylene		nalysis below)	on-standard ar	plicable or write n	TYPE (Circle ap	R BOTTLE	LOWED PE	NALYSIS AI	TYPICAL A	QUANTITY
(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) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) VOC (Boeing short list) Methane Ethane Ethene Acetylene		WA □ C			(BTEX)	NWTPH-Gx)	WTPH-G) () (8020) (N	(<mark>8260</mark>) (8010	5
1 (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) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) VOC (Boeing short list) Methane Ethane Ethene Acetylene		WA □ C	e)	8141) (Oil & Grea	HCID) (8081) (-Dx) (TPH-) (NWTPH	(NWTPH-I	(8270) (PAH	
(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) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) VOC (Boeing short list) Methane Ethane Ethene Acetylene		3) (NO2) (F)	(SO4) (NO3							
(Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) VOC (Boeing short list) Methane Ethane Ethene Acetylene				NO2)) (NH3) (NO3/					1
(Dissolved Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) VOC (Boeing short list) Methane Ethane Ethene Acetylene	(NI-)) (A =) (C) (7	OLY ONE S ONE S ON	(Ca) (Ca) (E) (
VOC (Boeing short list) Methane Ethane Ethene Acetylene	.) (Na)									
Methane Ethane Ethene Acetylene		(ZII) (TIg) (K) (Na	g) (Se) (11) (v)	(Mg) (MIII) (MI) (A	(C1) (Cu) (1e) (F0	a) (Cu) (Co)	(Ba) (Be) (C			
							etylene	· · · · · · · · · · · · · · · · · · ·		
others										
lothers										
OMED .									others	
Duplicate Sample No(s):									nnle No(s)	Duplicate San
Comments:										



Sample Number: RGW209S-181113	Project Nam	ne:	Boeing Ren	nton		Project Numbe	r:	0025217.099.0	99	
MATER LEVEL AND LEVEL DE DATA	Event:		Nov-18			Date/Time:	11/ 13 /2018@	1145		
NATER EVEL VIEL PURGE DATA Secure (YFS) Damaged (NO) Describe: Flisch Mount Flisch Mount Secure (YFS) Damaged (NO) Describe: Flisch Mount Secure (YFS) Damaged (NO) Describe: Flisch Mount Secure (YFS) Damaged (NO) Describe: Flisch Mount Secure (YFS) Secure (YFS) Damaged (NO) Describe: Flisch Mount Secure (YFS) Secure (Y	Sample Nun	nber:	RGW209S-	- 181113		Weather:	40s PC			
Marcian Marc	Landau Rep	resentative:	SRB							
DTW Before Purging (ft)	WATER LEV	VEL/WELL/P	URGE DATA							
Page	Well Condition	on:	Secure (YES	5)	Damaged (N	IO)	Describe:	Flush Mount		
Purgle water disposed to:	DTW Before	Purging (ft)	5.27	Time:	1112	Flow through ce	l <u>l vol.</u>		GW Meter No.(s heron3
Time	Begin Purge:	Date/Time:	11/13/2018	@ 1115	End Purge:	Date/Time:	11/13 /2018 @	1130	Gallons Purged:	0.25
Time	Purge water d	lisposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
Purps Cond. Subbitzation Parameters for three consecutive readings within the following limits \$\frac{1}{2}\$ How \$\frac{1}{2}\$ \$\frac{1}{2}\$		Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
1118	Time									Observations
1118							~	~		
1121 13.97	1118	14.33	456	0.33	6.36	-76.8	LOW	5.27	- U	
1124 13.99 421 0.18 6.34 -73.0 5.27 1127 14.01 419 0.16 6.33 -73.4			422					5.27		
SAMPLE COLLECTION DATA Bailer										
SAMPLE COLLECTION DATA Sample Collected With:								3.21		
Sample Collected With:	1127	14.01	419	0.16	0.33	-/3.4				
Sample Collected With:										
Sample Collected With:										
Sample Collected With:										
Sample Collected With:										
Made of:				D ::		D D T				
Decon Procedure: Alconox Wash Tap Rinse DI Water Dedicated	_	_			_		_	———	— • • • • •	-
Contact Cont							_ ' '	U Other	Dedicated	
Replicate Replicate Replicate ("F"C") Temp ("S"C") Cond. (mg/L) D.O. pH (mV) QNP (mV) Turbidity (NTU) DTW (ft) Ferrous iron (Fe II) Comments/Observations 1 14.02 418 0.15 6.33 -73.3 -74.0		_		sh 📋	Tap Rinse	DI Water	Dedicated			
Replicate Temp Cond. D.O. pH ORP Turbidity DTW Ferrous iron Comments/Observations	` •	,		-1	CLEAD CO	LODI ECC NO A	<u> </u>			
CF/C CUS/cm CF/C CUS/cm CUS/c	Sample Desci	ription (color,	urbiaity, odoi	r, sneen, etc.):	CLEAR CO	LUKLESS NU/N	3			
2 14.03 418 0.15 6.33 -74.0 3 14.04 418 0.15 6.33 -74.1 Average: 14.04 418 0.15 6.33 -74.1 Average: 14.04 418 0.15 6.33 -73.9 #DIV/0! QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) 5 (8260) (8010) (8020) (NWTPH-G) (NWTPH-GX) (BTEX) WA □ OR □ (8270) (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) 1 (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) (Potential Ethene Ethene Acetylene Duplicate Sample No(s):	Replicate				pН		•			
3	1	14.02	418	0.15	6.33	-73.3				
4 14.08 417 0.14 6.33 -74.1 Average: 14.04 418 0.15 6.33 -73.9 #DIV/0! QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) 5 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA □ OR □ (8270) (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) 1 (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) (VOC (Boeing short list) Methane Ethane Ethene Acetylene	2	14.03	418	0.15	6.33	-74.0				
4 14.08 417 0.14 6.33 -74.1 Average: 14.04 418 0.15 6.33 -73.9 #DIV/0! QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) 5 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA □ OR □ (8270) (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) 1 (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) (VOC (Boeing short list) Methane Ethane Ethene Acetylene	3	14.04	418	0.15	6.33	-74.2				
Average: 14.04										
QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) 5 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA OR (8270) (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) 1 (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) Methane Ethane Ethene Acetylene Duplicate Sample No(s):							#DIV/0!			
5 (8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA □ OR □ (8270) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease) WA □ OR □ (pH) (Conductivity) (TDS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (CI) (SO4) (NO3) (NO2) (F) 1 (COD) (TOcl (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Cyanide) (WAD Cyanide) (Free Cyanide) (Total Metals) (As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (TI) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silic VOC (Boeing short list) Methane Ethane Ethene Acetylene (Dissolved Metals) (As)										
(8270) (PAH) (NWTPH-D) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease) WA OR OR (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) 1 (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) Methane Ethane Ethene Acetylene Others Duplicate Sample No(s):							pplicable or write	non-standard 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) (Silice VOC (Boeing short list) Methane Ethane Ethene Acetylene Others Duplicate Sample No(s):	5						(8141) (Oil & Gre	ease)		
1 (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) Methane Ethane Ethene Acetylene others Duplicate Sample No(s):										OIL .
(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) Methane Ethane Ethene Acetylene others Duplicate Sample No(s):	1									
(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) (Silica VOC (Boeing short list) Methane Ethane Ethene Acetylene others Duplicate Sample No(s):		(Total Cyanid	e) (WAD Cy	yanide) (Free	Cyanide)					
VOC (Boeing short list) Methane Ethane Ethene Acetylene others Duplicate Sample No(s):										
Methane Ethane Ethene Acetylene others Duplicate Sample No(s):				b) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	(Y) (Zn) (Hg) (K) (Na) (Hardness) (Silic
others Duplicate Sample No(s):		L VOC (Rogin	g short list)							
Duplicate Sample No(s):				a a 4 x 1 c						
Duplicate Sample No(s):				cetylene						
Duplicate Sample No(s):				cetylene						
		Methane Eth		cetylene						
Comments:		Methane Eth		cetylene						
Signatura: SPR Date: 11/13/2018	-	Methane Eth		cetylene						



Project Nam	e:	Boeing Rer	nton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 13 /2018@	813		
Sample Nun	nber:	RGW210S-	- 181113		Weather:	CLEAR 30S			
Landau Rep	resentative:	CEB							
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES	5)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	5.03	Time:	745	Flow through cel	ll vol.		GW Meter No.(s	s 1
Begin Purge:	Date/Time:	11/13/2018	@ 748	End Purge:	Date/Time:	11/13 /2018 @	814	Gallons Purged:	0.5
Purge water d	isposed 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: Stablization +/- 3%	on of Parame +/- 10%	ters for three +/- 0.1 units		dings within the fo	llowing limits < 0.3 ft	>/= 1 flow through cell	
751	13.2	251.4	2.96	6.53		LOW	5.11	un ough cen	
754	11.1	218.3	2.39	6.46	5.6	2011	5.11		
757	10.3	194.3	1.27	6.05	33.8	-	5.13		
800	10.3	194.8	1.20	6.04	34.2				
803	10.2	199.4	1.01	6.01	29.2				
806	10.4	201.4	1.00	6.03	25.6				
808	10.4	202.7	1.01	6.05	22.4				
	LLECTION I		D. II			DED DI (DDED			
Sample Collec	cted With:	Q. : 1 . Q.	Bailer			DED BLADDER			
Made of:	. =	Stainless Ste		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	_	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	,	Other							
Sample Descr	ription (color, t	turbidity, odor	, sheen, etc.):	CLEAR, SL	IGHT YELLOW	COLOR, SOME O	RANGE PARTI	CULATES, NO N	NS .
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	10.5	203.1	0.99	6.06	21.7				
2	10.5	203.6	0.96	6.06	21.0				
3	10.5	204.5	0.94	6.07	20.1				
4	10.5	205.0	0.95	6.07	19.4				
Average:	10.5	204.1	0.96	6.07	20.6	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS A	LLOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
5	(<mark>8260</mark>) (8010		NWTPH-G) (WA 🗆	OR 🗆
						(8141) (Oil & Gre		WA D	OR 🗆
1	(COD) (TOC				oity) (Alkalinity) n) (NH3) (NO3/	(HCO3/CO3) (C	(SO4) (NO	(NO2) (F)	
	(/ (-	, , , , , , ,	vanide) (Free		(-1.20)				
					(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg	g) (K) (Na)
	(Dissolved M	etals) (As) (St	o) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (Pl	o) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (N	Na) (Hardness) (Silica
	VOC (Boein	g short list)							
	Methane Eth	ane Ethene A	cetylene						
	others								
Duplicate San	nnle No(s):								
Comments:	iipic 140(s).								
Cianotura	CED					Datas	11/12/2019		



Project Nam	ie:	Boeing Ren	nton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 13 /2018@	1030		
Sample Nun	nber:	RGW237S-	- 181113		Weather:	40s PC			
Landau Rep	resentative:	SRB							
WATER LEV	/EL/WELL/PI	URGE DATA							
Well Condition	on:	Secure (YES	5)	Damaged (N	IO)	Describe:	Flush Mount		
DTW Before	Purging (ft)	4.85	Time:	957	Flow through ce	ll vol.		GW Meter No.(s heron3
Begin Purge:	Date/Time:		@ 1000	End Purge:	Date/Time:	11/13 /2018 @	1022	Gallons Purged:	0.25
Purge water d	lisposed 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
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	
1003	12.95	332	3.09	6.49	-12.1	LOW	4.85		
1006	13.06	320	2.91	6.46	-14.1		4.85		
1009	16.12	269	0.68	6.43	-32.6		4.85		
1012	16.40	271	0.52	6.43	-37.6				
1015	16.52	277	0.37	6.41	-40.9				
1018	16.72	292	0.31	6.39	-45.4				
1021	16.57	298	0.26	6.40	-49.3				
	LLECTION I		D 11		D /D /F	1 111 11			
Sample Colle	cted With:		Bailer	_	Pump/Pump Type			— D P · · · ·	
Made of:	. =	Stainless Ste	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced		Alconox Wa	sh 📋	Tap Rinse	DI Water	Dedicated			
(By Numerica	,	Other							
Sample Descr	ription (color,	turbidity, odoi	r, sheen, etc.):	CLEAR SLI	GHTLY YELLO	W WITH MINOR I	PARTICULATE	S NO/NS	
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	16.57	297	0.26	6.39	-50.0				
2	16.57	297	0.25	6.39	-50.3				
3	16.57	298	0.24	6.39	-50.6				
4	16.60	298	0.24	6.38	-50.9				
Average:	16.58	298	0.25	6.39	-50.5	#DIV/0!			
OUANTITY	TYPICAL A	NALYSIS AI	LLOWED PH	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalvsis below)	
5			NWTPH-G) (WA □	OR 🗆
	(8270) (PAH	I) (NWTPH-	D) (NWTPI	I-Dx) (TPH	-HCID) (8081)	(8141) (Oil & Gre	ease)	WA □	OR 🗆
) (HCO3/CO3) (Cl) (SO4) (NO	03) (NO2) (F)	
1					n) (NH3) (NO3	/NO2)			
			yanide) (Free		(Cr) (Cu) (Fo)	(Pb) (Mg) (Mn) (Ni) (Ag) (Sg) (T1) (V) (Zn) (U	Ig) (K) (Na)
									Na) (Hardness) (Silio
	VOC (Boein		o, (Da) (Do) (C	-u, (-u) (-0)	(51) (54) (16) (1	c, (1115) (1111) (111)	(. 15) (00) (11) (1	, (zm, (115) (11) (u, (Hardiness) (BIII
		ane Ethene A	cetylene						
	d								
	others								
Duplicate Sar	nnle No(s)								
	inpre 1 (0(5).								
Comments:	inpre rvo(s).								



Project Nam	e:	Boeing Ren	iton		Project Number	er:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 13 /2018@	1100		
Sample Nun	nber:	RGW238I-	181113		Weather:	40s PC			
Landau Rep	resentative:	SRB			•				
WATER LEV	/EL/WELL/P	URGE DATA							
Well Condition		Secure (YES		Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	4.89	Time:	_	Flow through ce	ll vol.	1	GW Meter No.(s heron3
Begin Purge:			@ 1030	End Purge:	-	11/ 13 /2018 @	1053	Gallons Purged:	
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 /° Ĉ)	(uS/cm)	(mg/L)	-	(mV)	(NTU)	(ft)	Volume (gal)	Observations
	Purge Goa	ls: Stablizatio +/- 3%		ters for three +/- 0.1 units		dings within the fo	ollowing limits < 0.3 ft	>/= 1 flow through cell	
1033	12.40	430	0.78	6.02		LOW	4.92	un ough cen	
						LOW			
1036	12.40	441	0.44	5.96	-9.3		4.94		
1039	12.53	455	0.38	6.02	-40.5		4.94		-
1042	12.47	504	0.22	6.14	-63.3		4.94		
1045	12.71	501	0.18	6.17	-67.0				
1048	13.04	498	0.16	6.20	-71.7				
1051	13.40	492	0.14	6.24	-75.9				
SAMPLE CO	LLECTION I	DATA							
Sample Colle	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	ıl Order)	Other							
Sample Descr	ription (color,	turbidity, odoi	, sheen, etc.):	CLEAR CO	LORLESS NO/N	S			
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
Керпсас	(°F/°C)	(uS/cm)	(mg/L)	pm	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	13.55	490	0.14	6.25	-76.6				
2	13.50	490	0.15	6.25	-77.1				
3	13.55	490	0.15	6.26	-77.8				
		489			ı				
. 4	13.60		0.15	6.27	-78.4	WD 77 7 (0.1			
Average:	13.55	490	0.15	6.26	-77.5	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS A	LLOWED PE	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
5		0) (8020) (N						WA 🗆	OR 🗆
						(8141) (Oil & Gre		WA 🗆	OR 🗆
1						(HCO3/CO3) ((SO4) (NO	03) (NO2) (F)	
1	`	le) (WAD Cy	<u> </u>		n) (NH3) (NO3	/NU2)			
					(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se)	(T1) (V) (Zn) (E	Ig) (K) (Na)
									(Na) (Hardness) (Silic
	VOC (Boein								
	Methane Eth	ane Ethene A	cetylene						
	others								
Duplicate Sar	nple No(s):								
Comments:									
					· · · · · · · · · · · · · · · · · · ·				



Project Nam	e:	Boeing Rer	nton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 13 /2018@	806		
Sample Nun	nber:	RGW239I-	181113	-	Weather:	40'S, SUNNY			
Landau Repr	resentative:	JHA							
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES	5)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	5.71	Time:	740	Flow through cel	l vol.		GW Meter No.(s	SLOPE 4
Begin Purge:	Date/Time:		8 @ 744	End Purge:	Date/Time:	11/ 1 /2018 @ 80)5	Gallons Purged:	0.75
Purge water d	isposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O.	pН	ORP (mV)	Turbidity	DTW	Internal Purge	Comments/
Time			(mg/L) on of Parame	ters for three		(NTU) dings within the fo	(ft) llowing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
747	11.0	272.2	2.90	6.86	40.5	LOW	5.71	< 0.25	-
750	11.2	277.4	2.73	5.93	-10.5				
753	11.6	280.5	2.42	6.03	-40.5		5.71	0.25	
756	11.7	280.9	2.25	6.06	-48.1				
759	11.8	281.3	1.98	6.08	-51.4				
802		281.7	2.01	6.10	-55.8				
804		282.8	1.73	6.12	-58.8				
SAMPLE CO	LLECTION I	OATA			T.				
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	,	Other							
Sample Descr	ription (color, t	turbidity, odor	, sheen, etc.):	CLEAR, CC	LORLESS, NO/N	NS			
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	12.2	283.2	1.69	6.12	-59.1				
2	12.2	283.6	1.69	6.12	-59.4				
3	12.2	283.5	1.75	6.12	-60.0				
4	12.3	284.0	1.78	6.12	-60.5				
Average:	12.2	283.6	1.73	6.12	-59.8	#DIV/0!			
OUANTITY	TYPICAL A	NALYSIS A	LLOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
5	(8260) (8010		NWTPH-G) (- 		WA □	OR 🗆
	(8270) (PAI	H) (NWTPH-	D) (NWTPH	I-Dx) (TPH-	HCID) (8081)	(8141) (Oil & Grea	ase)	wa □	OR 🗆
	(pH) (Condu	*/				(HCO3/CO3) (C	(SO4) (NO	(NO2) (F)	
1	(COD) (TO				n) (NH3) (NO3)	NO2)			
			vanide) (Free		(Cr) (Cr) (Fr)	(Pb) (Mg) (Mn) (N	Ti) (A ~) (C ~) (TI) (V) (7-) (U)) (IZ) (N ₀)
						b) (Mg) (Mn) (Ni) (A			
	VOC (Boein		9) (Bu) (Bc) (C	ou) (eu) (eo)	(01) (04) (10) (11	<i>y</i> (111 <i>g</i>) (1111) (111) (1	115) (50) (11) (1) (Zii) (11g) (11) (11	ru)
		ane Ethene A	cetylene						
	.1								
	others								
Duplicate San	nple No(s):								_
Comments:	MSMSD Lo	cation							
Signature:		JHA				Date:	11/13/2018		



Project Nam	e:	Boeing Rer	nton		Project Numbe	r:	0025217.099.0	99	<u>-</u>
Event:		Nov-18			Date/Time:	11/ 13 /2018@	841		
Sample Num	nber:	RGW240D	- 181113		Weather:	40'S, SUNNY			
Landau Repi	-	JHA			-				
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Conditio		Secure (YES	5)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	5.73	Time:	813	Flow through cel	l vol.		GW Meter No.(s SLOPE 4
	Date/Time:			End Purge:	_	11/ 1 /2018 @ 83	3	Gallons Purged:	
Purge water d	isposed 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)	•	(mV)	(NTU)	(ft)	Volume (gal)	Observations
	Purge Goa +/- 3%	ls: Stablizatio +/- 3%		ters for three +/- 0.1 units		dings within the fol +/- 10%	lowing limits < 0.3 ft	>/= 1 flow through cell	
820	10.5	341.5	0.55	6.33		MED	6.11	um ough cen	TURN TO LOWES
823	9.4	338.5	0.46	6.34	-52.0	WED	6.08		AT LOWEST
826		331.1	0.42	6.20	-55.3			<0.25	ATLOWEST
829	9.2	330.2	0.42	6.17	-60.1		0.08	<u><0.23</u>	
		331.0	0.40	6.18	-63.5				
832	9.4	331.0	0.40	0.18	-03.3				
CAMPLE CO	LLECTION D								
Sample Collect		AIA 🔲	Bailer		Pump/Pump Type	DED BLADDER			
Made of:		Stainless Ste	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lure:	Alconox Wa	sh 🗖	Tap Rinse	DI Water	Dedicated	_	_	
(By Numerica	_	Other	_						
Sample Descr	ription (color, t	urbidity, odor	, sheen, etc.):	CLOUDY, I	LIGHT WHITE/G	RAY COLOR, NO/	NS		
		~ .			022		D. MYY.	E	Commental
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	9.4	331.0	0.39	6.18	-63.6				
2	9.4	331.2	0.39	6.18	-63.7				
3	9.4	331.2	0.40	6.19	-64.1				
4	9.4	331.4	0.39	6.19	-64.3				
Average:	9.4	331.2	0.39	6.19	-63.9	#DIV/0!	6.26		
QUANTITY 5			NWTPH-G) (pplicable or write r	ion-standard a	WA \square	OR 🗆
3						(8141) (Oil & Grea	ise)	WA 🗆	OR 🗆
						(HCO3/CO3) (C			
1					n) (NH3) (NO3/				
			yanide) (Free						
						Pb) (Mg) (Mn) (N			
	`		o) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (Pt	o) (Mg) (Mn) (Ni) (A	Ag) (Se) (Tl) (V)	(Zn) (Hg) (K) (I	Va)
	VOC (Boein	g short list) ane Ethene A	cetylene						
	wichiane Elli	anc Eulelle A	ceryiche						
	others								
Dunlicate San									
Duplicate San		VN WAS INF	VITABLE						



Project Nam	e:	Boeing Ren	iton		Project Numbe	r:	0025217.099.09	99	
Event:		Nov-18			Date/Time:	11/ 13 /2018@	1001		
Sample Num	ber:	RGW241S-	181113		Weather:	40'S, SUNNY			
Landau Rep	-	JHA			-				
WATER LEV	'EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	6.3	Time:	933	Flow through cel	l vol.		GW Meter No.(s	S SLOPE 4
Begin Purge:				End Purge:	_	11/ 1 /2018 @ 95	7	Gallons Purged:	
Purge water d			55-gal Drum	Ě	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		dings within the fol +/- 10%	llowing limits < 0.3 ft	>/= 1 flow through cell	
041									
941	12.4	287.7	0.34	6.27		LOW	0.3	<0.25	
944	12.2	286.7	0.32	6.25	-61.3				
947	13.9	298.0	0.29	6.26	-69.2		6.3	0.25	
950	14.1	301.1	0.30	6.29	-72.8				
953	14.4	303.2	0.32	6.31	-76.0				
956	14.1	303.4	0.32	6.32	-78.1				
SAMPLE CO	LLECTION D								
Sample Collec	cted With:		Bailer			DED BLADDER			
Made of:		Stainless Ste	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	ure:	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	l Order)	Other				-			
Sample Descr	iption (color, t	urbidity, odor	, sheen, etc.):	CLEAR, CC	LORLESS, NO/N	NS .			
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	14.1	303.1	0.33	6.32	-78.3				
2	14.1	302.9	0.33	6.32	-78.1				
3	14.1	303.0	0.34	6.32	-78.5				
4	14.1	302.9	0.34	6.32	-78.5				
Average:	14.1	303.0	0.34	6.32	-78.4	#DIV/0!			
						•			
QUANTITY 5	(8260) (8010					oplicable or write i	ion-standard ai	wa \square	OR 🗆
3						(8141) (Oil & Grea	ise)	WA 🗆	OR 🗆
						(HCO3/CO3) (C			OI.
					i) (NH3) (NO3/				
	(Total Cyanid	e) (WAD Cy	vanide) (Free	Cyanide)					
						Pb) (Mg) (Mn) (N			
		/ \ / \	b) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (Pt	o) (Mg) (Mn) (Ni) (A	Ag) (Se) (Tl) (V)	(Zn) (Hg) (K) (N	Va)
	VOC (Boein		aotulas a						
	ivietnane Eth	ane Ethene A	cetylene						
	others								
.									
Duplicate San	nple No(s):								
Comments:									



Project Nam	e:	Boeing Ren	ton		Project Number	r <u>:</u>	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 13 /2018@	936		
Sample Num	nber:	RGW242I-	181113		Weather:	40'S, SUNNY			
Landau Repi	resentative:	JHA							
WATER LEV	'EL/WELL/PU	RGE DATA							
Well Conditio	n:	Secure (YES)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	6.44	Time:	858	Flow through cel	l vol.		GW Meter No.(s	SLOPE 4
Begin Purge:	Date/Time:			End Purge:		11/ 1 /2018 @ 93	0	Gallons Purged:	
Purge water d	isposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATME	ENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C) Purge Goal	(uS/cm) ls: Stablizatio	(mg/L) on of Paramet	ters for three	(mV) consecutive read	(NTU) dings within the fo	(ft) Howing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
917	11.7	275.3	0.59	6.21	-20.4	LOW	6.44	< 0.25	
920	11.4	275.4	0.52	6.22	-32.1				
923	11.6	275.7	0.46	6.22	-41.8		6.44	0.25	
926	11.7	275.6	0.46	6.22	-48.4		0.11	0.23	
					-54.2				
929	11.9	277.6	0.50	6.24	-54.2				
	LLECTION D		Dailan		D.,	DED DI ADDED			
Sample Collec	ted with:	<u> </u>	Bailer		Pump/Pump Type	DED BLADDER		,	
Mode of	i ch	Ctainless Ctar	, I	DVC	Tofler	Dolyothylana	Othor	Dadicated	
Made of:		Stainless Stee	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	_	Alconox Was	_	PVC Tap Rinse	Teflon DI Water	Polyethylene Dedicated	Other	Dedicated	
Decon Proced By Numerica	l Order)	Alconox Was	sh 🗖	Tap Rinse	DI Water	Dedicated	Other	Dedicated	
Decon Proced By Numerica	l Order)	Alconox Was	sh 🗖	Tap Rinse	_	Dedicated	Other	Dedicated	
Decon Proced By Numerica	l Order)	Alconox Was	sh 🗖	Tap Rinse	DI Water	Dedicated	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
Decon Proced By Numerica Sample Descr	il Order) iption (color, t	Alconox Was Other urbidity, odor,	sheen, etc.):	Tap Rinse	DI Water COLORLESS, NO ORP	Dedicated O/NS Turbidity	DTW	Ferrous iron	
Decon Proced By Numerica Sample Descr Replicate	tl Order) iption (color, t Temp (°F/°C) 11.9	Alconox Was Other Other urbidity, odor, Cond. (uS/cm) 277.6	sheen, etc.):	Tap Rinse CLOUDY, C pH 6.25	ORP (mV)	Dedicated O/NS Turbidity	DTW	Ferrous iron	
Decon Proced By Numerica Sample Descr Replicate 1 2	Order	Alconox Was Other Durbidity, odor, Cond. (uS/cm) 277.6 277.6	sheen, etc.):_ D.O. (mg/L) 0.50 0.49	Tap Rinse CLOUDY, C pH 6.25 6.25	OLORLESS, NO ORP (mV) -55.2 -55.5	Dedicated O/NS Turbidity	DTW	Ferrous iron	
Decon Proced By Numerica Sample Descr Replicate 1 2 3	Temp (°F/°C) 11.9	Alconox Was Other purbidity, odor, Cond. (uS/cm) 277.6 277.6 277.6	sheen, etc.):_ D.O. (mg/L) 0.50 0.49	Tap Rinse CLOUDY, 0 pH 6.25 6.25 6.25	ORP (mV) -55.2 -55.8	Dedicated O/NS Turbidity	DTW	Ferrous iron	
Decon Proced By Numerica Sample Descr Replicate 1 2 3 4	Temp (°F/°C) 11.9 11.9 11.9	Alconox Was Other Other purbidity, odor, Cond. (uS/cm) 277.6 277.6 277.6 277.6	sheen, etc.):_ D.O. (mg/L) 0.50 0.49 0.48	Tap Rinse CLOUDY, C pH 6.25 6.25 6.25 6.25	ORP (mV) -55.2 -55.8 -56.2	Dedicated O/NS Turbidity (NTU)	DTW	Ferrous iron	
Decon Proced By Numerica Sample Descr Replicate 1 2 3	Temp (°F/°C) 11.9	Alconox Was Other purbidity, odor, Cond. (uS/cm) 277.6 277.6 277.6	sheen, etc.):_ D.O. (mg/L) 0.50 0.49	Tap Rinse CLOUDY, 0 pH 6.25 6.25 6.25	ORP (mV) -55.2 -55.8	Dedicated O/NS Turbidity	DTW	Ferrous iron	
Decon Proced By Numerical Sample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.9 11.9 11.9 11.9 11.9 11.9	Alconox Was Other Durbidity, odor, Cond. (uS/cm) 277.6 277.6 277.6 277.6 277.6 NALYSIS AI	sheen, etc.):_ D.O. (mg/L) 0.50 0.49 0.48 0.49 LLOWED PE	CLOUDY, 0 pH 6.25 6.25 6.25 6.25 6.25 6.25	ORP (mV) -55.2 -55.5 -56.2 -55.7 TYPE (Circle a)	Dedicated O/NS Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Observations
Decon Proced By Numerica Sample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.9 11.9 11.9 11.9 11.9 11.9 (8260) (8010	Alconox Was Other Other Purbidity, odor, Cond. (uS/cm) 277.6 277.6 277.6 277.6 277.6 277.6 277.6 277.6 277.6 277.6 (uS/cm) (uS	sheen, etc.):_ D.O. (mg/L) 0.50 0.49 0.48 0.49 LLOWED PE	CLOUDY, C pH 6.25 6.25 6.25 6.25 6.25 6.25 CR BOTTLE NWTPH-GX	ORP (mV) -55.2 -55.5 -56.2 -56.2 -57 TYPE (Circle a) (BTEX)	Dedicated O/NS Turbidity (NTU) #DIV/0!	DTW (ft)	Ferrous iron (Fe II) nalysis below) WA	Observations OR
Decon Proced By Numerical Sample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.9 11.9 11.9 11.9 11.9 (8260) (8010) (8270) (PAH)	Alconox Was Other Other Purbidity, odor, Cond. (uS/cm) 277.6 277.6 277.6 277.6 277.6 277.6 277.6 277.6 NALYSIS AI (US/CM) (8020) (NOT) (NWTPH-	sheen, etc.):	CLOUDY, C pH 6.25 6.25 6.25 6.25 6.25 ER BOTTLE NWTPH-GX 1-Dx) (TPH-	ORP (mV) -55.2 -55.5 -55.8 -56.2 -55.7 TYPE (Circle a) (BTEX) HCID) (8081)	Dedicated O/NS Turbidity (NTU) #DIV/0! pplicable or write 1 (8141) (Oil & Great	DTW (ft)	Ferrous iron (Fe II) nalysis below) WA □ WA □	Observations
Decon Proced By Numerica Sample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.9 11.9 11.9 11.9 11.9 (8260) (8010) (8270) (PAH) (pH) (Condu	Alconox Was Other Other Durbidity, odor, Cond. (uS/cm) 277.6 277.6 277.6 277.6 277.6 277.6 (uS/cm) (uS	sheen, etc.): D.O. (mg/L) 0.50 0.49 0.49 0.48 0.49 LLOWED PERMITPH-G) (D) (NWTPH-S) (B) (TSS) (B)	CLOUDY, C pH 6.25 6.25 6.25 6.25 6.25 ER BOTTLE NWTPH-GX (-Dx) (TPH-OD) (Turbic	ORP (mV) -55.2 -55.5 -55.8 -56.2 -55.7 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity)	Dedicated D/NS Turbidity (NTU) #DIV/0! pplicable or write in the interval of the interval	DTW (ft)	Ferrous iron (Fe II) nalysis below) WA □ WA □	Observations OR
Decon Proced By Numerical Sample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.9 11.9 11.9 11.9 11.9 (8260) (8010 (8270) (PAH (pH) (Condu	Alconox Was Other Other urbidity, odor, Cond. (uS/cm) 277.6 277.6 277.6 277.6 NALYSIS AI () (8020) (N () (NWTPH-ctivity) (TDS) (C) (Total PO4	sheen, etc.):_ D.O. (mg/L) 0.50 0.49 0.48 0.49 LLOWED PERMYPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kie	PH 6.25 6.25 6.25 6.25 6.25 CR BOTTLE NWTPH-GX I-Dx) (TPH-OD) (Turbic dahl Nitrogen	ORP (mV) -55.2 -55.5 -55.8 -56.2 -55.7 TYPE (Circle a) (BTEX) HCID) (8081)	Dedicated D/NS Turbidity (NTU) #DIV/0! pplicable or write in the interval of the interval	DTW (ft)	Ferrous iron (Fe II) nalysis below) WA □ WA □	Observations OR
Decon Proced By Numerical sample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.9 11.9 11.9 11.9 11.9 (8260) (8010 (8270) (PAH (pH) (Condu (COD) (TOO (Total Cyanid	Alconox Was Other Other purbidity, odor, Cond. (uS/cm) 277.6 277.6 277.6 277.6 277.6 NALYSIS AI (I) (NWTPH-ctivity) (TDS) (Total PO-ce) (WAD Cy	sheen, etc.):	PH 6.25 6.25 6.25 6.25 6.25 CR BOTTLE NWTPH-Gx) (-Dx) (TPH-OD) (Turbid dahl Nitrogen Cyanide)	ORP (mV) -55.2 -55.5 -56.2 -55.7 TYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write in the interest of the in	DTW (ft) non-standard a ase)	Ferrous iron (Fe II) malysis below) WA WA WA Solution	Observations OR OR OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.9 11.9 11.9 11.9 11.9 (8260) (8010 (8270) (PAH (PH) (Condu (COD) (TOG (Total Cyanid (Total Metals)	Alconox Was Other Other Properties of the Cond. (uS/cm) 277.6 277.	sheen, etc.):	PH 6.25 6.25 6.25 6.25 6.25 CR BOTTLE NWTPH-GX I-DX) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -55.2 -55.5 -56.2 -56.2 -57 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) (NH3) (NO3/	Dedicated D/NS Turbidity (NTU) #DIV/0! pplicable or write in the interval of the interval	DTW (ft) non-standard a ase) El) (SO4) (NO	Ferrous iron (Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Decon Proced By Numerical Sample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.9 11.9 11.9 11.9 11.9 (8260) (8010 (8270) (PAH (PH) (Condu (COD) (TOG (Total Cyanid (Total Metals)	Alconox Was Other Other Purbidity, odor, US/cm) 277.6 277.6 277.6 277.6 277.6 NALYSIS AI (1) (8020) (N (1) (NWTPH-ctivity) (TDS (2) (Total PO-ctivity) (As) (Sb) (Stals) (As) (Sb) (Stals) (As) (Sb) (Stals)	sheen, etc.):	PH 6.25 6.25 6.25 6.25 6.25 CR BOTTLE NWTPH-GX I-DX) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -55.2 -55.5 -56.2 -56.2 -57 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write in the image of the	DTW (ft) non-standard a ase) El) (SO4) (NO	Ferrous iron (Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Decon Proced By Numerica Sample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.9 11.9 11.9 11.9 11.9 (8260) (8010) (8270) (PAH) (pH) (Condu (COD) (TOd (Total Metals)) (Dissolved Metals) VOC (Boein	Alconox Was Other Other Purbidity, odor, US/cm) 277.6 277.6 277.6 277.6 277.6 NALYSIS AI (1) (8020) (N (1) (NWTPH-ctivity) (TDS (2) (Total PO-ctivity) (As) (Sb) (Stals) (As) (Sb) (Stals) (As) (Sb) (Stals)	Sheen, etc.): D.O. (mg/L) 0.50 0.49 0.48 0.49 LLOWED PERMITPH-G) (D) (NWTPH-S) (TSS) (B4) (Total Kiedanide) (Free Ba) (Be) (Called (Cal	PH 6.25 6.25 6.25 6.25 6.25 CR BOTTLE NWTPH-GX I-DX) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -55.2 -55.5 -56.2 -56.2 -57 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write in the image of the	DTW (ft) non-standard a ase) El) (SO4) (NO	Ferrous iron (Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Decon Proced By Numerica Sample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.9 11.9 11.9 11.9 11.9 (8260) (8010) (8270) (PAH) (pH) (Condu (COD) (TOd (Total Metals)) (Dissolved Metals) VOC (Boein	Alconox Was Other Driving Other Purbidity, odor, Cond. (uS/cm) 277.6 277.6 277.6 277.6 277.6 277.6 (uS/cm) (uS	Sheen, etc.): D.O. (mg/L) 0.50 0.49 0.48 0.49 LLOWED PERMITPH-G) (D) (NWTPH-S) (TSS) (B4) (Total Kiedanide) (Free Ba) (Be) (Called (Cal	PH 6.25 6.25 6.25 6.25 6.25 CR BOTTLE NWTPH-GX 1-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -55.2 -55.5 -56.2 -56.2 -57 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write in the image of the	DTW (ft) non-standard a ase) El) (SO4) (NO	Ferrous iron (Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Decon Proced By Numerica Sample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.9 11.9 11.9 11.9 11.9 (8260) (8016) (8270) (PAH (pH) (Condu (COD) (TOG (Total Cyanid (Total Metals) (Dissolved Me VOC (Boein Methane Eth	Alconox Was Other Driving Other Purbidity, odor, Cond. (uS/cm) 277.6 277.6 277.6 277.6 277.6 277.6 (uS/cm) (uS	Sheen, etc.): D.O. (mg/L) 0.50 0.49 0.48 0.49 LLOWED PERMITPH-G) (D) (NWTPH-S) (TSS) (B4) (Total Kiedanide) (Free Ba) (Be) (Called (Cal	PH 6.25 6.25 6.25 6.25 6.25 CR BOTTLE NWTPH-GX 1-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -55.2 -55.5 -56.2 -56.2 -57 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write in the image of the	DTW (ft) non-standard a ase) El) (SO4) (NO	Ferrous iron (Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Decon Proced By Numerica Sample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.9 11.9 11.9 11.9 11.9 (8260) (8010) (8270) (PAH) (pH) (Condu (COD) (TOd (Total Metals)) (Dissolved Metals) VOC (Boein	Alconox Was Other Driving Other Purbidity, odor, Cond. (uS/cm) 277.6 277.6 277.6 277.6 277.6 277.6 (uS/cm) (uS	Sheen, etc.): D.O. (mg/L) 0.50 0.49 0.48 0.49 LLOWED PERMITPH-G) (D) (NWTPH-S) (TSS) (B4) (Total Kiedanide) (Free Ba) (Be) (Called (Cal	PH 6.25 6.25 6.25 6.25 6.25 CR BOTTLE NWTPH-GX 1-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -55.2 -55.5 -56.2 -56.2 -57 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write in the image of the	DTW (ft) non-standard a ase) El) (SO4) (NO	Ferrous iron (Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Decon Proced By Numerica Sample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.9 11.9 11.9 11.9 11.9 11.9 (8260) (8010 (8270) (PAH (pH) (Condu (COD) (TOG (Total Cyanid (Total Metals) (Dissolved Me VOC (Boein Methane Eth	Alconox Was Other Driving Other Purbidity, odor, Cond. (uS/cm) 277.6 277.6 277.6 277.6 277.6 277.6 (uS/cm) (uS	Sheen, etc.): D.O. (mg/L) 0.50 0.49 0.48 0.49 LLOWED PERMITPH-G) (D) (NWTPH-S) (TSS) (B4) (Total Kiedanide) (Free Ba) (Be) (Called (Cal	PH 6.25 6.25 6.25 6.25 6.25 CR BOTTLE NWTPH-GX 1-Dx) (TPH-OD) (Turbic dahl Nitrogen Cyanide)) (Cd) (Co)	ORP (mV) -55.2 -55.5 -56.2 -56.2 -57 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write in the image of the	DTW (ft) non-standard a ase) El) (SO4) (NO	Ferrous iron (Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR OR OR OR OR OR OR OR OR OR



Event: Sample Nur	ne:	Boeing Ren	ton		Project Number	r:	0025217.099.0	99	
Sample Nur		Nov-18			Date/Time:	11/ 13 /2018@	1116		
sampic Mul.	mber:	RGW243I-	181113		Weather:	40'S, SUNNY			
Landau Rep	oresentative:	JHA							
	VEL/WELL/PU								
Well Condition		Secure (YES)		Damaged (N			Flush Mount		
DTW Before		5.43	Time:		Flow through cel			GW Meter No.(s	
	Date/Time:			End Purge:		11/ 1 /2018 @ 11		Gallons Purged:	
Purge water o	disposed to:		55-gal Drum		Storage Tank	Ground		SITE TREATME	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
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	
1056	16.0	374.6	0.26	6.08	-24.0	LOW	5.43	< 0.25	
1059	9 15.7	393.5	0.27	6.11	-47.9				
1101	15.4	398.2	0.32	6.12	-58.0			0.25	
1104	15.3	398.7	0.34	6.12	-60.1		5.43		
1107		399.4	0.44	6.11	-63.6				
1110		399.1	0.48	6.11					
1112		399.2	0.59	6.11	-68.5				
1112	, 13.1	399.2	0.39	0.11	-00.3				
SAMPLE CO	OLLECTION D)ATA							
Sample Colle	ected With:		Bailer		Pump/Pump Type	DED BLADDER		-	
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	dure:	Alconox Was	sh 🗖	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other							
	•		sheen, etc.):	CLEAR, CC	LORLESS, NO/N	JS			
			_				DOWN	Ferrous iron	Comments/
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity	DTW		
1	15.1				(111 🗸)	(NTU)	(ft)	(Fe II)	Observations
		399.1	0.59	6.11	-68.6	(NTU)	(II)	(Fe II)	Observations
2	15.1	399.1 399.1	0.59	6.11 6.11	` '	(NTU)	(It)	(Fe II)	Observations
2 3	15.1 15.1				-68.6	(NTU)		(Fe II)	Observations
		399.1	0.61	6.11	-68.6 -68.8	(NTU)	(it)	(Fe II)	Observations
3	15.1	399.1 398.9	0.61	6.11 6.11	-68.6 -68.8 -69.0	#DIV/0!	(II)	(Fe II)	Observations
3 4 Average:	15.1 15.1 15.1	399.1 398.9 398.8 399.0	0.61 0.62 0.62 0.61	6.11 6.11 6.11	-68.6 -68.8 -69.0 -69.1 -68.9	#DIV/0!			Observations
3 4 Average:	15.1 15.1 15.1 TYPICAL A	399.1 398.9 398.8 399.0	0.61 0.62 0.62 0.61 LLOWED PF	6.11 6.11 6.11 6.11 ER BOTTLE	-68.6 -68.8 -69.0 -69.1 -68.9			nalysis below)	Observations OR
3 4 Average:	15.1 15.1 15.1 7 TYPICAL A (8260) (8010	399.1 398.9 398.8 399.0 NALYSIS AI 0) (8020) (N	0.61 0.62 0.62 0.61 LLOWED PE	6.11 6.11 6.11 6.11 ER BOTTLE NWTPH-GX	-68.6 -68.8 -69.0 -69.1 -68.9 TYPE (Circle a)	#DIV/0!	non-standard a	nalysis below)	
3 4 Average:	15.1 15.1 15.1 7 TYPICAL A (8260) (8010 (8270) (PAF- (pH) (Condu	399.1 398.9 398.8 399.0 NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS	0.61 0.62 0.62 0.61 LLOWED PE WTPH-G) (D) (NWTPH S) (TSS) (B	6.11 6.11 6.11 6.11 ER BOTTLE NWTPH-Gx 1-Dx) (TPH-OD) (Turbic	-68.6 -69.0 -69.1 -68.9 TYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity)	#DIV/0! pplicable or write: (8141) (Oil & Gre) (HCO3/CO3) (C	non-standard a	nalysis below) WA □ WA □	OR □
3 4 Average:	15.1 15.1 15.1 7 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu	399.1 398.9 398.8 399.0 NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS	0.61 0.62 0.61 LLOWED PER (WTPH-G) (NWTPH-G) (NWTPH-G) (TSS) (B) (Total Kie	6.11 6.11 6.11 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbio dahl Nitroger	-68.6 -68.8 -69.0 -69.1 -68.9 TYPE (Circle a) (BTEX) HCID) (8081)	#DIV/0! pplicable or write: (8141) (Oil & Gre) (HCO3/CO3) (C	non-standard a	nalysis below) WA □ WA □	OR □
3 4 Average: QUANTITY 5	15.1 15.1 15.1 7 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (TOO (Total Cyanid	399.1 398.9 398.8 399.0 NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO- de) (WAD Cy	0.61 0.62 0.61 LOWED PERMYPH-G) (D) (NWTPH-S) (TSS) (B-4) (Total Kie-anide) (Free	6.11 6.11 6.11 ER BOTTLE NWTPH-Gx [-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)	-68.6 -68.8 -69.0 -69.1 -68.9 TYPE (Circle a) (BTEX) HCID) (8081) (dity) (Alkalinity) (NH3) (NO3/	#DIV/0! pplicable or write: (8141) (Oil & Gre (HCO3/CO3) (C	non-standard a ase) Cl) (SO4) (NO	malysis below) WA WA WA Solution WA Solu	OR □ OR □
3 4 Average: QUANTITY 5	15.1 15.1 15.1 7 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals)	399.1 398.9 398.8 399.0 NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO4 le) (WAD Cy) (As) (Sb) (I	0.61 0.62 0.61 LLOWED PE WTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kiel anide) (Free Ba) (Be) (Ca	6.11 6.11 6.11 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)) (Cd) (Co)	-68.6 -68.8 -69.0 -69.1 -68.9	#DIV/0! pplicable or write: (8141) (Oil & Gre (HCO3/CO3) (C) NO2) Pb) (Mg) (Mn) (P	non-standard a ase) Cl) (SO4) (NO	nalysis below) WA WA WA Solution WA	OR OR OR OR OR OR OR OR OR OR
3 4 Average: QUANTITY 5	15.1 15.1 15.1 (8260) (8010 (8270) (PAF- (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals)	399.1 398.9 398.8 399.0 NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO- de) (WAD Cy) (As) (Sb) (I etals) (As) (Sb	0.61 0.62 0.61 LLOWED PE WTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kiel anide) (Free Ba) (Be) (Ca	6.11 6.11 6.11 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)) (Cd) (Co)	-68.6 -68.8 -69.0 -69.1 -68.9	#DIV/0! pplicable or write: (8141) (Oil & Gre (HCO3/CO3) (C	non-standard a ase) Cl) (SO4) (NO	nalysis below) WA WA WA Solution WA	OR OR OR OR OR OR OR OR OR OR
3 4 Average: QUANTITY 5	15.1 15.1 15.1 15.1 (Region of the property of	399.1 398.9 398.8 399.0 NALYSIS AI 0) (8020) (N H) (NWTPH-Lactivity) (TDS C) (Total PO-2 le) (WAD Cy) (As) (Sb) (1 etals) (As) (Sb	0.61 0.62 0.61 LLOWED PERMYPH-G) (D) (NWTPH-B) (TSS) (B4) (Total Kiedanide) (Free Ba) (Be) (Call) (Ba) (Be) (Call)	6.11 6.11 6.11 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)) (Cd) (Co)	-68.6 -68.8 -69.0 -69.1 -68.9	#DIV/0! pplicable or write: (8141) (Oil & Gre (HCO3/CO3) (C) NO2) Pb) (Mg) (Mn) (P	non-standard a ase) Cl) (SO4) (NO	nalysis below) WA WA WA Solution WA	OR OR OR OR OR OR OR OR OR OR
3 4 Average: QUANTITY 5	15.1 15.1 15.1 15.1 (Region of the property of	399.1 398.9 398.8 399.0 NALYSIS AI 0) (8020) (N H) (NWTPH- activity) (TDS C) (Total PO- de) (WAD Cy) (As) (Sb) (I etals) (As) (Sb	0.61 0.62 0.61 LLOWED PERMYPH-G) (D) (NWTPH-B) (TSS) (B4) (Total Kiedanide) (Free Ba) (Be) (Call) (Ba) (Be) (Call)	6.11 6.11 6.11 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)) (Cd) (Co)	-68.6 -68.8 -69.0 -69.1 -68.9	#DIV/0! pplicable or write: (8141) (Oil & Gre (HCO3/CO3) (C) NO2) Pb) (Mg) (Mn) (P	non-standard a ase) Cl) (SO4) (NO	nalysis below) WA WA WA Solution WA	OR OR OR OR OR OR OR OR OR OR
3 4 Average: QUANTITY 5	15.1 15.1 15.1 15.1 (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Methane Eth	399.1 398.9 398.8 399.0 NALYSIS AI 0) (8020) (N H) (NWTPH-Lactivity) (TDS C) (Total PO-2 le) (WAD Cy) (As) (Sb) (1 etals) (As) (Sb	0.61 0.62 0.61 LLOWED PERMYPH-G) (D) (NWTPH-B) (TSS) (B4) (Total Kiedanide) (Free Ba) (Be) (Call) (Ba) (Be) (Call)	6.11 6.11 6.11 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)) (Cd) (Co)	-68.6 -68.8 -69.0 -69.1 -68.9	#DIV/0! pplicable or write: (8141) (Oil & Gre (HCO3/CO3) (C) NO2) Pb) (Mg) (Mn) (P	non-standard a ase) Cl) (SO4) (NO	nalysis below) WA WA WA Solution WA	OR OR OR OR OR OR OR OR OR OR
3 4 Average: QUANTITY 5	15.1 15.1 15.1 15.1 (Region of the property of	399.1 398.9 398.8 399.0 NALYSIS AI 0) (8020) (N H) (NWTPH-Lactivity) (TDS C) (Total PO-2 le) (WAD Cy) (As) (Sb) (1 etals) (As) (Sb	0.61 0.62 0.61 LLOWED PERMYPH-G) (D) (NWTPH-B) (TSS) (B4) (Total Kiedanide) (Free Ba) (Be) (Call) (Ba) (Be) (Call)	6.11 6.11 6.11 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)) (Cd) (Co)	-68.6 -68.8 -69.0 -69.1 -68.9	#DIV/0! pplicable or write: (8141) (Oil & Gre (HCO3/CO3) (C) NO2) Pb) (Mg) (Mn) (P	non-standard a ase) Cl) (SO4) (NO	nalysis below) WA WA WA Solution WA	OR OR OR OR OR OR OR OR OR OR
3 4 Average: QUANTITY 5	15.1 15.1 15.1 15.1 (Racion (1994) (1994) (2004) (2	399.1 398.9 398.8 399.0 NALYSIS AI 0) (8020) (N H) (NWTPH-Lactivity) (TDS C) (Total PO-2 le) (WAD Cy) (As) (Sb) (1 etals) (As) (Sb	0.61 0.62 0.61 LLOWED PERMYPH-G) (D) (NWTPH-B) (TSS) (B4) (Total Kiedanide) (Free Ba) (Be) (Call) (Ba) (Be) (Call)	6.11 6.11 6.11 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)) (Cd) (Co)	-68.6 -68.8 -69.0 -69.1 -68.9	#DIV/0! pplicable or write: (8141) (Oil & Gre (HCO3/CO3) (C) NO2) Pb) (Mg) (Mn) (P	non-standard a ase) Cl) (SO4) (NO	nalysis below) WA WA WA Solution WA	OR OR OR OR OR OR OR OR OR OR



Project Nam	e:	Boeing Ren	iton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/13 /2018@	938		
Sample Num	ber:	RGW244S-	181113		Weather:	CLEAR 30S			
Landau Repr	resentative:	CEB							
WATER LEV	'EL/WELL/PU	JRGE DATA							
Well Conditio	n:	Secure (YES	5)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	5.34	Time:	913	Flow through cel	l <u>vol.</u>		GW Meter No.(s	. 1
Begin Purge:	Date/Time:	-	@ 915	End Purge:		11/ 13 /2018 @	932	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) Purge Goa	(uS/cm) ls: Stablizatio	(mg/L) on of Paramet	ters for three	(mV)	(NTU) dings within the fo	(ft) llowing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
918	14.4	446.8	0.42	6.22	-21.2		5.45		
921	13.5	435.1	0.43	6.22	-39.0		5.45		
924	13.6	436.7	0.44	6.18	-49.9		5.45		
927	13.5	435.2	0.43	6.18	-52.7				
930	13.5	434.8	0.45	6.17	-54.3				
SAMPLE CO	LLECTION D	OATA							
Sample Collec	eted With:		Bailer	₩	Pump/Pump Type	DED BLADDR			
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	ure:	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated		^	
(By Numerica	*	Other							
Sample Descr	iption (color, t	turbidity, odor	, sheen, etc.):	CLEAR, CO	LORLESS SOM	E PARTICULATES	S NO NS		
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	434.5	0.46	6.16	-54.7				
2	13.4	434.5	0.45	6.16	-55.0				
3	13.4	434.4	0.44	6.16	-55.3				
4	13.4	434.3	0.44	6.16	-55.6				
Average:	13.4	434.4	0.45	6.16	-55.2	#DIV/0!			
	TVDICAL A	NAT VCIC AT	I I OWED DE	D ROTTI E	TVDE (Circle o	pplicable or write	non standard a	nolysis bolow)	
5			NWTPH-G) (ppincable of write	non-stanuaru a	WA □	OR 🗆
						(8141) (Oil & Gre	ase)	wa □	OR 🗆
						(HCO3/CO3) (C		3) (NO2) (F)	
1) (NH3) (NO3)	NO2)			
			vanide) (Free						
						(Pb) (Mg) (Mn) (1			
	VOC (Boein)) (Ba) (Be) (C	a) (Ca) (Co)	(Cr) (Cu) (Fe) (Pl	o) (MIg) (MIn) (N1) (.	Ag) (Se) (11) (V) (Zn) (Hg) (K) (N	Va) (Hardness) (Silic
		ane Ethene A	cetylene						
	others								
Duplicate San	nple No(s):								
-r	r 10(3).								
Comments:									



Project Name	e:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/12 /2018@	1633		
Sample Num	ber:	10-71-MW1	181112		Weather:	CLEAR 40S			
Landau Repr	esentative:	SRB/JHA/C	EB		•				
WATER LEV	EL/WELL/PI	IRGE DATA							
Well Condition		Secure (YES))	Damaged (N	O)	Describe:	Flush Mount		
DTW Before I		8.81	Time:		Flow through cel			GW Meter No.(s	1
Begin Purge:		11/12/2018	@ 1608	End Purge:	•	11/12 /2018 @	1621	Gallons Purged:	0.5
Purge water di			55-gal Drum		Storage Tank	Ground		SITE TREATM	
Turge water a	•		_		_	_			
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		(ers for three		dings within the fol		>/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1611	13.9	215.7	0.93	5.70	41.5	LOW	8.82		
1614	13.8	209.9	1.03	5.67	47.3		8.82		
1617	13.6	207.8	1.10	5.71	42.1		8.82		
1620	13.2	204.1	1.09	5.73	37.0		0.02		
1020	13.2	204.1	1.09	3.13	37.0				
SAMPLE CO		OATA							
Sample Collec	ted With:		Bailer		Pump/Pump Type	DED BLADDER		_	
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	ure:	Alconox Was	h 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica)	1.01								
(By Trumerica	i Oraer)	Other							
	*		sheen, etc.):	CLEAR CO	LORLESS NO N	S			
Sample Descri	iption (color, t	urbidity, odor,	_				DTW	Formus iron	Comments/
	Temp		sheen, etc.): _ D.O. (mg/L)	CLEAR CO	ORP (mV)	S Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
Sample Descri	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity			
Sample Descri	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	рН 5.73	ORP (mV)	Turbidity			
Replicate 1 2	Temp (°F/°C) 13.1	Cond. (uS/cm) 202.3 201.3	D.O. (mg/L) 1.07	pH 5.73 5.74	ORP (mV) 34.8 34.2	Turbidity			
Sample Descri	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	рН 5.73	ORP (mV)	Turbidity			
Replicate 1 2	Temp (°F/°C) 13.1	Cond. (uS/cm) 202.3 201.3	D.O. (mg/L) 1.07	pH 5.73 5.74	ORP (mV) 34.8 34.2	Turbidity			
Replicate 1 2 3	Temp (°F/°C) 13.1 13.0	Cond. (uS/cm) 202.3 201.3 200.8	D.O. (mg/L) 1.07 1.06	pH 5.73 5.74 5.76	ORP (mV) 34.8 34.2 33.5	Turbidity			
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.1 13.0 12.9	Cond. (uS/cm) 202.3 201.3 200.8 200.3	D.O. (mg/L) 1.07 1.06 1.05 1.05	5.73 5.74 5.76 5.75	ORP (mV) 34.8 34.2 33.5 32.2 33.7	Turbidity (NTU) #DIV/0!	(ft)	(Fe II)	
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.1 13.0 12.9 13.0 TYPICAL A	Cond. (uS/cm) 202.3 201.3 200.8 200.3	D.O. (mg/L) 1.07 1.06 1.05 1.05 1.06	pH 5.73 5.74 5.76 5.75 5.75	ORP (mV) 34.8 34.2 33.5 32.2 33.7 TYPE (Circle ap	Turbidity (NTU)	(ft)	(Fe II)	
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.1 13.0 12.9 13.0 TYPICAL A (8260) (8010)	Cond. (uS/cm) 202.3 201.3 200.8 200.3 201.2 NALYSIS AI 0) (8020) (N	D.O. (mg/L) 1.07 1.06 1.05 1.06 1.06 LOWED PE	5.73 5.74 5.76 5.75 5.75 R BOTTLE	ORP (mV) 34.8 34.2 33.5 32.2 33.7 TYPE (Circle ap (BTEX)	Turbidity (NTU) #DIV/0!	(ft)	(Fe II)	Observations
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.1 13.0 12.9 13.0 TYPICAL A (8260) (8010 (8270D) (PA	Cond. (uS/cm) 202.3 201.3 200.8 200.3 201.2 NALYSIS AI (NWTPE	D.O. (mg/L) 1.07 1.06 1.05 1.06 LOWED PE WTPH-G) (III-D) (NWTP	5.73 5.74 5.76 5.75 5.75 R BOTTLE NWTPH-Gx) H-Dx) (TPH	ORP (mV) 34.8 34.2 33.5 32.2 33.7 TYPE (Circle ap (BTEX) I-HCID) (8081)	Turbidity (NTU) #DIV/0! pplicable or write i	(ft)	nalysis below) WA □ WA □	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.1 13.0 12.9 13.0 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu	Cond. (uS/cm) 202.3 201.3 200.8 200.3 201.2 NALYSIS AI 0) (8020) (N CH) (NWTPE ctivity) (TDS C) (Total PO4	D.O. (mg/L) 1.07 1.06 1.05 1.06 1.06 LOWED PE WTPH-G) (I I-D) (NWTP G) (TSS) (Be G) (Total Kiece	5.73 5.74 5.76 5.75 5.75 6.R BOTTLE NWTPH-Gx) H-Dx) (TPH-OD) (Turbid dahl Nitrogen	ORP (mV) 34.8 34.2 33.5 32.2 33.7 TYPE (Circle ap (BTEX) I-HCID) (8081)	#DIV/0! #DIV/0! (8141) (Oil & Gr (HCO3/CO3) (C	(ft)	nalysis below) WA □ WA □	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.1 13.0 12.9 13.0 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid	Cond. (uS/cm) 202.3 201.3 200.8 200.3 201.2 NALYSIS AI 0) (8020) (N CH) (NWTPE citivity) (TDS C) (Total PO4 e) (WAD Cyc)	D.O. (mg/L) 1.07 1.06 1.05 1.06 LOWED PE WTPH-G) (I I-D) (NWTP G) (TSS) (Be g) (Total Kiecanide) (Free	5.73 5.74 5.76 5.75 5.75 CR BOTTLE NWTPH-Gx) H-Dx) (TPHOD) (Turbic dahl Nitrogen Cyanide)	ORP (mV) 34.8 34.2 33.5 32.2 33.7 TYPE (Circle ap (BTEX) I-HCID) (8081) lity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C	non-standard and ease)	(Fe II) malysis below) WA WA WA Solution 19 WA WA NO2) (F)	Observations OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.1 13.0 12.9 13.0 TYPICAL A (8260) (8010) (8270D) (PA (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals)	Cond. (uS/cm) 202.3 201.3 200.8 200.3 201.2 NALYSIS AI 0) (8020) (N AH) (NWTPH ctivity) (TDS C) (Total PO4 e) (WAD Cy o) (As) (Sb) (I	D.O. (mg/L) 1.07 1.06 1.05 1.06 LOWED PE WTPH-G) (II-D) (NWTP G) (TSS) (Be) (Total Kiece anide) (Free each) (Free each) (Ba) (Be) (Ca)	5.73 5.74 5.76 5.75 5.75 5.75 CR BOTTLE NWTPH-Gx) H-Dx) (TPHOD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) 34.8 34.2 33.5 32.2 33.7 TYPE (Circle ap (BTEX) I-HCID) (8081) Iity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C	ease) l) (SO4) (NO	(Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ (K) (K) (Na)
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.1 13.0 12.9 13.0 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOC (Total Cyanid (Total Metals) (Dissolved Metals)	Cond. (uS/cm) 202.3 201.3 200.8 200.3 201.2 NALYSIS AI (0) (8020) (N AH) (NWTPF- (ctivity) (TDS (C) (Total PO4 (e) (WAD Cyc (As) (Sb) (I (etals) (As) (Sb) (Sb)	D.O. (mg/L) 1.07 1.06 1.05 1.06 LOWED PE WTPH-G) (II-D) (NWTP G) (TSS) (Be) (Total Kiece anide) (Free each) (Free each) (Ba) (Be) (Ca)	5.73 5.74 5.76 5.75 5.75 5.75 CR BOTTLE NWTPH-Gx) H-Dx) (TPHOD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) 34.8 34.2 33.5 32.2 33.7 TYPE (Circle ap (BTEX) I-HCID) (8081) Iity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C	ease) l) (SO4) (NO	(Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.1 13.0 12.9 13.0 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals) (Dissolved Me	Cond. (uS/cm) 202.3 201.3 200.8 200.3 201.2 NALYSIS AI () (8020) (N () (NWTPE) () (Total PO4 () (AS) (Sb) (I () (etals) (As) (Sb) g short list)	D.O. (mg/L) 1.07 1.06 1.05 1.06 LOWED PE WTPH-G) (III-D) (NWTP G) (TSS) (Bold) (Total Kiecannide) (Free Cannide) (Free Cannide) (Free Cannide) (Ba) (Be) (Cannide) (Ba) (Be) (Cannide) (Cannide	5.73 5.74 5.76 5.75 5.75 5.75 CR BOTTLE NWTPH-Gx) H-Dx) (TPHOD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) 34.8 34.2 33.5 32.2 33.7 TYPE (Circle ap (BTEX) I-HCID) (8081) Iity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C	ease) l) (SO4) (NO	(Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ (K) (K) (Na)
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.1 13.0 12.9 13.0 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals) (Dissolved Me	Cond. (uS/cm) 202.3 201.3 200.8 200.3 201.2 NALYSIS AI (0) (8020) (N AH) (NWTPF- (ctivity) (TDS (C) (Total PO4 (e) (WAD Cyc (As) (Sb) (I (etals) (As) (Sb) (Sb)	D.O. (mg/L) 1.07 1.06 1.05 1.06 LOWED PE WTPH-G) (III-D) (NWTP G) (TSS) (Bold) (Total Kiecannide) (Free Cannide) (Free Cannide) (Free Cannide) (Ba) (Be) (Cannide) (Ba) (Be) (Cannide) (Cannide	5.73 5.74 5.76 5.75 5.75 5.75 CR BOTTLE NWTPH-Gx) H-Dx) (TPHOD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) 34.8 34.2 33.5 32.2 33.7 TYPE (Circle ap (BTEX) I-HCID) (8081) Iity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C	ease) l) (SO4) (NO	(Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ (K) (K) (Na)
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.1 13.0 12.9 13.0 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals) (Dissolved Me	Cond. (uS/cm) 202.3 201.3 200.8 200.3 201.2 NALYSIS AI () (8020) (N () (NWTPE) () (Total PO4 () (AS) (Sb) (I () (etals) (As) (Sb) g short list)	D.O. (mg/L) 1.07 1.06 1.05 1.06 LOWED PE WTPH-G) (III-D) (NWTP G) (TSS) (Bold) (Total Kiecannide) (Free Cannide) (Free Cannide) (Free Cannide) (Ba) (Be) (Cannide) (Ba) (Be) (Cannide) (Cannide	5.73 5.74 5.76 5.75 5.75 5.75 CR BOTTLE NWTPH-Gx) H-Dx) (TPHOD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) 34.8 34.2 33.5 32.2 33.7 TYPE (Circle ap (BTEX) I-HCID) (8081) Iity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C) NO2) Pb) (Mg) (Mn) (N	ease) l) (SO4) (NO	(Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ (K) (K) (Na)
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.1 13.0 12.9 13.0 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals) (Dissolved Me	Cond. (uS/cm) 202.3 201.3 200.8 200.3 201.2 NALYSIS AI () (8020) (N () (NWTPE) () (Total PO4 () (AS) (Sb) (I () (etals) (As) (Sb) g short list)	D.O. (mg/L) 1.07 1.06 1.05 1.06 LOWED PE WTPH-G) (III-D) (NWTP G) (TSS) (Bold) (Total Kiecannide) (Free Cannide) (Free Cannide) (Free Cannide) (Ba) (Be) (Cannide) (Ba) (Be) (Cannide) (Cannide	5.73 5.74 5.76 5.75 5.75 5.75 CR BOTTLE NWTPH-Gx) H-Dx) (TPHOD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) 34.8 34.2 33.5 32.2 33.7 TYPE (Circle ap (BTEX) I-HCID) (8081) Iity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C) NO2) Pb) (Mg) (Mn) (N	ease) l) (SO4) (NO	(Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ (K) (K) (Na)
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.1 13.0 12.9 13.0 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals) (Dissolved Me VOC (Boein Methane Eth	Cond. (uS/cm) 202.3 201.3 200.8 200.3 201.2 NALYSIS AI () (8020) (N () (NWTPE) () (Total PO4 () (AS) (Sb) (I () (etals) (As) (Sb) g short list)	D.O. (mg/L) 1.07 1.06 1.05 1.06 LOWED PE WTPH-G) (III-D) (NWTP G) (TSS) (Bold) (Total Kiecannide) (Free Cannide) (Free Cannide) (Free Cannide) (Ba) (Be) (Cannide) (Ba) (Be) (Cannide) (Cannide	5.73 5.74 5.76 5.75 5.75 5.75 CR BOTTLE NWTPH-Gx) H-Dx) (TPHOD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) 34.8 34.2 33.5 32.2 33.7 TYPE (Circle ap (BTEX) I-HCID) (8081) Iity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C) NO2) Pb) (Mg) (Mn) (N	ease) l) (SO4) (NO	(Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ (K) (K) (Na)
Replicate 1 2 3 4 Average: QUANTITY 3 Duplicate Sam	Temp (°F/°C) 13.1 13.0 12.9 13.0 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals) (Dissolved Me VOC (Boein Methane Eth	Cond. (uS/cm) 202.3 201.3 200.8 200.3 201.2 NALYSIS AI ()) (8020) (N ()H) (NWTPE- () (Total PO4- () (As) (Sb) (I () (etals) (As) (Sb) g short list)	D.O. (mg/L) 1.07 1.06 1.05 1.06 LOWED PE WTPH-G) (III-D) (NWTP G) (TSS) (Bold) (Total Kiecannide) (Free Cannide) (Free Cannide) (Free Cannide) (Ba) (Be) (Cannide) (Ba) (Be) (Cannide) (Cannide	5.73 5.74 5.76 5.75 5.75 5.75 CR BOTTLE NWTPH-Gx) H-Dx) (TPHOD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) 34.8 34.2 33.5 32.2 33.7 TYPE (Circle ap (BTEX) I-HCID) (8081) Iity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C) NO2) Pb) (Mg) (Mn) (N	ease) l) (SO4) (NO	(Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ (K) (K) (Na)
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 13.1 13.0 12.9 13.0 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals) (Dissolved Me VOC (Boein Methane Eth	Cond. (uS/cm) 202.3 201.3 200.8 200.3 201.2 NALYSIS AI ()) (8020) (N ()H) (NWTPE- () (Total PO4- () (As) (Sb) (I () (etals) (As) (Sb) g short list)	D.O. (mg/L) 1.07 1.06 1.05 1.06 LOWED PE WTPH-G) (III-D) (NWTP G) (TSS) (Bold) (Total Kiecannide) (Free Cannide) (Free Cannide) (Free Cannide) (Ba) (Be) (Cannide) (Ba) (Be) (Cannide) (Cannide	5.73 5.74 5.76 5.75 5.75 5.75 CR BOTTLE NWTPH-Gx) H-Dx) (TPHOD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) 34.8 34.2 33.5 32.2 33.7 TYPE (Circle ap (BTEX) I-HCID) (8081) Iity) (Alkalinity) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C) NO2) Pb) (Mg) (Mn) (N	ease) l) (SO4) (NO	(Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ (K) (K) (Na)



Project Nam	ne.	Boeing Rent	ton		Project Number	ar.	0025217.099.0	199	
Event:		Nov-18	1011		Date/Time:	11/ 12 /2018@			
Sample Nun	nher:	10-71-MW2	181112		Weather:	40'S, SUNNY	1330		
Landau Rep	-	JHA	101112		Wedner.	105,501111			
WATER LEV	VEL/WELL/P	URGE DATA							
Well Condition		Secure (YES))	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	9.03	Time:	1530	Flow through ce	ll vol.		GW Meter No.(s	HERON 3
Begin Purge:	Date/Time:	11/ 12 /2018	8 @ 1534	End Purge:	_	11/ 12 /2018 @		Gallons Purged:	
Purge water d	lisposed to:		55-gal Drum		Storage Tank	Ground		SITE TREATMI	ENT SYSTEM
Ü	Temp	Cond.	D.O.	рН	ORP	Turbidity	DTW		Comments/
Time	(°F/°C)	(uS/cm)	D.O. (mg/L)	рп	(mV)	(NTU)	(ft)	Internal Purge Volume (gal)	Observations
			n of Parame			dings within the fo		>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1537	16.4	179.8	0.94	5.86	88.1	LOW	9.06	<0.25	
1540	16.4	187.5	0.46	5.99	36.3				
1543	16.2	188.4	0.36	6.02	8.0		9.06	0.25	
1546		188.7	0.38	6.01	-4.4				
					-11.0				
1549		189.0	0.32	6.01			9.06		
1552	15.9	189.0	0.28	6.02	-14.7			0.5	
1554	15.9	189.0	0.28	6.02	-16.5				
CAN DIE CO									
SAMPLE CO Sample Colle			Bailer		Dump/Dump Typ	DED DI ADDED			
Made of:	cted with.	Stainless Stee		PVC	Teflon	DED BLADDER Polyethylene	Other	Dedicated	
			_				L Other	Dedicated	
Decon Proced (By Numerical		Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
			aleane ata).	CLEAD CC	ODLESS NO	NIC .			
Sample Desci	ipuon (color,	iuroidity, odor,	, sneen, etc.)	CLEAR, CC	LORLESS, NO/	113			
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	189.0	0.28	6.02	-16.6				
2	15.9	189.0	0.29	6.02	-16.3				
3	15.9	189.0	0.28	6.02					
4	15.9	189.0	0.28	6.02	-17.2				
Average:	15.9	189.0	0.28	6.02	-16.8	#DIV/0!			
QUANTITY						pplicable or write	non-standard a	nalysis below)	
3		0) (8020) (N							OR 🗆
						(8141) (Oil & G			OR 🗆
						(HCO3/CO3) (C	Cl) (SO4) (NO	03) (NO2) (F)	
					n) (NH3) (NO3	/NO2)			
		le) (WAD Cy			(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (1	Vi) (Ag) (Se) (Tl) (V) (7 n) (Ha) (K) (Na)
									Va) (Hardness) (Silic
	VOC (Boein		, (Du) (De) (C	-u, (-u, (-u)	(21) (24) (16) (1	~, (111 <u>8) (1111) (111) (</u>	<u>-</u>	, (211) (118) (11) (11)	, (Haraness) (Bille
	`	ane Ethene Ac	etylene						
	others								
Duplicate Sar	nnla Na(a):								
Comments:	ubie mo(s):								
Signature:			JHA			Date:	11/12/2018		



Project Name	e:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 12 /2018@	1558		
Sample Num	ber:	10-71-MW4	181112	-	Weather:	SUNNY 40S			
Landau Repr	esentative:	SRB/JHA/C	EB		_				
WATER LEV	EL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES))	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before I	Purging (ft)	8.90	Time:	1530	Flow through cel	l vol.		GW Meter No.(s	1
Begin Purge:		11/12/2018	@ 1536	End Purge:	•	11/ 12 /2018 @	1549	Gallons Purged:	0.5
Purge water di			55-gal Drum		Storage Tank	Ground		SITE TREATM	
Ü		C 1	_		_	Turbidity			Comments/
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	(NTU)	DTW (ft)	Internal Purge Volume (gal)	Observations
						dings within the fol	_	>/= 1 flow	
	+/- 3%	+/- 3%		+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
1539	16.6	259.9	0.79	6.22	29.0	LOW	8.89		
1542	16.3	277.9	0.70	6.22	-2.0		8.89		
1545	15.8	277.1	0.67	6.20	-9.3		8.90		
1548	15.7	276.0	0.72	6.20	-10.1				
SAMPLE CO			D. H.		D T	DED DI ADDED			
Sample Collect		· 	Bailer			DED BLADDER	Cth out	□ Dadiastad	
Made of:		Stainless Stee	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	_	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	l Oraer)	☐ Other							
C 1. D			.1	CLEAD CO	LODI ECC NO NO				
Sample Descri	iption (color, t	urbidity, odor,	sheen, etc.):	CLEAR CO	LORLESS NO N	S			
Sample Descri	Temp (°F/°C)	Cond. (uS/cm)	sheen, etc.): _ D.O. (mg/L)	CLEAR CO	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) 275.4	D.O. (mg/L)	pН	ORP (mV)	Turbidity			
Replicate 1 2	Temp (°F/°C) 15.7	Cond. (uS/cm) 275.4 275.2	D.O. (mg/L) 0.76	pH 6.20 6.20	ORP (mV) -9.9	Turbidity			
Replicate 1 2 3	Temp (°F/°C) 15.7 15.7	Cond. (uS/cm) 275.4 275.2 274.9	D.O. (mg/L) 0.76 0.78	pH 6.20 6.20 6.20	ORP (mV) -9.9 -9.8 -9.6	Turbidity			
Replicate 1 2 3 4	Temp (°F/°C) 15.7 15.7 15.7	Cond. (uS/cm) 275.4 275.2 274.9 274.6	D.O. (mg/L) 0.76 0.78 0.81	pH 6.20 6.20 6.20 6.19	ORP (mV) -9.9 -9.8 -9.6 -9.3	Turbidity (NTU)			
Replicate 1 2 3	Temp (°F/°C) 15.7 15.7	Cond. (uS/cm) 275.4 275.2 274.9	D.O. (mg/L) 0.76 0.78	pH 6.20 6.20 6.20	ORP (mV) -9.9 -9.8 -9.6	Turbidity			
Replicate 1 2 3 4 Average:	Temp (°F/°C) 15.7 15.7 15.7 15.7 15.7	Cond. (uS/cm) 275.4 275.2 274.9 274.6 275.0	D.O. (mg/L) 0.76 0.78 0.81 0.83 0.80	6.20 6.20 6.20 6.19 6.20	ORP (mV) -9.9 -9.8 -9.6 -9.3 -9.7 TYPE (Circle ap	Turbidity (NTU)	(ft)	(Fe II)	Observations
Replicate 1 2 3 4 Average:	Temp (°F/°C) 15.7 15.7 15.7 15.7 15.7 TYPICAL A (8260) (8010	Cond. (uS/cm) 275.4 275.2 274.9 274.6 275.0 NALYSIS AI 0) (8020) (N	D.O. (mg/L) 0.76 0.78 0.81 0.83 0.80 LOWED PE	6.20 6.20 6.20 6.19 6.20 6.R BOTTLE	ORP (mV) -9.9 -9.8 -9.6 -9.3 -9.7 TYPE (Circle ap (BTEX)	Turbidity (NTU) #DIV/0!	(ft)	(Fe II)	Observations OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 15.7 15.7 15.7 15.7 15.7 TYPICAL A (8260) (8010 (8270D) (PA	Cond. (uS/cm) 275.4 275.2 274.9 274.6 275.0 NALYSIS AI 0) (8020) (N	D.O. (mg/L) 0.76 0.78 0.81 0.83 0.80 LOWED PE WTPH-G) (MI-D) (NWTP	6.20 6.20 6.20 6.20 6.20 6.20 KR BOTTLE NWTPH-GX) H-DX) (TPH	ORP (mV) -9.9 -9.8 -9.6 -9.3 -9.7 TYPE (Circle ap (BTEX) H-HCID) (8081)	#DIV/0! pplicable or write r (8141) (Oil & Gr	(ft) non-standard and ease)	nalysis below) WA □ WA □	Observations
Replicate 1 2 3 4 Average:	Temp (°F/°C) 15.7 15.7 15.7 15.7 15.7 15.7 (8260) (8010) (8270D) (PA) (pH) (Condu	Cond. (uS/cm) 275.4 275.2 274.9 274.6 275.0 NALYSIS AI 0) (8020) (Na.H) (NWTPHetivity) (TDS)	D.O. (mg/L) 0.76 0.78 0.81 0.83 0.80 LOWED PE WTPH-G) (Mathematical Control of the Control	6.20 6.20 6.20 6.20 6.20 6.19 6.20 KR BOTTLE NWTPH-GX) H-Dx) (TPHOD) (Turbic	ORP (mV) -9.9 -9.8 -9.6 -9.3 -9.7 TYPE (Circle ap (BTEX) H-HCID) (8081) lity) (Alkalinity)	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C	(ft) non-standard and ease)	nalysis below) WA □ WA □	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 15.7 15.7 15.7 15.7 15.7 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu	Cond. (uS/cm) 275.4 275.2 274.9 274.6 275.0 NALYSIS AI (a) (8020) (N (b) (NWTPF- (ctivity) (TDS) (c) (Total PO4)	D.O. (mg/L) 0.76 0.78 0.81 0.83 0.80 LOWED PE WTPH-G) (M-D) (NWTP G) (TSS) (B	6.20 6.20 6.20 6.19 6.20 CR BOTTLE NWTPH-Gx) H-Dx) (TPHOD) (Turbic dahl Nitrogen	ORP (mV) -9.9 -9.8 -9.6 -9.3 -9.7 TYPE (Circle ap (BTEX) H-HCID) (8081)	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C	(ft) non-standard and ease)	nalysis below) WA □ WA □	Observations OR
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 15.7 15.7 15.7 15.7 15.7 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOC (Total Cyanid	Cond. (uS/cm) 275.4 275.2 274.9 274.6 275.0 NALYSIS AI (a) (8020) (N CH) (NWTPE- ctivity) (TDS (b) (Total PO4 (c) (WAD Cy	D.O. (mg/L) 0.76 0.78 0.81 0.83 0.80 LOWED PE WTPH-G) (M-D) (NWTP G) (TSS) (B-D) (TSS) (TS	6.20 6.20 6.20 6.19 6.20 6.20 CR BOTTLE NWTPH-Gx) H-Dx) (TPHOD) (Turbic dahl Nitrogen Cyanide)	ORP (mV) -9.9 -9.8 -9.6 -9.3 -9.7 TYPE (Circle ap (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C	non-standard and ease)	(Fe II) malysis below) WA WA WA Solution 19 WA WA NO2) (F)	Observations OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 15.7 15.7 15.7 15.7 15.7 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals)	Cond. (uS/cm) 275.4 275.2 274.9 274.6 275.0 NALYSIS AI 0) (8020) (N hH) (NWTPI- ctivity) (TDS C) (Total PO4 e) (WAD Cy	D.O. (mg/L) 0.76 0.78 0.81 0.83 0.80 LOWED PE WTPH-G) (M-D) (NWTP G) (TSS) (B-D) (TSS) (TS	6.20 6.20 6.20 6.19 6.20 6.20 6.19 6.20 CR BOTTLE NWTPH-GX) H-DX) (TPHOD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -9.9 -9.8 -9.6 -9.3 -9.7 TYPE (Circle ap (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C	ease) l) (SO4) (NO:	(Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ (K) (K) (Na)
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 15.7 15.7 15.7 15.7 15.7 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals)	Cond. (uS/cm) 275.4 275.2 274.9 274.6 275.0 NALYSIS AI (0) (8020) (N CH) (NWTPI- ctivity) (TDS (C) (Total PO4- e) (WAD Cy (As) (Sb) (I etals) (As) (Sb) (Sb)	D.O. (mg/L) 0.76 0.78 0.81 0.83 0.80 LOWED PE WTPH-G) (M-D) (NWTP G) (TSS) (B-D) (TSS) (TSS) (B-D) (TSS) (TS	6.20 6.20 6.20 6.19 6.20 6.20 6.19 6.20 CR BOTTLE NWTPH-GX) H-DX) (TPHOD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -9.9 -9.8 -9.6 -9.3 -9.7 TYPE (Circle ap (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C	ease) l) (SO4) (NO:	(Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 15.7 15.7 15.7 15.7 15.7 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals) (Dissolved Mo VOC (Boein	Cond. (uS/cm) 275.4 275.2 274.9 274.6 275.0 NALYSIS AI (0) (8020) (N CH) (NWTPI- ctivity) (TDS (C) (Total PO4- e) (WAD Cy (As) (Sb) (I etals) (As) (Sb) (Sb)	D.O. (mg/L) 0.76 0.78 0.81 0.80 LOWED PE WTPH-G) (Management of the company	6.20 6.20 6.20 6.19 6.20 6.20 6.19 6.20 CR BOTTLE NWTPH-GX) H-DX) (TPHOD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -9.9 -9.8 -9.6 -9.3 -9.7 TYPE (Circle ap (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C	ease) l) (SO4) (NO:	(Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ (K) (K) (Na)
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 15.7 15.7 15.7 15.7 15.7 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals) (Dissolved Mo VOC (Boein	Cond. (uS/cm) 275.4 275.2 274.9 274.6 275.0 NALYSIS AI (b) (8020) (N CH) (NWTPEctivity) (TDS C) (Total PO4 (e) (WAD Cy (As) (Sb) (detals) (As) (Sb) (detals) (As) (Sb) (sp) (detals) (As) (Sb) (detals) (As) (detals)	D.O. (mg/L) 0.76 0.78 0.81 0.80 LOWED PE WTPH-G) (Management of the company	6.20 6.20 6.20 6.19 6.20 6.20 6.19 6.20 CR BOTTLE NWTPH-GX) H-DX) (TPHOD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -9.9 -9.8 -9.6 -9.3 -9.7 TYPE (Circle ap (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C	ease) l) (SO4) (NO:	(Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ (K) (K) (Na)
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 15.7 15.7 15.7 15.7 15.7 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals) (Dissolved Methane Eth	Cond. (uS/cm) 275.4 275.2 274.9 274.6 275.0 NALYSIS AI (b) (8020) (N CH) (NWTPEctivity) (TDS C) (Total PO4 (e) (WAD Cy (As) (Sb) (detals) (As) (Sb) (detals) (As) (Sb) (sp) (detals) (As) (Sb) (detals) (As) (detals)	D.O. (mg/L) 0.76 0.78 0.81 0.80 LOWED PE WTPH-G) (Management of the company	6.20 6.20 6.20 6.19 6.20 6.20 6.19 6.20 CR BOTTLE NWTPH-GX) H-DX) (TPHOD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -9.9 -9.8 -9.6 -9.3 -9.7 TYPE (Circle ap (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C	ease) l) (SO4) (NO:	(Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ (K) (K) (Na)
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 15.7 15.7 15.7 15.7 15.7 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals) (Dissolved Mo VOC (Boein	Cond. (uS/cm) 275.4 275.2 274.9 274.6 275.0 NALYSIS AI (b) (8020) (N CH) (NWTPEctivity) (TDS C) (Total PO4 (e) (WAD Cy (As) (Sb) (detals) (As) (Sb) (detals) (As) (Sb) (sp) (detals) (As) (Sb) (detals) (As) (detals)	D.O. (mg/L) 0.76 0.78 0.81 0.80 LOWED PE WTPH-G) (Management of the company	6.20 6.20 6.20 6.19 6.20 6.20 6.19 6.20 CR BOTTLE NWTPH-GX) H-DX) (TPHOD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -9.9 -9.8 -9.6 -9.3 -9.7 TYPE (Circle ap (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C	ease) l) (SO4) (NO:	(Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ (K) (K) (Na)
Replicate 1 2 3 4 Average: QUANTITY 3 Duplicate Sam	Temp (°F/°C) 15.7 15.7 15.7 15.7 15.7 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals) (Dissolved Me VOC (Boein Methane Eth	Cond. (uS/cm) 275.4 275.2 274.9 274.6 275.0 NALYSIS AI (b) (8020) (N CH) (NWTPEctivity) (TDS C) (Total PO4 (e) (WAD Cy (As) (Sb) (detals) (As) (Sb) (detals) (As) (Sb) (sp) (detals) (As) (Sb) (detals) (As) (detals)	D.O. (mg/L) 0.76 0.78 0.81 0.80 LOWED PE WTPH-G) (Management of the company	6.20 6.20 6.20 6.19 6.20 6.20 6.19 6.20 CR BOTTLE NWTPH-GX) H-DX) (TPHOD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -9.9 -9.8 -9.6 -9.3 -9.7 TYPE (Circle ap (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C	ease) l) (SO4) (NO:	(Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ (K) (K) (Na)
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 15.7 15.7 15.7 15.7 15.7 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals) (Dissolved Me VOC (Boein Methane Eth	Cond. (uS/cm) 275.4 275.2 274.9 274.6 275.0 NALYSIS AI (b) (8020) (N CH) (NWTPEctivity) (TDS C) (Total PO4 (e) (WAD Cy (As) (Sb) (detals) (As) (Sb) (detals) (As) (Sb) (sp) (detals) (As) (Sb) (detals) (As) (detals)	D.O. (mg/L) 0.76 0.78 0.81 0.80 LOWED PE WTPH-G) (Management of the company	6.20 6.20 6.20 6.19 6.20 6.20 6.19 6.20 CR BOTTLE NWTPH-GX) H-DX) (TPHOD) (Turbic dahl Nitrogen Cyanide) () (Cd) (Co)	ORP (mV) -9.9 -9.8 -9.6 -9.3 -9.7 TYPE (Circle ap (BTEX) H-HCID) (8081) lity) (Alkalinity)) (NH3) (NO3/	#DIV/0! #DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C	ease) l) (SO4) (NO:	(Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ (K) (K) (Na)



Project Nam	e <u>:</u>	Boeing Ren	iton		Project Number		0025217.099.0	199	
Event:		Nov-18			Date/Time:	11/ 12 /2018@	1211		
Sample Num		RGW183S-	181112		Weather:	40'S, SUNNY			
Landau Repr	resentative:	JHA							
WATER LEV	EL/WELL/P	URGE DATA							
Well Condition	n:	Secure (YES	5)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	8.67	Time:	1142	Flow through ce	ll vol.		GW Meter No.(s	HERON 3
Begin Purge:	Date/Time:		8 @ 1148	End Purge:	_	11/ 12 /2018 @	1209	Gallons Purged:	
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)	рп	(mV)	(NTU)	(ft)	Volume (gal)	Observations
	Purge Goa	ls: Stablizatio	on of Parame			dings within the fo	ollowing limits	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1151	13.0	137.5	0.71	6.29	71.6	LOW	8.67	<0.25	
1154	13.0	139.7	0.56	6.30	56.5				
1157	13.1	141.1	0.45	6.34	37.5		8.67		
1200	13.2	141.7	0.41	6.37	24.7				
1203	13.2	141.8	0.41	6.38	20.3		-		
1206	13.3	142.0	0.35	6.38	16.2	-			_
1208	13.3	142.2	0.35	6.39	13.4				
SAMPLE CO									
Sample Collec	eted With:		Bailer	_		<u>DED BLADDER</u>			
Made of:	빌	Stainless Ste		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced		Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other							
Sample Descr	iption (color,	turbidity, odoi	, sheen, etc.):	CLEAR, CC	DLORLESS, NO/	NS			
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
Керпсас	(°F/°C)	(uS/cm)	(mg/L)	pm	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	13.3	142.3	0.35	6.40	12.7				
2	13.3	142.3	0.35	6.39	12.3				
3	13.3	142.8	0.35	6.39	11.8				
4	13.3	142.4	0.35	6.39	11.5				
Average:	13.3	142.5	0.35	6.39	12.1	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS A	LLOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	ınalysis below)	
		0) (8020) (1				••			OR 🗆
2	(8270) (PAI	H) (NWTPH-	D) (NWTPI	H-Dx) (TPH	-HCID) (8081)	(8141) (Oil & Gr	ease)	WA □	OR □
	(pH) (Condu	activity) (TD	S) (TSS) (B	BOD) (Turbi	dity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO	03) (NO2) (F)	
					n) (NH3) (NO3	/NO2)			
		le) (WAD C							
						(Pb) (Mg) (Mn) (
			o) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	') (Zn) (Hg) (K) (N	Na) (Hardness) (Silica
	VOC (Boein		ootulene						
	wiemane Etr	nane Ethene A	cetylene						
	others								
	3.11015								
Duplicate San	nple No(s):								
Comments:									
Signature:		JHA				Date:	11/12/2018		



Project Nam	ne:	Boeing Ren	nton		Project Number	er:	0025217.099.0	199	
Event:		Nov-18			Date/Time:	11/ 12 /2018@	1236		
Sample Nun	nber:	RGW184S-	- 181112		Weather:	40'S, SUNNY			
Landau Rep	resentative:	JHA							
WATER LEV	VEL/WELL/P	URGE DATA							
Well Condition		Secure (YES		Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	9.19	Time:		Flow through ce			GW Meter No.(s	HERON 3
	Date/Time:			End Purge:	Č	11/ 12 /2018 @ 1	1235	Gallons Purged:	0.5
Purge water d			55-gal Drum	Ä	Storage Tank	Ground		SITE TREATM	ENT SYSTEM
· ·	Тетр	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	
1015	+/- 3%	+/- 3%		+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
1217	14.3	150.0	3.31	6.19		LOW	9.19	<0.25	
1220	13.7	142.1	2.29	6.19	89.0			·	
1223	13.5	138.1	1.73	6.18	89.5		9.19	0.25	
1226	13.3	136.1	1.45	6.16	90.7				
1229	13.2	135.0	1.30	6.14	90.9				
1232	13.2	134.5	1.22	6.13	90.2			0.5	
1234	13.3	134.1	1.13	6.14	88.8				
SAMPLE CO	DLLECTION 1	DATA							
Sample Colle	cted With:		Bailer		Pump/Pump Typ	e DED BLADDER			
Made of:		Stainless Ste	el	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lure:	Alconox Wa	ısh	Tap Rinse	DI Water	Dedicated			
(By Numerica	· · · · · · · · · · · · · · · · · · ·	Other							
Sample Descr	ription (color,	turbidity, odo	r, sheen, etc.):	CLOUDY, I	LIGHT BROWN	COLOR, NO/NS			
Replicate	Тетр	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
Керпсас	(°F/°C)	(uS/cm)	(mg/L)	pm	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	13.3	134.1	1.15	6.14	88.5				
2	13.3	134.1	1.15	6.14	88.3				
3	13.3	134.1	1.13	6.14	88.1				
4	13.3	134.1	1.11	6.14	88.0				
							0.10		
Average:	13.3	134.1	1.14	6.14	88.2	#DIV/0!	9.19		
QUANTITY						pplicable or write	non-standard a		
			NWTPH-G) ((0141) (01.0 C	```		OR 🗆
2						(8141) (Oil & Gr r) (HCO3/CO3) (0		WA []	OR □
					n) (NH3) (NO3		CI) (304) (NO	(NO2) (F)	
			yanide) (Free) (1:110) (1:00	,1,02)			
					(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (1	Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg	g) (K) (Na)
	(Dissolved M	Ietals) (As) (Sl	b) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) ((Ag) (Se) (Tl) (V	(Y) (Zn) (Hg) (K) (N	Na) (Hardness) (Silica
	VOC (Boeir								
	Methane Eth	nane Ethene A	cetylene						
	others								
1	1								
Duplicate Sar	nple No(s):								
Comments:									
Signature:		JHA				Date:	11/12/2018		



Project Nam	ne:	Boeing Ren	nton		Project Number	er:	0025217.099.0	199	
Event:		Nov-18			Date/Time:	11/ 12 /2018@	1346		
Sample Nun	nber:	RGW211S	- 181112		Weather:	40'S, SUNNY			
Landau Repr	resentative:	JHA							
WATER LEV	VEL/WELL/P	URGE DATA							
Well Condition		Secure (YES		Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	9.88	Time:		Flow through ce			GW Meter No.(s	HERON 3
	Date/Time:			End Purge:	Č	11/ 12 /2018 @ 1	1337	Gallons Purged:	0.25
Purge water d			55-gal Drum	Ā	Storage Tank	Ground		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%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1327	16.1	279.3	0.15	6.34	-58.6	HIGH	9.88	<0.25	
1330	16.2	269.3	0.14	6.36	-75.8		9.88	<0.25	
1333	16.2	266.5	0.12	6.34	-75.8				
1336	16.2	261.8	0.14	6.31	-74.7				
SAMPLE CO	DLLECTION I	DATA							
Sample Colle			Bailer		Pump/Pump Type	e DED BLADDER			
Made of:		Stainless Ste	eel 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lure:	Alconox Wa	ısh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color,	turbidity, odo	r, sheen, etc.):	TURBID, B	ROWN, SLIGHT	PETROLEUM OD	OOR/NS		
		<u> </u>		***	opp.		DOWN	Ferrous iron	Comments/
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	(Fe II)	Observations
1	16.2	260.9	0.14	6.30	-74.5		,		
2	16.2	260.0	0.14	6.30	-74.7				
	16.2	259.9	0.14	6.30					
3					-74.6			-	
4	16.2	259.6	0.02	6.30	-74.6				
Average:	16.2	260.1	0.11	6.30	-74.6	#DIV/0!	9.88		
QUANTITY	TYPICAL A	NALYSIS A	LLOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
			NWTPH-G) (OR 🗆
2						(8141) (Oil & Gr			OR 🗆
) (HCO3/CO3) (C	Cl) (SO4) (NO	03) (NO2) (F)	
			yanide) (Free		n) (NH3) (NO3	/NO2)			
					(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (1	Vi) (Ag) (Se) (Tl) (V) (Zn) (Ho	(K) (Na)
									Na) (Hardness) (Silic
	VOC (Boeir		-) (= ::) (= -) () () ()	() () () (-	-) (8) () () ((8) () () (-) () (8) () (-) (=====) (=====
		nane Ethene A	cetylene	,					
	others								
Duplicate Sar	nple No(s):								
Comments:									
Signature:		JHA				Date:	11/12/2018		



Project Nam	ne:	Boeing Rent	ton		Project Number	er:	0025217.099.0	199	
Event:		Nov-18			Date/Time:	11/12 /2018@	1348		
Sample Nur	nher:	RGW212S-	181112		Weather:	CLEAR 40S	13 10		
Landau Rep		SRB/JHA/C			Wedner.	CEEFIIC 105			
WATER LE	VEL/WELL/P	URGE DATA							
Well Condition	on:	Secure (YES))	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	10.43	Time:	1325	Flow through co	ell vol.		GW Meter No.(s	1
Begin Purge:	Date/Time:	11/12 /2013	1325	End Purge:	Date/Time:	11/ 12 /2018 @	1345	Gallons Purged:	0.5
Purge water o	lisposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATME	ENT SYSTEM
	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		dings within the fo +/- 10%	llowing limits < 0.3 ft	>/= 1 flow through cell	
1220								tiir ough cen	
1328		231.8	0.42	5.63		LOW	10.54		
1331	15.3	229.6	0.44	5.61	119.1		10.54		
1334	15.2	224.2	0.47	5.58	122.8		10.55		
1337	15.2	220.7	0.42	5.55	127.0				
1340	15.2	219.4	0.40	5.54	128.7				
1343		218.6	0.42	5.54					
1343	13.2	210.0	0.42	3.34	130.3				
								·	
CANDIE CO	N. I. ECTION I								
Sample Colle	OLLECTION I		Bailer		Dumn/Dumn Tym	e <u>DED BLADDER</u>			
Made of:	cted with.	Stainless Stee		PVC	Tump/Tump Typ	Polyethylene	Other	Dedicated	
			_		—			Dedicated	
Decon Proceed (By Numerical)		Alconox Was	sh 📋	Tap Rinse	DI Water	Dedicated			
			ala ana ata h	CLEAD CO	LORLESS NO N	IC .			
Sample Desc.	ripuon (color,	iuroiuity, odor,	, sneen, etc.).	CLEAR CO	LOKLESS NO N	15			
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	15.2	218.5	0.41	5.54	130.4	(1.10)	(10)	(=)	
2	15.2	218.2	0.40	5.53	130.6				
3	15.2	218.4	0.39	5.53	130.9				
4	15.2	218.3	0.39	5.53	131.2				
Average:	15.2	218.4	0.40	5.53	130.8	#DIV/0!			
OUANTITY	TYPICAL A	NALYSIS AI	LOWED PI	ER BOTTLE	E TYPE (Circle 2	applicable or write	non-standard a	nalysis below)	
· Contract of		0) (8020) (N				. рр			OR 🗆
2	(8270) (PAI	H) (NWTPH-	D) (NWTPI	H-Dx) (TPH	-HCID) (8081)	(8141) (Oil & Gre	ease)	WA □	OR 🗆
	(pH) (Condu	activity) (TDS	S) (TSS) (E	BOD) (Turbi	dity) (Alkalinity	r) (HCO3/CO3) (0	Cl) (SO4) (NO	O3) (NO2) (F)	
	(COD) (TO	C) (Total PO4	l) (Total Kie	edahl Nitroger	n) (NH3) (NO3	5/NO2)			
		le) (WAD Cy							
	1					(Pb) (Mg) (Mn) (1			
) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (F	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V	() (Zn) (Hg) (K) (N	a) (Hardness) (Silic
	VOC (Boein	~	natrilan a						
	iviculane Etr	nane Ethene Ac	etylene						
	others								
	•								
Duplicate Sar	mple No(s):								
Comments:									
Signature:	CEB					Date:	11/12/2018		



Project Nam	ie:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	_
Event:		Nov-18			Date/Time:	11/12 /2018@	1308		
Sample Nun	nber:	RGW221S-	181112		Weather:	CLEAR 40S			
Landau Rep	resentative:	SRB/JHA/C	EB		-				
WATERIEV	/EL/WELL/PI	IRGE DATA							
Well Condition		Secure (YES)		Damaged (N	(0)	Describe:	Flush Mount		
DTW Before		9.98	Time:		Flow through ce		114511 1/15 4411	GW Meter No.(s	1
Begin Purge:		11/12 /2013		End Purge:	Č	11/12 /2018 @	1300	Gallons Purged:	0.5
0 0		11/12 /2016		Ĕ		$\overline{}$			
Purge water d	isposed to:		55-gal Drum	—	Storage Tank	Ground	Otner	SITE TREATM	ENI SYSIEM
7D *	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C) Purge Goal	(uS/cm) ls: Stablizatio	(mg/L) on of Parame	ters for three	(mV) consecutive rea	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1249	14.8	227.0	0.32	6.27	25.5	LOW	9.98		
1252	13.6	221.2	0.43	6.16	12.3		9.98		
1255	13.6	221.0	0.43	6.15	12.2		9.98		
1258	13.5	219.5	0.39	6.06	12.7				
CAMDIE CO	LLECTION I								
Sample Collection			Bailer		Dumn/Dumn Tyre	DED BLADDER			
Made of:	cied Willi.	Stainless Stee		PVC	Teflon	Polyethylene	Other	□ Dadicated	
	. 📛				—		L Oulei	Dedicated	
Decon Proced	_	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(R) Mumarica									
(By Numerica		Other	1	CI E I D CO	L ODL EGG NO N	~			
			, sheen, etc.):	CLEAR CO	LORLESS NO N	S			
Sample Descr	ription (color, t	turbidity, odor					DTW	Ferrous iron	Comments/
			D.O. (mg/L)	CLEAR CO	ORP (mV)	S Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
Sample Descr	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity			
Sample Descr Replicate	Temp (°F/°C)	Cond. (uS/cm) 219.0	D.O. (mg/L)	рН 6.05	ORP (mV)	Turbidity			
Sample Descr Replicate	Temp (°F/°C) 13.5	Cond. (uS/cm) 219.0 219.1	D.O. (mg/L) 0.39	pH 6.05 6.04	ORP (mV) 12.6 12.5	Turbidity			
Sample Descr Replicate	Temp (°F/°C) 13.5 13.5	Cond. (uS/cm) 219.0 219.1 219.1	D.O. (mg/L) 0.39 0.39	рН 6.05	ORP (mV) 12.6 12.5 12.4	Turbidity			
Sample Descr Replicate	Temp (°F/°C) 13.5	Cond. (uS/cm) 219.0 219.1	D.O. (mg/L) 0.39	pH 6.05 6.04	ORP (mV) 12.6 12.5	Turbidity			
Sample Descr Replicate 1 2 3	Temp (°F/°C) 13.5 13.5	Cond. (uS/cm) 219.0 219.1 219.1	D.O. (mg/L) 0.39 0.39	pH 6.05 6.04 6.04	ORP (mV) 12.6 12.5 12.4	Turbidity			
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.5 13.5 13.5	Cond. (uS/cm) 219.0 219.1 218.9 219.0	D.O. (mg/L) 0.39 0.39 0.39 0.39	6.05 6.04 6.04 6.04	ORP (mV) 12.6 12.5 12.4 12.3 12.5	Turbidity (NTU) #DIV/0!	(ft)	(Fe II)	
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.5 13.5 13.5 TYPICAL A	Cond. (uS/cm) 219.0 219.1 219.1 218.9 219.0	D.O. (mg/L) 0.39 0.39 0.39 0.39	6.05 6.04 6.04 6.04 6.04 ER BOTTLE	ORP (mV) 12.6 12.5 12.4 12.3 12.5 TYPE (Circle a	Turbidity (NTU)	(ft)	(Fe II)	Observations
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.5 13.5 13.5 13.5 13.5 13.5	Cond. (uS/cm) 219.0 219.1 219.1 219.0 219.0 NALYSIS AI 0) (8020) (N	D.O. (mg/L) 0.39 0.39 0.39 0.39 0.39 ULLOWED PI	6.05 6.04 6.04 6.04 6.04 ER BOTTLE	ORP (mV) 12.6 12.5 12.4 12.3 12.5 TYPE (Circle a) (BTEX)	Turbidity (NTU) #DIV/0!	(ft)	(Fe II)	Observations OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.5 13.5 13.5 13.5 13.5 13.5 (8260) (8010) (8270) (PAF	Cond. (uS/cm) 219.0 219.1 219.1 218.9 219.0 NALYSIS AI 0) (8020) (N	D.O. (mg/L) 0.39 0.39 0.39 0.39 0.39 ULLOWED PINTPH-G) (NWTPH-G)	6.05 6.04 6.04 6.04 6.04 ER BOTTLE (NWTPH-GX	ORP (mV) 12.6 12.5 12.4 12.3 12.5 TYPE (Circle a.) (BTEX) HCID) (8081)	#DIV/0! pplicable or write (8141) (Oil & Gro	non-standard a	(Fe II) analysis below) WA WA WA	Observations
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.5 13.5 13.5 13.5 13.6 TYPICAL A (8260) (8010) (8270) (PAF (pH) (Conductive)	Cond. (uS/cm) 219.0 219.1 219.1 218.9 219.0 NALYSIS AI 0) (8020) (NI) (NWTPH-activity) (TDS	D.O. (mg/L) 0.39 0.39 0.39 0.39 0.39 ULOWED PINTPH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (FISS) (FI	6.05 6.04 6.04 6.04 6.04 ER BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbi	ORP (mV) 12.6 12.5 12.4 12.3 12.5 TYPE (Circle a.) (BTEX) HCID) (8081)	#DIV/0! pplicable or write (8141) (Oil & Gre) (HCO3/CO3) (6	non-standard a	(Fe II) analysis below) WA WA WA	Observations OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.5 13.5 13.5 13.5 13.6 13.7 13.5 13.7 13.5 13.7 13.7 13.9	Cond. (uS/cm) 219.0 219.1 219.1 218.9 219.0 NALYSIS AI 0) (8020) (NI) (NWTPH-activity) (TDS	D.O. (mg/L) 0.39 0.39 0.39 0.39 0.39 ULOWED PINWTPH-G) (NWTPH-G) (NWTPH-G) (TSS) (EM) (H) (Total Kie	6.05 6.04 6.04 6.04 6.04 ER BOTTLE (NWTPH-Gx I-Dx) (TPH-GOD) (Turbicall Nitroger	ORP (mV) 12.6 12.5 12.4 12.3 12.5 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity	#DIV/0! pplicable or write (8141) (Oil & Gre) (HCO3/CO3) (6	non-standard a	(Fe II) analysis below) WA WA WA	Observations OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.5 13.5 13.5 13.5 13.5 (8260) (8010 (8270) (PAF (pH) (Condu (COD) (TOO (Total Cyanid	Cond. (uS/cm) 219.0 219.1 219.1 219.0 NALYSIS AI 0) (8020) (N H) (NWTPH- lectivity) (TDS C) (Total PO-	D.O. (mg/L) 0.39 0.39 0.39 0.39 0.39 LLOWED PI WTPH-G) (NWTPH-G) (NWTPH-G) (TSS) (Ed) (Total Kieranide) (Free	pH 6.05 6.04 6.04 6.04 ER BOTTLE (NWTPH-Gx I-Dx) (TPH-GOD) (Turbic dahl Nitroger Cyanide)	ORP (mV) 12.6 12.5 12.4 12.3 12.5 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity and (NH3) (NO3)	#DIV/0! pplicable or write (8141) (Oil & Gre) (HCO3/CO3) (6	non-standard a	(Fe II) Inalysis below) WA 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) 13.5 13.5 13.5 13.5 13.5 13.5 (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Tod (Total Cyanid	Cond. (uS/cm) 219.0 219.1 219.1 218.9 219.0 NALYSIS AI (0) (8020) (NI) (NWTPH- (1ctivity) (TDS) (C) (Total PO- (Le) (WAD Cy (Le) (AS) (Sb) (Sb) (Sb)	D.O. (mg/L) 0.39 0.39 0.39 0.39 0.39 LLOWED PI WTPH-G) (D) (NWTPH-G) (Total Kie vanide) (Free Ba) (Be) (Ca	pH 6.05 6.04 6.04 6.04 6.04 ER BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbickled) (Turbickled) (Turbickled) (Cyanide) 1) (Cd) (Co)	ORP (mV) 12.6 12.5 12.4 12.3 12.5 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity a) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Green) (HCO3/CO3) (MC2) (Pb) (Mg) (Mn) (1)	non-standard a ease) Cl) (SO4) (NO	(Fe II) Inalysis below) WA WA O3) (NO2) (F) T1) (V) (Zn) (Hg	Observations OR OR OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.5 13.5 13.5 13.5 13.5 (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Tod (Total Cyanid	Cond. (uS/cm) 219.0 219.1 219.1 218.9 219.0 NALYSIS AI (0) (8020) (NI (1) (NWTPH- (1) (Total PO4- (2) (WAD Cy (2) (As) (Sb) (Setals) (As) (Sb) (Setals)	D.O. (mg/L) 0.39 0.39 0.39 0.39 0.39 LLOWED PI WTPH-G) (D) (NWTPH-G) (Total Kie vanide) (Free Ba) (Be) (Ca	pH 6.05 6.04 6.04 6.04 6.04 ER BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbickled) (Turbickled) (Turbickled) (Cyanide) 1) (Cd) (Co)	ORP (mV) 12.6 12.5 12.4 12.3 12.5 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity a) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Green) (HCO3/CO3) (MC2) (Pb) (Mg) (Mn) (1)	non-standard a ease) Cl) (SO4) (NO	(Fe II) Inalysis below) WA WA O3) (NO2) (F) T1) (V) (Zn) (Hg	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.5 13.5 13.5 13.5 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (TOd (Total Metals) (Dissolved M VOC (Boein	Cond. (uS/cm) 219.0 219.1 219.1 218.9 219.0 NALYSIS AI (0) (8020) (NI (1) (NWTPH- (1) (Total PO4- (2) (WAD Cy (2) (As) (Sb) (Setals) (As) (Sb) (Setals)	D.O. (mg/L) 0.39 0.39 0.39 0.39 0.39 CLLOWED PINATPH-G) (NWTPH-G) (NWT	pH 6.05 6.04 6.04 6.04 6.04 ER BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbickled) (Turbickled) (Turbickled) (Cyanide) 1) (Cd) (Co)	ORP (mV) 12.6 12.5 12.4 12.3 12.5 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity a) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Green) (HCO3/CO3) (MC2) (Pb) (Mg) (Mn) (1)	non-standard a ease) Cl) (SO4) (NO	(Fe II) Inalysis below) WA WA O3) (NO2) (F) T1) (V) (Zn) (Hg	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.5 13.5 13.5 13.5 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (TOd (Total Metals) (Dissolved M VOC (Boein	Cond. (uS/cm) 219.0 219.1 219.1 218.9 219.0 NALYSIS AI 0) (8020) (N H) (NWTPH- ictivity) (TDS C) (Total PO- le) (WAD Cy o) (As) (Sb) (Setals) (As) (Sb) g short list)	D.O. (mg/L) 0.39 0.39 0.39 0.39 0.39 CLLOWED PINATPH-G) (NWTPH-G) (NWT	pH 6.05 6.04 6.04 6.04 6.04 ER BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbickled) (Turbickled) (Turbickled) (Cyanide) 1) (Cd) (Co)	ORP (mV) 12.6 12.5 12.4 12.3 12.5 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity a) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Green) (HCO3/CO3) (MC2) (Pb) (Mg) (Mn) (1)	non-standard a ease) Cl) (SO4) (NO	(Fe II) Inalysis below) WA WA O3) (NO2) (F) T1) (V) (Zn) (Hg	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.5 13.5 13.5 13.5 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 219.0 219.1 219.1 218.9 219.0 NALYSIS AI 0) (8020) (N H) (NWTPH- ictivity) (TDS C) (Total PO- le) (WAD Cy o) (As) (Sb) (Setals) (As) (Sb) g short list)	D.O. (mg/L) 0.39 0.39 0.39 0.39 0.39 CLLOWED PINATPH-G) (NWTPH-G) (NWT	pH 6.05 6.04 6.04 6.04 6.04 ER BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbickled) (Turbickled) (Turbickled) (Cyanide) 1) (Cd) (Co)	ORP (mV) 12.6 12.5 12.4 12.3 12.5 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity a) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Green) (HCO3/CO3) (MC2) (Pb) (Mg) (Mn) (1)	non-standard a ease) Cl) (SO4) (NO	(Fe II) Inalysis below) WA WA O3) (NO2) (F) T1) (V) (Zn) (Hg	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 13.5 13.5 13.5 13.5 13.5 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (TOd (Total Metals) (Dissolved M VOC (Boein	Cond. (uS/cm) 219.0 219.1 219.1 218.9 219.0 NALYSIS AI 0) (8020) (N H) (NWTPH- ictivity) (TDS C) (Total PO- le) (WAD Cy o) (As) (Sb) (Setals) (As) (Sb) g short list)	D.O. (mg/L) 0.39 0.39 0.39 0.39 0.39 CLLOWED PINATPH-G) (NWTPH-G) (NWT	pH 6.05 6.04 6.04 6.04 6.04 ER BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbickled) (Turbickled) (Turbickled) (Cyanide) 1) (Cd) (Co)	ORP (mV) 12.6 12.5 12.4 12.3 12.5 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity a) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Green) (HCO3/CO3) (MC2) (Pb) (Mg) (Mn) (1)	non-standard a ease) Cl) (SO4) (NO	(Fe II) Inalysis below) WA WA O3) (NO2) (F) T1) (V) (Zn) (Hg	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY	Temp (°F/°C) 13.5 13.5 13.5 13.5 13.5 13.5 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 219.0 219.1 219.1 218.9 219.0 NALYSIS AI 0) (8020) (N H) (NWTPH- ictivity) (TDS C) (Total PO- le) (WAD Cy o) (As) (Sb) (Setals) (As) (Sb) g short list)	D.O. (mg/L) 0.39 0.39 0.39 0.39 0.39 CLLOWED PINATPH-G) (NWTPH-G) (NWT	pH 6.05 6.04 6.04 6.04 6.04 ER BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbickled) (Turbickled) (Turbickled) (Cyanide) 1) (Cd) (Co)	ORP (mV) 12.6 12.5 12.4 12.3 12.5 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity a) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Green) (HCO3/CO3) (MC2) (Pb) (Mg) (Mn) (1)	non-standard a ease) Cl) (SO4) (NO	(Fe II) Inalysis below) WA WA O3) (NO2) (F) T1) (V) (Zn) (Hg	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY 2 Duplicate Sar	Temp (°F/°C) 13.5 13.5 13.5 13.5 13.5 13.5 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 219.0 219.1 219.1 218.9 219.0 NALYSIS AI 0) (8020) (N H) (NWTPH- ictivity) (TDS C) (Total PO- le) (WAD Cy o) (As) (Sb) (Setals) (As) (Sb) g short list)	D.O. (mg/L) 0.39 0.39 0.39 0.39 0.39 CLLOWED PINATPH-G) (NWTPH-G) (NWT	pH 6.05 6.04 6.04 6.04 6.04 ER BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbickled) (Turbickled) (Turbickled) (Cyanide) 1) (Cd) (Co)	ORP (mV) 12.6 12.5 12.4 12.3 12.5 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity a) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Green) (HCO3/CO3) (MC2) (Pb) (Mg) (Mn) (1)	non-standard a ease) Cl) (SO4) (NO	(Fe II) Inalysis below) WA WA O3) (NO2) (F) T1) (V) (Zn) (Hg	Observations OR OR OR OR OR OR OR OR OR OR
Replicate 1 2 3 4 Average: QUANTITY	Temp (°F/°C) 13.5 13.5 13.5 13.5 13.5 13.5 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 219.0 219.1 219.1 218.9 219.0 NALYSIS AI 0) (8020) (N H) (NWTPH- ictivity) (TDS C) (Total PO- le) (WAD Cy o) (As) (Sb) (Setals) (As) (Sb) g short list)	D.O. (mg/L) 0.39 0.39 0.39 0.39 0.39 CLLOWED PINATPH-G) (NWTPH-G) (NWT	pH 6.05 6.04 6.04 6.04 6.04 ER BOTTLE (NWTPH-Gx H-Dx) (TPH-GOD) (Turbickled) (Turbickled) (Turbickled) (Cyanide) 1) (Cd) (Co)	ORP (mV) 12.6 12.5 12.4 12.3 12.5 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity a) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Green) (HCO3/CO3) (MC2) (Pb) (Mg) (Mn) (1)	non-standard a ease) Cl) (SO4) (NO	(Fe II) Inalysis below) WA WA O3) (NO2) (F) T1) (V) (Zn) (Hg	Observations OR OR OR OR OR OR OR OR OR OR



Project Nam	e:	Boeing Rer	nton		Project Number	er:	0025217.099.0)99	
Event:	-	Nov-18			Date/Time:	11/ 12 /2018@	1423		
Sample Num	nber:	RGW224S-	- 181112		Weather:	CLEAR 40S			
Landau Repr		SRB/JHA/0	CEB						
WATER LEV	/EL/WELL/P	URGE DATA							
Well Condition		Secure (YES		Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	10.61	Time:		Flow through ce			GW Meter No.(s	1
Begin Purge:				End Purge:	_	11/12 /2018 @	1415	Gallons Purged:	0.5
Purge water d	isposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATME	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
	Purge Goa +/- 3%	ls: Stablization +/- 3%		ters for three +/- 0.1 units		dings within the fo	ollowing limits < 0.3 ft	>/= 1 flow through cell	
1404								tin ough cen	
1404	16.9	212.4	0.38	5.99		LOW	10.65		
1407	16.8	244.1	0.40	6.04	3.2		10.65	·	
1410	16.8	246.1	0.41	6.03	1.6		10.66		
1413	16.8	249.9	0.40	6.03	-1.7				
SAMPLE CO	LLECTION I	DATA							
Sample Collec	cted With:		Bailer		Pump/Pump Type	e <u>DED BLADDER</u>		. <u>-</u>	
Made of:		Stainless Ste	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	ure:	Alconox Wa	ısh	Tap Rinse	DI Water	Dedicated Dedicated		Λ	
(By Numerica	l Order)	Other				·^			
Sample Descr	iption (color,	turbidity, odo	r, sheen, etc.):	CLEAR CO	LORLESS NO N	S			
Replicate	Tomn	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
Replicate	Temp (°F/°C)	(uS/cm)	(mg/L)	рп	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	16.8	250.5	0.40	6.02	-3.5				
2	16.9	250.6	0.38	6.02	-3.8				
	16.8	250.7	0.39	6.02					
3					-4.1			·	
4	16.8	250.7	0.39	6.02	-4.4			· ———	
Average:	16.8	250.6	0.39	6.02	-4.0	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS A	LLOWED PI	ER BOTTLE	E TYPE (Circle a	pplicable or write	non-standard a	analysis below)	
			NWTPH-G)						OR 🗆
2						(8141) (Oil & Gre	•		or □
	· /				dity) (Alkalinity n) (NH3) (NO3	() (HCO3/CO3) ((CI) (SO4) (NC	03) (NO2) (F)	
			yanide) (Free		II) (NH3) (NO3	/NO2)			
					(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg)) (K) (Na)
									(a) (Hardness) (Silic
	VOC (Boein	g short list)							
	Methane Eth	nane Ethene A	cetylene						
	ath ar-								
	others								
Duplicate San	nple No(s):	Duplicate Lo	ocation (DUP3	3)					
Comments:									
Signature:	CEB					Date:	11/12/2018		

\\SEA2-FS1\projects\8888 - Boeing Renton\02 Data Management\2018\4Q2018\Field Data\FORMER FUEL FARM_11.12.18_CEB



Project Nam	ne:	Boeing Ren	nton		Project Number	er:	0025217.099.0	199	
Event:		Nov-18			Date/Time:	11/ 12 /2018@	1411		
Sample Nun	nber:	RGW255S-	- 181112		Weather:	40'S, SUNNY			
Landau Rep	resentative:	JHA							
WATER LEV	VEL/WELL/P	URGE DATA	,						
Well Condition		Secure (YES		Damaged (N	(O)	Describe:	Flush Mount		
DTW Before		9.86	Time:		Flow through ce			GW Meter No.(s	HERON 3
	Date/Time:			End Purge:	_	11/ 12 /2018 @ 1	1408	Gallons Purged:	0.75
Purge water d			55-gal Drum	Ē	Storage Tank	Ground		SITE TREATM	
Tunge water a	-		· ·		Ü				
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	on of Parame		e consecutive rea	dings within the fo		>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1352	17.1	198.6	0.22	5.98	20.6	LOW	9.92	<0.25	
1355	17.2	199.4	0.21	6.09	12.9				
1358	17.4	197.2	0.17	6.25	1.6		9.94	0.25	
1401	17.3	196.3	0.15	6.27	0.2				
1404		195.3	0.14	6.27	-1.0	-	9.94		
							7.71	0.5	
1407	17.3	195.1	0.15	6.27	-1.2			0.5	
	· ———								
SAMPLE CO			D '1		D /D T	DED DI ADDED			
Sample Colle	_	G. : 1				DED BLADDER			
Made of:	. 📙	Stainless Ste		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced		Alconox Wa	ısh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other							
Sample Descr	nption (color,	turbidity, odoi	r, sheen, etc.):	CLEAR, CC	DLORLESS, NO/	NS			
Replicate	Тетр	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
	(°F/°C)	(uS/cm)	(mg/L)		(mV)	(NTU)	(ft)	(Fe II)	Observations
1	17.3	195.0	0.15	6.27	-1.0				
2	17.3	195.2	0.14	6.27	-1.1				
3	17.3	195.2	0.15	6.27	-0.9				
4	17.3	195.0	0.15	6.27	-1.2				
Average:	17.3	195.1	0.15	6.27	-1.1	#DIV/0!			
-									
QUANTITY						pplicable or write	non-standard a		OR [
2	<u> </u>		NWTPH-G) (`		(8141) (Oil & Gr	ease)	WA □ WA □	OR OR
) (HCO3/CO3) (OK L
					n) (NH3) (NO3		ci) (BOT) (ITC	95) (1102) (1)	
			yanide) (Free		1) (1112) (1102	,1102)			
	<u> </u>			•	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (1	Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg	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	7) (Zn) (Hg) (K) (N	Na) (Hardness) (Silic
	VOC (Boein								
	Methane Eth	nane Ethene A	cetylene						
	a thace								
	others								
Duplicate Sar	nple No(s):								
Comments:									
Signature:		JHA				Date:	11/12/2018		_



Project Nam	ie:	Boeing Ren	ton		Project Numbe	er:	0025217.099.0	199	
Event:		Nov-18			Date/Time:	11/ 12 /2018@	1100		
Sample Nun	nber:	DUP3-	181112		Weather:	CLOUDY 40S			
Landau Repr	resentative:	SRB/JHA/C	CEB		•				
WATER LEV	/EL/WELL/PI	URGE DATA							
Well Condition		Secure (YES		Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)		Time:	2 (Flow through ce			GW Meter No.(s	;)
	Date/Time:	11/ /2018 (End Purge:	_	11/ /2018 @		Gallons Purged:	0.5
Purge water d			55-gal Drum	Ě	Storage Tank	Ground	Other	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
	Purge Goal	ls: Stablizatio	on of Paramet		consecutive rea	dings within the fo	llowing limits	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
		_					~		
-	· 	1)UPL	ICAT	ΈTΟŀ	RGW224	-S		
SAMPLE CO	LLECTION I	DATA							
Sample Collec	cted With:		Bailer		Pump/Pump Type	e			
Made of:		Stainless Ste	el	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lure:	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other	_		₩	_			
· -			, sheen, etc.):	CLEAR CO	LORLESS NO N				
· -			, sheen, etc.):_	CLEAR CO	LORLESS NO N				
· -			D.O. (mg/L)	CLEAR CO	LORLESS NO N ORP (mV)		DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
Sample Descr	Temp	turbidity, odor	D.O.	pН	ORP	S Turbidity			
Sample Descr Replicate	Temp (°F/°C)	Cond. (uS/cm) 250.8	D.O. (mg/L)	рН 6.02	ORP (mV)	S Turbidity			
Replicate 1 2	Temp (°F/°C) 16.8	Cond. (uS/cm) 250.8	D.O. (mg/L) 0.39	pH 6.02 6.02	ORP (mV) -3.6 -4.0	S Turbidity			
Replicate 1 2 3	Temp (°F/°C) 16.8 16.8	Cond. (uS/cm) 250.8 250.6 250.7	D.O. (mg/L) 0.39 0.38	6.02 6.02 6.02	ORP (mV) -3.6 -4.0 -4.3	S Turbidity			
Replicate 1 2	Temp (°F/°C) 16.8 16.8 16.8	Cond. (uS/cm) 250.8 250.6 250.7	D.O. (mg/L) 0.39 0.38 0.39	6.02 6.02 6.02 6.02	ORP (mV) -3.6 -4.0	S Turbidity			
Replicate 1 2 3	Temp (°F/°C) 16.8 16.8	Cond. (uS/cm) 250.8 250.6 250.7	D.O. (mg/L) 0.39 0.38	6.02 6.02 6.02	ORP (mV) -3.6 -4.0 -4.3	S Turbidity			
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.8 16.8 16.8 16.8	Cond. (uS/cm) 250.8 250.6 250.7 250.7	D.O. (mg/L) 0.39 0.38 0.39 0.39 0.39	6.02 6.02 6.02 6.02 6.02	ORP (mV) -3.6 -4.0 -4.3 -4.4 -4.1	Turbidity (NTU)	(ft)	(Fe II)	
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.8 16.8 16.8 16.8 TYPICAL A	Cond. (uS/cm) 250.8 250.6 250.7 250.7	D.O. (mg/L) 0.39 0.38 0.39 0.39 0.39	6.02 6.02 6.02 6.02 6.02	ORP (mV) -3.6 -4.0 -4.3 -4.4 -4.1 TYPE (Circle a	Turbidity (NTU) #DIV/0!	(ft)	(Fe II)	
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.8 16.8 16.8 16.8 16.8 16.8 16.8	Cond. (uS/cm) 250.8 250.6 250.7 250.7 250.7 250.7 NALYSIS AI	D.O. (mg/L) 0.39 0.38 0.39 0.39 0.39 LLOWED PE	6.02 6.02 6.02 6.02 6.02 ER BOTTLE	ORP (mV) -3.6 -4.0 -4.3 -4.4 -4.1 TYPE (Circle a) (BTEX)	Turbidity (NTU) #DIV/0!	(ft)	(Fe II)	Observations
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.8 16.8 16.8 16.8 16.8 16.8 16.8 16.8	Cond. (uS/cm) 250.8 250.6 250.7 250.7 250.7 NALYSIS AI (0) (8020) (NH) (NWTPH-	D.O. (mg/L) 0.39 0.38 0.39 0.39 0.39 LLOWED PENWTPH-G) (NWTPH-G)	6.02 6.02 6.02 6.02 6.02 ER BOTTLE NWTPH-Gx I-Dx) (TPH-	ORP (mV) -3.6 -4.0 -4.3 -4.4 -4.1 TYPE (Circle at at a constant) (BTEX) HCID) (8081)	Turbidity (NTU) #DIV/0! pplicable or write	non-standard a	(Fe II) analysis below) WA WA WA	Observations OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.8 16.8 16.8 16.8 16.8 16.8 (8260) (8010 (8270) (PAH) (Conduction) (TOO	Cond. (uS/cm) 250.8 250.6 250.7 250.7 250.7 NALYSIS AI (0) (8020) (NH) (NWTPH-activity) (TD: CC) (Total PO-	D.O. (mg/L) 0.39 0.38 0.39 0.39 0.39 LLOWED PENTPH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (D) (NWTPH	6.02 6.02 6.02 6.02 6.02 CR BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger	ORP (mV) -3.6 -4.0 -4.3 -4.4 -4.1 TYPE (Circle at at a constant) (BTEX) HCID) (8081)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gree) (HCO3/CO3) (C	non-standard a	(Fe II) analysis below) WA WA WA	Observations OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.8 16.8 16.8 16.8 16.8 16.8 (8260) (8010 (8270) (PAF (pH) (Condu (COD) (TOO (Total Cyanid	Cond. (uS/cm) 250.8 250.6 250.7 250.7 250.7 NALYSIS AI (0) (8020) (NH) (NWTPH-activity) (TD:C) (Total PO-le) (WAD Cy	D.O. (mg/L) 0.39 0.38 0.39 0.39 0.39 LLOWED PENWTPH-G) (NWTPH-S) (TSS) (B4) (Total Kie vanide) (Free	6.02 6.02 6.02 6.02 6.02 CR BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)	ORP (mV) -3.6 -4.0 -4.3 -4.4 -4.1 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) (NH3) (NO3	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gree) (HCO3/CO3) (Oil NO2)	non-standard a ase) Cl) (SO4) (NO	(Fe II) Inalysis 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) 16.8 16.8 16.8 16.8 16.8 16.8 (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals)	Cond. (uS/cm) 250.8 250.6 250.7 250.7 250.7 NALYSIS AI (0) (8020) (NH) (NWTPH- (ctivity) (TDC) (Total PO- (le) (WAD Cy) (As) (Sb) (D.O. (mg/L) 0.39 0.38 0.39 0.39 0.39 LLOWED PENTTH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (TSS) (Bd) (Total Kiewanide) (Free Ba) (Be) (Ca	pH 6.02 6.02 6.02 6.02 6.02 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)) (Cd) (Co)	ORP (mV) -3.6 -4.0 -4.3 -4.4 -4.1 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gre) (HCO3/CO3) (O/NO2) (Pb) (Mg) (Mn) (N	non-standard a ase) Cl) (SO4) (NO	(Fe II) analysis below) WA WA ON ONE OF ONE OF OF ONE OF	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.8 16.8 16.8 16.8 16.8 16.8 (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M	Cond. (uS/cm) 250.8 250.6 250.7 250.7 250.7 NALYSIS AI 0) (8020) (NH) (NWTPH- letivity) (TD: C) (Total PO- le) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (D.O. (mg/L) 0.39 0.38 0.39 0.39 0.39 LLOWED PENTTH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (TSS) (Bd) (Total Kiewanide) (Free Ba) (Be) (Ca	pH 6.02 6.02 6.02 6.02 6.02 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)) (Cd) (Co)	ORP (mV) -3.6 -4.0 -4.3 -4.4 -4.1 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gre) (HCO3/CO3) (O/NO2) (Pb) (Mg) (Mn) (N	non-standard a ase) Cl) (SO4) (NO	(Fe II) analysis below) WA WA ON ONE OF ONE OF OF ONE OF	Observations OR □ OR □
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.8 16.8 16.8 16.8 16.8 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm) 250.8 250.6 250.7 250.7 250.7 NALYSIS All (NWTPH-activity) (TD: C) (Total PO-cle) (WAD Cy) (As) (Sb) (etals) (As) (Sb; g short list)	D.O. (mg/L) 0.39 0.38 0.39 0.39 0.39 LLOWED PENTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (NWTPH-G) (D) (NWTPH-G) (N	pH 6.02 6.02 6.02 6.02 6.02 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)) (Cd) (Co)	ORP (mV) -3.6 -4.0 -4.3 -4.4 -4.1 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gre) (HCO3/CO3) (O/NO2) (Pb) (Mg) (Mn) (N	non-standard a ase) Cl) (SO4) (NO	(Fe II) analysis below) WA WA ON ONE OF ONE OF OF ONE OF	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.8 16.8 16.8 16.8 16.8 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm) 250.8 250.6 250.7 250.7 250.7 NALYSIS AI 0) (8020) (NH) (NWTPH- letivity) (TD: C) (Total PO- le) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (D.O. (mg/L) 0.39 0.38 0.39 0.39 0.39 LLOWED PENTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (NWTPH-G) (D) (NWTPH-G) (N	pH 6.02 6.02 6.02 6.02 6.02 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)) (Cd) (Co)	ORP (mV) -3.6 -4.0 -4.3 -4.4 -4.1 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gre) (HCO3/CO3) (O/NO2) (Pb) (Mg) (Mn) (N	non-standard a ase) Cl) (SO4) (NO	(Fe II) analysis below) WA WA ON ONE OF ONE OF OF ONE OF	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.8 16.8 16.8 16.8 16.8 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm) 250.8 250.6 250.7 250.7 250.7 NALYSIS All (NWTPH-activity) (TD: C) (Total PO-cle) (WAD Cy) (As) (Sb) (etals) (As) (Sb; g short list)	D.O. (mg/L) 0.39 0.38 0.39 0.39 0.39 LLOWED PENTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (NWTPH-G) (D) (NWTPH-G) (N	pH 6.02 6.02 6.02 6.02 6.02 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)) (Cd) (Co)	ORP (mV) -3.6 -4.0 -4.3 -4.4 -4.1 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gre) (HCO3/CO3) (O/NO2) (Pb) (Mg) (Mn) (N	non-standard a ase) Cl) (SO4) (NO	(Fe II) analysis below) WA WA ON ONE OF ONE OF OF ONE OF	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.8 16.8 16.8 16.8 16.8 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 250.8 250.6 250.7 250.7 250.7 NALYSIS All (NWTPH-activity) (TD: C) (Total PO-cle) (WAD Cy) (As) (Sb) (etals) (As) (Sb; g short list)	D.O. (mg/L) 0.39 0.38 0.39 0.39 0.39 LLOWED PENTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (NWTPH-G) (D) (NWTPH-G) (N	pH 6.02 6.02 6.02 6.02 6.02 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)) (Cd) (Co)	ORP (mV) -3.6 -4.0 -4.3 -4.4 -4.1 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gre) (HCO3/CO3) (O/NO2) (Pb) (Mg) (Mn) (N	non-standard a ase) Cl) (SO4) (NO	(Fe II) analysis below) WA WA ON ONE OF ONE OF OF ONE OF	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.8 16.8 16.8 16.8 16.8 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm) 250.8 250.6 250.7 250.7 250.7 NALYSIS All (NWTPH-activity) (TD: C) (Total PO-cle) (WAD Cy) (As) (Sb) (etals) (As) (Sb; g short list)	D.O. (mg/L) 0.39 0.38 0.39 0.39 0.39 LLOWED PENTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (NWTPH-G) (D) (NWTPH-G) (N	pH 6.02 6.02 6.02 6.02 6.02 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)) (Cd) (Co)	ORP (mV) -3.6 -4.0 -4.3 -4.4 -4.1 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gre) (HCO3/CO3) (O/NO2) (Pb) (Mg) (Mn) (N	non-standard a ase) Cl) (SO4) (NO	(Fe II) analysis below) WA WA ON ONE OF ONE OF OF ONE OF	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.8 16.8 16.8 16.8 16.8 16.8 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 250.8 250.6 250.7 250.7 250.7 NALYSIS All (NWTPH-activity) (TD: C) (Total PO-cle) (WAD Cy) (As) (Sb) (etals) (As) (Sb; g short list)	D.O. (mg/L) 0.39 0.38 0.39 0.39 0.39 LLOWED PENTTH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (Total Kiewanide) (Free Ba) (Be) (Cab) (Ba) (Be) (Cab) (Catylene	pH 6.02 6.02 6.02 6.02 6.02 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)) (Cd) (Co)	ORP (mV) -3.6 -4.0 -4.3 -4.4 -4.1 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gre) (HCO3/CO3) (O/NO2) (Pb) (Mg) (Mn) (N	non-standard a ase) Cl) (SO4) (NO	(Fe II) analysis below) WA WA ON ONE OF ONE OF OF ONE OF	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY	Temp (°F/°C) 16.8 16.8 16.8 16.8 16.8 16.8 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 250.8 250.6 250.7 250.7 250.7 NALYSIS AI (0) (8020) (NH) (NWTPH- letivity) (TDE) (C) (Total PO- le) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (etals) (As) (Sb) lane Ethene Ac	D.O. (mg/L) 0.39 0.38 0.39 0.39 0.39 LLOWED PENTTH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (Total Kiewanide) (Free Ba) (Be) (Cab) (Ba) (Be) (Cab) (Catylene	pH 6.02 6.02 6.02 6.02 6.02 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)) (Cd) (Co)	ORP (mV) -3.6 -4.0 -4.3 -4.4 -4.1 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gre) (HCO3/CO3) (O/NO2) (Pb) (Mg) (Mn) (N	non-standard a ase) Cl) (SO4) (NO	(Fe II) analysis below) WA WA ON ONE OF ONE OF OF ONE OF	Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 2 Duplicate Sample Description of the property of the	Temp (°F/°C) 16.8 16.8 16.8 16.8 16.8 16.8 TYPICAL A (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 250.8 250.6 250.7 250.7 250.7 NALYSIS AI (0) (8020) (NH) (NWTPH- letivity) (TDE) (C) (Total PO- le) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (etals) (As) (Sb) lane Ethene Ac	D.O. (mg/L) 0.39 0.38 0.39 0.39 0.39 LLOWED PENTTH-G) (NWTPH-G) (NWTPH-G) (NWTPH-G) (Total Kiewanide) (Free Ba) (Be) (Cab) (Ba) (Be) (Cab) (Catylene	pH 6.02 6.02 6.02 6.02 6.02 ER BOTTLE NWTPH-Gx I-Dx) (TPH-OD) (Turbidahl Nitroger Cyanide)) (Cd) (Co)	ORP (mV) -3.6 -4.0 -4.3 -4.4 -4.1 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & Gre) (HCO3/CO3) (O/NO2) (Pb) (Mg) (Mn) (N	non-standard a ase) Cl) (SO4) (NO	(Fe II) analysis below) WA WA ON ONE OF ONE OF OF ONE OF	Observations OR □ OR □ OR □



Project Nam	ne:	Boeing Ren	nton		Project Number	er:	0025217.099.0	199	
Event:		Nov-18			Date/Time:	11/12 /2018@	1508		
Sample Nun	nber:	RGW256S-	- 181112		Weather:	SUNNY 40S			
Landau Rep		SRB/JHA/0	CEB						
WATERIEV	VEL/WELL/P	LIRGE DATA							
Well Condition		Secure (YES		Damaged (N	(0)	Describe:	Flush Mount		
DTW Before		8.76	Time:		Flow through ce		Trash Would	GW Meter No.(s	1
	Date/Time:			End Purge:	Č	11/ 12 /2018 @	1501	Gallons Purged:	0.5
Purge water d		117 12 7201	55-gal Drum	Ā	Storage Tank	Ground		SITE TREATMI	
i uige water u	nsposed to.		_		_				ENT STSTEM
Time	Temp (°F/°C)	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time		(uS/cm) ls: Stablizatio	(mg/L) on of Parame	ters for three	(mV) e consecutive rea	(NTU) dings within the fo	(ft) llowing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1450	16.5	167.2	0.36	5.85	81.8	LOW	8.78		
1453	16.1	171.9	0.39	5.87	77.0		8.76		
1456		171.8	0.41	5.87	77.2		0.76		
							8.70		
1459	15.7	171.4	0.41	5.85	78.9				
SAMPLE CO	DLLECTION I	DATA							
Sample Colle	cted With:		Bailer	₩	Pump/Pump Typ	e DED BLADDER			
Made of:		Stainless Ste	el	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	dure:	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated		^	
(By Numerica	al Order)	Other				7X			
Sample Descr	ription (color,	turbidity, odo	r, sheen, etc.):	CLEAR CO	LORLESS NO N	S			
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O.	pН	ORP	Turbidity (NTU)	DTW	Ferrous iron (Fe II)	Comments/ Observations
	, ,	,	(mg/L)	- 0-	(mV)	(1110)	(ft)	(Fe II)	Observations
1	15.5	170.8	0.42	5.85	80.2				
2	15.5	170.7	0.42	5.85	80.3				
3	15.5	170.5	0.41	5.86	80.4				
4	15.5	170.5	0.41	5.85	80.7				
Average:	15.5	170.6	0.42	5.85	80.4	#DIV/0!			
-	1								
QUANTITY						pplicable or write	non-standard a		OR 🗆
2	· · ·		NWTPH-G) (`		(8141) (Oil & Gre	naca)		OR □ OR □
						(8141) (Oli & Gle) (HCO3/CO3) (0	•		OK 🗆
	<u> </u>				n) (NH3) (NO3		21) (504) (110	03) (1102) (1)	
			yanide) (Free		(====)	· · · · - /			
	•			•	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (1	Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg	(K) (Na)
	(Dissolved M	letals) (As) (Sl	b) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) ((Ag) (Se) (Tl) (V	(Y) (Zn) (Hg) (K) (N	Va) (Hardness) (Silic
	VOC (Boein	ng short list)							
	Methane Eth	nane Ethene A	cetylene						
	others								
Duplicate Sar	mple No(s):								
Comments:	· · · - (5)*								
Signature:	CEB					Date:	11/12/2018		
- 15						Duic.			



D'AT D'D'	
Project Name: Boeing Renton Project Number: 0025217.099.099	
Event: Nov-18 Date/Time: 11/ 12 /2018@ 1441	
Sample Number: RGW257S- 181112 Weather: 40'S, SUNNY	
Landau Representative: JHA	
WATER LEVEL/WELL/PURGE DATA	
Well Condition: Secure (YES) Damaged (NO) Describe: Flush Mount	
	Meter No.(s HERON 3
	ns Purged: 0.5
	E TREATMENT SYSTEM
	rnal Purge Comments/ ume (gal) Observations
Purge Goals: Stablization of Parameters for three consecutive readings within the following limits >/=	= 1 flow
+/- 3% +/- 10% +/- 0.1 units +/- 10 mV +/- 10% < 0.3 ft thro	ough cell
1421 16.9 165.6 1.34 5.90 100.9 LOW 9.32 <0.2	5
<u>1424</u> <u>16.7</u> <u>166.1</u> <u>0.65</u> <u>5.97</u> <u>95.5</u>	
1427 16.7 167.9 0.39 5.98 93.0 9.32	0.25
1430 16.7 168.0 0.36 6.00 90.6	
1433 16.7 168.1 0.37 6.00 89.7	
1433 10.7 100.1 0.37 0.00 09.7	
SAMPLE COLLECTION DATA	
Sample Collected With: Bailer	D 1' / 1
	Dedicated
Decon Procedure: Alconox Wash Tap Rinse DI Water Dedicated	
(By Numerical Order)	
Sample Description (color, turbidity, odor, sheen, etc.): CLEAR, COLORLESS, NO/NS	
Replicate Temp Cond. D.O. pH ORP Turbidity DTW Fer	rous iron Comments/
	(Fe II) Observations
1 16.7 168.2 0.37 6.00 89.7	
2 16.7 168.1 0.37 6.00 89.4	
3 16.7 168.1 0.36 6.00 89.5	
4 16.7 168.0 0.36 6.00 89.2	
Average: 16.7 168.1 0.37 6.00 89.5 #DIV/0!	
QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analys	
(8260) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA	
2 (8270) (PAH) (NWTPH-Dx) (TPH-HCID) (8081) (8141) (Oil & Grease) WA	
(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (ICOD) (TOC) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2)	NO2) (F)
(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) (Value of the Cyannel)	/) (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)	
VOC (Boeing short list)	
VOC (Boeing short list) Methane Ethane Ethene Acetylene	
Methane Ethane Ethene Acetylene	
Methane Ethane Ethene Acetylene others	
Methane Ethane Ethene Acetylene	



Project Nam	e:	Boeing Ren	ton		Project Numbe	er:	0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 12 /2018@	1213		
Sample Num	nber:	RGW258S-	181112		Weather:	CLOUDY 40S			
Landau Repi	resentative:	SRB/JHA/C	CEB		•				
WATER LEV	EL/WELL/P	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	7.72	Time:	1148	Flow through ce	l <u>l vol.</u>		GW Meter No.(s	1
Begin Purge:	Date/Time:		1149	End Purge:	Date/Time:	11/12 /2018 @	1206	Gallons Purged:	0.5
Purge water d	isposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
Time.	Temp (°F/°C)	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time		(uS/cm) ls: Stablizatio	(mg/L) on of Parame	ters for three	(mV) e consecutive rea	(NTU) dings within the fo	(ft) llowing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1152	13.4	306.1	0.42	6.42	0.8	LOW	7.72		
1155	13.0	304.6	0.45	6.41	-1.1		7.72		
1158	12.2	297.3	0.51	6.18	-0.9		7.73		
1201	12.0	296.5	0.50	6.14	-0.6				
1204	11.9	294.3	0.45	6.16	-5.0				
SAMPLE CO	LLECTION I	DATA							
Sample Collec	cted With:		Bailer		Pump/Pump Type	<u>DED BLADDER</u>			
Made of:		Stainless Ste	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	ure:	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	,	Other							
Sample Descr	iption (color, t	urbidity, odor	, sheen, etc.):	CLEAR CO	LORLESS NO N	S			
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	11.9	294.0	0.43	6.17	-6.3	(1110)	(11)	(1 0 11)	0.0001 (4.010110
2	12.0	293.7	0.44	6.17	-6.9				
3	12.0	293.6	0.44	6.18	-7.3				
4	12.0	293.5	0.43	6.18	-7.9				
Average:	12.0	293.7	0.44	6.18	-7.1	#DIV/0!			
-									
QUANTITY					,	pplicable or write	non-standard a		OR 🗆
2	(8260) (8010 (8270) (PAE			`		(8141) (Oil & Gre	ease)	WA □ WA □	OR □
) (HCO3/CO3) (on —
	*				n) (NH3) (NO3		, , , , , ,		
	(Total Cyanid	e) (WAD Cy	vanide) (Free	Cyanide)					
						(Pb) (Mg) (Mn) (1			
			o) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) ((Ag) (Se) (Tl) (V	() (Zn) (Hg) (K) (N	Na) (Hardness) (Silica
	VOC (Boein	g short list) ane Ethene A	cetylene						
	wichiane Elli	anc Emelle A	COLYTOTIC						
	others								
Dunlingt- C	mla Na(a):								
Duplicate San Comments:	_	cation							
Comments:	CED CED	cation				Data	11/12/2019		

Signature: CEB | CEB | NSEA2-FS1\projects\8888 - Boeing Renton\02 Data Management\2018\4Q2018\Field Data\FORMER FUEL FARM_11.12.18_CEB



Project Nam	ie:	Boeing Ren	nton		Project Number	er:	0025217.099.0	199	
Event:		Nov-18			Date/Time:	11/ 12 /2018@	856		
Sample Nun	nber:	RGW081S-	- 181112		Weather:	40'S, SUNNY			
Landau Rep	resentative:	JHA							
WATER LEV	/EL/WELL/P	URGE DATA							
Well Condition		Secure (YES		Damaged (N	(O)	Describe:	Flush Mount		
DTW Before		8.41	Time:		Flow through ce		-	GW Meter No.(s	SHERON 3
	Date/Time:			End Purge:	=	11/ 12 /2018 @ 8	353	Gallons Purged:	0.5
Purge water d			55-gal Drum	Ä	Storage Tank	Ground		SITE TREATM	•
	-		C		_				
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	on of Parame		e consecutive rea	dings within the fo		>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
837	12.5	181.8	1.20	6.29	83.7	LOW	8.41	<0.25	
840	12.7	188.4	0.54	6.42	24.4				
843	12.5	188.9	0.46	6.46	0.2		8.41	0.25	
846	12.1	186.7	0.42	6.44	-18.8				
849	12.2	187.3	0.41	6.42	-22.4				
			0.41	6.41	-25.8				
852	12.4	187.7	0.41	0.41	-23.8				
-					-			·	
SAMPLE CO		DATA 🔲	Bailer		Dramer /Dramer Trans	DED DI ADDER			
Sample Colle Made of:	cted with:	Stainless Ste		PVC		DED BLADDER	Other	. Dadicated	
					Teflon	Polyethylene	U Other	Dedicated	
Decon Proced		Alconox Wa	ısh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	,	Other	1 ()	CLEAD CO	N OBLEGG NO	N.G			
Sample Desci	aption (color,	turbidity, odoi	r, sheen, etc.):	CLEAR, CC	DLORLESS, NO/	NS			
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	12.4	187.9	0.41	6.41	-26.2	(5.25)	()	(' ')	
2	12.4	188.0	0.42	6.41	-26.5				
3	12.4	187.9	0.41	6.41	-26.9				
4	12.4	187.8	0.42	6.41	-27.3			·	
Average:	12.4	187.9	0.42	6.41	-26.7	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS A	LLOWED PI	ER BOTTLE	E TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
3	(8260-SIM)	(8010) (802	0) (NWTPH-	-G) (NWTP	H-Gx) (BTEX)			WA □	OR 🗆
						(8141) (Oil & G		WA 🗆	OR 🗆
						(HCO3/CO3) (C	Cl) (SO4) (NO	O3) (NO2) (F)	
1					Vitrogen) (NH3)	(NO3/NO2)			
1			yanide) (Free		(Ca) (Ca) (Ea)	(DL) (M-) (M-) (AT:) (A -) (C -) (TI) (V) (7) (II.	-) (V) (M-)
1						(Pb) (Mg) (Mn) (I b) (Mg) (Mn) (Ni) (
	VOC (Boeir		o) (Da) (De) (C	<i>Sa)</i> (Cu) (Co)	(CI) (Cu) (Fe) (I	b) (Mg) (MII) (M) (Ag) (3e) (11) (v	(Zii) (11g) (K) (1	Na)
		nane Ethene A	cetylene						
	others								
Dunting C									
Duplicate Sar	npie ivo(s):								
Comments:			TITA				11/10/2011		
Signature:			JHA			Date:	11/12/2018		_



							•		
Project Nam	ie:	Boeing Ren	ton		Project Number		0025217.099.0	199	
Event:		Nov-18			Date/Time:	11/ 12 /2018@ 9	956		
Sample Nun		RGW172S-	181112		Weather:	30'S, SUNNY			
Landau Rep	resentative:	JHA							
WATER LEV	/EL/WELL/P	URGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	9.19	Time:	932	Flow through ce	ell vol.		GW Meter No.(s HERON 3
Begin Purge:	Date/Time:	11/12 /201	8 @ 934	End Purge:	Date/Time:	11/ 12 /2018 @ 9	55	Gallons Purged:	0.25
Purge water d	isposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	IENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	-	(mV)	(NTU)	(ft)	Volume (gal)	Observations
						dings within the fol		>/= 1 flow	
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
937	14.9	736.0	0.59	5.27	71.6	LOW	9.51	<0.25	TURN CPM DON
940	14.0	635.0	0.49	5.57	33.8		9.34	<0.25	LOWEST SETTING
943	13.7	611.0	0.51	5.70	26.4			< 0.25	
946	13.0	563.0	0.54	5.65	17.3		9.29		
949	11.5	489.1	0.61	5.81	1.5				
952	11.0	457.3	0.63	5.83	-3.5	·			
954	10.8	443.2	0.65	5.85	-5.0				
SAMPLE CO			D '1		D /D T	DED DI ADDED			
Sample Colle			Bailer			e DED BLADDER			
Made of:	. 📮	Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced		Alconox Was	sh 📋	Tap Rinse	DI Water	Dedicated			
(By Numerica	· · · · · · · · · · · · · · · · · · ·	Other							
Sample Desci	ription (color,	turbidity, odor	, sheen, etc.):	CLOUDY V	ITH SOME SUS	SPENDED SOLIDS	, COLORLESS	, ROTTEN MILI	C ODOR/NS
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	10.8	441.1	0.65	5.85	-4.8				
2	10.8	439.9	0.65	5.86	-4.6				
3	10.8	434.8	0.66	5.86	-4.8				
4	10.8	432.0	0.66	5.86	-4.9				
Average:	10.8	437.0	0.66	5.86	-4.8	#DIV/0!	9.46		
QUANTITY	TYPICAL A	NALYSIS AI	LLOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
3	(8260-SIM)	(8010) (8020)) (NWTPH	-G) (NWTPl	H-Gx) (BTEX)			WA □	OR 🗆
	(8270D) (PA	AH) (NWTPI	H-D) (NWT	PH-Dx) (TP	H-HCID) (8081)) (8141) (Oil & Gr	rease)	WA □	OR □
	``					r) (HCO3/CO3) (C	Cl) (SO4) (NO	03) (NO2) (F)	
1					litrogen) (NH3)	(NO3/NO2)			
		le) (WAD Cy			(2) (2) (2)	<u> </u>			
1						(Pb) (Mg) (Mn) (Ng) (Mg) (Ng) (Mg)			
	VOC (Boein) (Ba) (Be) (C	.a) (Ca) (Co)	(Cr) (Cu) (Fe) (P	(b) (Mg) (Mn) (Ni) (A	Ag) (Se) (11) (V	(Zn) (Hg) (K) (ina)
	,	nane Ethene A	cetylene						
	Tremune Lu	ic Editorio / N	223,10110						
	others								
Duplicate Sar	nple No(s):								
Comments:									
Signature			IΗΔ			Date	11/12/2018		



Project Nam	ie.	Boeing Rent	ton		Project Number	ar.	0025217.099.0	199	
Event:		Nov-18	1011		Date/Time:	11/ 12 /2018@		.,,,	
Sample Nun	nher:	RGW226S-	181112		Weather:	30'S, SUNNY	720		
Landau Rep	-	JHA	101112		w camer.	303, 301111			
		URGE DATA							
Well Condition		Secure (YES))	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	8.78	Time:	900	Flow through ce	ell vol.		GW Meter No.(s	HERON 3
Begin Purge:	Date/Time:	11/ 12 /2018	8 @ 904	End Purge:	_	11/ 12 /2018 @ 9	25	Gallons Purged:	0.75
Purge water d			55-gal Drum	_	Storage Tank	Ground		SITE TREATME	ENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	<u>-</u>	(mV)	(NTU)	(ft)	Volume (gal)	Observations
						dings within the fo		>/= 1 flow	
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
907	13.8	215.5	1.69	6.30	73.5	LOW	8.81	<0.25	
910	12.9	255.4	1.10	6.29	40.0			·	
913	12.0	251.5	0.83	6.40	-8.8		8.81	0.25	
916	11.7	237.6	0.68	6.39	-36.0				
919	11.6	233.3	0.62	6.38	-39.5				
922		231.8	0.59	6.37	-40.4			0.5	
924	11.2	226.1	0.57	6.36	-42.3			·	
SAMPLE CO	LLECTION I	DATA							
Sample Colle			Bailer		Pump/Pump Typ	e DED BLADDER			
Made of:		Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proceed	lure:	Alconox Was	sh 🗖	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other		1					
Sample Desci	ription (color,	turbidity, odor,	, sheen, etc.):	CLEAR, CO	LORLESS, NO/	NS			
									<u> </u>
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	11.2	225.8	0.56	6.36	-42.3				
2	11.2	225.5	0.57	6.36	-42.3				
								·	
3	11.2	225.3	0.57	6.36	-42.3				
4	11.2	224.9	0.57	6.36	-42.1			·	
Average:	11.2	225.4	0.57	6.36	-42.3	#DIV/0!	8.89		
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
3	(8260-SIM)	(8010) (8020) (NWTPH-	-G) (NWTPI	H-Gx) (BTEX)				OR 🗆
						(8141) (Oil & G			OR 🗆
						r) (HCO3/CO3) (C	Cl) (SO4) (NO	O3) (NO2) (F)	
1					litrogen) (NH3)	(NO3/NO2)			
1		le) (WAD Cy			(Cr.) (Cr.) (Fa)	(Dla) (Ma) (Ma) (JE) (A ~) (C ~) (T1) (V) (Zn) (Ha	(V) (Na)
1						(Pb) (Mg) (Mn) (Ni) (b) (Mg) (Mn) (Ni) (
	VOC (Boein) (Da) (De) (C	<i>Sa)</i> (Cu) (Co)	(CI) (Cu) (Fe) (I	0) (NIg) (NIII) (NI) (Ag) (Se) (11) (V	(K) (Zii) (Tig) (K) (N	(a)
	,	iane Ethene Ac	etylene						
	others								
Dumlinate C	mala Na(-):								
Duplicate Sar Comments:	upie mo(s):								
Signature:			JHA			Date:	11/12/2018		



Project Nam	ne:	Boeing Ren	ton		Project Number	er:	0025217.099.0)99	
Event:		Nov-18	1011		Date/Time:	11/ 12 /2018@		,,,,	
Sample Nun	nher:	RGW233I-	181112		Weather:	30'S, SUNNY	730		
Landau Rep		JHA	101112		weather.	303, 501111			
WATER LEV	VEL/WELL/P	URGE DATA							
Well Condition		Secure (YES		Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	7.27	Time:	730	Flow through ce	ell vol.		GW Meter No.(s	HERON 3
Begin Purge:	Date/Time:	11/ 12 /201	8 @ 734	End Purge:	Date/Time:	11/ 12 /2018 @ 3	755	Gallons Purged:	0.75
Purge water d	lisposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATMI	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%		+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
737	10.6	185.5	3.52	6.13	95.7	LOW	7.29	<0.25	
740	11.4	182.6	2.60	6.07	82.0			. <u> </u>	
743	12.6	189.4	1.89	6.24	42.9		7.29	0.25	
746	12.7	190.7	1.91	6.32	24.3				
749		190.7	1.96	6.36	16.5				
752		189.4	2.13	6.37	8.3			0.5	
754	12.7	189.4	1.78	6.37	4.3			· ——	
	DLLECTION I		D '1		D /D T	DED DI ADDED			
Sample Colle	_		Bailer			e DED BLADDER			
Made of:		Stainless Stee	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced		Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other							
Sample Desci	ription (color,	turbidity, odor	, sheen, etc.):	CLEAR, CC	DLORLESS, NO/	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	12.7	189.6	1.71	6.36	3.6				
2	12.8	190.2	1.71	6.36	3.1				
3	12.9	190.4	1.67	6.36	2.7				
4	12.9	190.1	1.69	6.36	2.3				
Average:	12.8	190.1	1.70	6.36					
	1								
						pplicable or write	non-standard a		on [
3					H-Gx) (BTEX)		Y		OR □ OR □
						(8141) (Oil & G			OK 🗆
1					Vitrogen) (NH3)		CI) (504) (NO	33) (NO2) (I')	
-		le) (WAD Cy			viirogen) (14113)	(1103/1102)			
1					(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Ni) (Ag) (Se) ((Tl) (V) (Zn) (Hg	(K) (Na)
						(b) (Mg) (Mn) (Ni)			
	VOC (Boein								
	Methane Eth	nane Ethene A	cetylene						
	others								
Duplicate Sar	mple No(s):								
Comments:									
Signature:			JHA			Date:	11/12/2018		



							•		
Project Nam	ne:	Boeing Ren	ton		Project Number		0025217.099.0	199	
Event:		Nov-18			Date/Time:	11/ 12 /2018@	1106		
Sample Nun		RGW234S-	181112		Weather:	30'S, SUNNY			
Landau Rep	resentative:	JHA							
WATER LEV	VEL/WELL/P	URGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	7.97	Time:	1042	Flow through ce	ell vol.		GW Meter No.(s	HERON 3
Begin Purge:	Date/Time:	11/12 /201	8 @ 1045	End Purge:	Date/Time:	11/ 12 /2018 @ 1	101	Gallons Purged:	0.5
Purge water d	lisposed 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)	-	(mV)	(NTU)	(ft)	Volume (gal)	Observations
	Purge Goa					dings within the fo	llowing limits < 0.3 ft	>/= 1 flow	
10.10		+/- 3%		+/- 0.1 units		+/- 10%		through cell	
1048	15.1	232.1	0.33	6.37	-10.9	MED	7.97	<0.25	
1051	15.2	222.3	0.36	6.36	-21.3				
1054	15.2	219.1	0.30	6.35	-21.6		7.97	0.25	
1057	15.1	215.3	0.28	6.33	-23.3				
1100	15.2	215.1	0.29	6.32	-24.2				
- 1100			0.25	- 0.52		-			
						-			
					-		-		
	LLECTION 1		D. "I		D /D T	DED DI ADDED			
Sample Colle		_	Bailer			e DED BLADDER		D. D. Harted	
Made of:	. 📮	Stainless Ste		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced		Alconox Wa	sh 📋	Tap Rinse	DI Water	Dedicated			
(By Numerica	,	Other	•	CI CUDII	COL OBLEGG M	0.010			
Sample Desci	nption (color,	turbidity, odor	, sheen, etc.):	CLOUDY, C	COLORLESS, N	J/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	15.3	214.9	0.29	6.33	-24.7				
2	15.3	214.9	0.29	6.33	-24.6				
3	15.3	214.9	0.29	6.33					
4	15.3	214.9	0.29	6.33	-24.9				
Average:	15.3	214.9	0.29	6.33	-24.7	#DIV/0!	7.97		
QUANTITY	TYPICAL A	NALYSIS A	LLOWED PI	ER BOTTLE	E TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
3					H-Gx) (BTEX)				OR 🗆
	<u> </u>) (8141) (Oil & G			OR 🗆
	`					(HCO3/CO3) (C	Cl) (SO4) (NO	03) (NO2) (F)	
1					Vitrogen) (NH3)	(NO3/NO2)			
1		de) (WAD Cy			(Cr) (Cr) (Er)	(Pb) (Mg) (Mn) (N	Ji) (A ~) (C ~) (Tl) (V) (7-) (U-	r) (K) (No)
1						(Pb) (Mg) (Mn) (Ni) (
	VOC (Boeir		,, (Da) (Dc) (C	<i>_u,</i> (<i>_u,</i> (<i>_u</i>)	(C1) (Cu) (1°C) (1	o) (1418) (14111) (141) (115) (DC) (11) (V) (Zii) (11g) (K) (T	<i>14)</i>
	,	nane Ethene A	cetylene						
			<i>y</i>						
	others								
D " ~	1.37.7								
-	nple No(s):								
Comments:									
Signature			IΗΔ			Date	11/12/2018		



							· · · · · · · · · · · · · · · · · · ·		
Project Nam	e:	Boeing Ren	ton		Project Number		0025217.099.0	199	
Event:		Nov-18	101110		Date/Time:	11/ 12 /2018@	1036		
Sample Nun		RGW235I-	181112		Weather:	30'S, SUNNY			
Landau Rep	resentative:	JHA							
WATER LEV	/EL/WELL/P	URGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	7.49	Time:	1010	Flow through ce	l <u>l vol.</u>		GW Meter No.(s	HERON 3
Begin Purge:	Date/Time:	11/12 /201	8 @ 1014	End Purge:	Date/Time:	11/ 12 /2018 @ 1	035	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)		(mV)	(NTU)	(ft)	Volume (gal)	Observations
	Purge Goa +/- 3%	ls: Stablization +/- 3%		ters for three +/- 0.1 units	e consecutive rea +/- 10 mV	dings within the fol +/- 10%	llowing limits < 0.3 ft	>/= 1 flow through cell	
1017									
1017	11.2	134.0	1.30	6.18		LOW	1.32	<0.25	
1020	12.4	145.8	0.49	6.14	1.6				
1023	12.5	144.0	0.40	6.31	-13.3		7.52		
1026	12.7	141.9	0.36	6.42	-23.1			0.25	
1029	12.6	140.3	0.33	6.48	-29.9				
1032	13.0	139.1	0.32	6.52	-34.6				
1034	13.0	138.0	0.31	6.53	-37.1				
SAMPLE CO	LLECTION I	DATA							
Sample Colle			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	l Order)	Other		•					
Sample Descr	ription (color,	turbidity, odor	, sheen, etc.):	CLEAR, CC	LORLESS, NO/	NS			
					ODB		D. W.Y.	Ferrous iron	C
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	(Fe II)	Comments/ Observations
1	13.0	137.8	0.30	6.54	-37.4	()	()	(-)	
2	13.0	137.7	0.30	6.54	-37.7				
3	13.0	137.6	0.30	6.54	-37.8				
4	13.0	137.6	0.30	6.54	-38.0			·	
Average:	13.0	137.7	0.30	6.54	-37.7	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LLOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
3	(8260-SIM)	(8010) (8020)) (NWTPH-	-G) (NWTPl	H-Gx) (BTEX)			WA □	OR 🗆
	(8270D) (PA	AH) (NWTPI	H-D) (NWT)	PH-Dx) (TP	H-HCID) (8081)	(8141) (Oil & Gr	rease)	WA □	OR 🗆
	· / ·) (HCO3/CO3) (C	(SO4) (NO	03) (NO2) (F)	
1					litrogen) (NH3)	(NO3/NO2)			
		le) (WAD Cy			(C) (C) (F)	(N) (M) (M) (A	I') (A) (C) (TI) (II) (II) (III) (IZ) (N.)
1						(Pb) (Mg) (Mn) (Ni) (Mg) (Mn) (Ni) (Mg) (Mn) (Ni) (Mg)			
	VOC (Boein) (Ba) (Be) (C	<i>La)</i> (Cu) (Co)	(CI) (Cu) (Fe) (F	b) (Mg) (MIII) (MI) (A	Ag) (Se) (11) (V) (ZII) (Fig) (K) (F	Na)
	,	nane Ethene A	cetylene						
			<i>y</i>						
	others								
Dumlia - 4 - C	umla Na (-)								
Duplicate Sar Comments:	upie mo(s):								
Signature:			ТΗΔ			Data	11/12/2018		



Purge water disposed to:	Duning A Mana		Daring Dam	4		D 4 N 1		0025217 000 0	200	
Sample Number: Samp	•	ie:		ton		J			199	
Auditum Representative SHE/JHA/CEP STEP STE		.1		101112				1013		
Well Condition: Secure (YES) Darraged (NO) Describe: Flish Mount Flish Mo	-					weatner:	CLEAR 408			
Medical Secure VES Secure										
DTW Refore Purging (th)										
Regin Purges Date-Time 11/12 2011; 952 Brad Purges Date-Time 11/12 20118)	Damaged (N	O)	Describe:	Flush Mount		
Purge water						_			GW Meter No.(s	1
Time (1Fe/C) (uS/cm) (uS/cm) (uS/cm) (uS/cm) (uS/cm) (uR/L) (uS/cm) (uR/L) (uR							$\overline{}$		·	
Time	Purge water d	lisposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATME	ENT SYSTEM
### Purge Goals Stabilization of Parameters for three consecutive readings: within the following Limits		Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Section Sect	Time				4 f 4 l					Observations
955 16.7 312.8 0.26 5.90 15.9 I.OW 8.94 958 15.0 300.9 0.27 5.92 -2.4										
150 300.9 0.27 5.92 -2.4	955	16.7						8 94	J	
1001 13.2 279.2 0.40 5.91 -10.7										
1004 12.2 268.2 0.48 5.50 -12.1									·	
1007									·	
1010 10.9 257.1 0.53 5.58 4.8	1004	12.2	268.2	0.48	5.90	-12.1			·	
NAMPLE COLLECTION DATA	1007	11.1	254.2	0.54	5.59	1.2				
Sample Collected With:	1010	10.9	257.1	0.53	5.58	-4.8				
Sample Collected With:	1012	10.8	257.2	0.51	5.60	-6.2				
Sample Collected With:									·	
Made of: Stainless Steel PVC Teflon Polyethylene Other Dedicated Decon Procedure: Alconox Wash Tap Rinse DI Water Dedicated Dedicated Sample Description (color, turbidity, odor, sheen, etc.): CLEAR COLORLESS SMELLS LIKE OLD BUTTER NS Replicate Temp (GFPC) Cond. (uS/cm) D.O. pH (mV) Purbidity (NTU) pTW Ferrous iron (Fe II) Comments/ Observations 1 10.9 257.1 0.52 5.62 -8.8	SAMPLE CO	LLECTION 1	DATA							
Decon Procedure: Alconox Wash Tap Rinse DI Water Dedicated	Sample Colle	cted With:		Bailer	₩	Pump/Pump Type	e DED BLADDER		_	
Condition Comments Comments	Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Companies Comp	Decon Procee	lure:	Alconox Was	sh 🗖	Tap Rinse	DI Water	Dedicated		^	
Replicate Temp	(By Numerica	ıl Order)	Other				***			
CF/PC (uS/cm) (mg/L) (mV) (NTU) (ft) (Fe II) Observations 1 10.9 257.2 0.52 5.60 -6.9	Sample Descr	ription (color,	turbidity, odor	, sheen, etc.):	CLEAR CO	LORLESS SMEI	LLS LIKE OLD BU	TTER NS		
CF/PC (uS/cm) (mg/L) (mV) (NTU) (ft) (Fe II) Observations 1 10.9 257.2 0.52 5.60 -6.9			- C 1	D.O.		ODB	T 1:14	DTW	Formous inon	Comments
1 10.9 257.2 0.52 5.60 -6.9 2 10.9 257.1 0.52 5.62 -8.8 3 10.9 256.4 0.52 5.65 -11.5 4 10.8 255.7 0.52 5.67 -13.8 Average: 10.9 256.6 0.52 5.64 -10.3 #DIV/0! QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) 3 (8260-SIM) (8010) (8020) (NWTPH-G) (NWTPH-GN) (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) 1 (COD) (TOC5310C) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Cyanide) (WAD Cyanide) (Free Cyanide) 1 (Total 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) Methane Ethane Ethene Acetylene Duplicate Sample No(s): Duplicate Location (DUPI) Comments:	Replicate				рп		•			
2 10.9 257.1 0.52 5.62 -8.8 3 10.9 256.4 0.52 5.65 -11.5 4 10.8 255.7 0.52 5.67 -13.8 Average: 10.9 256.6 0.52 5.64 -10.3 #DIV/0! QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) 3 (8260-SIM) (8010) (8020) (NWTPH-G) (NWTPH-GX) (BTEX) (8270D) (PAH) (NWTPH-D) (NWTPH-DX) (TPH-HCID) (8081) (8141) (0il & Grease) WA □ OR □ (pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) 1 (COD) (TOC5310C) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Cyanide) (WAD Cyanide) (Free Cyanide) 1 (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) Methane Ethane Ethene Acetylene Duplicate Sample No(s): Duplicate Sample No(s): Duplicate Sample No(s):	1	,			5.60		,	()		
3 10.9 256.4 0.52 5.65 -11.5 4 10.8 255.7 0.52 5.67 -13.8 Average: 10.9 256.6 0.52 5.64 -10.3 #DIV/0! QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) 3 (8260-SIM) (8010) (8020) (NWTPH-G) (NWTPH-GX) (BTEX) WA □ OR □ (8270D) (PAH) (NWTPH-D) (NWTPH-DX) (TPH-HCID) (8081) (8141) (0il & Grease) WA □ OR □ (PH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) 1 (COD) (TOC5310C) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Cyanide) (WAD Cyanide) (Free Cyanide) 1 (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) Methane Ethane Ethene Acetylene Duplicate Sample No(s):										
4 10.8 255.7 0.52 5.67 -13.8 Average: 10.9 256.6 0.52 5.64 -10.3 #DIV/0! QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) 3 (8260-SIM) (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) 1 (COD) (TOc5310C) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Cyanide) (WAD Cyanide) (Free Cyanide) 1 (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) Methane Ethane Ethene Acetylene Duplicate Sample No(s): Duplicate Location (DUP1) Comments:									· ——	
Average: 10.9 256.6 0.52 5.64 -10.3 #DIV/0! QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) 3 (8260-SIM) (8010) (8020) (NWTPH-G) (NWTPH-Gx) (BTEX) WA OR										
QUANTITY TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below) 3 (8260-SIM) (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) 1 (COD) (TOC5310C) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Cyanide) (WAD Cyanide) (Free Cyanide) 1 (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) Methane Ethane Ethene Acetylene Duplicate Sample No(s): Duplicate Location (DUP1) Comments:	4	10.8	255.7	0.52	5.67	-13.8			·	
3 (8260-SIM) (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) 1 (COD) (TOC5310C) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Cyanide) (WAD Cyanide) (Free Cyanide) 1 (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) Methane Ethane Ethene Acetylene Duplicate Sample No(s):	Average:	10.9	256.6	0.52	5.64	-10.3	#DIV/0!		·	
(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) 1 (COD) (TOC5310C) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Cyanide) (WAD Cyanide) (Free Cyanide) 1 (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) Methane Ethane Ethene Acetylene others Duplicate Sample No(s): Duplicate Location (DUP1) Comments:	QUANTITY	TYPICAL A	NALYSIS AI	LLOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO3/CO3) (Cl) (SO4) (NO3) (NO2) (F) (COD) (TOC5310C) (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) Methane Ethane Ethene Acetylene others Duplicate Sample No(s):	3	(8260-SIM)	(8010) (8020) (NWTPH-	-G) (NWTPl	H-Gx) (BTEX)			WA □	OR 🗆
1 (COD) (TOC5310C) (Total PO4) (Total Kiedahl Nitrogen) (NH3) (NO3/NO2) (Total Cyanide) (WAD Cyanide) (Free Cyanide) 1 (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) Methane Ethane Ethene Acetylene others Duplicate Sample No(s):		(8270D) (PA	AH) (NWTPI	H-D) (NWT)	PH-Dx) (TP	H-HCID) (8081)	(8141) (Oil & G	rease)	WA □	or 🗆
(Total Cyanide) (WAD Cyanide) (Free Cyanide) 1 (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) Methane Ethane Ethene Acetylene others Duplicate Sample No(s):		`						Cl) (SO4) (NO	O3) (NO2) (F)	
1 (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) Methane Ethane Ethene Acetylene others Duplicate Sample No(s):Duplicate Location (DUP1) Comments:	1					litrogen) (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) Methane Ethane Ethane Acetylene others Duplicate Sample No(s):Duplicate Location (DUPI) Comments:						(C) (C) (F)	(DL) (AL) (AL) (A	T') (A) (C) (T1) (1) (7) (11)) (II) (AI)
VOC (Boeing short list) Methane Ethane Ethene Acetylene others Duplicate Sample No(s):Duplicate Location (DUP1) Comments:	1									
Methane Ethane Ethane Acetylene others Duplicate Sample No(s):Duplicate Location (DUP1) Comments:) (Ba) (Be) (C	<i>Sa)</i> (Cu) (Co)	(CI) (Cu) (Fe) (I	b) (Mg) (MII) (M) (Ag) (3e) (11) (v	(Zii) (11g) (K) (N	a) (Hardiless) (Sinc
others Duplicate Sample No(s):Duplicate Location (DUP1) Comments:		,		cetylene						
Duplicate Sample No(s):Duplicate Location (DUP1) Comments:										
Duplicate Sample No(s):Duplicate Location (DUP1) Comments:										
Comments:	_	others			<u> </u>			-		
Comments:	Dualis -t- C		Dunlingto I	action (DIID)						
	•	npie No(s):	_Duplicate Lo	cauon (DUP)	J					
		CED					D :	11/10/0010		

\\SEA2-FS1\projects\8888 - Boeing Renton\02 Data Management\2018\4Q2018\Field Data\SWMU-172&174_11.12.18CEB



Project Nan	ne:	Boeing Ren	ton	Project Number:			0025217.099.099		
Event:		Nov-18			Date/Time:	11/12 /2018@	700		
Sample Nur	nber:	RGWDUP1	181112		Weather:	CLEAR 30S			
Landau Rep	resentative:	SRB/JHA/C	EB						
WATER LE	VEL/WELL/P	URGE DATA							
Well Conditi	on:	Secure (YES))	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)		Time:		Flow through ce	ell vol.		GW Meter No.(s	1
Begin Purge:	Date/Time:	11/ /2018 @	<u>0</u>	End Purge:	Date/Time:	11/ /2018 @		Gallons Purged:	
Purge water of	disposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATME	ENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm) ls: Stablizatio	(mg/L) n of Parame	ters for thre	(mV) e consecutive rea	(NTU) dings within the fo	(ft) Howing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
	-	DUI	PLICA	ATE I	TO RGV	W152S			
	-				-	•			
	_								
	_				-				
SAMPLE CO	OLLECTION 1								
Sample Colle	ected With:		Bailer		Pump/Pump Typ	e		-	
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proce	dure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	al Order)	Other							
Sample Desc	ription (color,	turbidity, odor,	, sheen, etc.):	CLEAR CO	LORLESS, SME	LLS LIKE OLD BU	JTTER NS		
			D.O.		ODB	T 1:11	DOW	Ferrous iron	Comments/
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	(Fe II)	Observations
1	10.9	257.2	0.52	5.61	-8.0	(1.10)	(10)	(= 1 ==)	0.0000.0000
2									
2	10.9	256.7	0.52	5.64	-10.8				
3	10.9	256.1	0.52	5.66	-12.7				
4 4 waraga	10.8	255.4 256.4	0.51	5.65	-14.5 -11.5	#DIV/0!			
Average:	10.9	230.4	0.32	3.03	-11.3	#DIV/0:	-		
QUANTITY						pplicable or write	non-standard a		
3			 		H-Gx) (BTEX)	. (0.1.11) (0.11.0.0			OR 🗆
) (8141) (Oil & G			OR 🗆
1					dity) (Alkalinity Jitrogen) (NH3)	(NO2/NO2)	21) (SO4) (NO	03) (NO2) (F)	
1	 	de) (WAD Cy			viiiogeii) (NH3)	(NO3/NO2)			
1					(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Vi) (Ag) (Se) (Tl) (V) (Zn) (Ho) (K) (Na)
1	1					(b) (Mg) (Mn) (Ni) (
	VOC (Boein) (24) (25) (4	(24) (22)	(01) (04) (14) (1	o) (1.1 <u>8</u>) (1.111) (1.11) (118) (34) (11) (1) (Ell) (11g) (11) (11	u) (Haraness) (Sinc
		nane Ethene Ac	cetylene						
	others								
Dunlingta C-	mnla Ma(a).	Dunlingto to	DCW/1529						
Duplicate Sa: Comments:	mpie ivo(s):	Duplicate to 1	KGW 1328						
Signature:	CEB					Date:	11/12/2019		
oignatule.	CLD					Date:	11/12/2018		

\\SEA2-FS1\projects\8888 - Boeing Renton\02 Data Management\2018\4Q2018\Field Data\SWMU-172&174_11.12.18CEB



Project Nam	ne:	Boeing Ren	ton		Project Number	er:	0025217.099.0)99	
Event:		Nov-18			Date/Time:	11/12 /2018@	948		
Sample Nun	nber:	RGW153S-	181112		Weather:	CLEAR 30S			
Landau Rep	resentative:	SRB/JHA/C	CEB						
WATER LEV	VEL/WELL/P	URGE DATA							
Well Condition		Secure (YES		Damaged (N	(O)	Describe	: Flush Mount		
DTW Before	Purging (ft)	9.38	Time:		Flow through ce	ll vol.		GW Meter No.(s	1
		11/12 /201		End Purge:	_	11/12 /2018 @	935	Gallons Purged:	0.5
Purge water d	lisposed 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)	-	(mV)	(NTU)	(ft)	Volume (gal)	Observations
	Purge Goa +/- 3%	ls: Stablization +/- 3%		ters for three +/- 0.1 units	e consecutive rea +/- 10 mV	dings within the t	following limits < 0.3 ft	>/= 1 flow through cell	
016								<u> </u>	
916		1315.0	0.85	5.03		LOW	9.38		
919		967.0	0.92	5.16	66.1	-	9.38		
922	12.3	677.0	0.88	5.38	48.3		9.40	,	
925	12.2	632.0	0.85	5.43	43.7				
928	12.1	540.0	0.87	5.55	29.2				
931	12.1	503.0	0.81	5.63	18.9				
933	12.1	474.8	0.81	5.68	16.4				
SAMPLE CO	DLLECTION I	DATA							
Sample Colle	cted With:		Bailer		Pump/Pump Type	e <u>DED BLADDE</u> I	₹	- ,	
Made of:		Stainless Ste	el	PVC	Teflon	Polyethylene	e 🔲 Other	Dedicated	
Decon Proced	dure:	Alconox Wa	sh	Tap Rinse	DI Water	Dedicated Dedicated			
(By Numerica	al Order)	Other					_		
Sample Descr	ription (color,	turbidity, odor	, sheen, etc.):	CLEAR CO	LORLESS SLIG	HT ODOR NS			
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
Керпсас	(°F/°C)	(uS/cm)	(mg/L)	pm	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	12.1	465.6	0.85	5.70	14.9				
2	12.1	459.9	0.84	5.72	12.2				
3	12.1	455.5	0.83	5.73	11.3		_		
4	12.1	450.0	0.83	5.74	10.3		_		
						//DIV//01		·	
Average:	12.1	457.8	0.84	5.72	12.2	#DIV/0!			
_						pplicable or writ	e non-standard a		
3					H-Gx) (BTEX)	(0141) (07.0	<u> </u>		OR 🗆
						(8141) (Oil & (HCO3/CO3)			OR □
1	<u> </u>				Vitrogen) (NH3)		(CI) (304) (N	(NO2) (F)	
_		de) (WAD Cy			(Hogen) (14113)	(1103/1102)			
1					(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn)	(Ni) (Ag) (Se) ((Tl) (V) (Zn) (Hg	g) (K) (Na)
	(Dissolved M	letals) (As) (St) (Ba) (Be) (G	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	7) (Zn) (Hg) (K) (N	Va) (Hardness) (Silic
	VOC (Boein								
	Methane Eth	nane Ethene A	cetylene						
	others								
	•								
Duplicate Sar	mple No(s):								
Comments:									
Signature:	CEB					Date	:11/12/2018		



							-		
Project Nam	ne <u>:</u>	Boeing Ren	ton		Project Number		0025217.099.0	99	
Event:		Nov-18			Date/Time:	11/ 12 /2018@ 9	956		
Sample Nun	•	RGW172S-	181112		Weather:	30'S, SUNNY			
Landau Rep	resentative:	JHA							
WATER LEV	VEL/WELL/P	URGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	9.19	Time:	932	Flow through ce	ll vol.		GW Meter No.(s HERON 3
Begin Purge:	Date/Time:	11/ 12 /2013	8 @ 934	End Purge:	Date/Time:	11/ 12 /2018 @ 9	55	Gallons Purged:	0.25
Purge water d	disposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	IENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	<u>-</u>	(mV)	(NTU)	(ft)	Volume (gal)	Observations
						dings within the fol	llowing limits < 0.3 ft	>/= 1 flow	
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%		through cell	
937	14.9	736.0	0.59	5.27		LOW		<0.25	TURN CPM DON
940	14.0	635.0	0.49	5.57	33.8		9.34	<0.25	LOWEST SETTING
943	13.7	611.0	0.51	5.70	26.4			<0.25	
946	13.0	563.0	0.54	5.65	17.3		9.29		
949	11.5	489.1	0.61	5.81	1.5				
952		457.3	0.63	5.83	-3.5				
									-
954	10.8	443.2	0.65	5.85	-5.0				
CANDIE CO	N. I. E.C.TION I								
Sample Colle	OLLECTION I		Bailer		Dump/Dump Typ	e DED BLADDER			
Made of:	cted With.	Stainless Stee		PVC	Tump/Tump Typ Teflon	Polyethylene	Other	Dedicated	
						=	U Other	Dedicated	
Decon Proced	_	Alconox Was	sn 📋	Tap Rinse	DI Water	Dedicated			
(By Numerica	· · · · · · · · · · · · · · · · · · ·	Other	1 ()	CI OUDW II	UTIL COME CITO	SDENIDED GOLIDG	COL ODI EGG	DOTTEN MILI	Z ODODAJC
Sample Descr	ription (color,	turbiaity, odor	, sneen, etc.):	CLOUDY W	VITH SOME SUS	SPENDED SOLIDS,	, COLORLESS	, ROTTEN MILE	C ODOR/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	10.8	441.1	0.65	5.85	-4.8				
2	10.8	439.9	0.65	5.86	-4.6				
3	10.8	434.8	0.66	5.86	-4.8				
4	10.8	432.0	0.66	5.86	-4.9				-
						(ID II / 0.1	0.46	-	-
Average:	10.8	437.0	0.66	5.86	-4.8	#DIV/0!	9.46		
QUANTITY	TYPICAL A	NALYSIS AI	LLOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write i	non-standard a	nalysis below)	
3	<u> </u>		<u> </u>		H-Gx) (BTEX)			WA 🗆	OR 🗆
						(8141) (Oil & Gi		WA 🗆	OR □
	<u> </u>					(HCO3/CO3) (C	(SO4) (NO	03) (NO2) (F)	
1					litrogen) (NH3)	(NO3/NO2)			
1		le) (WAD Cy			(Cr) (Cu) (Fa)	(Pb) (Mg) (Mn) (N	Ji) (Ag) (Sg) (Tl) (V) (7 n) (H	(K) (Na)
1						b) (Mg) (Mn) (Ni) (A			
	VOC (Boein		, (Da) (De) (C	-u, (-u, (-u)	(21) (24) (16) (1	~, (111 <u>6)</u> (1111) (111) (1	-5) (50) (11) (V	, (En) (118) (IX) (-·~ <i>)</i>
	†	ane Ethene Ac	cetylene						
	others	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	<u> </u>					
Dumling C	1a NI- ()								
Duplicate Sar Comments:	mpie No(s):								
Signature:			ТΗΔ			ъ.	11/12/2018		



Project Nam	ie:	Boeing Ren	ton		Project Number	er <u>:</u>	0025217.099.0	199	
Event:		Nov-18			Date/Time:	11/12 /2018@	853		
Sample Nun	nber:	RGW173S-			Weather:	CLEAR 30S			
Landau Rep	resentative:	SRB/JHA/C	EB						
WATER LEV	VEL/WELL/P	URGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	9.20	Time:	823	Flow through ce	ll vol.		GW Meter No.(s	1
Begin Purge:	Date/Time:	11/12 /2013	830	End Purge:	Date/Time:	11/12 /2018 @	905	Gallons Purged:	0.5
Purge water d	lisposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATMI	ENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	рш	(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	
833	13.1	747.0	0.57	6.73	-99.0	LOW	9.22		
836	11.9	560.0	0.61	6.63	-77.6		9.22		
839	11.8	519.0	0.57	6.57	-70.4		9.22		
842	11.5	396.3	0.53	6.36	-44.8				
845		394.2	0.54	6.36	-44.1				
848	11.9	368.8	0.54	6.40	-42.6				
	LLECTION I		D "		D /D /T	DED DI (DDED			
Sample Colle	_		Bailer			DED BLADDER			
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,	turbidity, odor	, sheen, etc.):	CLEAR CO	LORLESS NO N	S			
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
	(°F/°C)	(uS/cm)	(mg/L)	P	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	11.9	367.6	0.54	6.40	-42.5				
2	11.9	366.2	0.56	6.42	-42.4				
3	11.9	365.6	0.55	6.42	-42.2				
4	11.9	365.6	0.55	6.43	-42.1				
Average:	11.9	366.3	0.55	6.42	-42.3	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LLOWED P	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
3	(8260-SIM)	(8010) (8020) (NWTPH	-G) (NWTPl	H-Gx) (BTEX)			WA □	OR 🗆
	(8270D) (PA	AH) (NWTPI	H-D) (NWT)	PH-Dx) (TP	H-HCID) (8081)	(8141) (Oil & G	rease)	WA 🗆	OR 🗆
	`) (HCO3/CO3) (C	Cl) (SO4) (NO	03) (NO2) (F)	
1					litrogen) (NH3)	(NO3/NO2)			
4		le) (WAD Cy			(C) (C) (F)	(DL) (AL) (AL) (A	T) (A) (C) (TI) (17) (7) (11) (II) (N.)
1						(Pb) (Mg) (Mn) (Ng) (Mg) (Mg) (Mg) (Mg) (Mg) (Mg) (Mg) (M			
	VOC (Boein) (Da) (De) (C	<i>La)</i> (Cu) (Co)	(CI) (Cu) (Fe) (F	b) (Mg) (MIII) (MI) (Ag) (Se) (11) (v) (ZII) (Hg) (K) (N	la) (Hardness) (Silic
	,	nane Ethene Ac	cetylene						
		Smalle i N	.,						
	others								
D 1: ~	1.37.7								
Duplicate Sar		4:							
	MSMSD Lo	cation					44484		
Signature:	CFR					Date	11/12/2018		

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Landau Associates



Project Nam	ne.	Boeing Ren	ton		Project Number	ar.	0025217.099.0	199	
Event:	<u> </u>	Nov-18	1011		Date/Time:	11/ 12 /2018@		,,,,	
Sample Nun	nher:	RGW226S-	181112		Weather:	30'S, SUNNY	720		
Landau Rep		JHA	101112		w camer.	303, 301111			
		URGE DATA							
Well Condition		Secure (YES))	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	8.78	Time:	900	Flow through ce	ell vol.		GW Meter No.(s	HERON 3
Begin Purge:	Date/Time:	11/ 12 /2018	8 @ 904	End Purge:	_	11/ 12 /2018 @ 9	25	Gallons Purged:	0.75
Purge water d	lisposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATME	ENT SYSTEM
	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%	llowing limits < 0.3 ft	>/= 1 flow through cell	
007								U	
907		215.5	1.69	6.30		LOW	8.81	<0.25	
910		255.4	1.10	6.29	40.0				
913	12.0	251.5	0.83	6.40	-8.8		8.81	0.25	
916	11.7	237.6	0.68	6.39	-36.0				
919	11.6	233.3	0.62	6.38	-39.5				
922	11.5	231.8	0.59	6.37	-40.4			0.5	
924	11.2	226.1	0.57	6.36	-42.3				
					-				
SAMPLE CO	DLLECTION I	DATA						· <u></u>	
Sample Colle			Bailer		Pump/Pump Typ	e <u>DED BLADDER</u>			
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, CC	LORLESS, NO/	NS			
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
Керпсас	(°F/°C)	(uS/cm)	(mg/L)	pm	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	11.2	225.8	0.56	6.36	-42.3				
2	11.2	225.5	0.57	6.36	-42.3				
3	11.2	225.3	0.57	6.36	-42.3			-	
4	11.2	224.9	0.57	6.36	-42.1				
						//DB7/01	0.00	·	
Average:	11.2	225.4	0.57	6.36	-42.3	#DIV/0!	8.89	·	
QUANTITY						applicable or write	non-standard a		
3					H-Gx) (BTEX)				OR 🗆
) (8141) (Oil & G			OR 🗆
1						(NO2/NO2)	(SO4) (NO	03) (NO2) (F)	
1		le) (WAD Cy			litrogen) (NH3)	(NO3/NO2)			
1	1				(Cr) (Cn) (Fe)	(Pb) (Mg) (Mn) (1	Ni) (Aσ) (Se) (Tl) (V) (Zn) (Ho	(K) (Na)
						(b) (Mg) (Mn) (Ni) (
	VOC (Boein						8/ / / / /	<i>/</i>	,
	 	nane Ethene Ac	etylene						
	others								
Duplicate Sar	mple No(s)								
Comments:									
Signature:			JHA			Date:	11/12/2018		



Project Nam	20:	Boeing Ren	ton		Project Number		0025217.099.0	100	
•	<u> </u>		1011		· ·			199	
Event:	.1	Nov-18	101112		Date/Time:	11/12 /2018@	758		
Sample Nun		RGW232S-			Weather:	clear 30s			
Landau Rep	resentative:	SRB/JHA/C	EB						
		URGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	7.67	Time:		Flow through ce			GW Meter No.(s	1
Begin Purge:	Date/Time:	11/12 /2013	736	End Purge:	Date/Time:	11/12 /2018 @	757	Gallons Purged:	0.5
Purge water of	lisposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATME	ENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	-	(mV)	(NTU)	(ft)	Volume (gal)	Observations
						dings within the fo		>/= 1 flow	
	+/- 3%	+/- 3%		+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
739	15.5	581.0	1.97	6.42	-92.7	LOW	8.42		
742	14.2	544.0	1.83	6.37	-91.9		8.44		
745	13.4	539.0	1.86	6.33	-89.9		8.47		
748	10.8	512.0	2.12	6.22	-78.0				
751	8.3	479.9	2.49	6.05	-59.0				
754		461.5	2.41	5.99	-50.9				
756	7.3	457.6	2.27	5.99	-49.5				
	DLLECTION I		D. 11		D				
Sample Colle	cted With:		Bailer			e <u>DED BLADDER</u>			
Made of:	<u> </u>	Stainless Stee		PVC	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 CO	LORLESS NO N	S			
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
керпсас	(°F/°C)	(uS/cm)	(mg/L)	pm	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	7.3	454.7	2.20	5.98	-48.2				
				5.97	-47.0				
2	7.1	452.3	2.17						
3	6.9	450.8	2.05	5.96	-45.8				
4	6.9	447.9	1.97	5.96	-44.5				
Average:	7.1	451.4	2.10	5.97	-46.4	#DIV/0!			
OUANTITY	TYPICAL A	NALYSIS AI	LLOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	ınalysis below)	
3					H-Gx) (BTEX)				OR 🗆
) (8141) (Oil & G	rease)	WA 🗆	OR 🗆
	(pH) (Condi	activity) (TDS	S) (TSS) (E	BOD) (Turbi	dity) (Alkalinity	(HCO3/CO3)	Cl) (SO4) (NO	O3) (NO2) (F)	
1					Vitrogen) (NH3)	(NO3/NO2)			
	(Total Cyanic	le) (WAD Cy	ranide) (Free	Cyanide)					
1						(Pb) (Mg) (Mn) (1			
) (Ba) (Be) (G	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	(b) (Mg) (Mn) (Ni) ((Ag) (Se) (Tl) (V	(Y) (Zn) (Hg) (K) (N	a) (Hardness) (Silic
	VOC (Boein		4 . 1 .						
	Methane Eth	nane Ethene Ac	cetylene						
	others								
	Jourers								
Duplicate Sar	mple No(s):								
Comments:	pumped at lo	owest cpm							
Signature:	CEB					Date:	11/12/2018		

\\SEA2-FS1\projects\8888 - Boeing Renton\02 Data Management\2018\4Q2018\Field Data\SWMU-172&174_11.12.18CEB



Project Nam	ie:	Boeing Ren	ton		Project Number		0025217.099.0)99	
Event:		Nov-18	ton		Date/Time:	11/ 12 /2018@		,,,,	
Sample Nun	nher:	RGW233I-	181112		Weather:	30'S, SUNNY	730		
Landau Rep		JHA	101112		weather.	30 8, 801111			
WATER LEV	/EL/WELL/P	URGE DATA							
Well Condition		Secure (YES		Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	7.27	Time:	730	Flow through ce	ell vol.		GW Meter No.(s	HERON 3
Begin Purge:	Date/Time:	11/ 12 /2013	8 @ 734	End Purge:	Date/Time:	11/ 12 /2018 @ ′	755	Gallons Purged:	0.75
Purge water d	isposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATMI	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%		+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
737	10.6	185.5	3.52	6.13	95.7	LOW	7.29	<0.25	
740	11.4	182.6	2.60	6.07	82.0				
743	12.6	189.4	1.89	6.24	42.9		7.29	0.25	
746	12.7	190.7	1.91	6.32	24.3				
749	12.7	190.7	1.96	6.36	16.5				
		189.4						0.5	
752	12.6		2.13	6.37	8.3		-		
754	12.7	189.4	1.78	6.37	4.3		-		
SAMPLE CO	I LECTION I							·	
Sample Colle			Bailer		Pumn/Pumn Tyn	e DED BLADDER			
Made of:		Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lure.	Alconox Was	_	Tap Rinse	DI Water	Dedicated	—		
(By Numerica		Other	""	rup remse	□ Di Water	Bedicated			
-		_	sheen, etc.):	CLEAR, CC	DLORLESS, NO/	NS			
	· T · · · · · · · · · · · · · · · · · ·		,, <u>-</u>						
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	12.7	189.6	1.71	6.36	3.6				
2	12.8	190.2	1.71	6.36	3.1				
							-		
3	12.9	190.4	1.67	6.36				. ———	
4	12.9	190.1	1.69	6.36	2.3		-		
Average:	12.8	190.1	1.70	6.36	2.9	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LLOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	analysis below)	
3	1				H-Gx) (BTEX)				OR 🗆
) (8141) (Oil & C			OR 🗆
						r) (HCO3/CO3) (Cl) (SO4) (NO	O3) (NO2) (F)	
1					Vitrogen) (NH3)	(NO3/NO2)			
1		le) (WAD Cy			(Cr) (Cu) (Fa)	(Pb) (Mg) (Mn) (Ni) (Aa) (Sa) ((T1) (I/) (Zn) (Ha) (V) (Na)
1						(Fb) (Mg) (Mn) (Ni) (
	VOC (Boein) (Da) (Dc) (C	<i>ca)</i> (ca) (co)	(C1) (Cu) (1 c) (1	O) (IVIg) (IVIII) (IVI)	(11g) (Sc) (11) (V	(Lii) (Lig) (IX) (IX	, a j
		nane Ethene Ac	cetylene						
	others								
Duplicate Sar	nnle No(s):								
Comments:	induc 140(8).								
Signature:			JHA			Date:	11/12/2018		



							-		
Project Nam	ne:	Boeing Ren	ton		Project Number		0025217.099.0)99	
Event:		Nov-18			Date/Time:	11/ 12 /2018@	1106		
Sample Nun		RGW234S-	181112		Weather:	30'S, SUNNY			
Landau Rep	resentative:	JHA							
WATER LEV	VEL/WELL/P	URGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	7.97	Time:	1042	Flow through ce	ell vol.		GW Meter No.(s	HERON 3
Begin Purge:	Date/Time:	11/12 /201	8 @ 1045	End Purge:	Date/Time:	11/ 12 /2018 @ 1	.101	Gallons Purged:	0.5
Purge water d	lisposed 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)	-	(mV)	(NTU)	(ft)	Volume (gal)	Observations
	Purge Goa +/- 3%					dings within the fo	llowing limits < 0.3 ft	>/= 1 flow	
1010		+/- 3%		+/- 0.1 units		+/- 10%		through cell	
1048	15.1	232.1	0.33	6.37	-10.9	MED	7.97	<0.25	
1051	15.2	222.3	0.36	6.36	-21.3			·	
1054	15.2	219.1	0.30	6.35	-21.6		7.97	0.25	
1057	15.1	215.3	0.28	6.33	-23.3				
1100	15.2	215.1	0.29	6.32	-24.2				
- 1100			- 0.27	- 0.52				· ——	
						-			
	-				-	·		·	
	DLLECTION 1		D "		D /D T	DED DI ADDED			
Sample Colle			Bailer			e DED BLADDER			
Made of:		Stainless Ste		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	_	Alconox Wa	sh 📙	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other							
Sample Desci	ription (color,	turbidity, odor	, sheen, etc.):	CLOUDY, C	COLORLESS, N	O/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	15.3	214.9	0.29	6.33	-24.7				
2	15.3	214.9	0.29	6.33	-24.6				
3	15.3	214.9	0.29	6.33					
4	15.3		0.29	6.33	-24.9				
Average:	15.3	214.9	0.29	6.33	-24.7	#DIV/0!	7.97		
QUANTITY	TYPICAL A	NALYSIS A	LLOWED PI	ER BOTTLE	E TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
3	(8260-SIM)	(8010) (8020	O) (NWTPH-	-G) (NWTP	H-Gx) (BTEX)			WA □	OR 🗆
	(8270D) (PA	AH) (NWTPI	H-D) (NWT	PH-Dx) (TP	H-HCID) (8081) (8141) (Oil & G	rease)	WA □	OR 🗆
	<u> </u>					r) (HCO3/CO3) (C	Cl) (SO4) (NO	O3) (NO2) (F)	
1					Vitrogen) (NH3)	(NO3/NO2)			
		de) (WAD Cy			(G) (G) (F)	(DL) (A.L.) (A.L.) (A.		TI) (II) (II) (II)) (II) (AL.)
1						(Pb) (Mg) (Mn) (Ng) (Mg) (Ng) (Ng)			
	VOC (Boein) (Da) (Be) (C	.a) (Cu) (Co)	(CI) (Cu) (Fe) (F	(Ni) (Mg) (Mn) (Ni) (Ag) (Se) (11) (V) (ZII) (ПВ) (К) (Г	na)
	†	nane Ethene A	cetylene						
	Triculatio Ett	Lancite IV	, 10110						
	others								
-	mple No(s):								
Comments:									
Signature			IHΔ			Date	11/12/2018		



- · · · · · · ·		D : D					· · · · · · · · · · · · · · · · · · ·		
Project Nam	e:	Boeing Ren	ton		Project Numbe		0025217.099.0	199	
Event:		Nov-18	101110		Date/Time:	11/ 12 /2018@	1036		
Sample Num		RGW235I-	181112		Weather:	30'S, SUNNY			
Landau Rep	resentative:	JHA							
WATER LEV	/EL/WELL/P	URGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	7.49	Time:	1010	Flow through ce	ll vol.		GW Meter No.(s	HERON 3
Begin Purge:	Date/Time:	11/12 /201	8 @ 1014	End Purge:	Date/Time:	11/ 12 /2018 @ 1	035	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)		(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 fol +/- 10%	llowing limits < 0.3 ft	>/= 1 flow through cell	
1017									
1017	11.2	134.0	1.30	6.18		LOW	1.32	<0.25	
1020	12.4	145.8	0.49	6.14	1.6				
1023	12.5	144.0	0.40	6.31	-13.3		7.52		
1026	12.7	141.9	0.36	6.42	-23.1			0.25	
1029	12.6	140.3	0.33	6.48	-29.9				
1032	13.0	139.1	0.32	6.52	-34.6				
1034	13.0	138.0	0.31	6.53	-37.1				
SAMPLE CO	LLECTION I	DATA							
Sample Collec			Bailer		Pump/Pump Type	e 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	l Order)	Other		•					
Sample Descr	ription (color,	turbidity, odor	, sheen, etc.):	CLEAR, CC	LORLESS, NO/	NS			
					ODB		D. W.Y.	Ferrous iron	C
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	(Fe II)	Comments/ Observations
1	13.0	137.8	0.30	6.54	-37.4	(2.2.2)	()	(-)	
2	13.0	137.7	0.30	6.54	-37.7				
3	13.0	137.6	0.30	6.54	-37.8				
4	13.0	137.6	0.30	6.54	-38.0			·	
Average:	13.0	137.7	0.30	6.54	-37.7	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LLOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
3	(8260-SIM)	(8010) (8020)) (NWTPH-	-G) (NWTPl	H-Gx) (BTEX)			WA □	OR 🗆
	(8270D) (PA	AH) (NWTPI	H-D) (NWT)	PH-Dx) (TP	H-HCID) (8081)	(8141) (Oil & Gr	rease)	WA □	OR 🗆
_	· / ·					(HCO3/CO3) (C	(SO4) (NO	03) (NO2) (F)	
1					litrogen) (NH3)	(NO3/NO2)			
		le) (WAD Cy			(C) (C) (T)	(DI) (M) (M) (A	I') (A) (C) (TI) (II) (II) (III) (IZ) (N.)
1						(Pb) (Mg) (Mn) (Ni) (Mg) (Mg) (Mn) (Ni) (Mg) (Mn) (Ni) (Mg) (Mn) (Ni) (Mg) (Mg) (Mg) (Mg) (Mg) (Mg) (Mg) (Mg			
	VOC (Boein) (Ba) (Be) (C	<i>La)</i> (Cu) (Co)	(CI) (Cu) (Fe) (F	b) (Mg) (MIII) (MI) (A	Ag) (Se) (11) (V) (ZII) (Fig) (K) (F	Na)
	,	ane Ethene A	cetylene						
			<i>y</i>						
	others								
Dualia-t- C	umla Na (-)								
Duplicate San Comments:	npie ivo(s):								
Signature:			ТΗΔ			Date	11/12/2018		



D		D : D			D 1 .37 1				
Project Nam	ie:	Boeing Ren	ton		Project Number		0025217.099.0	199	
Event:		Nov-18			Date/Time:	11/12 /2018@	1113		
Sample Nun		RGW236S-			Weather:	CLEAR 30S			
Landau Rep	resentative:	SRB/JHA/C	CEB						
WATER LEV	VEL/WELL/P	URGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:	Flush Mount		
DTW Before	Purging (ft)	7.23	Time:	1048	Flow through ce	ell vol.		GW Meter No.(s	1
Begin Purge:	Date/Time:	11/12 /201	1048	End Purge:	Date/Time:	11/12 /2018 @	1105	Gallons Purged:	0.5
Purge water d	lisposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATME	ENT SYSTEM
	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		dings within the fo +/- 10%	llowing limits < 0.3 ft	>/= 1 flow through cell	
1051								tiir ough ten	
1051	13.9	336.1	1.70	6.47	-2.2	LOW	7.25		
1054	13.3	370.1	1.19	6.53	-32.3		7.25		
1057	13.1	383.1	0.51	6.54	-58.0		7.25		
1100	13.1	383.8	0.48	6.53	-61.0				
1103	13.3	385.4	0.48	6.54	-66.4				
	·								
CALLED TO CO	I I E CTION I								
Sample Colle	OLLECTION I		Bailer		Dump/Dump Typ	o DED DI ADDED			
Made of:	cted With.	Stainless Ste	_	PVC	Teflon	DED BLADDER Polyethylene	Other	Dodinated -	
					—		LI Other	Dedicated	
Decon Proced		Alconox Wa	sn 📋	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other	-1	CLEAD CO	LODI EGG GME		ITTED NC		
Sample Desci	ripuon (color,	turbiaity, odor	, sneen, etc.):	CLEAR CO	LUKLESS, SME	LLS LIKE OLD BU	JIIEK, 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	13.2	385.2	0.48	6.54	-66.6				
2	13.3	385.5	0.49	6.54	-67.0				
3	13.3	385.1	0.48	6.54	-67.2				
4	13.2	384.8	0.48	6.54	-67.2				
Average:	13.3		0.48	6.54					
						pplicable or write	non-standard a		
3					H-Gx) (BTEX)				OR 🗆
						(8141) (Oil & G (HCO3/CO3) (O			OR 🗆
1	` `				Vitrogen) (NH3)		21) (304) (NC)3) (NO2) (F)	
		de) (WAD Cy			vitrogen) (14113)	(1103/1102)			
1					(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (1	Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
						(b) (Mg) (Mn) (Ni) (
	VOC (Boeir								
	Methane Eth	nane Ethene A	cetylene						
	others								
Dunlicate Sar	nnle No(s)								
Comments:	p. 1 10(3).								
Signature:	CER					Dotor	11/12/2018		

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wood.

Appendix C



Memo

To: John Long, Project Manager Project: 0088880100.2019

From: Crystal Thimsen c: Project File

Tel: (206) 342-1760 Fax: (206) 342-1761 Date: January 17, 2019

Subject: Summary Data Quality Review

November 2018 Boeing Renton Groundwater Sampling

SWMU-172/174

ARI Group Number: 18K0181

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 12, 2018. 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) (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
RGWDUP1-181112	18K0181-01	all
RGW233I-181112	18K0181-02	all
RGW232S-181112	18K0181-03	all
RGW173S-181112	18K0181-04	all
RGW081S-181112	18K0181-05	all
RGW226S-181112	18K0181-06	all
RGW153S-181112	18K0181-07	all
RGW172S-181112	18K0181-08	all
RGW152S-181112	18K0181-09	all
RGW235I-181112	18K0181-10	all
RGW236S-181112	18K0181-11	all

Sample ID	Laboratory Sample ID	Requested Analyses
RGW234S-181112	18K0181-12	all
Trip Blank	18K0181-13	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 13, 2018. 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
- 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 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.

Sample ID/ Field Duplicate ID	Analyte	Primary Result (ng/L)	Duplicate Result (ng/L)	Reporting Limit (ng/L)	RPD (%)
	vinyl chloride	246	260	20	6
RGW152S-181112/	cis-1,2-dichloroethene	1,700	1,830	20	7
RGWDUP1-191112	trichloroethene	223	211	20	6
	tetrachloroethene	846	756	20	11

Abbreviations

ng/L = nanograms per liter NC = not calculated

RPD = relative percent difference

7. Reporting Limits and Laboratory Flags – Acceptable except as noted:

The vinyl chloride result for sample RGW173S-181112 was flagged with an "M" by the laboratory to indicate the analyte was detected and confirmed by the analyst but with a low spectral match. The result is qualified as estimated and flagged with a "J."

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 field duplicate RPDs were within the control limits, except for total lead. The total lead results for samples RGW152S-181112 and RGWDUP1-181112 are qualified as estimated and flagged with a "J."

Sample ID/ Field Duplicate ID	Analyte	Primary Result (µg/L)	Duplicate Result (µg /L)	Reporting Limit (µg /L)	RPD (%)
	TOC	10,910	14,180	500	26
RGW152S-181112/	total arsenic	22.6	22.5	0.200	<1
RGWDUP1-181112	total copper	4.76	4.44	0.500	7
	total lead	2.48	1.24	0.100	67

Abbreviations

μg/L = micrograms 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 18K0181 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
RGWDUP1-181112	total lead	1.24 J	μg/L	field duplicate RPD
RGW233I-181112	none			
RGW232S-181112	none			
RGW173S-181112	vinyl chloride	44.8 J	ng/L	flagged "M" by lab
RGW081S-181112	none			
RGW226S-181112	none			
RGW153S-181112	none			
RGW172S-181112	none			
RGW152S-181112	total lead	2.48 J	μg/L	field duplicate RPD
RGW235I-181112	none			
RGW236S-181112	none			
RGW234S-181112	none			
Trip Blank	none			

Abbreviations

 μ g/L = micrograms per liter

J = the analyte is qualified as estimated

M = the analyte was detected and confirmed by the analyst but with a low spectral match

Memo January 17, 2019 Page 5 of 5

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: January 21, 2019

Subject: Summary Data Quality Review

November 2018 Boeing Renton Groundwater Sampling

Building 4-78/79 SWMU/AOC Group ARI Work Order Number: 18K0190

This memo presents the summary data quality review of 16 primary groundwater samples, one field duplicate groundwater sample, and one trip blank sample collected on November 13, 2018. 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
RGWDUP2-181113	18K0190-01	all
RGW239I-181113	18K0190-02	all
RGW210S-181113	18K0190-03	all
RGW240D-181113	18K0190-04	all
RGW031S-181113	18K0190-05	all
RGW143S-181113	18K0190-06	all
RGW242I-181113	18K0190-07	all
RGW244S-181113	18K0190-08	all
RGW241S-181113	18K0190-09	all
RGW033S-181113	18K0190-10	all
RGW237S-181113	18K0190-11	all
RGW039S-181113	18K0190-12	all
RGW238I-181113	18K0190-13	all

Sample ID	Laboratory Sample ID	Requested Analyses
RGW243I-181113	17K0213-14	all
RGW034S-181113	18K0190-15	all
RGW209S-181113	18K0190-16	all
RGW038S-181113	18K0190-17	all
Trip Blank	18K0190-18	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, 2014a and b).

ARI received the samples on November 13, 2018. The temperature of the cooler was recorded upon receipt and was below the maximum acceptable temperature of 6 degrees Celsius, except for one cooler that was received at 7.1 degrees Celsius. Because samples were submitted within four hours of the final sample collection time, they were not subject to elevated temperatures for an extended amount of time; therefore, sample results are not affected and are not qualified.

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 except as noted:

VOCs by EPA 8260C: One of three surrogates, 1,2-dichloroethene-d4, was recovered at 134 percent in sample RGWDUP2-181113 and at 131 percent in sample RGW031S-181113. Both recoveries are above the control limits of 80 to 129 percent. The high recoveries equate to a potential high bias in the samples. Therefore, results for detected compounds are qualified as estimated and flagged with a "J" and non-detected compounds are not qualified.

- 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 (%)
	vinyl chloride	0.31	0.30	0.20	NC
RGW031S-181113/	cis-1,2-dichloroethene	0.63	0.58	0.20	NC
RGWDUP2-181113	benzene	28.3	23.8	0.20	17
	TPH-G	2010	2000	100	<1

Abbreviations

 μ 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-181113/ RGWDUP2-181113	TOC	20.46	20.27	0.50	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 18K0190 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	Qualified Result	Units	Qualifier Reason
	vinyl chloride	0.30 J		
RGWDUP2-181113	cis-1,2-dichloroethene	0.58 J	μg/L	surrogate recoveries
	benzene	23.8 J		
RGW239I-181113	none			
RGW210S-181113	none			
RGW240D-181113	none			
	vinyl chloride	0.31 J		
RGW031S-181113	cis-1,2-dichloroethene	0.63 J	μg/L	surrogate recoveries
	benzene	28.3 J		
RGW143S-181113	none			
RGW242I-181113	none			
RGW244S-181113	none			
RGW241S-181113	none			
RGW033S-181113	none			
RGW237S-181113	none			
RGW039S-181113	none			
RGW238I-181113	none			
RGW243I-181113	none			
RGW034S-181113	none			
RGW209S-181113	none			
RGW038S-181113	none			
Trip Blank	none			

<u>Abbreviations</u>

 μ g/L = micrograms per liter J = The value is an estimate

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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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0088880100.2019

Memo

To: John Long, Project Manager Project:

From: Crystal Thimsen c: Project File

Tel: (206) 342-1760 Fax: (206) 342-1761 Date: January 21, 2019

Subject: Summary Data Quality Review

November 2018 Boeing Renton Groundwater Sampling

Former Fuel Farm AOC Group ARI Work Order Number: 18K0186

This memo presents the summary data quality review of 10 primary groundwater samples and one field duplicate collected on November 12, 2018. 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.

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

Sample ID	Laboratory Sample ID	Requested Analyses
RGWDUP3-181112	18K0186-01	all
RGW183S-181112	18K0186-02	all
RGW258S-181112	18K0186-03	all
RGW184S-181112	18K0186-04	all
RGW221S-181112	18K0186-05	all
RGW211S-181112	18K0186-06	all
RGW212S-181112	18K0186-07	all
RGW255S-181112	18K0186-08	all
RGW224S-181112	18K0186-09	all
RGW257S-181112	18K0186-10	all
RGW256S-181112	18K0186-11	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.

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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 13, 2018. 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 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 (%)
RGW224S-181112/	DRO C12-C24	1.56	1.56	0.100	0
RGWDUP3-181112	TPH JetA C10-C18	1.64	1.72	0.100	5

Abbreviations

mg/L = milligrams per liter

DRO = diesel range organics

RPD = relative percent difference

TPH = total petroleum hydrocarbons

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 18K0186 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
RGWDUP3-181112	none
RGW183S-181112	none
RGW258S-181112	none
RGW184S-181112	none
RGW221S-181112	none
RGW211S-181112	none
RGW212S-181112	none
RGW255S-181112	none
RGW224S-181112	none
RGW257S-181112	none
RGW256S-181112	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: January 21, 2019

Subject: Summary Data Quality Review

November 2018 Boeing Renton Groundwater Sampling

AOC-001 and -002 and AOC-003 ARI Work Order Number: 18K0191

This memo presents the summary data quality review of 10 primary groundwater samples, one field duplicate, and one trip blank sample collected on November 13, 2018. 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 from AOC-001 and -002 were analyzed for the following:

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

Samples from AOC-003 were analyzed for the following:

- VOCs (cis-1,2-dichloroethene, tetrachloroethene, trichloroethene, and vinyl chloride) by EPA Method 8260C SIM; and
- TOC by SM 5310C.

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

Sample ID	Laboratory Sample ID	Requested Analyses
RGWDUP4-181113	18K0191-01	all AOC-001 and -002 analyses
RGW197S-181113	18K0191-02	all AOC-001 and -002 analyses
RGW185S-181113	18K0191-03	all AOC-001 and -002 analyses
RGW248I-181113	18K0191-04	all AOC-003 analyses
RGW245S-181113	18K0191-05	all AOC-001 and -002 analyses
RGW247S-181113	18K0191-06	all AOC-003 analyses
RGW194S-181113	18K0191-07	all AOC-001 and -002 analyses

Sample ID	Laboratory Sample ID	Requested Analyses
RGW195S-181113	18K0191-08	all AOC-001 and -002 analyses
RGW196D-181113	18K0191-09	all AOC-001 and -002 analyses
RGW188S-181113	18K0191-10	all AOC-003 analyses
RGW249S-181113	18K0191-11	all AOC-003 analyses
Trip Blank	18K0191-12	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, 2018. The temperature of the cooler was recorded upon receipt and was 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

VOCs by EPA 8260C SIM: The recoveries for 1,1-dichloroethene in the MS/MSD performed with sample RGW188S-181113 were 128 and 138 percent, greater than the control limits of 80 to 120 percent. The high recoveries equate to a possible high bias in the samples and 1,1-dichloroethene was not detected in the project samples. Therefore, sample results are not affected and are not qualified.

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.

Sample ID/ Field Duplicate ID	Analyte	Primary Result (µg/L)	Duplicate Result (µg/L)	Reporting Limit (µg/L)	RPD (%)
RGW185S-181113/ RGWDUP4-181113	benzene	0.32	0.27	0.20	NC
	cis-1,2-dichloroethene	0.315	0.343	0.020	9
	vinyl chloride	0.385	0.346	0.020	11

Abbreviations

 μ g/L = micrograms per liter

NC = not calculated

RPD = relative percent difference

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
- Field Duplicates Acceptable

One field duplicate was submitted for TOC 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 field duplicate RPD was within the control limits.

Sample ID/ Field Duplicate ID	Analyte	Primary Result (mg/L)	Duplicate Result (mg /L)	Reporting Limit (mg /L)	RPD (%)
RGW185S-181113/ RGWDUP4-181113	TOC	12.39	12.39	0.50	0

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 18K0191 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.

Sample ID	Qualified Analyte
RGWDUP4-181113	none
RGW197S-181113	none
RGW185S-181113	none
RGW248I-181113	none
RGW245S-181113	none
RGW247S-181113	none
RGW194S-181113	none
RGW195S-181113	none
RGW196D-181113	none
RGW188S-181113	none
RGW249S-181113	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: January 21, 2019

Subject: Summary Data Quality Review

November 2018 Boeing Renton Groundwater Sampling

AOC-034 and -035

ARI Work Order Number: 18K0189

This memo presents the summary data quality review of four primary groundwater samples and one trip blank collected on November 13, 2018. 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) (cis-1,2-dichloroethene and vinyl chloride) 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
RGW217S-181113	18K0189-01	all
RGW216S-181113	18K0189-02	all
RGW218S-181113	18K0189-03	all
RGW251S-181113	18K0189-04	all
Trip Blank	18K0189-05	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.

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 guidance documents (EPA, 2014).

ARI received the samples on November 13, 2018. The temperature of the cooler was recorded upon receipt and was 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 except as noted:

One of four surrogates, 4-bromofluorobenzene, was recovered at 78.7 percent, below the control limits of 80 to 120 percent, in sample RGW218S-181113. The sample was reanalyzed with similar surrogate recoveries. The results are reported from the initial analysis, and qualified as estimated due to the potential low bias. Because the results are all below detection, a "UJ" flag is applied to the results.

- 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 review. The completeness of work order number 18K0189 is 100 percent. Evaluation of the usefulness of these data is based on EPA guidance documents referenced 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
RGW217S-181113	none			
RGW216S-181113	none			
RGW218S-181113	vinyl chloride	0.20 UJ	μg/L	surrogate recoveries
NGW2103 101113	cis-1,2-dichloroethene	0.20 UJ	µg/L	surrogate recoveries
RGW251S-181113	none			
Trip Blank	none			

Abbreviations

 μ g/L = micrograms per liter

UJ = The analyte was not detected at the estimated reporting limit indicated.

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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: January 17, 2019

Subject: Summary Data Quality Review

November 2018 Boeing Renton Groundwater Sampling

Building 10-71 Parcel

ARI Work Order Number: 18K0183

This memo presents the summary data quality review of three primary groundwater samples and one trip blank sample collected on November 12, 2018. 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-MW2-181112	18K0183-01	VOCs
10-71-MW4-181112	18K0183-02	VOCs
10-71-MW1-181112	18K0183-03	VOCs
Trip Blank	18K0183-04	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 13, 2018. The temperature of the cooler was recorded upon receipt and was 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

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 18K0183 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-MW2-181112	none
10-71-MW4-181112	none
10-71-MW1-181112	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: February 1, 2019

Subject: Summary Data Quality Review

November 2018 Boeing Renton Groundwater Sampling

Apron A

ARI Work Order Number: 18K0192

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 13, 2018. 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
RGWDUP5-181113	18K0192-01	all
RGW262S-181113	18K0192-02	all
RGW264S-181113	18K0192-03	all
Trip Blank	18K0192-04	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 13, 2018. The temperature of the coolers were recorded upon receipt and was below the maximum acceptable temperature of 6 degrees Celsius. The laboratory noted that the sample time for RGW264S-181113 was different than the time on the chain-of-custody. The laboratory logged the samples with the time on the chain-of-custody and proceeded with analysis.

Memo February 1, 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, RGWDUP5-181113, was submitted with sample RGW262S-181113. 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-181113/ RGWDUP5-181113	TOC	33.32	32.53	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 18K0192 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
RGWDUP5-181113	none
RGW262S-181113	none
RGW264S-181113	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 2018

Boeing Renton Site Renton, Washington

Prepared for:
The Boeing Company
EHS Remediation

Prepared by: CALIBRE Systems, Inc. Project No. K0357000

February 14, 2019

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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 2018 (between October 1 and December 31, 2018). The ongoing remedial actions include:

- 1. Operation of two soil vapor extraction (SVE) systems located at Solid Waste Management Unit (SWMU) and Area of Concern (AOC) locations designated as SWMU-172/174 and Building 4-78/4-79 SWMU/AOC Group;
- 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 document describing the remedial approach for *in situ* treatment for benzene in groundwater (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 (SWMU-172/174 and Building 4-78/79 are the locations where the two SVE systems have operated). 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 2018. This includes operation and monitoring activities for the SVE systems located at Building 4-78/79 and SWMU-172/174 and a summary of the ongoing biological treatment 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
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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

Attachment B – Laboratory Report

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. 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 SVE systems performed in October – December 2018.

2.1 Building 4-78/4-79 SWMU/AOC Group SVE System

The Building 4-78/79 SVE system consists of 15 vapor extraction wells and a SVE equipment trailer as shown in Figure 2-1. The SVE system is equipped with two vapor-phase granular-activated carbon (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 vapors from the outlet of the lead vessel passing through the lag vessel. The system also includes two smaller vessels each containing 200 pounds of zeolite impregnated with permanganate to remove and oxidize specific compounds, such as vinyl chloride, that are not efficiently adsorbed by GAC.

Through November 1, 2018, 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. This SVE system was shutdown at the beginning of November following Ecology's approval. System monitoring included regular monitoring of total organic vapor concentrations with a calibrated photo-ionization detector (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 shows historical samples for TO-15 analysis at the Building 4-78/79 SVE system.

2.1.2 Summary of Operations and Operational Changes

Monitoring completed in October 2018 show the influent concentrations were maintained at the asymptotic levels observed prior to and during the rebound testing periods.

Table 2-2 shows the PID readings for selected wells in the Building 4-78/79 SVE system. Table 2-3 shows the operational parameters (flow rate and PID readings) and a summary of the mass removal for the SVE system over this quarter.

2.1.3 Mass Removal Estimate

Between April 17, 2015 and October 31, 2018 the Building 4-78/79 SVE system has recovered an estimated 19.6 pounds of VOCs (a mixture of TCE, other CVOCs and fuel related compounds), as shown in Table 2-3. Approximately 0.4 pounds of VOCs were removed during the October 2018 operating period (fourth quarter 2018). The cumulative VOC mass removal for the Building 4-78/79 SVE system is shown in Figure 2-2.

2.2 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 2-3. 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 also includes two smaller vessels each containing 200 pounds of zeolite impregnated with permanganate.

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 photo-ionization detector (PID).

2.2.1 TO-15 Laboratory Analysis of Vapor Samples

No samples for TO-15 analysis were collected during this operating period. Table 2-4 summarizes the TO-15 detections for the SWMU-172/174 SVE system for 13 TO-15 sampling events¹ that have been implemented since system startup.

2.2.2 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

¹ 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.

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 again 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 re-opening SVE-3 to extraction. The system was periodically monitored over a 3-hour period the day of the system modification to identify any increase in vapor concentration from the operating wells or the system inlet. No significant increases in vapor concentrations were observed following these changes during this operating period. Table 2-5 shows the PID readings for the wells in the SWMU 172/174 SVE system. Table 2-6 shows an operational summary for the system.

2.2.3 Mass Removal Estimate

Between April 17, 2015 and December 27, 2018 the SWMU-172/174 SVE system has recovered an estimated 14.6 pounds of VOCs (primarily tetrachloroethene, PCE), as shown in Table 2-6. Approximately 0.3 pounds of VOCs were removed during the current reporting period (fourth quarter 2018). The cumulative VOC mass removal for the SWMU-172/174 SVE system is shown in Figure 2-4.

2.3 Recommended Next Steps for the SVE Systems

During this reporting period (October 2018), Boeing submitted to Ecology a separate Tech Memo recommending the shutdown of the SVE system at the Building 4-78/79 area and received concurrence from Ecology in November 2018 at which point the system was shutdown (CALIBRE 2018a). In December 2018, Boeing submitted to Ecology a Tech Memo describing the planned approach for further evaluation of soils at the Building 4-78/79 area (CALIBRE 2018b). Soil confirmation samples previously collected at this area revealed that cleanup standards for COCs were met at all but one of the 24 samples at the 4-78/79 area. The single sample (PP13) which exceed cleanup standards for TPH-G was collected from a low permeable silty/clay layer. The objective of the soil evaluation is to identify the location and depth of utilities in the immediate area, determine the feasibility of excavating soil by delineating the extent of soil contamination around PP13 and to determine the extent of soil that can be removed. Utility clearance, coring and probe sampling related to the additional soil evaluation are planned for 2019.

Modifying the SVE system flow at the SWMU-172/174 area showed marginal increases in VOC mass removal from SVE-2 and the system influent on the day the system was adjusted in December 2018 however subsequent monitoring during this quarter did not show significant change in vapor concentrations. Continued monitoring in January 2019 show increases in vapor concentrations and summa can samples for TO-15 analysis are planned for the first quarter of 2019. It's possible the observed increase in vapor concentrations is associated with alternating flows between wells (i.e. SVE-1 was extracting and is now an inlet vent and vice versa for SVE-3) or may be related to seasonal changes in water table elevation (December 2018 had above average precipitation while January 2019 showed significantly below average precipitation). 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 between December 2014 and July 2018.

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. A fifth round of nitrate/sulfate injections was performed in December 2018 and collection of groundwater samples are planned for the first quarter of 2019 from the injection and monitoring wells at this area.

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 3-1 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

The soil confirmation samples in the second quarter of 2018 revealed that cleanup standards for CVOCs were met at all but one of the 24 samples at the 4-78/79 area. The single sample which exceed cleanup standards for TPH-G was collected from a low permeable silty/clay layer. TO-15 samples from the nearest extraction well to this location showed TPH-G was non-detect in both samples, indicating it is unlikely that continued SVE operation would have any impact on this low permeable layer. Subsequently, Ecology approved the shutdown of the Building 4-78/79 SVE system in November 2018. A separate work plan was provided to Ecology for review and approval outlining the proposed locations and depths of additional soil sampling (by Geoprobe) around PP13 for evaluation of soil excavation. Ecology has since approved the work plan and the additional soil sampling is planned in 2019.

SVE operations were modified at the SWMU-172/174 area 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. Increased vapor concentrations were observed at SVE-2 and the system influent for a brief period however no significant/sustained increases were observed until January 2019. It is recommended that SVE operations be continued for this area, with samples collected for TO-15 analysis in the first quarter of 2019 and 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-3. In

addition, it may be beneficial to operate the SVE system in a pulsed mode to monitor for any VOC rebound in soil vapor.

Groundwater monitoring will continue according to the EDR, with supplemental VOC and TOC sampling at selected wells. No substrate for ERD treatment was injected in the fourth quarter of 2018. A fifth round of nitrate/sulfate injections for benzene treatment at the Building 4-78/79 area was completed in December 2018 and collection of performance monitoring data is planned for the first quarter of 2019. Additional substrate injections are recommended for Building 4-78/79, AOC-003, and AOC-001/002 (after access is available in this area).

5.0 References

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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.

CALIBRE 2017. Bioremediation of Benzene in Groundwater; Building 4-78/79 Area, Boeing Renton Facility Rev. 1. Prepared by CALIBRE Systems, Inc. for The Boeing Company, EHS Remediation. September 2017.

CALIBRE 2018a. Recommendation to shut down SVE system at Building 4-78/4-79 SWMU/AOC Group; Boeing Renton Site. Prepared by CALIBRE Systems, Inc. for The Boeing Company, EHS Remediation. October 2018.

CALIBRE 2018b. Plan for Evaluation of Soils around Probe PP13 at Building 4-78/4-79 SWMU/AOC Group; Boeing Renton Site. Prepared by CALIBRE Systems, Inc. for The Boeing Company, EHS Remediation. November 2018.

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.

TABLES

	rtical Resul	ts - 4-78/7	9 SVE Syste	em																						
SVE System Inlet																										
																						1,2,4-				
			cis-1,2-	trans-1,2-	Vinyl						Freon						Carbon	m,p-		Ethyl		Trimethylbe			Total	
Date	PCE	TCE	DCE	DCE	Chloride			1,1-DCE	Acetone	Benzene	113	Hexane	Pentane	Toluene	TPHg	MEK	Disulfide	Xylene	o-Xylene	Benzene	Chloroform	nzene	Cumene	Styrene	Chlorinated	Total VOCs
4/17/2015 ⁽¹⁾	2.9	280	5.2	ND	ND	8.0	ND	ND	ND	ND	98	ND	ND	1.2	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	296	416
5/18/2015	11	800	27	ND	ND	21.0	ND	ND	ND	ND	120	ND	ND	ND	ND	61	ND	ND	ND	ND	ND	ND	ND	ND	859	1,040
10/13/2015	2.7	160	11	ND	ND	2.7	ND	ND	12	ND	48	9.4	ND	ND	1,400	ND	ND	ND	176	1,646						
3/18/2016 6/30/2016	ND 1.2	49 100	2.5 6.0	ND ND	ND 2.3	ND 2.2	ND ND	ND ND	19 32	ND ND	16 49	6.6 ND	13 ND	2.3 ND	69 ND	ND ND	ND 7.2	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	52 112	177 200
9/12/2016	1.6	110	20	ND ND	5.9	2.2	ND ND	ND	ND	ND	54	26	100	ND	600	ND	ND	ND ND	140	920						
12/14/2016	ND	17	6.3	ND	2.4	ND	ND	ND	ND	ND	18	4.5	33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25.7	81.2
4/5/2017	ND	43	3.0	ND	ND.	1.7	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	47.7	58.7
8/16/2017	1.3	91	8.0	ND	ND	3.1	ND	ND	ND	ND	6.4	ND	ND	7	ND	ND	ND	0.96	ND	ND	ND	ND	ND	ND	103	118
12/8/2017 -																										
Rebound Start	ND	42	2.5	ND	ND	1.3	ND	ND	ND	ND	1.7	1.7	5.2	1.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	45.8	56.3
1/19/2018 - 35-Day																										
60 Minute Sample	ND	68	2.6	ND	2.0	5.8	ND	ND	ND	ND	13	13	26	1.0	280	7.1	ND	ND	ND	ND	ND	ND	ND	ND	78.4	419
3/6/2018 - 80-Day 60		l		1	l				1																	
Min Sample	ND	67	3.2	ND	8.9	7.6	ND	ND	ND	ND	40	44	48	1.0	510	ND	ND	ND	86.7	730						
5/22/2018	2.6	260	10	ND	4.6	19	ND	ND	22	ND	50	49	110	2.8	2,000	ND	ND	ND	296	2,530						
6/7/2018	ND	69	3.7	ND	ND	2.1	ND	ND	ND	ND	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	74.8	77.6
6/20/2018	1.3	87	3.7	ND	ND	2.6	ND	ND	ND	ND	3.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	94.6	98.0
SVE-01																										
3AF-01				1					1													1,2,4-			1	
		1	cis-1,2-	trans-1,2-	Vinyl		1		1		Freon	1					Carbon	m,p-		Ethyl		Trimethylbe			Total	
Date	PCE	TCE	DCE	DCE	Chloride	1,1,1-TCA	1,1-DCA	1,1-DCE	Acetone	Benzene	113	Hexane	Pentane	Toluene	TPHg	MEK	Disulfide	Xylene	o-Xylene	Benzene	Chloroform	nzene	Cumene	Styrene	Chlorinated	Total VOCs
10/13/2015	ND	ND	ND	ND	ND	ND	ND ND	ND.	ND	ND	ND	11	ND	ND	2,100	ND	ND	ND	ND	2,111						
6/30/2016	ND	1.2	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	12.2
9/12/2016	ND	ND	ND	ND	ND	ND	ND	ND	14	ND	ND	62	160	1.3	1,800	ND	ND	ND	ND	2,037						
12/8/2017 -																										
Rebound Start	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	27	2.0	250	ND	ND	ND	ND	290						
5/22/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	26	83	ND	630	ND	16	ND	ND	ND	ND	ND	1.7	ND	ND	757
6/7/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11
6/20/2018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
SVE-05							1															424			1	1
			cis-1,2-	trans-1,2-	Vinyl						Freon						Carbon			Ethyl		1,2,4- Trimethylbe			Total	
Date	PCE	TCE	DCE	DCE	Chloride	1.1.1-TCA	1,1-DCA	1,1-DCE	Acetone	Benzene	113	Hexane	Pentane	Toluene	TPHg	MEK	Disulfide	m,p- Xylene	o-Xylene	Benzene	Chloroform	nzene	Cumene	Styrene	Chlorinated	Total VOCs
8/16/2017	2.5	39	ND	ND	ND	ND	ND	ND	ND	ND	17	ND	ND	160	320	ND	ND	4.5	1.4	1.4	ND	ND	ND	ND	41.5	546
0/10/2017	2.3	33	NU	IND	ND	IND	IVD	NU	IND	ND	- 17	ND	ND	100	320	IND	ND	4.5	1.4	1.7	ND	ND	ND	ND	41.5	340
SVE-6																										
																						1,2,4-				
		1	cis-1,2-	trans-1,2-	Vinyl		1		1		Freon	1					Carbon	m,p-		Ethyl		Trimethylbe			Total	
Date	PCE	TCE	DCE	DCE	Chloride			1,1-DCE	Acetone	Benzene	113	Hexane	Pentane	Toluene	TPHg	MEK	Disulfide	Xylene	o-Xylene	Benzene	Chloroform	nzene	Cumene	Styrene	Chlorinated	Total VOCs
9/12/2016	ND	98	ND	ND	190	ND	ND	ND	ND	ND	6,900	55	360	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	288	7,603
8/16/2017	16	100	4.5	ND	ND	5.4	1.5	ND	ND	ND	75	ND	ND	ND	440	ND	ND	ND	ND	ND	5.0	ND	ND	ND	127	647
12/8/2017 -		1		1	1		1		1		l	1						l								
	5.4	37	ND	ND	ND	2.7	ND	ND	ND	ND	7.2	ND	ND	6.4	ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND	45	60
Rebound Start	5.4			I	l				l			l														
Rebound Start 1/19/2018 - 35-Day							ND	ND	ND	ND	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3	ND	ND	ND	64	89
Rebound Start 1/19/2018 - 35-Day 60 Minute Sample	6.4	52	1.0	ND	ND	4.6	ND	ND	.,,,								1									
Rebound Start 1/19/2018 - 35-Day 60 Minute Sample 3/6/2018 - 80-Day 60	6.4									410	2.000	ND	NB	ND	ND			NID	110	ND	ND	NO	ND		07	2.007
Rebound Start 1/19/2018 - 35-Day 60 Minute Sample 3/6/2018 - 80-Day 60 Min Sample	6.4	67	ND	ND	ND	10	ND	ND	ND	ND ND	2,000	ND	ND 600	ND ND	ND	ND	ND	ND	ND	ND	ND ND	ND ND	ND ND	ND ND	87	2,087
Rebound Start 1/19/2018 - 35-Day 60 Minute Sample 3/6/2018 - 80-Day 60 Min Sample 5/22/2018	6.4 9.8 36	67 220	ND ND	ND ND	ND 29	10 28	ND ND	ND ND	ND ND	ND	1,900	350	690	ND	26,000	ND	ND	ND	313	29,253						
Rebound Start 1/19/2018 - 35-Day 60 Minute Sample 3/6/2018 - 80-Day 60 Min Sample 5/22/2018 6/7/2018	6.4 9.8 36 20	67 220 120	ND ND 3.3	ND ND ND	ND 29 ND	10 28 5.9	ND ND 1.4	ND ND ND	ND ND ND	ND ND	1,900 65	350 ND	690 ND	ND ND	26,000 ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND 2	ND ND	ND ND	ND ND	313 151	29,253 218
Rebound Start 1/19/2018 - 35-Day 60 Minute Sample 3/6/2018 - 80-Day 60 Min Sample 5/22/2018	6.4 9.8 36	67 220	ND ND	ND ND	ND 29	10 28	ND ND	ND ND	ND ND	ND	1,900	350	690	ND	26,000	ND	ND	ND	313	29,253						
Rebound Start 1/19/2018 - 35-Day 60 Minute Sample 3/6/2018 - 80-Day 60 Min Sample 5/22/2018 6/7/2018 6/20/2018	6.4 9.8 36 20	67 220 120	ND ND 3.3	ND ND ND	ND 29 ND	10 28 5.9	ND ND 1.4	ND ND ND	ND ND ND	ND ND	1,900 65	350 ND	690 ND	ND ND	26,000 ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND 2	ND ND	ND ND	ND ND	313 151	29,253 218
Rebound Start 1/19/2018 - 35-Day 60 Minute Sample 3/6/2018 - 80-Day 60 Min Sample 5/22/2018 6/7/2018	6.4 9.8 36 20	67 220 120	ND ND 3.3	ND ND ND	ND 29 ND	10 28 5.9	ND ND 1.4	ND ND ND	ND ND ND	ND ND	1,900 65	350 ND	690 ND	ND ND	26,000 ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND 2	ND ND	ND ND	ND ND	313 151	29,253 218
Rebound Start 1/19/2018 - 35-Day 60 Minute Sample 3/6/2018 - 80-Day 60 Min Sample 5/22/2018 6/7/2018 6/20/2018	6.4 9.8 36 20	67 220 120	ND ND 3.3	ND ND ND	ND 29 ND	10 28 5.9	ND ND 1.4	ND ND ND	ND ND ND	ND ND	1,900 65	350 ND	690 ND	ND ND	26,000 ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND 2	ND ND ND	ND ND	ND ND	313 151	29,253 218
Rebound Start 1/19/2018 - 35-Day 60 Minute Sample 3/6/2018 - 80-Day 60 Min Sample 5/22/2018 6/7/2018 6/20/2018	6.4 9.8 36 20	67 220 120	ND ND 3.3 2.7	ND ND ND ND	ND 29 ND ND	10 28 5.9 4.2	ND ND 1.4	ND ND ND	ND ND ND	ND ND	1,900 65 57	350 ND	690 ND	ND ND	26,000 ND	ND ND	ND ND ND	ND ND ND	ND ND	ND ND ND	ND 2	ND ND ND	ND ND	ND ND	313 151 152	29,253 218
Rebound Start 1/19/2018 - 35-Day 60 Minute Sample 3/6/2018 - 80-Day 60 Min Sample 5/22/2018 6/7/2018 6/20/2018 SVE-8	6.4 9.8 36 20 24	67 220 120 120	ND ND 3.3 2.7	ND ND ND ND	ND 29 ND ND	10 28 5.9 4.2	ND ND 1.4 1.5	ND ND ND ND	ND ND ND	ND ND 1.5	1,900 65 57 Freon	350 ND ND	690 ND ND	ND ND ND	26,000 ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND 2 3.4	ND ND ND 1,2,4- Trimethylbe	ND ND ND	ND ND ND	313 151 152 Total	29,253 218 214

Table 2-1 TO-15 Analytical Results - 4-78/79 SVE System

SVE-10

34F-10																										
				trans-1,2-							Freon						Carbon	m,p-		Ethyl		1,2,4- Trimethylbe			Total	
Date	PCE	TCE	DCE	DCE	Chloride	1,1,1-TCA	1,1-DCA	1,1-DCE	Acetone	Benzene	113	Hexane	Pentane	Toluene	TPHg	MEK	Disulfide	Xylene	o-Xylene	Benzene	Chloroform	nzene	Cumene	Styrene	Chlorinated	Total VOCs
3/18/2016	ND	250	13	ND	ND	6.9	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	270	286
6/30/2016	1.5	250	17	ND	7.1	6.2	ND	ND	ND	ND	120	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	282	402
9/12/2016	2.6	320	97	2.1	18	7.9	2.3	1.6	ND	ND	130	ND	ND	2.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	452	584
12/16/2016	ND	91	95	1.4	28	3.3	1.6	1.4	ND	ND	95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	222	317
4/5/2017	1.4	240	19	ND	ND	10	ND	ND	ND	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	270	290
8/16/2017	2.6	300	42	ND	ND	14	1.4	ND	ND	ND	34	ND	ND	9.5	260	ND	ND	2.9	1.6	ND	ND	1.5	ND	ND	360	670
12/8/2017 -																										
Rebound Start	ND	180	11	ND	ND	6.3	ND	ND	ND	ND	8.9	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	197	207
1/19/2018 - 35-Day																										
60 Minute Sample	1.7	330	13	ND	ND	28	1.2	ND	ND	ND	39	ND	ND	1.4	ND	17	ND	ND	ND	ND	ND	ND	ND	ND	374	431
1/19/2018 - 35-Day																										
180 Minute Sample	1.8	350	15	ND	ND	24	1.3	ND	ND	ND	31	ND	ND	ND	ND	37	ND	ND	ND	ND	ND	ND	ND	ND	392	460
3/6/2018 - 80-Day 60																										
Min Sample	1.7	330	12	ND	ND	41	1.7	ND	ND	ND	59	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	386	445
3/6/2018 - 80-Day																										
180 Min Sample	1.6	300	12	ND	ND	32	ND	ND	ND	ND	41	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	346	387
5/22/2018	5.4	720	23	ND	ND	70	ND	ND	ND	ND	77	ND	17	38	480	ND	ND	19	7.6	6.9	ND	ND	ND	11	818	1,475
6/7/2018	1.6	230	14	ND	ND	8.5	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	254	265
6/20/2018	1.9	300	15	ND	ND	11	ND	ND	11	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	328	350

SVE-1	2																										
																							1,2,4-				
				cis-1,2-	trans-1,2-	Vinyl						Freon						Carbon	m,p-		Ethyl		Trimethylbe			Total	ı
Date		PCE	TCE	DCE	DCE	Chloride	1,1,1-TCA	1,1-DCA	1,1-DCE	Acetone	Benzene	113	Hexane	Pentane	Toluene	TPHg	MEK	Disulfide	Xylene	o-Xylene	Benzene	Chloroform	nzene	Cumene	Styrene	Chlorinated	Total VOCs
	8/16/2017	2.8	320	16	ND	ND	7	ND	ND	ND	ND	4.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	346	350

Notes:
(1) The TO-15 sample results from this day were considered anomalously low based on multiple PID measurements at the time and subsequent TO-15 samples from system operation

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

ND = non-detect

DCA = Dichloroethane

DCE = Dichloroethene

MEK = methyl ethyl ketone or 2-butanone

PCE = Tetrachloroethene

TCA = Trichloroethane

TCE = Trichloroethene

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

Table 2-2 PID Monitoring - 4-78/79 SVE System

Date	Days in Operation Since Startup 1	SVE-01	SVE-02	SVE-03	SVE-04	SVE-05	SVE-06	SVE-07	SVE-08	SVE-09	SVE-10	SVE-11	SVE-12	SVE-13	SVE-14	SVE-15	VPC Inlet	VPC Mid	VPC Outlet ²	Notes
10/11/2018	1,117																311		0	
10/19/2018	1,125																422		0	Background PID at 340 ppb.
10/31/2018	1,137																418			System down; PLC screen is off with no warning or cause listed for system turning off. Possible power outage. Restart system.
11/1/2018	1,138														·			·		System turned off following approval from Ecology.

Notes

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

PID values listed are field measurements calibrated to isobutylene that have not been corrected to the ionization potentials of the target compounds

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

 $^{^{\}rm 1}$ Days in operation since system startup on April 17, 2015.

² Concentrations measured are at the low end of the range of concentrations able to be measured by the PID. Data presented should be compared with analytical results presented in Table 2-1 which show no detections of COCs.

Table 2-3 VOC Mass Removal Estimate - 4-78/4-79 SVE System

Date	PID Reading (ppbv)	Corrected Value (VOC) (ppbv) 1	System Flow (cfm)	Cumulative Runtime Hours	VOCs removed in Operating Period Between Monitoring Events (lbs)	Cumulative VOC Mass Removed Since Start of SVE Operations in April, 2015 (lbs)
10/11/2018	311	181	105	21,190	0.24	19.51
10/19/2018	422	246	98	21,381	0.10	19.61
10/31/2018	418	244	105	21,432	0.03	19.64

Notes:

PID = photoionization detector ppbv = parts per billion by volume

cfm = cubic feet per minute

lbs = pounds

A correction factor of 0.58 has been applied to the PID vapor measurement for VOCs based on the mixture of analytes detected in the influent TO-15 analysis on 6/20/18.

TO-15 analysis results showed Trichloroethene made up of 89% of the total VOCs removed in the 6/20/18 results.

Table 2-4 TO-15 Analytical Results - SWMU-172/174 SVE System

SVF	S١	/stem	In	let

JVL Jystein iniet																
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																ĺ
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

SVE-2

				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
	8/30/2018	180	14	6.1	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	200	200

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

VPC Outlet																
	205	705	cis-1,2-	trans-1,2-		444 701	44.004			v 1	CI. C				Total	Total
Date	PCE	TCE	DCE	DCE	Chloride	1,1,1-TCA	1,1-DCA	Acetone	Toluene	m,p-Xylene	Chloroform	o-xyiene	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	25.2
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.

Table 2-5 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
10/11/2018	1,110			Vent	40	0	0	
10/19/2018	1,118			Vent	282		0	
10/31/2018	1,130		222	Vent	182		38	
11/12/2018	1,142		91	Vent	12		0	Changed blower oil
11/28/2018	1,158	128	419	Vent	462		37	
12/5/2018	1,165	0	142	Vent	75			After initial readings, modified system to vent from SVE-1 and pull soil vapor from SVE-2 and SVE-3.
12/5/2018	1,165	Vent	153	174	174			Readings ~1 hrs after system flow modification.
12/5/2018	,		316		252			Readings ~3 hrs after system flow modification.
12/14/2018 12/21/2018	,		0		41 23		0	

Notes:

Operational change was made on 12/5/18. 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.

¹ Days in operation since system startup on April 17, 2015.

Table 2-6 VOC Mass Removal Estimate - SWMU 172/174 SVE System

					VOCs removed in	
					Operating Period	Cumulative VOC Mass
	PID Reading	Corrected Value	System Flow	Cumulative	Between Monitoring	Removed Since Start of SVE
Date	(ppbv)	(PCE) (ppbv) ¹	(cfm)	Runtime Hours	Events (lbs)	Operations in April, 2015 (lbs)
10/11/2018	40	23	77	20,713	0.023	14.31
10/19/2018	282	162	70	20,869	0.043	14.35
10/31/2018	182	104	77	21,136	0.052	14.40
11/12/2018	12	7	77	21,401	0.003	14.41
11/28/2018	462	265	77	21,743	0.169	14.58
12/5/2018	75	43	77	21,892	0.012	14.59
12/5/2018	174	100	90	21,893	0.000	14.59
12/5/2018	252	144	90	21,896	0.001	14.59
12/14/2018	41	23	90	22,104	0.011	14.60
12/21/2018	23	13	90	22,466	0.010	14.61

Notes:

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

lbs = pounds

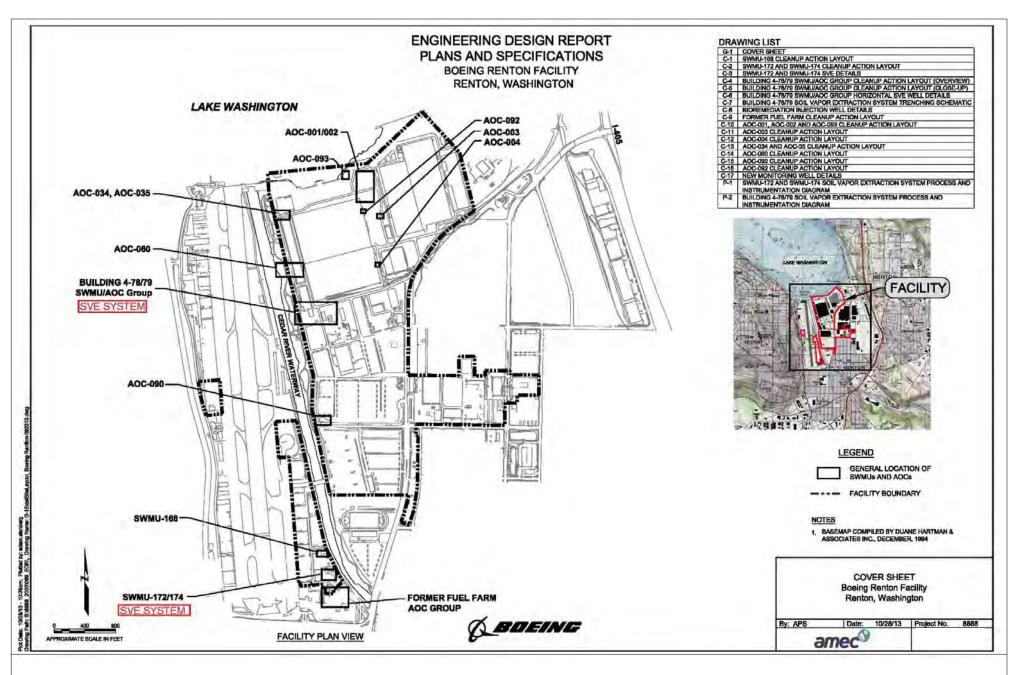
TO-15 analysis results showed Tetrachloroethene made up 90% of the total VOCs removed at the influent on 8/30/18.

¹ 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 8/30/18.

Table 3-1 Groundwater Monitoring Results Summary November 2018 and Recommended ERD Treatment

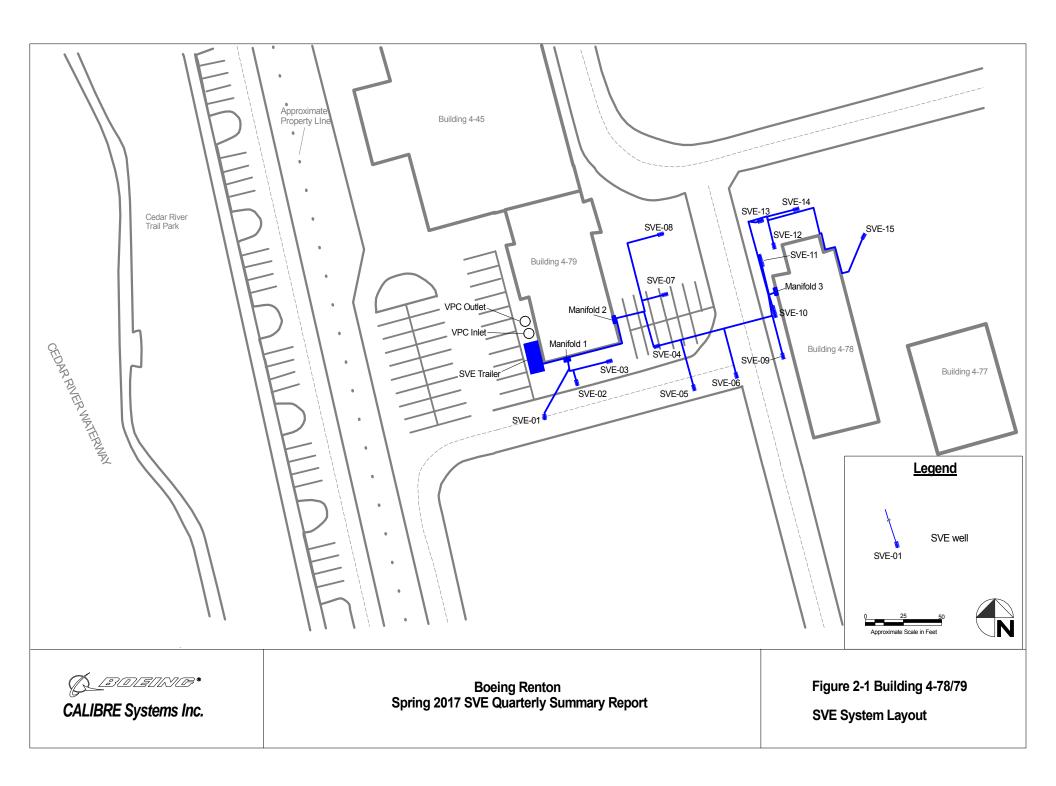
GW Treatment Area	Source and downgradient	CPOC wells	Treatment IWs	ERD Treatment
SWMU-172/174	PCE and TCE less than 1.0 ug/L; cisDCE less than 2.0 ug/L; VC less than 0.30 ug/L.	All detections are at 0.56 ug/L or less.	Prior data, North and South IWS showed total CVOCs range from 0.03 ug/L to 6.90 ug/L. TOC near background.	Substrate injection completed in July 2018. Continue monitoring.
Building 4-78/4-79 SWMU/AOC Group	TCE is ND; cisDCE and VC are ND or less than 0.55 ug/L at all but one well. One central well (GW033S) continues to show significant reductions in total CVOCs from 1,430 ug/L in Nov 2017. Recent data show 150 ug/L in May 2018, 8.5 ug/L in Aug 2018, and 46 ug/L in Nov 2018 after substrate injections in January and July 2018. Benzene increased at source well GW031S (from 3 ug/L in Aug 2018 to 28 ug/L in Nov 2018). Nitrate/sulfate injected in December 2018.	All CPOC wells with CVOCs either ND or slightly above CULs. Max VC concentration at 0.29 ug/L (CUL is 0.20 ug/L).	Prior data, 4 of 5 wells with low detections where sum of CVOCs are less than 3 ug/L	Substrate injection in selected IWs/areas around GW033S completed in July 2018. Recommend additional substrate in this area as CVOCs increased at GW033S.
AOC-001/002	Prior data, MW near source at 1.2 ug/L; downgradient all detections are less than 2.5 ug/L.	All detections remain below 0.75 ug/L.	Prior data, detections at or below 0.30 ug/L.	Inject infiltration galleries at source (IPRA and IPRB) when area is accessible.
AOC-003	All detections are less than 1.0 ug/L.	All detections are less than 1.0 ug/L.	Prior data, in 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	Two of three wells are ND; other well shows TCE at 0.28 ug/L and cisDCE at 0.25 ug/L.	-	-	No action
AOC-60	Prior data, detections less than 5 ug/L; elevated TOC at treated wells.	Prior data, all detections less than 0.10 ug/L	-	Substrate injection completed in July 2018. Continue monitoring.
AOC – 90	Prior data, MW near source at 27 ug/L CVOCs; downgradient wells less than 0.30 ug/L; elevated TOC at treated well.	Prior data, all detections are less than 0.40 ug/L.	-	Substrate injection at GW- 189S completed in July 2018. Continue monitoring
Apron A	Two of three wells ND; other well shows VC at 0.55 ug/L.	-	-	No action
Building 4-70	-	Prior data, CVOCs at 0.70 ug/L and 0.22 ug/L.	-	No action

FIGURES



CALIBRE Systems, Inc.

Figure 1-1 Site Location/ AOC Outlines



25 Increased measurement suspected from observed System shut down background air sources (painting operations) 20 Rebound testing Gap represents system downtime due to VOCs Removed (lbs) high water in winter 5 0 Aug-15 Jan-16 Jun-16 Nov-16 Mar-17 Aug-17 Jan-18 Jun-18 Apr-15 Nov-18 Date **VOC Mass Removed** -Operational Changes

Figure 2-2 Cumulative VOC Mass Removed - 4-78/79 SVE System

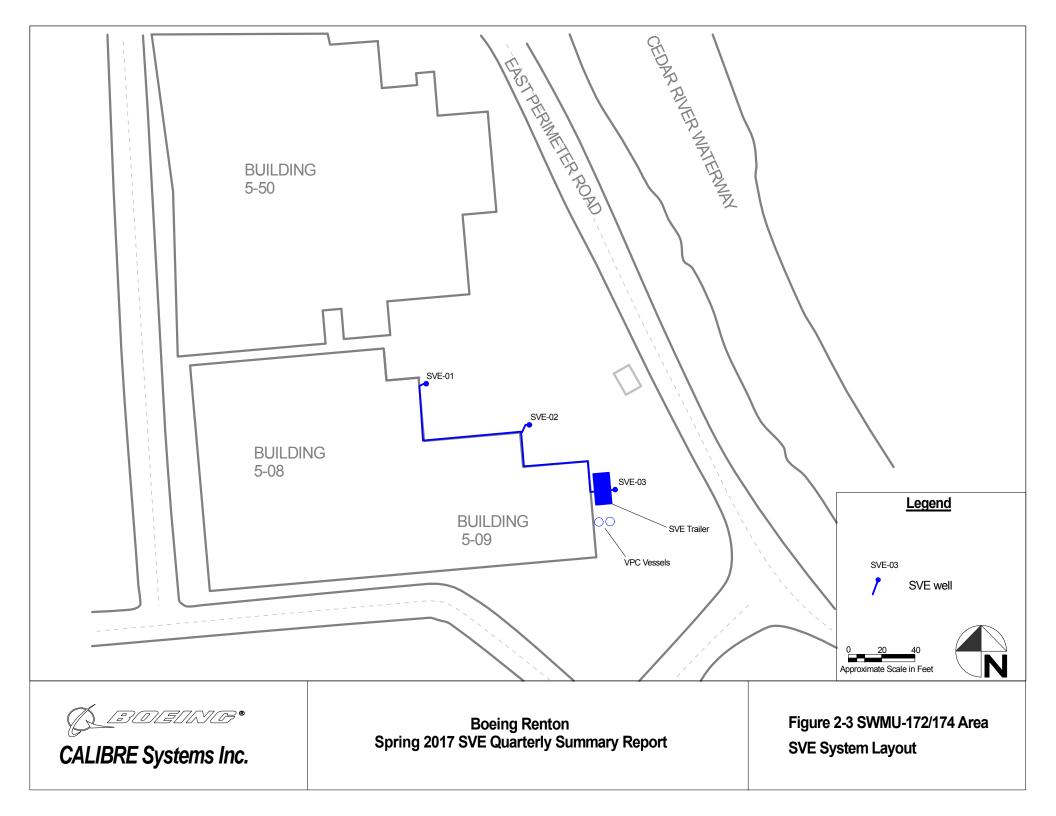
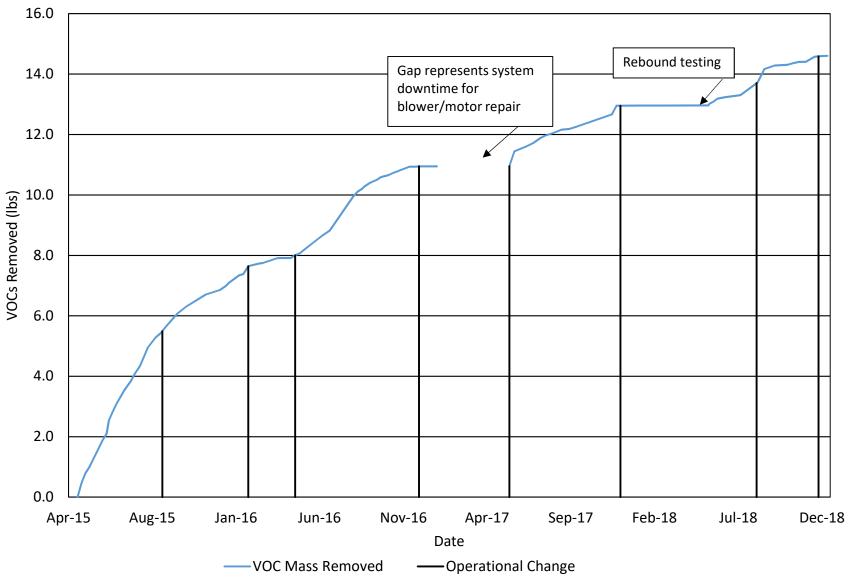


Figure 2-4 Cumulative VOC Mass Removed - SWMU-172/174 SVE System



^{*}SWMU 172/174 SVE system did not run Winter 2017 due to equipment failure.

Attachment A: Field Log Forms

Inspection Date:	10/11/18	Date of last inspection: 9/17/18	
Periodic systems	Vacuum praesura n	oisture separator, water storage drums	
1) Check nownate,	E well VPC inlet and	VPC outlet with PID.	
2) Check each 3 v	Oper	ational Parameters - Monitoring interval is varia	ble.
Inspection Time:	0830	Motor Hours: 5 296.3	
Blower	Current Value	Other Note	98
Vacuum gauge	35"420		
Pressure gauge	13"1120		
System flow rate	1055cFm		
Blower Temperature	170F		
Temp.at lag VPC discharge		s, TEFC motor fan, any unusual noise/vibration	

PID Model:	PPB RA	DE 3000		Details:	O PPS	110.00,00	a	
Calibration time	e/ date:	11/18 0740		PID check	after monitor	ing:		
Sampling Point	Time	PID Reading (1)	PID Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated ¹	Well
SVE-01								
SVE-02								
SVE-03								
SVE-04								
SVE-05								
SVE-06						Time Market		
SVE-07								
SVE-08								
SVE-09								
SVE-10								
SVE-11								
SVE-12								
SVE-13								
SVE-14								
SVE-15								
Other:								

Sampling Point	Time	PID Reading (1)	PID Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated ¹	Well
VPC Inlet	0840	311 pts	303895					
VPC Midpoint								
VPC Outlet	0845	OPPS	o ppb					

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

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		Contract of the second	15 Porto
Signature	Printed Name	Signature	Date

nspection Date: _ Periodic systems () Check flowrate,	vacuum pressure. m	Date of last inspection:	
2) Check each SV	E wall VPC inlet and	d VPC outlet with PID. rational Parameters - Monitoring interval is variable.	
Inspection Time:		Motor Hours: 54869	
Blower	O Current Value	Other Notes	
Vacuum gauge	31"H20	Buckground PID = 340 APS	
Pressure gauge	14"420		
System flow rate	9856FM		
Blower Temperature	12708		
Temp.at lag VPC discharge		Its, TEFC motor fan, any unusual noise/vibration	

PID Model:	PPRO	AE 3000		Details:	0 776	19996 7	25	
Calibration time	e/ date:	1/19/18 07	15	PID check	after monitor	ing:		
Sampling Point	Time	PID Reading (1)	PID Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated ¹	Well Off
SVE-01								
SVE-02								
SVE-03								
SVE-04								
SVE-05								
SVE-06								
SVE-07					-			
SVE-08								
SVE-09								
SVE-10								
SVE-11								
SVE-12								
SVE-13								
SVE-14								
SVE-15					100/10000			
Other:								

Sampling Point	Time	PID Reading (1)	PID Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated ¹	Off
VPC Inlet	0755	422pps						
VPC Midpoint								
VPC Outlet	0757	0 275						

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

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Signature Justin Nusru
Printed Name Signature Date

2) Check each S\	re well, vPC inlet, an	moisture separator, water storage drums d VPC outlet with PID.
Inquastic Ti	Ope	rational Parameters - Monitoring interval is variable.
Inspection Time:	0730	Motor Hours: 5 5 38 . 5
Blower	Current Value	
Vacuum gauge	33" Hz	System Pown. Ple screen is off w/ me weren
Pressure gauge	15" H20	System Pown. Ple serven is off w/ no worning or cause lated to- system turning off. Possibly a power entage. Restorted system
System flow rate	1055cFM	a form on any 2. Restorted system
Blower Temperature	102°F	
Temp.at lag VPC discharge		s, TEFC motor fan, any unusual noise/vibration

PID Model:	PPB e	AE 3000		Details:	Oppo	100 00		
Calibration time	e/ date:	13/18 0730	•	PID check	after monitor	10.00 ging:	ppm	
Sampling Point	Time	PID Reading (1)	PID Reading (2)	Vacuum	Flow Rate	Differential	Flow Rate	Well
SVE-01			(2)		(gauge)	Pressure	Calculated ¹	Off
SVE-02								
SVE-03								
SVE-04								
SVE-05								
SVE-06								
SVE-07								
SVE-08								-
SVE-09								
SVE-10								
SVE-11				- V				
SVE-12								
SVE-13								
SVE-14								
SVE-15								
Other:								W.

Sampling Point	Time	PID Reading (1)	PID Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated ¹	Well
VPC Inlet	0749	375,000	418,025					
VPC Midpoint								
VPC Outlet	0745	Opple	opps					

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

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Signature	Printed Name	Signature	Date

 Check flowrate, Check each SV 	F well VPC inlet and	oisture separator, water storage drums I VPC outlet with PID.	
-) Oncor oden or	Ope	ational Parameters - Monitoring interval is variable.	
Inspection Time:	0745	Motor Hours: 5881.2	
Blower	Current Value	Other Notes	
Vacuum gauge	49"1+20		
Pressure gauge	14"Hz0		
System flow rate	7756=m		
Blower Temperature	108°F		
Temp.at lag			
Other notes: ch	eck oil level, drive be	ts, TEFC motor fan, any unusual noise/vibration	

Calibration time	PBRAE date: 10	11/18 0740	PID check	after monitor	ing:		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Sampling Point	Time	PID Reading (1)	PID Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated ¹
SVE-01				1110 (144)			
SVE-02							
SVE-03	ve	NT					
VPC Inlet	0750	40285	36295				
VPC Midpoint	0752	0 200	Opph				
VPC Outlet	0755	o ppb	0 10105				
Other vapor point							

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

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Signature	Junin Nusc Printed Name	Signature	

) Check flowrate) Check each S\	check: , vacuum, pre	ssure, moistur	e separat	or, water sto	orage drums			
) Check each 5	/E well, vrc i	Operation	al Param	eters - Moni	toring interval	is variable.		
Inspection Time	0715		tor Hours					
Blower	Current	Value		- A	Oth	er Notes		
Vacuum gauge	55" It2	ð						
Pressure gauge	10"H20							
System flow rate	70 ScF	m						
Blower Temperature	117°F							
Temp.at lag VPC discharge								Octobra de la constanta de la
Other notes: ch	leck on level,	arrec bono, i L	i o moto.	,,				
PID Model:	20004	= 240)		Details:	0794	0 /9.99	16 2pb	
4 44 400 400	PPB RAE I date: 10/19		15		OPP &	1 1	16 7pb	
4 47 (1017)		3000 1/18 0 70 PID Reading (1)	g PID			1 1	Differential Pressure	The second second
Calibration time	date: 10 / 19	PID Reading	g PID	PID check	after monitor	ing:	Differential	The second second
Calibration time Sampling Point SVE-01	date: 10 / 19	PID Reading	g PID	PID check	after monitor	ing:	Differential	The second second
Calibration time Sampling Point SVE-01 SVE-02	date: 10 / 19	PID Reading	g PID	PID check	after monitor	ing:	Differential	The second second
Calibration time Sampling Point SVE-01 SVE-02 SVE-03	date: 10 / 19	PID Reading	g PID	PID check Reading (2)	after monitor	ing:	Differential	The second second
Calibration time Sampling Point SVE-01 SVE-02 SVE-03 VPC Inlet	date: 10/14 Time	PID Reading	g PID	PID check Reading (2)	after monitor	ing:	Differential	The second second
Calibration time Sampling Point	date: 10/14 Time	PID Reading	g PID	PID check Reading (2)	after monitor	ing:	Differential	Flow Rate Calculated

Questions? Call Justin Nest At the Completion of a moni	e @ (360) 981-5606 toring event scan monitoring forms ar	nd email to Justin Neste: Justin.Ne	ste@calibresys.com
Signature	Onstin Mestro Printed Name	Signature	tilla 18 Date

J CHECK Each 3V	Ope	d VPC outlet with PID. rational Parameters - Monitoring interval is variable.
Inspection Time:		Motor Hours: 6303.4
Blower	Current Value	Other Notes
Vacuum gauge	51"1120	
Pressure gauge	11 It zu	
System flow rate	775cFm	
Blower Temperature	115°F	
Temp.at lag VPC discharge		

Calibration time	date: 10/	3118 0730	PID check	after monitor	ing:		
Sampling Point	Time	PID Reading (1)	PID Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated ¹
SVE-01		2					
SVE-02	0825	182 pib	179776				
SVE-03	ve	ct					
VPC Inlet	C820	182ppb	174PP5				
VPC Midpoint							
VPC Outlet	0817	38 225	0775				
Other vapor point							

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

At the Completion of a mon	itoring event scan monitoring forms and e	mail to Justin Neste: Justin.Nest	e@calibresys.com
	TastinNesse	(h=0=	10/34/18
Signature	Printed Name	Signature	Date

2) Check each SVI	E well, VPC inlet, and Ope	d VPC outlet with PID. rational Parameters - Monitoring interval is variable.	***************************************
Inspection Time:		Motor Hours: 6568-7	
Blower	Current Value	Other Notes	
Vacuum gauge	53 " ltzu	Changed blows oil	
Pressure gauge	11HzD		
System flow rate	77 scFm		
Blower Temperature	106°F		
Temp.at lag VPC discharge		ts, TEFC motor fan, any unusual noise/vibration	

PID Model: PPBRAE3000			Details:	0 006	19,996	PPS	
Calibration time	e/ date: (1) (2	1.80900	PID chec	k after monitor			
Sampling Point	Time	PID Reading (1)	PID Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated ¹
SVE-01							
SVE-02	0921	91,706	66 PPb				
SVE-03	ven						
VPC Inlet	0918	12ppb	Oppb				
VPC Midpoint							-
VPC Outlet	0916	0970	0706				
Other vapor point							

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

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	Justin Nesse		11/12/16
Signature	Printed Name	Signature	Date

) Check each Svi	e well, vPC lillet, and Opel	VPC outlet with PID. ational Parameters - Monitoring interval is variable.
Inspection Time:	0900	Motor Hours: 69 10.6
Blower	Current Value	Other Notes
Vacuum gauge	56"1120	
Pressure gauge	12"420	
System flow rate	77SLFM	
Blower Temperature	11704	
Temp.at lag VPC discharge		ts, TEFC motor fan, any unusual noise/vibration

PID Model: PPBRAE 3000			Details:	OP	P5 /10,0	Oppm	
Calibration time		8/18 0900	PID check	PID check after monitoring:			
Sampling Point	Time	PID Reading (1)	PID Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated
SVE-01	0945	126800	128 ppb				
SVE-02	0940	419ppb	382ppb				
SVE-03	Ven	1					
VPC Inlet	0935	462005	455 pgs				
VPC Midpoint							
VPC Outlet	0930	33245	37225				
Other vapor point							

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

Questions? Call Justin Nes At the Completion of a mod	ste @ (360) 981-5606 nitoring event scan monitoring forms	and email to Justin Neste: Justin.Ne	este@calibresys.com
Signature	Tusta Walste	Signature	11/28/16 Date

inspection bate.	12/5/18	Date of last inspection: 11/28/18	
) Check flowrate,	vacuum, pressure, n	noisture separator, water storage drums	
 Check each SV 	E well, VPC inlet, and	d VPC outlet with PID.	
	Ope	rational Parameters - Monitoring interval is variable.	
Inspection Time:	0855	Motor Hours: 7059.9	
Blower	Current Value	Other Notes	
Vacuum gauge	55"Hz0	closed stel value & opened as vent	
		and a closed vent	
Pressure	12" Hz0	Vox = 35"HW 1005 IN = 119PPS	
gauge		Pres = 18" 470 1010 SUES 177 PP9 174	
System flow rate	77 Scfm	Opened 50 = 35" Hzv 1005 IN = 174 ppb Voic = 35" Hzv 1005 IN = 174 ppb Pres = 18" 4zv 1010 SUE 3 = 173 ppb/149 Flow = 90 scrow 10158 UE 2 = 153 ppb/149	
Blower	100°F	Temp = 910F 10185	
Temperature	100	1130 110	
Temp.at lag VPC discharge		Temp= 09107 1130 IN = 244/252PPS 1137 SUEZ = 316 PPS 1140 SVE3 = 187PPS	

PID Model: PPB RAE 3000					Details: Oppb/10.00 ppm						
Calibration time/ date: 12/5/18 0055				PID check after monitoring:							
Sampling Time PID		PID Reading (1)	PIDF	Reading (2)	ng Vacuum		Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated ¹		
SVE-01	0915	Oppb	D PP	b c	lose	lver					
SVE-02	0912	135 ppb	142			· 10"420	730scFm	10"Hz0	39 x Fm		
SVE-03	Vent			10	pen	7"1120	7305FM	17"H20	50 SUFM		
VPC Inlet	0907	74000	75	PPb							
VPC Midpoint		74000	75	-		1.0					
VPC Outlet	0903	O ppb	Opp	de							
Other vapor point											

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

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Signature	Printed Name	Signature	Date

Renton Cleanup Action SVE System - SWMU 172/174 Field Operations Log Form Date of last inspection: Inspection Date: Periodic systems check: 1) Check flowrate, vacuum, pressure, moisture separator, water storage drums 2) Check each SVE well, VPC inlet, and VPC outlet with PID. Operational Parameters - Monitoring interval is variable. Motor Hours: Inspection Time: 1030 7,270.4 **Current Value Other Notes** Blower 35 " (tru) Vacuum gauge Pressure 18"H20 gauge System flow 90 SURM rate Blower Temperature Temp.at lag VPC discharge Other notes: check oil level, drive belts, TEFC motor fan, any unusual noise/vibration PID Model: PPB RAESON Details: PID check after monitoring Calibration time/ date: 12/14 PID Reading **Differential** Flow Rate PID Reading Vacuum Flow Rate Sampling Time Calculated1 **Point** (2)(gauge) **Pressure** (1) Neur SVE-01 SVE-02 doo (SVE-03 **VPC** Inlet

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

Questions?	Call	Justin	Neste	@	(360)	981	-5606
GUCCUIOTIO.	COLL	OCCUIII	110000	(00)	(000)	00.	

VPC Midpoint

VPC Outlet
Other vapor point

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2. Chiana	Tuckin Neste	(= n=	12/14/1
Signature	Printed Name	Signature	Date

) Check each SVI		Operationa	l Parame	eters - Moni	toring interval	is variable.				
Inspection Time:	1240	Mote	or Hours:	7,437				and the second second		
Blower	Current	t Value			Oth	er Notes				
Vacuum gauge	37"4	20								
Pressure gauge	20"420									
System flow rate	90 sc									
Blower Temperature	98°F									
Temp.at lag VPC discharge Other notes: che	eck oil level	, drive belts, TEF	-C motor	fan, any un	usual noise/vi	bration				
PID Model:				Details:						
A TO SOLVE		1.000								
Calibration time/	date:			PID check after monitoring:						
Sampling Point	Time	PID Reading (1)	PID	Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated		
SVE-01		Vent								
SVE-02		O pps	0	ppb						
SVE-03		\$1 ppb	93	796						
VPC Inlet		18 ppb	23	PPD	·y					
VPC Midpoint	111411111111111111111111111111111111111									
VPC Outlet		UPPO	0 p	Pb						
Other vapor point										
1. Flow rate ca	liculated from t	the equation Flow Ro	ate (cfm) =	$12.24 \times \sqrt{dif}$	ferential pressur	e.				
Questions? Call J At the Completion	ustin Neste of a monito	@ (360) 981-56 oring event scan	06 monitorir	ng forms and	d email to Jus	tin Neste: Justii	n.Neste@calibr	esys.com		
Signature			Printed Name Signature							