

Quarterly Report, First Quarter 2020

RCRA Corrective Action Program
Boeing Renton Facility
Project # PS20203450.2020 The Boeing Company

Prepared for:

The Boeing Company
Seattle, Washington



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Prepared for:

The Boeing Company Seattle, Washington

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Wood Environment & Infrastructure Solutions, Inc.



05/15/2020

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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 first quarter 2020. This work is required under the Resource Conservation and Recovery Act (RCRA) Corrective Action Program being performed at the 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 Addendum to the Compliance Monitoring Plan (Wood, 2019), which contains changes to the revised Compliance Monitoring Plan (Amec Foster Wheeler, 2016a) that superseded the original plan presented in Appendix D of the EDR (AMEC, 2014).

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

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

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

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



groundwater for drinking water beneficial uses compare concentrations of constituents of concern (COCs) to both the current site specific cleanup levels (CULs) specified in the CAP (which were based primarily on drinking water and protection of surface water beneficial uses) and to proposed updated CULs from the CALIBRE Systems, Inc. (CALIBRE) December 17, 2019, technical memorandum (CALIBRE, 2019a), which proposed revised CULs based on Model Toxics Control Act (MTCA) criteria for potable water that are demonstrated to be protective of other exposure pathways and promulgated criteria. Ecology has made several clarifications and changes to MTCA since the draft CAP was prepared that are relevant to Facility CULs. These proposed revised CULs are referenced herein as *proposed* CULs, while the CULs specified in the CAP are referenced as *current* CULs.

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 CULs at the CPOCs.

This report presents this information for the first quarter of 2020—the period from January through March 2020.

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 first quarter 2020

The following work was completed during the first quarter of 2020, the period from January through March 2020:

- On behalf of Boeing, Wood Environment & Infrastructure Solutions, Inc. (Wood) submitted the fourth quarter 2019 report to Ecology on February 17, 2020.
- Nitrate injections at the Building 4-78/79 area were completed during January 2020.
- Injection well sampling at Building 4-78/79 was completed during February 2020.
- Groundwater monitoring for the first quarter of 2020 was completed during March 2020.



1.1.2 Deviations from required tasks

There were no deviations from required tasks during this activity period, and there are no planned deviations for the next 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 second quarter of 2020:

- Reporting will be completed in accordance with the Order, CAP, EDR, Addendum to the Compliance Monitoring Plan (Wood, 2019), and any changes approved by Ecology.
- Groundwater sampling and analysis for the second quarter of 2020 will be completed.
- Nitrate and sugar substrate injections will be performed as needed
- Boeing will submit a response to Ecology's comments regarding the December 17, 2019, technical
 memorandum discussing updated CULs, and will provide a recommendation for modifications to the
 groundwater monitoring program in accordance with the CAP to reduce monitoring where COCs have
 been below cleanup levels for eight consecutive monitoring events.

2.0 Groundwater sampling methodology

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

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

3.0 Corrective action activities completed during quarter

This section describes the corrective action activities conducted at the Facility during the first quarter of 2020. Operation of the SVE system at SWMU-172/174 continued during the first quarter, as discussed in Section 3.2.1.2. Quarterly compliance monitoring was conducted in accordance with the Addendum to the Compliance Monitoring Plan (Wood, 2019).

3.1 SWMU-168

This section describes corrective action activities conducted at this SWMU. Figure 1 shows the location of the groundwater monitoring wells at SWMU-168, as well as the groundwater elevations measured during this monitoring event. The cleanup remedy for SWMU-168 is MNA; therefore, cleanup activities consist of monitoring only.

3.1.1 Cleanup action activities

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

3.1.2 Compliance monitoring plan deviations

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

3.1.3 Water levels

Groundwater elevations measured during the first quarter 2020 groundwater monitoring event at SWMU 168 are summarized in Table 1 and shown on Figure 1. Groundwater elevation contours are not shown due to the limited number of shallow groundwater monitoring wells.

3.1.4 Groundwater monitoring results

Results for primary geochemical indicators are presented in Table 2; results for the SWMU-168 COCs are presented in Table 3; and COC results for the last eight consecutive quarters are presented in Appendix D. Groundwater in this area is monitored following the schedule presented in Tables A-1 and A-2 in Appendix A, which includes semiannual monitoring at the CPOC for both the area COCs and the primary geochemical indicators listed in Table A-2.

3.1.4.1 Natural attenuation/geochemical indicators

The geochemical indicator results are presented in Table 2. Data from the CPOC area wells indicate that conditions are conducive to natural attenuation of vinyl chloride (VC) in this SWMU. The results for dissolved oxygen (DO) and oxidation reduction potential (ORP) measurements indicate reducing conditions. The pH values measured in all wells were near neutral.

3.1.4.2 COC results for source area

Groundwater samples were not collected from the source area well for SWMU-168, following the sampling schedule presented in Tables A-1 and A-2.

3.1.4.3 COC results for conditional point of compliance area

Monitoring results for the CPOC area monitoring wells are shown in Table 3. VC was not detected in CPOC area wells GW229S and GW231S The concentration of VC in the groundwater from CPOC well GW230I was below both *current* and *proposed* CULs for VC. As shown in Table D-1 in Appendix D, VC



concentrations in the groundwater collected from CPOC wells GW229S and GW231S have been below *current* and *proposed* CULs for the last eight consecutive quarters.

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 SVE, bioremediation, and MA. Figure 2 shows the layout of the groundwater monitoring and 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 first quarter.

3.2.1.2 Soil vapor extraction and bioremediation operations

The SVE system at SWMU-172 and SWMU-174 operated normally during the first quarter until a shutdown in March 2020. The shutdown occurred due to the COVID-19 pandemic and the system is tentatively set to restart in May 2020, pending state work orders. Details for system operations are included in the SVE operations and monitoring report prepared by CALIBRE (Appendix E).

3.2.2 Compliance monitoring plan deviations

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

3.2.3 Water levels

Groundwater elevations for the SWMU-172 and SWMU-174 area measured during the first quarter 2020 are summarized in Table 4 and shown on Figure 2. The contoured data for March 2020 show that groundwater is generally flowing 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 at 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 5; results for the SWMU-172 and SWMU-174 area COCs are presented in Table 6; and COC results for the last eight consecutive quarters are presented in Appendix D.

3.2.4.1 Monitored attenuation/geochemical indicators

The geochemical indicator results are presented in Table 5. Total organic carbon (TOC) concentrations ranged from 1.25 milligrams per liter (mg/L) to 45.66 mg/L for all SWMU-172 and SWMU-174 monitoring 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 DO and ORP levels indicate that reducing conditions were present.

3.2.4.2 COC results for source and downgradient plume areas

Table 6 lists first quarter 2020 analytical results for the SWMU-172 and SWMU-174 COCs. Figure 3 shows historical trend plots for tetrachloroethene (PCE), trichloroethene (TCE), VC, and *cis*-1,2-dichloroethene (*cis*-1,2-DCE) in source area wells GW152S and GW153S. Historical trend plots for PCE, TCE, VC, and *cis*-1,2-DCE in downgradient plume area wells GW172S and GW173S are shown in Figure 4. 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 6, *cis*-1,2-DCE, TCE, PCE, and VC concentrations exceeded the *current* CULs in the groundwater collected from both source area and downgradient plume area wells. As shown in Figure 3, the concentrations of COCs in groundwater from source area wells were within the range of historical concentrations in the first quarter of 2020. In source area well GW152S, COCs in groundwater increased in concentration compared to previous monitoring events in the past year, while COCs except for VC decreased in concentration in the groundwater collected from source area well GW153S. As shown in Figure 4, COC concentrations in groundwater from downgradient plume area wells were stable or increased during the first quarter. COCs were observed at higher concentrations in the first quarter 2020 than have been detected in the previous two years of monitoring events in the groundwater from downgradient well GW172S. However, all COCs at GW172S remain at concentrations below 1 microgram per liter (µg/L). COCs in the groundwater collected from downgradient well GW173S were generally stable, and lower than concentrations observed at GW172S.

Arsenic was detected above the *current* CUL in all source area and downgradient plume area wells. As shown in Figure 5, the arsenic concentrations in the groundwater from both source area and downgradient wells decreased during the first quarter sampling event, except for in downgradient plume area well GW172S, which increased. The range of arsenic values detected continues to be highly variable, with average values in the range of 5–15 µg/L and occasional short-term excursions up to 30 to 40 µg/L (see Appendix D). This observed range is consistent with the naturally occurring background arsenic range reported by Ecology (Ecology, 2018) based on testing over 2,500 water supply wells in the Puget Sound Basin (all from water supply aquifers with no anthropogenic impacts). Copper and lead were detected above the *current* CUL in the groundwater from source area well GW152S and from downgradient plume area well GW172S. Concentrations of both copper and lead were below the *current* CUL in the groundwater from all other source area and downgradient plume area wells, except for an exceedance of copper in GW226S.

As discussed above, concentrations of select COCs in groundwater from source area and downgradient plume area wells exceed the *current* CULs; however, concentrations of all COCs, except arsenic and lead, in the groundwater from source area wells are below the *proposed* CULs.

3.2.4.3 COC results for conditional point of compliance area

Results from the CPOC area wells are presented in Table 6 and trend charts for *cis*-1,2-DCE, TCE, and VC for all CPOC area wells are presented in Figure 6. As shown in Table 6, *cis*-1,2-DCE was detected at concentrations above the *current* CUL, ranging from 0.0552 to 0.221 µg/L, in the groundwater from all CPOC wells except GW236S. TCE was also detected at concentrations above the *current* CUL in the groundwater from CPOC area wells GW234S and GW235I, and VC was detected above the *current* CUL in the groundwater from CPOC area well GW232S. PCE concentrations were below detection in all CPOC area wells. As shown on Figure 6, concentrations of *cis*-1,2-DCE have exceeded the CUL in the CPOC area wells since compliance monitoring began, but are generally stable and are of low concern due to the low toxicity of *cis*-1,2-DCE and associated lack of a surface water quality standard for this COC. The concentrations of PCE, TCE, VC in the CPOC area wells also generally appear to be stable.

Arsenic was detected above the *current* CUL in the groundwater samples from CPOC area wells GW232S, GW234S, and GW236S. Copper and lead were detected above the respective *current* CULs in the groundwater samples from CPOC area wells GW234S and GW236S (Table 6). Figure 7 shows arsenic,



copper, and lead trends since the beginning of compliance monitoring in groundwater samples from the CPOC area wells. As shown in Figure 7, arsenic, copper, and lead concentrations appear to vary over time. Generally, groundwater collected from CPOC area wells have a stable trend with recent spikes in metals in GW234S and GW236S.

Select COC concentrations exceed the *current* CUL in the groundwater from select CPOC area wells, as detailed above; however, only arsenic and lead concentrations exceed the *proposed* CULs in the groundwater samples collected from CPOC 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 first quarter of 2020. The cleanup remedy for this SMWU/AOC group is bioremediation, SVE, MNA, and MA. Figure 8 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 this cleanup action area during the first quarter.

3.3.1.2 Soil vapor extraction and bioremediation operations

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

A revised work plan (CALIBRE, 2019b) for excavating the soils near PP13 and GW013S was submitted to Ecology on May 8, 2019, in response to a request from Ecology. The investigation described in the work plan was conducted on June 13 and 14, 2019, and the results were submitted to Ecology in November 2019 (CALIBRE, 2019c). Groundwater elevations were being monitored during the fourth quarter of 2019 to determine the best time for soil removal activities. As documented in an email to Ecology dated October 22, 2019, the soil excavation work had not been completed because groundwater levels were not low enough before the start of the rainy season to schedule the work. As of the end of the first quarter of 2020, the soil excavation work has not been completed. TPH-G concentrations in groundwater continue to be closely monitored.

Nitrate/sulfate injections were completed in January 2020, with sampling taking place in February 2020. Trend charts for *cis-*1,2-DCE and benzene in the nitrate/sulfate injection wells are presented in Figure 9, and charts for TCE and VC in the injection wells are presented in Figure 10.

3.3.2 Compliance monitoring plan deviations

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

3.3.3 Water levels

Groundwater elevations measured during the first quarter 2020 groundwater monitoring event at the Building 4-78/79 SWMU/AOC group are summarized in Table 7 and shown on Figure 8. The approximate



direction of groundwater flow from the source area is generally to the west, but the gradient is too flat to include accurate groundwater elevation contours.

3.3.4 Groundwater monitoring results

Results for primary geochemical indicators are presented in Table 8; results for the COCs for Building 4-78/79 SWMU/AOC Group are presented in Table 9; and COC results for the last eight consecutive quarters are presented in Appendix D. Groundwater at this area is monitored following the schedule presented in Tables A-1 and A-2 in Appendix A.

3.3.4.1 Natural attenuation/geochemical indicators

The geochemical indicator results are presented in Table 8. 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 near 6 standard units during the first quarter monitoring period. Results for the other primary geochemical indicators were fairly consistent throughout this area.

3.3.4.2 COC results for source and downgradient plume areas

Table 9 lists first quarter 2020 analytical results for the Building 4-78/79 SWMU/AOC Group COCs. The *current* CULs established in the CAP are also presented on Table 9. Figures 11 and 12 are trend charts showing historical trends for COCs in source area and downgradient plume area 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 9, benzene was detected in groundwater samples from two source area wells (GW031S and GW033S) at concentrations above the *current* CUL. Benzene was below detection in the remaining source area wells. Other detections above the *current* CUL in the groundwater from source area wells were *cis*-1,2-DCE in GW033S, TCE in GW244S, and VC in GW033S and GW244S. TPH-G was detected in the groundwater from source area well GW031S at a concentration of 2,980 µg/L (the field duplicate concentration was 3,060 µg/L), which is above both the *current* and *proposed* CUL. TPH-G was also detected in the groundwater from source area well GW033S, but at a concentration below the *current* and *proposed* CUL. Benzene, VC, and TPH-G were the only COCs with concentrations above the proposed CULs in the groundwater from source area wells. No COCs were detected in the groundwater collected from the downgradient plume area wells.

Figure 11 shows trends for selected COCs for source area wells GW031S and GW033S and Figure 12 shows trends for selected COCs for source area well GW034S and downgradient plume area well GW209S. COC concentrations in the groundwater collected from GW031S are generally consistent with historical results and trends, with benzene increasing in concentration during the first quarter monitoring event, similar to the first quarters in 2017 and 2018. The concentration of benzene in the groundwater collected from source area well GW033S is generally consistent with historical results. The concentrations of *cis*-1,2-DCE and VC in both source area wells shown in Figure 11 are within the range of concentrations previously detected and TCE has been below detection in the groundwater from the same two source area wells for the past two years of monitoring events. COC concentrations in groundwater samples collected from source area well GW034S (Figure 12) are stable. Nitrate and sulfate injections described in Appendix E are continuing to address elevated benzene present between source area well GW031S and downgradient plume area well GW210S.



Figure 12 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 all COCs are stable in the groundwater collected from GW209S, with concentrations not detected.

As shown in Table D-3 in Appendix D, all COCs have been either below detection or below *current* CULs in the groundwater collected from source area wells GW039S and GW243I (except for one exceedance of benzene in GW 243I in May 2018) and all downgradient plume area wells (except for one slight exceedance of VC in GW209S in May 2018) for the last eight consecutive quarters.

3.3.4.3 COC results for conditional point of compliance area

Groundwater monitoring results from the first guarter for the CPOC area are summarized in Table 9. Trends for CPOC area wells GW143S, GW237S and GW240D are shown in Figures 13 through 15. Benzene was detected only in the groundwater sample collected from CPOC area well GW237S, at a concentration of 3.48 µg/L, above the *current* CUL. As shown in Figure 13, benzene has been sporadically detected in the groundwater from CPOC area well GW237S but has not been detected in the groundwater samples from any other CPOC area wells at concentrations above the current CUL. VC was not detected in any of the groundwater samples from CPOC area wells. As shown in Figure 14, the concentrations of VC in the groundwater from the CPOC area wells is within the range of concentrations detected since monitoring began. Cis-1,2-DCE was detected in the groundwater collected from CPOC area well GW143S at a concentration below the current CUL, consistent with past monitoring events, as shown in Figure 13. TCE was not detected above the reporting limit in any of the CPOC area wells during the first quarter monitoring events. The reporting limit for COCs in GW237S was elevated, but results still indicate VC, TCE, and cis-1,2-DCE were not detected. The only other COC detected in the groundwater samples from the CPOC area during the first quarter was TPH-G in CPOC area well GW237S at a concentration of 961 µg/L, above the current and proposed CUL. As shown in Figure 15, TPH-G concentrations in the groundwater from CPOC GW237S appear to fluctuate seasonally.

While select COCs exceed the *current* CULs in the groundwater from select CPOC area wells, as detailed above, the concentrations of these COCs are below the *proposed* CULs, except TPH-G in GW237S.

As shown in Table D-3 in Appendix D, all COCs have been below detection in the groundwater from CPOC wells GW239I, GW241S, and GW242I for the last eight consecutive quarters. Additionally, well GW238I has been below detection limits for all COCs with the exception of a single detection of vinyl chloride at 0.21 µg/L during November 2018.

3.4 Former fuel farm AOC group

The final remedy for the Former Fuel Farm is MNA. The Former Fuel Farm AOC group is monitored semiannually in May and November; therefore, no monitoring was conducted for this area during the first quarter of 2020. COC results for the last eight consecutive quarters are presented in Appendix D.

3.5 AOC-001 and AOC-002

This section describes corrective action activities conducted at these AOCs during the first quarter of 2020. 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 16 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 first quarter.



3.5.2 Compliance monitoring plan deviations

Due to construction at Apron R, monitoring wells in these areas were removed on November 25, 2019. The wells affected by this work are noted in Table A-1. Groundwater samples were collected from the remaining source area well, GW193S, during the first quarter 2020.

3.5.3 Water levels

Table 10 presents the groundwater elevation measured during the first quarter 2020 monitoring event at AOC-001 and AOC-002. Figure 16 shows the groundwater elevation from this event. Due to construction activities, only one monitoring well in this area was measured and consequently the hydraulic gradient cannot be determined.

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. Due to the number of wells that were decommissioned when Apron R construction began, this site is not included in Appendix D.

3.5.4.1 Monitored attenuation/geochemical indicators

The geochemical indicator results are presented in Table 11. The pH was near neutral in CPOC area well GW193S and is conducive to microbial activity. TOC was elevated this quarter in the source area well, at 48.20 mg/L.

3.5.4.2 COC results for source and downgradient plume areas

The analytical results for the AOC-001 and -002 COCs are summarized in Table 12. The only COCs detected in the groundwater collected from GW193S were *cis*-1,2-DCE, TCE, and VC, all of which were detected at concentrations above the *current* CULs. However, COC concentrations are below the *proposed* CULs. Trend plots for *cis*-1,2-DCE, TCE, and VC in source area well GW193S are shown in Figure 17. This figure shows that concentrations of the COCs in the groundwater from GW193S remain stable.

3.5.4.3 COC results for conditional point of compliance area

The CPOC area wells were not sampled during this event due to construction activities.

3.6 AOC-003

This section describes corrective action activities conducted at AOC-003 for the first quarter of 2020. The cleanup remedy for this AOC is bioremediation and MA. Figure 18 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 first quarter.

3.6.2 Compliance monitoring plan deviations

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



3.6.3 Water levels

Table 13 presents the groundwater elevations measured during the first quarter 2020 monitoring event at AOC-003. Figure 18 shows the groundwater elevations from this event. Groundwater elevation contours are not shown due to the limited number of shallow groundwater monitoring wells. Historic groundwater levels suggest that groundwater generally flows north-northwest toward Lake Washington.

3.6.4 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 primary geochemical indicators are presented in Table 14; results for the AOC-003 COCs are presented in Table 15; and COC results for the last eight consecutive quarters are presented in Appendix D.

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

Table 15 lists first quarter 2020 analytical results for the AOC-003 COCs. Trend plots have not been prepared for the AOC-003 source area well because groundwater analyses for this well generally have been below reporting limits. During the first quarter sampling event, VC was detected above the *current* CUL in the groundwater from the source area well, GW249S (at 0.33 μ g/L), and PCE was detected above the *current* CUL in the groundwater from the downgradient area well, GW188S (at 0.024 μ g/L). All other sample results for the source area and downgradient area wells were below the *current* and *proposed* CULs.

As shown in Table D-5 in Appendix D, except for VC, all COCs have been below the *current* and *proposed* CULs in the groundwater collected from the source and downgradient plume area wells for the last eight consecutive quarters.

3.6.4.3 COC results for conditional point of compliance area

Groundwater collected from the two CPOC monitoring wells did not have detections of PCE, TCE or *cis*-1,2-DCE above the *current* and *proposed* CULs. VC was detected at concentrations above the *current* and *proposed* CULs in the groundwater samples collected from both CPOC area wells, as shown in Table 15 (however, both detections were below 0.5 µg/L).

As shown in Table D-5 in Appendix D, except for VC, all COCs have been below the *current* and *proposed* CULs in the groundwater collected from the CPOC area wells for the last eight consecutive quarters.

3.7 AOC-004

This section describes corrective action activities conducted at AOC-004. The cleanup remedy for this AOC is bioremediation and MA. Figure 19 shows the layout of the groundwater monitoring and bioremediation injection wells for this AOC.

3.7.1 Cleanup action activities

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



3.7.2 Compliance monitoring plan deviations

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

3.7.3 Water levels

Table 16 presents the groundwater elevations measured during the first quarter 2020 monitoring event at AOC-004. Figure 19 shows the groundwater elevations. Because there are only two groundwater elevation monitoring locations for AOC-004, groundwater contours are not shown on Figure 19.

3.7.4 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 primary geochemical indicators are presented in Table 17; results for COCs are presented in Table 18; and COC results for the last eight consecutive quarters are presented in Appendix D.

3.7.4.1 Monitored attenuation/geochemical indicators

The geochemical indicator results are presented in Table 17. The primary geochemical indicators were generally uniform across the AOC. Geochemical indicators will continue to be monitored to assess attenuation of AOC 004 COCs.

3.7.4.2 COC results for the source area

Table 18 lists first quarter 2020 analytical results for lead, the sole COC for AOC-004. Lead was detected in the groundwater sample from the source area well at a concentration of 0.00119 mg/L, slightly above the *current* CUL of 0.001 mg/L. This concentration is below the *proposed* CUL for lead. Trend plots have not been created for the AOC-004 source area well, since COCs have not been detected consistently at concentrations above the *current* CUL since monitoring began in 2015.

3.7.4.3 COC results for the conditional point of compliance area

As shown in Table 18, lead was detected below both the *current* and *proposed* CUL at a concentration of 0.000974 mg/L in the groundwater from CPOC area well GW174S.

As shown in Table D-6 in Appendix D, lead concentrations in the groundwater from CPOC well GW174S have been below the *current* CUL for that last six consecutive quarters and below the *proposed* CUL for the last eight consecutive quarters.

3.8 AOC-060

This section describes corrective action activities conducted at AOC-060 during the first quarter of 2020. The cleanup remedy for this AOC is bioremediation and MA. Figure 20 shows the locations of the groundwater monitoring and bioremediation injection wells at AOC-060, as well as the groundwater elevations measured during the first quarter sampling event.

3.8.1 Cleanup action activities

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

3.8.2 Compliance monitoring plan deviations

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



3.8.3 Water levels

Table 19 presents the groundwater elevations measured during the first quarter 2020 groundwater monitoring event at AOC-060. Figure 20 shows the groundwater elevations measured during this event. The groundwater flow direction is west toward the Cedar River, but the hydraulic gradient was unable to be accurately determined.

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 primary geochemical indicators are presented in Table 20; results for COCs are presented in Table 21; and COC results for the last eight consecutive quarters are presented in Appendix D.

3.8.4.1 Monitored attenuation/geochemical indicators

The geochemical indicator results are presented in Table 20. The primary geochemical indicators show generally uniform conditions in source and downgradient plume areas, except for the higher TOC concentration detected in the groundwater from CPOC area well GW254S. These data indicate that conditions are generally conducive to biodegradation of the COCs for this AOC.

3.8.4.2 COC results for source and downgradient plume areas

Table 21 presents first quarter 2020 analytical results for the AOC-060 groundwater COCs. Figures 21 and 22 present trend plots for the COCs in selected source area and downgradient plume area wells. Trend charts are not shown for groundwater monitoring wells for which COCs are not commonly detected.

As shown in Table 21 and Figures 21 and 22, concentrations of *cis*-1,2-DCE and TCE exceeded the *current* CUL in groundwater from the source area and downgradient plume area wells; and concentrations of VC exceeded the *current* CUL in the groundwater from GW012S. The concentrations of COCs in the groundwater from source area well GW009S and downgradient plume area wells GW012S and GW014S are generally stable (Figures 21 and 22), while the concentrations of COCs in the groundwater from downgradient plume area well GW147S appear to vary seasonally (Figure 22).

While select COCs exceed the *current* CULs in source area and downgradient plume area wells, as described above, with the exception of VC, concentrations of COCs in the groundwater in the source and downgradient plume areas are below the *proposed* CULs.

3.8.4.3 COC results for the conditional point of compliance area

As shown in Table 21, *cis*-1,2-DCE was detected at a concentration above the *current* CUL in the groundwater collected from CPOC area wells GW253I. TCE was detected in the groundwater from CPOC area well GW253I at a concentration slightly above the *current* CUL (at 0.021 µg/L); TCE concentrations in the remaining CPOC area wells were below the detection limit. VC was detected in the groundwater from all the CPOC area wells except GW252S, but the concentrations were below the *current* CUL. Figures 23 and 24 present trends for the COCs in the CPOC area wells. As shown in Figures 23 and 24, the COC concentrations in the groundwater from the CPOC area wells are generally stable, with *cis*-1,2-DCE and TCE the most consistently detected at concentrations above the *current* CUL. VC has not been detected in the groundwater from the CPOC area at concentrations above the *current* CUL since February 2016.

While *cis*-1,2-DCE and TCE concentrations exceed the *current* CULs in the groundwater from CPOC area well GW253I, COC concentrations are below the *proposed* CULs in all CPOC area wells.



As shown in Table D-7 in Appendix D, COCs have been below the *current* CULs in the groundwater from CPOC wells GW149S and GW252S for the last eight consecutive quarters.

3.9 AOC-090

This section describes corrective action activities conducted at AOC-090 during the first quarter of 2020. The cleanup remedy for this AOC is bioremediation and MA. Figure 25 shows the locations of the groundwater monitoring wells and the bioremediation injection system at AOC-090, as well as the groundwater elevations measured during the first quarter.

3.9.1 Cleanup action activities

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

3.9.2 Compliance monitoring plan deviations

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

3.9.3 Water levels

Table 22 presents the groundwater elevations measured during the first quarter 2020 groundwater monitoring event at AOC-090. Figure 25 shows the groundwater elevations measured during this event. Based on these measurements, groundwater flow directions in the vicinity of AOC-090 could not be accurately determined. The cause of variations in the water levels is not known.

3.9.4 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 primary geochemical indicators are presented in Table 23; results for COCs are presented in Table 24; and COC results for the last eight consecutive quarters are presented in Appendix D.

3.9.4.1 Monitored attenuation/geochemical indicators

The geochemical indicator results are presented in Table 23. The pH was around 6 standard units in all wells. As shown in Figure 26, TOC in source area well GW189S decreased significantly during the first quarter of 2020. The other geochemical indicators show that groundwater conditions are generally uniform in AOC-090. In general, primary geochemical indicators show that conditions support biological degradation of chlorinated VOCs.

3.9.4.2 COC Results for source and downgradient plume areas

Table 24 presents first quarter 2020 analytical results for the AOC-090 groundwater COCs. No COCs above current CULs were detected in groundwater at the source area well GW189S this quarter. Only VC was detected in the groundwater collected from downgradient plume area well GW176S at a concentration of 0.207 μ g/L, above the *current* CUL. No other COCs were detected at concentrations above the *current* CULs in the groundwater samples collected from source area or downgradient plume area wells.

Figure 26 presents trends for selected COCs in source area well GW189S. As shown in Figure 26; concentrations of *cis*-1,2-DCE, TCE, and VC decreased during the first quarter sampling event. COC concentrations in the groundwater sample from this source area well have been declining over the past several years and have continued this trend for this monitoring event.



As discussed above, VC exceeds the *current* CUL in groundwater from one downgradient area well; however, concentrations of all COCs are below the *proposed* CULs in source area and downgradient area wells for the first quarter monitoring event.

As shown in Table D-8 in Appendix D, COCs have been below the *current* CULs in the groundwater from downgradient plume area well GW175I, and all COCs except VC have been below the *current* CULs in downgradient plume area well GW176S for the last eight consecutive quarters.

3.9.4.3 COC Results for conditional point of compliance area

VC was detected at concentrations above the *current* CUL in the shallow zone CPOC area wells GW178S and GW208S (both detections were below 0.5 μ g/L). The VC concentration in GW208S also exceeds the *proposed* CUL. No other COCs were detected above the *current* or *proposed* CULs in groundwater from either the shallow or intermediate zone CPOC area wells.

This is the thirteenth consecutive sampling event that neither 1,1,2-trichloroethane, acetone, benzene, carbon tetrachloride, chloroform, *cis*-1,2-DCE, methylene chloride, toluene, trans-1,2-dichloroethene, nor any of the TPH fractions were detected above *current* CULs in any of the CPOC area wells.

As shown in Table D-8 in Appendix D, VC is the only COC that has been detected at concentrations above the *current* CULS in the groundwater collected from all CPOC wells for the last eight consecutive quarters.

3.10 **Building 4-70 area**

This section describes corrective action activities conducted at this area during the first quarter of 2020. The cleanup remedy for the Building 4-70 Area is bioremediation and MA. Figure 27 shows the locations of the groundwater monitoring and bioremediation injection wells for this area.

3.10.1 Cleanup action activities

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

3.10.2 Compliance monitoring plan deviations

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

3.10.3 Water levels

Table 25 presents the groundwater elevations measured during the first quarter 2020 monitoring event at Building 4-70. Figure 27 shows the groundwater elevations in the two monitoring wells for this area. These groundwater elevation data (only two wells) do not support development of elevation contours. However, the flow direction is expected to be similar to the flow observed at the Building 4 78/79 Area: generally to the west, toward the Cedar River Waterway.

3.10.4 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 26; results for the Building 70 Area COCs are presented in Table 27.

3.10.4.1 Monitored attenuation/geochemical indicators

The geochemical indicator results are presented in Table 26. The primary geochemical indicators show that reducing conditions were present and that conditions were conducive to biological degradation of



the chlorinated VOCs. Geochemical indicators will continue to be monitored following the schedule presented in Table A-2 in Appendix A.

3.10.4.2 COC Results for conditional point of compliance area

Both of the groundwater monitoring wells for the Building 4-70 Area are located along the CPOC (Figure 27). Groundwater monitoring results for the CPOC area wells are shown in Table 27. VC was the only COC detected in the groundwater from CPOC monitoring wells at a concentration above the *current* CUL, at $0.21 \, \mu g/L$ in the groundwater from GW260S. This concentration is below the *proposed* CUL for VC.

3.11 Lot 20/former building 10-71 parcel

The Lot 20/Former Building 10-71 Parcel is monitored semiannually in May and November; therefore, no monitoring was conducted for this area during the first quarter of 2020.

3.12 Apron A area

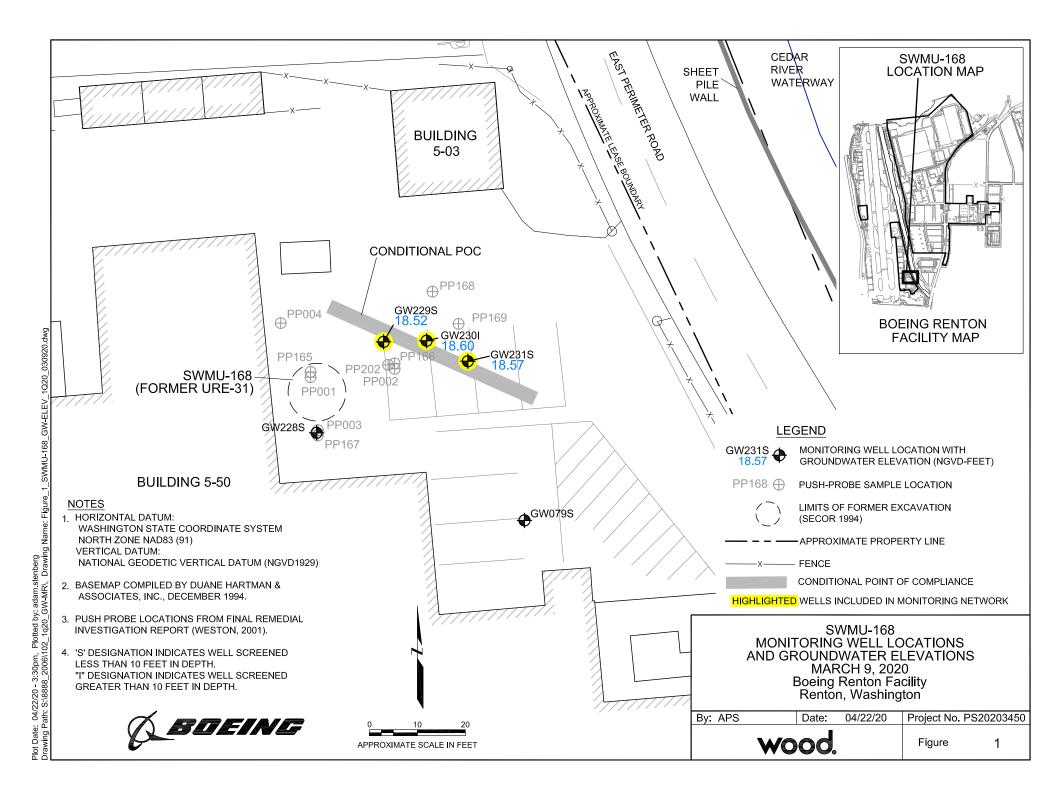
The Apron A Area is monitored semiannually in May and November; therefore, no monitoring was conducted for this area during the first quarter of 2020.

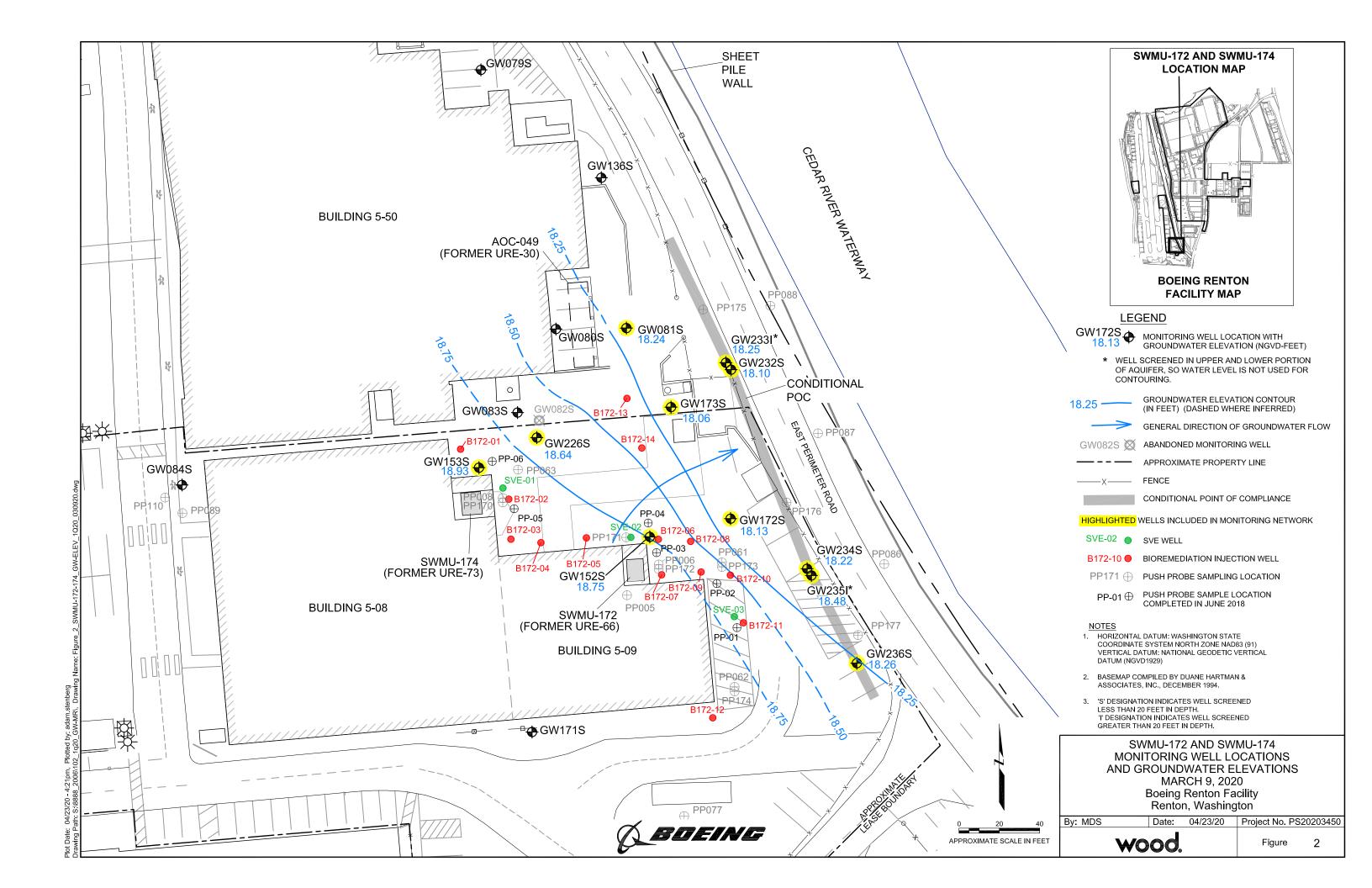
4.0 References

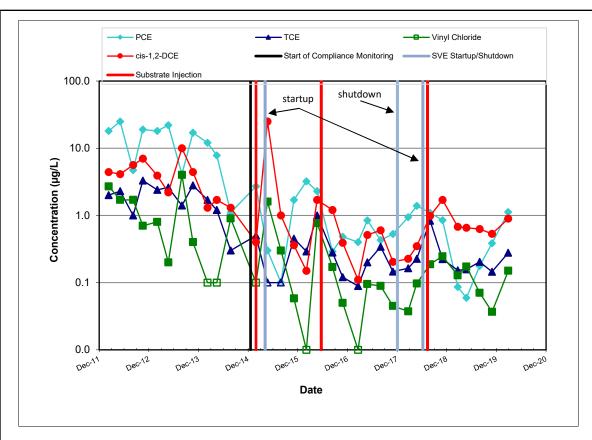
- AMEC Environment & Infrastructure, Inc. (AMEC), 2012, Draft Cleanup Action Plan, Boeing Renton Facility, Renton, Washington: Prepared for The Boeing Company, September.
- AMEC, 2014, Draft Engineering Design Report, Boeing Renton Cleanup Plan Implementation, Boeing Renton Facility, Renton, Washington: Prepared for The Boeing Company, July.
- Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler), 2016a, Compliance Monitoring Plan, Boeing Renton Facility, Renton, Washington: Prepared for The Boeing Company, February.
- Amec Foster Wheeler, 2016b, Apron A Investigation Results, Renton Municipal Airport Boeing Apron A Renton, Washington, June.
- Amec Foster Wheeler, 2016c, Quality Assurance Project Plan, Boeing Renton Facility, Renton, Washington: Prepared for The Boeing Company, February.
- CALIBRE Systems, Inc. (CALIBRE), 2019a, Cleanup Levels in Groundwater at the Boeing Renton Plant, December 17.
- CALIBRE, 2019b, Plan for Evaluation of Soils around Probe PP13 at Building 4-78/79 SWMU/AOC Group; Boeing Renton Site, April 29.
- CALIBRE, 2019c, Soils Probes at Building 4-78/4-79 SWMU/AOC Group; Boeing Renton Site, November 21.
- Washington State Department of Ecology (Ecology), 2018, Natural Background Groundwater Arsenic Concentrations in Washington State, Review Draft, Publication No. 14-09-044, May.
- Wood Environment & Infrastructure Solutions, Inc. (Wood), 2018, Quarterly report, second quarter 2018, RCRA Corrective Action Program, Boeing Renton Facility, August.
- Wood, 2019, Addendum to the Compliance Monitoring Plan, Boeing Renton Facility, Renton, Washington: Prepared for the Boeing Company, April.

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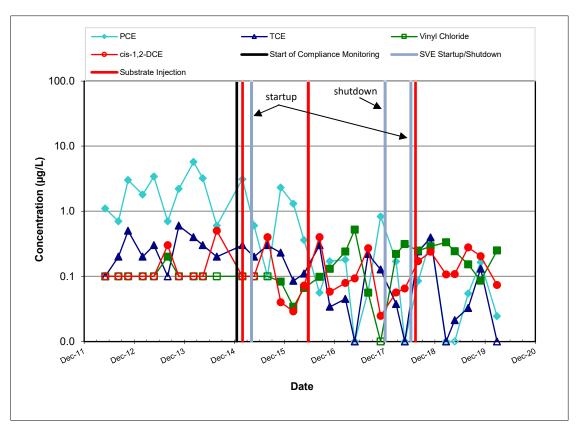
Figures







SOURCE AREA WELL GW152S

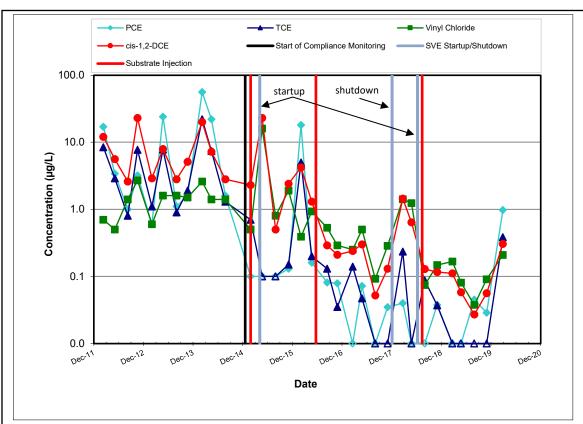


SOURCE AREA WELL GW153S

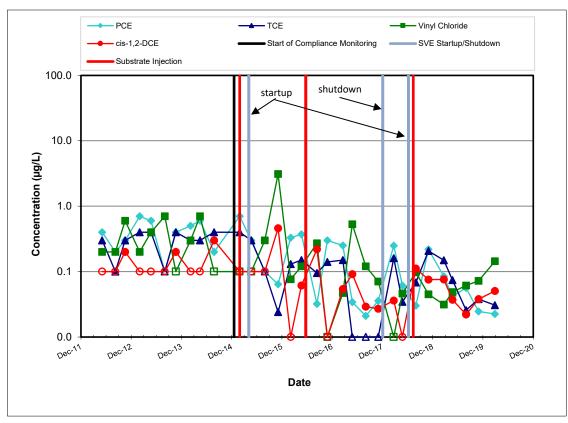
 $\underline{\text{Note:}} \text{ non-detected values shown at one-half the reporting limit and graphed with an open symbol.}$



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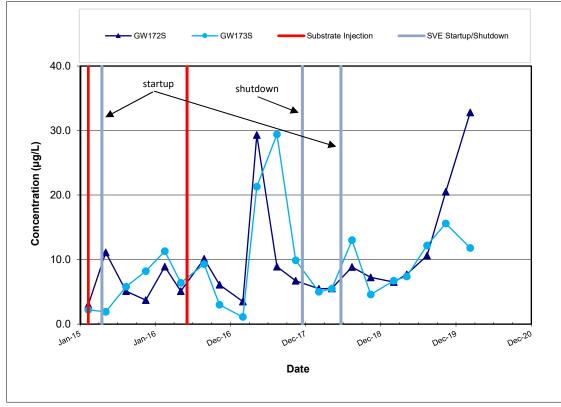
DOWNGRADIENT PLUME AREA WELL GW172S



DOWNGRADIENT PLUME AREA WELL GW173S

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





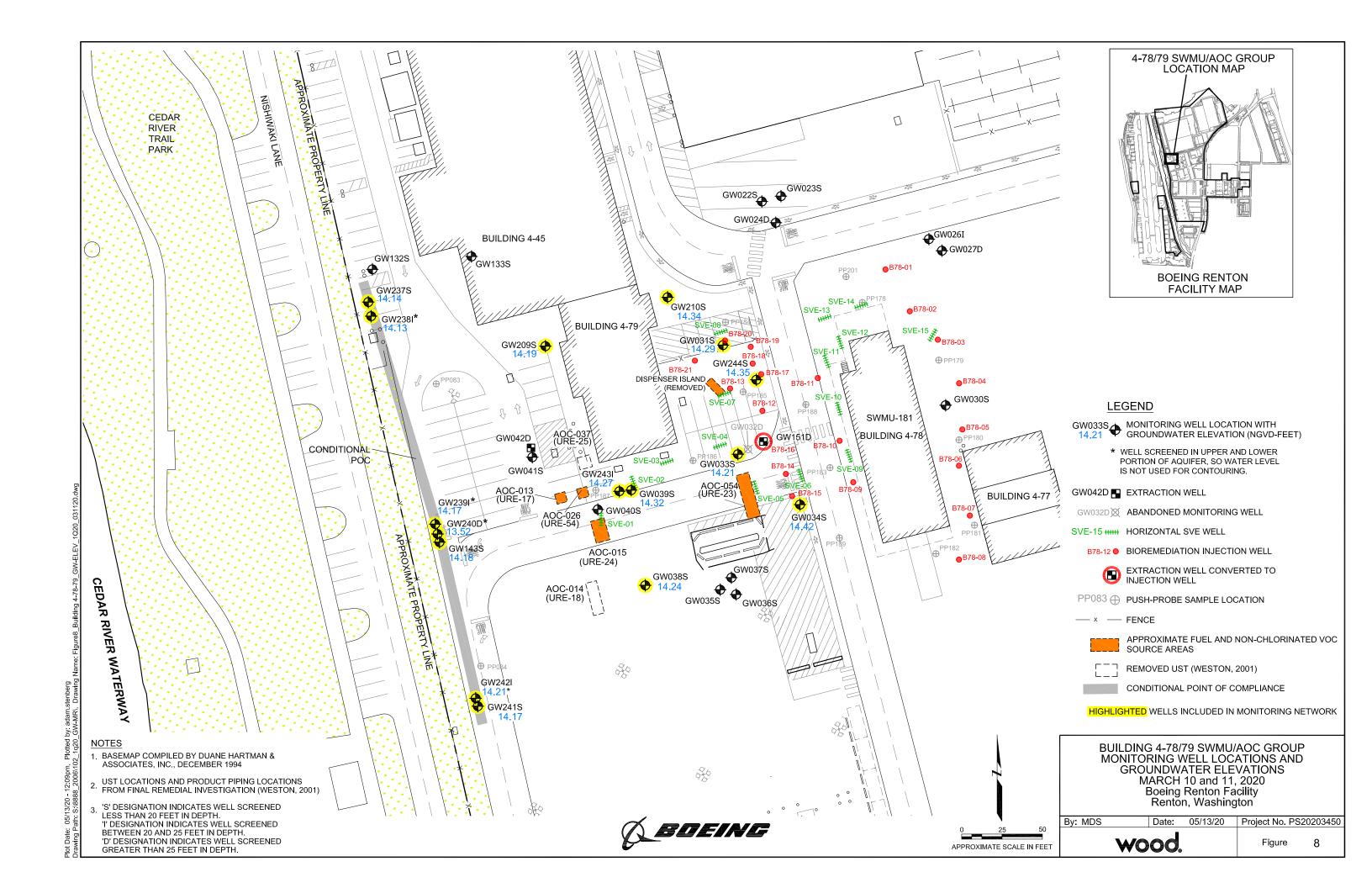
TOTAL ARSENIC IN DOWNGRADIENT PLUME AREA WELLS

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

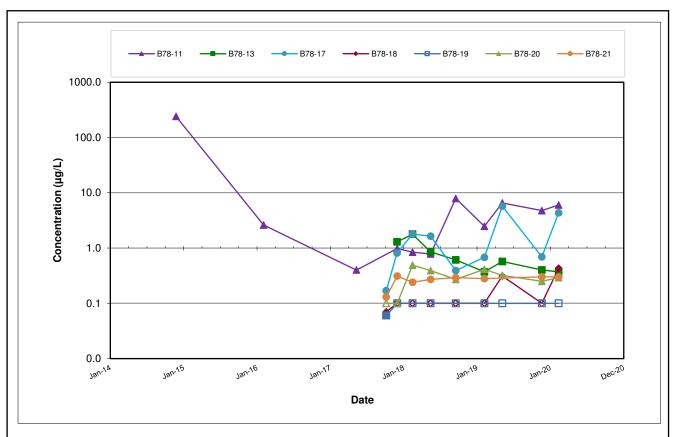


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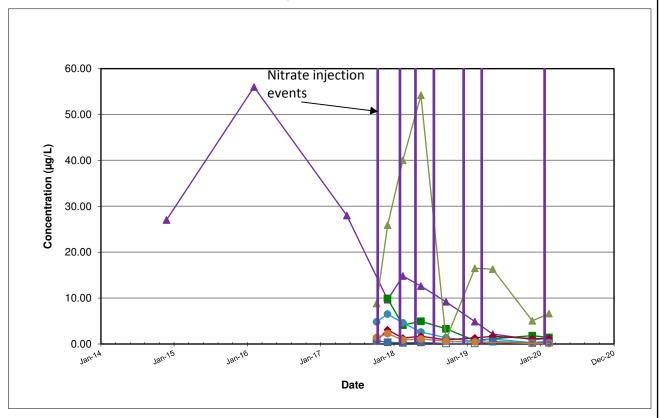
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cis-1,2-Dichloroethene



Benzene

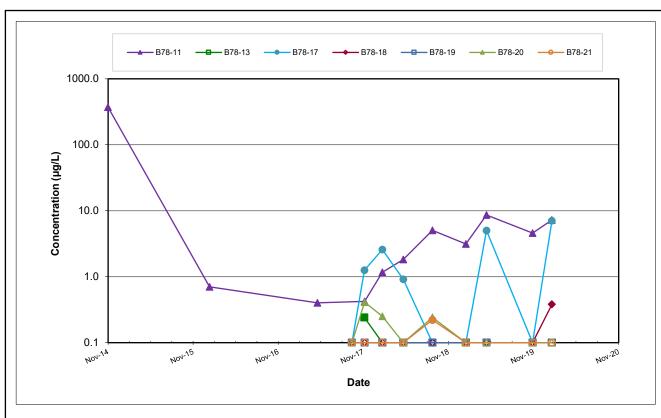
Note: non-detected values shown at one-half the reporting limit and graphed with an open symbol.



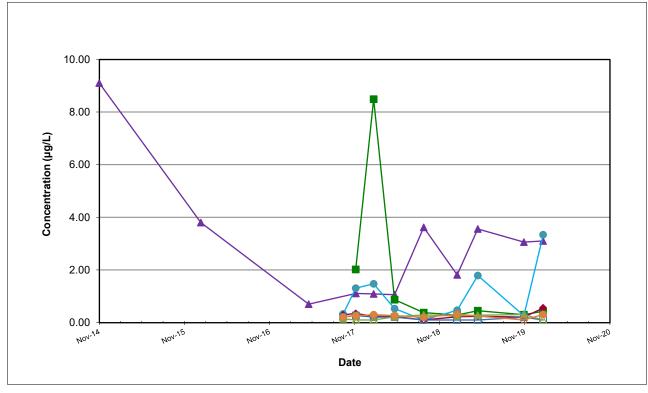
BUILDING 4-78/79 SWMU/AOC GROUP TREND PLOTS FOR CIS-1,2-DICHLOROETHENE AND BENZENE IN INJECTION WELLS Boeing Renton Facility Renton, Washington

Project No. 8888

> Figure 9



Trichloroethene



Vinyl Chloride

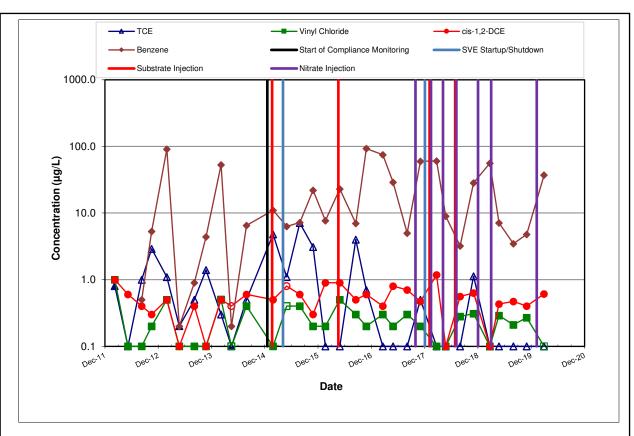
Note: non-detected values shown at one-half the reporting limit and graphed with an open symbol.



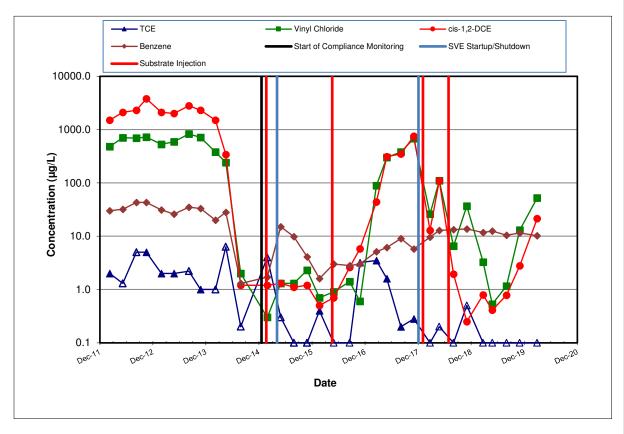
BUILDING 4-78/79 SWMU/AOC GROUP TREND PLOTS FOR TRICHLOROETHENE AND VINYL CHLORIDE IN INJECTION WELLS Boeing Renton Facility Renton, Washington

Project No. 8888

> Figure 10



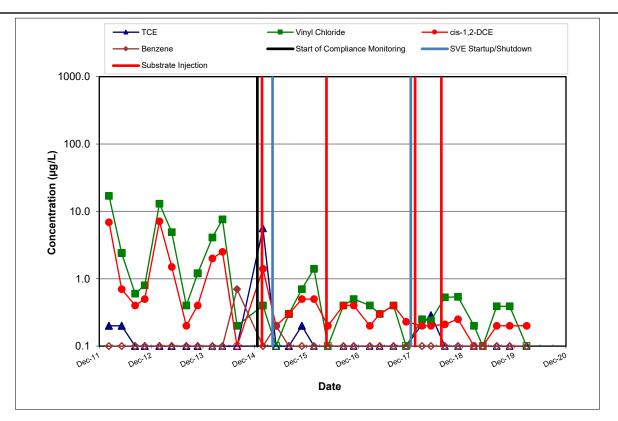
SOURCE AREA WELL GW031S



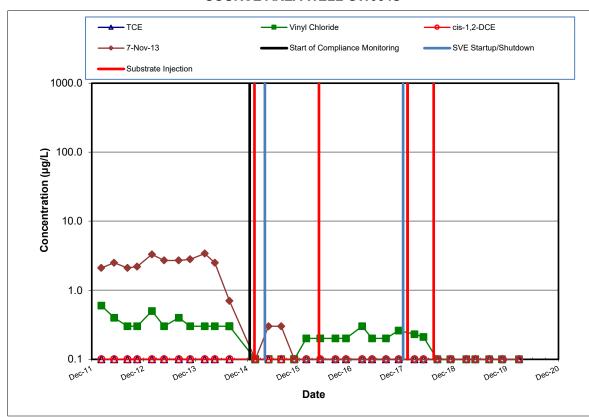
SOURCE AREA WELL GW033S

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





SOURCE AREA WELL GW034S

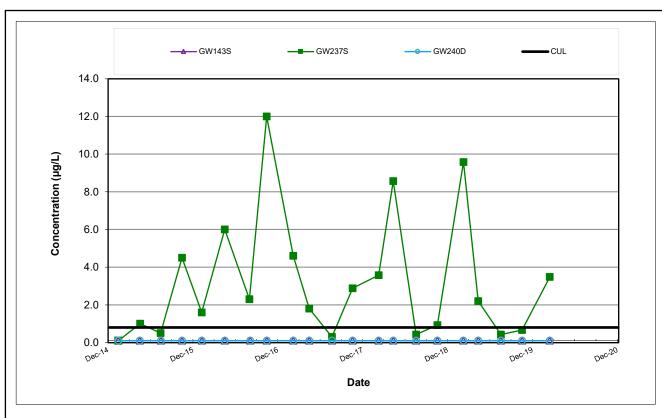


DOWNGRADIENT PLUME AREA WELL GW209S

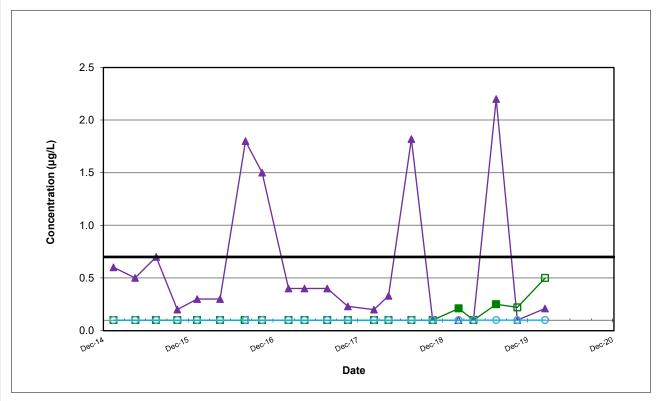
<u>Note</u>: non-detected values shown at one-half the reporting limit and graphed with an open symbol.











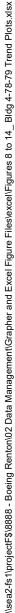
cis-1,2-Dichloroethene

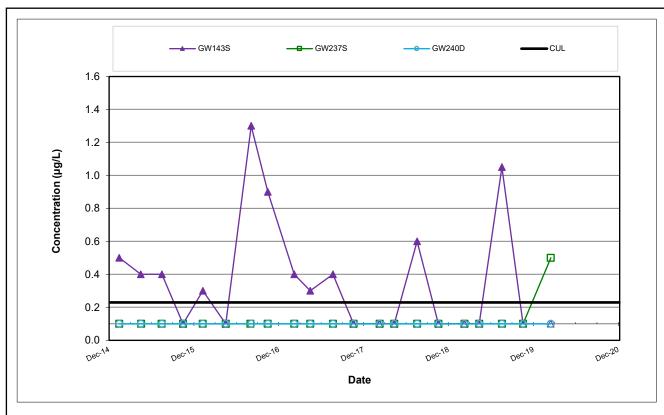
Note: non-detected values shown at one-half the reporting limit and graphed with an open symbol.



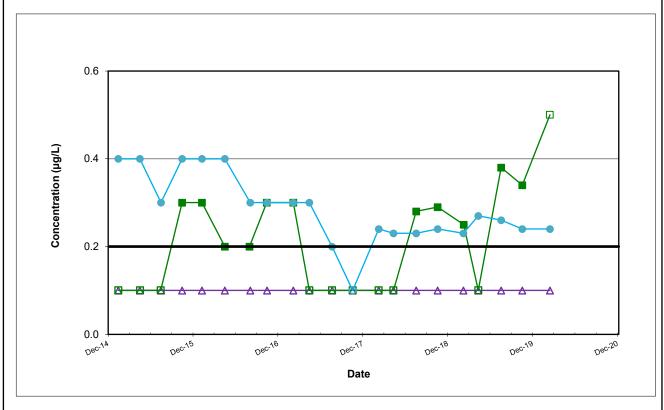
BUILDING 4-78/79 SWMU/AOC GROUP TREND PLOTS FOR BENZENE AND CIS-1,2-DICHLOROETHENE IN CPOC AREA WELLS Boeing Renton Facility Renton, Washington

Project No. 8888





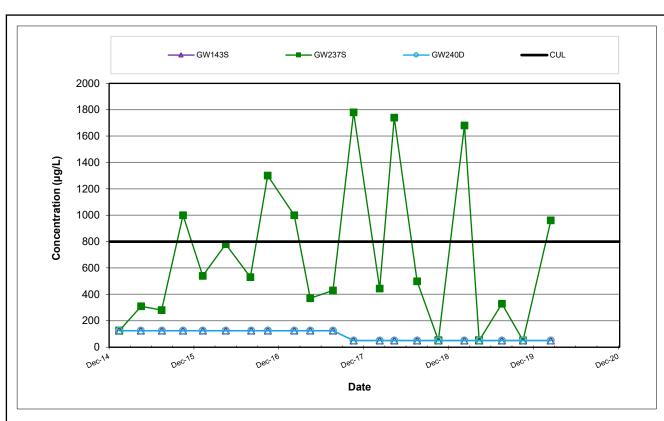
Trichloroethene



Vinyl Chloride

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

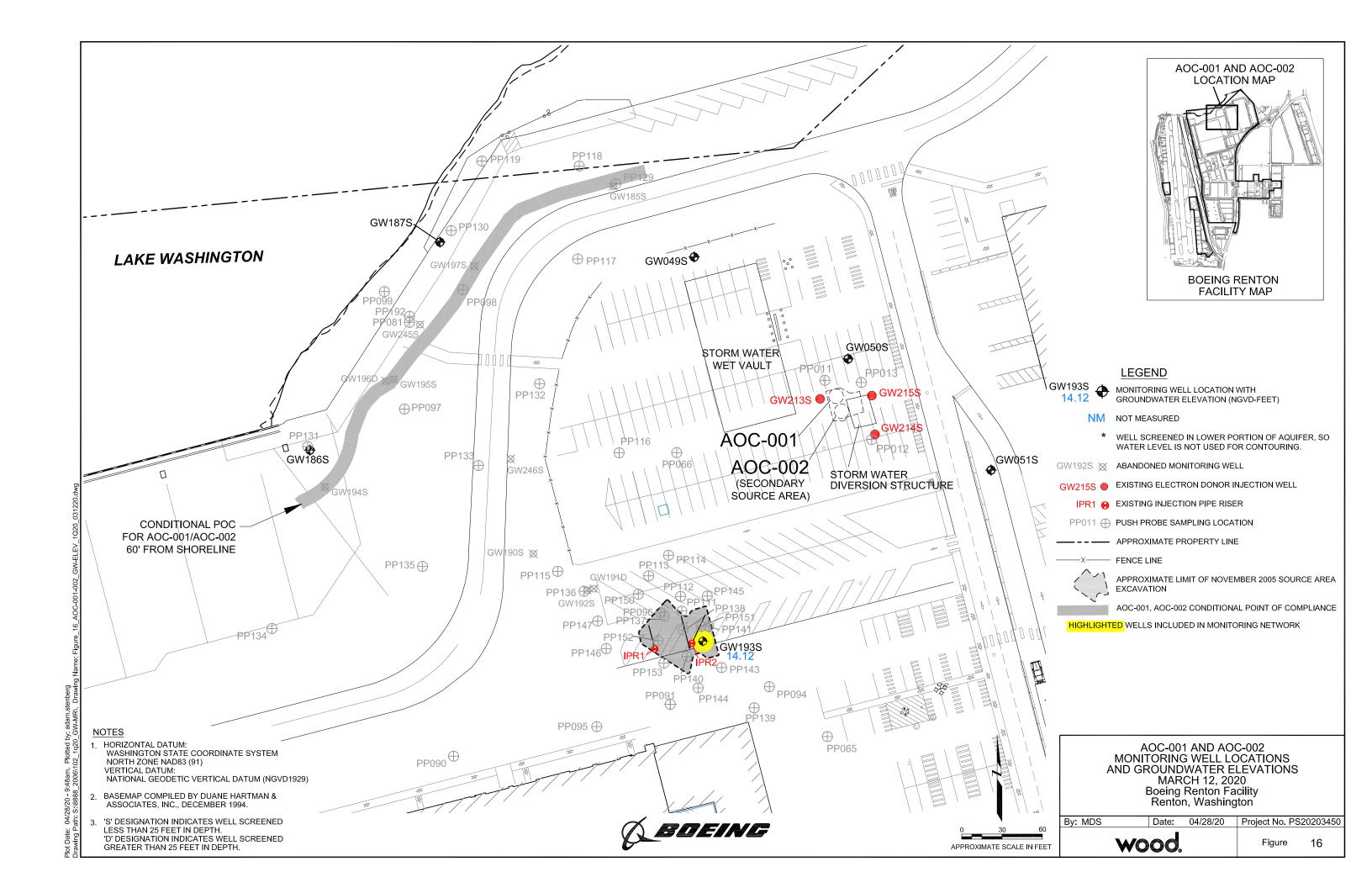


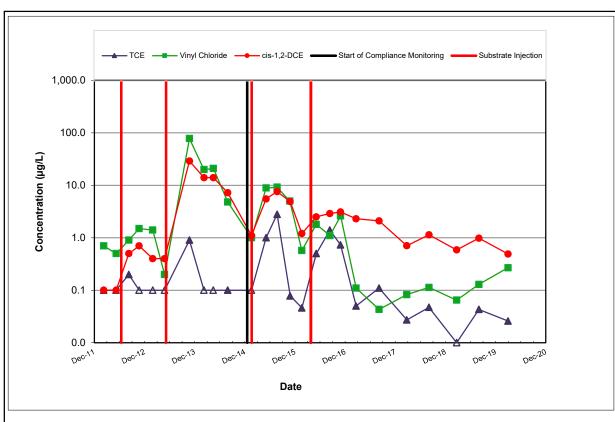


TPH as Gasoline

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



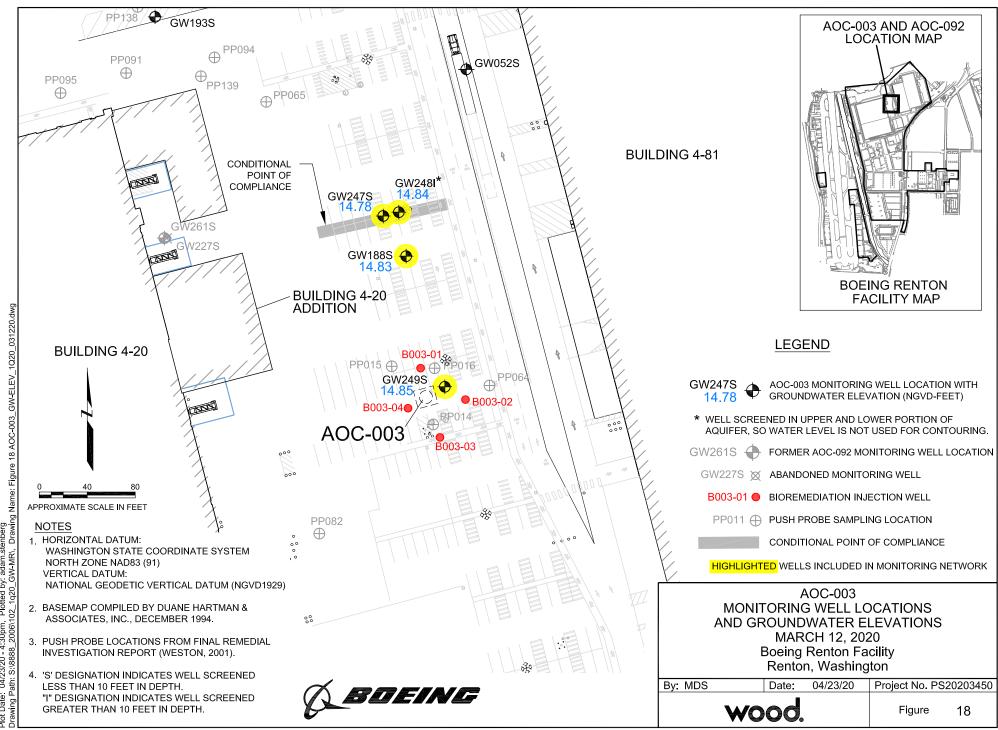


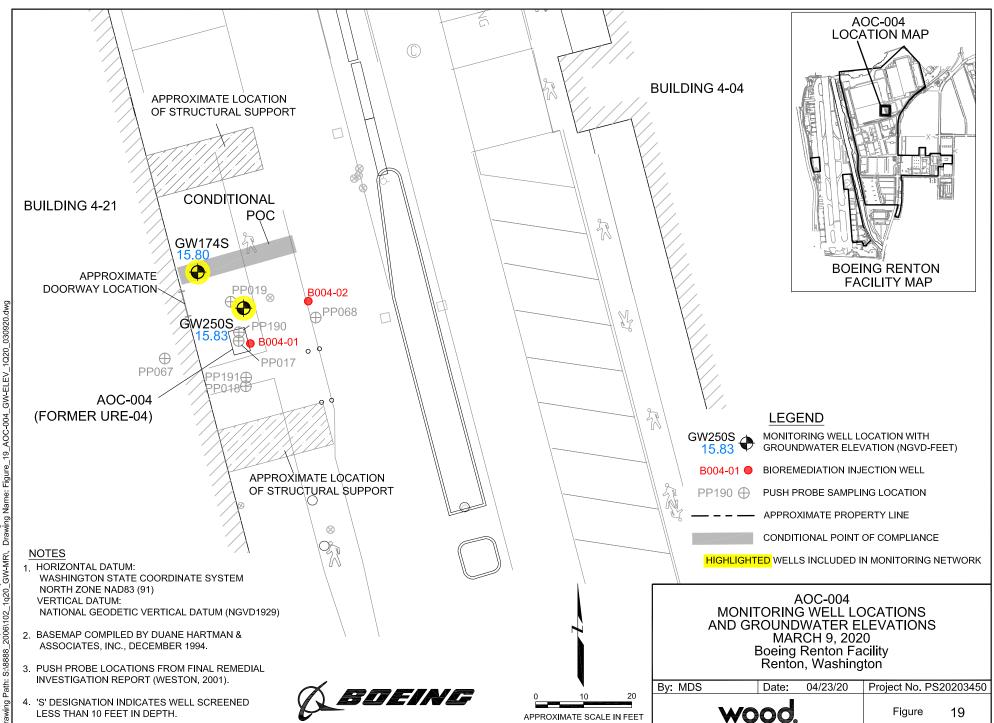


SOURCE AREA WELL GW193S

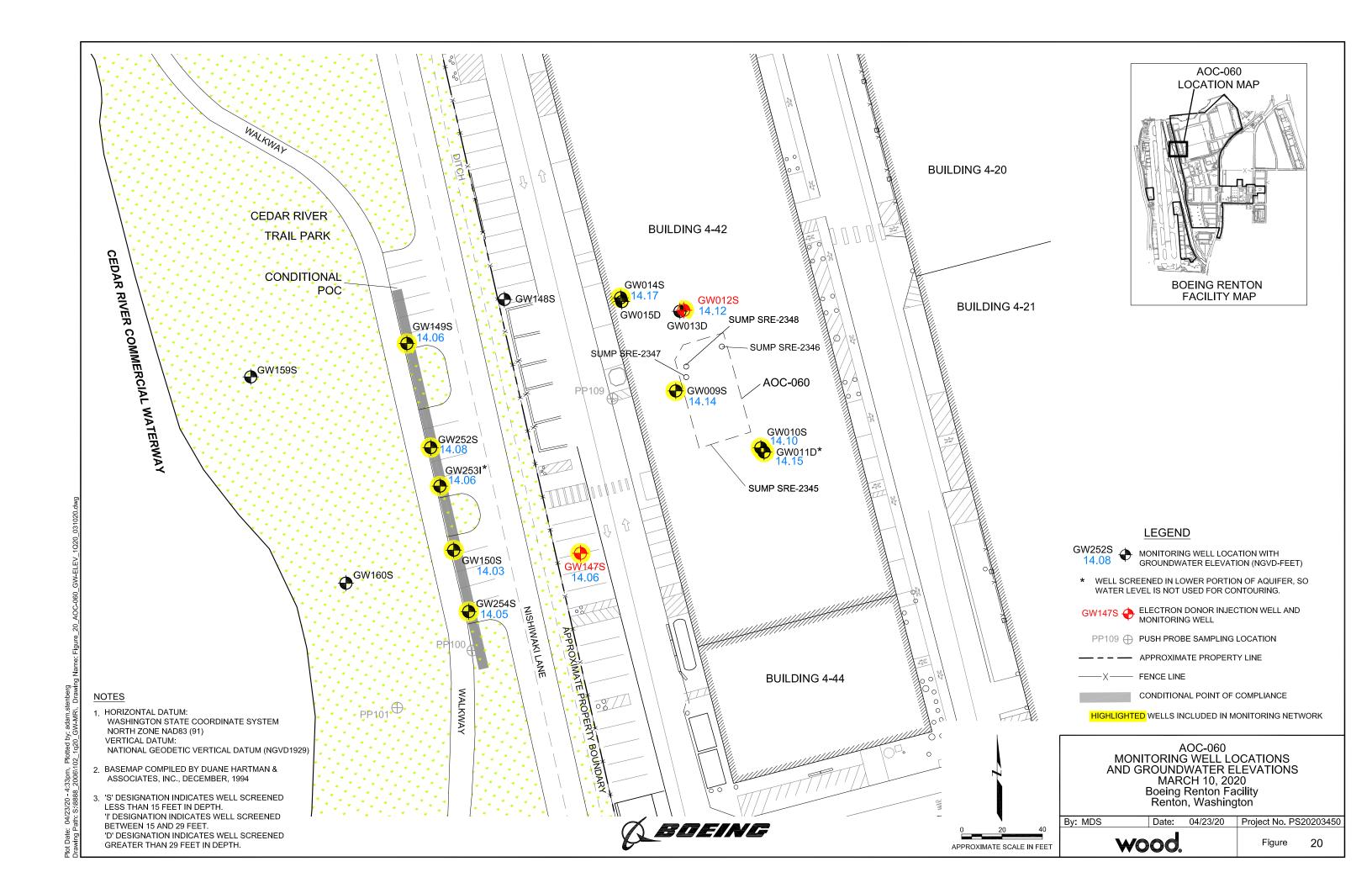
 $\underline{\text{Note}} : \text{non-detected values shown at one-half the reporting limit and are graphed with an open symbol.}$







Plot Date: 04/23/20 - 4:32pm, Plotted by: adam stenberg



Vinyl Chloride

100.00

10.00

cis-1,2-DCE

Substrate Injection

Start of Compliance Monitoring

Jan-20

Jan-20

Jan-16

DOWNGRADIENT PLUME AREA WELL GW012S

Date

wood.

0.0

Jan-11

Jan-12

Jan-13

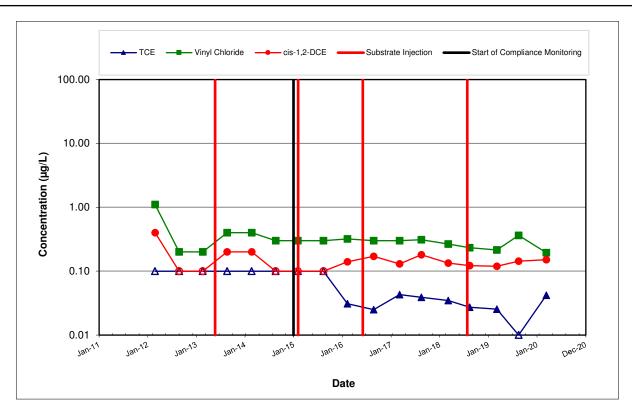
Jan-14

AOC-060 TREND PLOTS FOR SOURCE AREA WELL GW009S AND DOWNGRADIENT PLUME AREA WELL GW012S **Boeing Renton Facility** Renton, Washington

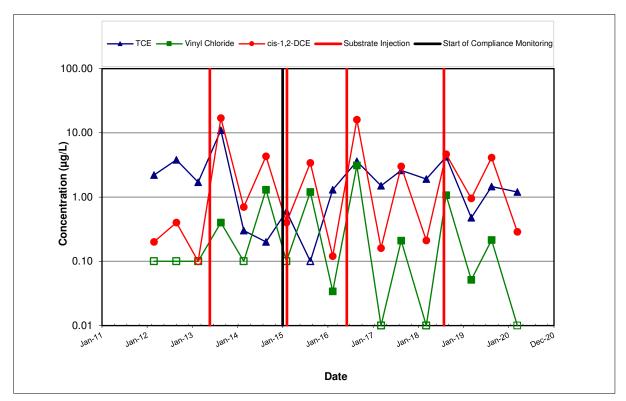
Jan-17

Jan-18

Project No. 8888 Figure 21



DOWNGRADIENT PLUME AREA WELL GW014S



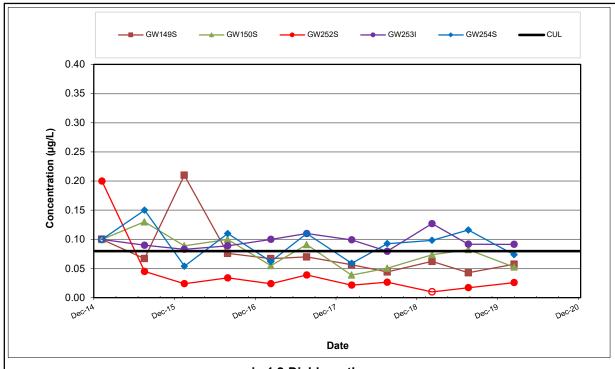
DOWNGRADIENT PLUME AREA WELL GW147S

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

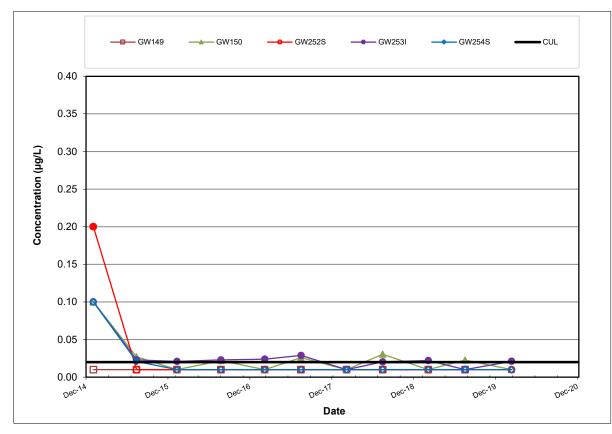


AOC-060 TREND PLOTS FOR DOWNGRADIENT PLUME
AREA WELLS GW014S AND GW147S
Boeing Renton Facility
Renton, Washington

Project No. 8888



cis-1,2-Dichloroethene



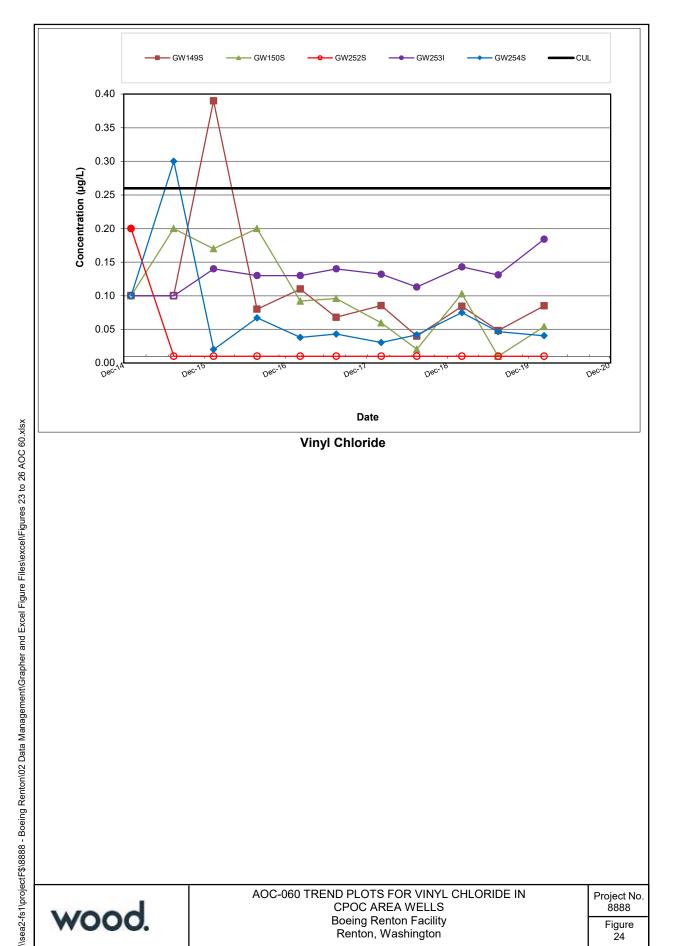
Trichloroethene

wood.

\sea2-fs1\projectF\$\8888 - Boeing Renton\02 Data Management\Grapher and Excel Figure Files\exce\Figure 23 to 26 AOC 60.xlsx

AOC-060 TREND PLOTS FOR CIS-1,2-DICHLOROETHENE AND TRICHLOROETHENE IN CPOC AREA WELLS Boeing Renton Facility Renton, Washington

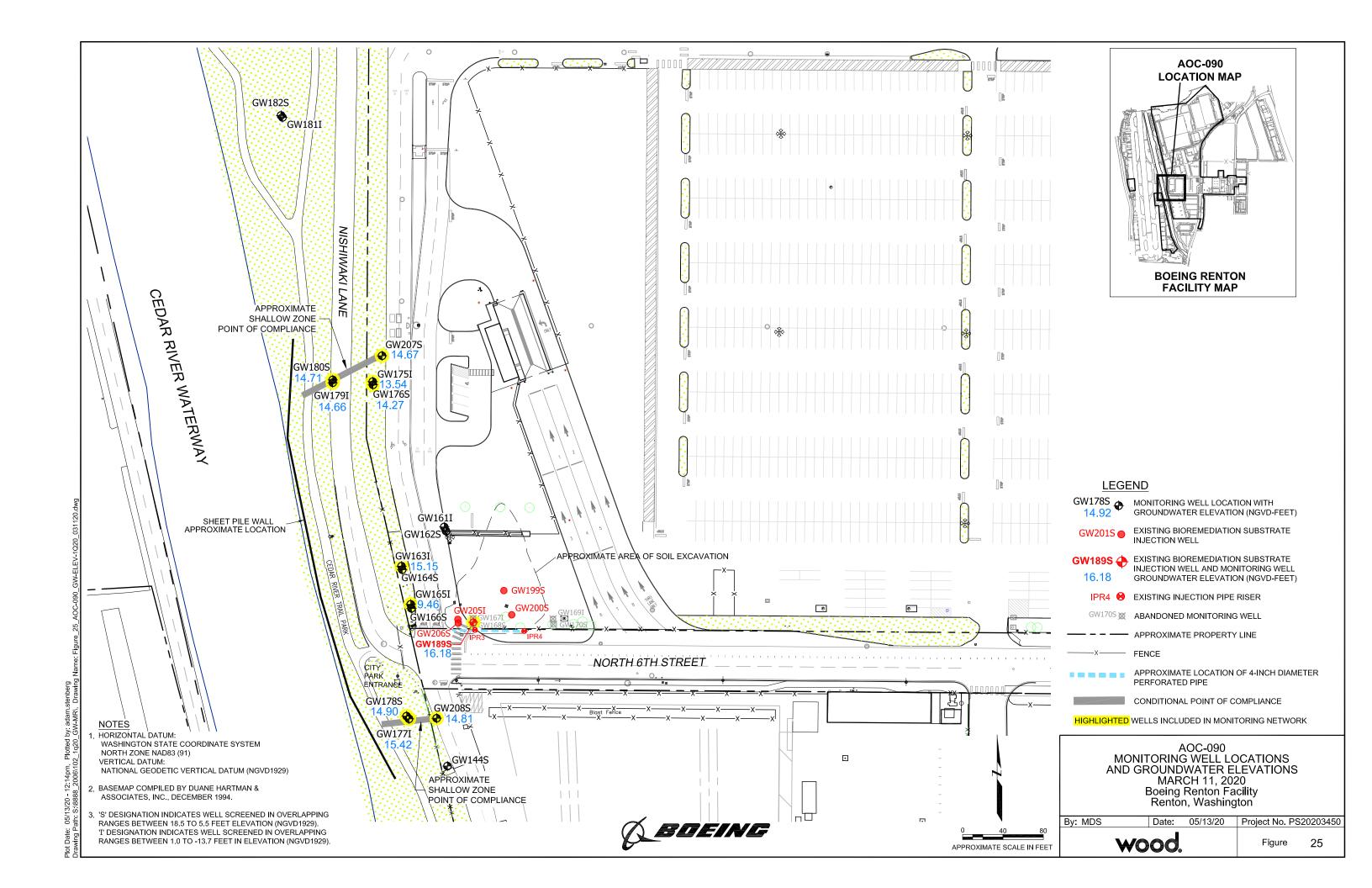
Project No. 8888

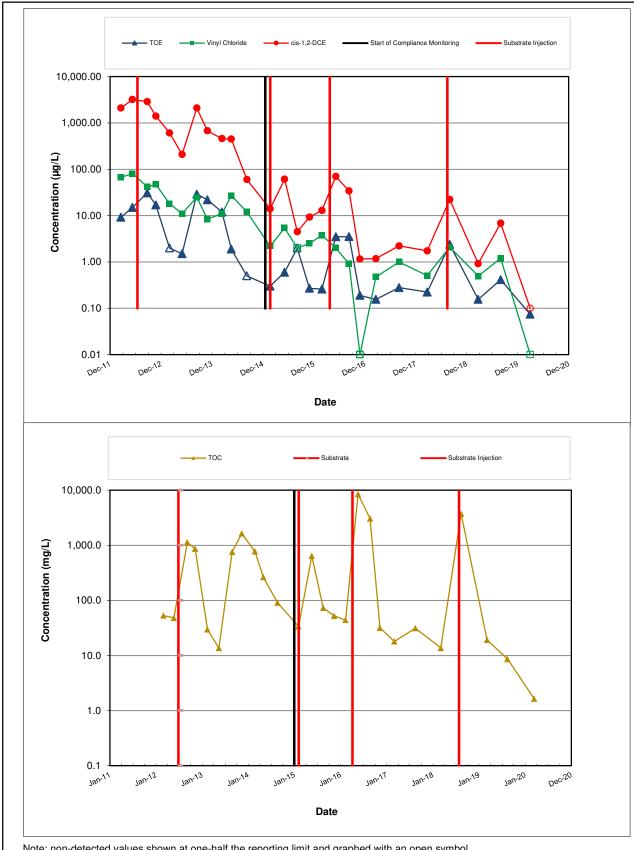


wood.

AOC-060 TREND PLOTS FOR VINYL CHLORIDE IN CPOC AREA WELLS Boeing Renton Facility Renton, Washington

Project No. 8888



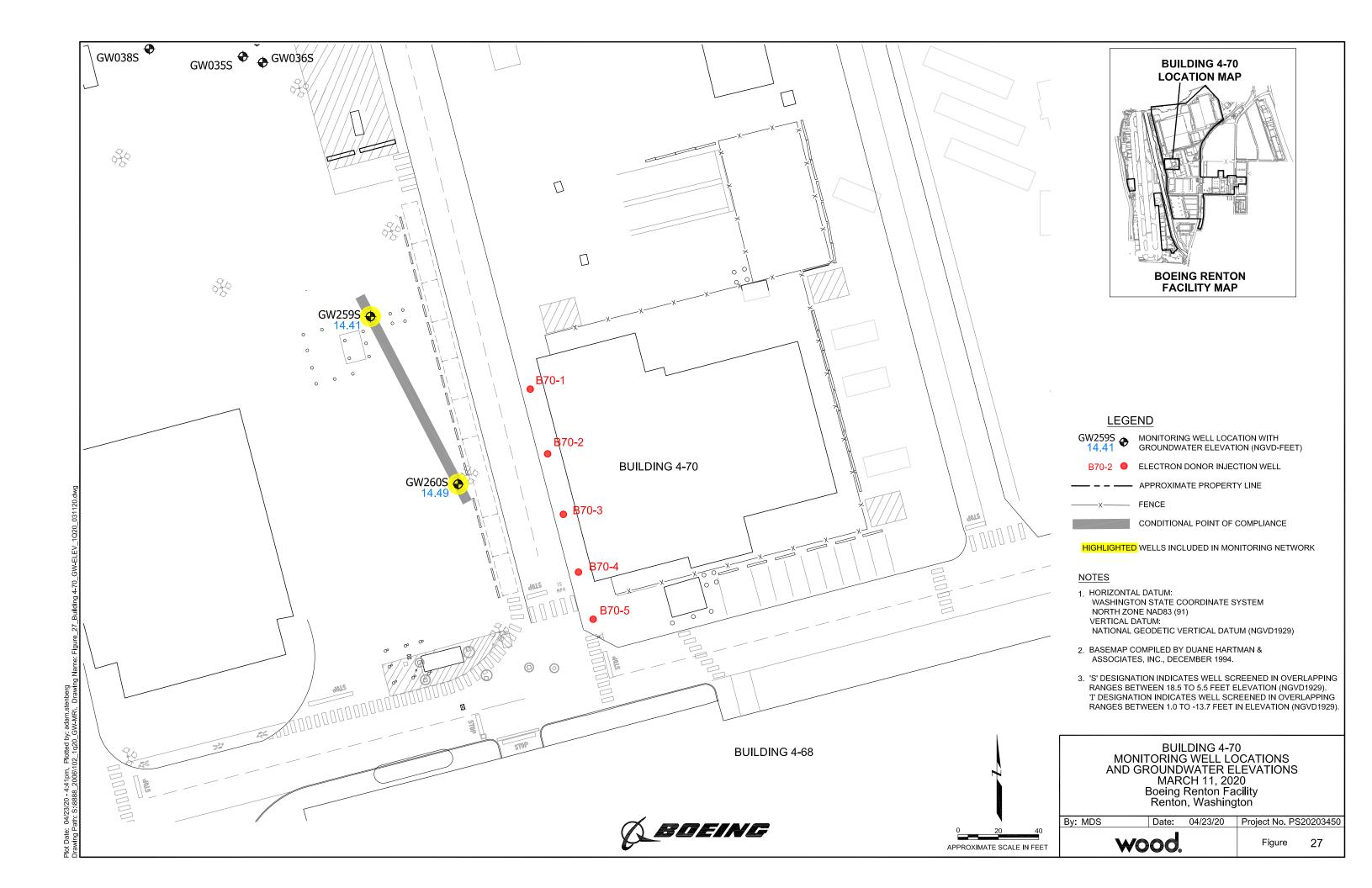


Note: non-detected values shown at one-half the reporting limit and graphed with an open symbol.

wood.

AOC-090 TREND PLOTS FOR SOURCE AREA WELL GW189S **Boeing Renton Facility** Renton, Washington

Project No. 8888



wood.

Tables

TABLE 1: SWMU-168 GROUNDWATER ELEVATION DATA March 9, 2020

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
GW229S	5 to 10	25.42	6.90	18.52
GW230I	4 to 14	24.86	6.26	18.60
GW231S	5 to 10	24.65	6.08	18.57

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

SWMU = solid waste management unit

TOC = top of casing

TABLE 2: SWMU-168 CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS ¹ March 9, 2020

Boeing Renton Facility, Renton, Washington

		Well ID ² CPOC Area						
Parameter	GW229S	GW230I	GW231S					
Temperature (degrees C)	10.2	8.8	9.3					
Specific Conductivity (µS/cm)	232.5	270.1	235.5					
Dissolved Oxygen (mg/L)	2.37	1.48	2.58					
pH (standard units)	6.10	6.29	6.34					
Oxidation/Reduction Potential (mV)	39.6	-17.0	14.3					

Notes:

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

Abbreviations:

 μ S/cm = microsiemens per centimeter

CPOC = conditional point of compliance

degrees C = degrees Celsius

mg/L = milligrams per liter

mV = millivolts

TABLE 3: SWMU-168 CONCENTRATIONS OF CONSTITUENTS OF CONCERN¹ March 9, 2020

Boeing Renton Facility, Renton, Washington

Analyte	Current Cleanup Levels ³	GW229S	Well ID ² CPOC Area GW230I	GW231S
Volatile Organic Compounds (µg/L)				
Vinyl Chloride	0.11	0.02 U	0.0869	0.020 U

Notes:

- 1. **Bolded** values exceed the cleanup levels.
- 2. S = shallow well; I = intermediate well.
- 4. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

Abbreviations:

 μ g/L = micrograms per liter

AOC = area of concern

CPOC = conditional point of compliance

TABLE 4: SWMU-172 AND SWMU-174 GROUP GROUNDWATER ELEVATION DATA March 9, 2020

Boeing Renton Facility, Renton, Washington

Well ID ¹	Screen Interval Depth (feet bgs) ²	TOC Elevation (feet) ³	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet) ³
GW081S	5 to 20 ²	25.91	7.67	18.24
GW152S	5 to 20 ²	26.98	8.23	18.75
GW153S	5 to 20 ²	27.47	8.54	18.93
GW172S	8 to 18 ²	26.44	8.31	18.13
GW173S	8 to 18 ²	26.51	8.45	18.06
GW226S	5 to 20 ²	26.86	8.22	18.64
GW232S	4 to 14	24.45	6.35	18.10
GW233I	15 to 25	24.35	6.1	18.25
GW234S	3 to 13	24.95	6.73	18.22
GW235I	15 to 25	24.9	6.42	18.48
GW236S	5 to 15	24.36	6.1	18.26

Notes:

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

Abbreviations:

bgs = below ground surface SWMU = solid waste management unit TOC = top of casing

TABLE 5: SWMU-172 AND SWMU-174 GROUP CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS ¹ March 9, 2020

Boeing Renton Facility, Renton, Washington

Well ID ²												
		Source Area		Downgradient Plume Area				CPOC Area				
		GW152S										
Parameter	GW152S	(field dup.)	GW153S	GW081S	GW172S	GW173S	GW226S	GW232S	GW233I	GW234S	GW2351	GW236S
Temperature (degrees C)	10.7	10.7	8.1	11.0	9.4	6.3	10.9	5.5	5.6	5.5	4.1	3.6
Specific Conductivity (µS/cm)	165.2	165.2	191.5	186.8	249.8	319.5	256.9	286.7	155.8	174.9	114.7	235.9
Dissolved Oxygen (mg/L)	4.03	4.03	2.54	0.93	1.68	0.78	1.86	4.26	0.94	3.19	3.87	6.47
pH (standard units)	6.16	6.16	6.32	6.45	6.48	6.64	6.44	6.17	6.46	6.36	6.31	6.12
Oxidation/Reduction Potential (mV)	9.6	9.6	-10.1	-21.9	0.8	-91.7	-24.8	26.2	-13.4	16.0	34.1	44.7
Total Organic Carbon (mg/L)	8.70	5.68	10.24	4.69	45.66	6.76	8.35	5.02	4.21	10.55	1.25	3.85

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:

 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 6: SWMU-172 AND SWMU-174 GROUP CONCENTRATIONS OF CONSTITUENTS OF CONCERN ^{1,2} March 9, 2020

Boeing Renton Facility, Renton, Washington

				Well ID ³										
		Current		Source Area			Downgradient Plume Area			CPOC Area				
		Cleanup		GW152S										
Analyte		Levels ⁴	GW152S	(field dup.)	GW153S	GW081S	GW172S	GW173S	GW226S	GW232S	GW233I	GW234S	GW235I	GW236S
Volatile Organic Com	pounds (µg,	/L)												
cis -1,2-Dichloroether	ne	0.03	0.892	0.808	0.0736	0.0357	0.305	0.0504	0.0396	0.221	0.0552	0.0984	0.127	0.0241
Tetrachloroethene		0.02	1.120	1.200	0.0244	0.020 U	0.976	0.0224	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Trichloroethene		0.02	0.278	0.269	0.020 U	0.020 U	0.384	0.0305	0.020 U	0.020 U	0.020 U	0.0297	0.0336	0.020 U
Vinyl Chloride		0.11	0.150	0.138	0.249	0.020 U	0.209	0.144	0.0380	0.264	0.020 U	0.0302	0.020 U	0.020 U
Total Metals (µg/L)														
Arsenic		1.0	3.84	2.73	5.48	1.87	32.8	11.8	4.88	2.73	0.467	27.4	0.251	6.29
Copper		3.5	8.03	5.74	3.09	0.791	27.6	1.51	5.00	2.22	0.500 U	32.9	0.935	21.2
Lead		1.0	6.13	3.57	0.712	0.100 U	15.1	0.442	0.500	0.354	0.100 U	11.8	0.235	18.7

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. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

Abbreviations:

μg/L = micrograms per liter

AOC = area of concern

CPOC = conditional point of compliance

field dup. = field duplicate

TABLE 7: BUILDING 4-78/79 SWMU/AOC GROUP GROUNDWATER ELEVATION DATA March 10 and 11, 2020

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	5.15	14.29
GW033S	5 to 25	19.49	5.28	14.21
GW034S	5 to 25	19.65	5.36	14.42
GW038S	5 to 25	19.68	5.44	14.24
GW039S	3.5 to 13.5	19.3	4.98	14.32
GW143S	10 to 15	19.81	5.63	14.18
GW209S	3.5 to 13.3	19.37	5.18	14.19
GW210S	3.5 to 13.3	19.19	4.85	14.34
GW237S	5 to 15	18.85	4.71	14.14
GW238I	5 to 20	18.94	4.81	14.13
GW239I	15 to 20	19.69	5.52	14.17
GW240D	22 to 27	19.81	6.29	13.52
GW241S	4 to 14	20.28	6.11	14.17
GW242I	15 to 20	20.44	6.23	14.21
GW243I	5 to 20	19.49	5.22	14.27
GW244S	5 to 15	19.53	5.18	14.35

Notes:

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

Abbreviations:

AOC = area of concern

bgs = below ground surface

SWMU = solid waste management unit

TOC = top of casing

TALBE 8: BUILDING 4-78/79 SWMU/AOC GROUP CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS ¹ March 10 and 11, 2020

Boeing Renton Facility, Renton, Washington

				Well ID ²							
		Source Area									
		GW031S									
Parameter	GW031S	(field dup.)	GW033S	GW034S	GW039S	GW243I	GW244S				
Temperature (degrees C)	13.1	13.1	10.8	9.0	9.1	11.5	10.9				
Specific Conductivity (µS/cm)	373.9	373.9	321.1	254.4	179.4	303.9	319.4				
Dissolved Oxygen (mg/L)	1.13	1.13	1.48	1.55	2.03	0.99	1.47				
pH (standard units)	6.36	6.36	6.22	6.27	5.80	6.28	6.23				
Oxidation/Reduction Potential (mV)	-22.5	-22.5	-15.5	-13.9	33.6	-19.1	-2.8				
Total Organic Carbon (mg/L)	13.13	13.07	14.31	8.97	6.06	8.70	14.88				

		Well ID ² Downgradient Plume Area						
	Down							
Parameter	GW038S	GW209S	GW210S					
Temperature (degrees C)	11.3	11.2	10.8					
Specific Conductivity (µS/cm)	228.0	326.1	260.9					
Dissolved Oxygen (mg/L)	0.73	0.99	3.91					
pH (standard units)	6.28	6.37	6.51					
Oxidation/Reduction Potential (mV)	-11.0	-23.6	19.3					
Total Organic Carbon (mg/L)	10.12	9.65	219.9					

				Well ID ²							
		CPOC Area									
Parameter	GW143S	GW237S	GW238I	GW239I	GW240D	GW241S	GW242I				
Temperature (degrees C)	7.1	10.3	8.8	7.6	6.9	7.4	6.3				
Specific Conductivity (µS/cm)	238.8	182.0	366.7	267.0	284.0	260.7	282.1				
Dissolved Oxygen (mg/L)	1.51	0.95	1.10	1.26	1.34	1.23	1.94				
pH (standard units)	6.33	6.47	6.35	6.30	6.32	5.95	5.93				
Oxidation/Reduction Potential (mV)	-27.4	-4.6	-30.8	-22.9	-24.7	1.6	-8.6				
Total Organic Carbon (mg/L)	10.97	8.95	19.06	10.28	7.10	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 field dup. = field duplicate AOC = area of concern field mg/L = milligrams per liter

CPOC = conditional point of compliance mV = millivolts

degrees C = degrees Celsius SWMU = solid waste management unit

NA = not analyzed

TABLE 9: BUILDING 4-78/79 SWMU/AOC GROUP CONCENTRATIONS OF CONSTITUENTS OF CONCERN ^{1, 2} March 10 and 11, 2020

Boeing Renton Facility, Renton, Washington

			Well ID ³									
					Downgradient Plume Area							
	Current		GW031S									
Analyte	Cleanup Level ⁴	GW031S	(field dup.)	GW033S	GW034S	GW039S	GW243I	GW244S	GW038S	GW209S	GW210S	
Volatile Organic Compound	nds (µg/L)											
Benzene	0.80	37.1	38.5	10.2	0.20 U	0.20 U	0.20 U	0.52	0.20 U	0.20 U	0.20 U	
cis -1,2-Dichloroethene	0.70	0.61	0.56	21.4	0.20 U	0.20 U	0.20 U	0.68	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	0.23	0.20 U	0.20 U	0.20 U	
Vinyl Chloride	0.20	0.20 U	0.20 U	52.2	0.20 U	0.20 U	0.20 U	0.70	0.20 U	0.20 U	0.20 U	
Total Petroleum Hydroca	Total Petroleum Hydrocarbons (μg/L)											
TPH-G (C7-C12)	800	2,980	3,060	296	100 U	100 U	100 U	100 U	100 U	100 U	100 U	

		Well ID ³										
	Current Cleanup	CPOC Area										
Analyte	Levels ⁴	GW143S GW237S GW238I GW239I GW240D GW241S GW242I										
Volatile Organic Compo	unds (µg/L)											
Benzene	0.80	0.20 U	3.48	0.20 U								
cis -1,2-Dichloroethene	0.70	0.21	1.00 U	0.20 U								
Trichloroethene	0.23	0.20 U	1.00 U	0.20 U								
Vinyl Chloride	0.20	0.20 U	1.00 U	0.20 U								
Total Petroleum Hydroo	arbons (μg/L)											
TPH-G (C7-C12)	800	100 U	961	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; D = deep well.
- 4. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

Abbreviations:

 μ g/L = micrograms per liter

AOC = area of concern

CPOC = conditional point of compliance

field dup. = field duplicate

SWMU = solid waste management unit

TPH-G = total petroleum hydrocarbons as gasoline

TABLE 10: AOC-001 AND AOC-002 GROUNDWATER ELEVATION DATA March 12, 2020

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
GW193S	3.0 to 12.8	18.67	4.55	14.12

Notes:

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

Abbreviations:

AOC = area of concern bgs = below ground surface TOC = top of casing

TABLE 11: AOC-001 AND AOC-002 CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS ¹ March 12, 2020

Boeing Renton Facility, Renton, Washington

	Well ID ²											
	Source Area		Downgradient Plume Area			CPOC Area						
						GW185S						
Parameter	GW193S	GW190S	GW191D ³	GW192S	GW246S ⁴	GW185S⁴	(field dup.) ⁴	GW194S⁴	GW195S⁴	GW196D ^{4, 5}	GW197S⁴	GW245S
Temperature (degrees C)	8.1	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Specific Conductivity (µS/cm)	905	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Dissolved Oxygen (mg/L)	2.56	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
pH (standard units)	6.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Oxidation/Reduction Potential (mV)	9.4	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Total Organic Carbon (mg/L)	48.20	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

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. GW191D is installed in a cluster with GW192S, and GW191D is screened below a silt layer at 26.5 to 36 feet in depth
- 4. Wells GW246S and GW185S through GW197S are associated with the AOC-001 and AOC-002 cleanup action area
- 5. GW196D is installed in a cluster with GW195S, and GW196D is screened below a silt layer at 26.8 to 36.8 feet in depth

Abbreviations:

 μ S/cm = microsiemens per centimeter field dup. = field duplicate AOC = area of concern field mg/L = milligrams per liter

CPOC = conditional point of compliance mV = millivolts
degrees C = degrees Celsius NM = not measured

TABLE 12: AOC-001 AND AOC-002 CONCENTRATIONS OF **CONSTITUENTS OF CONCERN 1, 2**

March 12, 2020

Boeing Renton Facility, Renton, Washington

		Well ID ³ Source Area		
Analyte	Current Cleanup Levels 4	GW193S		
Volatile Organic Compounds (µg/L)				
1,1-Dichloroethene	0.057	0.020 U		
Benzene	0.8	0.20 U		
cis -1,2-Dichloroethene	0.02	0.490		
Trichloroethene	0.02	0.0258		
Vinyl Chloride	0.05	0.268		

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. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

Abbreviations:

 μ g/L = micrograms per liter

AOC = area of concern

TABLE 13: AOC-003 GROUNDWATER ELEVATION DATA March 12, 2020

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	3.5 to 13.5	18.78	3.95	14.83
GW247S	4 to 14	18.91	4.13	14.78
GW248I	10 to 20	18.78	3.94	14.84
GW249S	4 to 14	18.85	3.89	14.85

Notes:

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

Abbreviations:

AOC = area of concern

bgs = below ground surface

TOC = top of casing

TABLE 14: AOC-003 CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS ¹ March 12, 2020

Boeing Renton Facility, Renton, Washington

		Well ID ²					
		Downgradient					
	Source Area	Plume Area	СРОС А	rea			
Parameter	GW249S	GW188S	GW247S	GW248I			
Temperature (degrees C)	7.7	8.2	7.2	7.4			
Specific Conductivity (µS/cm)	290	373	313.4	380.7			
Dissolved Oxygen (mg/L)	4.53	5.91	1.75	1.79			
pH (standard units)	6.13	6.14	6.29	6.33			
Oxidation/Reduction Potential (mV)	-37.9	-30.4	21.3	12.2			
Total Organic Carbon (mg/L)	18.06	11.22	10.21	15.07			

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:

 μ S/cm = microsiemens per centimeter AOC = area of concern 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} March 12, 2020

Boeing Renton Facility, Renton, Washington

		Well ID ³					
		C A	Downgradient				
	Current Cleanup Source A		Cleanup Source Area Plume Area		CPOC Area		
Analyte	Levels ⁴	GW249S	GW188S	GW247S	GW248I		
Volatile Organic Compounds (µg/L)							
cis -1,2-Dichloroethene	0.78	0.0604	0.0362	0.0394	0.020 U		
Tetrachloroethene	0.02	0.020 U	0.0244	0.020 U	0.020 U		
Trichloroethene	0.16	0.020 U	0.020 U	0.020 U	0.020 U		
Vinyl Chloride	0.24	0.334	0.235	0.305	0.499		

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. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

Abbreviations:

μg/L = micrograms per liter

AOC = area of concern

CPOC = conditional point of compliance

TABLE 16: AOC-004 GROUNDWATER ELEVATION DATA March 9, 2020

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
GW174S	4 to 14	19.56	3.76	15.80
GW250S	4 to 14	19.31	3.48	15.83

Notes:

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

Abbreviations:

AOC = area of concern bgs = below ground surface TOC = top of casing

TABLE 17: AOC-004 CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS ¹ March 9, 2020

Boeing Renton Facility, Renton, Washington

	Well I	D ²	
	Source Area	CPOC Area	
Parameter	GW250S	GW174S	
Temperature (degrees C)	8.5	11.2	
Specific Conductivity (µS/cm)	100.6	135.3	
Dissolved Oxygen (mg/L)	1.46	0.19	
pH (standard units)	6.52	6.85	
Oxidation/Reduction Potential (mV)	-19.0	-130.8	

Notes:

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

Abbreviations:

 μ S/cm = microsiemens per centimeter

AOC = area of concern

CPOC = conditional point of compliance

degrees C = degrees Celsius

mg/L = milligrams per liter

mV = millivolts

TABLE 18: AOC-004 CONCENTRATIONS OF CONSTITUENTS OF CONCERN¹ March 9, 2020

Boeing Renton Facility, Renton, Washington

		Well ID ²		
	Current Cleanup	Source Area	CPOC Area	
Analyte	Levels ³	GW250S	GW174S	
Metals (mg/L)				
Lead	0.001	0.00119	0.000974	

Notes:

- 1. **Bolded** values exceed the cleanup levels.
- 2. S = shallow well.
- 3. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

Abbreviations:

AOC = area of concern

CPOC = conditional point of compliance

mg/L = milligrams per liter

TABLE 19: AOC-060 GROUNDWATER ELEVATION DATA March 10, 2020

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
GW009S	4.5 to 14.5	19.36	5.22	14.14
GW010S	4.5 to 14.5	19.47	5.37	14.10
GW011D	29 to 39	19.49	5.34	14.15
GW012S	4.5 to 14.5	19.11	4.99	14.12
GW014S	4.5 to 14.5	19.24	5.07	14.17
GW147S	5 to 15	18.73	4.67	14.06
GW149S	5 to 15	19.19	5.13	14.06
GW150S	5 to 15	19.1	5.07	14.03
GW252S	4 to 14	19.01	4.93	14.08
GW253I	10 to 20	19.02	4.96	14.06
GW254S	4 to 14	19.16	5.11	14.05

Notes:

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

Abbreviations:

AOC = area of concern

bgs = below ground surface

TOC = top of casing

TABLE 20: AOC-060 CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS ¹ March 10, 2020

Boeing Renton Facility, Renton, Washington

					Well ID ²	:				
	Source Area	D	owngradien	it Plume Ar	ea		(CPOC Area	1	
				GW014S						
				(field						
Parameter	GW009S	GW012S	GW014S	dup.)	GW147S	GW149S	GW150S	GW252S	GW253I	GW254S
Temperature (degrees C)	19.5	19.7	15.9	15.9	8.5	11.2	11.1	11.0	12.1	10.5
Specific Conductivity (µS/cm)	376	655	375.2	375.2	31.1	265.4	286.9	464.2	310.5	442.4
Dissolved Oxygen (mg/L)	2.37	5.07	2.92	2.92	2.87	1.05	1.31	1.24	1.09	0.82
pH (standard units)	6.40	6.15	6.34	6.34	5.72	6.46	6.50	6.68	6.53	6.69
Oxidation/Reduction Potential (mV)	-73.9	-99.0	-27.6	-27.6	126.9	-68.3	-47.4	-96.2	-82.1	-106.5
Total Organic Carbon (mg/L)	6.51	9.88	3.08	3.00	4.56	5.07	7.19	7.22	5.53	10.03

Notes:

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

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

Abbreviations:

 $\mu S/cm$ = microsiemens per centimeter field dup. = field duplicate

AOC = area of concern mg/L = milligrams per liter

CPOC = conditional point of compliance mV = millivolts

degrees C = degrees Celsius

TABLE 21: AOC-060 CONCENTRATIONS OF CONSTITUENTS OF CONCERN ^{1, 2} March 10, 2020

Boeing Renton Facility, Renton, Washington

						Well ID	3				
		Source									
	Current	Area		Downgrad	ient Plume Area	1			CPOC Area		
	Cleanup				GW014S						
Analyte	Levels ⁴	GW009S	GW012S	GW014S	(field dup.)	GW147S	GW149S	GW150S	GW252S	GW2531	GW254S
Volatile Organic Compounds	s (µg/L)										
cis -1,2-Dichloroethene	0.08	0.093	0.482	0.151	0.146	0.287	0.0574	0.0525	0.0259	0.0915	0.0736
Trichloroethene	0.02	0.0242	0.0505	0.0419	0.0324	1.200	0.020 U	0.020 U	0.020 U	0.0212	0.020 U
Vinyl Chloride	0.26	0.183	0.603	0.195	0.233	0.020 U	0.0850	0.0541	0.020 U	0.184	0.0405

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. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

Abbreviations:

 μ g/L = micrograms per liter

AOC = area of concern

CPOC = conditional point of compliance

field dup. = field duplicate

SWMU = solid waste management unit

TABLE 22: AOC-090 GROUNDWATER ELEVATION DATA March 11, 2020

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
GW163I	25 to 35	21.27	6.12	15.15
GW165I	25 to 35	21.14	11.68	9.46
GW175I	21.2 to 26.1	20.57	7.03	13.54
GW176S	10 to 14.3	20.15	5.88	14.27
GW177I	21.7 to 26	22.51	7.09	15.42
GW178S	11.2 to 15.5	22.73	7.83	14.90
GW179I	21.5 to 26	20.47	5.81	14.66
GW180S	10.5 to 15	20.56	5.85	14.71
GW189S	4 to 14	22.01	5.83	16.18
GW207S	7.3 to 12	21.12	6.45	14.67
GW208S	6.3 to 11	22.45	7.64	14.81

Notes:

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

Abbreviations:

AOC = area of concern

bgs = below ground surface

TOC = top of casing

TABLE 23: AOC-090 CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS ¹ March 11, 2020

Boeing Renton Facility, Renton, Washington

						Well ID ²							
	Source Area	Downgradier	nt Plume Area		Shall	ow Zone CPOC	Area		Int	Intermediate Zone CPOC Area			
						GW180s							
Parameter	GW189S ³	GW175I	GW176S	GW178S	GW180S	(field dup.)	GW207S	GW208S	GW163I	GW165I	GW177I	GW179I	
Temperature (degrees C)	10.3	11.2	11.1	10.2	11.1	11.1	10.9	10.0	10.2	10.6	10.7	11.8	
Specific Conductivity (µS/cm)	107.6	400.9	472.4	367.4	207.7	207.7	238.4	430.5	321.6	285.1	443.6	380.4	
Dissolved Oxygen (mg/L)	1.23	1.64	1.18	4.12	0.92	0.92	1.00	5.32	3.48	2.39	4.08	2.58	
pH (standard units)	6.57	6.28	6.27	6.20	6.36	6.36	6.79	6.14	6.24	6.27	6.23	6.35	
Oxidation/Reduction Potential (mV)	-40.4	-10.7	-9.2	-57.9	-26.1	-26.1	-39.4	-87.3	-39.5	-30.2	-63.6	-55.4	
Total Organic Carbon (mg/L)	1.65	NA	NA	NA	NA	NA	NA	NA	NA	NA	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.
- 3. GW189S is the replacement well for GW168S.

Abbreviations:

 μ S/cm = microsiemens per centimeter field dup. = field duplicate AOC = area of concern field mg/L = milligrams per liter

 $\begin{tabular}{ll} {\sf CPOC} = conditional point of compliance} & {\sf mV} = millivolts \\ {\sf degrees} \ {\sf C} = {\sf degrees} \ {\sf Celsius} & {\sf NA} = {\sf not} \ {\sf analyzed} \\ \end{tabular}$

TABLE 24: AOC-090 CONCENTRATIONS OF CONSTITUENTS OF CONCERN ^{1, 2} March 11, 2020

Boeing Renton Facility, Renton, Washington

							Well ID ³						
	Current	Source Area	Downgradier	nt Plume Area		Shall	ow Zone CPOC	Area		Int	ermediate Z	one CPOC A	rea
	Cleanup						GW180S						
Analyte	Levels 4	GW189S ⁵	GW175I	GW176S	GW178S	GW180S	(field dup.)	GW207S	GW208S	GW163I	GW165I	GW177I	GW179I
Volatile Organic Compounds	(μg/L)												
1,1,2,2-Tetrachloroethane	0.17	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
1,1,2-Trichloroethane	0.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
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	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Acetone	300	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
Benzene	0.8	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Carbon Tetrachloride	0.23	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Chloroform	2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
cis-1,2-Dichloroethene	2.4	0.20 U	0.20 U	0.25	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Methylene Chloride	2	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Tetrachloroethene	0.05	0.0263	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Toluene	75	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
trans-1,2-Dichloroethene	53.9	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Trichloroethene	0.08	0.0745	0.020 U	0.020 U	0.021	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Vinyl Chloride	0.13	0.020 U	0.020 U	0.207	0.184	0.020 U	0.020 U	0.020 U	0.419	0.020 U	0.020 U	0.020 U	0.020 U
Total Petroleum Hydrocarbor	ns (µg/L)												
TPH-G (C7-C12)	800	189	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
TPH-D (C12-C24)	500	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
TPH-O (C24-C40)	500	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 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. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.
- 5. GW189S is the replacement well for GW168S.

Abbreviations:

 μ g/L = micrograms per liter

AOC = area of concern

CPOC = conditional point of compliance

field dup. = field duplicate

SWMU = solid waste management unit

TPH-D = total petroleum hydrocarbons as diesel

TPH-G = total petroleum hydrocarbons as gasoline

TPH-O = total petroleum hydrocarbons as oil

TABLE 25: BUILDING 4-70 GROUNDWATER ELEVATION DATA March 11, 2020

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
Γ	GW259S	5 to 15	19.72	5.31	14.41
	GW260S	5 to 15	19.83	5.34	14.49

Notes:

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

Abbreviations:

bgs = below ground surface

TOC = top of casing

TABLE 26: BUILDING 4-70 CONCENTRATIONS OF PRIMARY GEOCHEMICAL INDICATORS ¹ March 11, 2020

Boeing Renton Facility, Renton, Washington

		I ID ²
		CArea
Parameter	GW259S	GW260S
Temperature (degrees C)	11.7	10.4
Specific Conductivity (µS/cm)	211.1	243.5
Dissolved Oxygen (mg/L)	1.76	0.79
pH (standard units)	6.59	6.39
Oxidation/Reduction Potential (mV)	1.3	-7.5
Total Organic Carbon (mg/L)	9.90	10.36

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:

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

TABLE 27: BUILDING 4-70 CONCENTRATIONS OF CONSTITUENTS OF CONCERN ^{1, 2} March 11, 2020

Boeing Renton Facility, Renton, Washington

		Wel	I ID ³
	Current Cleanup	CPOC	Area
	Levels ⁴	GW259S	GW260S
Volatile Organic Compounds (μg/L)			
cis-1,2-Dichloroethene	16	0.26	0.2 U
Trichloroethene	0.54	0.37	0.2 U
Vinyl Chloride	0.2	0.2 U	0.21

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.
- 4. Cleanup levels obtained from Washington State Department of Ecology email to Boeing on December 30, 2015. on December 30, 2015.

Abbreviations:

 μ g/L = micrograms per liter

CPOC = conditional point of compliance

wood.

Appendix A

TABLE A-1: GROUNDWATER COMPLIANCE MONITORING SCHEDULE

Boeing Renton Facility, Renton, Washington

Cleanup Action	Monitorin	g Frequency ¹		Groundwate	er 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
SWMU-172/SWMU-174	X		NA	GW152S and GW153S	GW081S, GW172S, GW173S,	GW232S, GW233I, GW234S,		cis -1,2-DCE, PCE, TCE, VC	SW8260C SIM ⁶
					and GW226S	GW235I, and GW236S		Arsenic, copper, and lead	EPA 6020A
Building 4-78/79	X		NA	GW031S, GW033S, GW034S,	GW038S, GW209S, and GW210S	GW143S, GW237S, GW238I, GW239I, GW240D, GW241S,		VC, TCE, cis -1,2-DCE, benzene	SW8260C ⁶
SWMU/AOC Group	^		NA	GW039S, GW243I, and GW244S	GW0303, GW2093, and GW2103	and GW242I		TPH-gasoline	NWTPH-Gx
Former Fuel Farm SWMU/AOC Group		X (2,4)	NA	GW255S, GW256S, and GW257S	NA	GW183S, GW184S, GW211S, GW212S, GW221S, GW224S, and GW258S		TPH-jet fuel, TPH-diesel	NWTPH-Dx
105 201 (105 2009	Х	X (1,3)		51440259	GW190S ^{8,9} , GW191D ^{8,9} , GW192S ^{8,9} ,	GW185S ^{8,9} , GW195S ^{8,9} , GW196D ^{8,9} , GW197S ^{8,9} , and		Benzene	SW8260C ⁶
AOC-001/AOC-002 ⁹	(CPOC wells)	(all other wells)	NA	GW193S ⁹	and GW246S ^{8,9}	GW196D ⁸³ , GW197S ⁸³ , and GW245S ^{8,9}		TCE, cis -1,2-DCE, 1,1-dichloroethene, VC	SW8260C SIM
405.003	Х	X (1,3)		CMO40C	CIMADOC	CM247C CM240I		PCE, TCE	SUMPOSE SUM
AOC-003	(CPOC wells)	(all other wells)	NA	GW249S	GW188S	GW247S and GW248I		cis -1,2-DCE, VC	SW8260C SIM
AOC-004		X (1,3)	NA	GW250S	NA	GW174S		Lead	EPA 6020A
AOC 000		V (1.2)	GW012S and GW014S	CMOOOC	C\N/1.47C	GW149S, GW150S, GW252S,	GW010S and GW011D	VC	CMOSCOC CIM
AOC-060		X (1,3)	GW0125 and GW0145	GW009S	GW147S	GW253I, and GW254S	GW010S and GW011D	TCE, cis -1,2-DCE	SW8260C SIM
								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 (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
								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
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.
- 8. Monitoring wells were abandoned on 11/25/2019 prior to Apron R construction and will be replaced upon completion of construction.
- 9. Groundwater monitoring and sampling will be suspended until completion of construction.

Abbreviations:

AOC = area of concern cis -1,2-DCE = cis -1,2 dichloroethene COCs = constituents of concern CPOC = conditional point of compliance 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

NA = not applicable

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

Boeing Renton Facility, Renton, Washington

					Primary Geochemical Para		
Cleanup Action		Groundw	ater Monitoring Wells			Monitorin	ng 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 ⁷	NA	GW193S ⁷	GW190S ^{6,7} , GW191D ^{6,7} , GW192S ^{6,7} , and GW246S ^{6,7}	GW185S ^{6,7} , GW195S ^{6,7} , GW196D ^{6,7} , GW197S ^{6,7} , and GW245S ^{6,7}	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-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
- 4. Primary geochemical parameters will not be collected at GW228S only at CPOC wells that are sampled semiannually
- 5. TOC will only be analyzed in the groundwater from the source area well (GW189S).
- 6. Monitoring wells were abandoned on 11/25/2019 prior to Apron R construction and will be replaced upon completion of construction.
- 7. Groundwater monitoring and sampling will be suspended until completion of construction.

quarters when monitoring will be conducted is indicated by 1 for quarter 1, 2 for quarter 2, etc.

Abbreviations:

AOC = area of concern

COCs = constituents of concern

CPOC = conditional point of compliance

EDR = Engineering Design Report

NA = not applicable

ORP = oxidation reduction potential

SWMU = solid waste management unit

TOC = total organic carbon

wood.

Appendix B



Project Nam	ie:	Boeing Ren	ton		Project Number	:: 0	025217.099.0	99	
Event:		Quarterly N	Iarch 2020		Date/Time:	3/ 9 /2020@ 1340)		
Sample Num	nber:	RGW229S-	200309		Weather:	SUNNY, COLD			
Landau Repr	resentative:	BXM/SRB/	JAN		_				
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES)	Damaged (N	(O)	Describe: fl	ush		
DTW Before	Purging (ft)	6.90	Time:		Flow through cel	l vol.		GW Meter No.(s slope-8
	Date/Time:			End Purge:	_	3/ 9/2020@1334		Gallons Purged:	•
Purge water d			55-gal Drum	Ē	Storage Tank	Ground	_	SITE TREATM	
-	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	рп	(mV)	(NTU)	(ft)	Volume (gal)	Observations
						lings within the follo	0	>/= 1 flow	
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1314	11.7	232.2	0.33	5.99	111.3		6.92		
1317	11.8	236.2	0.33	6.00	94.1		6.96		
1320	11.8	238.3	0.71	6.04	76.2		6.92		
1323	11.5	239.9	1.37	6.07	57.4				
1326	11.0	237.8	1.82	6.09	48.9				
1329	10.7	235.5	2.06	6.09	45.1				
1332		232.5	2.37	6.10	39.6				
1332	10.2	232.3	2.31	0.10	37.0				
SAMPLE CO	I I ECTION D								
Sample Collection			Bailer		Pump/Pump Type	DEDICATED BLAI	ODER		
Made of:		Stainless Ste		_	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lure:	Alconox Wa	_	Tap Rinse	DI Water	Dedicated	E ouiei	Boureacou	
(By Numerica	_	Other	··· •	rap Kinse	□ Di Water	Dedicated			
		_	sheen etc.):	SI IGHTI Y	CLOUDY WHIT	E TINT, NO SHEEN	NO ODOR	SOME SOLIDS E	EL OATING
Sample Beser	iption (color, t	aroidity, odor	, sheen, etc.)	<u> </u>	elocbi, wini	E III(I, I(O BILLEI)	, I to obort,	JOINE BOLIDS I	LOTTERO
Replicate	Temp	C 1	D.O.	pН	ODD	Turbidity	DTW	Ferrous iron	C 4.1
	(°F/°C)	Cond. (uS/cm)	(mg/L)	pii	ORP (mV)	(NTU)	(ft)	(Fe II)	Comments/ Observations
1	(° F /° C)			6.10		•			
1 2	,	(uS/cm)	(mg/L)	•	(mV)	•			
	10.2	(uS/cm) 232.4	(mg/L)	6.10	(mV) 39.0	•			
2 3	10.2 10.1 10.1	232.4 231.9 231.9	(mg/L) 2.41 2.44 2.46	6.10 6.10 6.10	(mV) 39.0 38.8 38.4	•			
2 3 4	10.2 10.1 10.1 10.1	232.4 231.9 231.9 231.9	(mg/L) 2.41 2.44 2.46 2.48	6.10 6.10 6.10 6.10	(mV) 39.0 38.8 38.4 38.0	(NTU)			
2 3 4 Average:	10.2 10.1 10.1 10.1 10.1	232.4 231.9 231.9 231.9 232.0	(mg/L) 2.41 2.44 2.46 2.48 2.45	6.10 6.10 6.10 6.10 6.10	(mV) 39.0 38.8 38.4 38.0 38.6	(NTU) #DIV/0!	(ft)	(Fe II)	
2 3 4 Average:	10.2 10.1 10.1 10.1 10.1 TYPICAL A	(uS/cm) 232.4 231.9 231.9 231.9 232.0 NALYSIS AI	2.41 2.44 2.46 2.48 2.45 LLOWED PE	6.10 6.10 6.10 6.10 6.10	39.0 38.8 38.4 38.0 38.6	#DIV/0!	(ft)	(Fe II)	Observations
2 3 4 Average:	10.2 10.1 10.1 10.1 10.1 TYPICAL A (8260C SIM)	(uS/cm) 232.4 231.9 231.9 231.9 232.0 NALYSIS AI VC) (8010)	2.41 2.44 2.46 2.48 2.45 LLOWED PE	6.10 6.10 6.10 6.10 6.10 ER BOTTLE	(mV) 39.0 38.8 38.4 38.0 38.6 TYPE (Circle ap	#DIV/0!	n-standard a	nalysis below)	Observations OR
2 3 4 Average:	10.2 10.1 10.1 10.1 10.1 10.1 10.1 (8260C SIM V) (8270) (PAF	(uS/cm) 232.4 231.9 231.9 231.9 232.0 NALYSIS AI VC) (8010) H) (NWTPH-	2.41 2.44 2.46 2.48 2.45 LLOWED PE (8020) (NW	6.10 6.10 6.10 6.10 6.10 ER BOTTLE TPH-G) (N'	(mV) 39.0 38.8 38.4 38.0 38.6 TYPE (Circle ap WTPH-Gx) (BTH HCID) (8081) (#DIV/0! #DIV/0! plicable or write note EX) 8141) (Oil & Grease	n-standard a	nalysis below) WA □ WA □	Observations
2 3 4 Average:	10.2 10.1 10.1 10.1 10.1 TYPICAL A (8260C SIM V (8270) (PAF (pH) (Condu	(uS/cm) 232.4 231.9 231.9 231.9 232.0 NALYSIS AI VC) (8010) H) (NWTPH- activity) (TD:	2.41 2.44 2.46 2.48 2.45 LLOWED PE (8020) (NW D) (NWTPE S) (TSS) (B	6.10 6.10 6.10 6.10 6.10 CR BOTTLE TPH-G) (N' I-Dx) (TPH-OD) (Turbic	(mV) 39.0 38.8 38.4 38.0 38.6 TYPE (Circle ap WTPH-Gx) (BTI HCID) (8081) (dity) (Alkalinity)	#DIV/0! plicable or write not EX) 8141) (Oil & Grease (HCO3/CO3) (Cl)	n-standard a	nalysis below) WA □ WA □	Observations OR
2 3 4 Average:	10.2 10.1 10.1 10.1 10.1 TYPICAL A (8260C SIM V (8270) (PAF (pH) (Condu	(uS/cm) 232.4 231.9 231.9 231.9 232.0 NALYSIS AI VC) (8010) H) (NWTPH- activity) (TD:	(mg/L) 2.41 2.44 2.46 2.48 2.45 LLOWED PE (8020) (NW D) (NWTPE S) (TSS) (B (Total PO4)	6.10 6.10 6.10 6.10 6.10 CR BOTTLE TPH-G) (NY I-Dx) (TPH-GOD) (Turbic (Total Kieda	(mV) 39.0 38.8 38.4 38.0 38.6 TYPE (Circle ap WTPH-Gx) (BTH HCID) (8081) (#DIV/0! plicable or write not EX) 8141) (Oil & Grease (HCO3/CO3) (Cl)	n-standard a	nalysis below) WA □ WA □	Observations OR
2 3 4 Average:	10.2 10.1 10.1 10.1 10.1 TYPICAL A (8260C SIM V (8270) (PAF (pH) (Condu (COD) (TOO (Total Cyanid	(uS/cm) 232.4 231.9 231.9 231.9 232.0 NALYSIS AI VC) (8010) H) (NWTPH- lectivity) (TD: C SM5310C) le) (WAD Cy	2.41 2.44 2.46 2.48 2.45 2.45 2.LOWED PE (8020) (NW D) (NWTPE S) (TSS) (B (Total PO4) ranide) (Free	6.10 6.10 6.10 6.10 6.10 ER BOTTLE TPH-G) (N' I-Dx) (TPH-OD) (Turbic (Total Kieda Cyanide)	(mV) 39.0 38.8 38.4 38.0 38.6 TYPE (Circle ap WTPH-Gx) (BTI HCID) (8081) (dity) (Alkalinity) hl Nitrogen) (NH	#DIV/0! plicable or write not EX) 8141) (Oil & Grease (HCO3/CO3) (Cl)	n-standard and e) (SO4) (NO	malysis below) WA WA WA Solution WA Solution WA WA Solution WA	Observations OR □ OR □
2 3 4 Average:	10.2 10.1 10.1 10.1 10.1 TYPICAL A (8260C SIM V (8270) (PAF (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals)	(uS/cm) 232.4 231.9 231.9 232.0 NALYSIS AI VC) (8010) H) (NWTPH- letivity) (TD: C SM5310C) le) (WAD Cy o) (As) (Sb) (2.41 2.44 2.46 2.48 2.45 2.45 2.40 2.45 2.45 2.45 2.40 2.45 2.45 2.40 2.45 2.40 2.41 2.46 2.48 2.45 2.45 2.45 2.45 2.46 2.48 2.48 2.45 2.49 2.49 2.49 2.49 2.49 2.49 2.49 2.49	6.10 6.10 6.10 6.10 6.10 CR BOTTLE TPH-G) (N' I-Dx) (TPH-OD) (Turbic (Total Kiedal Cyanide)	(mV) 39.0 38.8 38.4 38.0 38.6 TYPE (Circle ap WTPH-Gx) (BTI HCID) (8081) (dity) (Alkalinity) hl Nitrogen) (NH (Cr) (Cu) (Fe) (#DIV/0! #DIV/0! plicable or write no. EX) 8141) (Oil & Grease (HCO3/CO3) (Cl) (I3) (NO3/NO2)	n-standard and (SO4) (NO	nalysis below) WA WA WA Solution WA	Observations OR □ OR □ OR □
2 3 4 Average:	10.2 10.1 10.1 10.1 10.1 TYPICAL A (8260C SIM V (8270) (PAH (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	(uS/cm) 232.4 231.9 231.9 231.9 232.0 NALYSIS AI VC) (8010) H) (NWTPH- detivity) (TD: C SM5310C) le) (WAD Cy) (As) (Sb) (etals) (As) (Sb) g short list)	(mg/L) 2.41 2.44 2.46 2.48 2.45 LLOWED PF (8020) (NW D) (NWTPF S) (TSS) (B (Total PO4) ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.10 6.10 6.10 6.10 6.10 CR BOTTLE TPH-G) (N' I-Dx) (TPH-OD) (Turbic (Total Kiedal Cyanide)	(mV) 39.0 38.8 38.4 38.0 38.6 TYPE (Circle ap WTPH-Gx) (BTI HCID) (8081) (dity) (Alkalinity) hl Nitrogen) (NH (Cr) (Cu) (Fe) (#DIV/0! #DIV/0! **Plicable or write note: EX) 8141) (Oil & Grease: (HCO3/CO3) (Cl) (3) (NO3/NO2) Pb) (Mg) (Mn) (Ni)	n-standard and (SO4) (NO	nalysis below) WA WA WA Solution WA	Observations OR □ OR □ OR □
2 3 4 Average:	10.2 10.1 10.1 10.1 10.1 TYPICAL A (8260C SIM V (8270) (PAH (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	(uS/cm) 232.4 231.9 231.9 231.9 232.0 NALYSIS AI VC) (8010) H) (NWTPH- detivity) (TD: C SM5310C) le) (WAD Cy o) (As) (Sb) (etals) (As) (Sb) ((mg/L) 2.41 2.44 2.46 2.48 2.45 LLOWED PF (8020) (NW D) (NWTPF S) (TSS) (B (Total PO4) ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.10 6.10 6.10 6.10 6.10 CR BOTTLE TPH-G) (N' I-Dx) (TPH-OD) (Turbic (Total Kiedal Cyanide)	(mV) 39.0 38.8 38.4 38.0 38.6 TYPE (Circle ap WTPH-Gx) (BTI HCID) (8081) (dity) (Alkalinity) hl Nitrogen) (NH (Cr) (Cu) (Fe) (#DIV/0! #DIV/0! **Plicable or write note: EX) 8141) (Oil & Grease: (HCO3/CO3) (Cl) (3) (NO3/NO2) Pb) (Mg) (Mn) (Ni)	n-standard and (SO4) (NO	nalysis below) WA WA WA Solution WA	Observations OR OR OR OR OR OR OR OR OR OR
2 3 4 Average:	10.2 10.1 10.1 10.1 10.1 TYPICAL A (8260C SIM V (8270) (PAH (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	(uS/cm) 232.4 231.9 231.9 231.9 232.0 NALYSIS AI VC) (8010) H) (NWTPH- detivity) (TD: C SM5310C) le) (WAD Cy) (As) (Sb) (etals) (As) (Sb) g short list)	(mg/L) 2.41 2.44 2.46 2.48 2.45 LLOWED PF (8020) (NW D) (NWTPF S) (TSS) (B (Total PO4) ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.10 6.10 6.10 6.10 6.10 CR BOTTLE TPH-G) (N' I-Dx) (TPH-OD) (Turbic (Total Kiedal Cyanide)	(mV) 39.0 38.8 38.4 38.0 38.6 TYPE (Circle ap WTPH-Gx) (BTI HCID) (8081) (dity) (Alkalinity) hl Nitrogen) (NH (Cr) (Cu) (Fe) (#DIV/0! #DIV/0! **Plicable or write note: EX) 8141) (Oil & Grease: (HCO3/CO3) (Cl) (3) (NO3/NO2) Pb) (Mg) (Mn) (Ni)	n-standard and (SO4) (NO	nalysis below) WA WA WA Solution WA	Observations OR OR OR OR OR OR OR OR OR OR
2 3 4 Average:	10.2 10.1 10.1 10.1 10.1 TYPICAL A (8260C SIM V (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	(uS/cm) 232.4 231.9 231.9 231.9 232.0 NALYSIS AI VC) (8010) H) (NWTPH- detivity) (TD: C SM5310C) le) (WAD Cy) (As) (Sb) (etals) (As) (Sb) g short list)	(mg/L) 2.41 2.44 2.46 2.48 2.45 LLOWED PF (8020) (NW D) (NWTPF S) (TSS) (B (Total PO4) ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.10 6.10 6.10 6.10 6.10 CR BOTTLE TPH-G) (N' I-Dx) (TPH-OD) (Turbic (Total Kiedal Cyanide)	(mV) 39.0 38.8 38.4 38.0 38.6 TYPE (Circle ap WTPH-Gx) (BTI HCID) (8081) (dity) (Alkalinity) hl Nitrogen) (NH (Cr) (Cu) (Fe) (#DIV/0! #DIV/0! **Plicable or write note: EX) 8141) (Oil & Grease: (HCO3/CO3) (Cl) (3) (NO3/NO2) Pb) (Mg) (Mn) (Ni)	n-standard and (SO4) (NO	nalysis below) WA WA WA Solution WA	Observations OR □ OR □ OR □
2 3 4 Average:	10.2 10.1 10.1 10.1 10.1 TYPICAL A (8260C SIM V (8270) (PAH (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	(uS/cm) 232.4 231.9 231.9 231.9 232.0 NALYSIS AI VC) (8010) H) (NWTPH- detivity) (TD: C SM5310C) le) (WAD Cy) (As) (Sb) (etals) (As) (Sb) g short list)	(mg/L) 2.41 2.44 2.46 2.48 2.45 LLOWED PF (8020) (NW D) (NWTPF S) (TSS) (B (Total PO4) ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.10 6.10 6.10 6.10 6.10 CR BOTTLE TPH-G) (N' I-Dx) (TPH-OD) (Turbic (Total Kiedal Cyanide)	(mV) 39.0 38.8 38.4 38.0 38.6 TYPE (Circle ap WTPH-Gx) (BTI HCID) (8081) (dity) (Alkalinity) hl Nitrogen) (NH (Cr) (Cu) (Fe) (#DIV/0! #DIV/0! **Plicable or write note: EX) 8141) (Oil & Grease: (HCO3/CO3) (Cl) (3) (NO3/NO2) Pb) (Mg) (Mn) (Ni)	n-standard and (SO4) (NO	nalysis below) WA WA WA Solution WA	Observations OR □ OR □ OR □
2 3 4 Average:	10.2 10.1 10.1 10.1 10.1 10.1 TYPICAL A (8260C SIM V (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	(uS/cm) 232.4 231.9 231.9 231.9 232.0 NALYSIS AI VC) (8010) H) (NWTPH- detivity) (TD: C SM5310C) le) (WAD Cy) (As) (Sb) (etals) (As) (Sb) g short list)	(mg/L) 2.41 2.44 2.46 2.48 2.45 LLOWED PF (8020) (NW D) (NWTPF S) (TSS) (B (Total PO4) vanide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.10 6.10 6.10 6.10 6.10 CR BOTTLE TPH-G) (N' I-Dx) (TPH-OD) (Turbic (Total Kiedal Cyanide)	(mV) 39.0 38.8 38.4 38.0 38.6 TYPE (Circle ap WTPH-Gx) (BTI HCID) (8081) (dity) (Alkalinity) hl Nitrogen) (NH (Cr) (Cu) (Fe) (#DIV/0! #DIV/0! **Plicable or write note: EX) 8141) (Oil & Grease: (HCO3/CO3) (Cl) (3) (NO3/NO2) Pb) (Mg) (Mn) (Ni)	n-standard and (SO4) (NO	nalysis below) WA WA WA Solution WA	Observations OR □ OR □ OR □
2 3 4 Average: QUANTITY 3	10.2 10.1 10.1 10.1 10.1 10.1 TYPICAL A (8260C SIM V (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	(uS/cm) 232.4 231.9 231.9 231.9 232.0 NALYSIS AI VC) (8010) H) (NWTPH- detivity) (TD: C SM5310C) le) (WAD Cy) (As) (Sb) (etals) (As) (Sb) g short list)	(mg/L) 2.41 2.44 2.46 2.48 2.45 LLOWED PF (8020) (NW D) (NWTPF S) (TSS) (B (Total PO4) vanide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	6.10 6.10 6.10 6.10 6.10 CR BOTTLE TPH-G) (N' I-Dx) (TPH-OD) (Turbic (Total Kiedal Cyanide)	(mV) 39.0 38.8 38.4 38.0 38.6 TYPE (Circle ap WTPH-Gx) (BTI HCID) (8081) (dity) (Alkalinity) hl Nitrogen) (NH (Cr) (Cu) (Fe) (#DIV/0! #DIV/0! **Plicable or write note: EX) 8141) (Oil & Grease: (HCO3/CO3) (Cl) (3) (NO3/NO2) Pb) (Mg) (Mn) (Ni)	n-standard and (SO4) (NO	nalysis below) WA WA WA Solution WA	Observations OR □ OR □ OR □



Project Nam	ne:	Boeing Ren	iton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	1arch 2020		Date/Time:	3/9/2020@	1406		
Sample Nur	nber:	RGW230I-	200309		Weather:	SUNNY			
Landau Rep	resentative:	BXM/SRB/	/JAN						
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES	5)	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	6.26	Time:	1338	Flow through cel	ll vol.		GW Meter No.(s 1
	Date/Time:			End Purge:	_	3/9 /2020 @	1353	Gallons Purged:	
Purge water of			55-gal Drum		Storage Tank	Ground		SITE TREATM	
-	T	C1			ODD	T1:124	DTW	I41 D	G
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
			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	
1343	10.4	269.2	1.13	6.26	-7.7		6.27		
1346	9.9	274.5	1.39	6.25	-16.0		6.27		
1349	9.2	272.8	1.48	6.30	-17.9		6.27		
1352	8.8	270.1	1.48	6.29	-17.0		6.27		
1355							·		-
1358						-			
1400	·								-
	LLECTION D								
Sample Colle	_	_	Bailer	_		DED. BLADDER		— • · · ·	-
Made of:		Stainless Ste		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee		Alconox Wa	sh 📙	Tap Rinse	DI Water	Dedicated			
(By Numerica	,	Other							
Sample Descri	ription (color, t	urbidity, odor	, sheen, etc.):	SLIGHTLY	CLOUDY, COLO	ORLESS, LOTS OF	FINES FLOAT	ING, NO SHEEN	I, NO ODOR
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	8.9	269.7	1.46	6.29	-16.9				
2	8.8	269.6	1.47	6.29	-16.8				
3									
	8.8	269.5	1.47	6.28	-15.9				
4	8.8	269.3	1.47	6.29	-16.6				
Average:	8.8	269.5	1.47	6.29	-16.6	#DIV/0!	<u></u>		
QUANTITY	TYPICAL A	NALYSIS AI	LLOWED PI	ER BOTTLE	TYPE (Circle a)	oplicable or write	non-standard a	nalysis below)	
3	(8260C SIM	VC) (8010)	(8020) (NW	TPH-G) (N	WTPH-Gx) (BT	EX)		wa 🗆	OR 🗆
	` '	, ,		, ,		(8141) (Oil & Gre		WA 🗆	OR 🗆
		• • • • • • • • • • • • • • • • • • • •				(HCO3/CO3) (0	Cl) (SO4) (NO	3) (NO2) (F)	
					hl Nitrogen) (NI	13) (NO3/NO2)			
		le) (WAD Cy			(Cr) (Cn) (Ea)	(Pb) (Mg) (Mn) (Ni) (An) (Sa) (Tl) (V) (7n) (U	(K) (Na)
									Na) (Hardness) (Silic
	VOC (Boein		, (= 4) (20) (, (24) (20)	, ,-, (ou) (1 o) (1	· / (· · · · · · · · · · · · · · · · · · ·	, (, (**8) (**) (, (
	,	ane Ethene A	cetylene						
						·			
	others								
Duplicate Sar	nnle No(s):								
Comments:	прис 110(8).								
Comments.									



Project Nan	ne:	Boeing Rent	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	arch 2020		Date/Time:	3/9/2020@	1336		
Sample Nur	nber:	RGW231S-	200309		Weather:	SUNNY			
Landau Rep	resentative:	BXM/SRB/.	JAN						
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES))	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	6.08	Time:	1305	Flow through ce	ll vol.		GW Meter No.(s
Begin Purge:	Date/Time:	3/9 /2020 @	1309	End Purge:	Date/Time:	3/9 /2020 @	1330	Gallons Purged:	0.:
Purge water of	disposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
		. ,		ters for three	. ,	dings within the fo	. ,	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/ - 10%	< 0.3 ft	through cell	
1312	10.1	192.4	3.75	6.33	34.5		6.09		
1315	9.7	200.1	3.61	6.28	33.3		6.09		
1318	9.4	213.5	3.14	6.27	31.5		6.09		
1321	9.3	226.9	2.73	6.29	27.9		6.09		
1324		233.1	2.70	6.32	19.4				
1327		234.8	2.62	6.33	15.4				
1329	9.3	235.5	2.58	6.34	14.3				
SAMPLE CO	DLLECTION D								
Sample Colle			Bailer		Pump/Pump Type	DED. BLADDER			
Made of:		Stainless Stee	_	PVC	Teflon	Polyethylene	Other	Dedicated	-
Decon Procee	dure:	Alconox Was			DI Water	Dedicated			
(By Numerica		Other		rup runse	□ <i>D1</i> ,, a.e.	Bedieuted			
, ,	,	— .	sheen, etc.):	LIGHT BRO	WN. MED-HIGH	I TURB, NO/NS, P	ARTICULATES	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	9.3	235.7	2.56	6.34	14.2				
2	9.3	235.8	2.56	6.34	14.2				
3	9.2	235.9	2.58	6.34	14.0				
4	9.2	236.0	2.55	6.34	13.8				
Average:	9.3	235.9	2.56	6.34	14.1	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AL	LOWED PI	ER BOTTLE	TYPE (Circle a	oplicable or write	non-standard a	nalysis below)	
3					WTPH-Gx) (BT	_		WA □	OR 🗆
	(8270) (PAI	H) (NWTPH-I	O) (NWTPI	I-Dx) (TPH-	HCID) (8081)	(8141) (Oil & Grea	ase)	wa 🗆	OR □
	(pH) (Condu	activity) (TDS	(TSS) (E	OD) (Turbi	dity) (Alkalinity)	(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
	(COD) (TO	C SM5310C)	(Total PO4)	(Total Kieda	hl Nitrogen) (NI	H3) (NO3/NO2)			
		le) (WAD Cya							
						(Pb) (Mg) (Mn) (1			
) (Ba) (Be) ((Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) ((Ag) (Se) (Tl) (V	') (Zn) (Hg) (K) (Na) (Hardness) (Si
	VOC (Boein	ig short list) nane Ethene Ac	etylene						
	iviculane Ell	iane Eulene AC	ctylene						
	others								
D 11	1 NI ()								
Duplicate Sar	mple No(s):								
Comments:							2/0:===		
Signature:	JAN					Date:	3/9/2020		



ie:	Boeing Rent	ton		Project Numbe	r:	0025217.099.0	99	
	Quarterly M	larch 2020		Date/Time:	3/9 /2020@ 12:	30		
nber:	RGW081S-	200309		Weather:	sunny, cold			
resentative:	BXM/SRB/.	JAN						
/EL/WELL/PU	JRGE DATA							
on:	Secure (YES))	Damaged (N	O)	Describe:	flush		
Purging (ft)	7.67	Time:	1147	Flow through ce	ll vol.		GW Meter No.(s slope -8
				•		9	-	
			Ē				•	
•		-						
•			pН		•		U	Comments/ Observations
. ,	. ,		ters for three		. ,	. ,	>/= 1 flow	Observations
+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
11.4	193.4	1.73	6.45	-8.3		7.64		
11.3	191.9	1.60	6.43	-10.2		7.61		
10.9	187.1	1.18	6.37	1.4		7.61		
10.7	184.7	0.78	6.41	-11.8				
10.9	186.0	0.84	6.44	-19.1				
11.0	186.8	0.93	6.45	-21.9				
LLECTION D								
cted With:		Bailer		Pump/Pump Type	dedicated bladder			
	Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
dure:	Alconox Was	sh 🗖	Tap Rinse	DI Water	Dedicated			
			_	₩				
ıl Order)	Other			<u>—</u>				
*		sheen, etc.):	clear, colorle		dor, some dark fines	S		
ription (color, t	urbidity, odor,	·		ss, no sheen, no c	dor, some dark fines		F	Commented
*		D.O.	clear, colorle			DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	dor, some dark fines	DTW		
Temp (°F/°C)	Cond. (uS/cm) 186.9	D.O. (mg/L)	pH 6.45	ORP (mV)	dor, some dark fines	DTW		
Temp (°F/°C) 10.9	Cond. (uS/cm) 186.9	D.O. (mg/L) 0.98	pH 6.45 6.46	ORP (mV) -22.6 -22.8	dor, some dark fines	DTW		
Temp (°F/°C) 10.9 11.0	Cond. (uS/cm) 186.9 186.8	D.O. (mg/L) 0.98 1.00	pH 6.45 6.46 6.46	ORP (mV) -22.6 -22.8 -23.2	dor, some dark fines	DTW		
Temp (°F/°C) 10.9 11.0 10.9	Cond. (uS/cm) 186.9 187.1 187.0	D.O. (mg/L) 0.98 1.00 1.01	6.45 6.46 6.46 6.45	ORP (mV) -22.6 -22.8 -23.2 -24.4	Turbidity (NTU)	DTW		
Temp (°F/°C) 10.9 11.0	Cond. (uS/cm) 186.9 186.8	D.O. (mg/L) 0.98 1.00	pH 6.45 6.46 6.46	ORP (mV) -22.6 -22.8 -23.2	dor, some dark fines	DTW		
Temp (°F/°C) 10.9 11.0 10.9 11.0	Cond. (uS/cm) 186.9 186.8 187.1 187.0	D.O. (mg/L) 0.98 1.00 1.01 1.03	6.45 6.46 6.46 6.45 6.46	ORP (mV) -22.6 -22.8 -23.2 -24.4 -23.3	Turbidity (NTU)	DTW (ft)	(Fe II)	
Temp (°F/°C) 10.9 11.0 11.0 11.0 17.9	Cond. (uS/cm) 186.9 186.8 187.1 187.0 187.0	D.O. (mg/L) 0.98 1.00 1.01 1.03 1.01 LOWED PE	6.45 6.46 6.45 6.46 6.46 CR BOTTLE	ORP (mV) -22.6 -22.8 -23.2 -24.4 -23.3	Turbidity (NTU) #DIV/0!	DTW (ft)	(Fe II)	
Temp (°F/°C) 10.9 11.0 11.0 11.0 11.0 11.0 (8260-SIM) (8270D) (PA	Cond. (uS/cm) 186.9 186.8 187.1 187.0 187.0 NALYSIS AI (8010) (8020 AH) (NWTPF	D.O. (mg/L) 0.98 1.00 1.01 1.03 1.01 LOWED PE 0) (NWTPH-I-D) (NWTF	6.45 6.46 6.46 6.45 6.46 ER BOTTLE G) (NWTPH PH-Dx) (TPH	ORP (mV) -22.6 -22.8 -23.2 -24.4 -23.3 TYPE (Circle a) H-Gx) (BTEX) H-HCID) (8081)	#DIV/0!	DTW (ft)	nalysis below) WA WA WA	Observations
Temp (°F/°C) 10.9 11.0 11.0 10.9 11.0 TYPICAL A (8260-SIM) (8270D) (PA	Cond. (uS/cm) 186.9 186.8 187.1 187.0 187.0 NALYSIS AL (8010) (8020 AH) (NWTPHactivity) (TDS)	D.O. (mg/L) 0.98 1.00 1.01 1.03 1.01 LOWED PE) (NWTPH- H-D) (NWTFH- S) (TSS) (B	6.45 6.46 6.45 6.46 6.46 CR BOTTLE G) (NWTPH-PH-Dx) (TPH-Dx) (Turbic	ORP (mV) -22.6 -22.8 -23.2 -24.4 -23.3 TYPE (Circle a) I-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity)	#DIV/0! #DIV/0! (8141) (Oil & Gr	DTW (ft)	nalysis below) WA WA WA	Observations OR
Temp (°F/°C) 10.9 11.0 11.0 11.0 TYPICAL A (8260-SIM) (8270D) (PA (pH) (Conduction) (TOO	Cond. (uS/cm) 186.9 186.8 187.1 187.0 187.0 NALYSIS AI (8010) (8020 AH) (NWTPF- letivity) (TDS) C5310C) (Total	D.O. (mg/L) 0.98 1.00 1.01 1.03 1.01 LOWED PE 0) (NWTPH-I-D) (NWTPH-I-D	6.45 6.46 6.45 6.46 6.46 CR BOTTLE G) (NWTPPPH-Dx) (TPPGOD) (Turbic stal Kiedahl N	ORP (mV) -22.6 -22.8 -23.2 -24.4 -23.3 TYPE (Circle a) H-Gx) (BTEX) H-HCID) (8081)	#DIV/0! #DIV/0! (8141) (Oil & Gr	DTW (ft)	nalysis below) WA WA WA	Observations OR
Temp (°F/°C) 10.9 11.0 11.0 11.0 11.0 (8260-SIM) (8270D) (PA (COD) (TOO (Total Cyanid	Cond. (uS/cm) 186.9 186.8 187.1 187.0 187.0 NALYSIS AL (8010) (8020 AH) (NWTPHetivity) (TDS	D.O. (mg/L) 0.98 1.00 1.01 1.03 1.01 LOWED PE 1) (NWTPH-I-D) (NWTPH-I-D	6.45 6.46 6.45 6.46 6.46 CR BOTTLE G) (NWTPP PH-Dx) (TPP OD) (Turbic tal Kiedahl N Cyanide)	ORP (mV) -22.6 -22.8 -23.2 -24.4 -23.3 TYPE (Circle and H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3)	#DIV/0! #DIV/0! pplicable or write in (8141) (Oil & Gro (HCO3/CO3) (C) (NO3/NO2)	DTW (ft) non-standard a ease) I) (SO4) (NO	nalysis below) WA WA WA Solution (NO2) (F)	Observations OR □ OR □
Temp (°F/°C) 10.9 11.0 11.0 11.0 11.0 TYPICAL A (8260-SIM) (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals)	Cond. (uS/cm) 186.9 186.8 187.1 187.0 187.0 NALYSIS AI (8010) (8020 AH) (NWTPF- detivity) (TDS (C5310C) (Tot e) (WAD Cy. () (As) (Sb) (1	D.O. (mg/L) 0.98 1.00 1.01 1.03 1.01 LOWED PE (1) (NWTPH-I-D) (NWTFH-I-D) (NWTFH-I-D	pH 6.45 6.46 6.45 6.46 ER BOTTLE G) (NWTPH PH-Dx) (TPH OD) (Turbic otal Kiedahl N Cyanide) () (Cd) (Co)	ORP (mV) -22.6 -22.8 -23.2 -24.4 -23.3 TYPE (Circle and H-GX) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! #DIV/0! (NTU) #DIV/0! (R141) (Oil & Grown (HCO3/CO3) (CO3/NO2) (Pb) (Mg) (Mn) (No. 100)	DTW (ft) non-standard a ease) l) (SO4) (NO	malysis below) WA WA WA WO WO WO WO WO WO WO WO WO WO	Observations OR □ OR □ OR □
Temp (°F/°C) 10.9 11.0 11.0 11.0 TYPICAL A (8260-SIM) (8270D) (PA (pH) (Conduction (COD) (Total Cyanida (Total Metals) (Dissolved Metals)	Cond. (uS/cm) 186.9 186.8 187.1 187.0 187.0 NALYSIS AI (8010) (8020) AH) (NWTPHetivity) (TDS) (25310C) (Total) (As) (Sb) (Ietals) (As) (Sb) (Sb)	D.O. (mg/L) 0.98 1.00 1.01 1.03 1.01 LOWED PE (1) (NWTPH-I-D) (NWTFH-I-D) (NWTFH-I-D	pH 6.45 6.46 6.45 6.46 ER BOTTLE G) (NWTPH PH-Dx) (TPH OD) (Turbic otal Kiedahl N Cyanide) () (Cd) (Co)	ORP (mV) -22.6 -22.8 -23.2 -24.4 -23.3 TYPE (Circle and H-GX) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! #DIV/0! (NTU) #DIV/0! (R141) (Oil & Grown (HCO3/CO3) (CO3/NO2) (Pb) (Mg) (Mn) (No. 100)	DTW (ft) non-standard a ease) l) (SO4) (NO	malysis below) WA WA WA WO WO WO WO WO WO WO WO WO WO	Observations OR □ OR □
Temp (°F/°C) 10.9 11.0 10.9 11.0 TYPICAL A (8260-SIM) (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm) 186.9 186.8 187.1 187.0 187.0 NALYSIS AL (8010) (8020 AH) (NWTPHetivity) (TDS (25310C) (Tot (e) (WAD Cy.) (As) (Sb) (19 (etals) (As) (Sb) (g short list)	D.O. (mg/L) 0.98 1.00 1.01 1.03 1.01 LOWED PE 0) (NWTPH-H-D) (NWTFH-H-D) (NWTFH-H-D) (NWTFH-H-D) (To anide) (Free Ba) (Be) (Ca) (Ba) (Be) (Ca)	pH 6.45 6.46 6.45 6.46 ER BOTTLE G) (NWTPH PH-Dx) (TPH OD) (Turbic otal Kiedahl N Cyanide) () (Cd) (Co)	ORP (mV) -22.6 -22.8 -23.2 -24.4 -23.3 TYPE (Circle and H-GX) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! #DIV/0! (NTU) #DIV/0! (R141) (Oil & Grown (HCO3/CO3) (CO3/NO2) (Pb) (Mg) (Mn) (No. 100)	DTW (ft) non-standard a ease) l) (SO4) (NO	malysis below) WA WA WA WO WO WO WO WO WO WO WO WO WO	Observations OR □ OR □ OR □
Temp (°F/°C) 10.9 11.0 10.9 11.0 TYPICAL A (8260-SIM) (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm) 186.9 186.8 187.1 187.0 187.0 NALYSIS AI (8010) (8020) AH) (NWTPHetivity) (TDS) (25310C) (Total) (As) (Sb) (Ietals) (As) (Sb) (Sb)	D.O. (mg/L) 0.98 1.00 1.01 1.03 1.01 LOWED PE 0) (NWTPH-H-D) (NWTFH-H-D) (NWTFH-H-D) (NWTFH-H-D) (To anide) (Free Ba) (Be) (Ca) (Ba) (Be) (Ca)	pH 6.45 6.46 6.45 6.46 ER BOTTLE G) (NWTPH PH-Dx) (TPH OD) (Turbic otal Kiedahl N Cyanide) () (Cd) (Co)	ORP (mV) -22.6 -22.8 -23.2 -24.4 -23.3 TYPE (Circle and H-GX) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! #DIV/0! (NTU) #DIV/0! (R141) (Oil & Grown (HCO3/CO3) (CO3/NO2) (Pb) (Mg) (Mn) (No. 100)	DTW (ft) non-standard a ease) l) (SO4) (NO	malysis below) WA WA WA WO WO WO WO WO WO WO WO WO WO	Observations OR □ OR □ OR □
Temp (°F/°C) 10.9 11.0 10.9 11.0 TYPICAL A (8260-SIM) (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm) 186.9 186.8 187.1 187.0 187.0 NALYSIS AL (8010) (8020 AH) (NWTPHetivity) (TDS (25310C) (Tot (e) (WAD Cy.) (As) (Sb) (19 (etals) (As) (Sb) (g short list)	D.O. (mg/L) 0.98 1.00 1.01 1.03 1.01 LOWED PE 0) (NWTPH-H-D) (NWTFH-H-D) (NWTFH-H-D) (NWTFH-H-D) (To anide) (Free Ba) (Be) (Ca) (Ba) (Be) (Ca)	pH 6.45 6.46 6.45 6.46 ER BOTTLE G) (NWTPH PH-Dx) (TPH OD) (Turbic otal Kiedahl N Cyanide) () (Cd) (Co)	ORP (mV) -22.6 -22.8 -23.2 -24.4 -23.3 TYPE (Circle and H-GX) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! #DIV/0! (NTU) #DIV/0! (R141) (Oil & Grown (HCO3/CO3) (CO3/NO2) (Pb) (Mg) (Mn) (No. 100)	DTW (ft) non-standard a ease) l) (SO4) (NO	malysis below) WA WA WA WO WO WO WO WO WO WO WO WO WO	Observations OR □ OR □ OR □
Temp (°F/°C) 10.9 11.0 10.9 11.0 TYPICAL A (8260-SIM) (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein	Cond. (uS/cm) 186.9 186.8 187.1 187.0 187.0 NALYSIS AL (8010) (8020 AH) (NWTPHetivity) (TDS (25310C) (Tot (e) (WAD Cy.) (As) (Sb) (19 (etals) (As) (Sb) (g short list)	D.O. (mg/L) 0.98 1.00 1.01 1.03 1.01 LOWED PE 0) (NWTPH-H-D) (NWTFH-H-D) (NWTFH-H-D) (NWTFH-H-D) (To anide) (Free Ba) (Be) (Ca) (Ba) (Be) (Ca)	pH 6.45 6.46 6.45 6.46 ER BOTTLE G) (NWTPH PH-Dx) (TPH OD) (Turbic otal Kiedahl N Cyanide) () (Cd) (Co)	ORP (mV) -22.6 -22.8 -23.2 -24.4 -23.3 TYPE (Circle and H-GX) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! #DIV/0! (NTU) #DIV/0! (R141) (Oil & Grown (HCO3/CO3) (CO3/NO2) (Pb) (Mg) (Mn) (No. 100)	DTW (ft) non-standard a ease) l) (SO4) (NO	malysis below) WA WA WA WO WO WO WO WO WO WO WO WO WO	Observations OR □ OR □ OR □
Temp (°F/°C) 10.9 11.0 11.0 11.0 11.0 10.9 11.0 TYPICAL A (8260-SIM) (8270D) (PA (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 186.9 186.8 187.1 187.0 187.0 NALYSIS AL (8010) (8020 AH) (NWTPHetivity) (TDS (25310C) (Tot (e) (WAD Cy.) (As) (Sb) (19 (etals) (As) (Sb) (g short list)	D.O. (mg/L) 0.98 1.00 1.01 1.03 1.01 LOWED PE 0) (NWTPH-H-D) (NWTFH-H-D) (NWTFH-H-D) (NWTFH-H-D) (To anide) (Free Ba) (Be) (Ca) (Ba) (Be) (Ca)	pH 6.45 6.46 6.45 6.46 ER BOTTLE G) (NWTPH PH-Dx) (TPH OD) (Turbic otal Kiedahl N Cyanide) () (Cd) (Co)	ORP (mV) -22.6 -22.8 -23.2 -24.4 -23.3 TYPE (Circle and H-GX) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! #DIV/0! (NTU) #DIV/0! (R141) (Oil & Grown (HCO3/CO3) (CO3/NO2) (Pb) (Mg) (Mn) (No. 100)	DTW (ft) non-standard a ease) l) (SO4) (NO	malysis below) WA WA WA WO WO WO WO WO WO WO WO WO WO	Observations OR □ OR □ OR □
Temp (°F/°C) 10.9 11.0 11.0 10.9 11.0 TYPICAL A (8260-SIM) (8270D) (PA (COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	Cond. (uS/cm) 186.9 186.8 187.1 187.0 187.0 NALYSIS AL (8010) (8020 AH) (NWTPHetivity) (TDS (25310C) (Tot (e) (WAD Cy.) (As) (Sb) (19 (etals) (As) (Sb) (g short list)	D.O. (mg/L) 0.98 1.00 1.01 1.03 1.01 LOWED PE 0) (NWTPH-H-D) (NWTFH-H-D) (NWTFH-H-D) (NWTFH-H-D) (To anide) (Free Ba) (Be) (Ca) (Ba) (Be) (Ca)	pH 6.45 6.46 6.45 6.46 ER BOTTLE G) (NWTPH PH-Dx) (TPH OD) (Turbic otal Kiedahl N Cyanide) () (Cd) (Co)	ORP (mV) -22.6 -22.8 -23.2 -24.4 -23.3 TYPE (Circle and H-GX) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! #DIV/0! (NTU) #DIV/0! (R141) (Oil & Grown (HCO3/CO3) (CO3/NO2) (Pb) (Mg) (Mn) (No. 100)	DTW (ft) non-standard a ease) l) (SO4) (NO	malysis below) WA WA WA WO WO WO WO WO WO WO WO WO WO	Observations OR □ OR □ OR □
	resentative: //EL/WELL/PU on: Purging (ft) Date/Time: lisposed to: //Emp (°F/°C) Purge Goa +/- 3% 11.4 11.3 10.9 10.6 10.6 10.7 10.9 11.0 CLLECTION Deted With:	resentative: BXM/SRB/ //EL/WELL/PURGE DATA on: Secure (YES) Purging (ft) 7.67 Date/Time: 3/9 /2020 @ lisposed to: Temp Cond. (uS/cm) Purge Goals: Stablization +/- 3% +/- 3% 11.4 193.4 11.3 191.9 10.9 187.1 10.6 183.7 10.7 184.7 10.9 186.0 11.0 186.8 OLLECTION DATA cted With: Stainless Steel	resentative: BXM/SRB/JAN //EL/WELL/PURGE DATA on: Secure (YES) Purging (ft) 7.67 Time: Date/Time: 3/9 /2020 @ 1156 lisposed to: 55-gal Drum // Temp Cond. D.O. (°F/°C) (uS/cm) (mg/L) Purge Goals: Stablization of Parame +/- 3% +/- 3% +/- 10% 11.4 193.4 1.73 11.3 191.9 1.60 10.9 187.1 1.18 10.6 184.0 1.02 10.6 183.7 0.83 10.7 184.7 0.78 10.9 186.0 0.84 11.0 186.8 0.93 DLIECTION DATA cted With: Bailer	BXM/SRB/JAN Damaged (Note: Purging (ft) 7.67 Time: 1147 Date/Time: 3/9 /2020 @ 1156 End Purge: End P	Purging (ft) 7.67 Time: 1147 Flow through cell	Purging (ft)		Damaged (NO) Describe: Flush F



Project Nam	ne:	Boeing Ren	ton		Project Number	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/9/2020@	1111		
Sample Nun	nber:	RGW152S-	200309		Weather:	SUNNY			
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES)	Damaged (N	O)	Describe:			
DTW Before	Purging (ft)	8.23	Time:	1039	Flow through ce	ll vol	•	GW Meter No.(s 1
	Date/Time:			End Purge:	_	3/9 /2020 @	1056	Gallons Purged:	0.25
Purge water d			55-gal Drum	Ĕ	Storage Tank	Ground		SITE TREATM	-
ruige water e	nsposed to.				Storage Tank	e Ground	- Other	SITE TREATM	ENTOTOTEN
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O.	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge	Comments/ Observations
Time	. ,	_ ` /	(mg/L) on of Parame	ters for three		dings within the fo	. ,	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1045	12.7	164.4	3.99	6.24	7.8		8.23		
1048	12.1	163.5	4.16	6.19	8.5		8.23		
1051					9.2		8.23		
	11.3	162.5	4.15	6.17			8.23		
1054	10.7	165.2	4.03	6.16	9.6				
1057									
1100	<u> </u>								
1102									
SAMPLE CO	LLECTION D)ATA							
Sample Colle			Bailer		Pump/Pump Type	DED. BLADDER			
Made of:		Stainless Ste	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced		Alconox Wa	_	Tap Rinse	DI Water	Dedicated		Boureasou	
		Other	sii 📋	1 ap Kilise	☐ DI Water	Dedicated			
(By Numerica	*	_		CD AV ME	S TELED OF ICE	TOPOP NG			
Sample Desci	ripuon (color, t	urbiaity, odor	, sneen, etc.):_	GKA I, MEI	O TURB, SLIGHT	ODOR, NS.			
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	рН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	10.6	165.6	3.93	6.16	9.6				
2	10.7	166.9	3.91	6.15	11.2				
3	10.5	170.1	4.00	6.15	10.9				
4	10.4	170.7	3.98	6.16	9.8				
Average:	10.6	168.3	3.96	6.16	10.4	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	R BOTTLE	TYPE (Circle a)	oplicable or write	non-standard a	nalysis below)	
3		(8010) (8020				-		wa 🗆	OR 🗆
	(8270D) (PA	AH) (NWTPI	H-D) (NWTF	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & G	rease)	wa 🗆	OR 🗆
	(pH) (Condu	ctivity) (TD:	S) (TSS) (B	OD) (Turbio	dity) (Alkalinity)	(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
1	(COD) (TO	C5310C) (To	tal PO4) (To	tal Kiedahl N	itrogen) (NH3)	(NO3/NO2)			
	` *	le) (WAD Cy							
1	,	, , , , , ,	, , , ,	, , , , ,		(Pb) (Mg) (Mn) (<u> </u>
) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	(Y) (Zn) (Hg) (K) (Na) (Hardness) (Sili
	VOC (Boein		. 1						
	Methane Eth	nane Ethene A	cetylene						
	others								
L	ouicis								
Duplicate Sar	nple No(s):	Duplicate Lo	cation (DUP1)					
Comments:									
	JAN					Date:	3/9/2020		



Project Nan	ne:	Boeing Ren	ton		Project Number	r:	0025217.099.0	99	
Event:		Quarterly M	larch 2020		Date/Time:	3/9/2020@	800		
Sample Nur	mber:	RGWDUP1			Weather:	SUNNY			
Landau Rep	oresentative:	BXM/SRB/.	JAN						
WATER LE	VEL/WELL/PU	IRGE DATA							
Well Conditi		Secure (YES))	Damaged (N	(O)	Describe:			
DTW Before		Secure (125)	Time:		Flow through ce		•	GW Meter No.(6)
	Date/Time:	3/0 /2020 @	Time.	End Purge:	_	3/9 /2020 @		Gallons Purged:	0.25
0 0			551 D	Ē		Ground	Other	SITE TREATM	
Purge water	disposed to:		55-gal Drum		Storage Tank	₩ Ground	- Other	SHE IKEAIW	ENISISIEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	
Time	(°F/°C)	(uS/cm) ls: Stablizatio	(mg/L) n of Parame	ters for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
		DHE	PLICA	TET	O RGV	W152S	•		
	_					W 1525			
			-				•		
CALLED F. CC	N. I. E. C. T. I.						·-		
	OLLECTION D		Bailer		D /D T	DED DI ADDED			
Sample Colle	ected with:		_			DED. BLADDER		-	
Made of:		Stainless Stee	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proce		Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	al Order)	Other							
Sample Desc	ription (color,	turbidity, odor,	sheen, etc.):	GRAY, MEI	O TURB, SLIGH	Γ ODOR, NS.			
DE	Т	C 1	D.O.	11	ODD	T	DTW		<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	10.3	171.2	3.80	6 15	9.9	(= - = -)	(=3)	(= + ==)	
				6.15					
2	10.1	173.2	3.60	6.15	9.8		-		
3	10.1	175.0	3.37	6.16	9.5				
4	10.1	175.5	3.30	6.17	9.0				
Average:	10.2	173.7	3.52	6.16	9.6	#DIV/0!			
OUANTITY	TVDICALA	NAT VOIC AT	I OMED DI	D BULLI	TVDF (Cinals	anlicable orit-	non standard -	nolveje bolovi	
QUANTITY 3					H-Gx) (BTEX)	pplicable or write	non-standard a	WA	OR 🗆
3						(8141) (Oil & G	rease)	wa 🗆	OR 🗆
	· · · · ·					(HCO3/CO3) (C			- OIL
1					itrogen) (NH3)			/ \ / / /	
		le) (WAD Cy							
1	(Total Metals) (As) (Sb) (l	Ba) (Be) (Ca	ı) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (1	Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
	(Dissolved M	etals) (As) (Sb) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) ((Ag) (Se) (Tl) (V	(Zn) (Hg) (K)	Na) (Hardness) (Silica
	VOC (Boein	g short list)							
	Methane Eth	nane Ethene Ac	cetylene						
1									
	others								
Duplicate Sa	U	Duplicate to l	RGW152S						
Duplicate Sar Comments:	U	Duplicate to l	RGW152S						



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/9/2020@	1141		
Sample Nun	nber:	RGW153S-	200309		Weather:	SUNNY			
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	8.54	Time:	1116	Flow through cel	l vol.		GW Meter No.(1
	Date/Time:			End Purge:	_	3/9 /2020 @	1137	Gallons Purged:	0.25
Purge water of			55-gal Drum	Ĕ	Storage Tank	Ground		SITE TREATM	
C	, m		-		-		_		
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
	. ,	. ,	, 0	ters for three		dings within the fo	. ,	>/= 1 flow	O DSCI VILLIONS
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1120	11.6	132.1	4.29	6.23	11.5		8.54		
1123	11.0	137.5	4.19	6.18	8.6		8.54		
1126	10.0	155.6	4.07	6.18	7.8		8.54		
1129		176.7	3.68	6.22	5.4				
1132		188.4	3.05	6.27	-3.7				
1135	8.2	191.4	2.64	6.31	-8.5		-		
1137	8.1	191.5	2.54	6.32	-10.1		·		
	<u> </u>								
SAMPLE CO	LLECTION D	ATA							
Sample Colle	cted With:		Bailer	_	Pump/Pump Type	DED. BLADDER		_	
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	dure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color, t	urbidity, odor	sheen, etc.):	LIGHT TAN	I, LOW-MED TU	RB, NO/NS.			
			D.O.	**	OPP		DOW		
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	8.0	191.2	2.52	6.33	-10.4	(/		(')	
2	8.0	191.1	2.50	6.33	-10.6				
3	8.0	191.1	2.48	6.33	-10.8				
4	8.0	191.1	2.45	6.33	10.9				-
Average:	8.0	191.1	2.49	6.33	-5.2	#DIV/0!	-		
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PH	R BOTTLE	TYPE (Circle a)	oplicable or write	non-standard a	nalysis below)	
3		(8010) (8020				•		wa 🗆	OR 🗆
	(8270D) (PA	AH) (NWTPI	I-D) (NWTI	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & G	rease)	wa 🗆	OR □
	(pH) (Condu	ctivity) (TDS	S) (TSS) (B	OD) (Turbi	dity) (Alkalinity)	(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
1					itrogen) (NH3)	(NO3/NO2)			
	` '	le) (WAD Cy	/ \		(0) (0) =	(NL) (0.5.)	NTO 24 5 17 1	TTD) (T.F. (T.)) (II) (31)
1						(Pb) (Mg) (Mn) (
) (Ba) (Be) (C	(Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (N1)	(Ag) (Se) (T1) (V	() (Zn) (Hg) (K) (Na) (Hardness) (Silic
	VOC (Boein	ag snort list) nane Ethene A	cetylene						
	Wictiane Lu	iane Emene A	cetylene						
	others								
Duplicate Sar	nple No(s):								
Comments:									
Signature:	IAN					Date	3/9/2020		



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	1arch 2020		Date/Time:	3/ 9/2020@	1036		
Sample Nun	nber:	RGW172S-	200309		Weather:	SUNNY			
Landau Rep	•	BXM/SRB/	/JAN		·				
WATER LEV	/EL/WELL/PI	IRGE DATA							
Well Condition		Secure (YES	5)	Damaged (N	(O)	Describe:			
DTW Before		8.31	Time:		Flow through cel			GW Meter No.(e 1
	Date/Time:				_	3/9 /2020 @	1025	•	
0 0		-	,	End Purge:				Gallons Purged:	0.25
Purge water d	isposed to:		55-gal Drum	- 4	Storage Tank	Ground	Other	SITE TREATM	ENTSYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	
Time	(°F/°C)	(uS/cm)	(mg/L)	tors for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1014	10.5	226.9	1.59	6.52	11.3		8.31	O	
	· ———								
1017		243.7	1.69	6.50	6.2		8.31		
1020	9.7	252.3	1.59	6.49	4.1		8.31		
1023	9.4	249.8	1.68	6.48	0.8				
1026									
1029									
1031	·							-	
1031	. ———								-
	T I DOWN D								
	LLECTION E		Bailer		D 7D T	DED DI ADDED			
Sample Colle	cted With:					DED. BLADDER		— 5	
Made of:		Stainless Ste		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proceed	dure:	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color,	turbidity, odor	, sheen, etc.):	DARK YEL	LOW-ORANGE,	MED-HIGH TURE	B, NO/NS.		
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
rtoprioute	(°F/°C)	(uS/cm)	(mg/L)	P	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	9.2	248.1	1.73	6.47	0.1				
2	9.3	247.9	1.73	6.47	-0.1				
									-
3	9.3	247.9	1.73	6.46	-0.3				
4	9.3	247.3	1.74	6.46	-0.4				
Average:	9.3	247.8	1.73	6.47	-0.2	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LLOWED PE	ER BOTTLE	TYPE (Circle at	oplicable or write	non-standard a	nalysis below)	
3					H-Gx) (BTEX)			wa 🗆	OR 🗆
	(8270D) (PA	AH) (NWTPI	H-D) (NWTI	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & Gi	rease)	wa 🗆	OR □
	(pH) (Condu	activity) (TD:	S) (TSS) (B	OD) (Turbic	dity) (Alkalinity)	(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
1	(COD) (TO	C5310C) (To	tal PO4) (To	tal Kiedahl N	itrogen) (NH3)	(NO3/NO2)			
		le) (WAD Cy							
1						(Pb) (Mg) (Mn) (I			
			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
	VOC (Boein								
	Methane Eth	nane Ethene A	cetylene						
	others								
	others								
Duplicate Sar	nple No(s):								
Comments:									
Signature:	JAN					Date:	3/9/2020		



	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/9 /2020@	1055		
Sample Nun	nber:	RGW173S-	200309		Weather:	suunny, cold			
Landau Rep	•	BXM/SRB/	JAN		•	•			
WATEDIEV	VEL/WELL/PU	IDGE DATA							
Well Condition		Secure (YES)	Damaged (N	(A)	Describe:	fluch		
		•	,	•	*		Hush	CWM N N	1 0
DTW Before		8.45	Time:		Flow through ce		10.45	GW Meter No.(
0 0	Date/Time:			End Purge:		3/9 /2020 @		Gallons Purged:	
Purge water of	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)	4 6 41	(mV)	(NTU)	(ft)	Volume (gal)	Observations
	+/- 3%	ls: Stablizatio +/- 3%		ters for three +/- 0.1 units	+/- 10 mV	dings within the fo +/- 10%	< 0.3 ft	>/= 1 flow through cell	
1027					-96.4	17 10 70	8.45	tin ough cen	
-		351.3	0.93	6.61					
1030	7.7	342.5	0.61	6.63	-99.6		8.45		
1033	6.9	331.8	0.52	6.64	-95.6		8.45		
1036	6.7	327.4	0.49	6.64	-92.9				
1039	6.5	323.0	0.50	6.65	-89.4				
1042		320.7	0.66	6.65	-91.8				
-									
1045	6.3	319.5	0.78	6.64	-91.7				
	LLECTION D								
Sample Colle	cted With:		Bailer			dedicated bladder		_	
Made of:		Stainless Stee	el 📙	PVC	Teflon	Polyethylene	U 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 to sligh	tly cloudy, colorle	ess, no sheen, no od	or, some light co	lored solids floati	ng
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
	` ,	, , ,			, ,	(1110)	(11)	(1011)	Observations
1	6.3	319.5	0.79	6.64	-92.2				
2	6.3	319.2	0.82	6.64	-92.3				
3	6.3	319.1	0.85	6.64	-91.2				
4	6.3	319.1	0.88	6.64	-89.8				
Average:	6.3	319.2	0.84	6.64	-91.4	#DIV/0!			
	1			D DOWN -		_	, , , ,		
TO A VICTORY	ITYPICAL A	NAI VCIC AI	LOWED PE	CR ROTTLE	TYPE (Circle at	mlicable or write i	non-standard a	nalysis below)	
QUANTITY						opineable of write i		W/A 🗆	OD \square
3	(8260-SIM)	(8010) (8020)) (NWTPH-	G) (NWTPI	H-Gx) (BTEX)	•		WA 🗆	OR OR
	(8260-SIM) (8270D) (PA	(8010) (8020 AH) (NWTPF)) (NWTPH- H-D) (NWTF	G) (NWTPI PH-Dx) (TPI	H-Gx) (BTEX) H-HCID) (8081)	(8141) (Oil & Gr	rease)	wa 🗆	OR OR
	(8260-SIM) (8270D) (PA (pH) (Condu	(8010) (8020 AH) (NWTPH activity) (TDS)) (NWTPH- H-D) (NWTF S) (TSS) (B	G) (NWTPI PH-Dx) (TPI OD) (Turbio	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity)	(8141) (Oil & Gr (HCO3/CO3) (C	rease)	wa 🗆	_
3	(8260-SIM) (8270D) (PA (pH) (Condu (COD) (TOO	(8010) (8020 AH) (NWTPH activity) (TDS C5310C) (To	O) (NWTPH-H-D) (NWTF S) (TSS) (B tal PO4) (To	G) (NWTPI PH-Dx) (TPI OD) (Turbio stal Kiedahl N	H-Gx) (BTEX) H-HCID) (8081)	(8141) (Oil & Gr (HCO3/CO3) (C	rease)	wa 🗆	_
3	(8260-SIM) (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanic	(8010) (8020) AH) (NWTPH activity) (TDS) C5310C) (To le) (WAD Cy	O) (NWTPH-H-D) (NWTF S) (TSS) (B tal PO4) (To ranide) (Free	G) (NWTPI PH-Dx) (TPI OD) (Turbio tal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3)	(8141) (Oil & Gr (HCO3/CO3) (C	rease) Cl) (SO4) (NO	WA □ 3) (NO2) (F)	OR □
1	(8260-SIM) (8270D) (PA (pH) (Condu (COD) (TOd (Total Cyanic (Total Metals	(8010) (8020) AH) (NWTPH activity) (TDS C5310C) (To le) (WAD Cy) (As) (Sb) (3	O) (NWTPH-H-D) (NWTFS) (TSS) (Btal PO4) (Toanide) (Free Ba) (Be) (Ca	G) (NWTPFPH-Dx) (TPFGOD) (Turbio stal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □
1	(8260-SIM) (8270D) (PA (pH) (Condu (COD) (TOd (Total Cyanic (Total Metals	(8010) (8020) AH) (NWTPH activity) (TDS) C5310C) (To de) (WAD Cy) (As) (Sb) (setals) (As) (Sb)	O) (NWTPH-H-D) (NWTFS) (TSS) (Btal PO4) (Toanide) (Free Ba) (Be) (Ca	G) (NWTPFPH-Dx) (TPFGOD) (Turbio stal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □ g) (K) (Na)
1	(8260-SIM) (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanic (Total Metals (Dissolved M VOC (Boein	(8010) (8020) AH) (NWTPH activity) (TDS) C5310C) (To de) (WAD Cy) (As) (Sb) (setals) (As) (Sb)	O) (NWTPH-H-D) (NWTF BS) (TSS) (B tal PO4) (To anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	G) (NWTPFPH-Dx) (TPFGOD) (Turbio stal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □ g) (K) (Na)
1	(8260-SIM) (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanic (Total Metals (Dissolved M VOC (Boein	(8010) (8020) AH) (NWTPH entivity) (TDS) C5310C) (To le) (WAD Cy) (As) (Sb) (setals) (As) (Sb) (g short list)	O) (NWTPH-H-D) (NWTF BS) (TSS) (B tal PO4) (To anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	G) (NWTPFPH-Dx) (TPFGOD) (Turbio stal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □ g) (K) (Na)
1	(8260-SIM) (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanic (Total Metals (Dissolved M VOC (Boein	(8010) (8020) AH) (NWTPH entivity) (TDS) C5310C) (To le) (WAD Cy) (As) (Sb) (setals) (As) (Sb) (g short list)	O) (NWTPH-H-D) (NWTF BS) (TSS) (B tal PO4) (To anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	G) (NWTPFPH-Dx) (TPFGOD) (Turbio stal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □ g) (K) (Na)
1	(8260-SIM) (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanic (Total Metals (Dissolved M VOC (Boein	(8010) (8020) AH) (NWTPH entivity) (TDS) C5310C) (To le) (WAD Cy) (As) (Sb) (setals) (As) (Sb) (g short list)	O) (NWTPH-H-D) (NWTF BS) (TSS) (B tal PO4) (To anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca	G) (NWTPFPH-Dx) (TPFGOD) (Turbio stal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □ g) (K) (Na)
1	(8260-SIM) (8270D) (PA (pH) (Condu (COD) (TOd (Total Cyanic (Total Metals (Dissolved M VOC (Boein Methane Eth	(8010) (8020) AH) (NWTPH ectivity) (TDS) C5310C) (To le) (WAD Cy) (As) (Sb) (Setals) (As) (Sb) ag short list) nane Ethene Action	O) (NWTPH-H-D) (NWTF H-D) (NWTF S) (TSS) (B tal PO4) (To anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca cetylene	G) (NWTPFPH-Dx) (TPFGOD) (Turbio stal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □ g) (K) (Na)
1	(8260-SIM) (8270D) (PA (pH) (Condu (COD) (TOd (Total Cyanic (Total Metals (Dissolved M VOC (Boein Methane Eth	(8010) (8020) AH) (NWTPH entivity) (TDS) C5310C) (To le) (WAD Cy) (As) (Sb) (setals) (As) (Sb) (g short list)	O) (NWTPH-H-D) (NWTF H-D) (NWTF S) (TSS) (B tal PO4) (To anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca cetylene	G) (NWTPFPH-Dx) (TPFGOD) (Turbio stal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) itrogen) (NH3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	rease) Cl) (SO4) (NO Ni) (Ag) (Se) (WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □ g) (K) (Na)



Project Nam	ie:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/9/2020@	1221		
Sample Nun	nber:	RGW226S-	200309		Weather:	SUNNY			
Landau Rep	resentative:	BXM/SRB/	JAN		•				
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES)	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	8.22	Time:	1153	Flow through ce	ll vol		GW Meter No.(s 1
	Date/Time:			End Purge:	_	3/9 /2020 @	1216	Gallons Purged:	0.25
Purge water d		<u>37772020 C</u>	55-gal Drum	Ē	Storage Tank	Ground		SITE TREATM	
r unge water e			-		-		_		
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
		. ,	, 0	ters for three	. ,	dings within the fo	. ,	>/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1158	12.0	197.5	2.35	6.38	-5.2		8.22	·	
1201	11.7	207.3	2.37	6.37	-12.2		8.22		
1204	11.5	223.9	2.41	6.36	-15.4		8.22		
1207	11.2	243.3	2.27	6.37	-16.6				
1210	11.0	255.9	2.16	6.38	-17.4				-
1213		258.0	1.96	6.42	-22.8				
	·								
1215	10.9	256.9	1.86	6.44	-24.8				-
	LLECTION D		D "		D D T	DED DI LODED			
Sample Colle	cted With:		Bailer			DED. BLADDER		— — — — — — — — — —	
Made of:		Stainless Stee	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	lure:	Alconox Was	sh 📙	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color, t	turbidity, odor	sheen, etc.):	SLIGHT TIN	NT, LOW TURB,	SLIGHT ODOR, N	O SHEEN.		
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	10.9	256.7	1.85	6.44	-25.4				
2	10.9	256.7	1.84	6.44	-25.8				
3	10.9	256.6	1.83	6.44	-26.4				
4	11.0	256.2	1.82	6.45	-26.7				
Average:	10.9	256.6	1.84	6.44	-26.1	#DIV/0!			
					`	oplicable or write	non-standard a		OP [
3					H-Gx) (BTEX)	(8141) (Oil & G	ranca)	WA □	OR OR
	· · · · ·					(HCO3/CO3) (C			OK 🗆
1					(itrogen) (NH3)		., (50 1) (110	5, (110 <i>2</i>) (1)	
		le) (WAD Cy				· / / / / / / / / / / / / / / / / / / /			
1	` .				(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	(g) (K) (Na)
	(Dissolved M	etals) (As) (Sb) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	(Zn) (Hg) (K)	Na) (Hardness) (Silic
	VOC (Boein	g short list)							
	Methane Eth	nane Ethene A	cetylene						
	others								
L	others								
Duplicate Sar	nple No(s):								
Comments:									
Signature:	JAN					Date:	3/9/2020		



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/ 09 /2020@	930		
Sample Nun	nber:	RGW232S-	200309		Weather:	FOGGY, COLD			
Landau Rep	resentative:	BXM/SRB/	'JAN		·				
WATER LEV	VEL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES)	Damaged (N	(O)	Describe:	FLUSH		
DTW Before		6.35	Time:		Flow through cel	•		GW Meter No.(s SI OPE-8
	Date/Time:			End Purge:	•	3/ 9 /2020 @ 926		Gallons Purged:	
				Ē	Storage Tank	\Box		SITE TREATM	
Purge water of	iisposed to:	-	55-gal Drum	-	Storage Talik	Ground	Other	SHE IKEAIW	ENI SISIEM
7D\$	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	
Time	(°F/°C) Purge Goa	(uS/cm) ls: Stablizatio	(mg/L) on of Parame	ters for three	(mV) e consecutive rea	(NTU) dings within the fol	(ft) llowing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
906	8.5	324.9	1.47	6.14	11.9		6.79		CYCLING 1/MIN F
909	8.0	319.3	1.71	6.14	11.7		6.82		
912	6.4	301.6	2.90	6.16	14.9		6.84		
915		294.7	3.48	6.17	19.1		6.87		
									_
918		291.3	3.84	6.17	21.6	·	6.91		
921	5.5	287.6	4.18	6.17	24.7		6.96		
924	5.5	286.7	4.26	6.17	26.2		6.99		
SAMPLE CO	LLECTION D	ATA							
Sample Colle	cted With:		Bailer		Pump/Pump Type	dedicated baldder			
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	dure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	al Order)	Other							
Sample Descr	ription (color, t	urbidity, odor	, sheen, etc.):	CLEAR, CO	LORESS, NO SH	EEN, NO ODOR, S	OME LIGHT O	COLORED SOLI	OS FLOATING
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	, , ,	, ,		6 16	, ,	(1,10)	(20)	(1 0 11)	O NO CT VILLED IN
1	5.6	286.4	4.29	6.16	27.1				
2	5.6	286.1	4.31	6.15	27.7				_
3	5.6	286.2	4.32	6.15	27.9				
4	5.6	286.3	4.34	6.15	28.0				
Average:	5.6	286.3	4.32	6.15	27.7	#DIV/0!			
OHANTITY	TVPICAL A			D D OFFEE D					
3		NALVSIS AT	I OWED PE	CR ROTTLE	TVPE (Circle at	mlicable or write n	on-standard a		
	1					pplicable or write n	on-standard a		OR 🗆
	(8260-SIM)	(8010) (8020)) (NWTPH-	G) (NWTPI	H-Gx) (BTEX)			WA 🗆	OR 🗆
	(8260-SIM) (8270D) (PA	(8010) (8020 AH) (NWTPF)) (NWTPH- H-D) (NWTI	G) (NWTPI PH-Dx) (TPI	H-Gx) (BTEX) H-HCID) (8081)	(8141) (Oil & Gro (HCO3/CO3) (C	ease)	WA □ WA □	_
1	(8260-SIM) (8270D) (PA (pH) (Condu	(8010) (8020 AH) (NWTPH activity) (TDS)) (NWTPH- H-D) (NWTF S) (TSS) (B	G) (NWTPI PH-Dx) (TPI OD) (Turbi	H-Gx) (BTEX) H-HCID) (8081)	(8141) (Oil & Gro (HCO3/CO3) (C	ease)	WA □ WA □	_
1	(8260-SIM) (8270D) (PA (pH) (Condu (COD) (TOO	(8010) (8020 AH) (NWTPH activity) (TDS	O) (NWTPH-H-D) (NWTF S) (TSS) (E tal PO4) (To	G) (NWTPH PH-Dx) (TPH OD) (Turbional Kiedahl N	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity)	(8141) (Oil & Gro (HCO3/CO3) (C	ease)	WA □ WA □	_
1	(8260-SIM) (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid	(8010) (8020 AH) (NWTPH activity) (TDS C5310C) (To le) (WAD Cy	O) (NWTPH-H-D) (NWTF S) (TSS) (Estal PO4) (Total PO4) (Total PO4) (Total PO4) (Free	G) (NWTPI PH-Dx) (TPI OD) (Turbio tal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3)	(8141) (Oil & Gro (HCO3/CO3) (C	ease) l) (SO4) (NO	WA	OR
	(8260-SIM) (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M	(8010) (8020) AH) (NWTPH tetrivity) (TDS) C5310C) (To te) (WAD Cy) (As) (Sb) (tetals) (As) (St)	O) (NWTPH-H-D) (NWTF S) (TSS) (Estal PO4) (Total PO4) (Tree Tranide) (Free Ba) (Be) (Ca	G) (NWTPF PH-Dx) (TPF OD) (Turbio stal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	ease) I) (SO4) (NO Wi) (Ag) (Se) (WA □ WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □
	(8260-SIM) (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	(8010) (8020) AH) (NWTPH netivity) (TDS) C5310C) (To le) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (g short list)	O) (NWTPH-H-D) (NWTFH-S) (TSS) (Estal PO4) (Total PO4) (Total PO4) (Total PO4) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba	G) (NWTPF PH-Dx) (TPF OD) (Turbio stal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	ease) I) (SO4) (NO Wi) (Ag) (Se) (WA □ WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □
	(8260-SIM) (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	(8010) (8020) AH) (NWTPH tetrivity) (TDS) C5310C) (To te) (WAD Cy) (As) (Sb) (tetals) (As) (St)	O) (NWTPH-H-D) (NWTFH-S) (TSS) (Estal PO4) (Total PO4) (Total PO4) (Total PO4) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba	G) (NWTPF PH-Dx) (TPF OD) (Turbio stal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	ease) I) (SO4) (NO Wi) (Ag) (Se) (WA □ WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □
	(8260-SIM) (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	(8010) (8020) AH) (NWTPH netivity) (TDS) C5310C) (To le) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (g short list)	O) (NWTPH-H-D) (NWTFH-S) (TSS) (Estal PO4) (Total PO4) (Total PO4) (Total PO4) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba	G) (NWTPF PH-Dx) (TPF OD) (Turbio stal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	ease) I) (SO4) (NO Wi) (Ag) (Se) (WA □ WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □
	(8260-SIM) (8270D) (PA (pH) (Conduction (COD) (TOG) (Total Cyanid (Total Metals) (Dissolved M VOC (Boein Methane Eth	(8010) (8020) AH) (NWTPH netivity) (TDS) C5310C) (To le) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (g short list)	O) (NWTPH-H-D) (NWTFH-S) (TSS) (Estal PO4) (Total PO4) (Total PO4) (Total PO4) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba	G) (NWTPF PH-Dx) (TPF OD) (Turbio stal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	ease) I) (SO4) (NO Wi) (Ag) (Se) (WA □ WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □
	(8260-SIM) (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	(8010) (8020) AH) (NWTPH tetrivity) (TDS) C5310C) (To le) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (g short list)	O) (NWTPH-H-D) (NWTFH-S) (TSS) (Estal PO4) (Total PO4) (Total PO4) (Total PO4) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba	G) (NWTPF PH-Dx) (TPF OD) (Turbio stal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	ease) I) (SO4) (NO Wi) (Ag) (Se) (WA □ WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □
	(8260-SIM) (8270D) (PA (pH) (Conduction (COD) (TOG) (Total Cyanid (Total Metals) (Dissolved M VOC (Boein Methane Eth	(8010) (8020) AH) (NWTPH tetrivity) (TDS) C5310C) (To le) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (g short list)	O) (NWTPH-H-D) (NWTFH-S) (TSS) (Estal PO4) (Total PO4) (Total PO4) (Total PO4) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba	G) (NWTPF PH-Dx) (TPF OD) (Turbio stal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	ease) I) (SO4) (NO Wi) (Ag) (Se) (WA □ WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR □
1	(8260-SIM) (8270D) (PA (pH) (Conduction (COD) (TOG) (Total Cyanid (Total Metals) (Dissolved M VOC (Boein Methane Eth	(8010) (8020) AH) (NWTPH tetrivity) (TDS) C5310C) (To le) (WAD Cy) (As) (Sb) (etals) (As) (Sb) (g short list)	O) (NWTPH-H-D) (NWTFH-S) (TSS) (Estal PO4) (Total PO4) (Total PO4) (Total PO4) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba) (Ba	G) (NWTPF PH-Dx) (TPF OD) (Turbio stal Kiedahl N Cyanide)	H-Gx) (BTEX) H-HCID) (8081) dity) (Alkalinity) (itrogen) (NH3) (Cr) (Cu) (Fe)	(8141) (Oil & Gr (HCO3/CO3) (C (NO3/NO2)	ease) I) (SO4) (NO Wi) (Ag) (Se) (WA □ WA □ 3) (NO2) (F) Tl) (V) (Zn) (H	OR



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/ 9 /2020@	845		
Sample Nun	nber:	RGW233I-	200309		Weather:	SUNNY, COLD)		
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES)	Damaged (N	(O)	Describe:	FLUSH		
DTW Before	Purging (ft)	6.1	Time:		Flow through cel			GW Meter No.(SLOPE -8
	Date/Time:			End Purge:	_	3/ 09/2020@	840	Gallons Purged:	
Purge water of			55-gal Drum	Ĕ	Storage Tank	Ground		SITE TREATM	
i uige water c	nsposed to.		55-gai Diulii		Storage Tank	⊕ Ground	Other	SITE TREATM	ENTSTSTEM
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) consecutive rea	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
820	5.3	152.2	1.12	6.46	8.6		6.09		
823	6.2	160.0	1.06	6.42	-7.5		6.09		
826		159.9	1.03	6.44	-11.1		6.09		-
							0.09		
829		158.1	0.92	6.46	-13.3				
832	5.7	156.7	0.91	6.46	-14.3				
835	5.6	155.8	0.94	6.46	-13.4				
SAMPLE CO	LLECTION D	DATA							
Sample Colle			Bailer		Pump/Pump Type	DEDICATED BL	ADDER		
Made of:	_	Stainless Stee	el 🗖	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	_	Alconox Was		Tap Rinse	DI Water	Dedicated			
(By Numerica		Other	··· 및	rap Kinse	□ Di water	Dedicated			
, ,	*	_	shoon atali	CLEAD CO	I ODI ESS NO C	DOR, NO SHEEN			
Sample Desci	ription (color, i	iurbianty, odor	, sheen, etc.).	CLEAR, CO	LOKLESS, NO C	DOR, NO SHEEN			
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	5.6	155.5	0.92	6.46	-13.4				
2	5.6	155.7	0.91	6.46	-13.1				
3	5.6	155.8	0.92	6.46	-13.0		-		
4	5.6	155.1	0.92	6.46	-13.0				
Average:	5.6	155.5	0.92	6.46	-13.1	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PI	ER BOTTLE	TYPE (Circle ap	pplicable or write	non-standard a	nalysis below)	
3	(8260-SIM)	(8010) (8020) (NWTPH-	-G) (NWTPI	H-Gx) (BTEX)			wa 🗆	OR 🗆
	(8270D) (PA	AH) (NWTPI	I-D) (NWTI	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & G	rease)	wa 🗆	OR □
	* '	• • • • • • • • • • • • • • • • • • • •	, , , , ,	, ,	**	(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
1					itrogen) (NH3)	(NO3/NO2)			
_		le) (WAD Cy			(0) (0) 7:	ONLY OF YORK	NEV (A V CO V C	TIL (17 (7)) (II) (II)
1						(Pb) (Mg) (Mn) (
	VOC (Boein		у (ва) (ве) (.a) (Ca) (Co)	(Cr) (Cu) (Fe) (P	o) (Mg) (Mn) (N1)	(Ag) (Se) (TI) (V) (Zn) (Hg) (K) (Na) (Hardness) (Sili
	,	nane Ethene A	retylene						
	141CHIAIIC Ell	and Eurene A	cernone						
	others								
L	1								
Duplicate Sar	nple No(s):								
Comments:									
Signature:	RYM					Dotor	3.09.20		



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/9/2020@	1001		
Sample Nun	nber:	RGW234S-			Weather:	PARTLY CLOU	JDY		
Landau Rep	•	BXM/SRB/	JAN		·				
WATER LEV	/EL/WELL/PI	JRGE DATA							
Well Condition		Secure (YES)	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	6.73	Time:		Flow through cel	l vol	-	GW Meter No.(s 1
	Date/Time:		932		_	3/9 /2020 @	951	Gallons Purged:	0.25
Purge water d		3/7/2020 @	55-gal Drum	Ē	Storage Tank	Ground		SITE TREATM	
		Cond.	D.O.		ORP		_		
Time	Temp (°F/°C)	(uS/cm)	(mg/L)	pН	(mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Observations
	. ,	. ,		ters for three		dings within the fo	. ,	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/ - 10%	< 0.3 ft	through cell	
935	9.3	233.3	3.79	6.41	26.6		6.73		
938	8.4	222.1	3.56	6.39	21.8		6.73	·	
941	7.6	205.1	3.47	6.39	18.8		6.73		
944	6.8	192.1	3.15	6.38	18.4				
947	6.2	182.9	3.05	6.38	15.5				
950	5.5	174.9	3.19	6.36	16.0				
952			0.17		10.0				
932	· -								
SAMDLE CO	LLECTION D						·		
Sample Colle			Bailer		Pumn/Pumn Tyne	DED. BLADDER			
Made of:	cica with.	Stainless Ste		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced		Alconox Wa	_	Tap Rinse	DI Water	Dedicated	outer	Dedicated	
		Other	··· <u></u>	rap Kilise	□ DI Water	Dedicated			
(By Numerica	,	_	ahaan ata h	LICHT DDC	WM/TAN MED	HIGH TURB NO	NIC		
Sample Descr	ripuon (color,	turbiaity, odor	, sneen, etc.):	LIGHT BKC	W IN/ I AIN, MIED-	HIGH TURB, 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	5.4	173.7	3.18	6.36	16.1				
2	5.3	172.1	3.20	6.36	15.9				
3	5.3	171.2	3.20	6.36	15.9				
4	5.3	170.4	3.20	6.36	15.6				
Average:	5.3	171.9	3.20	6.36	15.9	#DIV/0!			
OLIA NITITY	TYDICALA	NAT VOIC AT	I OWED DI	D DATTI E	TVDE (Circle or	mliachla an muita	non stondond o	nolvaia holovy)	
3					H-Gx) (BTEX)	oplicable or write	non-standard a	WA	OR 🗆
						(8141) (Oil & G	rease)	wa 🗆	OR 🗆
	`					(HCO3/CO3) (C			
1	(COD) (TO	C5310C) (To	tal PO4) (To	tal Kiedahl N	itrogen) (NH3)	(NO3/NO2)			
	(Total Cyanid	le) (WAD Cy	anide) (Free	Cyanide)					
1						(Pb) (Mg) (Mn) (
) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (Na) (Hardness) (Sili
	VOC (Boein		4-1						
	wietnane Eth	nane Ethene A	cetylene						
	others								
Duplicate Sar	nple No(s):								
Comments:									
Signature:	JAN					Date:	3/9/2020		



Project Nam	ie:	Boeing Ren	ton		Project Number	r:	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/ 9/2020@	921		
Sample Nun	nber:	RGW235I-	200309		Weather:	CLOUDY			
Landau Rep	resentative:	BXM/SRB/	JAN		- -				
WATERIEV	/EL/WELL/PU	IRCE DATA							
Well Condition		Secure (YES)	Damaged (N	(O)	Describe:			
		`	,	•	,			CW Matan No.	1
DTW Before		6.42	Time:	End Purge:	Flow through cel	3/9 /2020 @	015	GW Meter No.(
	Date/Time:		854	Ē				Gallons Purged:	0.25
Purge water d	isposed to:		55-gal Drum	4	Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	
Time	(°F/°C)	(uS/cm)	(mg/L)	tors for throa	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
857	8.1	122.3	3.51	6.85	12.1		6.42		
	·								
900	7.3	119.9	3.41	6.75	16.0		6.42		
903	6.6	117.0	3.45	6.69	19.2		6.42		
906	5.9	115.5	3.63	6.56	23.2			-	-
909	4.9	114.9	3.85	6.45	27.8				
912	4.3	114.3	3.97	6.36	31.5				
914	·	114.7	3.87	6.31	34.1				
914	4.1	114.7	3.07	0.31	34.1				
CALLED F. CO	LI ECTION D						-		
	LLECTION D		Bailer		D /D T	DED DI ADDED			
Sample Collection	ctea with:					DED. BLADDER		D. Francis	
Made of:		Stainless Stee		PVC	Teflon	Polyethylene	U Other	Dedicated	
Decon Proced	_	Alconox Was	sh 📙	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other	-						
Sample Descr	ription (color, t	urbidity, odor,	, sheen, etc.):	NO COLOR	, LOW TURB, NO	D/NS.			
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
перисис	(°F/°C)	(uS/cm)	(mg/L)	PII	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	4.2	114.6	3.80	6.29	35.7				
2	3.9	114.7	3.92	6.25	37.7		•		
								-	
3	4.0	114.7	3.89	6.21	40.2				
4	4.0	114.7	3.84	6.16	42.7				
Average:	4.0	114.7	3.86	6.23	39.1	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	ER BOTTLE	TYPE (Circle at	pplicable or write	non-standard a	nalysis below)	
3	(8260-SIM)	(8010) (8020)) (NWTPH-	G) (NWTPI	H-Gx) (BTEX)	•		wa 🗆	OR 🗆
	(8270D) (PA	AH) (NWTPI	H-D) (NWTI	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & Gr	rease)	wa 🗆	OR □
	(pH) (Condu	ctivity) (TDS	S) (TSS) (B	OD) (Turbio	dity) (Alkalinity)	(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
1	(COD) (TOO	C5310C) (To	tal PO4) (To	tal Kiedahl N	itrogen) (NH3)	(NO3/NO2)			
		le) (WAD Cy	, ,	•					
1						(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) (Na) (Hardness) (Silica
	VOC (Boein		ootule===						
	Methane Eth	nane Ethene A	cetylene						
	others								
Duplicate Sar	nple No(s):								
Duplicate Sar Comments:	mple No(s):								



Project Nam	ne:	Boeing Ren	ton		Project Number	r:	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/9/2020@	846		
Sample Nun	nber:	RGW236S-	200309		Weather:	PARTLY CLOU	JDY		
Landau Rep	resentative:	BXM/SRB/	JAN		•				
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES)	Damaged (N	(O)	Describe:			
DTW Before		6.10	Time:		Flow through cel			GW Meter No.(s
	Date/Time:		817	End Purge:	_	3/9 /2020 @	929	Gallons Purged:	
				Ĕ		Ground		SITE TREATM	
Purge water d	nsposed to.		55-gal Drum		Storage Tank	⊕ Ground	- Other	SHE IKEAIM	ENTSISIEM
ran t	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	
Time	(°F/°C) Purge Goa	(uS/cm) ls: Stablizatio	(mg/L) on of Parame	ters for three	(mV)	(NTU) dings within the fo	(ft) Illowing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
820	8.1	281.7	8.75	6.07	32.3		6.10		
823	6.9	279.7	8.50	6.04	36.3		6.10		
826	6.4	271.4	8.09	6.05	39.4		6.10		
829	5.3	258.3	7.52	6.08	42.4				
832	4.8	250.3	6.83	6.10	43.9				_
835	4.1	239.8	6.56	6.11	44.8				
837	3.6	235.9	6.47	6.12	44.7				
	· —————						-		-
SAMPLE CO	LLECTION D	ΔΤΔ							
Sample Collection			Bailer		Pumn/Pumn Tyne	DED. BLADDER			
Made of:		Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
				Tap Rinse	—		outer	Bedieated	
Decon Proced		Alconox Was	sn 📙	rap Kinse	DI Water	Dedicated			
(By Numerica	*	Other							
Sample Descr	ription (color, t	turbidity, odor,	sheen, etc.):	DARK ORA	NGE, MED-HIGI	H TURB, SLIGHT	ODOR, NO SHI	EEN.	
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	3.6	235.7	6.40	6.12	44.8				
2	3.6	235.6	6.31	6.12	44.5		-		
3	3.4	233.3	6.37	6.12	44.6				
									-
4	3.5	233.2	6.38	6.12	44.8				
Average:	3.5	234.5	6.37	6.12	44.7	#DIV/0!	•		
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	R BOTTLE	TYPE (Circle ap	pplicable or write	non-standard a	nalysis below)	
3	(8260-SIM)	(8010) (8020) (NWTPH-	G) (NWTPI	H-Gx) (BTEX)			WA □	OR □
	(8270D) (PA	AH) (NWTPI	I-D) (NWTI	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & Gi	rease)	wa 🗆	OR □
	(pH) (Condu	activity) (TDS	S) (TSS) (B	OD) (Turbio	dity) (Alkalinity)	(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
1					itrogen) (NH3)	(NO3/NO2)			
	` *	le) (WAD Cy			(6) (6) =:	(N) (0.5.) = -:	TD (1) := :	TI D (17 (5)	·) (II) (31 ·
1						(Pb) (Mg) (Mn) (I			
) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) ((Ag) (Se) (Tl) (V	/) (Zn) (Hg) (K) (Na) (Hardness) (Sil
	VOC (Boein		patulana						
	Methane Eth	nane Ethene A	cetylene						
	others								
	1 241010								
Duplicate Sar	mple No(s):								
Comments:									
Signature:	JAN					Date:	3/9/2020		



Project Nam	ne <u>:</u>	Boeing Ren	ton		Project Number	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/11 /2020@	1126		
Sample Nun	nber:	RGW031S-	200311		Weather:	PARTLY CLOU	JDY		
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	5.15	Time:	1056	Flow through ce	ll vol.		GW Meter No.(s
Begin Purge:	Date/Time:	3/11 /2020 @	1100	End Purge:	Date/Time:	3/11 /2020 @	1121	Gallons Purged:	0.0
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
	Purge Goa +/- 3%	ls: Stablizatio +/- 3%		ters for three +/- 0.1 units		dings within the fo +/- 10%	ollowing limits < 0.3 ft	>/= 1 flow through cell	
1102						+/- 10 /0		tiir ougii cen	
1103	13.7	345.3	0.73	6.31	8.6		5.16		
1106	13.6	353.3	0.82	6.31	-0.3		5.16		
1109	13.4	361.1	0.92	6.31	-6.5		5.16		
1112	13.3	368.2	0.96	6.33	-13.3				
1115	13.3	370.7	1.08	6.34	-17.5				
1118		372.9	1.06	6.36	-20.8				
				6.36	-				
1120	13.1	373.9	1.13	0.30	-22.5		-		
CAMPLE CO	N. I. E.OTTON E						· <u> </u>		
	OLLECTION D		Bailer		Dumm /Dumm Tem	DED DI ADDER			
Sample Collection Made of:	cted with:	Stainless Stee	_	PVC	Teflon	DED. BLADDER Polyethylene	Other	Dedicated	
	. 🗀				—		LI Other	Dedicated	
Decon Proced		Alconox Was	sn 📋	Tap Rinse	DI Water	Dedicated			
(By Numerica	,	Other		NO GOL OD	I OW TUDD O	IGUE PEED OF E			
Sample Desci	ription (color,	turbidity, odor,	sheen, etc.):	NO COLOR	, LOW TURB, SI	LIGHT PETROLEU	JM ODOR, NO	SHEEN.	
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	13.1	374.2	1.11	6.36	-22.7				
2	13.1	374.0	1.10	6.37	-22.9				
					-				
3	13.1	374.1	1.10	6.37	-23.1		-		
4	13.1	374.1	1.09	6.37	-23.4				
Average:	13.1	374.1	1.10	6.37	-23.0	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PI	ER BOTTLE	TYPE (Circle a	oplicable or write	non-standard a	nalysis below)	
5	(8260) (801	0) (8020) (N	WTPH-G) ((NWTPH-Gx) (BTEX)			wa □	OR □
	(8270) (PAH	H) (NWTPH-	D) (NWTPH	I-Dx) (TPH-	HCID) (8081)	(8141) (Oil & Gre	ease)	wa 🗆	OR □
		•			•	(HCO3/CO3) (0	Cl) (SO4) (NO	3) (NO2) (F)	
1					n) (NH3) (NO3	/NO2)			
		le) (WAD Cy			(0) (0) (7)	(DL) (A.C.) (2.C.)	NT:	TOD (ALL) (FZ.) (C.)) (II) (31.)
						(Pb) (Mg) (Mn) (Na)			
	VOC (Boein) (ва) (ве) (С	_a) (Cd) (Co)	(Cr) (Cu) (Fe) (P	o) (Mg) (Mn) (N1)	(Ag) (Se) (11) (V) (Zn) (Hg) (K) (Na) (Hardness) (Si
	,	nane Ethene A	cetylene						
	Trictiane Ell	Ethelle At	- Stylolic						
	others								
Duplicate Sar	nple No(s):	Duplicate Lo	cation (DUP2)					
Comments:									
Signature:	JAN					Date:	3/11/2020		



Project Nan	ne:	Boeing Rent	ton		Project Number	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	larch 2020		Date/Time:	3/11 /2020@	800		
Sample Nui	mber:	RGWDUP2	200311		Weather:	PARTLY CLOU	JDY		
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LE	VEL/WELL/PU	JRGE DATA							
Well Conditi	on:	Secure (YES))	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)		Time:		Flow through ce	ll vol.		GW Meter No.(s
	Date/Time:	3/11 /2020 @		End Purge:		3/11 /2020 @		Gallons Purged:	
Purge water			55-gal Drum		Storage Tank	Ground		SITE TREATM	ENT SYSTEM
J	•		-		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
				ters for three	. ,	dings within the fo	. ,	>/= 1 flow	0.5561 (4.656)
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
		DHE	PLICA	TE T	O RGV	V031S			
	-		LICI			10315			
	_,								
	-								
SAMPLE CO	DLLECTION D	ATA							
Sample Colle	ected With:		Bailer		Pump/Pump Type	DED. BLADDER			
Made of:		Stainless Stee	ıl 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proce	dure:	Alconox Was	sh 🗖	Tap Rinse	DI Water	Dedicated			
(By Numeric	al Order)	Other			-				
	,	ш.							
Sample Desc	ription (color, t	urbidity, odor,	sheen, etc.):	NO COLOR	, LOW TURB, SI	LIGHT PETROLEU	M ODOR, NO	SHEEN.	
D 1' '	70				ODD	TD 11114	DOWN		<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
	, ,	, ,			, ,	(1110)	(11)	(FC II)	Observations
1	13.0	374.3	1.10	6.37	-23.5				
2	13.0	374.2	1.08	6.37	-23.9				
3	13.0	374.3	1.08	6.37	-24.1				
4	13.0	374.4	1.07	6.37	-24.3				
Average:	13.0	374.3	1.08	6.37	-24.0	#DIV/0!			
Average.	15.0	374.3	1.00	0.57	-24.0	#DIV/0:		-	
QUANTITY	TYPICAL A	NALYSIS AL	LOWED PE	R BOTTLE	TYPE (Circle a)	oplicable or write i	non-standard a	nalysis below)	
5	(8260) (801)	0) (8020) (N	(WTPH-G)	NWTPH-Gx) (BTEX)			wa 🗆	OR 🗆
	(8270) (PAH	I) (NWTPH-I	D) (NWTPH	I-Dx) (TPH-	HCID) (8081)	(8141) (Oil & Grea	ase)	wa 🗆	$_{ m OR}$ \square
			(P) (PST) (B	OD) (Turbi	dity) (Alkalinity)	(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
	(pH) (Condu	activity) (TDS) (ISS) (D		• • • • • • • • • • • • • • • • • • • •		, , , , ,		
1				dahl Nitroger	n) (NH3) (NO3	/NO2)			
1	(COD) (TOO	C) (Total PO4	1) (Total Kie		n) (NH3) (NO3	/NO2)			
1	(COD) (TOO (Total Cyanid	C) (Total PO4 le) (WAD Cya	1) (Total Kie anide) (Free	Cyanide)		,	Ni) (Ag) (Sa) (Tl) (V) (7n) (U	σ) (K) (Na)
1	(COD) (TOO (Total Cyanid (Total Metals	(Total PO4 le) (WAD Cya) (As) (Sb) (I	4) (Total Kie anide) (Free Ba) (Be) (Ca	Cyanide) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I			
1	(COD) (TOO (Total Cyanid (Total Metals (Dissolved M	(Total PO4 le) (WAD Cya) (As) (Sb) (I etals) (As) (Sb	4) (Total Kie anide) (Free Ba) (Be) (Ca	Cyanide) (Cd) (Co)	(Cr) (Cu) (Fe)	,			
1	(COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	(C) (Total PO4) (Ie) (WAD Cya) (As) (Sb) (Ie) (Ietals) (As) (Sb)	4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C	Cyanide) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I			
1	(COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	(Total PO4 le) (WAD Cya) (As) (Sb) (I etals) (As) (Sb	4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C	Cyanide) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I			
1	(COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	(C) (Total PO4) (de) (WAD Cya) (As) (Sb) (Hetals) (As) (Sb) (Sb) (Sg short list)	4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C	Cyanide) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I			
1	(COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	(C) (Total PO4) (de) (WAD Cya) (As) (Sb) (Hetals) (As) (Sb) (Sb) (Sg short list)	4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C	Cyanide) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I			
1	(COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	(C) (Total PO4) (de) (WAD Cya) (As) (Sb) (Hetals) (As) (Sb) (Sb) (Sg short list)	4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C	Cyanide) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I			
	(COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	C) (Total PO4 le) (WAD Cya) (As) (Sb) (I etals) (As) (Sb ag short list) nane Ethene Ac	4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C cetylene	Cyanide) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I			
	(COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	(C) (Total PO4) (de) (WAD Cya) (As) (Sb) (Hetals) (As) (Sb) (Sb) (Sg short list)	4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C cetylene	Cyanide) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I			
1 Duplicate Sa Comments:	(COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	C) (Total PO4 le) (WAD Cya) (As) (Sb) (I etals) (As) (Sb ag short list) nane Ethene Ac	4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C cetylene	Cyanide) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I			
Duplicate Sa	(COD) (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	C) (Total PO4 le) (WAD Cya) (As) (Sb) (I etals) (As) (Sb ag short list) nane Ethene Ac	4) (Total Kie anide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C cetylene	Cyanide) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I			



Project Nam	ie:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	1arch 2020		Date/Time:	3/11 /2020@	936		
Sample Nun	nber:	RGW033S-	200311	-	Weather:	SLIGHT RAIN			
Landau Rep	resentative:	BXM/SRB/	/JAN						
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES	5)	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	5.28	Time:		Flow through cel			GW Meter No.(rs 1
	Date/Time:			End Purge:	•	3/11 /2020 @	925	Gallons Purged:	0.25
Purge water d			55-gal Drum	_	Storage Tank	Ground		SITE TREATM	
	•		•		_		_		
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
		. ,		ters for three		dings within the fo	. ,	>/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/ - 10%	< 0.3 ft	through cell	
914	11.9	351.1	1.01	6.21	-0.8		5.28	- <u></u>	
917	11.4	341.3	1.57	6.22	-7.3		5.28		
920	11.0	332.8	1.53	6.22	-10.8		5.28		
923		321.1	1.48	6.22	-15.5			·	-
923	10.8	321.1	1.40	0.22	-13.3			· 	-
	· .							· 	
	·								
SAMPLE CO	LLECTION D	OATA							
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	ıl Order)	Other			—				
Sample Descr	ription (color,	turbidity, odor	, sheen, etc.):	NO COLOR	, LOW TURB, N	D/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	10.7	323.4	1.53	6.22	-15.9				
2	10.7	322.8	1.54	6.22	-16.4			. 	
3	10.7	322.7	1.63	6.22	-16.6			. <u></u>	
4	10.7	322.4	1.60	6.22	-16.8				
Average:	10.7	322.8	1.58	6.22	-16.4	#DIV/0!			
						_			
-						pplicable or write	non-standard a		
5		0) (8020) (N				(9141) (0:1 % Сто		WA □	OR OR
	<u> </u>		, ,	, ,		(8141) (Oil & Gre (HCO3/CO3) (O			
1					n) (NH3) (NO3,		.i, (504) (1 1 0	(1102) (I')	
-		le) (WAD Cy			, (- :) (1 (00)	· /			
		•		•	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Ni) (Ag) (Se) (Tl) (V) (Zn) (H	(g) (K) (Na)
	(Dissolved M	etals) (As) (St	o) (Ba) (Be) (Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) ((Ag) (Se) (Tl) (V	V) (Zn) (Hg) (K) ((Na) (Hardness) (Silio
	VOC (Boein	g short list)							
	Methane Eth	nane Ethene A	cetylene						
	others								
Duplicate Sar	nple No(s):								
Comments:									
Signature:	JAN					Date:	3/11/2020		



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	larch 2020		Date/Time:	3/11 /2020@	906		
Sample Nun	nber:	RGW034S-	200311		Weather:	CLOUDY			
Landau Rep	-	BXM/SRB/	JAN		•				
WATERLEY	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES)	Damaged (N	O)	Describe:			
DTW Before		5.36	Time:		Flow through ce		•	GW Meter No.(s 1
	Date/Time:			End Purge:	_	3/11 /2020 @	950	Gallons Purged:	0.25
			55-gal Drum	_		Ground		SITE TREATM	
Purge water d	iisposed to:	-	55-gai Druiii		Storage Tank	₩ Ground	- Other	SHE IREAIM	ENISISIEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	
Time	(°F/°C)	(uS/cm)	(mg/L)	tors for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
841	10.8	255.9	0.87	6.18	22.9		5.37		
		-							
844		257.0	0.92	6.25	10.8		5.37		
847	9.9	256.4	1.07	6.26	4.1		5.37		
850	9.5	255.8	1.47	6.26	-2.1				_
853	9.2	255.3	1.68	6.27	-7.5				
856	9.0	254.8	1.72	6.27	-11.1				
858		254.4	1.55	6.27	-13.9	-			
030	9.0	234.4	1.33	0.27	-13.9	-			-
G LA ENTE CO	I I ECTION D						·-		
	LLECTION D		Bailer		D /D T	DED DI ADDED			
Sample Colle	ctea with:			PVC		DED. BLADDER		D. B. dinas d	
Made of:		Stainless Stee	_		Teflon	Polyethylene	Other	Dedicated	
Decon Proced		Alconox Was	sh 📙	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color, t	urbidity, odor,	sheen, etc.):	NO COLOR	, LOW TURB, N	O/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	9.0	254.4	1.53	6.27	-14.2		` '		
2	9.0			6.27			•		
		254.3	1.53		-14.8				
3	8.9	254.4	1.55	6.27	-15.0	-	-		
4	8.9	254.4	1.62	6.27	-15.2				
Average:	9.0	254.4	1.56	6.27	-14.8	#DIV/0!			
OHANTITY	TYPICAL A	NALVSIS AI	LOWED PE	R BOTTLE	TVPE (Circle a	plicable or write	non-standard a	nalysis helow)	
5		0) (8020) (N				pricable of write	non sumum u u	wa 🗆	OR 🗆
						(8141) (Oil & Gre	ase)	wa 🗆	OR 🗆
	(pH) (Condu	ictivity) (TDS	S) (TSS) (B	OD) (Turbi	dity) (Alkalinity)	(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
1	(COD) (TOO	C) (Total PO	(Total Kie	dahl Nitroger	n) (NH3) (NO3	/NO2)			-
	(Total Cyanid	le) (WAD Cy	anide) (Free	Cyanide)					
	(Total Metals	(As) (Sb) (Ba) (Be) (Ca	(Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (Na) (Hardness) (Sili
	VOC (Boein								
	Methane Eth	nane Ethene A	cetylene						
	othors								
	others								
Duplicate Sar	nple No(s):								
Comments:									
Signature:	JAN					Date:	3/11/2020		



Project Nam	ie:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	1arch 2020		Date/Time:	3/10 /2020@	1606		
Sample Nun	nber:	RGW038S-	200310		Weather:	CLOUDY			
Landau Rep	resentative:	BXM/SRB/	/JAN						
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES	5)	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	5.44	Time:	1538	Flow through cel	l vol.		GW Meter No.(s 1
	Date/Time:				•	3/ 10/2020 @	1556	Gallons Purged:	0.25
Purge water d			55-gal Drum	Ē	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)	•	(mV)	(NTU)	(ft)	Volume (gal)	Observations
	U					dings within the fo		>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1543	12.3	209.4	0.58	6.23	5.8		5.45		
1546	12.0	217.2	0.61	6.23	3.1		5.45		
1549	11.7	223.0	0.67	6.24	-1.9		5.45		
1552	11.5	226.1	0.74	6.26	-7.1				
1555	11.3	228.0	0.73	6.28	-11.0				
1558									
1600							-		
1000	· ·						•		
SAMPLE CO	I I FCTION D	ΔΤΔ							
Sample Collection			Bailer		Pumn/Pumn Tyne	DED. BLADDER			
Made of:	-	Stainless Ste		PVC	Teflon	Polyethylene	Other	Dedicated	-
Decon Proced	lure:	Alconox Wa	_	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other	311 <u>–</u>	rup Kinse	□ Di water	Dedicated			
, ,	*	_	chaan atc.):	NO COLOP	LOW TUDE SI	JGHT ODOR, NO	CHEEN		
Sample Descr	iption (color,	turbianty, odor	, sneen, etc.).	NO COLOR	, LOW TORD, SI	adiri odok, No	SHEEN.		
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	11.3	228.3	0.75	6.29	-13.2		-		
2	11.3	228.5	0.75	6.29	-13.6				
3	11.3	228.8	0.74	6.29	-13.9				
4	11.3	228.8	0.77	6.29	-14.4				
Average:	11.3	228.6	0.75	6.29	-13.8	#DIV/0!			
OLIANTITY	TYDICALA	NAT VOIC AT	I OWED DI	D DATTI E	TVDE (Circle or	mliachla an muita	non standard a	nolvaia holovy)	
5		0) (8020) (N				oplicable or write	non-standard a	WA	OR 🗆
						(8141) (Oil & Gre	ase)	wa 🗆	OR 🗆
	<u> </u>		, ,	, ,		(HCO3/CO3) (C			
1	(COD) (TO	C) (Total PO	4) (Total Kie	dahl Nitroger	n) (NH3) (NO3	NO2)			
		le) (WAD Cy							
						Pb) (Mg) (Mn) (
			o) (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
	VOC (Boein	ig short list) nane Ethene A	cetylene						
	wiemane Eth	ыне динепе А	cetylelle						
	others								
Duplicate Sar	nple No(s):								
Comments:									
Signature:	JAN					Date:	3/10/2020		



Project Nan	ne <u>:</u>	Boeing Ren	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	1arch 2020		Date/Time:	3/11 /2020@	826		
Sample Nur	mber:	RGW177I-	200311		Weather:	RAIN			
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES	5)	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	4.98	Time:	757	Flow through cel	l vol.		GW Meter No.(s 1
	Date/Time:			End Purge:	_	3/11 /2020 @	816	Gallons Purged:	0.25
Purge water of	disposed to:		55-gal Drum		Storage Tank	Ground		SITE TREATM	ENT SYSTEM
Ü	T	C1	-		ODD		_		
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
		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	
803	12.0	190.3	2.74	6.38	8.8		5.01		
806	10.9	186.3	2.47	5.94	23.1		5.01		
809	10.4	184.6	1.98	5.82	28.4		5.01		
912	9.7	181.9	2.01	5.80	30.5				
815	9.1	179.4	2.03	5.80	33.6				
818									
		-					-		
820	<u> </u>						-		
CALLED F. CC									
Sample Colle	OLLECTION D		Bailer		Dryman /Dryman Tryma	DED. BLADDER			
Made of:	_	Stainless Ste		PVC	Teflon	Polyethylene	Other	Dedicated	_
							LI Other	Dedicated	
Decon Proce		Alconox Wa	sn 📋	Tap Rinse	DI Water	Dedicated			
(By Numerica	,	Other		OI IOI III II I	N. I.OW. MED. W.	IDD NOAIG			
Sample Desc	ription (color, t	turbiaity, oaor	, sneen, etc.):	SLIGHT TA	N, LOW-MED T	JRB, 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	9.1	179.5	2.00	5.80	34.3				
2	9.1	179.8	2.02	5.80	33.8				
3	9.1	179.2	2.05	5.80	34.4				
4	9.1			5.80					
		178.8	2.03		34.8	#P# 1/01			
Average:	9.1	179.3	2.03	5.80	34.3	#DIV/0!	-		-
QUANTITY	TYPICAL A	NALYSIS AI	LLOWED PI	ER BOTTLE	TYPE (Circle ap	plicable or write	non-standard a	nalysis below)	
5		0) (8020) (1						WA 🗆	OR 🗆
	l					(8141) (Oil & G		WA 🗆	OR 🗆
1		•			dity) (Alkalinity) n) (NH3) (NO3,	(HCO3/CO3) (0 NO2)	.1) (SO4) (NO	(NO2) (F)	
1		le) (WAD Cy			i) (11113) (11U3)	1104)			
					(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
									Na) (Hardness) (Silic
	VOC (Boein	ng short list)					-		
	Methane Eth	nane Ethene A	cetylene						
	- 41								
	others								
Duplicate Sar	mple No(s):								
Comments:									
	IAN	. <u></u>				Date:	3/11/2020		



Project Nam	ne:	Boeing Rent	on		Project Number	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	arch 2020		Date/Time:	3/10 /2020@	936		
Sample Nun	nber:	RGW143S-	200310		Weather:	CLOUDY			
Landau Rep	resentative:	BXM/SRB/J	AN						
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)		Damaged (N	O)	Describe:			
DTW Before	Purging (ft)	5.63	Time:	909	Flow through ce	ll vol.		GW Meter No.(s
Begin Purge:	Date/Time:	3/10/2020@	911	End Purge:	Date/Time:	3/10/2020 @	932	Gallons Purged:	0.
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
	Purge Goa	. ,			e consecutive rea	dings within the fo	. ,	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
914	10.6	237.8	0.69	6.35	-10.5		5.64		_
917	9.7	239.3	1.24	6.35	-16.2		5.64		
920	8.8	238.8	1.19	6.33	-19.9		5.64		
923	8.2	239.4	1.31	6.34	-22.8		5.64		
926		239.5	1.37	6.33	-25.3			-	
		239.1	1.44	6.33					
929					-26.7				
931	7.1	238.8	1.51	6.33	-27.4				
SAMPLE CC	LLECTION D	ATA							
Sample Collec			Bailer		Pump/Pump Type	DED. BLADDER			
Made of:		Stainless Stee	ı 📮	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lure:	Alconox Wasi	h 🗖	Tap Rinse	DI Water	Dedicated		_	
(By Numerica	ıl Order)	Other	_	•	421	_			
, ,	*		sheen, etc.):	NO COLOR	, LOW TURB, 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	7.0	238.8	1.53	6.33	-27.6				
2	7.0	238.7	1.51	6.33	-27.7				
3	7.0	238.7	1.50	6.34	-27.9				_
4	7.0	238.7	1.51	6.34	-27.9				
Average:	7.0	238.7	1.51	6.34	-27.8	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AL	LOWED PE	ER BOTTLE	TYPE (Circle a	oplicable or write	non-standard a	nalysis below)	
5	(8260) (8010	0) (8020) (N	WTPH-G) ((NWTPH-Gx)	(BTEX)			WA □	OR 🗆
	(8270) (PAH	I) (NWTPH-I	O) (NWTPH	H-Dx) (TPH-	HCID) (8081)	(8141) (Oil & Grea	ase)	wa 🗆	or □
						(HCO3/CO3) (C	(SO4) (NO	3) (NO2) (F)	
1				•	n) (NH3) (NO3	/NO2)			
		e) (WAD Cya			(0) (0) 7:	(DL) (A.S.) (2.5.) =	T. /A \ '@ \ '	m) (17 (7) ==	(II) (II)
						(Pb) (Mg) (Mn) (I			
	VOC (Boein		(Ба) (Ве) (С	.a) (Cu) (C0)	(C1) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) (Ag) (3e) (11) (V) (ZII) (Tg) (K) (iva) (riaruness) (Si
	,	ane Ethene Ac	etylene						
	others								
Duplicate Sar	nnle No(c):								
•	iipic 110(8).								
Comments:									



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/10 /2020@	1501		
Sample Nun	nber:	RGW209S-	200310		Weather:	CLOUDY			
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	5.18	Time:	1435	Flow through cel	l vol.		GW Meter No.(s 1
	Date/Time:			End Purge:	_	3/ 10/2020 @	1458	Gallons Purged:	
Purge water of	lisposed to:		55-gal Drum		Storage Tank	Ground		SITE TREATM	•
	T		-		ODD		_		
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
		ls: Stablizatio	n of Parame			dings within the fo	ollowing limits	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1440	12.7	328.1	0.62	6.33	18.5		5.18		
1443	12.3	329.4	0.59	6.34	4.5		5.18		
1446	11.9	328.9	0.64	6.35	-7.4		5.18		
1449	11.6	327.8	0.72	6.36	-14.1				
1452		327.0	0.92	6.36	-19.0				
1455		326.3	0.97	6.37	-22.5				
1457	11.2	326.1	0.99	6.37	-23.6				-
	LLECTION D		D. II						
Sample Colle	_	_	Bailer	_		DED. BLADDER	_	■ D P + 1	
Made of:	_	Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced		Alconox Was	sh 📋	Tap Rinse	DI Water	Dedicated			
(By Numerica	*	Other							
Sample Descr	ription (color, t	urbidity, odor	sheen, etc.):	NO COLOR	, LOW TURB, NO	D/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	11.2	326.0	0.94	6.37	-23.9				
2	11.2	326.0	0.99	6.37	-24.1				
3	11.2	326.0	0.93	6.37	-24.3				
4	11.1	326.0	0.98	6.37	-24.5		-		
						# DB #01			-
Average:	11.2	326.0	0.96	6.37	-24.2	#DIV/0!	-		-
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PI	ER BOTTLE	TYPE (Circle a)	plicable or write	non-standard a	nalysis below)	
5		0) (8020) (N						WA 🗆	OR 🗆
	, ,	/ \	/ \			(8141) (Oil & Gre		WA D	OR 🗆
1					dity) (Alkalinity) n) (NH3) (NO3)	(HCO3/CO3) (0	(SO4) (NO	(NO2) (F)	
1		le) (WAD Cy			i) (11113) (11U3)	1104)			
			, ,		(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
									Na) (Hardness) (Silic
	VOC (Boein	g short list)					-		
	Methane Eth	nane Ethene A	cetylene						
	- 41								
	others								
Duplicate Sar	nple No(s):								
Comments:									
	IAN					Date:	3/10/2020		



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:	'	Quarterly M	Iarch 2020		Date/Time:	3/11 /2020@	1046		
Sample Nun	nber:	RGW210S-	200311		Weather:	PARTLY CLOU	JDY		
Landau Rep	•	BXM/SRB/	'JAN		·				
WATER LEV	/EL/WELL/PI	JRGE DATA							
Well Condition		Secure (YES)	Damaged (N	O)	Describe:			
DTW Before	Purging (ft)	4.85	Time:		Flow through cel			GW Meter No.(s 1
	Date/Time:			End Purge:	_	3/11 /2020 @	1029	Gallons Purged:	0.25
Purge water d			55-gal Drum	Ĕ	Storage Tank	Ground		SITE TREATM	
C	Temp	Cond.	D.O.	рН	ORP	Turbidity	DTW	Internal Purge	
Time	(°F/°C)	(uS/cm)	(mg/L)	pm	(mV)	(NTU)	(ft)	Volume (gal)	Observations
	. ,	. ,		ters for three	. ,	dings within the fo	. ,	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1022	10.8	262.8	4.10	6.53	21.4		4.94		
1025	10.7	261.2	4.05	6.52	20.1		4.94		
1028	10.8	260.9	3.91	6.51	19.3		4.94	·	
1031									
1034									
1037							•		
1039									
1039	· 								-
CAMPLE CO	I LECTION D								
Sample Colle	LLECTION D		Bailer		Pumn/Pumn Tyne	DED. BLADDER			
Made of:	cica wini.	Stainless Ste		PVC	Teflon	Polyethylene	Other	Dedicated	
		Alconox Wa		Tap Rinse	DI Water	Dedicated	U Other	Dedicated	
Decon Proced		· —	sn 📋	rap Kinse	☐ DI Water	Dedicated			
(By Numerica	,	Other							
Sample Descr	ription (color,	turbidity, odor	, sheen, etc.):	BROWN, M	ED-HIGH TURB	, NO/NS, LOTS OF	FPARTICULAT	ES.	
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	10.8	260.9	3.89	6.51	18.9				
2	10.8	260.8	3.88	6.51	18.8				
3	10.8	260.8	3.87	6.51	18.7				
4	10.8	260.8	3.86	6.51	18.5				
Average:	10.8	260.8	3.88	6.51	18.7	#DIV/0!			
QUANTITY	TVDICAL A	NAI VCIC AI	I OWED DI	D BOTTI E	TVDF (Circle or	oplicable or write	non standard a	nolycic holow)	
5		0) (8020) (N				pricable of write	ion-standard a	wa 🗆	OR 🗆
						(8141) (Oil & Gre	ase)	wa 🗆	OR 🗆
				/ \		(HCO3/CO3) (C			
1	(COD) (TO	C) (Total PO	4) (Total Kie	dahl Nitroger	n) (NH3) (NO3)	NO2)			
	(Total Cyanic	le) (WAD Cy	ranide) (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	(Y) (Zn) (Hg) (K) (Na) (Hardness) (Sili
	VOC (Boein		cetulene						
	ivietnane Eth	nane Ethene A	cetylelle						
	others								
•									
Duplicate Sar	nple No(s):								
Comments:									
Signature:	JAN					Date:	3/11/2020		



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/10 /2020@	1216		
Sample Nur	nber:	RGW237S-	200310		Weather:	CLOUDY			
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	4.71	Time:	1148	Flow through cel	l vol.		GW Meter No.(s 1
	Date/Time:			End Purge:	_	3/ 10/2020 @	1212	Gallons Purged:	
Purge water of	disposed to:		55-gal Drum		Storage Tank	Ground		SITE TREATM	-
	T		-		ODD		DTW	I41 D	G
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
		ls: Stablizatio	n of Parame			dings within the fo	ollowing limits	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1154	10.3	172.6	3.63	6.45	18.0		4.72		
1157	9.9	177.9	2.80	6.33	21.6		4.72		
1200	9.9	194.4	2.25	6.32	21.1		4.72		
1203	10.0	204.7	1.69	6.36	13.7		4.72		
1206		194.2	1.22	6.43	3.6				
1209		186.4	0.99	6.47	-1.6				
	·								
1211	10.3	182.0	0.95	6.47	-4.6				-
	LLECTION D		D. II		D D T				
Sample Colle	_	_	Bailer	_		DED. BLADDER		■ 5 2	
Made of:	_	Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	_	Alconox Was	sh 📙	Tap Rinse	DI Water	Dedicated			
(By Numerica	*	Other							
Sample Descri	ription (color, t	urbidity, odor,	sheen, etc.):	LIGHT OR A	NGE, LOW-MEI	O TURB, 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	10.3	180.2	0.90	6.48	-5.5				
2	10.3	179.2	0.96	6.48	-6.5				
3	10.3	178.2	0.95	6.48	-6.8				-
4	10.3	177.9	0.93	6.48	-7.1				
Average:	10.3	178.9	0.94	6.48	-6.5	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PH	ER BOTTLE	TYPE (Circle a)	pplicable or write	non-standard a	nalysis below)	
5	(8260) (8010	0) (8020) (N	WTPH-G)	(NWTPH-Gx) (BTEX)			WA 🗆	OR 🗆
		, ,	, ,	, ,		(8141) (Oil & Gre		WA 🗆	OR 🗆
-		•				(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
1		e) (WAD Cy			n) (NH3) (NO3)	NO2)			
			, ,		(Cr) (Cn) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
									Na) (Hardness) (Silic
	VOC (Boein				. , . , . , . , . , . , . , . , . , . ,		. 5, . , . , . , .	, , , , , , , , , , , , , , , , , , , ,	
	Methane Eth	ane Ethene A	cetylene						
	1								
i .	-								
	others								
Duplicate Sai	•								
Duplicate Sar Comments:	•								



Project Nan	ne:	Boeing Rent	on		Project Number	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	arch 2020		Date/Time:	3/10 /2020@	1126		
Sample Nui	mber:	RGW238I-	200310		Weather:	CLOUDY			
Landau Rep	presentative:	BXM/SRB/J	JAN						
WATER LE'	VEL/WELL/PU	JRGE DATA							
Well Conditi	on:	Secure (YES)		Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	4.81	Time:	1049	Flow through ce	ll vol.		GW Meter No.(s
Begin Purge:	Date/Time:	3/10/2020 @	1052	End Purge:	Date/Time:	3/10/2020 @	1113	Gallons Purged:	0.3
Purge water	disposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	
Time	(°F/°C)	(uS/cm) ls: Stablization	(mg/L)	ters for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
1055	5 10.9	321.1	0.64	6.30	3.7		4.82	0	
1058	3 10.2	332.8	0.76	6.30	-5.3		4.82		
1101	9.7	347.7	0.75	6.30	-13.1		4.82		
1104	9.1	371.6	0.93	6.32	-21.0				
1107	9.0	373.7	0.98	6.33	-26.1				
1110	8.9	370.5	0.98	6.34	-29.2				
1112	2 8.8	366.7	1.10	6.35	-30.8				
SAMPLE CO	DLLECTION D								
Sample Colle	ected With:		Bailer		Pump/Pump Type	DED. BLADDER			
Made of:		Stainless Stee	1 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proce	dure:	Alconox Was	h 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	al Order)	Other							
Sample Desc	ription (color,	urbidity, odor,	sheen, etc.):	LIGHT OR A	ANGE, LOW TUI	RB, SLIGHT ODOF	R, NO SHEEN.		
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	8.8	366.2	1.18	6.35	-31.0	()	(==)	(= 1 ==)	
2	8.8	366.0	1.43	6.35	-31.2				
3	8.8	365.2	1.13	6.36	-31.4				
4	8.8	364.7	1.15	6.36	-31.6				
Average:	8.8	365.5	1.22	6.36	-31.3	#DIV/0!			
QUANTITY	TYPICAL A	NALVSIS AL	LOWED PI	ER BOTTLE	TVPE (Circle a	oplicable or write	non-standard a	nalysis helow)	
5		0) (8020) (N			1	pricusic of write		wa 🗆	OR 🗆
	` ' `			`		(8141) (Oil & Gre	ase)	wa 🗆	OR 🗆
	(pH) (Condu	ictivity) (TDS) (TSS) (E	OD) (Turbi	dity) (Alkalinity)	(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
1	(COD) (TO	C) (Total PO4) (Total Kie	dahl Nitroger	n) (NH3) (NO3	/NO2)			
		le) (WAD Cya							
						(Pb) (Mg) (Mn) (1			
			(Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) ((Ag) (Se) (Tl) (V	7) (Zn) (Hg) (K) (Na) (Hardness) (Sil
	VOC (Boein		estulano						
	wietnane Eth	nane Ethene Ac	etylelle						
	others								
Duplicate Sa	mpie No(s):	MSMSD Loca	auon						
Comments:	JAN					Date:	3/10/2020		
Signature:									



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:	'	Quarterly M	Iarch 2020		Date/Time:	3/10 /2020@	1036		
Sample Nun	nber:	RGW239I-	200310		Weather:	CLOUDY			
Landau Rep	•	BXM/SRB/	JAN		·				
WATER LEV	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES)	Damaged (N	(O)	Describe:			
DTW Before		5.52	Time:		Flow through cel			GW Meter No.(· 1
	Date/Time:			End Purge:	•	3/ 10/2020 @	1027	Gallons Purged:	0.25
Purge water d		3/ 10/2020 €	55-gal Drum	Ĕ	Storage Tank	Ground		SITE TREATM	
ruige water e			-		_		_		
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	
1014	10.4	272.5	0.83	6.33	0.1		5.53		
1017	9.4	274.3	1.02	6.31	-9.5		5.53		
1020	8.4	272.4	1.16	6.30	-16.1		5.53		
1023		270.1	1.22	6.30	-19.5				
1026		267.0	1.26	6.30	-22.9		-		
1029	·								
1031							-		
SAMPLE CO	LLECTION D								
Sample Colle	cted With:		Bailer		Pump/Pump Type	DED. BLADDER		_	
Made of:	<u>_</u>	Stainless Ste	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	lure:	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color,	turbidity, odor	, sheen, etc.):	NO COLOR	, LOW TURB, NO	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	7.5	266.4	1.27	6.30	-23.3		-	-	
2	7.5	266.2	1.28	6.30	-23.5				
3	7.5	265.9	1.29	6.30	-23.7				
4	7.5	265.8	1.30	6.30	-24.0		•		
						#DIV/01			
Average:	7.5	266.1	1.29	6.30	-23.6	#DIV/0!	·	·	
_						oplicable or write	non-standard a		
5		0) (8020) (N						WA L	OR 🗆
						(8141) (Oil & Gre		WA D	OR 🗆
1					n) (NH3) (NO3)	(HCO3/CO3) (C	.1) (SO4) (NO	(NO2) (F)	
1		le) (WAD Cy			1, (11113) (1103)	1102)			
		•			(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
									Na) (Hardness) (Silic
	VOC (Boein								
	Methane Eth	nane Ethene A	cetylene						
	others								
Duplicate Sar	nple No(s):								
Comments:	•								
	JAN					Date:	3/10/2020		



Project Nam	ie:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/10 /2020@	1006		
Sample Nun	nber:	RGW240D	200310		Weather:	CLOUDY			
Landau Rep	•	BXM/SRB/	JAN		·				
WATERIEV	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES)	Damaged (N	O)	Describe:			
DTW Before		6.29	Time:	•	Flow through cel			GW Meter No.(s 1
	0 0 ,	3/10/2020 @		End Purge:	•	3/ 10/2020 @	1001	Gallons Purged:	0.25
0 0						Ground		•	
Purge water d	usposed to:		55-gal Drum		Storage Tank	₩ Ground	- Other	SITE TREATM	ENISISIEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	
Time	(°F/°C)	(uS/cm) ls: Stablizatio	(mg/L) on of Parame	ters for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
945	9.7	307.2	0.97	6.44	-13.1		5.89		
948	8.9	304.5	1.07	6.41	-18.3		5.85		
							-		-
951	8.3	300.8	1.15	6.36	-21.2		5.79		
954	7.7	295.7	1.24	6.33	-22.5		5.76		
957	7.2	289.2	1.30	6.32	-23.8		5.73		
1000	6.9	284.0	1.34	6.32	-24.7				
						-			
SAMDLE CO	LLECTION D)ATA							
Sample Collection			Bailer		Pumn/Pumn Tyne	DED. BLADDER			
Made of:	cica wiai.	Stainless Ste		PVC	Teflon	Polyethylene	Other	Dedicated	
	. =		_		—		U Other	Dedicated	
Decon Proced		Alconox Was	sn 📋	Tap Rinse	DI Water	Dedicated			
(By Numerica	*	Other							
Sample Descr	ription (color,	turbidity, odor	sheen, etc.):	GRAY, LOV	V-MED TURB, N	O/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	6.9	282.5	1.34	6.32	-24.9				
2	6.9	282.2	1.39	6.32	-25.0				
									_
3	6.8	281.8	1.37	6.32	-25.0				
4	6.8	281.4	1.37	6.32	-25.1				
Average:	6.9	282.0	1.37	6.32	-25.0	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	R BOTTLE	TYPE (Circle at	oplicable or write	non-standard a	nalysis below)	
5		0) (8020) (N				. •		WA □	OR 🗆
	(8270) (PAI	H) (NWTPH-	D) (NWTPH	I-Dx) (TPH-	HCID) (8081)	(8141) (Oil & Gre	ase)	wa 🗆	OR □
	(pH) (Condu	activity) (TDS	S) (TSS) (B	OD) (Turbio	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							
	(Total Metals) (As) (Sb) (Ba) (Be) (Ca	(Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (1	Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) ((Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (Na) (Hardness) (Silic
	VOC (Boein								
	Methane Eth	nane Ethene A	cetylene						
	others								
	others								
Duplicate Sar	nple No(s):								
Comments:									
Signature:	JAN					Date:	3/10/2020		



Project Nam	ne:	Boeing Ren	ton		Project Number	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/10 /2020@	831		
Sample Nur	nber:	RGW-241S	200310		Weather:	CLOUDY			
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	6.11	Time:	805	Flow through ce	ll vol.		GW Meter No.(s 1
	Date/Time:			End Purge:	_	3/ 10/2020 @	821	Gallons Purged:	0.25
Purge water of	disposed to:		55-gal Drum		Storage Tank	Ground		SITE TREATM	ENT SYSTEM
	T		-		ODD		— DTW	T4	G
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
			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	
811	10.3	279.9	1.27	6.09	3.6		6.12		
814	9.2	273.2	1.15	5.99	2.0		6.12		_
817	8.2	266.1	1.16	5.96	2.7		6.12		
820	7.4	260.7	1.23	5.95	1.6				
823							-		
826									
828	·					-			_
	LLECTION D		D. 11		n n m				
Sample Colle	_	_	Bailer	_		DED. BLADDER	_	— • · · ·	_
Made of:		Stainless Ste		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee		Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	,	Other					•		
Sample Descri	ription (color, t	urbidity, odor	, sheen, etc.):	NO COLOR	, LOW TURB, N	O/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	7.2	259.3	1.33	5.96	2.0				
2	7.2	258.8	1.34	5.95	2.1				
3	7.2	258.6	1.33	5.95	1.4				
4	7.1	258.7	1.34	5.95	1.3				
Average:	7.2	258.9	1.34	5.95	1.7	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LLOWED PI	ER BOTTLE	TYPE (Circle a)	plicable or write	non-standard a	nalysis below)	
5	(<mark>8260</mark>) (8010	0) (8020) (1	NWTPH-G)	(NWTPH-Gx) (BTEX)			wa 🗆	OR 🗆
	, ,	/ \				(8141) (Oil & Gre		wa 🗆	OR 🗆
		•				(HCO3/CO3) (0	Cl) (SO4) (NO	3) (NO2) (F)	
			-		n) (NH3) (NO3.	(NO2)			
		le) (WAD Cy		•	(Cr) (Cu) (Ea)	(Pb) (Mg) (Mn) (Ni) (An) (Sa) (Tl) (V) (7n) (U	g) (K) (Na)
									Na) (Hardness) (Silic
	VOC (Boein		, (= ::, (2 :) (, (==, (=0)	\/ \ \/ \ \ \ -/ \ \ \ \ \ \ \ \ \	· / () (1·11/)	<u> </u>	/ (/ (- * 8/ (** / (, (====================================
	,	ane Ethene A	cetylene						
									-
	others								
Duplicate Sar	nnle No(s):								
Comments:	inpic 140(8).								
Comments.									



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/10 /2020@	856		
Sample Nur	nber:	RGW-242I-	200310		Weather:	CLOUDY			
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	6.23	Time:	818	Flow through cel	l vol.		GW Meter No.(s 1
	Date/Time:			End Purge:	_	3/ 10/2020 @	851	Gallons Purged:	
Purge water of	disposed to:		55-gal Drum		Storage Tank	Ground		SITE TREATM	•
	T		-		ODD		DTW	T4	Gt-l
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
		ls: Stablizatio	n of Parame			dings within the fo	ollowing limits	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
833	9.1	270.5	1.63	5.98	6.4		6.24		
836	8.3	294.0	1.96	5.98	5.3		6.24		
839	7.5	295.6	1.88	5.95	1.6		6.24		
842	6.9	291.6	1.84	5.96	-2.2				
845		288.2	1.72	5.93	-4.3				
848		285.3	1.73	5.93	-6.9				
				-					
850	6.3	282.1	1.94	5.93	-8.6				
-	LLECTION E		Bailer		D /D T	DED DI ADDED			
Sample Colle		Stainless Ste	_	PVC	Pump/Pump Type Teflon	DED. BLADDER	_	Dedicated	
Made of:	_					Polyethylene	Щ Other	Dedicated	
Decon Procee		Alconox Wa	sh 📋	Tap Rinse	DI Water	Dedicated			
(By Numerica	,	Other							
Sample Descri	ription (color,	turbidity, odor	sheen, etc.):	NO COLOR	, LOW TURB, NO	J/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	6.3	281.7	1.88	5.93	-8.7				
2	6.3	281.4	1.87	5.93	-8.9				
3	6.3	281.0	1.86	5.92	-9.3				
4	6.3	280.1	1.88	5.93	-9.4				
						# DB #01	-		-
Average:	6.3	281.1	1.87	5.93	-9.1	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PH	ER BOTTLE	TYPE (Circle a)	pplicable or write	non-standard a	nalysis below)	
5		0) (8020) (N						WA 🗆	OR 🗆
	`		, ,	, ,		(8141) (Oil & Gre	,	WA 🗆	OR 🗆
		•			dity) (Alkalinity) n) (NH3) (NO3/	(HCO3/CO3) (0	.1) (SO4) (NO	(NO2) (F)	
		le) (WAD Cy			1) (NII3) (NU3)	1102)			
		•			(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
									Na) (Hardness) (Silic
	VOC (Boein	g short list)							
	Methane Eth	nane Ethene A	cetylene						
	- 41								
	others								
Duplicate Sar	mple No(s):								
Comments:									
Signature	IAN			·		Date:	3/10/2020		



Project Nam	ie:	Boeing Ren	ton		Project Number	r <u>:</u>	0025217.099.0)99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/10 /2020@	1536		
Sample Nun	nber:	RGW-243I-	200310		Weather:	CLOUDY			
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	IO)	Describe:			
DTW Before	Purging (ft)	5.22	Time:	1511	Flow through ce	ll vol.		GW Meter No.(s 1
Begin Purge:	Date/Time:	3/ 10/2020 @	1512	End Purge:	Date/Time:	3/10/2020 @	1528	Gallons Purged:	0.2
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: Stablizatio +/- 3%	on of Parame +/- 10%	+/- 0.1 units		dings within the fo +/- 10%	< 0.3 ft	>/= 1 flow through cell	
1515	12.8	333.9	0.55	6.33	-4.0		5.23		
	· 						5.23		
1518	12.3	325.3	0.79	6.32	-11.3				
1521	12.0	316.5	0.97	6.30	-16.1		5.23		
1524	11.8	309.4	0.98	6.29	-17.9				
1527	11.5	303.9	0.99	6.28	-19.1				
1530									
1532									
SAMPLE CO	LLECTION D	OATA							
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	ıl Order)	Other		•	ب				
Sample Descr	ription (color,	_	, sheen, etc.):	NO COLOR	, LOW TURB, N	O/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	11.4	303.1	0.99	6.28	-19.2				
2	11.4	302.6	1.00	6.28	-19.3				
3	11.4	302.2	1.01	6.28	-19.4				
4	11.4	301.8	1.00	6.28	-19.4				
Average:	11.4	302.4	1.00	6.28	-19.3	#DIV/0!			
	TYPICAL A	NAT TOTAL	I OWED DE	ID DOMEST D	TAXABLE (CIT. 1				
QUANTITY						pplicable or write	non-standard a	wa \Box	ОВП
5		0) (8020) (NWTPH-				(8141) (Oil & Gre	ace)	WA □	OR \square
						(HCO3/CO3) (OR —
1	* '	*/			n) (NH3) (NO3.		/ (*** / (***		
	(Total Cyanid	le) (WAD Cy	anide) (Free	Cyanide)					
	(Total Metals) (As) (Sb) (Ba) (Be) (Ca	a) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
	(Dissolved M	etals) (As) (St	b) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	7) (Zn) (Hg) (K) (Na) (Hardness) (Sili
	VOC (Boein								
	Methane Eth	nane Ethene A	cetylene						
	others								
	others								
Duplicate Sar	nple No(s):								
Comments:									
Signature	IAN					Date:	·		



Project Nam	ie:	Boeing Ren	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	larch 2020		Date/Time:	3/11 /2020@	1206		
Sample Nun	nber:	RGW-244S	200311		Weather:	CLOUDY			
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	5.18	Time:	1137	Flow through cel	l vol.		GW Meter No.(s 1
	Date/Time:			End Purge:	_	3/11 /2020 @	1200	Gallons Purged:	
Purge water d	lisposed to:		55-gal Drum		Storage Tank	Ground		SITE TREATM	
-	T		-		ODD		DTW	T4	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
		ls: Stablizatio	n of Parame			dings within the fo	ollowing limits	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1142	12.7	315.4	0.90	6.26	15.1		5.24		
1145	12.3	320.1	0.89	6.23	11.1		5.26		
1148	11.9	321.5	1.09	6.22	7.2		5.27		
1151	11.5	321.4	1.20	6.22	4.5		5.27		
1154	11.1	320.5	1.25	6.22	1.5		5.27		
1157	10.9	319.4	1.39	6.22	-1.6				
	·						-		
1159	10.9	319.4	1.47	6.23	-2.8		-		
GALLEDY F. GO	LI ECTION D								
Sample College	LLECTION D		Bailer		Dryman /Dryman Tryma	DED. BLADDER			
Made of:	_	Stainless Stee	_	PVC	Teflon	Polyethylene	_	Dedicated	
	_	Alconox Was		Tap Rinse	DI Water	_	LI Other	Dedicated	
Decon Proced		_	sn 📋	rap Kinse	DI Water	Dedicated			
(By Numerica	*	Other	•	NO COLOR	LOW/FILDS M	2 2 4			
Sample Desci	ription (color, t	urbiaity, odor	sneen, etc.):	NO COLOR	, LOW TURB, N	J/N5.			
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	10.9	319.4	1.44	6.23	-3.1				
2	11.0	319.5	1.42	6.23	-3.3				
3	11.0	319.5	1.40	6.23	-3.5				
4	11.0	319.5	1.40	6.23	-3.7				
						# DB #01			
Average:	11.0	319.5	1.42	6.23	-3.4	#DIV/0!	-		
QUANTITY					` `	plicable or write	non-standard a	nalysis below)	
5	` ' `	0) (8020) (N		,				WA 🗆	OR 🗆
-	, ,	, ,	, ,			(8141) (Oil & Gre		WA D	OR □
1					dity) (Alkalinity) n) (NH3) (NO3)	(HCO3/CO3) (0 NO2)	.1) (SO4) (NO	(NO2) (F)	
1		e) (WAD Cy			i) (11113) (11U3)	1104)			
		•		•	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
									Na) (Hardness) (Silic
	VOC (Boein	g short list)					-		
	Methane Eth	ane Ethene A	cetylene						
	- 41								
	others								
Duplicate Sar	nple No(s):								
Comments:									
						Date:	3/11/2020		



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	arch 2020		Date/Time:	3/12/2020@	901		
Sample Nun	nber:	RGW193S-	200312		Weather:	CLOUDY			
Landau Rep	•	BXM/SRB/	JAN		•				
WATER LEV	/EL/WELL/PI	IRGE DATA							
Well Condition		Secure (YES)	Damaged (N	(O)	Describe:			
DTW Before		4.55	Time:		Flow through ce			GW Meter No.(· 1
		3/12/2020 @			_	3/ 12/2020 @	952	Gallons Purged:	0.25
0 0				Ē		Ground		•	
Purge water d	iisposed to:		55-gal Drum		Storage Tank	₩ Ground	- Other	SITE TREATM	IENI SISIEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	
Time	(°F/°C)	(uS/cm)	(mg/L) n of Parame	ters for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
835	9.6	825.0	2.61	6.15	34.9		4.58		
838		855.0	2.23	6.16	31.3		4.57		
841	8.6	878.0	3.11	6.18	26.2		4.57		
844	8.4	891.0	2.83	6.20	20.8		4.57		
847	8.2	899.0	2.75	6.23	15.6				
850	8.1	903.0	2.58	6.24	12.3				
852		905.0	2.56	6.25	9.4				
632	0.1	703.0	2.30	0.23	7.4				
CAMPLE CO	LI ECTION E								
	LLECTION E		Bailer		Dayner /Dayner True	DED BLADDER			
Sample Colle	ctea with:			PVC		DED. BLADDER		D. B. dinas d	
Made of:		Stainless Stee			Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lure: $igsqcup$	Alconox Was	sh 📙	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color,	turbidity, odor,	sheen, etc.):	NO COLOR	, LOW TURB, SI	LIGHT ODOR, NO	SHEEN.		
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	8.1	906.0	2.63	6.25	9.0		_		-
2	8.1	906.0	2.54	6.25	8.6				
3	8.1	907.0	2.52	6.25	8.2				
4	8.1	906.0	2.57	6.26	7.8				
						#D#1/01		·	-
Average:	8.1	906.3	2.57	6.25	8.4	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PI	ER BOTTLE	TYPE (Circle a)	oplicable or write	non-standard a	nalysis below)	
5	(<mark>8260</mark>) (801	0) (8020) (N	WTPH-G)	(NWTPH-Gx)	(BTEX)			WA 🗆	OR 🗆
	`					(8141) (Oil & Gi		WA 🗆	OR 🗆
						(HCO3/CO3) (C	(SO4) (NO	(NO2) (F)	
1					n) (NH3) (NO3)	/NO2)			
		le) (WAD Cy		•	(Cr) (Cn) (Ea)	(Pb) (Mg) (Mn) (I	Ni) (An) (Cn) (Tl) (V) (7) (U	(a) (K) (No)
									Na) (Hardness) (Silio
	VOC (Boein) (Da) (De) (C	.u) (Cu) (C0)	(C1) (Cu) (1°C) (F	0) (1418) (1411) (141) ((11) (V) (Zii) (11g) (K) (ina) (Hardiicss) (Silli
		nane Ethene A	cetylene						
	others								
Duplicate Sar	nple No(s):								
Comments:									
Signature:	JAN					Date:	3/12/2020		



Project Nan	ne:	Boeing Rent	on		Project Number	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	arch 2020		Date/Time:	3/12 /2020@ 9	950		
Sample Nur	nber:	RGW188S-	200312		Weather:	OVERCAST, R	AIN, COLD		
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES))	Damaged (N	(O)	Describe:	FLUSH		
DTW Before	Purging (ft)	3.95	Time:	919	Flow through ce	ll vol.		GW Meter No.(SLOPE-8
Begin Purge:	Date/Time:	3/ 12/2020	@ 921	End Purge:	Date/Time:	3/12 /2020 @ 94	14	Gallons Purged:	<1
Purge water of	disposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
			n of Parame			dings within the fo	llowing limits	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
924	10.4	387.9	1.01	5.95	14.1		3.97		
927	9.5	386.1	3.50	5.99	-0.2		3.97		
930	9.2	383.5	4.47	6.02	-6.7		3.97		
933	8.9	379.7	5.25	6.07	-14.1	_		_	
936		377.1	5.66	6.09	-20.2			. ———	
939		375.3	5.85	6.11	-25.4				
									-
942	8.2	373.3	5.91	6.14	-30.4				
CAMDIE CC	DLLECTION D								
Sample Colle			Bailer		Pump/Pump Type	DEDICATED BL	ADDER		
Made of:	_	Stainless Stee	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	=	Alconox Was	_	Tap Rinse	DI Water	Dedicated	outer	Dedicated	
(By Numerica		Other	" <u>"</u>	rap Kilise	□ Di Water	Dedicated			
, ,	,		sheen etc.):	CLEAD CO	I ODESS NO OI	OOR, NO SHEEN, I	I ICHT EINES E		MDI E
Sample Desc	ription (color,	urbiany, odor,	sneen, etc.).	CLLAR, CO	LOKESS, NO OI	OK, NO SHEEN, I	LIGITI TINES I	LOATINGINGE	IVII LL
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	8.1	372.7	5.91	6.14	-31.0				
2	8.1	372.6	5.90	6.14	-31.5				
3	8.1	372.3	5.90	6.15	-32.1				
4	8.1	372.2	5.87	6.15	-32.6				
Average:	8.1	372.5	5.90	6.15	-31.8	#DIV/0!			
			I OWED DI	ED DOTTEL E			4 1 1		
QUANTITY 3	Ī	NALYSIS AL 0) (8020) (N				oplicable or write i	non-standard a	WA WA	OR 🗆
3						(8141) (Oil & Gr	rease)	wa 🗆	OR 🗆
			, ,	, ,		(HCO3/CO3) (C			
1		•			n) (NH3) (NO3				
	(Total Cyanid	le) (WAD Cy	anide) (Free	Cyanide)					
						(Pb) (Mg) (Mn) (1			
			(Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) ((Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (Na) (Hardness) (Si
	VOC (Boein	· ·							
	ivietnane Eth	nane Ethene Ac	etyiene						
	others								
<u></u>	•								
Duplicate Sar	mple No(s):								
Comments:									
Signature	RYM					ъ.	3 12 2020		



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:	'	Quarterly M	Iarch 2020		Date/Time:	3/ 12/2020@	936		
Sample Nun	nber:	RGW247S-	200312		Weather:	SLIGHT RAIN			
Landau Rep	•	BXM/SRB/	JAN		·				
WATER LEV	/EL/WELL/PI	IRGE DATA							
Well Condition		Secure (YES)	Damaged (N	(O)	Describe:			
DTW Before		4.13	Time:		Flow through cel			GW Meter No.('s 1
	Date/Time:			End Purge:	•	3/ 12/2020 @	024	Gallons Purged:	0.25
0 0		3/ 12/2020 @		Ĕ		Ground			
Purge water d	nsposed to:		55-gal Drum		Storage Tank	⊕ Ground	Other	SITE TREATM	IENI SYSIEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	
Time	(°F/°C)	(uS/cm)	(mg/L) on of Parame	ters for three	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
911	10.2	339.1	1.27	6.46	16.7		4.17		
								· 	
914		330.6	1.51	6.36	19.0		4.17	· 	
917	7.9	321.3	1.83	6.31	21.0		4.17	· 	
920	7.5	316.7	1.76	6.29	21.7				
923	7.2	313.4	1.75	6.29	21.3				
926									
928	·								
720									
CAMPLE CO	A LECTION P								
	LLECTION E		Bailer		Dayner /Dayner Tamo	DED DI ADDED			
Sample Colle	ctea with:			PVC		DED. BLADDER		D. diam.	
Made of:		Stainless Ste	_		Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lure: $igsqcup$	Alconox Wa	sh 📙	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color,	turbidity, odor	, sheen, etc.):	NO COLOR	, LOW TURB, N	D/NS, SLIGHT PA	RTICLES.		
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
1	(°F/°C)	(uS/cm)	(mg/L)	•	(mV)	(NTU)	(ft)	(Fe II)	Observations
1	7.2	313.1	1.74	6.28	21.2				
2	7.2	312.9	1.72	6.28	21.2				
3	7.2	312.8	1.72	6.28	21.2				
4	7.2	312.7	1.74	6.28	21.1			· 	
Average:	7.2	312.9	1.73	6.28	21.2	#DIV/0!		·	
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	ER BOTTLE	TYPE (Circle at	oplicable or write	non-standard a	nalysis below)	
3	(8260) (801	0) (8020) (N	WTPH-G) ((NWTPH-Gx)) (BTEX)	•		WA □	OR 🗆
	(8270D) (PA	AH) (NWTPI	H-D) (NWTI	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & Gr	rease)	wa 🗆	OR □
	(pH) (Condu	activity) (TD:	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) (P	b) (Mg) (Mn) (Ni) ((Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (Na) (Hardness) (Silio
	VOC (Boein		. 1						
	Methane Eth	nane Ethene A	cetylene						
	others								
	outers								
Duplicate Sar	nple No(s):								
Comments:									
Signature:	JAN					Date:	3/12/2020		



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	arch 2020		Date/Time:	3/12/2020@	1001		
Sample Nun	nber:	RGW248I-			Weather:	SLIGHT RAIN			
Landau Rep	•	BXM/SRB/	JAN		·				
WATER LEV	/EL/WELL/PI	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	3.94	Time:		Flow through cel		-	GW Meter No.(rs 1
	0 0 , ,	3/ 12/2020 @		End Purge:	_	3/ 12/2020 @	955	Gallons Purged:	0.2:
Purge water d			55-gal Drum	Ē	Storage Tank	Ground		SITE TREATM	
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	PII	(mV)	(NTU)	(ft)	Volume (gal)	Observations
	U					dings within the fo		>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
938	10.7	413.5	1.15	6.34	27.4		3.96		
941	9.8	411.8	1.38	6.34	24.2		3.96		
944	8.8	403.8	1.48	6.33	21.3		3.96	·	
947	8.0	394.7	2.12	6.33	19.1				
950	7.6	386.3	1.67	6.33	16.3				
953	7.4	382.7	1.76	6.33	13.7				
955		380.7	1.79	6.33	12.2	-			-
933	7.4	360.7	1./9	0.55	12.2				-
SAMDLE CO	LLECTION D	<u></u>					·		
Sample Colle			Bailer		Pumn/Pumn Tyne	DED. BLADDER			
Made of:	cica with.	Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced		Alconox Was		Tap Rinse	DI Water	Dedicated	outer	Dedicated	
(By Numerica		Other	··· 🏻	rap Kilise	□ Di watei	Dedicated			
, ,	,	_	ahaan ata h	NO COL OD	LOW TUDD M	D/NIC			
Sample Descr	ripuon (color,	turbiaity, odor,	sneen, etc.):	NO COLOR	, LOW TURB, N	J/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	7.4	380.5	1.77	6.33	12.0				
2	7.3	380.4	1.78	6.33	11.8				
3	7.4	380.2	1.80	6.33	11.6				
4	7.4	380.1	1.77	6.33	11.4				
Average:	7.4	380.3	1.78	6.33	11.7	#DIV/0!			
	TYDICAL A	NIAT WOTC AT	I OWED DI	ED DOTTE	TX/DE (C21	!:!-			-
3		0) (8020) (N				pplicable or write	non-standard a	WA	OR 🗆
3	, ,	, , , , ,		`		(8141) (Oil & G	rease)	wa 🗆	OR 🗆
			, ,	/ \		(HCO3/CO3) (C			
1					n) (NH3) (NO3				
	(Total Cyanid	le) (WAD Cy	anide) (Free	Cyanide)					
	(Total Metals) (As) (Sb) (Ba) (Be) (Ca	(Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (1	Ni) (Ag) (Se) (Tl) (V) (Zn) (H	(g) (K) (Na)
) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) ((Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (Na) (Hardness) (Sili
	VOC (Boein		. 1						
	Methane Eth	nane Ethene Ac	etylene						
	others								
ı									
Duplicate Sar	nple No(s):								
Comments:									
Signature:	JAN					Date:	3/12/2020		



Project Nam	ne:	Boeing Rent	on		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:	-	Quarterly M	arch 2020		Date/Time:	3/ 12 /2020@ 9	05		
Sample Nun	nber:	RGW249S-	200312		Weather:	PARTLY CLOU	DY, COLD		
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES))	Damaged (N	(O)	Describe:	FLUSH		
DTW Before	Purging (ft)	3.89	Time:	839	Flow through cel	l vol.		GW Meter No.(s SLOPE-8
Begin Purge:	Date/Time:	3/ 12/2020	@ 840	End Purge:	Date/Time:	3/ 12 /2020 @ 90)3	Gallons Purged:	<1
Purge water of	disposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
	0					dings within the fo	U	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
843	9.5	348.3	0.54	6.20	-1.5		3.89		
846	8.6	320.4	1.83	6.20	-25.0		3.89		
849	8.0	305.9	3.50	6.16	-31.2		3.89		
852	7.8	297.5	4.18	6.14	-35.0	_		_	
855	7.7	293.1	4.41	6.13	-36.5				
858		290.0	4.53	6.13	-37.9				
030	7.7	290.0	4.33	0.13	-51.9				
	LLECTION D		Bailer		D /D T	DEDICATED DI	ADDED		
Sample Colle						DEDICATED BLA		. Dadicated	
Made of:	=	Stainless Stee	_		Teflon	Polyethylene	Other	Dedicated	
Decon Proced		Alconox Was	h 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	,	Other							
Sample Desci	ription (color,	urbidity, odor,	sheen, etc.):	CLEAR, CO	LORLESS, NO C	DOR, NO SHEEN			
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	7.7	288.5	4.57	6.13	-38.3				
2	7.6	288.9	4.58	6.13	-38.5				
3	7.6	288.9	4.59	6.13	-38.6				
4	7.6	288.6	4.59	6.13	-38.9				
			4.58	6.13		#DIV/0!			
Average:	7.6	288.7	4.38	0.13	-38.6	#DIV/U:			
QUANTITY						oplicable or write i	non-standard a		
3		0) (8020) (N				(01.11) (011.0.0		WA L	OR 🗆
			, ,	, ,		(8141) (Oil & Gr		WA []	OR \square
1		•			aity) (Alkalinity) 1) (NH3) (NO3)	(HCO3/CO3) (C /NO2)	1) (3U4) (NU	(1102) (F)	
•		le) (WAD Cy			, (10) (1103)	/			
		•			(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (N	Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
						b) (Mg) (Mn) (Ni) (
	VOC (Boein	g short list)							
	Methane Eth	nane Ethene Ac	etylene						
	oth o								
	others								
Duplicate Sar	nple No(s):								
Comments:	•								
							3 12 2020		



Project Nam	e:	Boeing Ren	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/ 9 /2020@	1500		
Sample Num	nber:	RGW174S-	200309		Weather:	SUNNY, COOL	,		
andau Repi	resentative:	BXM/SRB/	JAN						
VATER LEV	EL/WELL/PU	RGE DATA							
Vell Condition	on:	Secure (YES)	Damaged (N	O)	Describe:	FLUSH		
TW Before	Purging (ft)	3.76	Time:	1430	Flow through ce	l vol.		GW Meter No.(s	SLOPE-8
Begin Purge:	Date/Time:	3/ 9 /2020 0	@ 1434	End Purge:	Date/Time:	3/ 9 /2020 @	1457	Gallons Purged:	<1
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
		_ `		ters for three	. ,	dings within the fo	. ,	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1437	12.1	149.3	0.19	6.85	-134.3		3.87		
1440	11.7	144.6	0.20	6.85	-139.2		3.85		
1443	11.4	138.6	0.19	6.85	-134.8		3.87		
1446	11.3	136.4	0.18	6.85	-132.8		3.85		
							5.05		
1449	11.2	135.3	0.19	6.85	-130.8				
	·								
AMPLE CO	LLECTION D	ATA							
		į	Bailer		Pump/Pump Type	DEDICATED BL	ADDER		
ample Collec		į		PVC	Pump/Pump Type	DEDICATED BL Polyethylene	ADDER Other	Dedicated	
Sample Collect Made of: Decon Proced	cted With:		el 🔲		_			Dedicated	
Sample Collect Made of:	cted With:	Stainless Stee	el 🔲	PVC	Teflon	Polyethylene		Dedicated	
Sample Collect Made of: Decon Proced By Numerica	cted With:	Stainless Stee Alconox Was	el 🔲	PVC Tap Rinse	Teflon DI Water	Polyethylene	Other	Dedicated	
ample Collect Made of: Decon Proced By Numerica	cted With:	Stainless Stee Alconox Was Other urbidity, odor	sh	PVC Tap Rinse	Teflon DI Water LORLESS, NO S	Polyethylene Dedicated	Other	Dedicated	
ample Collect Made of: Decon Proced By Numerica	cted With:	Stainless Stee Alconox Was	el 🔲	PVC Tap Rinse	Teflon DI Water	Polyethylene Dedicated	Other	Dedicated Ferrous iron (Fe II)	Comments/ Observations
ample Collect Made of: Decon Proced By Numerica ample Descr	cted With:	Stainless Stee Alconox Was Other urbidity, odors	sh D.O.	PVC Tap Rinse CLEAR, CO	Teflon DI Water LORLESS, NO S ORP	Polyethylene Dedicated HEEN, NO ODOR Turbidity	Other DTW	Ferrous iron	
Sample Collect Made of: Decon Proced By Numerica sample Descr	ted With: dure: d Order) iption (color, to the color) Temp (°F/°C)	Stainless Stee Alconox Was Other urbidity, odors Cond. (uS/cm)	sh	PVC Tap Rinse CLEAR, CO pH	Teflon DI Water LORLESS, NO S ORP (mV)	Polyethylene Dedicated HEEN, NO ODOR Turbidity	Other DTW	Ferrous iron	
ample Collect Made of: Decon Proced By Numerica ample Descr Replicate 1 2	ted With: dure: d Order) iption (color, to the color) Temp (°F/°C) 11.2 11.2	Stainless Stee Alconox Was Other urbidity, odors Cond. (uS/cm) 135.1 135.0	D.O. (mg/L) 0.18	PVC Tap Rinse CLEAR, CO pH 6.85 6.85	Teflon DI Water LORLESS, NO S ORP (mV) -129.1 -129.2	Polyethylene Dedicated HEEN, NO ODOR Turbidity	Other DTW	Ferrous iron	
ample Collect Made of: Decon Proced By Numerica sample Descr Replicate 1 2 3	teted With: lure: il Order) iption (color, t Temp (°F/°C) 11.2 11.2	Stainless Stee Alconox Was Other urbidity, odor, Cond. (uS/cm) 135.1 135.0 134.9	D.O. (mg/L) 0.18 0.17	PVC Tap Rinse CLEAR, CO pH 6.85 6.85	Teflon DI Water LORLESS, NO S ORP (mV) -129.1 -129.2 -128.4	Polyethylene Dedicated HEEN, NO ODOR Turbidity	Other DTW	Ferrous iron	
ample Collect Ande of: Decon Proced By Numerica ample Descr Replicate 1 2	ted With:	Stainless Stee Alconox Was Other urbidity, odors Cond. (uS/cm) 135.1 135.0 134.9 134.7	D.O. (mg/L) 0.17 0.17	PVC Tap Rinse CLEAR, CO pH 6.85 6.85 6.85	Teflon DI Water LORLESS, NO S ORP (mV) -129.1 -129.2 -128.4 -128.4	Polyethylene Dedicated HEEN, NO ODOR Turbidity (NTU)	Other DTW	Ferrous iron	
ample Collect Made of: Decon Proced By Numerica ample Descr Replicate 1 2 3	teted With: lure: il Order) iption (color, t Temp (°F/°C) 11.2 11.2	Stainless Stee Alconox Was Other urbidity, odor, Cond. (uS/cm) 135.1 135.0 134.9	D.O. (mg/L) 0.18 0.17	PVC Tap Rinse CLEAR, CO pH 6.85 6.85	Teflon DI Water LORLESS, NO S ORP (mV) -129.1 -129.2 -128.4	Polyethylene Dedicated HEEN, NO ODOR Turbidity	Other DTW	Ferrous iron	
ample Collect Made of: Decon Proced By Numerica ample Descr Replicate 1 2 3 4 Average:	ted With:	Stainless Stee Alconox Was Other urbidity, odors Cond. (uS/cm) 135.1 135.0 134.9 134.7	D.O. (mg/L) 0.17 0.17	PVC Tap Rinse CLEAR, CO pH 6.85 6.85 6.85 6.85	Teflon DI Water LORLESS, NO S ORP (mV) -129.1 -129.2 -128.4 -128.4 -128.8	Polyethylene Dedicated HEEN, NO ODOR Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	
ample Collect Made of: Decon Proced By Numerica ample Descr Replicate 1 2 3 4 Average:	ted With:	Stainless Stee Alconox Was Other urbidity, odors Cond. (uS/cm) 135.1 135.0 134.9 134.7	D.O. (mg/L) 0.17 0.17 0.17 LLOWED PE	PVC Tap Rinse CLEAR, CO pH 6.85 6.85 6.85 6.85 6.85 CR BOTTLE	Teflon DI Water LORLESS, NO S ORP (mV) -129.1 -129.2 -128.4 -128.4 TYPE (Circle a)	Polyethylene Dedicated HEEN, NO ODOR Turbidity (NTU) #DIV/0!	DTW (ft)	Ferrous iron (Fe II)	
ample Collect Made of: Decon Proced By Numerica ample Descr Replicate 1 2 3 4 Average:	ted With: clure: clure: clure: clure: clure: clure:	Stainless Ster Alconox Was Alconox Was Other surbidity, odor, (uS/cm) 135.1 135.0 134.9 134.7 134.9 NALYSIS AI () (8021) (N	D.O. (mg/L) 0.18 0.17 0.17 0.17 1.10WED PE	PVC Tap Rinse CLEAR, CO pH 6.85 6.85 6.85 6.85 CR BOTTLE NWTPH-GX	Teflon DI Water LORLESS, NO S ORP (mV) -129.1 -129.2 -128.4 -128.4 -128.8 TYPE (Circle a) (BTEX)	Polyethylene Dedicated HEEN, NO ODOR Turbidity (NTU) #DIV/0!	DTW (ft)	Ferrous iron (Fe II)	Observations
ample Collect Made of: Decon Proced By Numerica ample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.2 11.2 11.2 11.2 11.2 (8260) (8010) (8270) (PAH (pH) (Condu	Stainless Stee Alconox Was Alconox Was Other urbidity, odor, Cond. (uS/cm) 135.1 135.0 134.9 134.7 134.9 NALYSIS AI 0) (8021) (NI I) (NWTPH- ctivity) (TDS	D.O. (mg/L) 0.18 0.17 0.17 0.17 0.17 LLOWED PERWTPH-G) (D) (NWTPH-GS) (BS) (BS) (BS)	PVC Tap Rinse CLEAR, CO pH 6.85 6.85 6.85 6.85 6.85 CR BOTTLE NWTPH-GX I-Dx) (TPH-OD) (Turbic	Teflon DI Water LORLESS, NO S ORP (mV) -129.1 -129.2 -128.4 -128.8 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity)	Polyethylene Dedicated HEEN, NO ODOR Turbidity (NTU) #DIV/0! pplicable or write: (8141) (Oil & Gre (HCO3/CO3) (C	DTW (ft)	Ferrous iron (Fe II) malysis below) WA WA WA	Observations OR
ample Collect Made of: Decon Proced By Numerica ample Descr Replicate 1 2 3 4 Average:	ted With: Control Color	Stainless Stee Alconox Was Dother urbidity, odors Cond. (uS/cm) 135.1 135.0 134.9 134.7 134.9 NALYSIS AI D) (8021) (N D) (NWTPH- ctivity) (TDS	D.O. (mg/L) 0.18 0.17 0.17 0.17 0.17 LLOWED PE WTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kie	PVC Tap Rinse CLEAR, CO pH 6.85 6.85 6.85 6.85 CR BOTTLE NWTPH-Gx, I-Dx) (TPH-OD) (Turbid alal Nitroger	Teflon DI Water LORLESS, NO S ORP (mV) -129.1 -129.2 -128.4 -128.8 TYPE (Circle a) (BTEX) HCID) (8081)	Polyethylene Dedicated HEEN, NO ODOR Turbidity (NTU) #DIV/0! pplicable or write: (8141) (Oil & Gre (HCO3/CO3) (C	DTW (ft)	Ferrous iron (Fe II) malysis below) WA WA WA	Observations OR
ample Collect Ande of: Decon Proced By Numerica ample Descr Replicate 1 2 3 4 Average:	ted With: Corder Color, tell Order	Stainless Stee Alconox Was Alconox Was Other urbidity, odors Cond. (uS/cm) 135.1 135.0 134.9 134.7 134.9 NALYSIS AI 0) (8021) (N I) (NWTPH- ctivity) (TDS C) (Total PO- e) (WAD Cy	D.O. (mg/L) 0.18 0.17 0.17 0.17 0.17 LLOWED PE WTPH-G) (D) (NWTPH-G) (D) (NWTPH-G) (D) (Total Kie anide) (Free	PVC Tap Rinse CLEAR, CO pH 6.85 6.85 6.85 6.85 6.85 CR BOTTLE NWTPH-GX I-DX) (TPH-OD) (Turbidahl Nitroger Cyanide)	Teflon DI Water LORLESS, NO S ORP (mV) -129.1 -129.2 -128.4 -128.4 -128.8 TYPE (Circle approximately (BTEX) HCID) (8081) dity) (Alkalinity) (i) (NH3) (NO3.	Polyethylene Dedicated HEEN, NO ODOR Turbidity (NTU) #DIV/0! pplicable or write: (8141) (Oil & Gre (HCO3/CO3) (C	DTW (ft) non-standard at ase) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA NO2) (F)	Observations OR OR OR
ample Collect Ande of: Decon Proced By Numerica ample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.2 11.2 11.2 11.2 11.2 (8260) (8010 (8270) (PAF (pH) (Condu (COD) (Total Cyanid (Total Metals	Stainless Stee Alconox Was Alconox Was Other urbidity, odor, Cond. (uS/cm) 135.1 135.0 134.9 134.7 134.9 NALYSIS AI () (8021) (N I) (NWTPH- ctivity) (TDS C) (Total PO- e) (WAD Cy s) (As) (Sb)	D.O. (mg/L) 0.18 0.17 0.17 0.17 0.17 CLOWED PERWTPH-G) (D) (NWTPH-G) (NWTPH-G) (D) (NWTPH-G) (D) (TSS) (B) (TSS) (B) (TSS) (B) (TSS) (B) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C	PVC Tap Rinse CLEAR, CO pH 6.85 6.85 6.85 6.85 CR BOTTLE NWTPH-GX 1-DX) (TPH-OD) (Turbidahl Nitroger Cyanide) (a) (Cd) (Co	Teflon DI Water LORLESS, NO S ORP (mV) -129.1 -129.2 -128.4 -128.8 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) dity) (Alkalinity) (NH3) (NO3)	Polyethylene Dedicated HEEN, NO ODOR Turbidity (NTU) #DIV/0! pplicable or write: (8141) (Oil & Green (HCO3/CO3) (Control (NCO2)) (Pb) (Mg) (Mn)	DTW (ft) non-standard at ase) (Ni) (Ag) (Se)	Ferrous iron (Fe II) malysis below) WA WA WA Solution (TI) (V) (Zn) (F)	Observations OR OR OR OR OR OR OR OR OR OR
ample Collect Ande of: Decon Proced By Numerica ample Descr Replicate 1 2 3 4 Average: DUANTITY	ted With: lure: l Order) iption (color, tolor) Temp (°F/°C) 11.2 11.2 11.2 11.2 11.2 11.2 (8260) (8010 (8270) (PAF (pH) (Conduction (COD) (TOG) (Total Cyanid (Total Metals) (Dissolved Metals)	Stainless Stee Alconox Was Alconox Was Other urbidity, odor, Cond. (uS/cm) 135.1 135.0 134.9 134.7 134.9 NALYSIS AI () (NWTPH- ctivity) (TDS C) (Total PO- e) (WAD Cy s) (As) (Sb) etals) (As) (Sb)	D.O. (mg/L) 0.18 0.17 0.17 0.17 0.17 CLOWED PERWTPH-G) (D) (NWTPH-G) (NWTPH-G) (D) (NWTPH-G) (D) (TSS) (B) (TSS) (B) (TSS) (B) (TSS) (B) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C	PVC Tap Rinse CLEAR, CO pH 6.85 6.85 6.85 6.85 CR BOTTLE NWTPH-GX 1-DX) (TPH-OD) (Turbidahl Nitroger Cyanide) (a) (Cd) (Co	Teflon DI Water LORLESS, NO S ORP (mV) -129.1 -129.2 -128.4 -128.8 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) dity) (Alkalinity) (NH3) (NO3)	Polyethylene Dedicated HEEN, NO ODOR Turbidity (NTU) #DIV/0! pplicable or write: (8141) (Oil & Gre (HCO3/CO3) (C	DTW (ft) non-standard at ase) (Ni) (Ag) (Se)	Ferrous iron (Fe II) malysis below) WA WA WA Solution (NO2) (F) (TI) (V) (Zn) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Sample Collect Made of: Decon Proced By Numerica Sample Descr Replicate 1 2 3 4 Average: DUANTITY	ted With: lure: lare: lare: lorder) iption (color, tolor) Temp (°F/°C) 11.2 11.2 11.2 11.2 11.2 11.2 11.2 (8260) (8010 (8270) (PAH (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals (Dissolved Metals VOC (Boein	Stainless Stee Alconox Was Alconox Was Cother urbidity, odor, 135.1 135.0 134.9 134.7 134.9 NALYSIS AI () (8021) (N () (NWTPH- ctivity) (TDS () (Total PO- e) (WAD Cy s) (As) (Sb) etals) (As) (Sb g short list)	D.O. (mg/L) 0.18 0.17 0.17 0.17 0.17 CLOWED PE WTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kie ranide) (Free (Ba) (Be) (Co) (Ba) (Be) (Co) (Co) (Ba) (Be) (Co) (Co) (Co) (Co) (Co) (Co) (Co) (Co	PVC Tap Rinse CLEAR, CO pH 6.85 6.85 6.85 6.85 CR BOTTLE NWTPH-GX 1-DX) (TPH-OD) (Turbidahl Nitroger Cyanide) (a) (Cd) (Co	Teflon DI Water LORLESS, NO S ORP (mV) -129.1 -129.2 -128.4 -128.8 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) dity) (Alkalinity) (NH3) (NO3)	Polyethylene Dedicated HEEN, NO ODOR Turbidity (NTU) #DIV/0! pplicable or write: (8141) (Oil & Green (HCO3/CO3) (Control (NCO2)) (Pb) (Mg) (Mn)	DTW (ft) non-standard at ase) (Ni) (Ag) (Se)	Ferrous iron (Fe II) malysis below) WA WA WA Solution (NO2) (F) (TI) (V) (Zn) (F)	Observations OR OR OR OR OR OR OR OR OR OR
ample Collect Made of: Decon Proced By Numerica ample Descr Replicate 1 2 3 4 Average: DUANTITY	ted With: lure: lare: lare: lorder) iption (color, tolor) Temp (°F/°C) 11.2 11.2 11.2 11.2 11.2 11.2 11.2 (8260) (8010 (8270) (PAH (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals (Dissolved Metals VOC (Boein	Stainless Stee Alconox Was Alconox Was Other urbidity, odor, Cond. (uS/cm) 135.1 135.0 134.9 134.7 134.9 NALYSIS AI () (NWTPH- ctivity) (TDS C) (Total PO- e) (WAD Cy s) (As) (Sb) etals) (As) (Sb)	D.O. (mg/L) 0.18 0.17 0.17 0.17 0.17 CLOWED PE WTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kie ranide) (Free (Ba) (Be) (Co) (Ba) (Be) (Co) (Co) (Ba) (Be) (Co) (Co) (Co) (Co) (Co) (Co) (Co) (Co	PVC Tap Rinse CLEAR, CO pH 6.85 6.85 6.85 6.85 CR BOTTLE NWTPH-GX 1-DX) (TPH-OD) (Turbidahl Nitroger Cyanide) (a) (Cd) (Co	Teflon DI Water LORLESS, NO S ORP (mV) -129.1 -129.2 -128.4 -128.8 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) dity) (Alkalinity) (NH3) (NO3)	Polyethylene Dedicated HEEN, NO ODOR Turbidity (NTU) #DIV/0! pplicable or write: (8141) (Oil & Green (HCO3/CO3) (Control (NCO2)) (Pb) (Mg) (Mn)	DTW (ft) non-standard at ase) (Ni) (Ag) (Se)	Ferrous iron (Fe II) malysis below) WA WA WA Solution (NO2) (F) (TI) (V) (Zn) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Sample Collect Made of: Decon Proced By Numerica Sample Descr Replicate 1 2 3 4 Average: DUANTITY	ted With: lure: lare: lare: lorder) iption (color, tolor) Temp (°F/°C) 11.2 11.2 11.2 11.2 11.2 11.2 11.2 (8260) (8010 (8270) (PAH (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals (Dissolved Metals VOC (Boein	Stainless Stee Alconox Was Alconox Was Cother urbidity, odor, 135.1 135.0 134.9 134.7 134.9 NALYSIS AI () (8021) (N () (NWTPH- ctivity) (TDS () (Total PO- e) (WAD Cy s) (As) (Sb) etals) (As) (Sb g short list)	D.O. (mg/L) 0.18 0.17 0.17 0.17 0.17 CLOWED PE WTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kie ranide) (Free (Ba) (Be) (Co) (Ba) (Be) (Co) (Co) (Ba) (Be) (Co) (Co) (Co) (Co) (Co) (Co) (Co) (Co	PVC Tap Rinse CLEAR, CO pH 6.85 6.85 6.85 6.85 CR BOTTLE NWTPH-GX 1-DX) (TPH-OD) (Turbidahl Nitroger Cyanide) (a) (Cd) (Co	Teflon DI Water LORLESS, NO S ORP (mV) -129.1 -129.2 -128.4 -128.8 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) dity) (Alkalinity) (NH3) (NO3)	Polyethylene Dedicated HEEN, NO ODOR Turbidity (NTU) #DIV/0! pplicable or write: (8141) (Oil & Green (HCO3/CO3) (Control (NCO2)) (Pb) (Mg) (Mn)	DTW (ft) non-standard at ase) (Ni) (Ag) (Se)	Ferrous iron (Fe II) malysis below) WA WA WA Solution (NO2) (F) (TI) (V) (Zn) (F)	Observations OR OR OR OR OR OR OR OR OR OR
Sample Collect Made of: Decon Proced By Numerica Sample Descr Replicate 1 2 3 4 Average: DUANTITY	ted With: lure: l Order) iption (color, tolor) Temp (°F/°C) 11.2 11.2 11.2 11.2 11.2 11.2 11.2 (8260) (8010 (8270) (PAF (pH) (Conduction (COD) (Total Cyanidation (Cod) (Total Metalication (Cod) (Dissolved Methane Ethermore)	Stainless Stee Alconox Was Alconox Was Cother urbidity, odor, 135.1 135.0 134.9 134.7 134.9 NALYSIS AI () (8021) (N () (NWTPH- ctivity) (TDS () (Total PO- e) (WAD Cy s) (As) (Sb) etals) (As) (Sb g short list)	D.O. (mg/L) 0.18 0.17 0.17 0.17 0.17 CLOWED PE WTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kie ranide) (Free (Ba) (Be) (Co) (Ba) (Be) (Co) (Co) (Ba) (Be) (Co) (Co) (Co) (Co) (Co) (Co) (Co) (Co	PVC Tap Rinse CLEAR, CO pH 6.85 6.85 6.85 6.85 CR BOTTLE NWTPH-GX 1-DX) (TPH-OD) (Turbidahl Nitroger Cyanide) (a) (Cd) (Co	Teflon DI Water LORLESS, NO S ORP (mV) -129.1 -129.2 -128.4 -128.8 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) dity) (Alkalinity) (NH3) (NO3)	Polyethylene Dedicated HEEN, NO ODOR Turbidity (NTU) #DIV/0! pplicable or write: (8141) (Oil & Green (HCO3/CO3) (Control (NCO2)) (Pb) (Mg) (Mn)	DTW (ft) non-standard at ase) (Ni) (Ag) (Se)	Ferrous iron (Fe II) malysis below) WA WA WA Solution (NO2) (F) (TI) (V) (Zn) (F)	Observations OR OR OR OR OR OR OR OR OR OR
ample Collect Ande of: Decon Proced By Numerica ample Descr Replicate 1 2 3 4 Average:	ted With: lure: lure: l Order) iption (color, tolor) Temp (°F/°C) 11.2 11.2 11.2 11.2 11.2 TYPICAL A (8260) (8010 (8270) (PAH (pH) (Condu (COD) (TOC (Total Cyanid (Total Metals (Dissolved Metals VOC (Boein	Stainless Stee Alconox Was Alconox Was Cother urbidity, odor, 135.1 135.0 134.9 134.7 134.9 NALYSIS AI () (8021) (N () (NWTPH- ctivity) (TDS () (Total PO- e) (WAD Cy s) (As) (Sb) etals) (As) (Sb g short list)	D.O. (mg/L) 0.18 0.17 0.17 0.17 0.17 CLOWED PE WTPH-G) (D) (NWTPH S) (TSS) (B 4) (Total Kie ranide) (Free (Ba) (Be) (Co) (Ba) (Be) (Co) (Co) (Ba) (Be) (Co) (Co) (Co) (Co) (Co) (Co) (Co) (Co	PVC Tap Rinse CLEAR, CO pH 6.85 6.85 6.85 6.85 CR BOTTLE NWTPH-GX 1-DX) (TPH-OD) (Turbidahl Nitroger Cyanide) (a) (Cd) (Co	Teflon DI Water LORLESS, NO S ORP (mV) -129.1 -129.2 -128.4 -128.8 TYPE (Circle a) (BTEX) HCID) (8081) dity) (Alkalinity) dity) (Alkalinity) (NH3) (NO3)	Polyethylene Dedicated HEEN, NO ODOR Turbidity (NTU) #DIV/0! pplicable or write: (8141) (Oil & Green (HCO3/CO3) (Control (NCO2)) (Pb) (Mg) (Mn)	DTW (ft) non-standard at ase) (Ni) (Ag) (Se)	Ferrous iron (Fe II) malysis below) WA WA WA Solution (NO2) (F) (TI) (V) (Zn) (F)	Observations OR OR OR OR OR OR OR OR OR OR



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/9/2020@	1451		
Sample Nun	nber:	RGW250S-	200309		Weather:	SUNNY			
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	3.48	Time:	1425	Flow through cel	l vol.		GW Meter No.(s 1
	Date/Time:			End Purge:	_	3/9 /2020 @	1448	Gallons Purged:	0.25
Purge water of	lisposed to:		55-gal Drum		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%	+/- 10%	+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
1430	10.8	99.2	2.41	6.76	4.4		3.63		
1433	9.8	103.7	2.32	6.72	-2.3		3.61		
1436	9.0	104.1	2.32	6.68	-8.1		3.60		
1439	8.7	103.0	2.05	6.67	-15.3		3.59		
1442	8.6	101.8	1.70	6.67	-20.5		3.59		
1445	8.5	100.9	1.57	6.60	-21.3		3.59		
1447		100.6	1.46	6.52	-19.0				
1447		100.0	1.40	0.32	-17.0				
SAMDI E CC	LLECTION D	<u></u>							
Sample Colle			Bailer		Pumn/Pumn Tyne	DED. BLADDER			
Made of:	_	Stainless Ste	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	_	Alconox Wa	-	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other			□ Di Water	Dedicated			
` -	ription (color, t	_							
Sumple Beser	ription (color, t	aroidity, odor	, sheen, etc.).						
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	8.5	100.5	1.46	6.51	-18.9				
2	8.5	100.5	1.46	6.50	-18.9				
3	8.5	100.5	1.45	6.50	-19.1				
4	8.5	100.4	1.44	6.50	-19.4				
Average:	8.5	100.5	1.45	6.50	-19.1	#DIV/0!	-		
	1								
QUANTITY						oplicable or write	non-standard a		on 🗆
		0) (8021) (NWTPH-				(8141) (Oil & Gre	ace)	WA □	OR \square
	, ,	/ \				(HCO3/CO3) (C			<u> </u>
		•			n) (NH3) (NO3)				
		le) (WAD Cy							
1	(Total Metals) (As) (Sb) (Ba) (Be) (Ca	ı) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
	(Dissolved M	etals) (As) (St) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (Na) (Hardness) (Silic
	VOC (Boein								
	Methane Eth	nane Ethene A	cetylene						
	others								
	J. 1101.0								
Duplicate Sar	mple No(s):								
Comments:									
Signature:	IAN					Date	3/9/2020		



Project Nar	ne:	Boeing Rent	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	arch 2020		Date/Time:	3/ 10 /2020@	805		
Sample Nu	mber:	RGWDUP4	200310		Weather:	INDOORS			
Landau Rep	oresentative:	BXM/SRB/.	JAN						
WATER LE	VEL/WELL/PU	JRGE DATA							
Well Conditi	on:	Secure (YES))	Damaged (N	(O)	Describe:	FLUSH		
DTW Before	Purging (ft)	5.07	Time:		Flow through ce	ll vol.	•	GW Meter No.(s SLOPE-8
	: Date/Time:		918	End Purge:	_	3/ 10 /2020 @ 94	41	Gallons Purged:	
Purge water			55-gal Drum	Ĕ	Storage Tank	Ground		SITE TREATM	
Turge water	•		-		-		_		
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
Time		. ,	, 0 ,	ters for three		dings within the fo	. ,	>/= 1 flow	Obscivations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
	-, -	DUF	PLICA	ATE T	O RGV	W014S			
	_		-						
								-	
	_								
SAMPLE CO	DLLECTION D	DATA							
Sample Colle	ected With:		Bailer		Pump/Pump Type	DEDICATED BL	ADDER		
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proce	dure:	Alconox Was	h 🗖	Tap Rinse	DI Water	Dedicated			
(By Numeric	al Order)	Other		1	4				
` -	*		sheen etc.):	CLEAR CO	LORLESS SOM	E MATERIAL FLA	OTING SULF	ER OR ROTTEN	EGG SMELL, NO S
Sumpre Desc	ripuon (coror,		<u></u>	CLL: III, CO	zorazzo, zoni		1011110,50211	SK OKKOTIEK	DOO BIVIEDE, 110 B
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	15.9	377.0	3.05	6.34	-27.5				
2	15.9	377.8	3.07	6.34	-27.2				
3	16.0	379.3	3.07	6.35	-26.9				
4	16.0	380.5	3.04	6.35	-27.3				
Average:	16.0	378.7	3.06	6.35	-27.2	#DIV/0!			
	1						-		
QUANTITY						pplicable or write	non-standard a		op [
3		0) (8020) (N				(0141) (011.0.0		WA L	OR 🗆
	· · · · ·					(8141) (Oil & G (HCO3/CO3) (O		WA []	OR 🗆
1					n) (NH3) (NO3		J) (304) (NO	(NO2) (F)	
1		le) (WAD Cy			1, (11113) (1103)	1102)			
		•			(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Ni) (Ag) (Se) (Tl) (V) (Zn) (H	(g) (K) (Na)
									(Na) (Hardness) (Silio
	VOC (Boein								
		nane Ethene Ac	cetylene						
				· <u> </u>					
									_
	others								
Duplicate Sa	mnla Na(a):	Duplicate to l	CW014C						
_	mpie ivo(s):	Duplicate to I	XUW0145						
Comments:	BXM						0.44 =		
Signature:						Date:	3/10/2020		



Event:	ne <u>:</u>	Boeing Rent	on		Project Numbe	<u>r:</u>	0025217.099.0	99	
		Quarterly M	arch 2020		Date/Time:	3/ 10 /2020@ 1	125		
Sample Nun	nber:	RGW009S-	200310		Weather:	INSIDE AN OF	FICE		
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	VEL/WELL/PU	IRGE DATA							
Well Condition	on:	Secure (YES)	1	Damaged (N	O)	Describe:	FLUSH		
DTW Before	Purging (ft)	5.22	Time:	1057	Flow through cel	l vol.		GW Meter No.(s SLOPE-8
Begin Purge:	Date/Time:	3/ 10 /2020	@ 1059	End Purge:	Date/Time:	3/10 /2020 @112	22	Gallons Purged:	<1
Purge water d	disposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	
Time	(°F/°C)	(uS/cm)	(mg/L)	tore for throa	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1102		380.9	0.2	6.40	-61.9	., _,,,	5.21	g	
1105		379.5	0.45	6.40	-69.1		5.21		
1108		378.4	0.89	6.39	-72.1		5.21		
1111		377.5	1.40	6.39	-73.4				
1114		376.8	1.86	6.40	-73.8				
1117	19.5	376.4	2.12	6.40	-73.6				
1120	19.5	376.0	2.37	6.40	-73.9				
SAMPLE CO	LLECTION D	ATA							
Sample Collec	cted With:		Bailer		Pump/Pump Type	DEDICATED BLA	ADDER		
Made of:		Stainless Stee	ı 📮	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	dure:	Alconox Was	h 🗖	Tap Rinse	DI Water	Dedicated			
(By Numerica	al Order)	Other							
Sample Desci	ription (color, t		sheen, etc.):	CLEAR, CO	LORLESS, NO C	DOR, NO SHEEN	Ī		
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	19.5	375.8	2.38	6.4	-73.9	` ,	. ,	` ,	
2	19.5	375.9	2.40	6.4	-74.0				
3	19.5	375.8	2.46	6.4	-74.2				
4	19.5	275.0							
-	17.0	375.8	2.46	6.4	-74.2				
Average:	19.5	375.8	2.46	6.4	-74.2 -74.1	#DIV/0!			
Average:	19.5	375.8	2.43	6.4	-74.1	#DIV/0!		nalysis below)	
Average:	19.5	375.8	2.43	6.4 ER BOTTLE	-74.1			nalysis below)	OR 🗆
Average:	19.5 TYPICAL A (8260) (8010	375.8 NALYSIS AL 0) (8020) (N	2.43 LOWED PH WTPH-G)	6.4 ER BOTTLE (NWTPH-Gx)	-74.1 TYPE (Circle a) (BTEX)	#DIV/0!	non-standard a		OR OR
Average:	19.5 TYPICAL A (8260) (8010 (8270D) (PA	375.8 NALYSIS AL 0) (8020) (N AH) (NWTPH	2.43 LOWED PH WTPH-G) (1-D) (NWTH	6.4 ER BOTTLE NWTPH-Gx) PH-Dx) (TPH	-74.1 TYPE (Circle ap) (BTEX) H-HCID) (8081)	#DIV/0!	non-standard a	WA □ WA □	
Average:	19.5 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu	375.8 NALYSIS AL O) (8020) (N AH) (NWTPH lectivity) (TDS C) (Total PO4	2.43 LOWED PF WTPH-G) (-D) (NWTF) (TSS) (E)) (Total Kie	6.4 CR BOTTLE NWTPH-Gx) PH-Dx) (TPH-OD) (Turbic dahl Nitroger	-74.1 TYPE (Circle ap) (BTEX) H-HCID) (8081)	#DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C	non-standard a	WA □ WA □	
Average: QUANTITY 3	19.5 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Too (Total Cyanid	375.8 NALYSIS AL O) (8020) (N AH) (NWTPH activity) (TDS C) (Total PO4 e) (WAD Cya	2.43 LOWED PP WTPH-G) (NWTH) (TSS) (E) (Total Kie unide) (Free	6.4 ER BOTTLE [NWTPH-Gx, PH-Dx) (TPH-OD) (Turbic dahl Nitroger Cyanide)	-74.1 TYPE (Circle ap) (BTEX) H-HCID) (8081) dity) (Alkalinity) a) (NH3) (NO3.	#DIV/0! pplicable or write in (8141) (Oil & Grant (HCO3/CO3) (CV) (NO2)	rease)	WA	OR
Average: QUANTITY 3	19.5 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOd (Total Cyanid (Total Metals)	375.8 NALYSIS AL 1) (8020) (N 1) (NWTPH 1ctivity) (TDS 2) (Total PO4 1) (WAD Cya 2) (As) (Sb) (I	2.43 LOWED PP WTPH-G) (-D) (NWTH) (TSS) (B) (Total Kie anide) (Free Ba) (Be) (Ca	6.4 CR BOTTLE NWTPH-GX, PH-Dx) (TPH-OD) (Turbic dahl Nitroger Cyanide) a) (Cd) (Co)	-74.1 TYPE (Circle ap) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3. (Cr) (Cu) (Fe)	#DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C/NO2) (Pb) (Mg) (Mn) (No. (No. (No. (No. (No. (No. (No. (No.	rease) Pl) (SO4) (NO	WA □ WA □ 3) (NO2) (F) T1) (V) (Zn) (H	OR □
Average: QUANTITY 3	19.5 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Too (Total Cyanid (Total Metals) (Dissolved Metals)	375.8 NALYSIS AL (MAH) (NWTPH (Inctivity) (TDS (IT) (TOTAL PO4 (IT) (WAD Cya (IT) (AS) (Sb) (It (IT)	2.43 LOWED PP WTPH-G) (-D) (NWTH) (TSS) (B) (Total Kie anide) (Free Ba) (Be) (Ca	6.4 CR BOTTLE NWTPH-GX, PH-Dx) (TPH-OD) (Turbic dahl Nitroger Cyanide) a) (Cd) (Co)	-74.1 TYPE (Circle ap) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3. (Cr) (Cu) (Fe)	#DIV/0! pplicable or write in (8141) (Oil & Grant (HCO3/CO3) (CV) (NO2)	rease) Pl) (SO4) (NO	WA □ WA □ 3) (NO2) (F) T1) (V) (Zn) (H	OR □
Average: QUANTITY 3	19.5 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOC (Total Cyanid (Total Metals) (Dissolved Metals)	375.8 NALYSIS AL 1) (8020) (N 1) (NWTPH 1) (Total PO4 2) (As) (Sb) (I 2) (tals) (As) (Sb) 2) g short list)	2.43 LOWED PP WTPH-G) (NWTF) (TSS) (E) (Total Kie anide) (Free Ba) (Be) (Ca) (Ba) (Be) (C	6.4 CR BOTTLE NWTPH-GX, PH-Dx) (TPH-OD) (Turbic dahl Nitroger Cyanide) a) (Cd) (Co)	-74.1 TYPE (Circle ap) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3. (Cr) (Cu) (Fe)	#DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C/NO2) (Pb) (Mg) (Mn) (No. (No. (No. (No. (No. (No. (No. (No.	rease) Pl) (SO4) (NO	WA □ WA □ 3) (NO2) (F) T1) (V) (Zn) (H	OR □
Average: QUANTITY 3	19.5 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOC (Total Cyanid (Total Metals) (Dissolved Metals)	375.8 NALYSIS AL (MAH) (NWTPH (Inctivity) (TDS (IT) (TOTAL PO4 (IT) (WAD Cya (IT) (AS) (Sb) (It (IT)	2.43 LOWED PP WTPH-G) (NWTF) (TSS) (E) (Total Kie anide) (Free Ba) (Be) (Ca) (Ba) (Be) (C	6.4 CR BOTTLE NWTPH-GX, PH-Dx) (TPH-OD) (Turbic dahl Nitroger Cyanide) a) (Cd) (Co)	-74.1 TYPE (Circle ap) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3. (Cr) (Cu) (Fe)	#DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C/NO2) (Pb) (Mg) (Mn) (No. (No. (No. (No. (No. (No. (No. (No.	rease) Pl) (SO4) (NO	WA □ WA □ 3) (NO2) (F) T1) (V) (Zn) (H	OR □
Average: QUANTITY 3	19.5 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOC (Total Cyanid (Total Metals) (Dissolved Metals)	375.8 NALYSIS AL 1) (8020) (N 1) (NWTPH 1) (Total PO4 2) (As) (Sb) (I 2) (tals) (As) (Sb) 2) g short list)	2.43 LOWED PP WTPH-G) (NWTF) (TSS) (E) (Total Kie anide) (Free Ba) (Be) (Ca) (Ba) (Be) (C	6.4 CR BOTTLE NWTPH-GX, PH-Dx) (TPH-OD) (Turbic dahl Nitroger Cyanide) a) (Cd) (Co)	-74.1 TYPE (Circle ap) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3. (Cr) (Cu) (Fe)	#DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C/NO2) (Pb) (Mg) (Mn) (No. (No. (No. (No. (No. (No. (No. (No.	rease) Pl) (SO4) (NO	WA □ WA □ 3) (NO2) (F) T1) (V) (Zn) (H	OR □
Average: QUANTITY 3	19.5 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOC (Total Cyanid (Total Metals) (Dissolved Metals)	375.8 NALYSIS AL 1) (8020) (N 1) (NWTPH 1) (Total PO4 2) (As) (Sb) (I 2) (tals) (As) (Sb) 2) g short list)	2.43 LOWED PP WTPH-G) (NWTF) (TSS) (E) (Total Kie anide) (Free Ba) (Be) (Ca) (Ba) (Be) (C	6.4 CR BOTTLE NWTPH-GX, PH-Dx) (TPH-OD) (Turbic dahl Nitroger Cyanide) a) (Cd) (Co)	-74.1 TYPE (Circle ap) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3. (Cr) (Cu) (Fe)	#DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C/NO2) (Pb) (Mg) (Mn) (No. (No. (No. (No. (No. (No. (No. (No.	rease) Pl) (SO4) (NO	WA □ WA □ 3) (NO2) (F) T1) (V) (Zn) (H	OR □
Average: QUANTITY 3	19.5 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M- VOC (Boein Methane Eth	375.8 NALYSIS AL 1) (8020) (N 1) (NWTPH 1) (Total PO4 2) (As) (Sb) (I 2) (tals) (As) (Sb) 2) g short list)	2.43 LOWED PP WTPH-G) (NWTF) (TSS) (E) (Total Kie anide) (Free Ba) (Be) (Ca) (Ba) (Be) (C	6.4 CR BOTTLE NWTPH-GX, PH-Dx) (TPH-OD) (Turbic dahl Nitroger Cyanide) a) (Cd) (Co)	-74.1 TYPE (Circle ap) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3. (Cr) (Cu) (Fe)	#DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C/NO2) (Pb) (Mg) (Mn) (No. (No. (No. (No. (No. (No. (No. (No.	rease) Pl) (SO4) (NO	WA □ WA □ 3) (NO2) (F) T1) (V) (Zn) (H	OR □
Average: QUANTITY 3	19.5 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M- VOC (Boein Methane Eth	375.8 NALYSIS AL 1) (8020) (N 1) (NWTPH 1) (Total PO4 2) (As) (Sb) (I 2) (tals) (As) (Sb) 2) g short list)	2.43 LOWED PP WTPH-G) (NWTF) (TSS) (E) (Total Kie anide) (Free Ba) (Be) (Ca) (Ba) (Be) (C	6.4 CR BOTTLE NWTPH-GX, PH-Dx) (TPH-OD) (Turbic dahl Nitroger Cyanide) a) (Cd) (Co)	-74.1 TYPE (Circle ap) (BTEX) H-HCID) (8081) dity) (Alkalinity) n) (NH3) (NO3. (Cr) (Cu) (Fe)	#DIV/0! pplicable or write r (8141) (Oil & Gr (HCO3/CO3) (C/NO2) (Pb) (Mg) (Mn) (No. (No. (No. (No. (No. (No. (No. (No.	rease) Pl) (SO4) (NO	WA □ WA □ 3) (NO2) (F) T1) (V) (Zn) (H	OR □



Project Nan	ne:	Boeing Ren	ton		Project Number	er:	0025217.099.0)99	
Event:		Quarterly M	larch 2020		Date/Time:	3/10 /2020@	NA		
Sample Nur	nber:	RGW010S-	2003		Weather:	INSIDE			
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LE	VEL/WELL/PU	JRGE DATA							
Well Conditi	on:	Secure (YES)	Damaged (N	(O)	Describe:	FLUSH		
DTW Before	Purging (ft)	5.37	Time:	1040	Flow through ce	ell vol.		GW Meter No.(s SLOPE-8
	Date/Time:			End Purge:	_	3/ /2020 @	NA	Gallons Purged:	
Purge water	disposed to:		55-gal Drum	_	Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
	•	C 1	-						
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
	U	ls: Stablizatio	n of Parame			dings within the fo	0	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
	_						·-		
				-					
	\mathbf{W}_{A}	ATER	LEV	EL O	NLY				
						-			
						-		-	
	_ (-	-		
						-			
						-			
SAMPLE CO	DLLECTION D	OATA							
Sample Colle	ected With:		Bailer		Pump/Pump Type	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,		sheen, etc.):						
•			-						
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						-			
2							-		
3									
4									
	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	-		
Average:	#DIV/0:	#D1V/U:	#DIV/0:	#DIV/0:	#DIV/0:	#DIV/0:			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PI	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
	1	0) (8020) (N						WA □	OR 🗆
	† ` · · · · ·		, ,	, ,		(8141) (Oil & G		WA 🗆	OR 🗆
	* * *	***			dity) (Alkalinity n) (NH3) (NO3	(HCO3/CO3) (C	.1) (SO4) (NO	(NO2) (F)	
		le) (WAD Cy	/ \		u) (NOS) (NOS	//1 10 2)			
	1	•			(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
									Na) (Hardness) (Silie
	VOC (Boeir		, , , (-, (-	, , , , , , , , , , , ,	. , , , , , , , , , , , , , , , , , , ,		. 5, . , . , .	, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,
		nane Ethene A	cetylene	· 					
							<u> </u>	<u> </u>	
	others								
Duplicate C-	mnla Ma(a):								
Duplicate Sar	mpie Mo(8):								
Comments:									
Signature:	BXM					Date:	3/10/2020		



Project Nan	ne:	Boeing Ren	ton		Project Number	er:	0025217.099.0	199	_
Event:		Quarterly M	Iarch 2020		Date/Time:	3/ /2020@	NA		
Sample Nur	mber:	RGW011D	2003		Weather:	INSIDE			
Landau Rep	resentative:	BXM/SRB/	'JAN						
WATER LE	VEL/WELL/PI	URGE DATA							
Well Conditi		Secure (YES)	Damaged (N	IO)	Describe:	FLUSH		
		5.34			Flow through ce		TEODII	GW Motor No. (c CLODE 9
DTW Before			Time:		_	3/ /2020 @	NI A	GW Meter No.(Gallons Purged:	
	Date/Time:	3/ /2020 @		End Purge:			NA		-
Purge water	disposed to:		55-gal Drum	ب	Storage Tank	☐ Ground	U Other	SITE TREATM	ENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	
Time	(°F/°C) Purge Goa	(uS/cm)	(mg/L) on of Parame	ters for three	(mV) e consecutive res	(NTU) adings within the fo	(ft) ollowing limits	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%		+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
	_								
	\mathbf{W}_{λ}	ATER	LEV	EL O	NLY				
						· 			
	_								
							-		
						-			
SAMPLE CO	DLLECTION I	DATA							
Sample Colle			Bailer	П	Pump/Pump Typ	e			
Made of:		Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proce	dure:	Alconox Was	_	Tap Rinse	DI Water	Dedicated			
(By Numerical		Other	·· •	rup Kinse	□ Di Water	E Dedicated			
		_	alaan ata h						
Sample Desc	ription (color,	turbiaity, odor	, sheen, etc.).						
Replicate	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Ferrous iron	Comments/
_	(°F/°C)	(uS/cm)	(mg/L)		(T 7)				Observations
1					(mV)	(NTU)	(ft)	(Fe II)	Observations
2					(mv)	(NTU)	(ft)	(Fe II)	Observations
3					(mv)	(NTU)	(ft)	(Fe II)	Observations
.7					(mv)	(NTU)	(ft)	(Fe II)	Observations
					(mv)	(NTU)	(ft)	(Fe II)	Observations
4					(mv)	(NTU)	(ft)	(Fe II)	Observations
	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	(NTU) #DIV/0!	(ft)	(Fe II)	Observations
4 Average:	1				#DIV/0!				Observations
4 Average:	TYPICAL A		LLOWED PE	ER BOTTLE	#DIV/0!	#DIV/0!			OR
4 Average:	(8260) (801	ANALYSIS AI 0) (8020) (N	LLOWED PE	ER BOTTLE	#DIV/0! TYPE (Circle a) (BTEX)	#DIV/0!	non-standard a	nalysis below)	
4 Average:	(8260) (801 (8270D) (PA	NALYSIS AI 0) (8020) (N AH) (NWTPI	LLOWED PENWTPH-G) (H-D) (NWTF	ER BOTTLE NWTPH-Gx PH-Dx) (TPI	#DIV/0! TYPE (Circle a) (BTEX) H-HCID) (8081)	#DIV/0!	non-standard a	nalysis below) WA □ WA □	OR 🗆
4 Average:	(8260) (801 (8270D) (PA (PH) (Conduction) (COD) (TO	NALYSIS AI 0) (8020) (N AH) (NWTPH uctivity) (TDS C) (Total PO-	LLOWED PENWTPH-G) (H-D) (NWTF) (B) (TSS) (B) (Total Kie	ER BOTTLE NWTPH-Gx PH-Dx) (TPl OD) (Turbi dahl Nitroger	#DIV/0! TYPE (Circle a) (BTEX) H-HCID) (8081)	#DIV/0! pplicable or write) (8141) (Oil & G) (HCO3/CO3) (6	non-standard a	nalysis below) WA □ WA □	OR 🗆
4 Average:	(8260) (801 (8270D) (P. (pH) (Condu (COD) (TO	NALYSIS AI 0) (8020) (N AH) (NWTPH uctivity) (TDS C) (Total PO- de) (WAD Cy	LLOWED PENWTPH-G) (H-D) (NWTFS) (TSS) (B4) (Total Kieranide) (Free	ER BOTTLE NWTPH-Gx PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide)	#DIV/0! TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity n) (NH3) (NO3	#DIV/0! **pplicable or write (8141) (Oil & G (HCO3/CO3) (G (MO2)	non-standard a rease) Cl) (SO4) (NO	nalysis below) WA WA WA O S) (NO2) (F)	OR OR
4 Average:	(8260) (801 (8270D) (PA (pH) (Condu (COD) (TO (Total Cyanic (Total Metals	NALYSIS AI 0) (8020) (N AH) (NWTPH uctivity) (TDS C) (Total PO- de) (WAD Cy s) (As) (Sb) (LLOWED PENWTPH-G) (H-D) (NWTFS) (TSS) (B4) (Total Kieranide) (Free Ba) (Be) (Ca	ER BOTTLE NWTPH-Gx PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	#DIV/0! TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity n) (NH3) (NO3)	#DIV/0! **pplicable or write (8141) (Oil & G (HCO3/CO3) (G 3/NO2) (Pb) (Mg) (Mn) (non-standard a rease) Cl) (SO4) (NO	malysis below) WA WA WA (S) (NO2) (F) T1) (V) (Zn) (H	OR OR OR OR
4 Average:	(TYPICAL A (8260) (801 (8270D) (PA (pH) (Condu (COD) (TO (Total Cyanic (Total Metals (Dissolved M	NALYSIS AI 0) (8020) (N AH) (NWTPH uctivity) (TDS C) (Total PO- de) (WAD Cy s) (As) (Sb) (Interval (School (Sc	LLOWED PENWTPH-G) (H-D) (NWTFS) (TSS) (B4) (Total Kieranide) (Free Ba) (Be) (Ca	ER BOTTLE NWTPH-Gx PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	#DIV/0! TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity n) (NH3) (NO3)	#DIV/0! **pplicable or write (8141) (Oil & G (HCO3/CO3) (G 3/NO2) (Pb) (Mg) (Mn) (non-standard a rease) Cl) (SO4) (NO	malysis below) WA WA WA (S) (NO2) (F) T1) (V) (Zn) (H	OR OR
4 Average:	(R260) (801) (8270D) (PA) (COD) (TOdal Cyanica (Total Metals) (Dissolved M. VOC (Boein	NALYSIS AI 0) (8020) (N AH) (NWTPF uctivity) (TDS C) (Total PO- de) (WAD Cy s) (As) (Sb) (detals) (As) (Sc) ng short list)	LLOWED PENWTPH-G) (H-D) (NWTFS) (TSS) (B4) (Total Kieranide) (Free Ba) (Be) (Caronic Ba) (Ca	ER BOTTLE NWTPH-Gx PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	#DIV/0! TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity n) (NH3) (NO3)	#DIV/0! **pplicable or write (8141) (Oil & G (HCO3/CO3) (G 3/NO2) (Pb) (Mg) (Mn) (non-standard a rease) Cl) (SO4) (NO	malysis below) WA WA WA (S) (NO2) (F) T1) (V) (Zn) (H	OR OR OR OR
4 Average:	(R260) (801) (8270D) (PA) (COD) (TOdal Cyanica (Total Metals) (Dissolved M. VOC (Boein	NALYSIS AI 0) (8020) (N AH) (NWTPH uctivity) (TDS C) (Total PO- de) (WAD Cy s) (As) (Sb) (Interval (School (Sc	LLOWED PENWTPH-G) (H-D) (NWTFS) (TSS) (B4) (Total Kieranide) (Free Ba) (Be) (Caronic Ba) (Ca	ER BOTTLE NWTPH-Gx PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	#DIV/0! TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity n) (NH3) (NO3)	#DIV/0! **pplicable or write (8141) (Oil & G (HCO3/CO3) (G 3/NO2) (Pb) (Mg) (Mn) (non-standard a rease) Cl) (SO4) (NO	malysis below) WA WA WA (S) (NO2) (F) T1) (V) (Zn) (H	OR OR OR OR
4 Average:	(R260) (801) (8270D) (PA) (COD) (TOdal Cyanica (Total Metals) (Dissolved M. VOC (Boein	NALYSIS AI 0) (8020) (N AH) (NWTPF uctivity) (TDS C) (Total PO- de) (WAD Cy s) (As) (Sb) (detals) (As) (Sc) ng short list)	LLOWED PENWTPH-G) (H-D) (NWTFS) (TSS) (B4) (Total Kieranide) (Free Ba) (Be) (Caronic Ba) (Ca	ER BOTTLE NWTPH-Gx PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	#DIV/0! TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity n) (NH3) (NO3)	#DIV/0! **pplicable or write (8141) (Oil & G (HCO3/CO3) (G 3/NO2) (Pb) (Mg) (Mn) (non-standard a rease) Cl) (SO4) (NO	malysis below) WA WA WA (S) (NO2) (F) T1) (V) (Zn) (H	OR OR OR OR
4 Average:	(TYPICAL A (8260) (801 (8270D) (PA (pH) (Condu (COD) (TO (Total Cyanic (Total Metals (Dissolved M VOC (Boeir Methane Eth	NALYSIS AI 0) (8020) (N AH) (NWTPF uctivity) (TDS C) (Total PO- de) (WAD Cy s) (As) (Sb) (detals) (As) (Sc) ng short list)	LLOWED PENWTPH-G) (H-D) (NWTFS) (TSS) (B4) (Total Kieranide) (Free Ba) (Be) (Caronic Ba) (Ca	ER BOTTLE NWTPH-Gx PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	#DIV/0! TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity n) (NH3) (NO3)	#DIV/0! **pplicable or write (8141) (Oil & G (HCO3/CO3) (G 3/NO2) (Pb) (Mg) (Mn) (non-standard a rease) Cl) (SO4) (NO	malysis below) WA WA WA (S) (NO2) (F) T1) (V) (Zn) (H	OR OR OR OR
4 Average:	(R260) (801) (8270D) (PAC) (PAC) (PAC) (PAC) (PAC) (Total Cyanic (Total Metals (Dissolved M. VOC (Boein	NALYSIS AI 0) (8020) (N AH) (NWTPF uctivity) (TDS C) (Total PO- de) (WAD Cy s) (As) (Sb) (detals) (As) (Sc) ng short list)	LLOWED PENWTPH-G) (H-D) (NWTFS) (TSS) (B4) (Total Kieranide) (Free Ba) (Be) (Caronic Ba) (Ca	ER BOTTLE NWTPH-Gx PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	#DIV/0! TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity n) (NH3) (NO3)	#DIV/0! **pplicable or write (8141) (Oil & G (HCO3/CO3) (G 3/NO2) (Pb) (Mg) (Mn) (non-standard a rease) Cl) (SO4) (NO	malysis below) WA WA WA (S) (NO2) (F) T1) (V) (Zn) (H	OR OR OR OR
4 Average:	(TYPICAL A (8260) (801 (8270D) (PA (pH) (Conduction (COD) (TOC) (Total Cyanic (Total Metals) (Dissolved M VOC (Boein Methane Ether)	NALYSIS AI 0) (8020) (N AH) (NWTPF uctivity) (TDS C) (Total PO- de) (WAD Cy s) (As) (Sb) (detals) (As) (Sc) ng short list)	LLOWED PENWTPH-G) (H-D) (NWTFS) (TSS) (B4) (Total Kieranide) (Free Ba) (Be) (Caronic Ba) (Ca	ER BOTTLE NWTPH-Gx PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	#DIV/0! TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity n) (NH3) (NO3)	#DIV/0! **pplicable or write (8141) (Oil & G (HCO3/CO3) (G 3/NO2) (Pb) (Mg) (Mn) (non-standard a rease) Cl) (SO4) (NO	malysis below) WA WA WA (S) (NO2) (F) T1) (V) (Zn) (H	OR OR OR OR
4 Average: QUANTITY	(TYPICAL A (8260) (801 (8270D) (PA (pH) (Conduction (COD) (TOC) (Total Cyanic (Total Metals) (Dissolved M VOC (Boein Methane Ether)	NALYSIS AI 0) (8020) (N AH) (NWTPF uctivity) (TDS C) (Total PO- de) (WAD Cy s) (As) (Sb) (detals) (As) (Sc) ng short list)	LLOWED PENWTPH-G) (H-D) (NWTFS) (TSS) (B4) (Total Kieranide) (Free Ba) (Be) (Caronic Ba) (Ca	ER BOTTLE NWTPH-Gx PH-Dx) (TPI OD) (Turbi dahl Nitroger Cyanide) a) (Cd) (Co)	#DIV/0! TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity n) (NH3) (NO3)	#DIV/0! **pplicable or write (8141) (Oil & G (HCO3/CO3) (G 3/NO2) (Pb) (Mg) (Mn) (non-standard a rease) Cl) (SO4) (NO	malysis below) WA WA WA (S) (NO2) (F) T1) (V) (Zn) (H	OR OR OR OR



Project Nam	ne:	Boeing Ren	ton		Project Number	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/ 10 /2020@	1030		
Sample Nun	nber:	RGW012S-	200310		Weather:	INDOORS			
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	O)	Describe:	FLUSH		
DTW Before	Purging (ft)	4.99	Time:	1004	Flow through ce	ll vol.		GW Meter No.(s SLOPE-8
	Date/Time:			End Purge:	•	3/ 10 /2020 @	1028	Gallons Purged:	
Purge water d			55-gal Drum	Ĕ	Storage Tank	Ground		SITE TREATM	
			-		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
				ters for three	. ,	dings within the fo	. ,	>/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1008	19.5	633	0.88	6.14	-88.2		5.00		
1011	19.4	643	3.15	6.14	-93.6		5.00		
1014	19.5	646	3.95	6.14	-95.0		5.00		
1017		650	4.63	6.15	-96.7				
1020		655	5.00	6.15	-98.3				
1023	19.7	655	5.07	6.15	-99.0		· 		
SAMPLE CO	LLECTION D	ATA							
Sample Collec	cted With:		Bailer		Pump/Pump Type	DEDICATED BL	ADDER		
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	urbidity, odor	, sheen, etc.):	CLEAR, CO	LORLESS, NO S	HEEN, NO ODOR	, SOME VERY	FINE MATERIA	L FLAOTING
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
	, ,	,	, 0		, ,	(1410)	(11)	(FC II)	Observations
1	19.7	655	5.12	6.15	-99.3	-	· 		
2	19.7	655	5.11	6.15	-99.3		· 		
3	19.8	655	5.13	6.15	-99.5				
4	19.7	655	5.12	6.15	-99.3				
Average:	19.7	655	5.12	6.15	-99.4	#DIV/0!			
OLI A NUDEUDA	TYPICAL A	NIAT WOTO AT	I OWED DI	ED DOTTEL	TEXADE (C! 1	11 11 14	4 1 1		
QUANTITY						oplicable or write	non-standard a	WA	OR 🗆
3	(8260) (8010 (8270D) (PA					(8141) (Oil & G	reace)	WA □	OR \square
						(HCO3/CO3) (C			OK —
1		•			n) (NH3) (NO3.		, ()	, () (-)	
	(Total Cyanid				·				
	(Total Metals	(As) (Sb) (Ba) (Be) (Ca	a) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
	(Dissolved M	etals) (As) (Sb) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (Na) (Hardness) (Sili
	VOC (Boein								
	Methane Eth	ane Ethene A	cetylene						
	-dh								
	others								
Duplicate Sar	ľ								
Duplicate Sar Comments:	ľ								



Project Nan	ne:	Boeing Ren	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/10 /2020@	945		
Sample Nur	nber:	RGW014S-	200310		Weather:	INDOORS			
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:	FLUSH		
DTW Before	Purging (ft)	5.07	Time:	915	Flow through cel	l vol.		GW Meter No.(s SLOPE-8
	Date/Time:			End Purge:	-	3/ 10 /2020 @ 94	41	Gallons Purged:	
Purge water of	disposed to:		55-gal Drum		Storage Tank	Ground		SITE TREATM	-
Ü	T		-		ODD	T1: 1:4			
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
			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	
921	16.4	350.1	1.82	6.21	-15.1		5.14		
924	15.9	356.9	1.92	6.25	-16.6		5.14		_
927	15.8	361.9	2.18	6.29	-21.1		5.14		
930	15.8	363.7	2.27	6.31	-25.1				
933		366.4	2.51	6.32	-25.3				
936			2.93	6.33	-26.6				
		371.6							
939	15.9	375.2	2.92	6.34	-27.6				-
	DLLECTION D		D '1		D /D T	D. F. (111 11			
Sample Colle	_	_	Bailer			Dedicated bladder	_	D D P + 1	
Made of:	=	Stainless Stee	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proce	_	Alconox Was	sh 📋	Tap Rinse	DI Water	Dedicated			
(By Numerica	al ()rder)								
	,	Other							
Sample Desc	,	_	, sheen, etc.):	CLEAR, CO	LORLESS, SOM	E MATERIAL FLA	AOTING, SULFI	ER OR ROTTEN	EGG SMELL, NO SI
Sample Description Replicate	,	_	D.O. (mg/L)	CLEAR, CO	ORP (mV)	E MATERIAL FLA Turbidity (NTU)	OTING, SULFI DTW (ft)	Ferrous iron (Fe II)	EGG SMELL, NO SI Comments/ Observations
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity	DTW	Ferrous iron	Comments/
Replicate 1	Temp (°F/°C)	Cond. (uS/cm) 375.4	D.O. (mg/L)	рН 6.34	ORP (mV)	Turbidity	DTW	Ferrous iron	Comments/
Replicate 1 2	Temp (°F/°C) 16.0	Cond. (uS/cm) 375.4 376.1	D.O. (mg/L) 2.92 3.00	pH 6.34 6.34	ORP (mV) -27.9 -27.8	Turbidity	DTW	Ferrous iron	Comments/
Replicate 1 2 3	Temp (°F/°C) 16.0 15.9	Cond. (uS/cm) 375.4 376.1 378.5	D.O. (mg/L) 2.92 3.00	pH 6.34 6.34 6.34	ORP (mV) -27.9 -27.8 -27.1	Turbidity	DTW	Ferrous iron	Comments/
Replicate 1 2 3 4	Temp (°F/°C) 16.0 15.9 16.0	Cond. (uS/cm) 375.4 376.1 378.5 380.0	D.O. (mg/L) 2.92 3.00 3.02 3.03	pH 6.34 6.34 6.34 6.35	ORP (mV) -27.9 -27.8 -27.1 -26.8	Turbidity (NTU)	DTW	Ferrous iron	Comments/
Replicate 1 2 3	Temp (°F/°C) 16.0 15.9	Cond. (uS/cm) 375.4 376.1 378.5	D.O. (mg/L) 2.92 3.00	pH 6.34 6.34 6.34	ORP (mV) -27.9 -27.8 -27.1	Turbidity	DTW	Ferrous iron	Comments/
Replicate 1 2 3 4	Temp (°F/°C) 16.0 15.9 16.0 16.0	Cond. (uS/cm) 375.4 376.1 378.5 380.0 377.5	D.O. (mg/L) 2.92 3.00 3.02 3.03 2.99	pH 6.34 6.34 6.35 6.34	ORP (mV) -27.9 -27.8 -27.1 -26.8 -27.4	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.0 15.9 16.0 16.0 17 TYPICAL A (8260) (8010	Cond. (uS/cm) 375.4 376.1 378.5 380.0 377.5 NALYSIS AI	D.O. (mg/L) 2.92 3.00 3.02 3.03 2.99 LLOWED PE	pH 6.34 6.34 6.35 6.34 ER BOTTLE NWTPH-GX	ORP (mV) -27.9 -27.8 -27.1 -26.8 -27.4 TYPE (Circle ap (BTEX)	Turbidity (NTU) #DIV/0!	DTW (ft)	Ferrous iron (Fe II) nalysis below) WA	Comments/ Observations OR OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.0 15.9 16.0 16.0 16.0 17YPICAL A (8260) (8010 (8270D) (PA	Cond. (uS/cm) 375.4 376.1 378.5 380.0 377.5 NALYSIS AI (MH) (NWTPH	D.O. (mg/L) 2.92 3.00 3.02 3.03 2.99 LOWED PENTPH-G) (H-D) (NWTF	6.34 6.34 6.35 6.34 CR BOTTLE NWTPH-GX	ORP (mV) -27.9 -27.8 -27.1 -26.8 -27.4 TYPE (Circle approximately continuous properties of the co	#DIV/0!	DTW (ft)	Ferrous iron (Fe II) nalysis below) WA WA WA	Comments/ Observations
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.0 15.9 16.0 16.0 16.0 (8260) (8010 (8270D) (PA (pH) (Condu	Cond. (uS/cm) 375.4 376.1 378.5 380.0 377.5 NALYSIS AI 0) (8020) (NAH) (NWTPHetivity) (TDS)	D.O. (mg/L) 2.92 3.00 3.02 3.03 2.99 LOWED PERMYPH-G) (M-D) (NWTF	6.34 6.34 6.35 6.34 ER BOTTLE NWTPH-Gx PH-Dx) (TPH-OD) (Turbic	ORP (mV) -27.9 -27.8 -27.1 -26.8 -27.4 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G. (HCO3/CO3) (C.	DTW (ft)	Ferrous iron (Fe II) nalysis below) WA WA WA	Comments/ Observations OR OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.0 15.9 16.0 16.0 16.0 (8270D) (PA (pH) (Condu	Cond. (uS/cm) 375.4 376.1 378.5 380.0 377.5 NALYSIS AI (b) (8020) (N AH) (NWTPH ctivity) (TDS (C) (Total PO-	D.O. (mg/L) 2.92 3.00 3.02 3.03 2.99 LOWED PENWTPH-G) (M-D) (NWTF	6.34 6.34 6.35 6.34 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPFI-OD) (Turbidahl Nitroger	ORP (mV) -27.9 -27.8 -27.1 -26.8 -27.4 TYPE (Circle approximately continuous properties of the co	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G. (HCO3/CO3) (C.	DTW (ft)	Ferrous iron (Fe II) nalysis below) WA WA WA	Comments/ Observations OR OR
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.0 15.9 16.0 16.0 16.0 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (TOO (Total Cyanid	Cond. (uS/cm) 375.4 376.1 378.5 380.0 377.5 NALYSIS AI 0) (8020) (N AH) (NWTPH ctivity) (TDS C) (Total PO4 e) (WAD Cy	D.O. (mg/L) 2.92 3.00 3.02 3.03 2.99 LLOWED PENTPH-G) (H-D) (NWTFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	6.34 6.34 6.35 6.34 CR BOTTLE NWTPH-GX PH-DX) (TPH OD) (Turbid dahl Nitroger Cyanide)	ORP (mV) -27.9 -27.8 -27.1 -26.8 -27.4 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) (NH3) (NO3.	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & G. (HCO3/CO3) (C. NO2)	DTW (ft) non-standard a	Ferrous iron (Fe II) nalysis below) WA WA WA Solution	Comments/ Observations OR □ OR □
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.0 15.9 16.0 16.0 16.0 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals)	Cond. (uS/cm) 375.4 376.1 378.5 380.0 377.5 NALYSIS AI (b) (8020) (NaH) (NWTPHetivity) (TDS) (C) (Total POZe) (WAD Cy) (As) (Sb) (Sb) (Sb)	D.O. (mg/L) 2.92 3.00 3.02 3.03 2.99 LLOWED PE WTPH-G) (H-D) (NWTF S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca	pH 6.34 6.34 6.35 6.34 CR BOTTLE NWTPH-GX PH-DX) (TPI OD) (Turbidahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV) -27.9 -27.8 -27.1 -26.8 -27.4 TYPE (Circle approximately) (BTEX) H-HCID) (8081) (dity) (Alkalinity) (NH3) (NO3)	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & G. (HCO3/CO3) (C. (NO2)	non-standard a rease) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA O 3) (NO2) (F)	Comments/ Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.0 15.9 16.0 16.0 16.0 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals)	Cond. (uS/cm) 375.4 376.1 378.5 380.0 377.5 NALYSIS AI ()) (8020) (N (H) (NWTPH (ctivity) (TDS (C) (Total PO-4 e) (WAD Cy () (As) (Sb) (Setals) (As) (Sb) (Setals)	D.O. (mg/L) 2.92 3.00 3.02 3.03 2.99 LLOWED PE WTPH-G) (H-D) (NWTF S) (TSS) (B 4) (Total Kie anide) (Free Ba) (Be) (Ca	pH 6.34 6.34 6.35 6.34 CR BOTTLE NWTPH-GX PH-DX) (TPI OD) (Turbidahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV) -27.9 -27.8 -27.1 -26.8 -27.4 TYPE (Circle approximately) (BTEX) H-HCID) (8081) (dity) (Alkalinity) (NH3) (NO3)	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & G. (HCO3/CO3) (C. (NO2)	non-standard a rease) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA O 3) (NO2) (F)	Comments/ Observations OR □ OR □
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.0 15.9 16.0 16.0 16.0 (8270D) (PA (PH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) (Dissolved Metals)	Cond. (uS/cm) 375.4 376.1 378.5 380.0 377.5 NALYSIS AI ()) (8020) (N (H) (NWTPH (ctivity) (TDS (C) (Total PO-4 e) (WAD Cy () (As) (Sb) (Setals) (As) (Sb) (Setals)	D.O. (mg/L) 2.92 3.00 3.02 3.03 2.99 LLOWED PENWTPH-G) (M-D) (NWTFFF) (TSS) (Bullet anide) (Free Ba) (Be) (Cab) (Ba) (Be) (Cab)	pH 6.34 6.34 6.35 6.34 CR BOTTLE NWTPH-GX PH-DX) (TPI OD) (Turbidahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV) -27.9 -27.8 -27.1 -26.8 -27.4 TYPE (Circle approximately) (BTEX) H-HCID) (8081) (dity) (Alkalinity) (NH3) (NO3)	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & G. (HCO3/CO3) (C. (NO2)	non-standard a rease) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA O 3) (NO2) (F)	Comments/ Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.0 15.9 16.0 16.0 16.0 (8270D) (PA (PH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) (Dissolved Metals)	Cond. (uS/cm) 375.4 376.1 378.5 380.0 377.5 NALYSIS AI () (8020) (N () (NWTPHetivity) (TDS () (Total PO4e) (WAD Cy () (As) (Sb) (detals) (As) (As) (As) (As) (As) (As) (As) (A	D.O. (mg/L) 2.92 3.00 3.02 3.03 2.99 LLOWED PENWTPH-G) (M-D) (NWTFFF) (TSS) (Bullet anide) (Free Ba) (Be) (Cab) (Ba) (Be) (Cab)	pH 6.34 6.34 6.35 6.34 CR BOTTLE NWTPH-GX PH-DX) (TPI OD) (Turbidahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV) -27.9 -27.8 -27.1 -26.8 -27.4 TYPE (Circle approximately) (BTEX) H-HCID) (8081) (dity) (Alkalinity) (NH3) (NO3)	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & G. (HCO3/CO3) (C. (NO2)	non-standard a rease) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA O 3) (NO2) (F)	Comments/ Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.0 15.9 16.0 16.0 16.0 (8270D) (PA (PH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) (Dissolved Metals)	Cond. (uS/cm) 375.4 376.1 378.5 380.0 377.5 NALYSIS AI () (8020) (N () (NWTPHetivity) (TDS () (Total PO4e) (WAD Cy () (As) (Sb) (detals) (As) (As) (As) (As) (As) (As) (As) (A	D.O. (mg/L) 2.92 3.00 3.02 3.03 2.99 LLOWED PENWTPH-G) (M-D) (NWTFFF) (TSS) (Bullet anide) (Free Ba) (Be) (Cab) (Ba) (Be) (Cab)	pH 6.34 6.34 6.35 6.34 CR BOTTLE NWTPH-GX PH-DX) (TPI OD) (Turbidahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV) -27.9 -27.8 -27.1 -26.8 -27.4 TYPE (Circle approximately) (BTEX) H-HCID) (8081) (dity) (Alkalinity) (NH3) (NO3)	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & G. (HCO3/CO3) (C. (NO2)	non-standard a rease) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA O 3) (NO2) (F)	Comments/ Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.0 15.9 16.0 16.0 16.0 (8270D) (PA (PH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals) (Dissolved Metals)	Cond. (uS/cm) 375.4 376.1 378.5 380.0 377.5 NALYSIS AI () (8020) (N () (NWTPHetivity) (TDS () (Total PO4e) (WAD Cy () (As) (Sb) (detals) (As) (As) (As) (As) (As) (As) (As) (A	D.O. (mg/L) 2.92 3.00 3.02 3.03 2.99 LLOWED PENWTPH-G) (M-D) (NWTFFF) (TSS) (Bullet anide) (Free Ba) (Be) (Cab) (Ba) (Be) (Cab)	pH 6.34 6.34 6.35 6.34 CR BOTTLE NWTPH-GX PH-DX) (TPI OD) (Turbidahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV) -27.9 -27.8 -27.1 -26.8 -27.4 TYPE (Circle approximately) (BTEX) H-HCID) (8081) (dity) (Alkalinity) (NH3) (NO3)	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & G. (HCO3/CO3) (C. (NO2)	non-standard a rease) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA O 3) (NO2) (F)	Comments/ Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 16.0 15.9 16.0 16.0 16.0 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (Total Cyanid (Total Metals) (Dissolved M. VOC (Boein Methane Eth	Cond. (uS/cm) 375.4 376.1 378.5 380.0 377.5 NALYSIS AI (NWTPFletivity) (TDS (Total PO2- e) (WAD Cy e) (As) (Sb) (Setals) (As) (Sb g short list) ane Ethene Ac	D.O. (mg/L) 2.92 3.00 3.02 3.03 2.99 LLOWED PE WTPH-G) (NWTF S) (TSS) (B 4) (Total Kie ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca cetylene	pH 6.34 6.34 6.35 6.34 CR BOTTLE (NWTPH-GX) PH-DX) (TPH-OD) (Turbic dahl Nitroger Cyanide) 1) (Cd) (Co) Ca) (Cd) (Co)	ORP (mV) -27.9 -27.8 -27.1 -26.8 -27.4 TYPE (Circle approximately (BTEX) H-HCID) (8081) (dity) (Alkalinity) (NH3) (NO3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & G. (HCO3/CO3) (C. (NO2)	non-standard a rease) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA O 3) (NO2) (F)	Comments/ Observations OR □ OR □ OR □
Replicate 1 2 3 4 Average:	Temp (°F/°C) 16.0 15.9 16.0 16.0 16.0 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (Total Cyanid (Total Metals) (Dissolved M. VOC (Boein Methane Eth	Cond. (uS/cm) 375.4 376.1 378.5 380.0 377.5 NALYSIS AI () (8020) (N () (NWTPHetivity) (TDS () (Total PO4e) (WAD Cy () (As) (Sb) (detals) (As) (As) (As) (As) (As) (As) (As) (A	D.O. (mg/L) 2.92 3.00 3.02 3.03 2.99 LLOWED PE WTPH-G) (NWTF S) (TSS) (B 4) (Total Kie ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (Ca cetylene	pH 6.34 6.34 6.35 6.34 CR BOTTLE (NWTPH-GX) PH-DX) (TPH-OD) (Turbic dahl Nitroger Cyanide) 1) (Cd) (Co) Ca) (Cd) (Co)	ORP (mV) -27.9 -27.8 -27.1 -26.8 -27.4 TYPE (Circle approximately (BTEX) H-HCID) (8081) (dity) (Alkalinity) (NH3) (NO3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write: (8141) (Oil & G. (HCO3/CO3) (C. (NO2)	non-standard a rease) Cl) (SO4) (NO	Ferrous iron (Fe II) nalysis below) WA WA WA O 3) (NO2) (F)	Comments/ Observations OR □ OR □ OR □



Project Nan	ne <u>:</u>	Boeing Ren	ton		Project Number	··	0025217.099.0	99	
Event:		Quarterly M	larch 2020		Date/Time:	3/ 10 /2020@	855		
Sample Nur	mber:	RGW147S-	200310		Weather:	OVERCAST, C	OLD		
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LE	VEL/WELL/PU	JRGE DATA							
Well Conditi	on:	Secure (YES)	Damaged (N	(O)	Describe:	FLUSH		
DTW Before	Purging (ft)	4.67	Time:	827	Flow through cel	l vol.		GW Meter No.(s SLOPE-8
	Date/Time:			End Purge:		3/10 /2020 @ 8	52	Gallons Purged:	
Purge water			55-gal Drum	Ĕ	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
Time				ters for three		lings within the fo	. ,	>/= 1 flow	observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/ - 10%	< 0.3 ft	through cell	
832	9.8	62.8	1.89	6.21	92.3		4.67		
835	8.6	46.3	2.05	5.98	83.2		4.67		
838	8.6	38.2	2.63	5.84	96.1		4.65		
841		33.5	2.75	5.78	108.0		-		
844		33.9	2.81	5.75	114.4		•		
847	8.5	31.9	2.92	5.73	120.9		-	•	
850	8.5	31.1	2.87	5.72	126.9		-		
SAMPLE CO	LLECTION D								
Sample Colle	_	_	Bailer		Pump/Pump Type			_	
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, t	urbidity, odor,	sheen, etc.):	CLEAR, CO	LORLESS, NO S	HEEN, NO ODOR	, LOTS OF FINI	ES FLOATING	
Domlinata	Toman	Cond.	D.O.	II	ORP	Tumbiditu	DTW	E	G
Replicate	Temp (°F/°C)	(uS/cm)	(mg/L)	pН	(mV)	Turbidity (NTU)	(ft)	Ferrous iron (Fe II)	Comments/ Observations
1	8.5	31.2	2.80	5.71	127.3				
2	8.5	30.8	2.91	5.71	128.1				
						-			-
3	8.5	30.8	2.88	5.71	128.5				
4	8.5	30.9	2.83	5.71	129.1				
Average:	8.5	30.9	2.86	5.7	128.3	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	ER BOTTLE	TYPE (Circle ap	plicable or write	non-standard a	nalysis below)	
3	(8260) (801)	0) (8020) (N	WTPH-G) ((NWTPH-Gx)) (BTEX)			wa 🗆	OR 🗆
	(8270D) (PA	AH) (NWTPI	I-D) (NWTI	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & G	rease)	wa 🗆	OR 🗆
		•				(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
1					n) (NH3) (NO3/	NO2)			
	· •	e) (WAD Cy			(0.) (0.) (7.)	DL\ (\$4.\. C.4.\. C.	ATIN (A. N. (C. N.)	TI) (II) (II) (II)	-) (IZ) (N.)
						Pb) (Mg) (Mn) (Ng) (Mg) (Mg) (Mg) (Mg) (Mg) (Mg) (Mg) (M			
	VOC (Boein) (Da) (Be) (C	.a) (Cu) (C0)	(C1) (Cu) (Fe) (Pi	o) (wig) (will) (M1)	(Ag) (Se) (11) (V) (ZII) (ПВ) (K) (Na) (Hardness) (Sili
	,	ane Ethene A	cetylene						
			.y :						
	others								
D " "	1 37 ()								<u>-</u>
Duplicate Sa	mple No(s):								
Comments:									
Signature	RYM					Date	3/10/2020		



Project Nam	e <u>:</u>	Boeing Rent	ton		Project Number	r <u>:</u>	0025217.099.0	99	
Event:	-	Quarterly M	arch 2020		Date/Time:	3/ 10 /2020@	1555		
Sample Num	nber:	RGW149S-	200310		Weather:	overcast, cold			
Landau Repr	resentative:	BXM/SRB/	JAN						
WATER LEV	'EL/WELL/PU	IRGE DATA							
Well Conditio	n:	Secure (YES))	Damaged (N	(O)	Describe:	flush		
DTW Before	Purging (ft)	5.13	Time:	1527	Flow through ce	ll vol.		GW Meter No.(s slope-8
Begin Purge:	Date/Time:	3/ 10 /2020	@ 1528	End Purge:	Date/Time:	3/ /2020 @	1551	Gallons Purged:	<1
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	Obscivations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1531	11.9	233.9	0.31	6.48	-0.2		5.13		
1534	11.6	244.7	0.27	6.45	-26.2		5.14		
1537	11.5	248.9	0.25	6.45	-40.9		5.14		
1540	11.4	254.1	0.30	6.45	-54.0				
1543	11.3	258.6	0.43	6.45	-58.1				
1546	11.3	261.6	0.75	6.45	-63.9				
1549	11.2	265.4	1.05	6.46	-68.3				
SAMPLE CO	LIECTION D	ATA							
Sample Collect			Bailer		Pump/Pump Type	DEDICATED BL	ADDER		
Sample Conce	icu wiiii.	-		_		_		D D E (1	
Made of:		Stainless Stee	.1	PVC	II II Teflon	II II Polvethylene	II II ()ther	Dedicated	
Made of:	=	Stainless Stee	_	PVC	Teflon	Polyethylene	U Other	Dedicated	
Decon Proced	ure:	Alconox Was	_	PVC Tap Rinse	Teflon DI Water	Dedicated	U Other	Dedicated	
Decon Proced (By Numerica	lure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated		Dedicated	
Decon Proced (By Numerica	lure:	Alconox Was	sh 🔲	Tap Rinse	DI Water			Dedicated	
Decon Proced (By Numerica	lure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated		Ferrous iron (Fe II)	Comments/ Observations
Decon Proced (By Numerica Sample Descr	ure: l Order) iption (color, t	Alconox Was Other urbidity, odor,	sheen, etc.):	Tap Rinse CLEAR, CO	DI Water LORLESS, NO C	Dedicated DOOR, NO SHEEN Turbidity	, DARK FINES DTW	Ferrous iron	
Decon Proced (By Numerica Sample Descr Replicate	ture:	Alconox Was Other urbidity, odor, Cond. (uS/cm)	sheen, etc.):_ D.O. (mg/L)	Tap Rinse CLEAR, CO pH	DI Water LORLESS, NO C ORP (mV)	Dedicated DOOR, NO SHEEN Turbidity	, DARK FINES DTW	Ferrous iron	
Decon Proced (By Numerica Sample Descr Replicate	ture: l Order) iption (color, t Temp (°F/°C) 11.3	Alconox Was Other urbidity, odor, Cond. (uS/cm) 266.0	sheen, etc.): D.O. (mg/L) 1.07	Tap Rinse CLEAR, CO pH 6.46	DI Water LORLESS, NO C ORP (mV) -68.7	Dedicated DOOR, NO SHEEN Turbidity	, DARK FINES DTW	Ferrous iron	
Decon Proced (By Numerica Sample Descr Replicate 1 2 3	Temp (°F/°C)	Alconox Was Other Other urbidity, odor, Cond. (uS/cm) 266.0 266.2 266.5	sheen, etc.):	Tap Rinse CLEAR, CO pH 6.46 6.46	DI Water LORLESS, NO C ORP (mV) -68.7 -68.8	Dedicated DOOR, NO SHEEN Turbidity	, DARK FINES DTW	Ferrous iron	
Decon Proced (By Numerica) Sample Descr Replicate 1 2 3 4	Temp (°F/°C) 11.2 11.2	Alconox Was Other urbidity, odor, Cond. (uS/cm) 266.0 266.2 266.5 266.7	h	Tap Rinse CLEAR, CO pH 6.46 6.46 6.46 6.46	DI Water LORLESS, NO C ORP (mV) -68.7 -68.8 -69.1	Dedicated DOOR, NO SHEEN Turbidity (NTU)	, DARK FINES DTW	Ferrous iron	
Decon Proced (By Numerica) Sample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.2 11.2 11.2	Alconox Was	h D.O. (mg/L) 1.07 1.11 1.14 1.16 1.12	Tap Rinse CLEAR, CO pH 6.46 6.46 6.46 6.46 6.46	ORP (mV) -68.7 -68.8 -69.1 -69.0	Dedicated DOOR, NO SHEEN Turbidity (NTU) #DIV/0!	DTW (ft)	Ferrous iron (Fe II)	
Decon Proced (By Numerica) Sample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.3 11.2 11.2 11.2 TYPICAL A	Alconox Was	sheen, etc.):_ D.O. (mg/L) 1.07 1.11 1.14 1.16 1.12 LOWED PE	CLEAR, CO pH 6.46 6.46 6.46 6.46 6.46 6.46 CR BOTTLE	ORP (mV) -68.7 -68.8 -69.1 -69.4 -69.0 TYPE (Circle a)	Dedicated DOOR, NO SHEEN Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Observations
Decon Proced (By Numerica) Sample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.2 11.2 11.2 11.2 11.2 11.2 11.2 11.2 11.9	Alconox Was Other urbidity, odor, Cond. (uS/cm) 266.0 266.2 266.5 266.7 266.4 NALYSIS AL ()) (8020) (N	D.O. (mg/L) 1.07 1.11 1.14 1.16 1.12 LOWED PE	CLEAR, CO pH 6.46 6.46 6.46 6.46 CR BOTTLE NWTPH-GX	ORP (mV) -68.7 -68.8 -69.1 -69.0 TYPE (Circle a) (BTEX)	Dedicated DOOR, NO SHEEN Turbidity (NTU) #DIV/0!	DTW (ft)	Ferrous iron (Fe II) nalysis below) WA	Observations OR OR
Decon Proced (By Numerica) Sample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.3 11.2 11.2 11.2 11.2 TYPICAL A (8260) (8010) (8270D) (PA	Alconox Was Other urbidity, odor, Cond. (uS/cm) 266.0 266.2 266.5 266.7 266.4 NALYSIS AL O) (8020) (N	bh D.O. (mg/L) 1.07 1.11 1.14 1.16 1.12 LOWED PE	CLEAR, CO pH 6.46 6.46 6.46 6.46 6.46 CR BOTTLE NWTPH-GX;	ORP (mV) -68.7 -68.8 -69.1 -69.0 TYPE (Circle a) (BTEX) H-HCID) (8081)	Dedicated DOOR, NO SHEEN Turbidity (NTU) #DIV/0!	DTW (ft)	Ferrous iron (Fe II) malysis below) WA WA WA	Observations
Decon Proced (By Numerica) Sample Descr Replicate 1 2 3 4 Average:	Temp (°F/°C) 11.3 11.2 11.2 11.2 11.2 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu	Alconox Was Other urbidity, odor, Cond. (uS/cm) 266.0 266.2 266.5 266.7 266.4 NALYSIS AL O) (8020) (N CH) (NWTPH ctivity) (TDS	sheen, etc.): D.O. (mg/L) 1.07 1.11 1.14 1.16 1.12 LOWED PE WTPH-G) (I-D) (NWTF G) (TSS) (B	CLEAR, CO pH 6.46 6.46 6.46 6.46 6.46 CR BOTTLE (NWTPH-GX) PH-Dx) (TPH-OD) (Turbic	ORP (mV) -68.7 -68.8 -69.1 -69.0 TYPE (Circle a) (BTEX) H-HCID) (8081)	#DIV/0! #DIV/0! #DIV/0! (8141) (Oil & G (HCO3/CO3) (6	DTW (ft)	Ferrous iron (Fe II) malysis below) WA WA WA	Observations OR OR
Decon Proced (By Numerica) Sample Descr Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 11.3 11.2 11.2 11.2 11.2 11.2 (8260) (8010 (8270D) (PA (pH) (Condu	Alconox Was Other urbidity, odor, Cond. (uS/cm) 266.0 266.2 266.5 266.7 266.4 NALYSIS AL O) (8020) (N CH) (NWTPH ctivity) (TDS	sheen, etc.): D.O. (mg/L) 1.07 1.11 1.14 1.16 1.12 LOWED PE WTPH-G) (I-D) (NWTF G) (TSS) (B	CLEAR, CO pH 6.46 6.46 6.46 6.46 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPI OD) (Turbidahl Nitroger	ORP (mV) -68.7 -68.8 -69.1 -69.4 -69.0 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity)	#DIV/0! #DIV/0! #DIV/0! (8141) (Oil & G (HCO3/CO3) (6	DTW (ft)	Ferrous iron (Fe II) malysis below) WA WA WA	Observations OR OR
Decon Proced (By Numerica) Sample Descr Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 11.3 11.2 11.2 11.2 11.2 (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid	Alconox Was Other urbidity, odor, Cond. (uS/cm) 266.0 266.2 266.5 266.7 266.4 NALYSIS AL (WALYSIS AL (US/CM)	sheen, etc.):_ D.O. (mg/L) 1.07 1.11 1.14 1.16 1.12 LOWED PE [WTPH-G) (NWTP G) (TSS) (B G) (Total Kie anide) (Free	CLEAR, CO pH 6.46 6.46 6.46 6.46 6.46 CR BOTTLE NWTPH-Gx PH-Dx) (TPI OD) (Turbid dahl Nitroger Cyanide)	ORP (mV) -68.7 -68.8 -69.1 -69.4 -69.0 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) a) (NH3) (NO3	#DIV/0! #DIV/0! #DIV/0! (8141) (Oil & G (HCO3/CO3) (6	DTW (ft) non-standard at rease) Cl) (SO4) (NO	Ferrous iron (Fe II) malysis below) WA WA WA Solution	Observations OR □ OR □
Decon Proced (By Numerica) Sample Descr Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 11.3 11.2 11.2 11.2 11.2 11.2 (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals)	Alconox Was Other urbidity, odor, Cond. (uS/cm) 266.0 266.2 266.5 266.7 266.4 NALYSIS AL O) (8020) (N CH) (NWTPH ctivity) (TDS C) (Total PO4 e) (WAD Cya O (As) (Sb) (I etals) (As) (Sb)	sheen, etc.): D.O. (mg/L) 1.07 1.11 1.14 1.16 1.12 LOWED PE (WTPH-G) (I-D) (NWTF G) (TSS) (B G) (Total Kie anide) (Free Ba) (Be) (Ca	CLEAR, CO pH 6.46 6.46 6.46 6.46 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPI OD) (Turbidahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV) -68.7 -68.8 -69.1 -69.0 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) a) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (O	DTW (ft) non-standard at rease) Cl) (SO4) (NO	Ferrous iron (Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □
Decon Proced (By Numerica) Sample Descr Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 11.3 11.2 11.2 11.2 11.2 11.2 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals)	Alconox Was Other urbidity, odor, Cond. (uS/cm) 266.0 266.2 266.5 266.7 266.4 NALYSIS AL (MALYSIS AL	sheen, etc.): D.O. (mg/L) 1.07 1.11 1.14 1.16 1.12 LOWED PE WTPH-G) (I-D) (NWTF (S) (TSS) (B (C) (Total Kie anide) (Free Ba) (Be) (Ca) (Ca) (Ca)	CLEAR, CO pH 6.46 6.46 6.46 6.46 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPI OD) (Turbidahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV) -68.7 -68.8 -69.1 -69.0 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) a) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (O'NO2)	DTW (ft) non-standard at rease) Cl) (SO4) (NO	Ferrous iron (Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □
Decon Proced (By Numerica) Sample Descr Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 11.3 11.2 11.2 11.2 11.2 11.2 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals)	Alconox Was Other urbidity, odor, Cond. (uS/cm) 266.0 266.2 266.5 266.7 266.4 NALYSIS AL O) (8020) (N CH) (NWTPH ctivity) (TDS C) (Total PO4 e) (WAD Cya O (As) (Sb) (I etals) (As) (Sb)	sheen, etc.): D.O. (mg/L) 1.07 1.11 1.14 1.16 1.12 LOWED PE WTPH-G) (I-D) (NWTF (S) (TSS) (B (C) (Total Kie anide) (Free Ba) (Be) (Ca) (Ca) (Ca)	CLEAR, CO pH 6.46 6.46 6.46 6.46 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPI OD) (Turbidahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV) -68.7 -68.8 -69.1 -69.0 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) a) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (O'NO2)	DTW (ft) non-standard at rease) Cl) (SO4) (NO	Ferrous iron (Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □
Decon Proced (By Numerica) Sample Descr Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 11.3 11.2 11.2 11.2 11.2 11.2 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals)	Alconox Was Other urbidity, odor, Cond. (uS/cm) 266.0 266.2 266.5 266.7 266.4 NALYSIS AL (MALYSIS AL	sheen, etc.): D.O. (mg/L) 1.07 1.11 1.14 1.16 1.12 LOWED PE WTPH-G) (I-D) (NWTF (S) (TSS) (B (C) (Total Kie anide) (Free Ba) (Be) (Ca) (Ca) (Ca)	CLEAR, CO pH 6.46 6.46 6.46 6.46 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPI OD) (Turbidahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV) -68.7 -68.8 -69.1 -69.0 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) a) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (O'NO2)	DTW (ft) non-standard at rease) Cl) (SO4) (NO	Ferrous iron (Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □
Decon Proced (By Numerica) Sample Descr Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 11.3 11.2 11.2 11.2 11.2 11.2 TYPICAL A (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved Metals)	Alconox Was Other urbidity, odor, Cond. (uS/cm) 266.0 266.2 266.5 266.7 266.4 NALYSIS AL (MALYSIS AL	sheen, etc.): D.O. (mg/L) 1.07 1.11 1.14 1.16 1.12 LOWED PE WTPH-G) (I-D) (NWTF (S) (TSS) (B (C) (Total Kie anide) (Free Ba) (Be) (Ca) (Ca) (Ca)	CLEAR, CO pH 6.46 6.46 6.46 6.46 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPI OD) (Turbidahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV) -68.7 -68.8 -69.1 -69.0 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) a) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (O'NO2)	DTW (ft) non-standard at rease) Cl) (SO4) (NO	Ferrous iron (Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □
Decon Proced (By Numerica) Sample Descr Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 11.3 11.2 11.2 11.2 11.2 11.2 11.2 (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M. VOC (Boein Methane Eth	Alconox Was Other urbidity, odor, Cond. (uS/cm) 266.0 266.2 266.5 266.7 266.4 NALYSIS AL (MALYSIS AL	sheen, etc.): D.O. (mg/L) 1.07 1.11 1.14 1.16 1.12 LOWED PE WTPH-G) (I-D) (NWTF (S) (TSS) (B (C) (Total Kie anide) (Free Ba) (Be) (Ca) (Ca) (Ca)	CLEAR, CO pH 6.46 6.46 6.46 6.46 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPI OD) (Turbidahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV) -68.7 -68.8 -69.1 -69.0 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) a) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (O'NO2)	DTW (ft) non-standard at rease) Cl) (SO4) (NO	Ferrous iron (Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □
Decon Proced (By Numerica Sample Descr Replicate 1 2 3 4 Average: QUANTITY 3	Temp (°F/°C) 11.3 11.2 11.2 11.2 11.2 11.2 11.2 (8260) (8010 (8270D) (PA (pH) (Condu (COD) (Total Cyanid (Total Metals) (Dissolved M. VOC (Boein Methane Eth	Alconox Was Other urbidity, odor, Cond. (uS/cm) 266.0 266.2 266.5 266.7 266.4 NALYSIS AL (MALYSIS AL	sheen, etc.): D.O. (mg/L) 1.07 1.11 1.14 1.16 1.12 LOWED PE WTPH-G) (I-D) (NWTF (S) (TSS) (B (C) (Total Kie anide) (Free Ba) (Be) (Ca) (Ca) (Ca)	CLEAR, CO pH 6.46 6.46 6.46 6.46 CR BOTTLE (NWTPH-Gx) PH-Dx) (TPI OD) (Turbidahl Nitroger Cyanide) () (Cd) (Co)	ORP (mV) -68.7 -68.8 -69.1 -69.0 TYPE (Circle a) (BTEX) H-HCID) (8081) dity) (Alkalinity) a) (NH3) (NO3) (Cr) (Cu) (Fe)	#DIV/0! #DIV/0! #DIV/0! pplicable or write (8141) (Oil & G (HCO3/CO3) (O'NO2)	DTW (ft) non-standard at rease) Cl) (SO4) (NO	Ferrous iron (Fe II) malysis below) WA WA WA 3) (NO2) (F)	Observations OR □ OR □ OR □



Project Nam	ne:	Boeing Rent	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	arch 2020		Date/Time:	3/ 10 /2020@	1315		
Sample Nun	nber:	RGW150S-	200310		Weather:	OVERCAST, C	OLD		
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES))	Damaged (N	O)	Describe:	FLUSH		
DTW Before	Purging (ft)	5.07	Time:	1248	Flow through cel	l vol.		GW Meter No.(s SLOPE-8
	0 0 0	3/ 10 /2020		End Purge:	_	3/ 10 /2020 @	1313	Gallons Purged:	
Purge water of			55-gal Drum	Ē	Storage Tank	Ground		SITE TREATM	-
		Cond.	D.O.		ORP		_		
Time	Temp (°F/°C)	(uS/cm)	(mg/L)	pН	(mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Observations
	. ,	. ,		ters for three	. ,	dings within the fo	. ,	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1253	11.3	279.0	0.32	6.54	-6.4		5.06		_
1256	11.1	278.5	0.37	6.51	-19.9		5.07		
1259	11.0	279.2	0.51	6.50	-29.3		5.07		
1302	10.9	280.1	0.65	6.50	-35.2				
1305	11.0	283.5	0.93	6.50	-41.2				
1308		285.7	1.14	6.50	-45.3	-			_
1311	11.1	286.9	1.31	6.50	-47.4				
CAMPLE CO	A L ECTION E	NA TO A							
Sample Colle	LLECTION D		Bailer		Dumn/Dumn Tyne	Dedicated bladder			
Made of:	cted with.	Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	_
	, E		_		—		LI Other	Dedicated	
Decon Proced		Alconox Was	in 📋	Tap Rinse	DI Water	Dedicated			
(By Numerica	*	Other							
Sample Descr	ription (color, t	turbidity, odor,	sheen, etc.):	CLEAR, CO	LORLESS, NO S	HEEN, NO ODOR			
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	11.1	287.4	1.36	6.5	-48.1				
2	11.1	288.6	1.37	6.5	-48.6				
3	11.2	288.2	1.41	6.5	-49.1				
4	11.2	288.5	1.44	6.5	-49.4				
Average:	11.2	288.2	1.40	6.5	-48.8	#DIV/0!			
OLIA NITITY	TYDICALA	NAT VOIC AT	I OWED DE	D DOTTI E	TVDE (Circle or	pplicable or write	non standard a	nolvaja holovy)	
3		0) (8020) (N				opiicable or write	non-standard a	WA	OR 🗆
3						(8141) (Oil & G	rease)	wa 🗆	OR 🗆
	· / `					(HCO3/CO3) (C			
1					n) (NH3) (NO3)				
	(Total Cyanid	le) (WAD Cy	anide) (Free	Cyanide)					
	(Total Metals) (As) (Sb) (l	Ba) (Be) (Ca	(Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	(Y) (Zn) (Hg) (K) (Na) (Hardness) (Sil
	VOC (Boein		. 1						
	Methane Eth	nane Ethene Ac	cetylene						
	others								
<u> </u>	241010								
Duplicate Sar	nple No(s):								
Comments:									
Signature:	BXM					Date:	3/10/2020		



Project Nam	ie:	Boeing Ren	ton		Project Number	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/ 10 /2020@	1500		
Sample Nun	nber:	RGW252S-	200310		Weather:	OVERCAST, C	OOL		
Landau Repr	resentative:	BXM/SRB/	JAN						
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:	FLUSH		
DTW Before	Purging (ft)	4.93	Time:	1425	Flow through ce	ll vol.		GW Meter No.(s SLOPE-8
	Date/Time:			End Purge:	_	3/ 10 /2020 @	1449	Gallons Purged:	
Purge water d	lisposed to:		55-gal Drum	_	Storage Tank	Ground		SITE TREATM	-
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
			, ,	ters for three		dings within the fo	. ,	>/= 1 flow	O DOCT VILLIONS
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1429	11.7	472.9	0.22	6.66	-73.9		4.93		
1432	11.6	473.0	0.21	6.67	-85.2		4.93		
1435	11.5	471.7	0.38	6.68	-91.4		4.93		
1438		470.6	0.51	6.68	-93.6		,		
1441	11.2	468.5	0.81	6.68	-95.2				
1444	11.1	465.3	1.11	6.68	-95.7				
1447	11.0	464.2	1.24	6.68	-96.2				
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	
Decon Proced	lure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color, t	urbidity, odor,	sheen, etc.):	CLEAR TO	SLIGHTLY CLO	UDY, COLORLES	S, LOTS OF GR	AY FINES, NO	SHEEN, NO ODOR
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	11.0	464.1	1.28	6.69	-96.3				
2	10.9	463.5	1.31	6.68	-96.4				
3	10.9	463.5	1.33	6.68	-96.4				
4	10.9	463.5	1.35	6.68	-96.5				
						# DB 7/01			
Average:	10.9	463.7	1.32	6.68	-96.4	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PI	ER BOTTLE	TYPE (Circle a)	oplicable or write	non-standard a	nalysis below)	
3		0) (8020) (N						wa 🗆	OR 🗆
					H-HCID) (8081)			WA 🗆	OR 🗆
1	* /	• • • • • • • • • • • • • • • • • • • •	, , , , ,	, ,		(HCO3/CO3) (C	(SO4) (NO	(NO2) (F)	
1		le) (WAD Cy			n) (NH3) (NO3.	/NO2)			
					(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Vi) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
				, , , , , , ,					Na) (Hardness) (Silic
	VOC (Boein		, (), (==) (·, (==, (=0)	· / (==/ (* e/ (*	, \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	(6) (**-) (**) (†	, \ , \\(\frac{1}{2}\) \(\frac{1}{2}\)	, ()
	·		-						
L	Methane Eth	ane Ethene A	cetylene						
	Methane Eth	ane Ethene A	cetylene						
	Methane Eth	nane Ethene A	cetylene						
	Methane Eth	ane Ethene A	cetylene						
Duralises S	others								
Duplicate San	others mple No(s):	MSMSD Loc	eation	VIED IT AND	WATER LEVEL	WAS ACCOUNTY	DDODRING W	VALUED 10 AM	DEFODE GETTER
Duplicate San Comments: Signature:	others mple No(s):	MSMSD Loc	eation	NED IT AND	WATER LEVEL	. WAS ACTIVELY Date:	DROPPING. W 3/10/2020	/AITED ~10 MIN	BEFORE GETTING



Project Nam	ie:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/ 10 /2020@	1410		
Sample Nun	nber:	RGW253I-	200310		Weather:	OVERCAST, C	OLD		
andau Rep	resentative:	BXM/SRB/	JAN						
VATER LEV	/EL/WELL/PU	JRGE DATA							
Vell Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:	FULL		
TW Before	Purging (ft)	4.96	Time:	1338	Flow through cel	ll vol.		GW Meter No.(s	SLOPE-8
Begin Purge:	Date/Time:	3/ 10 /2020	@ 1341	End Purge:	Date/Time:	3/ 10 /2020 @	1404	Gallons Purged:	<1
urge 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
	0					dings within the fo	0	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
1344	12.2	301.2	0.16	6.48	-2.4		4.99		
1347	12.0	308.7	0.19	6.50	-57.5		4.99		
1350	11.9	309.0	0.21	6.52	-63.9		4.99		
1353	11.9	309.3	0.37	6.52	-72.0				
1356	11.9	309.1	0.61	6.53	-77.4				
1359		309.7	0.86	6.54	-80.2				
1402	12.1	310.5	1.09	6.53	-82.1				
AMDI E CO	I I ECTION D	<u></u>							
ample Colle	LLECTION D		Bailer		Pumn/Pumn Tyne	Dedicated Bladder	•		
lade of:	cica wiiii.	Stainless Stee		PVC	Teflon	Polyethylene	Other	Dedicated	
	. =		_		_		E Onici	Dedicated	
Decon Proced		Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
By Numerica	*	Other							
ample Desci	ription (color, t	urbidity, odor	sheen, etc.):	CLEAR, CO	LORLESS, NO C	DOR, NO SHEEN			
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	12.1	310.5	1.10	6.54	-82.4				
2	12.1	310.6	1.12	6.54	-82.4				
3	12.1	310.6	1.14	6.54	-82.6				
4	12.1	310.6	1.16	6.54	-82.9				
Average:	12.1	310.6	1.13	6.54	-82.6	#DIV/0!			
	TVDICAL A	NAT VCIC AT	I OWED DI	D DATTI E		pplicable or write	non standard a	nalvaia balaw)	
3		0) (8020) (N				pplicable of write	iioii-staiiuai u ai	WA \square	OR 🗆
3						(8141) (Oil & G	rease)	WA \square	OR 🗆
			, ,	, ,		(HCO3/CO3) (C			
1					n) (NH3) (NO3)				
	(Total Cyanid	le) (WAD Cy	anide) (Free	Cyanide)					
	(Total Metals	(As) (Sb)	Ba) (Be) (Ca	(Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg	g) (K) (Na)
	(Dissolved M	etals) (As) (St) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) ((Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (Na) (Hardness) (Sil
	VOC (Boein								
	Methane Eth	nane Ethene A	cetylene						
	others								
	oniers								
uplicate Sar	nple No(s):								
omments:	WELL WAS	UNDER A L	OT OF PRES	SURE AND	SMELLED BAD	WHEN THE PRES	SURE WAS RE	LEASED	
lignature:	BXM					Date:	3/10/2020		



Project Nan	ne:	Boeing Ren	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	arch 2020		Date/Time:	3/10 /2020@	1240		
Sample Nur	nber:	RGW254S-	200310		Weather:	OVERCAST, C	OOL		
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:	FLUSH		
DTW Before	Purging (ft)	5.11	Time:		Flow through cel	l vol.		GW Meter No.(SLOPE-8
	Date/Time:			End Purge:	_	3/ 10 /2020 @	1236	Gallons Purged:	
Purge water of			55-gal Drum	Ĕ	Storage Tank	Ground		SITE TREATM	-
r urge water t	•		-		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
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	
1216	11.2	434.2	0.22	6.69	-78.3		5.13		
1219	11.1	440.7	0.24	6.70	-92.9		5.15		
1222	10.9	444.0	0.24	6.70	-100.8		5.14		
						-		-	
1225		443.9	0.30	6.70	-103.0		-		
1228	10.6	443.5	0.43	6.70	-104.0				
1231	10.5	443.2	0.58	6.70	-106.4			-	
1234	10.5	442.4	0.82	6.69	-106.5				
SAMPLE CO	LLECTION D	OATA							
Sample Colle	cted With:		Bailer		Pump/Pump Type	DEDICATED BL	ADDER		
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	dure:	Alconox Was	h 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	al Order)	Other			_				
Sample Desc	ription (color, t	urbidity, odor,	sheen, etc.):	CLEAR, CO	LORLESS, NO S	HEEN, NO ODOR			
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
	, , ,	, , ,	, ,	0	, ,	(1410)	(11)	(re n)	Observations
1	10.5	442.6	0.86	6.69	-106.6				
2	10.5	442.3	0.87	6.69	-106.6				
3	10.5	442.3	0.88	6.69	-106.6				
4	10.5	442.5	0.89	6.69	-106.6		-		
Average:	10.5	442.4	0.88	6.69	-106.6	#DIV/0!			
OLIA NITITY	TYDICALA	NAT VOIC AT	I OWED DI	D DATTI E	TVDE (Circle or	pplicable or write	non standard a	nolvaja bolovy)	
QUANTITY 3		0) (8020) (N			` `	opiicable or write	non-standard a	WA	OR 🗆
						(8141) (Oil & G	rease)	wa 🗆	OR 🗆
			, ,	, ,		(HCO3/CO3) (C			
1					n) (NH3) (NO3			. ` ` ′	
	(Total Cyanid	le) (WAD Cy	anide) (Free	Cyanide)					
	(Total Metals	(As) (Sb) (I	Ba) (Be) (Ca	(Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
	(Dissolved M	etals) (As) (Sb) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (Na) (Hardness) (Sili
	VOC (Boein								
	Methane Eth	nane Ethene Ac	etylene						
	others								
	omers								
Duplicate Sar	mple No(s):								
Comments:									
	RYM					Date:	3/10/2020		



Project Nar	ne:	Boeing Ren	ton		Project Number	r <u>:</u>	0025217.099.0	99	
Event:	-	Quarterly M	Iarch 2020		Date/Time:	3/11 /2020@	830		
Sample Nu	mber:	RGWDUP5	200311		Weather:	CLOUDY, COC)L		
Landau Rep	presentative:	BXM/SRB/	JAN						
WATER LE	VEL/WELL/PU	JRGE DATA							
Well Conditi	on:	Secure (YES)	Damaged (N	(O)	Describe:	FLUSH		
DTW Before	Purging (ft)	5.85	Time:	1511	Flow through ce	ll vol.		GW Meter No.(s SLOPE-8
	: Date/Time:			End Purge:	_	3/ 11 /2020 @01	535	Gallons Purged:	
Purge water			55-gal Drum	Ĕ	Storage Tank	Ground		SITE TREATM	-
8	•		-		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
		_ `		ters for three		dings within the fo	. ,	>/= 1 flow	0.5501 (11110115)
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
		D-	1:	.4. 4.	DCW	1000			
		Di	ıpııca	ite to	RGW:	1805	-		
	_,								
	<u> </u>								
	_								
	_								
SAMPLE CO	DLLECTION D	DATA							
Sample Colle	ected With:		Bailer		Pump/Pump Type	DEDICATED BL	ADDER		
Made of:		Stainless Stee	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proce	dure:	Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numeric	al Order)	Other							
Sample Desc	cription (color,	turbidity, odor,	sheen, etc.):_	CLEAR, CO	LORLESS, NO	DOR, NO SHEEN	I, DARK AND I	LIGHT FINES	
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
	, ,	, , ,	, ,		, ,	(1410)	(11)	(FC II)	Obsci vations
1	11.1	207.6	1.06	6.36	-27.3		-		
2	11.1	207.6	1.08	6.36	-27.6				
3	11.1	207.6	1.11	6.36	-27.8				
4	11.1	207.6	1.18	6.36	-28.2		-		
Average:	11.1	207.6	1.11	6.36	-27.7	#DIV/0!			
OLIANTITY	Z TYDICAL A	NAT VOIC AT	I OWED DE	D DOTTI E	TVDE (Cinale a	pplicable or write	non standard a	nolvaia holovy)	
QUANTITY 7		0) (8020) (N				pplicable or write	non-standard a	WA	OR 🗆
2						(8141) (Oil & G	rease)	wa 🗆	OR 🗆
						(HCO3/CO3) (C			
					n) (NH3) (NO3				
	(Total Cyanic	le) (WAD Cy	anide) (Free	Cyanide)					
	(Total Metals) (As) (Sb) (l	Ba) (Be) (Ca	(Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (l	Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
	(Dissolved M	letals) (As) (Sb) (Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (Na) (Hardness) (Sil
	VOC (Boein								
	Methane Eth	nane Ethene Ad	cetylene						
	others								
Duplicate Sa	mple No(s):	Duplicate to l	RGW180S						
Comments:	• • • • •								



Project Nam	ie:	Boeing Ren	ton		Project Number	r:	0025217.099.0	99	
Event:		Quarterly N	Iarch 2020		Date/Time:	3/11 /2020@ 1	1415		
Sample Nun	nber:	RGW163I-	200311		Weather:	CLOUDY, COO)L		
Landau Rep	resentative:	BXM/SRB/	JAN		·				
WATER LEV	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES)	Damaged (N	(O)	Describe:	FLUSH		
DTW Before		6.12	Time:		Flow through cel			GW Meter No.(s SLOPE-8
	Date/Time:			End Purge:	_	3/ 11 /2020 @ 14	408	Gallons Purged:	
Purge water d			55-gal Drum	Ĕ	Storage Tank	Ground		SITE TREATM	-
8	•		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
		. ,		ters for three	. ,	dings within the fo	ollowing limits	>/= 1 flow	O SSCI VILLIOIS
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1348	12.6	336.1	0.21	6.23	22.7		5.98		
1351	12.2	335.9	0.62	6.23	-2.4		5.95		
1354	11.8	334.2	1.28	6.23	-17.7		5.93		
1357	11.0	329.5	2.35	6.23	-31.2		5.92		
1400	·	326.4	2.86	6.24	-36.0		5.92		
1403	10.4	323.6	3.23	6.24	-38.2				
							-	· 	
1406	10.2	321.6	3.48	6.24	-39.5			· 	
CAMPLE CO	LECTIONE						· <u> </u>		
Sample College	LLECTION D		Bailer		Pumn/Pumn Tyne	DEDICATED BL	ADDER		
Made of:	cica wiiii.	Stainless Ste	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee		Alconox Wa	_	Tap Rinse	DI Water	Dedicated	U Other	Dedicated	
(By Numerica		Other	··· <u>L</u>	rap Kilise	□ Di Watei	Dedicated			
		_	chaan ata):	CLEAR CO	I ODI ESS NO C	DOR, NO SHEEN	· f		
Sample Desci	iption (color, i	urbianty, odor	, sneen, etc.)	CLL/III, CO	LOKEESS, NO C	DON, IVO SIILLIV			
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	10.2	321.1	3.52	6.24	-39.7	(/		(')	
2	10.2	321.1	3.54	6.24	-39.8				
3	10.2	321.1	3.55	6.24	-40.0		-	· 	
4	10.2	320.7	3.54	6.24	-40.0				
Average:	10.2	321.0	3.54	6.24	-39.9	#DIV/0!		· 	
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	ER BOTTLE	TYPE (Circle ap	pplicable or write	non-standard a	nalysis below)	
7		0) (8020) (1						WA 🗆	OR 🗆
2						(8141) (Oil & G		wa 🗆	OR □
		•				(HCO3/CO3) (0	Cl) (SO4) (NO	(NO2) (F)	
		le) (WAD Cy			n) (NH3) (NO3/	NO2)			
		•			(Cr) (Cu) (Fe) ((Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
									Na) (Hardness) (Silic
	VOC (Boein								
	Methane Eth	nane Ethene A	cetylene						
	oth or								
	others								
Duplicate Sar									
Duplicate Sai	nple No(s):								
Comments:	nple No(s):								



Project Nam	ıe:	Boeing Ren	ton		Project Number	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	larch 2020		Date/Time:	3/ 11 /2020@ 1	330		
Sample Nun	nber:	RGW165I-	200311		Weather:	OVERCAST, C	OOL		
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES))	Damaged (N	IO)	Describe:	FLUSH		
OTW Before	Purging (ft)	11.68	Time:	1256	Flow through cel	l vol.		GW Meter No.(s	SLOPE-8
Begin Purge:	Date/Time:	3/ 11 /2020	@ 1301	End Purge:	Date/Time:	3/ 11 /2020 @ 13	324	Gallons Purged:	<1
urge 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)	(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%	ollowing limits < 0.3 ft	>/= 1 flow through cell	
1204						+/- 10 %		tiirougii ceii	
1304	11.8	287.9	0.31	6.24	87.4		10.25		
1307	11.6	288.3	0.34	6.25	49.7		9.94		
1310	11.3	287.7	0.39	6.26	13.5		9.53		
1313	10.8	286.4	1.27	6.26	-15.0		8.95	-	
1316	10.6	285.6	1.57	6.27	-19.5		8.80	_	
1319	10.6	285.1	2.02	6.27	-25.7		8.55		
1322		285.1	2.39	6.27	-30.2		8.34		
1322	10.0	265.1	2.39	0.27	-50.2		0.34		
AMPLE CC	LLECTION D	OATA							
ample Colle			Bailer		Pump/Pump Type	DEDICATED BL	ADDER		
Tade of:		Stainless Stee	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	lure:	Alconox Was	sh 🗖	Tap Rinse	DI Water	Dedicated		_	
By Numerica		Other		.1					
-	*		sheen etc.):	CLEAR CO	LORLESS NO C	DOR, NO SHEEN	EFFERVESCE	NT	
umple Deser	iption (color, t	urbiany, odor,	sileen, etc.).	CLETIK, CO	LOKEESS, IVO C	DOR, IVO BILLEIV	, LITER VESCE	411	
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	10.6	285.1	2.47	6.27	-31.2				
2	10.6	285.1	2.50	6.27	-31.7				
3	10.6	285.2	2.53	6.28	-32.1				
4	10.6	285.3	2.56	6.28	-32.5		8.24		
Average:	10.6	285.2	2.52	6.28	-31.9	#DIV/0!			
UANTITY	TYPICAL A	NALYSIS AL	LOWED PE	ER BOTTLE	TYPE (Circle ap	pplicable or write	non-standard a	nalysis below)	
7	(<mark>8260</mark>) (801	0) (8020) (N	WTPH-G) (NWTPH-Gx) (BTEX)			wa 🗆	OR 🗆
2	(8270D) (PA	AH) (NWTPH	I-D) (NWTF	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & G	rease)	wa 🗆	or □
	' '	• • • • • • • • • • • • • • • • • • • •	/ \ / \			(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
	, ,		, ,		n) (NH3) (NO3/	(NO2)			
		le) (WAD Cy		_ •	(C ₂) (C ₂) (E ₂) (Db) (Ma) (Ma) (Ni) (Aa) (Ca) (Tl) (U) (7) (II:	r) (V) (Na)
						(Pb) (Mg) (Mn) (lb) (Mg) (Mn) (Ni)			
	VOC (Boein		, (Du) (DE) (C	-u, (Cu) (C0)	(C1) (Cu) (1°C) (F	o, (1118) (11111) (1111)	, 15) (DC) (11) (V) (LII) (11g) (K) (I) (1201011CSS) (31
	,	nane Ethene Ac	cetylene						
	others								
ouplicate Sar	nnle No(s)·								
P Dai									
Comments:	• ''	UNDER PRE	ESSURE WH	EN REMOVI	ING j-PLUG. WA	TER LEVEL WAS	COMING UP		



Project Nan	ne:	Boeing Rent	on		Project Number	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	arch 2020		Date/Time:	3/11 /2020@	1601		
Sample Nur	nber:	RGW175I-	200311		Weather:	CLOUDY			
Landau Rep	resentative:	BXM/SRB/J	JAN						
WATER LE	VEL/WELL/PU	JRGE DATA							
Well Conditi	on:	Secure (YES)		Damaged (N	O)	Describe:			
DTW Before	Purging (ft)	7.03	Time:	1531	Flow through ce	ll vol.		GW Meter No.(s
Begin Purge:	Date/Time:	3/11 /2020 @	1532	End Purge:	Date/Time:	3/11 /2020 @	1553	Gallons Purged:	0.:
Purge water	disposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
	0					dings within the fo		>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1535	12.3	403.9	0.91	6.32	6.8		7.08		
1538	12.2	406.0	1.03	6.29	4.0		6.96		
1541	11.9	406.3	1.21	6.29	-1.3		6.81		
1544		405.4	1.32	6.29	-4.4		6.72		
			-				-		
1547		404.0	1.42	6.29	-7.5		6.61		
1550	11.3	402.2	1.55	6.28	-9.9		6.53		
1552	11.2	400.9	1.64	6.28	-10.7				_
CAMDIE CO	DLLECTION D							<u></u>	
Sample Colle			Bailer		Pumn/Pumn Tyne	DED. BLADDER			
Made of:	cica wini.	Stainless Stee	_	PVC	Teflon	Polyethylene	Other	Dedicated	
	, –				_		U Other	Dedicated	
Decon Proce		Alconox Was	h 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	· ·	Other		NO COLOR	I OW TURB N	0.010			
Sample Desc	ription (color,	turbiaity, odor,	sneen, etc.):	NO COLOR	, LOW TURB, N	J/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	11.2	401.0	1.69	6.28	-10.9				
2	11.2	401.0	1.73	6.28	-11.1				
3	11.2	400.9	1.74	6.28	-11.2				
4	11.2	400.8	1.75	6.28	-11.3				
Average:	11.2	400.9	1.73	6.28	-11.1	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AL	LOWED PI	ER BOTTLE	TYPE (Circle a)	oplicable or write	non-standard a	nalysis below)	
7	(8260) (801	0) (8020) (N	WTPH-G)	(NWTPH-Gx	(BTEX)			wa 🗆	OR □
2	(8270D) (PA	AH) (NWTPH	-D) (NWTI	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & Gi	rease)	wa 🗆	OR □
	(pH) (Condu	activity) (TDS) (TSS) (E	OD) (Turbi	dity) (Alkalinity)	(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
					n) (NH3) (NO3	/NO2)			
		le) (WAD Cya							
						(Pb) (Mg) (Mn) (1			
) (Ba) (Be) (_a) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) (Ag) (Se) (TI) (V	() (Zn) (Hg) (K) (Na) (Hardness) (Si
	VOC (Boein	ig short list) nane Ethene Ac	etylene						
	wiemane Ett	iane Eulene Ac	etylelle						
	others								
	1								
Duplicate Sa	mple No(s):								
Comments:									
Signature:	JAN					Date:	3/11/2020		



Project Nan	ne:	Boeing Ren	ton		Project Number	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	arch 2020		Date/Time:	3/11 /2020@	1526		
Sample Nur	nber:	RGW176S-	200311		Weather:	CLOUDY			
Landau Rep	resentative:	BXM/SRB/.	JAN						
WATER LE	VEL/WELL/PU	JRGE DATA							
Well Conditi	on:	Secure (YES))	Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	5.88	Time:	1458	Flow through ce	ll vol.		GW Meter No.(3
Begin Purge:	Date/Time:	3/11 /2020 @	1500	End Purge:	Date/Time:	3/11 /2020 @	1521	Gallons Purged:	0.3
Purge water	disposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	tors for thro	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/ - 10%	+/- 0.1 units		+/- 10%	< 0.3 ft	through cell	
1503	12.0	442.4	0.79	6.28	34.9		5.53		
1506	5 11.7	462.7	0.67	6.27	21.2		5.42		
1509	-	467.7	0.83	6.27	14.0		5.39		
1512	-	469.8	0.97	6.27	6.3		5.36		
	_								
1515	-	470.3	1.20	6.27	-0.2		5.34		
1518	11.1	471.5	1.11	6.27	-5.8		5.33		
1520	11.1	472.4	1.18	6.27	-9.2				
	DLLECTION I		D. 11		n n m				
Sample Colle	_		Bailer			DED. BLADDER		— 5 2 3 3	
Made of:	_	Stainless Stee	_		Teflon	Polyethylene	U Other	Dedicated	
Decon Proce		Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other							
Sample Desc	ription (color,	turbidity, odor,	sheen, etc.):	VERY LIGH	IT YELLOW TIN	T, LOW TURB, N	O/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	11.1	472.8	1.08	6.27	-9.5				
2	11.1	472.5	1.13	6.27	-9.9				
3	11.1	472.7	1.14	6.27	-10.3				
4	11.1	472.8	1.13	6.27	-10.6		-		
Average:	11.1	472.7	1.12	6.27	-10.1	#DIV/0!			
	1						•		
QUANTITY						oplicable or write	non-standard a		OD 🗆
2		0) (8020) (N AH) (NWTPE				(8141) (Oil & G	rease)	WA □	OR U
						(HCO3/CO3) (O			OK —
		•			n) (NH3) (NO3		/ (*** / (***	-/ (/ (/	
	(Total Cyanic	le) (WAD Cy	anide) (Free	Cyanide)					
	(Total Metals) (As) (Sb) (l	Ba) (Be) (Ca	a) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
) (Ba) (Be) (Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (Na) (Hardness) (Sil
	VOC (Boein		atule :: -						
	Methane Eth	nane Ethene Ac	etylene						
	others								
	omers								
Duplicate Sa	mple No(s):								
Comments:									
Signature	IAN					Date:	3/11/2020		



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	1arch 2020		Date/Time:	3/ 11 /2020@ 10	040		
Sample Nur	nber:	RGW177I-	200311		Weather:	OVERCAST, CO)LD		
Landau Rep	resentative:	BXM/SRB/	/JAN		-				
WATER LEV	/EL/WELL/PU	IRGE DATA							
Well Condition		Secure (YES	5)	Damaged (N	(O)	Describe:	FLUSH		
DTW Before		7.09	Time:		Flow through cel	•		GW Meter No.(s	SLOPE-8
	Date/Time:			End Purge:	_	3/ 11 /2020 @ 103	33	Gallons Purged:	
Purge water of		5/ 11 /2020	55-gal Drum	Ĕ	Storage Tank	Ground	-	SITE TREATM	
r arge water 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
	. ,	. ,		ters for three	. ,	dings within the fol	. ,	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1013	11.1	449.1	0.42	6.20	-3.5		7.09		
1016	10.9	447.2	1.22	6.21	-36.8		7.09		
1019	10.8	446.5	1.78	6.21	-44.9		7.09		
1022	10.6	444.0	2.92	6.22	-57.4				
1025	10.7	443.9	3.61	6.22	-62.2				
1028		443.5	3.82	6.23	-62.8				-
-									
1031	10.7	443.6	4.08	6.23	-63.6				
CAMDIE CO	LLECTION D								
Sample Colle			Bailer		Pumn/Pumn Tyne	DEDICATED BLA	DDER		
Made of:	cica with.	Stainless Ste	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	lura:	Alconox Wa	_	Tap Rinse	DI Water	Dedicated	ouner	Bedicated	
(By Numerica		Other	sii 📋	1 ap Kilise	□ DI Water	Dedicated			
	,	_	shoon atali	CLEAD CO	LODIESS NO.C	DOR, NO SHEEN,	SOME LIGHT	EINIEC	
Sample Desci	ription (color,	iurbiuity, odor	, sneen, etc.)	CLEAR, CO	LOKLESS, NO C	DOR, NO SHEEN,	SOME LIGHT	TINES	
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	, , ,	` ′		c 22	, ,	(1110)	(11)	(ren)	Observations
1	10.6	443.4	4.13	6.23	-63.7				
2	10.6	443.4	4.16	6.23	-63.8				
3	10.6	443.6	4.15	6.23	-63.9				
4	10.7	443.3	4.17	6.23	-63.9				
Average:	10.6	443.4	4.15	6.23	-63.8	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LLOWED PE	ER BOTTLE	TYPE (Circle ar	pplicable or write n	on-standard a	nalysis below)	
7		0) (8020) (1				•		wa 🗆	OR 🗆
2	(8270D) (PA	AH) (NWTPl	H-D) (NWTF	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & Gro	ease)	wa □	OR □
	(pH) (Condu	activity) (TD	S) (TSS) (B	OD) (Turbi	dity) (Alkalinity)	(HCO3/CO3) (C	l) (SO4) (NO	3) (NO2) (F)	
		, ,			n) (NH3) (NO3/	NO2)			
		le) (WAD Cy					***		
						(Pb) (Mg) (Mn) (N			
	VOC (Boein) (ва) (ве) ((.a) (Cd) (Co)	(Cr) (Cu) (Fe) (P	o) (MIG) (MIN) (N1) (A	Ag) (Se) (11) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silic
	·	nane Ethene A	cetylene						
	1								
L									
	others								
Duplicate So									
Duplicate Sar									
Duplicate San Comments: Signature:						Date	3.11.2020		



Project Nam	ne:	Boeing Ren	ton		Project Numbe	r:	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/ 11 /2020@	950		
Sample Nun	nber:	RGW178S-	200311		Weather:	RAIN, OVERCA	ST, COOL		
Landau Rep	resentative:	BXM/SRB/	JAN		•				
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition		Secure (YES)	Damaged (N	(O)	Describe:	FLUSH		
DTW Before	Purging (ft)	7.83	Time:		Flow through cel	l vol.		GW Meter No.(s SLOPE-8
	Date/Time:			End Purge:	•	3/ 11 /2020 @ 943	3	Gallons Purged:	
Purge water d			55-gal Drum	Ē	Storage Tank	Ground		SITE TREATM	
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
	U					dings within the fol	0	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
923	11.4	372.7	0.17	6.13	-0.3		7.82		
926	10.4	371.5	2.04	6.18	-40.9		7.78		
929	10.3	370.6	2.4	6.18	-44.7		7.80		
932	10.2	368.6	3.1	6.19	-50.4		7.80		
935		367.8	3.64	6.19	-54.4				
938		367.4	3.96	6.19	-56.4				
941	10.2	367.4	4.12	6.2	-57.9				
CALLEDY F. CO.									
	LLECTION D		Bailer		Dryman /Dryman Tryma	DEDICATED BLA	DDED		
Sample Collection Made of:	cted with:	Stainless Stee			Teflon	DEDICATED BLA Polyethylene	Other	Dedicated	
	, E		_		—	_	U Other	Dedicated	
Decon Proced		Alconox Was	sh 📋	Tap Rinse	DI Water	Dedicated			
(By Numerica	*	Other							
Sample Desci	ription (color, t	urbiaity, odor	, sneen, etc.):	CLEAR, CO	LORLESS, NO S	HEEN, NO ODORL	IGHT FINES		
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	10.2	367.6	4.17	6.19	-58.1				
2	10.2	367.7	4.19	6.20	-58.3				
3	10.2	367.6	4.21	6.20	-58.6				
4	10.2	367.7	4.23	6.20	-58.8				
						# DB 7/01			
Average:	10.2	367.7	4.20	6.20	-58.5	#DIV/0!			
						pplicable or write n	on-standard a		
7	` / `	0) (8020) (N			, ,			WA L	OR 🗆
2						(8141) (Oil & Gre		WA □	OR 🗆
	(mII) (C-::1		ST (LISS) (B	עט) (Turbi	uity) (Alkalinity)	(HCO3/CO3) (Cl	i) (SO4) (NO	3) (NO2) (F)	
		•) (NH3) (NO2	NO2)			
	(COD) (TO	C) (Total PO	4) (Total Kie	dahl Nitroger	n) (NH3) (NO3)	NO2)			
	(COD) (TOO (Total Cyanid	C) (Total PO- e) (WAD Cy	4) (Total Kie ranide) (Free	dahl Nitroger Cyanide)		(NO2) (Pb) (Mg) (Mn) (N	(i) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
	(COD) (TOO (Total Cyanid (Total Metals	C) (Total PO- e) (WAD Cy) (As) (Sb) (4) (Total Kie anide) (Free Ba) (Be) (Ca	dahl Nitroger Cyanide) a) (Cd) (Co)	(Cr) (Cu) (Fe)	Pb) (Mg) (Mn) (N			
	(COD) (TOO (Total Cyanid (Total Metals	C) (Total PO- e) (WAD Cy) (As) (Sb) (etals) (As) (Sb	4) (Total Kie anide) (Free Ba) (Be) (Ca	dahl Nitroger Cyanide) a) (Cd) (Co)	(Cr) (Cu) (Fe)	Pb) (Mg) (Mn) (N			g) (K) (Na) Na) (Hardness) (Silid
	(COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	C) (Total PO- e) (WAD Cy) (As) (Sb) (etals) (As) (Sb	(Total Kie ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C	dahl Nitroger Cyanide) a) (Cd) (Co)	(Cr) (Cu) (Fe)	Pb) (Mg) (Mn) (N			
	(COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	e) (Total PO- e) (WAD Cy) (As) (Sb) (etals) (As) (Sb g short list)	(Total Kie ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C	dahl Nitroger Cyanide) a) (Cd) (Co)	(Cr) (Cu) (Fe)	Pb) (Mg) (Mn) (N			
	(COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	e) (Total PO- e) (WAD Cy) (As) (Sb) (etals) (As) (Sb g short list)	(Total Kie ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C	dahl Nitroger Cyanide) a) (Cd) (Co)	(Cr) (Cu) (Fe)	Pb) (Mg) (Mn) (N			
	(COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein	e) (Total PO- e) (WAD Cy) (As) (Sb) (etals) (As) (Sb g short list)	(Total Kie ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C	dahl Nitroger Cyanide) a) (Cd) (Co)	(Cr) (Cu) (Fe)	Pb) (Mg) (Mn) (N			
Duplicate Sar	(COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	e) (Total PO- e) (WAD Cy) (As) (Sb) (etals) (As) (Sb g short list)	(Total Kie ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C	dahl Nitroger Cyanide) a) (Cd) (Co)	(Cr) (Cu) (Fe)	Pb) (Mg) (Mn) (N			
Duplicate Sar	(COD) (TOO (Total Cyanid (Total Metals (Dissolved M VOC (Boein Methane Eth	e) (Total PO- e) (WAD Cy) (As) (Sb) (etals) (As) (Sb g short list)	(Total Kie ranide) (Free Ba) (Be) (Ca b) (Ba) (Be) (C	dahl Nitroger Cyanide) a) (Cd) (Co)	(Cr) (Cu) (Fe)	Pb) (Mg) (Mn) (N			



#/- 3% 1559 12 1602 12 1608 12 1608 12 1611 11 1614 11 1617 11 SAMPLE COLLECTION Sample Collected With: Made of: Decon Procedure: (By Numerical Order) Sample Description (color Replicate Temp (°F/°C) 1 11 2 11 3 11 4 11 Average: 11 QUANTITY TYPICAL	RGW179	A ES) 1 Time: 20 @ 1556 55-gal Drun D.O. (mg/L) tion of Parame +/- 10% 2 0.25 3 0.41 0 1.04 5 1.60 5 2.13 7 2.39 4 2.58 Bailer Steel	pH eters for three +/- 0.1 units 6.36 6.37 6.38 6.37 6.36 6.36 6.35	Flow through ce	OVERCAST, C Describe: Il vol. 3/ 11 /2020 @ Ground Turbidity (NTU) dings within the for +/- 10% DEDICATED BL Polyethylene Dedicated	FLUSH 1619 Other DTW (ft) cllowing limits < 0.3 ft 5.82 5.82 5.81	GW Meter No.(g Gallons Purged: SITE TREATM Internal Purge Volume (gal) >/= 1 flow through cell Dedicated	<1 ENT SYSTEM
WATER LEVEL/WELL/I Well Condition: DTW Before Purging (ft) Begin Purge: Date/Time Purge water disposed to: Temp (°F)°C) Purge Go	Stainless Stai	B/JAN A ES) 1 Time: 20 @ 1556 55-gal Drun D.O. (mg/L) tion of Parame +/- 10% 2 0.25 3 0.41 0 1.04 5 1.60 5 2.13 7 2.39 4 2.58 Bailer Gteel	1533 End Purge: pH eters for three +/- 0.1 units 6.36 6.37 6.38 6.37 6.36 6.36 6.35	Flow through ce	Describe: vol. 3/ 11 /2020 @	1619 Other DTW (ft) Other DTW (st) Other DTW (st) Other Othe	Gallons Purged: SITE TREATM Internal Purge Volume (gal) >/= 1 flow through cell	<1 ENT SYSTEM Comments/
WATER LEVEL/WELL/I Well Condition: DTW Before Purging (ft) Begin Purge: Date/Time Purge water disposed to: Temp Time (°F/°C) Purge Go +/- 3% 1559 12.3 1602 12.3 1608 12.3 1611 11.3 1614 11.3 SAMPLE COLLECTION Sample Collected With: Made of: [Decon Procedure: [(By Numerical Order) Sample Description (color Replicate Temp (°F/°C) 1 1 11.3 3 11.7 4 11.7 Average: 11.7	Secure (Y 5.8 Cond. (uS/cm) 11.8 380 11.8 380 12.8 380 11.8 380	A ES) 1 Time: 20 @ 1556 55-gal Drun D.O. (mg/L) tion of Parame +/- 10% 2 0.25 3 0.41 0 1.04 5 1.60 5 2.13 7 2.39 4 2.58 Bailer Steel	1533 End Purge: pH eters for three +/- 0.1 units 6.36 6.37 6.38 6.37 6.36 6.36 6.35	Flow through ce Date/Time: Storage Tank ORP (mV) e consecutive rea +/- 10 mV 7.3 -17.9 -38.7 -46.5 -51.5 -53.8 -55.4 Pump/Pump Type Teflon	Il vol. 3/ 11 /2020 @ Ground Turbidity (NTU) dings within the form +/- 10% E DEDICATED BL. Polyethylene	0ther DTW (ft) ollowing limits < 0.3 ft 5.82 5.82 5.81	Gallons Purged: SITE TREATM Internal Purge Volume (gal) >/= 1 flow through cell	<1 ENT SYSTEM Comments/
Well Condition: DTW Before Purging (ft) Begin Purge: Date/Time Temp Time "F"°C) Purge Go +/- 3% 1559 12 1602 12 1608 12 1610 11 1611 11 SAMPLE COLLECTION Sample Collected With: Made of: □ Decon Procedure: □ (By Numerical Order) Sample Description (color Replicate Temp (°F/°C) 1 11 3 11 4 11 QUANTITY TYPICAL	Secure (Y 5.8 6 7 7 7 7 7 7 7 7 7	ES) 1 Time: 20 @ 1556 55-gal Drun D.O. (mg/L) tion of Parame +/- 10% 2 0.25 3 0.41 0 1.04 5 1.60 5 2.13 7 2.39 4 2.58 Bailer steel	1533 End Purge: pH eters for three +/- 0.1 units 6.36 6.37 6.38 6.37 6.36 6.36 6.35	Flow through ce Date/Time: Storage Tank ORP (mV) e consecutive rea +/- 10 mV 7.3 -17.9 -38.7 -46.5 -51.5 -53.8 -55.4 Pump/Pump Type Teflon	Il vol. 3/ 11 /2020 @ Ground Turbidity (NTU) dings within the form +/- 10% E DEDICATED BL. Polyethylene	0ther DTW (ft) ollowing limits < 0.3 ft 5.82 5.82 5.81	Gallons Purged: SITE TREATM Internal Purge Volume (gal) >/= 1 flow through cell	<1 ENT SYSTEM Comments/
DTW Before Purging (ft) Begin Purge: Date/Time Purge water disposed to: Temp (°F/°C) Purge Go +/- 3% 1559 12.3 1602 12.3 1608 12.3 1608 12.4 1611 11.3 1614 11.3 1617 11.3 SAMPLE COLLECTION Sample Collected With: Made of: Decon Procedure: (By Numerical Order) Sample Description (color Replicate Temp (°F/°C) 1 11.3 3 11.3 4 11.4 Average: 11.7	(ft) 5.8 Cime: 3/ 11 /20 to: Cond. (uS/cm) e Goals: Stabliza 1/2 395 12.2 395 12.2 395 11.8 385 11.8 380 ON DATA h: Stainless S Alconox V Oldor, turbidity, or onp Cond. (uS/cm) 11.8 380	1 Time: 20 @ 1556 55-gal Drun D.O. (mg/L) tion of Parame +/- 10% 2 0.25 3 0.41 0 1.04 5 1.60 5 2.13 7 2.39 4 2.58 Bailer Gteel	1533 End Purge: pH eters for three +/- 0.1 units 6.36 6.37 6.38 6.37 6.36 6.36 6.35	Flow through ce Date/Time: Storage Tank ORP (mV) e consecutive rea +/- 10 mV 7.3 -17.9 -38.7 -46.5 -51.5 -53.8 -55.4 Pump/Pump Type Teflon	Il vol. 3/ 11 /2020 @ Ground Turbidity (NTU) dings within the form +/- 10% E DEDICATED BL. Polyethylene	0ther DTW (ft) ollowing limits < 0.3 ft 5.82 5.82 5.81	Gallons Purged: SITE TREATM Internal Purge Volume (gal) >/= 1 flow through cell	<1 ENT SYSTEM Comments/
Date/Time	Time: 3/ 11 /20 to:	D.O. (mg/L) tion of Parame +/- 10% 2	pH eters for three +/- 0.1 units 6.36 6.37 6.38 6.37 6.36 6.36 6.35	Date/Time: Storage Tank ORP (mV) e consecutive rea +/- 10 mV 7.3 -17.9 -38.7 -46.5 -51.5 -53.8 -55.4 Pump/Pump Type	3/ 11 /2020 @ Ground Turbidity (NTU) dings within the for +/- 10% DEDICATED BL	Other DTW (ft) ollowing limits < 0.3 ft 5.82 5.82 5.81	Gallons Purged: SITE TREATM Internal Purge Volume (gal) >/= 1 flow through cell	<1 ENT SYSTEM Comments/
Purge water disposed to: Temp (°F/°C) Purge GG +/- 3% 1559 12 1602 12 1608 12 1608 12 1611 11 1614 11 1617 11 SAMPLE COLLECTION Sample Collected With: Made of: Decon Procedure: (By Numerical Order) Sample Description (color Replicate Temp (°F/°C) 1 11 2 11 3 11 4 11 Average: 11 QUANTITY TYPICAL	to:	D.O. (mg/L) tion of Parame +/- 10% 2	pH eters for three +/- 0.1 units 6.36 6.37 6.38 6.36 6.36 6.36	Storage Tank ORP (mV) e consecutive rea +/- 10 mV 7.3 -17.9 -38.7 -46.5 -51.5 -53.8 -55.4 Pump/Pump Type	Ground Turbidity (NTU) dings within the form +/- 10% DEDICATED BL	Other DTW (ft) ollowing limits < 0.3 ft 5.82 5.82 5.81	Internal Purge Volume (gal) >/= 1 flow through cell	ENT SYSTEM Comments/
Time (°F/°C) Purge Go +/- 3% 1559 12 1602 12 1608 12 1611 11 1614 11 1617 11 SAMPLE COLLECTION Sample Collected With: Made of: [Decon Procedure: [(By Numerical Order) Sample Description (color Replicate Temp (°F/°C) 1 11 2 11 3 11 4 11 Average: 11 QUANTITY TYPICAL	Cond. (uS/cm)	D.O. (mg/L) tion of Parame +/- 10% 2	pH eters for three +/- 0.1 units 6.36 6.37 6.38 6.37 6.36 6.36 PVC	ORP (mV) e consecutive rea +/- 10 mV 7.3 -17.9 -38.7 -46.5 -51.5 -53.8 -55.4 Pump/Pump Type	Turbidity (NTU) dings within the form +/- 10% DEDICATED BL	DTW (ft)	Internal Purge Volume (gal) >/= 1 flow through cell	Comments/
Time (°F/°C) Purge Go +/- 3% 1559 12 1602 12 1608 12 1611 11 1614 11 1617 11 SAMPLE COLLECTION Sample Collected With: Made of: [Decon Procedure: [(By Numerical Order) Sample Description (color Replicate Temp (°F/°C) 1 11 2 11 3 11 4 11 Average: 11 QUANTITY TYPICAL	CC (uS/cm) e Goals: Stablizz +/- 3% 12.2 395 12.4 396 12.2 395 12.0 389 11.8 385 11.8 380	(mg/L) tion of Parame +/- 10% 2	6.36 6.37 6.38 6.37 6.36 6.36 6.36 6.35	(mV) e consecutive rea +/- 10 mV 7.3 -17.9 -38.7 -46.5 -51.5 -53.8 -55.4 Pump/Pump Type	(NTU) dings within the for +/- 10% BEDEDICATED BL Polyethylene	(ft) bllowing limits < 0.3 ft 5.82 5.82 5.81	Volume (gal) >/= 1 flow through cell	
Purge Gc	2 Goals: Stablizz 2 9% +/- 3% 12.2 395 12.4 396 12.2 395 12.0 389 11.8 385 11.8 380 ON DATA h:	tion of Parame +/- 10% 2	+/- 0.1 units 6.36 6.37 6.38 6.37 6.36 6.36 6.35	e consecutive rea +/- 10 mV 7.3 -17.9 -38.7 -46.5 -51.5 -53.8 -55.4 Pump/Pump Type	DEDICATED BL	5.82 5.82 5.81	>/= 1 flow through cell	
1559 12 1602 12 1605 12 1608 12 1611 11 1614 11 1617 11 SAMPLE COLLECTION Sample Collected With: Made of:	12.2 395. 12.4 396. 12.2 395. 12.0 389. 11.8 385. 11.8 380. ON DATA h:	2 0.25 3 0.41 0 1.04 5 1.60 5 2.13 7 2.39 4 2.58 Bailer Steel	6.36 6.37 6.38 6.37 6.36 6.36 6.35	7.3 -17.9 -38.7 -46.5 -51.5 -53.8 -55.4 Pump/Pump Type	DEDICATED BL	5.82 5.82 5.81		
1602 12. 1605 12. 1608 12. 1611 11. 1614 11. 1617 11. SAMPLE COLLECTION Sample Collected With: Made of: Decon Procedure: [By Numerical Order] Sample Description (color Replicate Temp (°F/°C) 1 11. 11. 2 11. 3 11. 4 11. 4 11. Average: 11. 11. 11. QUANTITY TYPICAL 11.	12.4 396 12.2 395 12.0 389 11.8 385 11.8 380 ON DATA h:	3 0.41 0 1.04 5 1.60 5 2.13 7 2.39 4 2.58 Bailer Steel	6.37 6.38 6.37 6.36 6.36 6.35	-17.9 -38.7 -46.5 -51.5 -53.8 -55.4 Pump/Pump Type	Polyethylene	5.82 5.81	Dedicated	
1605 12.2 1608 12.4 1611 11.4 1614 11.4 1617 11.5 1617 11.5 1617 11.5 1617 11.5 1617 11.5 1617	12.2 395. 12.0 389. 11.8 385. 11.8 380. CON DATA h:	1.04 5 1.60 5 2.13 7 2.39 4 2.58 Bailer Steel	6.38 6.37 6.36 6.36 6.35	-38.7 -46.5 -51.5 -53.8 -55.4 Pump/Pump Type	Polyethylene	5.81 ADDER	Dedicated	
1608 12.0 1611 11.3 1614 11.3 1617 11.3 SAMPLE COLLECTION Sample Collected With: Made of: Decon Procedure: (By Numerical Order) Sample Description (color Replicate Temp (°F/°C) 1 11.3 2 11.7 3 11.7 4 11.7 Average: 11.7 QUANTITY TYPICAL	12.0 389. 11.8 385. 11.8 380. ON DATA h:	5 1.60 5 2.13 7 2.39 4 2.58 Bailer Steel	6.37 6.36 6.36 6.35	-46.5 -51.5 -53.8 -55.4 Pump/Pump Type	Polyethylene	ADDER	Dedicated	
1611	11.8 385. 11.8 382. 11.8 380. CON DATA h:	5 2.13 7 2.39 4 2.58 Bailer Steel	6.36 6.36 6.35	-51.5 -53.8 -55.4 Pump/Pump Type	Polyethylene		Dedicated	
1611	11.8 385. 11.8 382. 11.8 380. CON DATA h:	5 2.13 7 2.39 4 2.58 Bailer Steel	6.36 6.36 6.35	-51.5 -53.8 -55.4 Pump/Pump Type	Polyethylene		Dedicated	
1614 11.3 1617 11.3 SAMPLE COLLECTION Sample Collected With: Made of: Decon Procedure: [By Numerical Order] Sample Description (color Temp (°F/°C) 1 11.3 2 11.4 3 11.7 4 11.7 Average: 11.7 QUANTITY TYPICAL	11.8 382 11.8 380 ON DATA h:	7 2.39 4 2.58 Bailer Steel	6.36 6.35	-53.8 -55.4 Pump/Pump Type	Polyethylene		Dedicated	
SAMPLE COLLECTION Sample Collected With: Made of: Decon Procedure: (By Numerical Order) Sample Description (color Replicate Temp (°F/°C) 1 11. 2 11. 3 11. 4 11. Average: 11.	ON DATA h: Stainless S Alconox V Other color, turbidity, or np Cond. (uS/cm) 11.8 380.	Bailer Steel	6.35	-55.4 Pump/Pump Type	Polyethylene		Dedicated	
SAMPLE COLLECTION Sample Collected With: Made of: Decon Procedure: (By Numerical Order) Sample Description (color Replicate Temp (°F/°C) 1 11.: 2 11.: 3 11.: 4 11.: Average: 11.: QUANTITY TYPICAL	ON DATA h: Stainless S Alconox V Other color, turbidity, or np Cond. (uS/cm) 11.8 380	Bailer Steel	PVC	Pump/Pump Type	Polyethylene		Dedicated	
Sample Collected With: Made of: Decon Procedure: (By Numerical Order) Sample Description (color Replicate Temp (°F/°C) 1 11.3 2 11.7 3 11.7 4 11.7 Average: 11.7	h: Stainless S Alconox V Alconox V Otholor, turbidity, or np Cond. (uS/cm) 11.8 380.	steel Vash	PVC	Teflon	Polyethylene		Dedicated	
Sample Collected With: Made of: Decon Procedure: (By Numerical Order) Sample Description (color Replicate Temp (°F/°C) 1 11.3 2 11.7 3 11.7 4 11.7 Average: 11.7	h: Stainless S Alconox V Alconox V Otholor, turbidity, or np Cond. (uS/cm) 11.8 380.	steel Vash	PVC	Teflon	Polyethylene		Dedicated	
Made of: Decon Procedure: (By Numerical Order) Sample Description (color Temp (°F/°C) 1 11.3 2 11.3 3 11.4 4 11.7 Average: 11.7 QUANTITY TYPICAL	Stainless S Alconox V Other color, turbidity, or np Cond. (uS/cm) 11.8 380	steel Vash	PVC	Teflon	Polyethylene		Dedicated	
Decon Procedure: (By Numerical Order) Sample Description (color Replicate Temp (°F/°C) 1 11.3 2 11.7 3 11.7 4 11.7 Average: 11.7	Alconox V Other Olor, turbidity, och	Vash 🔲		—		U Other	Dedicated	
(By Numerical Order) Sample Description (color Replicate Temp (°F/°C) 1 11.3 2 11.7 3 11.7 4 11.7 Average: 11.7 QUANTITY TYPICAL	Other olor, turbidity, or one Cond. (uS/cm)	_	I Tap Kinse	☐ DI Water	Dedicated			
Replicate Temp (°F/°C) 1 11.3 2 11.3 3 11.4 4 11.4 Average: 11.4	np Cond. (uS/cm)	T						
Replicate Temp (°F/°C) 1 11.3 2 11.7 3 11.7 4 11.7 Average: 11.7 QUANTITY TYPICAL	np Cond. (uS/cm) 11.8 380	or chaon ataly	. CLEAD CO	I ODI ESC NO C	DOD NO SHEEN			
(°F/°C) 1	(uS/cm) 11.8 380.	or, sheen, etc.).	. CLEAR, CO	LOKLESS, NO C	DOK, NO SHEEN			
2 11.7 3 11.7 4 11.7 Average: 11.7		D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
3 11.1 4 11.1 Average: 11.1 QUANTITY TYPICAL	11.7 379	3 2.61	6.35	-55.7				
4 11.' Average: 11.' QUANTITY TYPICAL		6 2.66	6.35	-55.8				
Average: 11.7 QUANTITY TYPICAL	11.7 379.	4 2.68	6.35	-56.0				
Average: 11.7 QUANTITY TYPICAL	11.7 379.	4 2.71	6.35	-56.1				
QUANTITY TYPICAL	11.7 379.			-55.9	#DIV/0!			
	(8010) (8020)				pplicable or write	non-standard ai	wa 🗆	OR 🗆
					(8141) (Oil & G	rease)	wa 🗆	OR \square
					(HCO3/CO3) (C			OK —
				n) (NH3) (NO3				
(Total Cyan	Cyanide) (WAD	Cyanide) (Free	e Cyanide)					
(Total Meta	Metals) (As) (Sb	(Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
		(Sb) (Ba) (Be) ((Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni)	(Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (Na) (Hardness) (Si
,	Boeing short list)	A						
Methane E	ne Ethane Ethene	Acetylene						
others								
	s):							
Duplicate Sample No(s):								



Project Nam	ne:	Boeing Rent	on		Project Number	er:	0025217.099.0	99	
Event:		Quarterly M	arch 2020		Date/Time:	3/ 11 /2020@ 1	1540		
Sample Nun	nber:	RGW180S-	200311		Weather:	OVERCAST, C	OOL		
Landau Rep	resentative:	BXM/SRB/J	AN						
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)		Damaged (N	(O)	Describe:	FLUSH		
DTW Before	Purging (ft)	5.85	Time:	1511	Flow through ce	ll vol.		GW Meter No.(s SLOPE-8
Begin Purge:	Date/Time:	3/ 11 /2020	@ 1512	End Purge:	Date/Time:	3/11 /2020 @ 13	535	Gallons Purged:	<1
Purge water d	disposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
Time	Temp (°F/°C)	Cond.	D.O.	pН	ORP (mV)	Turbidity	DTW (ft)	Internal Purge	
Time		(uS/cm) ls: Stablization	(mg/L) n of Parame	ters for three	. ,	(NTU) dings within the fo	. ,	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1515	11.6	226.6	0.13	6.40	17.1		5.85	·	
1518	11.3	217.8	0.19	6.37	-0.1		5.84	- <u></u>	
1521	11.2	213.2	0.20	6.37	-10.2		5.83		
1524	11.1	209.9	0.24	6.37	-16.4				
1527	11.1	208.3	0.40	6.37	-20.2				
1530	11.1	208.3	0.52	6.37	-21.7		-	· 	
1533	11.1	207.7	0.92	6.36	-26.1				
		<u> </u>							
	LLECTION D		Bailer		D /D T	DEDICATED DI	ADDED		
Sample Collec	ctea with:		_	_		DEDICATED BL		.	
Made of:		Stainless Stee	_	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	dure:	Alconox Was	h 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other							
Sample Descr	ription (color, t	urbidity, odor,	sheen, etc.):	CLEAR, CO	LORLESS, NO	DOR, NO SHEEN	I, DARK AND I	LIGHT FINES	
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	11.1	207.7	0.96	6.36	-26.4				
2	11.1	207.7	0.99	6.37	-26.8				
3	11.1	207.5	1.02	6.36	-27.0		-	· 	
4	11.1	207.6	1.16	6.36	-28.1				
Average:	11.1	207.6	1.03	6.36	-27.1	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AL	LOWED PE	ER BOTTLE	TYPE (Circle a	pplicable or write	non-standard a	nalysis below)	
7	(<mark>8260</mark>) (801	0) (8020) (N	WTPH-G)	(NWTPH-Gx)) (BTEX)			wa 🗆	OR □
2	` ` `					(8141) (Oil & G		wa 🗆	OR 🗆
		•				(HCO3/CO3) (C	Cl) (SO4) (NO	(NO2) (F)	
		e) (Total PO4			n) (NH3) (NO3	/NU2)			
		•			(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
						(b) (Mg) (Mn) (Ni)			
	VOC (Boein								
	Methane Eth	ane Ethene Ac	etylene						
	others								
Ouplicate Sar	mple No(s):	Duplicate Loc	ation (DUP5	5)					



Project Nam	ne:	Boeing Ren	ton		Project Number	r:	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/ 11 /2020@	1155		
Sample Nun	nber:	RGW189S-	200311		Weather:	OVERCAST, C	OOL		
Landau Rep	resentative:	BXM/SRB/	'JAN						
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	O)	Describe:	FLUSH		
DTW Before	Purging (ft)	5.83	Time:	1122	Flow through ce	ll vol.	'	GW Meter No.(SOLNST INTERFA
	Date/Time:	3/ 11 /2020		End Purge:	_	3/ 11 /2020 @ 1	146	Gallons Purged:	
Purge water d	lisposed to:		55-gal Drum		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)	F	(mV)	(NTU)	(ft)	Volume (gal)	Observations
	U					dings within the fo		>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1126	10.5	114.2	1.26	6.13	-26.8		5.86		
1129	10.5	112.0	1.26	6.45	-29.4		5.92		
1132	10.4	109.4	1.24	6.52	-35.8		5.97		
1135	10.4	108.4	1.25	6.55	-38.3		6.00		
							-		
1138	10.3	107.6	1.23	6.57	-40.4		6.02		
	<u> </u>						-		
SAMPLE CO	LLECTION D	OATA							
Sample Collec	cted With:		Bailer		Pump/Pump Type	DEDICATED BL	ADDER		
Made of:		Stainless Ste	el 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	dure:	Alconox Wa	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other			_				
Sample Descr	ription (color,	turbidity, odor	, sheen, etc.):	CLEAR, CO	LORLESS, NO (DOR, NO SHEEN			
			_						
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O.	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
	, , ,	,	(mg/L)			(1410)	(11)	(Fe II)	Observations
1	10.3	107.1	1.21	6.58	-41.5				
2	10.3	106.9	1.21	6.58	-41.9				
3	10.3	106.7	1.22	6.58	-42.2				
4	10.3	106.6	1.21	6.58	-42.6				
Average:	10.3	106.8	1.21	6.58	-42.1	#DIV/0!	'		
									-
QUANTITY						pplicable or write	non-standard a		op 🗆
7		0) (8020) (N				(8141) (Oil & G	maasa)	WA □	OR OR
2	, ,					(8141) (Oll & G (HCO3/CO3) (O			UK 🗀
1					n) (NH3) (NO3		.i/ (BU4) (NU	(1102) (F)	
		le) (WAD Cy			, (= .= 10)	· · · · · · · · · · · · · · · · · · ·			
		•			(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
									Na) (Hardness) (Silic
	VOC (Boein	g short list)							-
	Methane Eth	nane Ethene A	cetylene						
	others								
Duplicate Sar	nnle No(s).	MSMSD Loc	cation						
Comments:	r								
Signature:	BXM					Deter	3.11.2020		



Project Nan	ne:	Boeing Rent	on		Project Number	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	arch 2020		Date/Time:	3/11 /2020@	1636		
Sample Nur	nber:	RGW207S-	200311		Weather:	CLOUDY			
Landau Rep	resentative:	BXM/SRB/J	JAN						
WATER LE	VEL/WELL/PU	JRGE DATA							
Well Conditi	on:	Secure (YES)	1	Damaged (N	(O)	Describe:	_		
DTW Before	Purging (ft)	6.45	Time:	1608	Flow through ce	ll vol.		GW Meter No.(s
Begin Purge:	Date/Time:	3/11 /2020 @	1609	End Purge:	Date/Time:	3/11 /2020 @	1630	Gallons Purged:	0.
Purge water	disposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
Time	Temp (° F /° C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
						dings within the fo		>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1612	12.0	271.4	0.81	6.77	-13.8		6.26		
1615	11.6	263.4	0.92	6.77	-22.3		6.22		
1618	11.3	256.1	1.11	6.77	-27.6		6.20		
1621		249.8	0.93	6.78	-33.2		6.20		-
			-				-		
1624		246.2	0.97	6.79	-35.6		6.20		
1627	10.9	240.5	1.07	6.79	-38.2				
1629	10.9	238.4	1.00	6.79	-39.4				
	DLLECTION D		D ''		D D T	DED DI ADDED			
Sample Colle	cted With:		Bailer			DED. BLADDER		— • · · ·	
Made of:		Stainless Stee	_		Teflon	Polyethylene	Other	Dedicated	
Decon Proce	dure:	Alconox Was	h 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	al Order)	Other							
Sample Desc	ription (color,	turbidity, odor,	sheen, etc.):	NO COLOR	, LOW TURB, N	O/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	10.9	237.8	0.98	6.80	-39.7				
2	10.8	236.9	0.99	6.79	-39.9				
3	10.8	236.8	0.97	6.79	-40.0				
4	10.8	236.5	0.97	6.80	-40.2				
Average:	10.8	237.0	0.98	6.80	-40.0	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AL	LOWED PI	ER BOTTLE	TYPE (Circle a	oplicable or write	non-standard a	nalysis below)	
7	(8260) (801	0) (8020) (N	WTPH-G)	(NWTPH-Gx)) (BTEX)			WA □	OR 🗆
2	(8270D) (PA	AH) (NWTPH	(NWTI	PH-Dx) (TPI	H-HCID) (8081)	(8141) (Oil & Gr	rease)	wa 🗆	or □
	(pH) (Condu	activity) (TDS) (TSS) (E	BOD) (Turbio	dity) (Alkalinity)	(HCO3/CO3) (C	Cl) (SO4) (NO	3) (NO2) (F)	
	(COD) (TO	C) (Total PO4) (Total Kie	dahl Nitroger	n) (NH3) (NO3	/NO2)			
		le) (WAD Cya							
						(Pb) (Mg) (Mn) (I			
			(Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) ((Ag) (Se) (Tl) (V	(Zn) (Hg) (K) (Na) (Hardness) (Si
	VOC (Boein		. 1						
	Methane Eth	nane Ethene Ac	etylene						
	others								
	•								
Duplicate Sa	mple No(s):								
Comments:									_
Signature:	JAN					Date:	3/11/2020		



Project Nan	ne:	Boeing Ren	ton		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	Iarch 2020		Date/Time:	3/11 /2020@	855		
Sample Nur	mber:	RGW208S-	200311		Weather:	RAIN, OVERCA	AST, COOL		
Landau Rep	resentative:	BXM/SRB/	JAN						
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)	Damaged (N	(O)	Describe:	FLUSH		
DTW Before	Purging (ft)	7.64	Time:	824	Flow through cel	ll vol.		GW Meter No.(s	SLOPE-8
	Date/Time:	3/11 /2020	@ 826	End Purge:	Date/Time:	3/ 11/2020 @ 84	19	Gallons Purged:	<1
Purge water of	disposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
	Temp	Cond.	D.O.	pН	ORP	Turbidity	DTW	Internal Purge	Comments/
Time	(°F/°C)	(uS/cm)	(mg/L)	рп	(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	
829	11.2	449.1	1.45	6.24	-70.6		7.66		
832	10.6	450.6	1.37	6.19	-85.5		7.67		
835	10.3	444.6	1.88	6.17	-86.1		7.67	·- <u></u> -	
838	10.0	439.6	4.14	6.14	-86.0				
841	10.0	436.5	4.82	6.14	-86.4				
844		434.7	5.05	6.14	-86.7		-		
-								. ——	
847	10.0	430.5	5.32	6.14	-87.3				
	OLLECTION D		Bailer		Dayner /Dayner Trans	DEDICATED BI	ADDED		
Sample Colle	ctea with:	Stainless Stee		PVC	Teflon	DEDICATED BL	Other	Dedicated	
Made of:	. —		_		—	Polyethylene	U Other	Dedicated	
Decon Procee		Alconox Was	sh 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica		Other							
Sample Desc	ription (color, t	urbidity, odor,	sheen, etc.):	CLEAR, CO	LORLESS, NO S	HEEN, NO ODOR.	, DARK FINES		
Replicate	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	рН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Ferrous iron (Fe II)	Comments/ Observations
1	10.0	429.1	5.33	6.15	-87.4				
2	10.0	429.0	5.33	6.15	-87.5				
3	10.0	429.0	5.34	6.15	-87.6				
								· 	
4	10.0	428.3	5.35	6.15	-87.7	WD 777/01			
Average:	10.0	428.9	5.34	6.15	-87.6	#DIV/0!			
QUANTITY	TYPICAL A	NALYSIS AI	LOWED PE	ER BOTTLE	TYPE (Circle ap	oplicable or write i	non-standard a	nalysis below)	
7		0) (8020) (N						WA 🗆	OR 🗆
2						(8141) (Oil & Gr		WA 🗆	OR 🗆
	* /	• • • • • • • • • • • • • • • • • • • •	, , , , , ,	, ,	dity) (Alkalinity) 1) (NH3) (NO3)	(HCO3/CO3) (C	(SO4) (NO	(NO2) (F)	
	, ,	e) (WAD Cy	/ \		1) (11113) (11U3)	1104)			
				•	(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (1	Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
									Na) (Hardness) (Silic
	VOC (Boein	g short list)							
ĺ	•	ane Ethene A	cetylene						
	Methane Eth	anc Entene A							
	Methane Eth	anc Ethene A							
		ane Enene A							
	Methane Eth	and Eulene Av							
Duplicate Sar	others	and Eulene Av							
Duplicate Sar Comments:	others	and Eulene As							



Project Nan	ne:	Boeing Rent	on		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	arch 2020		Date/Time:	3/11 /2020@	1416		
Sample Nur	nber:	RGW259S-	200311		Weather:	CLOUDY			
Landau Rep	resentative:	BXM/SRB/J	AN						
WATER LEV	VEL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)		Damaged (N	(O)	Describe:			
DTW Before	Purging (ft)	5.31	Time:	1347	Flow through ce	ll vol.		GW Meter No.(s
Begin Purge:	Date/Time:	3/11 /2020 @	1351	End Purge:	Date/Time:	3/11 /2020 @	1411	Gallons Purged:	0.1
Purge water of	disposed to:		55-gal Drum		Storage Tank	Ground	Other	SITE TREATM	ENT SYSTEM
Time	Temp (°F/°C)	Cond. (uS/cm)	D.O. (mg/L)	pН	ORP (mV)	Turbidity (NTU)	DTW (ft)	Internal Purge Volume (gal)	Comments/ Observations
	Purge Goa	. ,	, 0 ,	ters for three		dings within the fo	. ,	>/= 1 flow	
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/ - 10%	< 0.3 ft	through cell	
1354	11.4	212.9	4.49	6.68	-1.1		5.55		_
1357	11.3	211.7	3.91	6.66	0.1		5.54		
1400	11.4	210.8	3.10	6.64	0.0		5.54		
1403	11.5	210.9	2.51	6.61	1.2		5.54		
1406	5 11.7	211.2	2.22	6.60	1.6				
1409	11.7	211.1	2.03	6.59	1.6				
1411	11.7	211.1	1.76	6.59	1.3				
	-								
SAMPLE CO	DLLECTION D	OATA							
Sample Colle	ected With:		Bailer		Pump/Pump Type	DED. BLADDER			_
Made of:		Stainless Stee	ı 🔲	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Procee	dure:	Alconox Was	h 🔲	Tap Rinse	DI Water	Dedicated			
(By Numerica	al Order)	Other			—				
Sample Desc	ription (color,	turbidity, odor,	sheen, etc.):	SLIGHT TA	N, LOW-MED T	URB, 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	11.7	211.1	1.73	6.59	1.3				
2	11.7	211.1	1.70	6.59	1.3				
3	11.7	211.1	1.69	6.58	1.3				
4	11.7	211.1	1.65	6.58	1.2	//DB1/01			
Average:	11.7	211.1	1.69	6.59	1.3	#DIV/0!			
QUANTITY	1					pplicable or write	non-standard a		
3		0) (8020) (N						WA L	OR 🗆
			/ \			(8141) (Oil & G		WA D	OR 🗆
1					n) (NH3) (NO3	(HCO3/CO3) (C	(SO4) (NO	(NO2) (F)	
-		le) (WAD Cya			1) (11111) (1101	1,02)			
		•			(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
	(Dissolved M	etals) (As) (Sb)	(Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) ((Ag) (Se) (Tl) (V	(Zn) (Hg) (K)	Na) (Hardness) (Sil
	VOC (Boein	g short list)							
	Methane Eth	nane Ethene Ac	etylene						
	others								
<u> </u>	ouicis								
Duplicate Sar	mple No(s):								
Comments:									
Signature:	JAN					Date:	3/11/2020		



Project Nam	ne:	Boeing Rent	on		Project Numbe	r <u>:</u>	0025217.099.0	99	
Event:		Quarterly M	arch 2020		Date/Time:	3/11 /2020@	1341		
Sample Nun	nber:	RGW260S-	200311		Weather:	CLOUDY			
Landau Rep	resentative:	BXM/SRB/J	AN						
WATER LEV	/EL/WELL/PU	JRGE DATA							
Well Condition	on:	Secure (YES)		Damaged (N	(O)	Describe:	_		
DTW Before	Purging (ft)	5.34	Time:	1316	Flow through ce	ll vol.		GW Meter No.(s
Begin Purge:	Date/Time:	3/11 /2020 @	1317	End Purge:	Date/Time:	3/11 /2020 @	1337	Gallons Purged:	0.
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	
Time	(°F/°C)	(uS/cm)	(mg/L)	tors for thro	(mV)	(NTU) dings within the fo	(ft)	Volume (gal) >/= 1 flow	Observations
	+/- 3%	+/- 3%	+/- 10%	+/- 0.1 units	+/- 10 mV	+/- 10%	< 0.3 ft	through cell	
1320		252.8	0.75	6.53	25.5	.,,	5.38	g	
			-						
1323		251.3	0.71	6.47	17.3		5.36		
1326	10.9	248.3	0.80	6.43	8.7		5.34		
1329	10.7	246.2	0.76	6.41	3.6		5.34		
1332	10.5	244.6	0.72	6.40	-1.5		5.34		
1335	10.4	243.8	0.81	6.39	-5.2				
1337	10.4	243.5	0.79	6.39	-7.5				
	-		_						
SAMPLE CO	LLECTION D	OATA							
Sample Colle	cted With:		Bailer		Pump/Pump Type	DED. BLADDER			
Made of:		Stainless Stee	ı 📮	PVC	Teflon	Polyethylene	Other	Dedicated	
Decon Proced	dure:	Alconox Was	h 🗖	Tap Rinse	DI Water	Dedicated			
(By Numerica	ıl Order)	Other	_	•	421	_			
Sample Descr	ription (color, t		sheen, etc.):	NO COLOR	, LOW TURB, N	O/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	10.4	243.4	0.78	6.38	-7.8				
2	10.4	243.5	0.79	6.38	-8.0				
3	10.3	243.4	0.82	6.38	-8.3				
4	10.3	243.4	0.79	6.38	-8.6				
Average:	10.4	243.4	0.80	6.38	-8.2	#DIV/0!			
			I OWED DI	ED DOWN E				1	
QUANTITY		NALYSIS AL 0) (8020) (N				pplicable or write	non-standard a	WA	OR 🗆
3						(8141) (Oil & G	reace)	wa 🗆	OR 🗆
		/ \	/ \			(HCO3/CO3) (C			OK L
1					n) (NH3) (NO3		51) (501) (110	5) (1102) (1)	
		le) (WAD Cya				·			
		•			(Cr) (Cu) (Fe)	(Pb) (Mg) (Mn) (I	Ni) (Ag) (Se) (Tl) (V) (Zn) (H	g) (K) (Na)
	(Dissolved M	etals) (As) (Sb)	(Ba) (Be) (C	Ca) (Cd) (Co)	(Cr) (Cu) (Fe) (P	b) (Mg) (Mn) (Ni) ((Ag) (Se) (Tl) (V	(Zn) (Hg) (K)	Na) (Hardness) (Si
	VOC (Boein	g short list)							
	Methane Eth	nane Ethene Ac	etylene						
	others								
Duplicate Sar	nple No(s):								
Comments:									
	JAN					Date:	3/11/2020		

wood.

Appendix C



To: Kathleen Goodman, Project Manager Project: PS20203450.2020

From: Chelsea Foster c: Project File

Tel: (206) 342-1760 Fax: (206) 342-1761 Date: April 10, 2020

Subject: Summary Data Quality Review

March 2020 Boeing Renton Groundwater Sampling

SWMU-168

ARI Work Order Number: 20C0121

This memo presents the summary data quality review of three primary groundwater samples and one trip blank sample collected on March 9, 2020. The samples were submitted to Analytical Resources, Inc. (ARI), located in Tukwila, Washington, a laboratory accredited by the Washington State Department of Ecology. The samples were analyzed for volatile organic compounds (vinyl chloride) by U.S. Environmental Protection Agency (EPA) Method 8260C with selected ion monitoring.

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

Sample ID	Laboratory Sample ID	Requested Analyses
Trip Blank	20C0121-01	vinyl chloride
RGW231S-200309	20C0121-02	vinyl chloride
RGW229S-200309	20C0121-03	vinyl chloride
RGW230I-200309	20C0121-04	vinyl chloride

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.

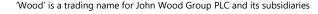
Holding times, method/trip blanks, surrogate recoveries, laboratory control samples (LCS) and laboratory control sample duplicates (LCSD), matrix spike/matrix spike duplicates (MS/MSD), field duplicates, and reporting limits were reviewed where available to assess compliance with applicable methods.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

ARI received the samples on March 10, 2020. The temperature of the cooler was recorded upon receipt and was below the maximum acceptable temperature of 6 degrees Celsius (°C).

Organic analyses

Samples were analyzed for vinyl chloride. 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 analysis of MS/MSD samples. The project frequency requirement was achieved with MS/MSD analysis conducted 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 ARI work order number 20C0121 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
Trip Blank	none
RGW231S-200309	none
RGW229S-200309	none
RGW230I-200309	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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To: Kathleen Goodman, Project Manager Project: PS20203450.2020

From: Chelsea Foster cc: Project File

Tel: (206) 342-1760 Fax: (206) 342-1761 Date: April 10, 2020

Subject: Summary Data Quality Review

March 2020 Boeing Renton Groundwater Sampling

SWMU-172/174

ARI Work Order Number: 20C0123

This memo presents the summary data quality review of 11 primary groundwater samples, one groundwater field duplicate, and one trip blank sample collected on March 9, 2020. The samples were submitted to Analytical Resources, Inc. (ARI) located in Tukwila, Washington, a laboratory accredited by the Washington State Department of 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;
- Total organic carbon (TOC) by Standard Method (SM) 5310 B-00; 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
Trip Blank	20C0123-01	all
RGW233I-200309	20C0123-02	all
RGW236S-200309	20C0123-03	all
RGW235I-200309	20C0123-04	all
RGW232S-200309	20C0123-05	all
RGW234S-200309	20C0123-06	all
RGW173S-200309	20C0123-07	all
RGW172S-200309	20C0123-08	all
RGW152S-200309	20C0123-09	all
RGW153S-200309	20C0123-10	all
RGW081S-200309	20C0123-11	all
RGW226S-200309	20C0123-12	all
RGWDUP1-200309	20C0123-13	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 the EPA guidance documents (EPA, 2014a and b).

ARI received the samples on March 10, 2020. The temperatures of the coolers were recorded upon receipt and were below the maximum acceptable temperature of 6 degrees Celsius (°C).

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. 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	150	138	20	8
RGW152-200309/	cis-1,2-dichloroethene	892	808	20	10
RGWDUP1-200309	trichloroethene	278	269	20	3
	tetrachloroethene	1,120	1,200	20	7

Notes

ng/L = nanograms per liter RPD= relative percent difference

7. Reporting Limits and Laboratory Flags – Acceptable

Inorganic analyses

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

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

One field duplicate was submitted for each analysis during this sampling event, meeting the project frequency requirement of five percent, or one for every 20 samples. Primary and duplicate results are summarized in the table below. The project-specific control limit for field duplicate RPDs is 30 percent for concentrations greater than five times the reporting limit. The field duplicate RPDs for TOC, total arsenic, total copper, and total lead were outside of the control limit of 30 percent and are therefore qualified as estimated and flagged with a "J."

Sample ID/ Field Duplicate ID	Analyte	Primary Result	Duplicate Result	Reporting Limit	Units	RPD (%)
	TOC	8.70	5.68	0.50	mg/L	42
RGW152-200309/	total arsenic	3.84	2.73	0.400	μg/L	34
RGWDUP1-200309	total copper	8.03	5.74	1.00	μg/L	33
	total lead	6.13	3.57	0.200	μg/L	53

Notes

 μ g/L = micrograms per liter 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 ARI work order number 20C0123 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	Qualified Result	Units	Qualifier Reason
Trip Blank	none	NA	NA	NA
RGW233I-200309	none	NA	NA	NA
RGW236S-200309	none	NA	NA	NA
RGW235I-200309	none	NA	NA	NA
RGW232S-200309	none	NA	NA	NA
RGW234S-200309	none	NA	NA	NA
RGW173S-200309	none	NA	NA	NA
RGW172S-200309	none	NA	NA	NA
RGW152S-200309	TOC total arsenic total copper total lead	8.70 J 3.84 J 8.03 J 6.13 J	mg/L µg/L µg/L µg/L	field duplicate RPD
RGW153S-200309	none	NA	NA	NA
RGW081S-200309	none	NA	NA	NA
RGW226S-200309	none	NA	NA	NA
RGWDUP1-200309	TOC total arsenic total copper total lead	5.68 J 2.73 J 5.74 J 3.57 J	mg/L μg/L μg/L μg/L	field duplicate RPD

Notes

 μ g/L = micrograms per liter

NA = not applicable

mg/L = milligrams per liter

RPD= relative percent difference

TOC = total organic carbon

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 Contract Laboratory Program 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.



To: Kathleen Goodman, Project Manager Project: PS20203450.2020

From: Chelsea Foster c: Project File

Tel: (206) 342-1760 Fax: (206) 342-1761 Date: April 10, 2020

Subject: Summary Data Quality Review

March 2020 Boeing Renton Groundwater Sampling

Building 4-78/79 SWMU/AOC Group

ARI Work Order Number: 20C0136 and 20C0158

This memo presents the summary data quality review of 16 primary groundwater samples, one field duplicate groundwater sample, and two trip blank samples collected on March 10 and 11, 2020. 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 Gx; 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
RGW241S-200310	20C0136-01	VOCs and TPH-G
RGW242I-200310	20C0136-02	VOCs and TPH-G
RGW143S-200310	20C0136-03	all
RGW240D-200310	20C0136-04	all
RGW239I-200310	20C0136-05	all
RGW238I-200310	20C0136-06	all
RGW237S-200310	20C0136-07	all
RGW209S-200310	20C0136-08	all
RGW243I-200310	20C0136-09	all
RGW038S-200310	20C0136-10	all
TripBlanks-200310	20C0136-11	VOCs and TPH-G
RGW039S-200311	20C0158-01	all
RGW034S-200311	20C0158-02	all

Sample ID	Laboratory Sample ID	Requested Analyses
RGW033S-200311	20C0158-03	all
RGW210S-200311	20C0158-04	all
RGW031S-200311	20C0158-05	all
RGW244S-200311	20C0158-06	all
RGWDUP2-200311	20C0158-07	all
TripBlanks-200311	20C0158-08	VOCs and TPH-G

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

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

ARI received the samples on March 11 and 12, 2020. The temperatures of the coolers were recorded upon receipt and were below the maximum acceptable temperature of 6 degrees Celsius (°C).

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 The surrogate percent recoveries were within control limits, with the exception of 1,2-dichloroethane-d4 in samples RGW031S-200311 and RGWDUP2-200311. The samples were reanalyzed at a dilution for which all surrogates were within control limits.
- 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 (μg/L)	Duplicate Result (μg/L)	Reporting Limit (µg/L)	RPD (%)
	vinyl chloride	ND	ND	0.20	NC
	cis-1,2-dichloroethene	0.61	0.56	0.20	NC
RGW031S-200311/ RGWDUP2-200311	benzene	34.8	35.5	0.20	2
	trichloroethene	ND	ND	0.20	NC
	TPH-G	2,980	3,060	100	3

Abbreviations

 μ g/L = micrograms per liter

NC = not calculated

ND = not detected

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 Acceptable
- 4. MS 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 RPD is acceptable.

Sample ID/ Field Duplicate ID	Analyte	Primary Result (mg/L)	Duplicate Result (mg/L)	Reporting Limit (mg/L)	RPD (%)
RGW031S-200311/ RGWDUP2-200311	TOC	13.13	13.07	0.5	<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 ARI work order numbers 20C0136 and 20C0158 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
RGW241S-200310	none
RGW242I-200310	none
RGW143S-200310	none
RGW240D-200310	none
RGW239I-200310	none
RGW238I-200310	none
RGW237S-200310	none
RGW209S-200310	none
RGW243I-200310	none
RGW038S-200310	none
TripBlanks-200310	none
RGW039S-200311	none
RGW034S-200311	none
RGW033S-200311	none
RGW210S-200311	none
RGW031S-200311	none
RGW244S-200311	none
RGWDUP2-200311	none
TripBlanks-200311	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.

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



To: Kathleen Goodman, Project Manager Project: PS20203450.2020

From: Chelsea Foster c: Project File

Tel: (206) 342-1760 Fax: (206) 342-1761 Date: April 10, 2020

Subject: Summary Data Quality Review

March 2020 Boeing Renton Groundwater Sampling

AOC-001 and -002 and AOC-003 ARI Work Order Number: 20C0180

This memo presents the summary data quality review of five primary groundwater samples and one trip blank sample collected on March 12, 2020. The samples were submitted to Analytical Resources, Inc. (ARI), located in Tukwila, Washington, a laboratory accredited by the Washington State Department of 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); and
- 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 5310 B-00.

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

Sample ID	Laboratory Sample ID	Requested Analyses
TripBlanks-200312	20C0180-01	VOCs
RGW193S-200312	20C0180-02	all AOC-001 and -002 analyses
RGW249S-200312	20C0180-03	all AOC-003 analyses
RGW247S-200312	20C0180-04	all AOC-003 analyses
RGW248I-200312	20C0180-05	all AOC-003 analyses
RGW188S-200312	20C0180-06	all AOC-003 analyses

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 March 13, 2020. The temperatures of the coolers were recorded upon receipt and were below the maximum acceptable temperature of 6 degrees Celsius (°C).

Organic analyses

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

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

Field duplicates were not collected at this site during this sampling event due to construction causing abandonement of the wells that were previously used to collect duplicate samples. The project frequency requirement of one field duplicate for every 20 samples was achieved with field duplicate samples collected at other sites included in this sampling event.

7. Reporting Limits and Laboratory Flags – Acceptable

Inorganic analyses

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

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

Field duplicates were not collected at this site during this sampling event due to construction causing abandonement of wells that were previously used to collect duplicate samples. 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 ARI work order number 20C0180 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
TripBlanks-200312	none
RGW193S-200312	none
RGW249S-200312	none
RGW247S-200312	none
RGW248I-200312	none
RGW188S-200312	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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To: Kathleen Goodman, Project Manager Project: PS20203450.2020

From: Chelsea Foster c: Project File

Tel: (206) 342-1760 Fax: (206) 342-1761 Date: April 10, 2020

Subject: Summary Data Quality Review

March 2020 Boeing Renton Groundwater Sampling

AOC-004

ARI Work Order Number: 20C0119

This memo presents the summary data quality review of two primary groundwater samples collected on March 9, 2020. The samples were submitted to Analytical Resources, Inc. (ARI), located in Tukwila, Washington, a laboratory accredited by the Washington State Department of Ecology. The samples were analyzed for total lead by U.S. Environmental Protection Agency (EPA) Method 6020A.

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

Sample ID	Laboratory Sample ID	Requested Analyses
RGW174S-200309	20C0119-01	total lead
RGW250S-200309	20C0119-02	total lead

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 OAPP were used.

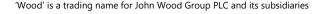
Holding times, method/trip blanks, laboratory control samples (LCS) and laboratory control sample duplicates (LCSD), matrix spike/matrix spike duplicates (MS/MSD), field duplicates, and reporting limits were reviewed where available to assess compliance with applicable methods. If qualification was required,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

ARI received the samples on March 10, 2020. The temperature of the cooler was recorded upon receipt and was below the maximum acceptable temperature of 6 degrees Celsius (°C).

Inorganic analyses

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

- 1. Preservation and Holding Times Acceptable
- 2. Blanks Acceptable
- 3. LCS Acceptable



4. MS/MSD – Acceptable

Additional sample volume for MS/MSD analyses was not submitted with samples collected from this site. MS/MSD results were reported with samples not associated with project samples; therefore, sample results are evaluated based on LCS/LCSD results. Project-specific MS/MSD requirements were met with samples collected at other sites included in this sampling event. The laboratory reported MS/MSD results; but project samples are not evaluated using this data since the spiked sample was not a project sample.

5. 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.

6. Reporting Limits and Laboratory Flags - Acceptable

Overall assessment of data

The table below summarizes the data assessment. The completeness of work order number 20C0119 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
RGW174S-200309	none
RGW250S-200309	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 Inorganic Superfund Data Review: EPA 540-R-013-001, August.

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To: Kathleen Goodman, Project Manager Project: PS20203450.2020

From: Chelsea Foster c: Project File

Tel: (206) 342-1760 Fax: (206) 342-1761 Date: April 10, 2020

Subject: Summary Data Quality Review

March 2020 Boeing Renton Groundwater Sampling

AOC-060

ARI Work Order Numbers: 20C0137

This memo presents the summary data quality review of nine primary groundwater samples, one field duplicate, and one trip blank sample collected on March 10, 2020. The samples were submitted to Analytical Resources, Inc. (ARI), located in Tukwila, Washington, a laboratory accredited by the Washington State Department of Ecology. The samples were selectively analyzed for the following:

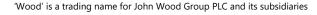
• Volatile organic compounds (VOCs) (cis-1,2-dichloroethene, trichloroethene, and vinyl chloride) by U.S. Environmental Protection Agency (EPA) Method 8260C with selected ion monitoring (SIM); and

• Total organic carbon (TOC) by Standard Method (SM) 5310B-00.

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

Sample ID	Laboratory Sample ID	Requested Analyses
TripBlanks-200310	20C0137-01	all
RGW147S-200310	20C0137-02	all
RGW014S-200310	20C0137-03	all
RGW012S-200310	20C0137-04	all
RGW009S-200310	20C0137-05	all
RGW254S-200310	20C0137-06	all
RGW150S-200310	20C0137-07	all
RGW253I-200310	20C0137-08	all
RGW252S-200310	20C0137-09	all
RGW149S-200310	20C0137-10	all
RGWDUP4-200310	20C0137-11	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.

Hold 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).

Samples were received by ARI on March 11, 2020. The temperatures of the coolers were recorded upon receipt and were below the maximum acceptable temperature of 6° 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 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 (%)
RGW014S-200310/ RGWDUP4-200310	vinyl chloride	195	233	20.0	18
	cis-1,2-dichloroethene	151	146	20.0	3
	trichloroethene	41.9	32.4	20.0	NC

Abbreviations

ng/L = nanograms per liter

NC = not calculated

RPD = relative percent difference

7. Reporting Limits and Laboratory Flags – Acceptable

Inorganic analyses

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

- 1. Preservation and Holding Times Acceptable
- 2. Blanks Acceptable
- 3. LCS Acceptable
- 4. MS Acceptable
- 5. Laboratory Duplicates Acceptable
- 6. 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 (%)
RGW014S-200310/ RGWDUP4-200310	TOC	3.08	3.00	0.50	3

Abbreviations

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

7. Reporting Limits – Acceptable

Overall assessment of data

A summary of the data assessment is presented in the table below. The completeness of work order number 20C0137 is 100 percent. Evaluation of the usefulness of these data is based on the EPA guidance document 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
TripBlanks-200310	none
RGW147S-200310	none
RGW014S-200310	none
RGW012S-200310	none
RGW009S-200310	none
RGW254S-200310	none
RGW150S-200310	none
RGW253I-200310	none
RGW252S-200310	none
RGW149S-200310	none
RGWDUP4-200310	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.



To: Kathleen Goodman, Project Manager Project: PS20203450.2020

From: Chelsea Foster c: Project File

Tel: (206) 342-1760 Fax: (206) 342-1761 Date: April 10, 2020

Subject: Summary Data Quality Review

March 2020 Boeing Renton Groundwater Sampling

AOC-090

ARI Work Order Number: 20C0159

This memo summarizes the data quality review of 11 primary groundwater samples, one duplicate sample, and a trip blank sample collected on March 11, 2020. 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 selectively analyzed for the following:

- Volatile organic compounds (VOCs) (acetone, methylene chloride, trans-1,2-dichlorethene, cis-1,2-dichloroethene, chloroform, carbon tetrachloride, benzene, toluene, and 1,1,2-trichloroethane) by U.S. Environmental Protection Agency (EPA) Method 8260C;
- VOCs (vinyl chloride, 1,1-dichloroethene, trichloroethene, tetrachloroethene, and 1,1,2,2-tetrachloroethane) by EPA Method 8260C with selected ion monitoring (SIM);
- Total petroleum hydrocarbons in the gasoline range (TPH-G) by Ecology Method NWTPH Gx;
- Total petroleum hydrocarbons in the diesel and motor oil ranges (TPH-D and TPH O) by Ecology Method NWTPH-Dx (with silica gel cleanup); and
- Total organic carbon (TOC) by Standard Method (SM) 5310C.

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

Sample ID	Laboratory Sample ID	Requested Analyses
RGW208S-200311	20C0159-01	VOCs and TPH
RGW178S-200311	20C0159-02	VOCs and TPH
RGW177I-200311	20C0159-03	VOCs and TPH
RGW189S-200311	20C0159-04	All
RGW165I-200311	20C0159-05	VOCs and TPH
RGW163I-200311	20C0159-06	VOCs and TPH
RGW180S-200311	20C0159-07	VOCs and TPH
RGW207S-200311	20C0159-08	VOCs and TPH
RGW175I-200311	20C0159-09	VOCs and TPH

Sample ID	Laboratory Sample ID	Requested Analyses
RGW176S-200311	20C0159-10	VOCs and TPH
RGW179I-200311	20C0159-11	VOCs and TPH
RGWDUP5-200311	20C0159-12	VOCs and TPH
TripBlanks-200311	20C0159-13	VOCs and TPH-G

Data were reviewed in accordance with the appropriate method procedures and criteria documented in the Quality Assurance Project Plan Addendum (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), laboratory 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 quidelines (EPA, 2014a and b).

ARI received the samples on March 12, 2020. The temperatures of the coolers were recorded upon receipt and were less than the maximum acceptable temperature of 6 degrees Celsius (°C).

Organic analyses

Samples were analyzed for VOCs and TPH. 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 (µg/L)	Duplicate Result (μg/L)	Reporting Limit (µg/L)	RPD (%)
	acetone	ND	ND	5.00	NC
	methylene chloride	ND	ND	1.00	NC
	trans-1,2-dichloroethene	ND	ND	0.20	NC
	cis-1,2-dichloroethene	ND	ND	0.20	NC
	chloroform	ND	ND	0.20	NC
	carbon tetrachloride	ND	ND	0.20	NC
	benzene	ND	ND	0.20	NC
RGW180S-200311/ RGWDUP5-200311	toluene	ND	ND	0.20	NC
	1,1,2-trichloroethane	ND	ND	0.20	NC
	vinyl chloride	ND	ND	0.02	NC
	1,1-dichloroethene	ND	ND	0.02	NC
	trichloroethene	ND	ND	0.02	NC
	tetrachloroethene	ND	ND	0.02	NC
	1,1,2,2-tetrachloroethane	ND	ND	0.02	NC
	TPH-G	ND	ND	100	NC

Abbreviations

 μ g/L = micrograms per liter

NC = not calculated

ND = not detected

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

A field duplicate was not collected for TOC analysis 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 – Acceptable

Overall assessment of data

The completeness of ARI work order numbers 20C0159 is 100 percent. Evaluation of 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, as qualified, meet the project's data quality objectives.

A summary of the data quality review is presented in the table below.

Sample ID	Qualified Analyte
RGW208S-200311	none
RGW178S-200311	none
RGW177I-200311	none
RGW189S-200311	none
RGW165I-200311	none
RGW163I-200311	none
RGW180S-200311	none
RGW207S-200311	none
RGW175I-200311	none
RGW176S-200311	none
RGW179I-200311	none
RGWDUP5-200311	none
TripBlanks-200311	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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To: Kathleen Goodman, Project Manager Project: PS20203450.2020

From: Chelsea Foster c: Project File

Tel: (206) 342-1760 Fax: (206) 342-1761 Date: April 10, 2020

Subject: Summary Data Quality Review

March 2020 Boeing Renton Groundwater Sampling

Bldg. 4-70

ARI Work Order Number: 20C0157

This memo summarizes the data quality review of two primary groundwater samples and one trip blank sample collected on March 11, 2020. The samples were submitted to Analytical Resources, Inc. (ARI), located in Tukwila, Washington, a laboratory accredited by the Washington State Department of Ecology. The samples were analyzed for the following:

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

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

Sample ID	Laboratory Sample ID	Requested Analyses
RGW259S-200311	20C0157-01	all
RGW260S-200311	20C0157-02	all
TripBlanks-200311	20C0157-03	VOCs

Data were reviewed in accordance with the appropriate method procedures and criteria documented in the Quality Assurance Project Plan Addendum (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), laboratory 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 quidelines (EPA, 2014).

ARI received the samples on March 12, 2020. The temperature of the cooler was recorded upon receipt and was less than the maximum acceptable temperature of 6 degrees Celsius (°C).

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 Acceptable except as noted:
- MS/MSD Extra volume was not submitted with samples to perform MS/MSD analyses. MS/MSD
 analyses performed with project samples submitted separately met project frequency
 requirements.
- 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 completeness of ARI work order number 20C0157 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, as qualified, meet the project's data quality objectives.

A summary of the data quality review is presented in the table below.

Sample ID	Qualified Result
RGW259S-200311	none
RGW260S-200311	none
TripBlanks-200311	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.

wood.

Appendix D

TABLE D-1: SWMU-168 HISTORICAL CONCENTRATIONS OF CONSTITUENTS OF CONCERN¹

Boeing Renton Facility, Renton, Washington

													Well	ID ²											
	Current		CPOC Area																						
	Cleanup		GW229S GW230I GW231S																						
Analyte	Level ³	11/7/2016	3/1/2017	8/14/2017	3/5/2018	8/13/2018	3/4/2019	8/12/2019	3/9/2020	11/7/2016	3/1/2017	8/14/2017	3/5/2018	8/13/2018	3/4/2019	8/12/2019	3/9/2020	11/7/2016	3/1/2017	8/14/2017	3/5/2018	8/13/2018	3/4/2019	8/12/2019	3/9/2020
Volatile Organic Com	npounds (μg/	L)																							
Vinyl Chloride	0.11	0.020 U	0.020 U	0.021	0.0273	0.020 U	0.0211	0.020 U	0.020 U	0.032	0.020 U	0.20	0.0873	0.14	0.0566	0.336	0.087	0.020 U	0.020 U	0.020 U	0.0393	0.0326	0.0327	0.026	0.020 U

Notes:

- 1. **Bolded** values exceed the cleanup levels.
- 2. S = shallow well; I = intermediate well.
- 3. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

Abbreviations:

 μ g/L = micrograms per liter

AOC = area of concern

CPOC = conditional point of compliance

SWMU = solid waste management unit

TABLE D-2: SWMU-172 AND SWMU-174 GROUP HISTORICAL CONCENTRATIONS OF CONSTITUENTS OF CONCERN^{1, 2}

Boeing Renton Facility, Renton, Washington

									1	Well ID ³							
	Current								Sc	urce Area							
	Cleanup				GV	V152S						GW	153S				
Analyte	Level ⁴	5/7/2018	8/13/2018	11/12/2018	3/4/2019	5/6/2019	8/12/2019	11/11/2019	3/9/2020	5/7/2018	8/13/2018	11/12/2018	3/4/2019	5/6/2019	8/12/2019	11/11/2019	3/9/2020
Volatile Organic Compound	ds (µg/L)																
cis-1,2-Dichloroethene	0.03	0.348	0.981	1.7	0.678	0.655	0.627	0.530	0.892	0.0649	0.171	0.238	0.107	0.108	0.278	0.204	0.0736
Tetrachloroethene	0.02	1.39	1.09	0.846	0.086	0.0594	0.176	0.384	1.12	0.020 U	0.0845	0.370	0.020 U	0.020 U	0.0544	0.164	0.024
Trichloroethene	0.02	0.226	0.833	0.223	0.152	0.157	0.203	0.145	0.278	0.020 U	0.241	0.394	0.020 U	0.0212	0.0326	0.131	0.02 U
Vinyl Chloride	0.11	0.0972	0.187 J	0.246	0.128	0.173	0.0705	0.0366	0.15	0.313 J	0.248	0.289	0.333	0.242	0.153	0.0859	0.249
Total Metals (µg/L)																	
Arsenic	1.0	2.99 J	75.7	22.6	7.54	4.49	23.4	7.48	3.84	3.51	5.67	7.84	4.49	5.97	4.72	11.9	5.48
Copper	3.5	2.86	24.1	4.76	5.12	2.35	21.8	16.6	8.03	1.01	2.55	16.2	2.00	1.25	1.58	10.2	3.09
Lead	1.0	1.52 J	12.7	2.48 J	3.33	1.26	14.8	12.1	6.13	0.207	3.06	0.381	0.352	0.198	0.351	2.76	0.712

									•	Well ID ³							
	Current								Downgra	dient Plume Aı	rea						
	Cleanup				GV	V081S				GW	172S						
Analyte	Level ⁴	5/7/2018	8/13/2018	11/12/2018	3/4/2019	5/6/2019	8/12/2019	11/11/2019	3/9/2020	5/7/2018	8/13/2018	11/12/2018	3/4/2019	5/6/2019	8/12/2019	11/11/2019	3/9/2020
Volatile Organic Compoun	ds (µg/L)																
cis-1,2-Dichloroethene	0.03	0.0311	0.0243	0.0327	0.0355	0.025	0.0282	0.0311	0.0357	0.641	0.129	0.116	0.111	0.0581	0.027	0.0561	0.305
Tetrachloroethene	0.02	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.0663	0.020 U	0.020 U	0.020 U	0.0376	0.020 U	0.020 U	0.0451	0.0287	0.976
Trichloroethene	0.02	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.0872	0.0370	0.020 U	0.020 U	0.020 U	0.020 U	0.384
Vinyl Chloride	0.11	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	1.41	1.24	0.0742	0.167	0.0808	0.0376	0.0905	0.209
Total Metals (µg/L)																	
Arsenic	1.0	1.63	2.30	2.20	2.33	2.49	2.49	2.69	1.87	5.52	8.84	7.24	6.52	7.71	10.6	20.5	32.8
Copper	3.5	0.534	0.811	0.561	0.536	0.546	1.38	1.96	0.791	0.989	2.50 U	1.77	2.07	2.13	3.86	9.25	27.6
Lead	1.0	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.116	0.210	0.100 U	0.772	1.02	1.13	0.774	0.991	1.02	7.44	15.1

										Well ID ³								
	Current								Do	wngradient Plu	me Area							
	Cleanup				GV	V173S								GW226S				
Analyte	Level⁴	5/7/2018	8/13/2018	11/12/2018	3/4/2019	5/6/2019	8/12/2019	11/11/2019	3/9/2020	3/5/2018	5/7/2018	8/13/2018	11/12/2018	3/4/2019	5/6/2019	8/12/2019	11/11/2019	3/9/2020
Volatile Organic Compound	ds (µg/L)																	
cis-1,2-Dichloroethene	0.03	0.020 U	0.111	0.0753	0.0756	0.037	0.022	0.0378	0.0504	0.0408	0.0401	0.0262	0.020 U	0.0387	0.0223	0.0259	0.0235	0.0396
Tetrachloroethene	0.02	0.061	0.0301	0.218	0.0842	0.0416	0.0561	0.0246	0.0224	0.020 U	0.020 U	0.0733	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Trichloroethene	0.02	0.0344	0.0681	0.206	0.149	0.0742	0.0256	0.0379	0.0305	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Vinyl Chloride	0.11	0.046	0.0969 J	0.0448 J	0.0312	0.0486	0.0613	0.072	0.144	0.0428	0.026	0.0409 J	0.0655	0.0432	0.0459	0.029	0.0615	0.038
Total Metals (µg/L)																		
Arsenic	1.0	1.80	13.0	4.59	6.72	7.38	12.2	15.6	11.8	4.14	3.27	2.78	3.44	5.07	2.97	2.85	12.0	4.88
Copper	3.5	3.48	6.95	3.85	4.38	1.11	1.39	4.68	1.51	2.60	1.05	1.19	2.28	4.55	0.500 U	0.626	15.6	5.00
Lead	1.0	0.314	2.88	0.706	0.712	0.251	0.290	1.36	0.442	0.297	0.129	0.141	0.422	0.413	0.100 U	0.100 U	2.43	0.500

TABLE D-2: SWMU-172 AND SWMU-174 GROUP HISTORICAL CONCENTRATIONS OF CONSTITUENTS OF CONCERN^{1, 2}

Boeing Renton Facility, Renton, Washington

	1																
	١								'	Well ID ³							
	Current								C	POC Area							
	Cleanup				GV	V232S							GW	2331			
Analyte	Level ⁴	5/7/2018	8/13/2018	11/12/2018	3/4/2019	5/6/2019	8/12/2019	11/11/2019	3/9/2020	5/7/2018	8/13/2018	11/12/2018	3/4/2019	5/6/2019	8/12/2019	11/11/2019	3/9/2020
Volatile Organic Compoun	ds (µg/L)																
cis-1,2-Dichloroethene	0.03	0.367	0.489	0.426	0.250	0.319	0.378	0.659	0.221	0.0598	0.0587	0.0692	0.075	0.054	0.0697	0.0546	0.0552
Tetrachloroethene	0.02	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Trichloroethene	0.02	0.020 U	0.020 U	0.020 U	0.020 U	0.0331	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.0225	0.020 U	0.020 U	0.020 U
Vinyl Chloride	0.11	0.419	0.544 J	0.564	0.242	0.348	0.412	0.860	0.264	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Total Metals (µg/L)																	
Arsenic	1.0	5.36	6.52	8.01	5.12	3.96	6.29	8.09	2.73	0.532	0.421	0.481	0.529	0.428	0.397	0.594	0.467
Copper	3.5	0.500 U	0.628	13.3	1.70	1.15	0.878	3.85	2.22	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.774	0.500 U
Lead	1.0	0.100 U	0.275	0.338	0.167	0.167	0.102	0.378	0.354	0.100 U	0.100 U	0.100 U	0.102	0.100 U	0.100 U	0.100 U	0.100 U

									١	Well ID ³							
	Current								С	POC Area							
	Cleanup				GV	V234S							GW	2351			
Analyte	Level⁴	5/7/2018	8/13/2018	11/12/2018	3/4/2019	5/6/2019	8/12/2019	11/11/2019	3/9/2020	5/7/2018	8/13/2018	11/12/2018	3/4/2019	5/6/2019	8/12/2019	11/11/2019	3/9/2020
Volatile Organic Compound	ds (µg/L)																
cis-1,2-Dichloroethene	0.03	0.0672	0.0758	0.112	0.0869	0.0630	0.0738	0.0850	0.0984	0.166	0.121	0.158	0.135	0.109	0.0638	0.109	0.127
Tetrachloroethene	0.02	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Trichloroethene	0.02	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.0297	0.0253	0.0305	0.0338	0.0353	0.0342	0.020 U	0.0287	0.0336
Vinyl Chloride	0.11	0.020 U	0.0282 J	0.0488	0.0273	0.0235	0.0252	0.0309	0.0302	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Total Metals (µg/L)																	
Arsenic	1.0	0.820	2.07	1.72	2.11	2.22	1.31	10.1	27.4	0.200 U	0.200 U	0.230	0.200 U	0.403	0.292	0.237	0.251
Copper	3.5	NA	0.748	1.27	1.75	1.93	0.869	33.2	32.9	0.500 U	0.500 U	0.500 U	0.500 U	1.58	0.714	0.573	0.935
Lead	1.0	NA	0.425	0.781	0.701	0.843	0.280	15.5	11.8	0.100 U	0.100 U	0.104	0.322	0.405	0.182	0.127	0.235

					We	ell ID ³			
	Current				CPC	C Area			
	Cleanup				GV	V236S			
Analyte	Level ⁴	5/7/2018	8/13/2018	11/12/2018	3/4/2019	5/6/2019	8/12/2019	11/11/2019	3/9/2020
Volatile Organic Compound	ds (µg/L)								
cis-1,2-Dichloroethene	0.03	0.0297	0.0427	0.0690	0.0443	0.0281	0.0468	0.108	0.0241
Tetrachloroethene	0.02	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Trichloroethene	0.02	0.020 U	0.020 U	0.020 U	0.020 U	0.0206	0.020 U	0.020 U	0.020 U
Vinyl Chloride	0.11	0.020 U	0.020 U	0.0323	0.020 U	0.020 U	0.020 U	0.0437	0.020 U
Total Metals (µg/L)									
Arsenic	1.0	1.80	2.69	3.35	2.81	2.10	3.70	36.5	6.29
Copper	3.5	2.05	0.500 U	0.924	0.919	2.17	0.893	66.9	21.2
Lead	1.0	2.49	0.874	1.48	1.94	1.90	1.53	117	18.7

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. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

<u>Abbreviations</u>

 μ g/L = micrograms per liter AOC = area of concern

CDOC = conditional pair

CPOC = conditional point of compliance SWMU = solid waste management unit

TABLE D-3: BUILDING 4-78/79 SWMU/AOC GROUP HISTORICAL CONCENTRATIONS OF CONSTITUENTS OF CONCERN 1, 2

Boeing Renton Facility, Renton, Washington

	Command												Wel	l ID³											
	Current												Sourc												
	Cleanup				GW	031 S							GW	D33S							GW	345			
Analyte	Level ⁴	5/7/2018	8/14/2018	11/13/2018	3/5/2019	5/7/2019	8/13/2019	11/12/2019	3/11/2020	5/7/2018	8/14/2018	11/13/2018	3/5/2019	5/7/2019	8/13/2019	11/12/2019	3/11/2020	5/7/2018	8/14/2018	11/13/2018	3/5/2019	5/7/2019	8/13/2019	11/12/2019	3/11/2020
Volatile Organic Compound	ds (μg/L)																								
Benzene	0.80	8.95	3.21	28.3 J	55.9	7.13	3.47	4.77	37.1	12.8	13.3	13.6	11.7	12.5	10.4	11.5	10.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
cis-1,2-Dichloroethene	0.70	0.20 U	0.56 J	0.63 J	0.20 U	0.43	0.47	0.40	0.61	40.7	1.94	9.35	0.79	0.41	0.78	2.78	21.4	0.20 U	0.21	0.25	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Trichloroethene	0.23	1.13	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.40 U	0.20 U	1.00 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.29	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	0.28	0.31 J	0.20 U	0.29	0.21	0.25	0.20 U	110	6.46	36.7	3.26	0.53	1.16	13.0	52.2	0.24	0.53	0.54	0.20	0.20 U	0.39	0.39	0.20 U
Total Petroleum Hydrocark	oons (µg/L)																								
TPH-G (C7-C12)	800	917	1,640	2,010	4200	1020	1390	1540	2,980	239	258	500 U	395	297	277	347	296	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U

													Wel	l ID³											
	Current													e Area											
	Cleanup				GW	039S							GW	2431							GW	244S			
Analyte	Level⁴	5/7/2018	8/14/2018	11/13/2018	3/5/2019	5/7/2019	8/13/2019	11/12/2019	3/11/202	5/7/2018	8/14/2018	11/13/2018	3/5/2019	5/7/2019	8/13/2019	11/12/2019	3/10/2020	5/7/2018	8/14/2018	11/13/2018	3/5/2019	5/7/2019	8/13/2019	11/12/2019	3/11/2020
Volatile Organic Compound	ls (μg/L)																								
Benzene	0.80	0.20 U	0.20 U	0.20 U	0.20 U	0.21	0.20 U	0.20 U	0.20 U	1.66	0.34	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	3.63	4.64	2.95	1.73	1.47	1.77	0.87	0.52
cis-1,2-Dichloroethene	0.70	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.80	0.44	0.26	0.82	2.03	0.37	0.20 U	0.68
Trichloroethene	0.23	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.92	0.20 U	0.20 U	0.22	0.20 U	0.20 U	0.20 U	0.23
Vinyl Chloride	0.20	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.06	0.62	0.55	0.86	1.45	0.71	0.35	0.7
Total Petroleum Hydrocarbo	ons (µg/L)																								
TPH-G (C7-C12)	800	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	132	100 U	106	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U

													Wel	I ID ³											
	Current												Downgradien												
	Cleanup				GW)38S							GW2								GW	210S			
Analyte	Level⁴	5/7/2018	8/14/2018 11/13/2018 3/5/2019 5/7/2019 8/13/2019 11/12/2019 3/10/2020 5/7/2019 8/13/2019 11/12/2019 3/10/2020 5/7/2018 8/14/2018 11/13/2018 3/5/2019 5/7/2019 8/13/2019 11/12/2019 3/10/2020 5/7/2018 8/14/2018 11/13/2018 3/5/2019 5/7/2019 8/13/2019 11/12/20															11/12/2019	3/11/2020						
Volatile Organic Compound	ds (μg/L)																								
Benzene	0.80	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.28	0.20 U					
cis-1,2-Dichloroethene	0.70	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	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	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	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	0.20 U	0.20	0.20 U	0.21	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U				
Total Petroleum Hydrocarb	ons (µg/L)																								
TPH-G (C7-C12)	800	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U

	_												We	II ID³											
	Current												СРО	C Area											
	Cleanup				GW	143S							GW	237S							GW.	2381			
Analyte	Level⁴	5/7/2018	8/14/2018	11/13/2018	3/5/2019	5/7/2019	8/13/2019	11/12/2019	3/10/2020	5/7/2018	8/14/2018	11/13/2018	3/5/2019	5/7/2019	8/13/2019	11/12/2019	3/10/2020	5/7/2018	8/14/2018	11/13/2018	3/5/2019	5/7/2019	8/13/2019	11/12/2019	3/10/2020
Volatile Organic Compound	ds (μg/L)																								
Benzene	0.80	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	8.57	0.43	0.93	9.58	2.20	0.43	0.66	3.48	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
cis-1,2-Dichloroethene	0.70	0.33	1.82	0.20 U	0.20 U	0.20 U	2.20	0.20 U	0.21	0.20 U	0.20 U	0.20 U	0.21	0.20 U	0.25	0.22	1.00 U	0.20 U	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	0.60	0.20 U	0.20 U	0.20 U	1.05	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	1.00 U	0.20 U	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	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.28	0.29	0.25	0.20 U	0.38	0.34	1.00 U	0.20 U	0.20 U	0.21	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Total Petroleum Hydrocarb	ons (µg/L)																								
TPH-G (C7-C12)	800	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	1,740	499	100 U	1,680	100 U	329	100 U	961	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U

TABLE D-3: BUILDING 4-78/79 SWMU/AOC GROUP HISTORICAL CONCENTRATIONS OF CONSTITUENTS OF CONCERN 1,2

Boeing Renton Facility, Renton, Washington

										boein	y Kenton Fa	icility, Keritt	Jii, wasiiiig	ton											
													Wel	l ID³											
	Current												СРОС	Area											
	Cleanup				GW	2391							GW2	240D							GW2	241S			
Analyte	Level⁴	5/7/2018	8/14/2018	11/13/2018	3/5/2019	5/7/2019	8/13/2019	11/12/2019	3/10/2020	5/7/2018	8/14/2018	11/13/2018	3/5/2019	5/7/2019	8/13/2019	11/12/2019	3/10/2020	5/7/2018	8/13/2018	11/13/2018	3/5/2019	5/7/2019	8/13/2019	11/12/2019	3/10/2020
Volatile Organic Compound	ds (µg/L)		8/14/2018 11/13/2018 3/5/2019 5/7/2019 8/13/2019 11/12/2019 3/10/2020 5/7/2019 8/13/2019 11/12/2019 3/10/2020 5/7/2018 8/13/2019 11/13/2018 3/5/2019 5/7/2019 8/13/2019 11/12/2019 3/10/2020 5/7/2018 8/13/2018 11/13/2018 3/5/2019 5/7/2019 8/13/2019 11/12/2019 3/10/2020 5/7/2018 8/13/2018 11/13/2018 3/5/2019 5/7/2019 8/13/2019 11/12/2019 3/10/2020 5/7/2018 8/13/2018 11/13/2018 3/5/2019 5/7/2019 8/13/2019 11/12/2019 3/10/2020 5/7/2018 8/13/2018 11/13/2018 3/5/2019 5/7/2019 8/13/2019 11/12/2019 3/10/2020 5/7/2018 8/13/2018 11/13/2018 3/5/2019 5/7/2019 8/13/2019 11/12/2019 3/10/2020 5/7/2018 8/13/2018 11/13/2018 3/5/2019 5/7/2019 8/13/2019 11/12/2019 3/10/2020 5/7/2018 8/13/2019 5/7/2019 8/13/2019 5/7/2019 8/13/2019 5/7/2019 8/13/2019 5/7/2019 8/13/2019 5/7/2019 8/13/2019 5/7/2019 8/13/2019 5/7/2019 8/13/2019 5/7/2019 8/13/2019 5/7/2019 8/13/2019 5/7/2019 8/13/2019 5/7/2019 8/13/2019 5/7/2019 8/13/2019 5/7/2019 8/13/2019 5/7/2019 8/13/2019 5/7/2019 8/13/2019 5/7/2019 8/13/2019 5/7/2019 8/13/2019 5/7/2019 8/13/2019 5/7/2019																						
Benzene	0.80	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
cis-1,2-Dichloroethene	0.70	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	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	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	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	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.23	0.23	0.24	0.23	0.27	0.26	0.24	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Total Petroleum Hydrocarb	ons (µg/L)																								
TPH-G (C7-C12)	800	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U

					Wol	l ID³			
	Current					Area			
	Cleanup					2421			
Analyte	Level⁴	5/7/2018	8/13/2018	11/13/2018	3/5/2019	5/7/2019	8/13/2019	11/12/2019	3/10/2020
Volatile Organic Compoun	ds (μg/L)								
Benzene	0.80	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
cis-1,2-Dichloroethene	0.70	0.20 U	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	0.20 U
Vinyl Chloride	0.20	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Total Petroleum Hydrocark	oons (µg/L)								
TPH-G (C7-C12)	800	100 U	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. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

<u>Abbreviations</u>

 μ g/L = micrograms per liter

AOC = area of concern

CPOC = conditional point of compliance

SWMU = solid waste management unit

TPH-G = total petroleum hydrocarbons as gasoline

TABLE D-4: FORMER FUEL FARM HISTORICAL CONCENTRATIONS OF CONSTITUENTS OF CONCERN 1, 2

Boeing Renton Facility, Renton, Washington

													We	II ID³											
	Current				Sourc	e Area											CPOC	Area							
	Cleanup				GW	255S							GW	183S							GW	184S			
Analyte	Level ⁴	5/5/2016	11/7/2016	5/10/2017	11/14/2017	5/7/2018	11/12/2018	5/7/2019	11/11/2019	5/5/2016	11/7/2016	5/10/2017	11/14/2017	5/7/2018	11/12/2018	5/7/2019	11/11/2019	5/5/2016	11/7/2016	5/10/2017	11/14/2017	5/7/2018	11/12/2018	5/7/2019	11/11/2019
Total Petroleum Hydrocark	oons (mg/L)																								
TPH-D (C12-C24)	0.5	0.094 U	0.095 U	0.095 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.095 U	0.096 U	0.095 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.095 U	0.096 U	0.095 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
Jet A	0.5	0.094 U	0.095 U	0.095 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.095 U	0.096 U	0.095 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.095 U	0.096 U	0.095 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U

														,											
													We	ll ID³											
	Current												СРОС	Area											
	Cleanup			GW211S GW212S GW21S 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2018 11/12/2018 5/7/2019 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2018 11/12/2018 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2018 11/12/2018 5/7/2018 11/12/2018 5/7/2018 11/12/2018 5/7/2018 11/12/2018 5/7/2018 11/12/2018 5/7/2018 11/12/2018 5/7/2018 11/12/2018 5/7/2018 11/12/201																					
Analyte	Level ⁴	5/5/2016	11/7/2016	5/10/2017	11/14/2017	5/7/2018	11/12/2018	5/7/2019	11/11/2019	5/5/2016	11/7/2016	5/10/2017	11/14/2017	5/7/2018	11/12/2018	5/7/2019	11/11/2019	5/5/2016	11/7/2016	5/10/2017	11/14/2017	5/7/2018	11/12/2018	5/7/2019	11/11/2019
Total Petroleum Hydrocarl	bons (mg/L)																								
TPH-D (C12-C24)	0.5	0.32	0.75	0.22	0.903	0.272	0.341	0.124	0.120	0.12 U	0.095 U	0.094 U	0.100 U	0.100 U	0.109	0.100 U	0.100 U	0.64	0.63	0.55	3.63	0.746	1.50	0.630	1.65
Jet A	0.5	0.37	0.58	0.24	0.245	0.214	0.191	0.117	0.117	0.12 U	0.095 U	0.094 U	0.100 U	0.100 U	0.108 U	0.100 U	0.100 U	0.58	0.52	0.48	2.12	0.635	0.863	0.397	1.09

													We	l ID³											
	Current												CPOC	Area											
	Cleanup			GW224S GW256S GW256S GW257S 7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2018 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/12/2018 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2016 5/10/2017 11/14/2017 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2018 11/12/2018 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2018 11/12/2018 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2018 11/12/2018 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2018 11/12/2018 5/7/2018 11/12/2018 5/7/2019 11/11/2019 5/5/2016 11/7/2018 5/7/2018 11/12/2018 5/7/2018 5/7/2018 5/7/2018 5/7/2018 5/7/2018 5/7/2018 5/7/2018																					
Analyte	Level⁴	5/5/2016	11/7/2016	5/10/2017	11/14/2017	5/7/2018	11/12/2018	5/7/2019	11/11/2019	5/5/2016	11/7/2016	5/10/2017	11/14/2017	5/7/2018	11/12/2018	5/7/2019	11/11/2019	5/5/2016	11/7/2016	5/10/2017	11/14/2017	5/7/2018	11/12/2018	5/7/2019	11/11/2019
Total Petroleum Hydroca	rbons (mg/L)																								
TPH-D (C12-C24)	0.5	1.2	1.4	0.73	1.84	0.560	1.56	0.256	1.46	0.094 U	0.095 U	0.096 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.095 U	0.095 U	0.095 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
Jet A	0.5	2.3	2.2	1.4	1.97	0.933	1.64	0.388	1.80	0.11	0.095 U	0.096 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.095 U	0.095 U	0.095 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U

					Wel	l ID³			
	Current				CPOC	Area			
	Cleanup					258S			
Analyte	Level⁴	5/5/2016	11/7/2016	5/10/2017	11/14/2017	5/7/2018	11/12/2018	5/7/2019	11/11/2019
Total Petroleum Hydrocark	bons (mg/L)								
TPH-D (C12-C24)	0.5	0.095 U	0.095 U	0.095 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
Jet A	0.5	0.095 U	0.095 U	0.095 U	0.100 U	0.100 U	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. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

<u>Abbreviations</u>

AOC = area of concern

CPOC = conditional point of compliance

mg/L = milligrams per liter

SWMU = solid waste management unit

TPH-D = total petroleum hydrocarbons as diesel

TABLE D-5: AOC-003 HISTORICAL CONCENTRATIONS OF CONSTITUENTS OF CONCERN 1, 2

Boeing Renton Facility, Renton, Washington

									Wel	I ID ³							
					Sourc	e Area							Downgradier	nt Plume Area			
	Current				GW:	249S							GW ⁻	188S			
Analyte	Cleanup Level⁴	11/14/2017	3/7/2018	5/8/2018	8/15/2018	11/13/2018	3/5/2019	8/14/2019	3/12/2020	11/14/2017	3/7/2018	5/8/2018	8/15/2018	11/13/2018	3/5/2019	8/14/2019	3/12/2020
Volatile Organic Compou	ganic Compounds (µg/L)																
cis-1,2-Dichloroethene	0.78	NS	0.102	0.0757	0.0524	0.0829	0.079	0.0526	0.0604	NS	0.0606	0.0531	0.0386	0.0636	0.0493	0.0361	0.0362
Tetrachloroethene	0.02	NS	0.0496	0.020 U	0.020 U	0.020 U	0.0105	0.020 U	0.020 U	NS	0.020 U	0.020 U	0.020 U	0.020 U	0.0107	0.020 U	0.0244
Trichloroethene	0.16	NS	0.0475	0.0211	0.020 U	0.020 U	0.0157	0.020 U	0.020 U	NS	0.020 U	0.020 U	0.020 U	0.020 U	0.0125	0.020 U	0.020 U
Vinyl Chloride	0.24	NS	0.114	0.428	0.413	0.629	0.424	0.367	0.334	NS	0.443	0.505	0.404	0.813	0.537	0.545	0.235

									Well	ID ³							
									CPOC	Area							
	Current				GW2	247S							GW:	2481			
Analyte	Cleanup Level⁴	5/8/2018	8/15/2018	11/13/2018	3/5/2019	5/8/2019	8/14/2019	11/12/2019	3/12/2020	5/8/2018	8/15/2018	11/13/2018	3/5/2019	5/8/2019	8/14/2019	11/12/2019	3/12/2020
Volatile Organic Compou	nds (µg/L)																
cis-1,2-Dichloroethene	0.78	0.0949	0.081	0.102	0.0728	0.0584	0.065	0.0635	0.039	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.02 U
Tetrachloroethene	0.02	0.020 U	0.020 U	0.020 U	0.126	0.020 U	0.020 U	0.020 U	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Trichloroethene	0.16	0.0257	0.0291	0.0208	0.018	0.020 U	0.020 U	0.148	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.0514	0.020 U
Vinyl Chloride	0.24	0.46	0.453	0.679	0.392	0.497	0.613	0.504	0.305	0.573	0.526	0.987	0.707	0.551	0.541	0.62	0.499

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. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC

<u>Abbreviations</u>

μg/L = micrograms per liter

AOC = area of concern

CPOC = conditional point of compliance

SWMU = solid waste management unit

TABLE D-6: AOC-004 HISTORICAL CONCENTRATIONS OF CONSTITUENTS OF CONCERN 1, 2

Boeing Renton Facility, Renton, Washington

					Wel	I ID ³									
	Current				Sourc	e Area									
	Cleanup	GW250S													
Analyte	Level ³	11/10/2016	3/1/2017	8/17/2017	3/6/2018	8/15/2018	3/5/2019	8/14/2019	3/9/2020						
Metals (mg/L)															
Lead	0.001	0.0020	0.0030	0.00026	0.000941	0.00107	0.00154	0.000714	0.00119						

					Wel	I ID ³									
	Current				СРОС	Area									
	Cleanup	GW174S													
Analyte	Level ³	11/10/2016	3/1/2017	8/17/2017	3/6/2018	8/15/2018	3/5/2019	8/14/2019	3/9/2020						
Metals (mg/L)															
Lead	0.001	0.0013 J	0.0016 J	0.0010	0.000449	0.000762	0.000815	0.000549	0.000974						

Notes

- 1. Data qualifiers are as follows:
 - J = The value is an estimate.
- 2. S = shallow well
- 4. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

Abbreviations

mg/L = milligrams per liter

AOC = area of concern

CPOC = conditional point of compliance

SWMU = solid waste management unit

TABLE D-7: AOC-060 HISTORICAL CONCENTRATIONS OF CONSTITUENTS OF CONCERN 1,2

Boeing Renton Facility, Renton, Washington

					We	II ID ³			
	Current				Sourc	e Area			
	Cleanup				GW	009S			
Analyte	Levels 4	8/23/2016	3/6/2017	8/16/2017	3/6/2018	8/14/2018	3/5/2019	8/14/2019	3/10/2020
Volatile Organic Compoun	ds (µg/L)								
cis -1,2-Dichloroethene	0.08	0.16	0.093	0.15	0.0948	0.126	0.107	0.127	0.093
Trichloroethene	0.02	0.032	0.022	0.033	0.0252	0.0238	0.0239	0.020 U	0.0242
Vinyl Chloride	0.26	0.40	0.26	0.39	0.241 J	0.318	0.285	0.300	0.183

													We	II ID ³											
	Current												Downgradie	nt Plume Are	a										
	Cleanup				GW	012S							GW	/014S							GW	147S			
Analyte	Levels ⁴	8/23/2016	3/6/2017	8/16/2017	3/6/2018	8/14/2018	3/5/2019	8/14/2019	3/10/2020	8/23/2016	3/6/2017	8/16/2017	3/6/2018	8/14/2018	3/5/2019	8/14/2019	3/10/2020	8/23/2016	3/6/2017	8/16/2017	3/6/2018	8/14/2018	3/5/2019	8/14/2019	3/10/2020
Volatile Organic Compound	ds (µg/L)																								
cis -1,2-Dichloroethene	0.08	5.2	1.6	0.95	0.609	1.29	1.23	0.798	0.482	0.17	0.13	0.18	0.134	0.122	0.119	0.143	0.151	16	0.16	3.0	0.211	4.63	0.955	4.11	0.287
Trichloroethene	0.02	3.0	0.11	0.098	0.0568	0.656	0.0546	0.0471	0.0505	0.025	0.043	0.039	0.0347	0.0273	0.0254	0.020 U	0.0419	3.6	1.5	2.6	1.91	4.23	0.475	1.46	1.20
Vinyl Chloride	0.26	2.5	2.0	1.4	0.586	0.605	1.35	0.893	0.603	0.30	0.30	0.31	0.266	0.232 J	0.214	0.365	0.195	3.1	0.020 U	0.21	0.020 U	1.07 J	0.0514	0.215	0.020 U

													We	II ID ³											
	Current												СРО	C Area											
	Cleanup				GW	/149S							GW	150S							GW	252S			
Analyte	Levels 4	8/23/2016	3/6/2017	8/16/2017	3/6/2018	8/14/2018	3/5/2019	8/14/2019	3/10/2020	8/23/2016	3/6/2017	8/16/2017	3/6/2018	8/14/2018	3/5/2019	8/14/2019	3/10/2020	8/23/2016	3/6/2017	8/16/2017	3/6/2018	8/14/2018	3/5/2019	8/14/2019	3/10/2020
Volatile Organic Compoun	ds (µg/L)																								
cis -1,2-Dichloroethene	0.08	0.076	0.067	0.070	0.0565	0.0441	0.0623	0.0427	0.0574	0.10	0.055	0.091	0.0388	0.0506	0.0737	0.0824	0.0525	0.034	0.024	0.039	0.0215	0.0266	0.020 U	0.0342	0.0259
Trichloroethene	0.02	0.020 U	0.020 U	0.022	0.020 U	0.026	0.020 U	0.0305	0.020 U	0.0228	0.02 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U						
Vinyl Chloride	0.26	0.080	0.11	0.068	0.0854	0.0399	0.0843	0.0482	0.085	0.20	0.092	0.096	0.0596	0.0203	0.103	0.020 U	0.0541	0.020 U	0.020 U						

	Current								Wel CPOC	I ID ³ : Area							
	Cleanup		GW253I GW254S 016 3/6/2017 8/16/2017 3/6/2018 8/14/2018 3/5/2019 8/14/2019 3/10/2020 8/23/2016 3/6/2017 8/16/2017 3/6/2018 8/14/2018 3/5/2019 8/14/2019														
Analyte	Levels 4	8/23/2016	3/6/2017	8/16/2017	3/6/2018	8/14/2018	3/5/2019	8/14/2019	3/10/2020	8/23/2016	3/6/2017	8/16/2017	3/6/2018	8/14/2018	3/5/2019	8/14/2019	3/10/2020
Volatile Organic Compound	ds (µg/L)																
cis -1,2-Dichloroethene	0.08	0.089	0.10	0.11	0.0991	0.0796	0.127	0.0917	0.0915	0.11	0.062	0.11	0.0589	0.0926	0.0983	0.116	0.0736
Trichloroethene	0.02	0.023	0.024	0.029	0.020 U	0.0204	0.0221	0.020 U	0.0212	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Vinyl Chloride	0.26	0.13	0.13	0.14	0.132	0.113	0.143	0.131	0.184	0.067	0.038	0.043	0.0303	0.0418	0.0749	0.0465	0.0405

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. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

Abbreviations:

μg/L = micrograms per liter

AOC = area of concern

CPOC = conditional point of compliance

SWMU = solid waste management unit

TABLE D-8: AOC-090 HISTORICAL CONCENTRATIONS OF CONSTITUENTS OF CONCERN^{1, 2}

Boeing Renton Facility, Renton, Washington

													Wel	l ID³											
	Current				Sourc	e Area											Downgradien	Plume Ar	ea						
	Cleanup				GW1	189S ⁵							GW	1751							GW ²	176S			
Analyte	Levels 4	11/8/2016	3/2/2017	8/15/2017	3/5/2018	8/13/2018	3/5/2019	8/12/2019	3/11/2020	11/8/2016	3/2/2017	8/15/2017	3/5/2018	8/13/2018	3/5/2019	8/12/2019	3/11/2020	11/8/2016	3/2/2017	8/15/2017	3/5/2018	8/13/2018	3/5/2019	8/12/2019	3/11/2020
/olatile Organic Compounds	(μg/L)																								
1,1,2,2-Tetrachloroethane	0.17	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
1,1,2-Trichloroethane	0.2	1.00 U	0.40 U	0.20 U	0.20 U	2.00 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
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	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Acetone	300	25.1	10.0 U	5.0 U	5.00 U	70	5.00 U	5.0 U	5.0 U	NA	5.00 U	5.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	NA	5.00 U	5.38	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U
Benzene	0.8	1.00 U	0.41	1.69	0.55	2.42	0.20	0.49	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Carbon Tetrachloride	0.23	1.00 U	0.40 U	0.20 U	0.20 U	2.00 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Chloroform	2	1.00 U	0.40 U	0.20 U	0.20 U	2.23	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
cis-1,2-Dichloroethene	2.4	1.16	1.18	2.23	1.74	22.3	0.92	6.87	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.25	0.34	0.26	0.27	0.25	0.27	0.25
Methylene Chloride	2	5.00 U	2.00 U	1.0 U	1.00 U	10.9 UJ	1.00 U	1.0 U	1.0 U	NA	1.00 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	NA	1.00 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	0.05	0.0549	0.020 U	0.020 U	0.020 U	0.20 U	0.028	0.020 U	0.0263	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Toluene	75	13.1	18.7	2.84	6.34	21.7	4.96	3.11	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.42	0.20 U	0.20 U	0.20 U	0.20 U
trans-1,2-Dichloroethene	53.9	1.00 U	0.56	0.40	0.48	2.00 U	0.20 U	0.39	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Trichloroethene	0.08	0.19	0.156	0.279	0.224	2.38	0.156	0.414	0.0745	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Vinyl Chloride	0.13	0.020 U	0.48	1.00	0.508 J	2.09 J	0.50	1.20	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.260	0.286	0.208	0.230	0.294	0.301	0.207
Total Petroleum Hydrocarbor	ns (µg/L)																								
TPH-G (C7-C12)	800	2,290	2,260	2,010	1,860	9,440	1,070	943	189	NA	100 U	100 U	100 U	100 U	100 U	100 U	100 U	NA	100 U	100 U	100 U	100 U	100 U	100 U	100 U
TPH-D (C12-C24)	500	146	398	689	200	4,120	362	432	100 U	NA	100 U	100 U	100 U	100 U	100 UJ	100 U	100 U	NA	100 U	100 U	100 U	100 U	100 UJ	100 U	100 U
TPH-O (C24-C40)	500	200 U	582	949	298	2,000 U	522	853	200 U	NA	200 U	200 U	200 U	200 U	200 UJ	200 U	200 U	NA	200 U	200 U	200 U	200 U	200 UJ	200 U	200 U

													Wel	IID3											
	Current													ne CPOC Area	<u> </u>										
	Cleanup				GW	178S								1805	-						GW	207S			
Analyte	Levels 4	11/8/2016	3/2/2017	8/15/2017	3/5/2018	8/13/2018	3/5/2019	8/12/2019	3/11/2020	11/8/2016	3/2/2017	8/15/2017	3/5/2018	8/13/2018	3/5/2019	8/12/2019	3/11/2020	11/8/2016	3/2/2017	8/15/2017	3/5/2018	8/13/2018	3/5/2019	8/12/2019	3/11/2020
Volatile Organic Compounds	(μg/L)																								
1,1,2,2-Tetrachloroethane	0.17	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
1,1,2-Trichloroethane	0.2	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,1-Dichloroethene	0.057	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.023	0.020 U	0.020 U	0.020 U
Acetone	300	NA	5.00 U	5.0 U	5.00 U	5.00 U	5.54	5.0 U	5.0 U	NA	5.00 U	5.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	NA	5.00 U	5.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U
Benzene	0.8	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.23	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Carbon Tetrachloride	0.23	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Chloroform	2	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
cis-1,2-Dichloroethene	2.4	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.29	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Methylene Chloride	2	NA	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	NA	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	NA	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Tetrachloroethene	0.05	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Toluene	75	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
trans-1,2-Dichloroethene	53.9	NA	0.20 U	0.26	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Trichloroethene	0.08	NA	0.020 U	0.0277	0.0214	0.0213	0.0213	0.020 U	0.021	NA	0.020 U	0.026	0.020 U	0.020 U	0.020 U	0.0239	0.020 U	NA	0.020 U	0.0412	0.020 U	0.0388	0.020 U	0.0305	0.020 U
Vinyl Chloride	0.13	NA	0.699	0.191	0.409	0.378	0.392	0.3840	0.1840	NA	0.020 U	0.0395	0.020 U	0.020 U	0.020 U	0.0485	0.020 U	NA	0.0758	0.2380	0.0300	0.311 J	0.0692	0.020 U	0.020 U
Total Petroleum Hydrocarboi	ns (µg/L)																								
TPH-G (C7-C12)	800	NA	100 U	100 U	100 U	100 U	100 U	100 U	100 U	NA	100 U	100 U	100 U	100 U	100 U	100 U	100 U	NA	100 U	100 U	100 U	100 U	100 U	100 U	100 U
TPH-D (C12-C24)	500	NA	100 U	100 U	100 U	100 U	100 UJ	100 U	100 U	NA	100 U	100 U	100 U	100 U	100 UJ	100 U	100 U	NA	100 U	100 U	100 U	100 U	100 UJ	100 U	100 U
TPH-O (C24-C40)	500	NA	200 U	200 U	200 U	200 U	200 UJ	200 U	200 U	NA	200 U	200 U	200 U	200 U	200 UJ	200 U	200 U	NA	200 U	200 U	200 U	200 U	200 UJ	200 U	200 U

TABLE D-8: AOC-090 HISTORICAL CONCENTRATIONS OF CONSTITUENTS OF CONCERN^{1, 2}

Boeing Renton Facility, Renton, Washington

										_ 509		,,	,	J · ·											
													We	II ID ³											
	Current				Shallow Zon	e CPOC Area	1									Int	termediate Zo	ne CPOC A	rea						
	Cleanup				GW	208S							GW	/163I							GW	1651			
Analyte	Levels 4	11/8/2016	3/2/2017	8/15/2017	3/5/2018	8/13/2018	3/5/2019	8/12/2019	3/11/2020	11/8/2016	3/2/2017	8/15/2017	3/5/2018	8/13/2018	3/5/2019	8/12/2019	3/11/2020	11/8/2016	3/2/2017	8/15/2017	3/5/2018	8/13/2018	3/5/2019	8/12/2019	3/11/2020
Volatile Organic Compounds	(μg/L)																								
1,1,2,2-Tetrachloroethane	0.17	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
1,1,2-Trichloroethane	0.2	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,1-Dichloroethene	0.057	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Acetone	300	NA	5.00 U	5.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	NA	5.00 U	5.0 U	5.00 U	5.00 U	6.90	5.0 U	5.0 U	NA	5.00 U	5.0 U	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U
Benzene	0.8	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Carbon Tetrachloride	0.23	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Chloroform	2	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
cis-1,2-Dichloroethene	2.4	NA	0.20 U	0.23	0.20	0.20 U	0.21	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Methylene Chloride	2	NA	1.00 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	NA	1.00 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	NA	1.00 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	0.05	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Toluene	75	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
trans-1,2-Dichloroethene	53.9	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Trichloroethene	0.08	NA	0.020 U	0.0281	0.020 U	0.0234	0.020 U	0.0293	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Vinyl Chloride	0.13	NA	0.565	0.330	0.388	0.097	0.437	0.245	0.419	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Total Petroleum Hydrocarbor	ıs (µg/L)																								
TPH-G (C7-C12)	800	NA	100 U	100 U	100 U	100 U	100 U	100 U	100 U	NA	100 U	100 U	100 U	100 U	100 U	100 U	100 U	NA	100 U	100 U	100 U	100 U	100 U	100 U	100 U
TPH-D (C12-C24)	500	NA	100 U	100 U	100 U	100 U	100 UJ	100 U	100 U	NA	100 U	100 U	100 U	100 U	100 UJ	100 U	100 U	NA	100 U	100 U	100 U	100 U	100 UJ	100 U	100 U
TPH-O (C24-C40)	500	NA	200 U	200 U	200 U	200 U	200 UJ	200 U	200 U	NA	200 U	200 U	200 U	200 U	200 UJ	200 U	200 U	NA	200 U	200 U	200 U	200 U	200 UJ	200 U	200 U

									Wel	l ID³							
	Current							Int	ermediate Z	one CPOC Ar	rea						
	Cleanup				GW	1771							GW	179I			
Analyte	Levels 4	11/8/2016	3/2/2017	8/15/2017	3/5/2018	8/13/2018	3/5/2019	8/12/2019	3/11/2020	11/8/2016	3/2/2017	8/15/2017	3/5/2018	8/13/2018	3/5/2019	8/12/2019	3/11/2020
Volatile Organic Compounds	(μg/L)																
1,1,2,2-Tetrachloroethane	0.17	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
1,1,2-Trichloroethane	0.2	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,1-Dichloroethene	0.057	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Acetone	300	NA	5.00 U	7.08	5.00 U	5.00 U	5.00 U	5.0 U	5.0 U	NA	5.00 U	5.0 U	5.00 U	5.00 U	7.16	5.0 U	5.0 U
Benzene	0.8	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Carbon Tetrachloride	0.23	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Chloroform	2	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
cis-1,2-Dichloroethene	2.4	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Methylene Chloride	2	NA	1.00 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U	NA	1.00 U	1.0 U	1.00 U	1.00 U	1.00 U	1.0 U	1.0 U
Tetrachloroethene	0.05	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Toluene	75	NA	0.20 U	0.20 U	0.25	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
trans-1,2-Dichloroethene	53.9	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Trichloroethene	0.08	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Vinyl Chloride	0.13	NA	0.1820	0.0871	0.0454	0.0303	0.0573	0.0339	0.020 U	NA	0.0632	0.020 U	0.0332	0.020 U	0.1330	0.0368	0.020 U
Total Petroleum Hydrocarbor	s (µg/L)																
TPH-G (C7-C12)	800	NA	100 U	100 U	100 U	100 U	100 U	100 U	100 U	NA	100 U	100 U	100 U	100 U	100 U	100 U	100 U
TPH-D (C12-C24)	500	NA	100 U	100 U	100 U	100 U	100 UJ	100 U	100 U	NA	100 U	100 U	100 U	100 U	100 UJ	100 U	100 U
TPH-O (C24-C40)	500	NA	200 U	200 U	200 U	200 U	200 UJ	200 U	200 U	NA	200 U	200 U	200 U	200 U	200 UJ	200 U	200 U

Notes:

1. Data qualifiers are as follows:

 $\ensuremath{\mathsf{U}}$ = The analyte was not detected at the reporting limit indicated.

J = The value is an estimate.

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

2. **Bolded** values exceed the cleanup levels.

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

4. Current cleanup levels obtained from Table 2 of the Cleanup Action Plan and are based on each individual SWMU or AOC.

5. GW189S is the replacement well for GW168S.

Abbreviations:

 μ g/L = micrograms per liter

AOC = area of concern

CPOC = conditional point of compliance

NA = well not available for sampling

SWMU = solid waste management unit

TPH-D = total petroleum hydrocarbons as diesel

TPH-G = total petroleum hydrocarbons as gasoline

TPH-O = total petroleum hydrocarbons as oil

wood.

Appendix E

APPENDIX E

Summary of Remedial Actions at the Boeing Renton Facility January – March 2020

Boeing Renton Site Renton, Washington

Prepared for: The Boeing Company EHS Remediation

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

May 15, 2020

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Acronyms

AOC Area of Concern °Bx degrees brix

bgs below ground surface

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

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

DCA Dichloroethane
DCE Dichloroethene

EDR Engineering Design Report

ERD Enhanced Reductive Dechlorination

ft feet lbs pounds

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

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

SWMU Solid Waste Management Unit

TCA Trichloroethane
TCE Trichloroethene

Tech Memo Technical Memorandum

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

TPH-G Total Petroleum Hydrocarbons-Gasoline

ug/L micrograms per liter VC Vinyl Chloride

VOCs Volatile Organic Compounds

VPC Vapor Phase Carbon

1.0 Introduction

CALIBRE Systems, Inc. (CALIBRE) prepared this Technical Memorandum (Tech Memo) for the Boeing Company to summarize remedial actions implemented at the Boeing Renton Facility in the first quarter of 2020 (between January 1 and March 31, 2020). The ongoing remedial actions include:

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

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

1.1 Facility Location and Background

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

1.2 Objectives and Organization

The objective for this Tech Memo is to summarize work completed in accordance with the EDR in the first quarter of 2020. This includes operation and monitoring activities for the SVE system located at SWMU-172/174 and a summary of the ongoing biological treatment and monitoring of groundwater at the following areas:

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

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

Section 3 – Groundwater Treatment

Section 4 – Conclusions and Recommendations

Section 5 – References

Attachment A – Field Data Sheets

2.0 SVE Systems Operation and Monitoring

SVE systems were installed in the Building 4-78/79 and SWMU-172/174 areas and began operation in April 2015. During the last quarter of 2017 photoionization detector (PID) results from both systems had shown low-level VOC concentrations removed at asymptotically low levels. Rebound stabilization tests were conducted in early 2018 followed by collection of soil confirmation samples from both areas in June 2018. Ecology approved the recommended shutdown of the Building 4-78/79 SVE system on November 1, 2018 after review and evaluation of the soil confirmation results for that area (CALIBRE 2018a). Operational modifications have continued at the SWMU-172/174 SVE system to optimize VOC removal for that area. The following sections summarize the operating conditions, operational changes, and performance monitoring/evaluation for the SWMU-172/174 SVE system performed in January to March 2020.

2.1 SWMU-172/174 SVE System

The SWMU-172/174 SVE system consists of three vapor extraction wells and a SVE equipment trailer as shown in Figure 2-1. The SVE system is equipped with two vapor-phase GAC vessels, each filled with 1,800 pounds of virgin carbon. The GAC vapor treatment system is configured to run in a lead-lag configuration with vapor from the outlet of the lead vessel passing through the lag vessel. The system historically included two smaller vessels each containing 200 pounds of zeolite impregnated with permanganate for vinyl chloride treatment. The lag permanganate drum became plugged during the fourth quarter 2019 and was taken offline. The lead permanganate drum is still operating within the treatment system.

Permanganate treatment was originally included in the design to treat potential vinyl chloride that would not be captured in GAC. Monitoring data has demonstrated that vinyl chloride is not present in the inlet air streams and permanganate treatment is not providing any benefit and may be discontinued in the future (Table 2-1).

Routine maintenance including oil changes, drive-belt tensioning and inspection, inspection of the air filter, and inspection of the moisture separator was completed per the Operations Manual (CALIBRE, 2014). All condensate water was contained in Department of Transportation (DOT)-approved drums and labeled in accordance with applicable waste management requirements. IDW storage, transport, and disposal were coordinated by Boeing personnel. System monitoring includes regular monitoring of total organic vapor concentrations with a calibrated PID.

2.1.1 TO-15 Laboratory Analysis of Vapor Samples

No samples for TO-15 analysis were collected during this operating period. Table 2-1 summarizes the TO-15 detections for the SWMU-172/174 SVE system for 15 TO-15 sampling events¹ that have been implemented since system startup.

2.1.2 Summary of Operations and Operational Changes

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

At the end of the second quarter 2019 PID readings showed reduced VOC levels at SVE-2 while SVE-1 remained near 0 ppbv. System operational modifications were completed that day (following the collection of samples for TO-15 analysis) to adjust SVE-1 as an inlet vent well with extraction at SVE-2 and SVE-3. The system has continued to operate in this manner during the first quarter 2020. Table 2-2 shows the PID readings for the wells in the SWMU 172/174 SVE system. Table 2-3 shows an operational summary for the system.

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

• On February 11, 2020 approximately 9 gallons of condensate water was drained from the moisture separator and the blower oil was changed. Upon inspection of the system, water was noticed dripping from the influent air filter which is after the moisture separator. Upon further inspection water was identified in the lead carbon vessel. No water was observed in the zeolite drum or the lag carbon vessel. After the water was removed, the system was reconfigured to blow hot air into the lead carbon vessel to allow it to dry out. The extraction wells and inlet valve were closed and the air dilution valve opened to allow ambient air into the system. The outlet valves were restricted to force the blower to generate hotter air.

3

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.

The initial plan for this site visit was to adjust flows by opening SVE-3 to vent and starting extraction at SVE-1 again. If those readings did not show significant changes in influent concentrations the system would have been turned off for a period of time in order to check for rebound. This current drying period will be used as a rebound test/rest period. Upon system startup, samples will be collected for TO-15 analysis.

• The system was turned off on March 13, 2020 in response to health and safety concerns related to COVID-19 and the need to regularly inspect the site and system. The system will be restarted after the Washington State Stay-at-Home Order is lifted, tentatively planned after the week of May 4, 2020.

2.1.3 Mass Removal Estimate

Between April 17, 2015 and March 31, 2020 the SWMU-172/174 SVE system has recovered an estimated 19.9 pounds of VOCs (primarily PCE), as shown in Table 2-3. Approximately 0.53 pounds of VOCs were removed during the current reporting period (first quarter 2020) based on the PID measurements collected while the system was operating. The cumulative VOC mass removal for the SWMU-172/174 SVE system is shown in Figure 2-2.

2.2 Recommended Next Steps for the SVE Systems

Modifying the SVE system flow at the SWMU-172/174 area at the end of the second quarter 2019 showed small increases in VOC mass removal from the system influent. Subsequent monitoring during fourth quarter 2019 showed variable vapor concentrations from SVE-3. Some rebound was observed at this well when the system was shutdown (with the moisture separator malfunction) and then again following the shutdown period for the holiday break. However, the subsequent site visits and monitoring showed these elevated levels declined in less than two weeks.

During the first few weeks of the first quarter 2020, concentrations had reduced back to low levels at the system (see Table 2-2 and 2-3). In early February 2020, condensate water was identified in the line to the lead carbon vessel and therefore the system was reconfigured to stop extracting soil vapor and to blow hot air through the vessel in order to dry out the carbon. During this process the system was shut down in response to the Governors Stay-at-Home Order and the system remains turned off. Plans for system modification during this reporting period included adjusting operating wells (i.e. SVE-3 was extracting and would be changed to an inlet vent and vice versa for SVE-1) however due to the system shut down these changes were not made. Because the system shut down is acting as a rebound test period, samples for TO-15 analysis will be collected for the system restart. Samples are planned at the SVE-influent, SVE-2 and SVE-3 (as these wells have historically shown higher VOC detections). Samples will be collected after approximately 1 hour of operation and then again after approximately 3 hours of operation in order to monitor rebound at the site.

After evaluation of the TO-15 results, additional modifications to the operation of this system will be considered to continue increased mass removal in the area between SVE-2 and SVE-3. These modifications may include opening SVE-1 and SVE-3 as an inlet vent or SVE-1 and SVE-2 as an inlet vent, to focus vapor removal in that area. It may also be beneficial to operate the SVE system in a pulsed mode in order to allow vapor concentrations to rebound followed by running the system for a period of time.

3.0 Ongoing Groundwater Treatment

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

Beginning in late 2017, anaerobic biodegradation of benzene using nitrate and sulfate injections was implemented for a small area at the 4-78/79 Building. Boeing has continued additional nitrate/sulfate injections in the area. These injections were completed in January 2020 (seventh event) with a target concentration of 1,600 mg/L for nitrate and 800 mg/L for sulfate per well (double what was injected in Dec 2018 and Mar 2019) to provide additional nitrate and sulfate to the impacted area. Injections were performed at B78-11, B78-13, B78-17, B78-18, B78-19, B78-20, and B78-21 and the injection volumes and mass of nitrate/sulfate are included in Table 3-1.

Performance monitoring data was collected at this area in early February 2020 and included the same list of wells sampled in the previous performance monitoring events, results are presented in Table 3-2. The February 2020 monitoring results show a number of wells with marginal increases in benzene from the prior monitoring event in November 2019. Six of the seven injection wells and both of the monitoring wells in this area continue to show benzene concentrations reduced from baseline sampling prior to when treatment started in October 2017. The one injection well above baseline results is well B-78-18 with baseline benzene at 0.72 ug/L in October 2017 and current benzene concentrations of 1.20 ug/L in February 2020; both the baseline level and current concentrations are low with both values below the MCL for benzene. Current benzene concentrations at these wells range from non-detect to 6.6 ug/L with concentration reductions at approximately 25 to 97 percent of the baseline results. These performance monitoring data indicate biodegradation of benzene is occurring. The monitoring results for nitrate show detections in two wells, monitoring well GW-244S and injection well B78-19, with concentrations of 0.145 and 0.395 mg/L, respectfully. Sulfate detections ranged from 2.69 mg/L to 118 mg/L.

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 3-3 presents a summary of those groundwater monitoring results, by area, related to groundwater treatment/ERD implementation, with recommendations for additional substrate injections at selected areas.

4.0 Conclusions and Recommendations

SVE operations were modified at the SWMU-172/174 during this reporting period after observing condensate in the system in February 2020. The system was shut down in response to the on-going COVID-19 virus and the Governor's Stay-at-Home Order. The system down time is equivalent to a rebound rest period and it is recommended that, upon system restart, samples for TO-15 analysis be collected from the SVE system. After evaluation of those results, additional modifications 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, may be considered.

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

5.0 References

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

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

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.

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

TABLES

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

SVE System Inlet

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

SVE-1

				cis-1,2-	trans-1,2-	Vinyl										Total	Total
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
	6/20/2019	10	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	11

SVE-2

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

SVE-3

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

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

VPC Outlet

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

Notes:

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

ND = non-detect

NA = not analyzed

DCE = Dichloroethene

PCE = tetrachloroethene

TCE = trichloroethene

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

Shaded cells are results from 1st Quarter 2019.

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

	Days in Operation							
Date	Since Startup 1	SVE-01	SVE-02	SVE-03	VPC Inlet	VPC Mid	VPC Outlet	Notes
								~ 1.5 gal condensate drained from
1/9/2020	1,565	Vent	204	960	1,082		0	moisture separator.
								~ 7.5 gal condensate drained from
1/17/2020	1,573	Vent			51		0	moisture separator.
								System check, drained ~1 gal condensate
1/24/2020	1,580	Vent					0	from moisture seperator.
								Drained ~ 8 gal condensate from moisture
2/7/2020	1,594	Vent	10	75	44		0	seperator.
2/11/2020	1,598	Vent			1,265			Changed blower oil. ~ 9 gal drained from moisture seperator. Noticed water at airfilter and lead GAC vessel. Adjusted system to generate/blow hot ambient air into vessel to dry carbon, no extraction of soil vapor.
3/13/2020	1,629	Vent						System shut down in response to COVID- 19 and Boeing limited access.

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

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

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

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

Date	PID Reading (ppbv)	Corrected Value (PCE) (ppbv) ¹	System Flow (cfm)	Cumulative Runtime Hours	VOCs removed in Operating Period Between Monitoring Events (lbs) ²	Cumulative VOC Mass Removed Since Start of SVE Operations in April, 2015 (lbs)
1/9/2020 ³	1,082	623	105	30,489	0.343	19.75
1/17/2020	51	29	105	30,681	0.014	19.76
1/24/2020 ⁴	51	29	105	30,849	0.013	19.78
2/7/2020	44	25	90	31,185	0.019	19.80
2/11/2020 ³	1,265	728	84	31,281	0.143	19.94

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

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 6/20/19. This number is much higher than the TO-15 results.

² These are based soley on the PID measurements collected this quarter; the prior TO-15 analyses indicates much lower mass. TO-15 analysis results showed Tetrachloroethene made up 88% of the total VOCs removed at the influent on 6/20/19.

³ These PID readings and mass estimates may be an error based on prior TO-15 analysis showing low levels of PCE.

⁴ Previous weeks influent PID reading used to calculate mass removal if that reading was not collected during the site visit.

Table 3-1 - January 2020 Injection Volumes at Benzene Treatment Wells

Area	Injection Well	Volume Total (gal)	NaNO3 (lbs)	MgSO4 (lbs)	DAP (lbs)	Concentration NO3 Injected (mg/L)	Concentration SO4 Injected (mg/L)
Building 4-78/79	B78-11	500	9.12	4.16	2.75	1,599	799
	B78-13	531	9.12	4.16	2.75	1,506	753
	B78-17	524	9.12	4.16	2.75	1,526	763
	B78-18	531	9.12	4.16	2.75	1,506	753
	B78-19	539	9.12	4.16	2.75	1,484	742
	B78-20	520	9.12	4.16	2.75	1,538	769
	B78-21	510	9.12	4.16	2.75	1,568	784

NaNO3 - Sodium Nitrate MgSO4 - Magnesium Sulfate DAP - Diammonium Phosphate

Table 3-2 - Baseline and Performance Monitoring Groundwater Data; 4-78/79 Benzene Treatment Area

		Sample Depth			cis-1,2-				Benzene		Nitrate		Nitrite		Sulfate	
Sample ID	Date	(ft bgs)	TCE (ug/L)		DCE (ug/L)		VC (ug/L)		(ug/L)		(mg-N/L)		(mg-N/L)		(mg/L)	
		(11.585)	1 5 = (58) =/		(8/-/		10 (08/ -/		(=8/-/		(8, -/		(8, -/		(6/ =/	
B78-11-8-113017	11/30/2017	8	0.42		0.98		1.11		9.66		<0.100	U	<0.100	U	1.94	
B78-11-021418	2/14/2018	8	1.16		0.84		1.09		14.8		<0.100	U	<0.100	U	9.22	D
B78-11-051518	5/15/2018	8	1.86		0.78		1.06		12.6		<0.100	U	<0.100	U	34.1	D
B78-11-180917	9/17/2018	8	5.01		7.90		3.62		9.20		<0.100	U	<0.100	U	23.4	D
B78-11-020719	2/7/2019	8	3.13		2.47		1.81		4.88		<0.100	U	<0.100	U	25.0	D
B78-11-050719	5/7/2019	8	8.60		6.55		3.56		2.15		<0.100	U	<0.100	U	47.0	D
B78-11-112019	11/20/2019	8	4.56		4.75		3.06		0.97		<0.100	U	<0.100	U	5.65	D
B78-11-021120	2/11/2020	8	7.21		6.00		3.10		1.20		<0.100	U	<0.100	U	118	D
B78-13-15-112917	11/29/2017	15	0.24		1.29		2.02		9.92		0.135		<0.100	U	0.652	
B78-13-021418	2/14/2018	15	<0.2	U	1.78		8.49		4.11		<0.100	U	<0.100	U	1.31	
B78-13-051518	5/15/2018	15	<0.2	U	0.85		0.87		4.94		0.182		<0.100	U	4.32	D
B78-13-180917	9/17/2018	15	<0.2	U	0.61		0.38		3.29		<0.100	U	<0.100	U	0.812	
B78-13-020719	2/7/2019	15	<0.2	U	0.37		0.29		0.74	Щ	<0.100	U	<0.100	U	0.189	<u> </u>
B78-13-050719	5/7/2019	15	<0.2	U	0.57		0.45	<u> </u>	1.16	Ш	<0.100	U	<0.100	U	<0.100	U
B78-13-112019	11/20/2019	15	<0.2	U	0.40		0.30	М	-	Ш	<0.100	U	<0.100	U	0.354	<u> </u>
B78-13-021120	2/11/2020	15	<0.2	U	0.37		0.43		1.42		<0.100	U	<0.100	U	2.87	D
D70 47 0 400047	10/6/2017		-0.3	1	0.47		0.33		4.0.4					1		1
B78-17-9-100617 B78-17-15-112917	10/6/2017 11/29/2017	9 15	<0.2 1.25	U	0.17 0.81	J	0.33 1.31	_	4.84 6.52	Н	<0.100	U	- <0.100	U	17.1	D
	1	15	2.57		1.78		1.47		4.61		<0.100	U	<0.100	U	7.35	D
B78-17-021418 B78-17-051518	2/14/2018 5/15/2018	15	0.91		1.63		0.53		2.60		<0.100	U	<0.100	U	8.66	D
B78-17-180917	9/17/2018	15	<0.2	U	0.39		<0.2	U			<0.100	U	<0.100	U	9.63	D
B78-17-180917 B78-17-020719	2/7/2019	15	<0.2	U	0.68		0.47	U	0.56		0.101	U	<0.100	U	2.32	U
B78-17-050719	5/7/2019	15	5.00	U	5.72		1.79		1.07		0.101		<0.100	U	4.92	D
B78-17-030719	11/20/2019	15	<0.2	U	0.69		0.26	М			<0.101	U	<0.100	U	1.32	U
B78-17-021120	2/11/2020	15	7.03	U	4.33		3.34	IVI	0.61		<0.100	U	<0.100	U	17.5	D
570 17 021120	2/11/2020	13	7.03	<u> </u>	4.55		3.34		0.01		10.100		10.100	Ü	17.5	
B78-18-8-100617	10/6/2017	8	<0.2	U	0.07	J	0.29		0.72		-		-		-	
B78-18-15-112917	11/29/2017	15	<0.2	U	<0.2	U	0.35	М			<0.100	U	<0.100	U	0.343	
DUP-01-112917	11/29/2017	15	<0.2	U	<0.2	U	0.36		2.96		<0.100	U	<0.100	U	1.68	
B78-18-021418	2/14/2018	15	<0.2	U	<0.2	U	0.24		1.28		<0.100	U	<0.100	U	1.47	
B78-18-051518	5/15/2018	15	<0.2	U	<0.2	U	0.23		1.68		<0.100	U	<0.100	U	27.6	D
B78-18-180917	9/17/2018	15	<0.2	U	<0.2	U	<0.2	U	0.89		<0.100	U	<0.100	U	7.28	D
B78-18-020719	2/7/2019	15	<0.2	U	<0.2	U	0.22		1.32		<0.100	U	<0.100	U	2.41	D
B78-18-050719	5/7/2019	15	<0.2	U	0.31		0.24		1.66		<0.100	U	<0.100	U	2.44	D
B78-18-112019	11/20/2019	15	<0.2	U	<0.2	U	0.21	М			<0.100	U	<0.100	U	2.64	D
B78-18-021120	2/11/2020	15	0.38		0.43		0.56		1.20		<0.100	U	<0.100	U	23.7	D
D70 40 0 400C47	40/5/2047			1	0.00		0.22	1	0.60							
B78-19-9-100617 B78-19-15-112917	10/6/2017	9 15	<0.2	U	0.06	J	0.22	N 4	0.69		- 10.100		- 10.100		- 0.255	
	11/29/2017		<0.2	U	<0.2	U		М			<0.100	U		U	0.255	
B78-19-021418 B78-19-051518	2/14/2018	15	<0.2	U		U	0.21		0.23		<0.100	U	<0.100	U	1.22	_
B78-19-051518 B78-19-180917	5/15/2018 9/17/2018	15 15	<0.2 <0.2	U	<0.2 <0.2	U	0.21 <0.2	U	0.34 <0.2	U	<0.100	U	<0.100 <0.100	U	22.4 1.91	D
B78-19-020719	2/7/2019	15	<0.2	U		U	<0.2	U		U	<0.100	U	<0.100	U	2.16	
B78-19-050719	5/7/2019	15	<0.2	U	<0.2	U	<0.2	U		U	<0.100	U	<0.100	U	14.2	D
B78-19-030719	11/20/2019	15	<0.2	U		U	0.2	М		H	<0.100	U	<0.100	U	0.454	<i>U</i>
B78-19-021120	2/11/2020	15	<0.2	U		U	<0.2	U		H	0.395	-	<0.100	U	28.3	D
					J		J			1 1	2.355			-		<u> </u>
B78-20-8-100617	10/6/2017	8	<0.2	U	<0.2	U	0.14	J	8.81		-		-		-	
B78-20-15-113017	11/30/2017	15	0.41		<0.2	U	<0.2	U			2.93	D	<0.100	U	53.9	D
B78-20-021418	2/14/2018	15	0.25		0.49	М	<0.2	U	40.0		<0.100	U	<0.100	U	21.1	D
B78-20-051518	5/15/2018	15	<0.2	U	0.39		0.22		54.2		<0.100	U	<0.100	U	15.5	D
B78-20-180917	9/17/2018	15	0.24		0.27		0.29		0.98		<0.100	U	<0.100	U	2.39	
D70 20 100317				1	0.44	М	0.25		16.5		<0.100	U	<0.100	U	1.89	
B78-20-020719	2/7/2019	15	<0.2	U	0.41	IVI	0.25	L	10.5		70.100	L	10.100	_		
	2/7/2019 5/7/2019	15 15	<0.2 <0.2	U	0.41	IVI	0.28		16.3		<0.100	U	<0.100	U	4.93	D
B78-20-020719				_	0.32	IVI		М	16.3					_		D

Table 3-2 - Baseline and Performance Monitoring Groundwater Data; 4-78/79 Benzene Treatment Area

			1			Π										Г
		Sample Depth			cis-1,2-				Benzene		Nitrate		Nitrite		Sulfate	
Sample ID	Date	(ft bgs)	TCE (ug/L)		DCE (ug/L)		VC (ug/L)		(ug/L)		(mg-N/L)		(mg-N/L)		(mg/L)	
B78-21-8-100617	10/6/2017	(1t bg3) 8	<0.2	U	0.13	J	0.21		1.42		(IIIg-IV/L)		(IIIg-IV/L)		(IIIg/L)	
Dup01-100617	10/6/2017	15	<0.2	U	0.15	J	0.21	J	2.01				_			
B78-21-15-112917	11/29/2017	15	<0.2	U	0.13	М	0.26	J	2.27		0.101		<0.100	U	4.43	D
B78-21-021418	2/14/2018	15	<0.2	U	0.24		0.30		0.86		<0.100	U	<0.100	U	1.60	
B78-21-051518	5/15/2018	15	<0.2	U	0.27		0.27		1.08		<0.100	U	<0.100	U	4.59	D
B78-21-180917	9/17/2018	15	0.22	_	0.29		<0.2	U	0.59	H	<0.100	U	<0.100	U	3.62	D
B78-21-020719	2/7/2019	15	<0.2	U	0.28		0.32	-	0.43		0.170	_	0.161	_	3.78	D
B78-21-050719	5/7/2019	15	<0.2	U	0.42		<0.2	U	0.43		<0.100	U	<0.101	U	5.73	D
B78-21-030719 B78-21-112019	11/20/2019	15	<0.2	U	0.30		<0.2	U	<0.2	U	<0.100	U	<0.100	U	5.92	D
B78-21-112019	2/11/2020	15	<0.2	U	0.30		0.31	U	<0.2	U	<0.100	U	<0.100	U	20.4	D
B76-21-021120	2/11/2020	13	₹0.2	U	0.30		0.51		₹0.2	U	\0.100	U	₹0.100	U	20.4	U
GW-244S-13-112917	11/29/2017	13	3.48		8.06		5.68		7.97		<0.100	U	<0.100	U	0.753	Т
GW-244S-021418	2/14/2018	13	1.01		1.25		1.22		5.34		<0.100	U	<0.100	U	1.25	1
GW-244S	3/6/2018	13	1.26		2.00		1.56		6.86		-	-	-	0	-	
GW-244S-051518	5/15/2018	13	<0.2	U	0.30		0.41		3.89		<0.100	U	<0.100	U	<0.100	U
GW-244S-180917	9/17/2018	13	<0.2	U	0.30		0.41		3.74		<0.100	U	<0.100	U	0.113	-
GW-244S	11/13/2018	13	<0.2	U	0.26		0.55		2.95		-	U		U	0.115	-
GW-244S-020719			<0.2	U	0.26		0.33		1.14				<0.100	U	0.337	
	2/7/2019	13 13	0.22	U	0.20		0.47		1.73		0.101		<0.100	U	0.557	
<i>GW-244S</i> GW-244S-050719	<i>3/4/2019</i> 5/7/2019	13	<0.2	U	1.22				1.73		<0.100	U	<0.100	U	1.45	
GW-244S-050719			<0.2	U	2.03		1.18				<0.100	U	<0.100	U	1.45	-
	5/7/2019	13		U			1.45		1.47		-		-			├
GW-244S	8/13/2019	13	<0.2	U	0.37	.,	0.71		1.77				-			-
GW-244S	11/11/2019	13	<0.2	U	<0.2	U	0.35	N 4	0.87							├
GW-244S-112019	11/20/2019	13	<0.2	U	<0.2	U	0.50	М	0.41		<0.100	U	<0.100	U	0.160	_
GW-244S-021120	2/11/2020	13	0.22		0.56		0.67		0.25		0.145		<0.100	U	2.69	D
GW-244S	3/10/2020	13	0.23		0.68		0.70		0.52		-		-		-	<u> </u>
GW-031S-23-113017	11/30/2017	23	<0.2	U	<0.2	U	<0.2	U	17.6		<0.100	U	<0.100	U	2.54	D
GW-0313-23-113017 GW-031S-021418	2/14/2018	23	<0.2	U	0.45	М	0.49	U	21.9		<0.100	U	<0.100	U	3.67	D
		23	<0.2	U	0.45	IVI			21.9		<0.100	U	<0.100	U	3.07	ט
DUP-01-021418 GW-031S	2/14/2018 3/6/2018	23	<0.2	U	1.18		0.42 <0.2	U	60.3				-			
				U	0.40		0.21	U	2.68			U	<0.100	U	2.95	D
GW-031S-051518	5/15/2018	23	0.36								<0.100	_		_		-
Dup-01-051518	5/15/2018	23	0.32		0.34		0.20		2.64		<0.100	U	<0.100	U	2.87	D
GW-031S-180917	9/17/2018	23 23	<0.2 <0.2	U	<0.2 0.21	U	0.28		<0.2 <0.2	U	<0.100	U	<0.100 <0.100	U	0.499	├
Dup-01-180917	9/17/2018			U						U	<0.100	U	<0.100	U	0.441	-
GW-031S	11/13/2018	23	<0.2	_	0.63		0.31		28.3		-		-		-	<u> </u>
Dup-01 GW-031S-020719	11/13/2018	23 23	<0.2 <0.2	U	0.58 0.51	М	0.30 <0.2	U	23.8 21.6			U		U	0 170	├
	2/7/2019			_			_	U			<0.100	U	<0.100	_	0.170	├
Dup-01-020719	2/7/2019	23	<0.2	U	0.57	M	0.24	.,	22.7		<0.100	U	<0.100	U	0.202	<u> </u>
GW-031S	3/4/2019	23	<0.2	U	<0.2	U	<0.2	U	55.9		-		-		-	-
Dup-01	3/4/2019	23	<0.2	U	<0.2	U	<0.2	U	58.6		- 100		- 10.100		1.00	<u> </u>
GW-031S-050719	5/7/2019	23	<0.2	U	0.22		0.30		1.90		<0.100	U	<0.100	U	1.86	
Dup-01-050719	5/7/2019	23	<0.2	U	0.27		<0.2	U	2.16		<0.100	U	<0.100	U	0.689	<u> </u>
GW-031S	5/7/2019	23	<0.2	U	0.43		0.29		7.13		-		-		-	<u> </u>
Dup-01	5/7/2019	23	<0.2	U	0.38		0.27	\vdash	6.69	\vdash	-	_	-	\vdash	-	₩
GW-031S	8/13/2019	23	<0.2	U	0.47		0.21		3.47		-		-		-	<u> </u>
Dup-01	8/13/2019	23	<0.2	U	0.48	-	0.22	\vdash	4.37	H	-	_	-	H	-	₩
GW-031S	11/11/2019	23	<0.2	U	0.40		0.25	\vdash	4.77	\vdash	-	_	-	\vdash	-	₩
Dup-01	11/11/2019	23	<0.2	U	0.39		0.27	ш	4.75			<u></u>		.	-	<u> </u>
GW-031S-112019	11/20/2019	23	<0.2	U	<0.2	U	<0.2	U	1.90	Н	<0.100	U	<0.100	U	1.26	<u> </u>
Dup-01-112019	11/20/2019	23	<0.2	U	<0.2	U	0.27	M	2.31	Н	<0.100	U	<0.100	U	1.16	<u> </u>
GW-031S-021120	2/11/2020	23	<0.2	U	<0.2	U	0.25	Ш	3.47	Н	<0.100	U	<0.100	U	3.29	D
Dup-01-021120	2/11/2020	23	<0.2	U	<0.2	U	0.27	<u>, , </u>	3.69	Н	<0.100	U	<0.100	U	3.11	D
GW-031S	3/10/2020	23	<0.2	U	0.61	-	<0.2	U	37.1	H	-		-	H	-	
Dup-01	3/10/2020	23	<0.2	U	0.56	Ц_	<0.2	U	38.5	Ш	-	<u> </u>	-	Ш	-	ㄴ

U = non-detect

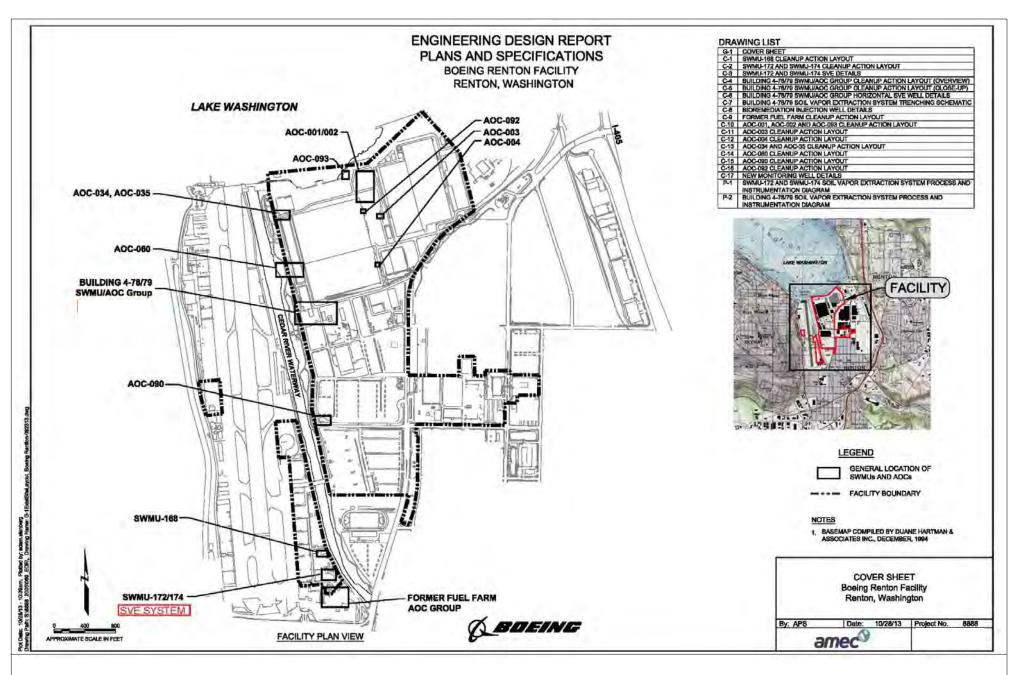
D = dilution

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

Table 3-3 Groundwater Monitoring Results Summary March 2020 and Recommended ERD Treatment

GW Treatment Area	Source and down gradient MWs	CPOC wells	Treatment IWs	ERD Treatment Recommendation
SWMU-172/174	PCE and TCE at or less than 1.2 ug/L; cisDCE less than 0.90 ug/L and VC less than 0.25 ug/L.	All detections are at 0.26 ug/L or less.	Prior data Mar 2018, North and South IWS showed total CVOCs range from 0.03 ug/L to 6.90 ug/L. TOC near background.	Detections are very low throughout the site. Will consider additional injections if beneficial.
Building 4-78/4-79 SWMU/AOC Group	One detection of TCE at 0.23 ug/L; cisDCE and VC are less than 1.0 ug/L at all but GW033S with cisDCE at 21.4 ug/L and VC at 52.2 ug/L. One central well (GW033S) continues to show total CVOCs remain reduced from Nov 2017 results of 1,430 ug/L but have increased from prior quarter. Recent data show 15.8 ug/L in Nov 2019 and 73.4 ug/L in Mar 2020. Substrate was applied to this area after Mar 2019 sampling. Benzene increased at source well GW031S (4.77 ug/L in Nov 2019 to 38.5 ug/L in Mar 2020). Nitrate/sulfate injections were completed in January 2020.	Majority of detections are ND; well GW143S with cisDCE detection at 0.21 ug/L. Northern well GW237S	Prior data May 2017, 4 of 5 wells with low detections where sum of CVOCs are less than 3 ug/L	CVOC detections have increased at source well GW033S. Recommend substrate injection in selected IWs/areas around GW033S. Addtional nitrate/sulfate injections recommended for the area around GW-031S.
AOC-001/002	Source MW: TCE is 0.03 ug/L, cisDCE is 0.49 ug/L and VC is 0.27 ug/L.	Prior data Aug 2019: All detections below 0.30 ug/L.	Prior data Mar 2018, detections at or below 0.30 ug/L.	Detections are very low throughout the site. Will consider additional injections if beneficial.
AOC-003	All detections are less than 0.33 ug/L.	All detections are less than 0.49 ug/L.	Prior data May 2017 one of four IWs sampled – VC detection less than 0.30 ug/L	Detections are very low throughout the site. Will consider additional injections if beneficial.
Lot 20 / former 10-71	Prior Data Nov 2019: All wells are ND.	-	-	No action at this time.
AOC-60	MW's with total CVOCS less than 0.41 ug/L; treatment MWs with total CVOCs less than 1.5 ug/L.	MW's with total CVOCs less than 0.30 ug/L.	-	Detections are very low throughout the site. Will consider additional injections if beneficial.
AOC – 90	Treatment MW at source with total CVOCs at 0.10 ug/L; down gradient wells less than 0.46 ug/L total CVOCs.	Detections less than 0.42 ug/L.	-	Detections are very low throughout the site. Will consider additional injections if beneficial.
Apron A	Two of three wells ND; GW264S with VC at 0.38 ug/L.	-	-	Detections are very low throughout the site. Will consider additional injections if beneficial.
Building 4-70	-	Total CVOCs less than 0.63 ug/L.	-	Detections are very low throughout the site. Will consider additional injections if beneficial.

FIGURES



CALIBRE Systems, Inc.

Figure 1-1 Site Location/ AOC Outlines

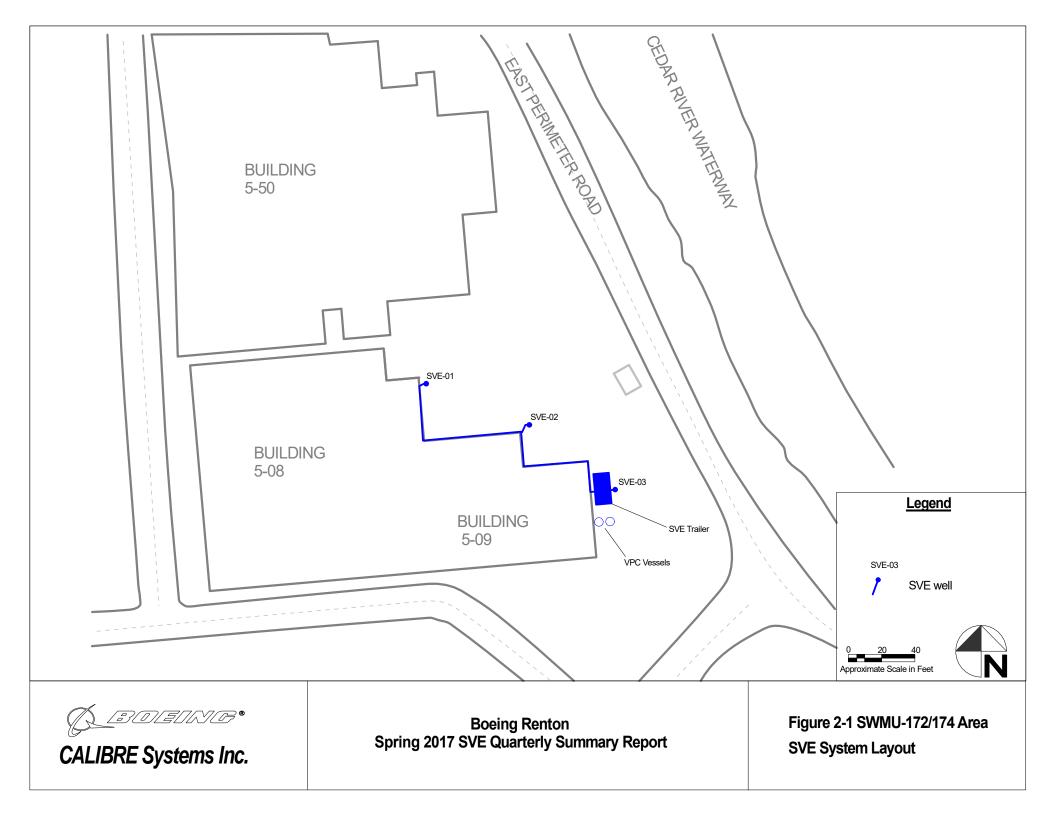
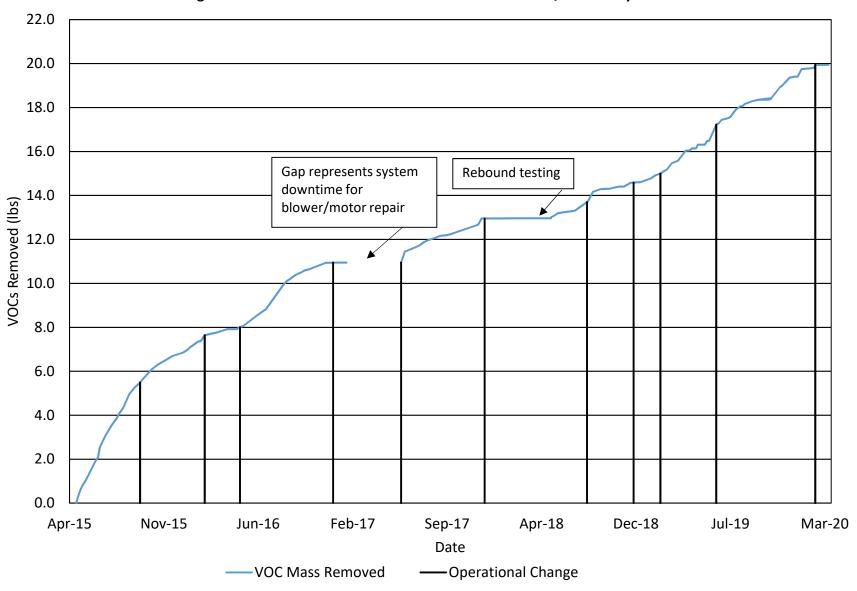


Figure 2-2 Cumulative VOC Mass Removed - SWMU-172/174 SVE System



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

Attachment A: Field Log Forms

Renton Cleanup Action SVE System – SWMU 172/174 Field Operations Log Form

) Check llowrate,) Check each SVE	Well VPC inlet and	oisture separator, water storage drums VPC outlet with PID. ational Parameters - Monitoring interval is variable.
Inspection Time:	1500	Motor Hours:
Blower	Current Value	Other Notes
Vacuum gauge	42 420	1.5 gal water drawned from seperator tank.
Pressure gauge	10 " 420	
System flow rate	105 SCFM	
Blower Temperature	9.2°F	
Temp.at lag VPC discharge		ts, TEFC motor fan, any unusual noise/vibration

PID Model:	PB RAE	2000	Details:	Details: DPB / 10,00 Ppm								
Calibration time/	date:	19/20 1500	PID che	PID check after monitoring:								
Sampling Point	Time	PID Reading (1)	PID Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated ¹					
SVE-01		Vent										
SVE-02		202 2 8 9 5	204 PPL									
SVE-03		881 825	960 pps									
VPC Inlet		1,082 pps	1,025200									
VPC Midpoint												
VPC Outlet		0 245	0 775									
Other vapor point			133									

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

Questions? Call Justin Nest At the Completion of a moni	e @ (360) 981-5606 toring event scan monitoring forms and	email to Justin Neste: Justin.Ne	ste@calibresys.com
Signature	Justin Neste	Signature	1/9/20 Date

Renton Cleanup Action SVE System – SWMU 172/174 Field Operations Log Form

Inspection Time:		Operational F Motor	Hours:					
Blower	Current	Value			Oth	er Notes		
Vacuum gauge	41 "Hz		5	Stained	from se	purator to	ink	
Pressure gauge	10" H-26)	ع کور	0				
System flow rate	105 SUF	m						
Blower Temperature	903/5							
Temp.at lag VPC discharge Other notes: che	eck oil level,	drive belts, TEFC	motor	fan, any un	usual noise/vib	oration		
PID Model:	PB Q AE 3	0000		Details:		110.01 PP	m	
Calibration time/				PID check	after monitori		Differential	
Sampling Point	Time	PID Reading (1)	(marray)					Flow Rate
SVE-01								
SVE-02								
SVE-03								
VPC Inlet		51 ppb	20	PPS				
VPC Midpoint								
VPC Outlet								
Other vapor point								
		the equation Flow Rate (20) (360) 981-5600 Oring event scan m	8				n.Neste@calibr	resys.com

Renton Cleanup Action SVE System – SWMU 172/174 Field Operations Log Form

CHECK Each 5v	E well, VPC inlet, and Oper	ational Parameters - Monitoring interval is variable.
Inspection Time:		Motor Hours:
Blower	Current Value	Other Notes
Vacuum gauge	41" 420	System check / Doain Condensate
Pressure gauge	10" H 20	System running on arrival Drained - Igal from moisture Separatur.
System flow rate	105 SCFM	Daired - Igal from noistore Separatur.
Blower Temperature	96°F	Diagnati
Temp.at lag VPC discharge		ts, TEFC motor fan, any unusual noise/vibration

PID Model:			Dotano									
Calibration time/	date:		PID ch	PID check after monitoring:								
Sampling Point	Time	PID Reading (1)	PID Reading	g Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated ¹					
SVE-01												
SVE-02												
SVE-03												
VPC Inlet												
VPC Midpoint												
VPC Outlet												
Other vapor point												

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

Questions? Call Justin Neste At the Completion of a monit	e @ (360) 981-5606 oring event scan monitoring forms and	l email to Justin Neste: Justin Nes	te@calibresys.com
	Justin Neste	Signature	1/24/20 Date
Signature	Printed Name	Signature	233

Renton Cleanup Action SVE System – SWMU 172/174 Field Operations Log Form

Inspection Time:	0545	Operational P			.orm.g			
Blower	Current	Value			Oth	er Notes		
Vacuum gauge	75"420	4	igste	m 011	2 arrival		Separatur	
Pressure gauge	20 11-	0 0	moine	d ~ 8	gal from	n misse	Separenter	
System flow rate	90 50	Fm						
Blower Temperature	76°F							
Temp.at lag VPC discharge								
Other notes: che	eck oil level,	drive belts, TEFC	motor	fan, any un	usual noise/vil	oration		
				Details:		1 .		
PID Model:	PPB RAE	3000				ppm / 0.	PPb	
Calibration time/	date:	7/20		PID check	after monitor			
Sampling Point	Time	PID Reading (1)	PID	Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate
SVE-01		vent						
SVE-02		10 PP5	97	Po				
SVE-03		74 PP5	75	775				
VPC Inlet		44 pps	0	ppb				
VPC Midpoint								
VPC Outlet				-				
Other vapor point								
Flow rate ca	alculated from t	he equation Flow Rate	(cfm) =	$= 12.24 \times \sqrt{dif}$	ferential pressur	re.		

Renton Cleanup Action SVE System – SWMU 172/174 Field Operations Log Form

ield Operati	ons Log				1) - s		
nspection Date: Periodic systems cl) Check flowrate, \	heck:	essure, moisture se	eparato	or, water sto				
) Oncok caon ove		Operational P	aranne	ters - Monit	oring interval	is variable.		
Inspection Time:	1400	Motor	Hours:					
Blower	Current	Value				er Notes		
Vacuum gauge	74.4	20 Chan Draine	ged t	310-er 01 gal cond	ensat in W	wist-me sep	45gal war	ed wester
Pressure gauge	24"#			A A. 122	- 2 M - 1 M - 6	6 W C 6	2	
System flow rate	84!	ockn value	109	ien bleed	value, c	lose recy	cle value	& connected
Blower Temperature	7731	< 2 out	les val	ves to 9	encrout & vice	t land	earbon. Di ected fend nors is to c	carbonness.
Temp.at lag VPC discharge						2	, ,	,
Other notes: che	eck oil level,	drive belts, TEFC	motor	ran, any un	usuai noise/vi	bration		
PID Model:				Details:	O PPb	110.0	ou pan	
Calibration time/	date:			PID check	after monitor	ing:		
Sampling Point	Time	PID Reading (1)	PID	Reading (2)	Vacuum	Flow Rate (gauge)	Differential Pressure	Flow Rate Calculated
SVE-01								

1,200 pab

SVE-02

SVE-03

VPC Inlet

VPC Midpoint

VPC Outlet
Other vapor
point

Questions? Call Justin Nes At the Completion of a mor	te @ (360) 981-5606 itoring event scan monitoring forms a	nd email to Justin Neste: Justin.Nes	ste@calibresys.com
Signature	Justin Neste	Signature	7/11/22 ²

1,265 pph

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