April 15, 2016

Washington State Department of Ecology
Northwest Regional Office
3190 160th Avenue Southeast
Bellevue, Washington 98008-5452

Attn: Ms. Robin Harrover

Transmitted via email to: *rharrover461@ecy.wa.gov*

Re: Status Report No. 54, January through March 2016 Activity Period
Boeing Auburn Facility
WAD 041337130, RCRA Corrective Action Agreed Order No. 01HWTRNR-3345
Project No. 0025164.120.501

Dear Ms. Harrover:

References

1. January 6, 2016. Draft Technical Memorandum: Investigation History and Status of Petroleum Releases, Building 17-06 Chip Collection and Briquetter Systems, Boeing Auburn Facility. From Jennifer Wynkoop, Landau Associates, Inc. (LAI), to James Bet, The Boeing Company (Boeing).
2. January 6, 2016. Email: "Boeing Auburn Spanish Website live." From Thea Levkovitz, Washington State Department of Ecology (Ecology), to representatives of Boeing, APAC, City of Algona, and Ecology.
3. January 6, 2016. Email: "Water Table Map for Feb Open House." From Robin Harrover, Ecology, to Jennifer Wynkoop, LAI.
4. January 8, 2016. Email: "Final Meeting Summary – Ecology and City of Auburn" From Robin Harrover, Ecology, to James Bet, Boeing. (Attachment: Meeting summary).
5. January 14, 2016. Email: "2016 Draft Schedule." From Jennifer Wynkoop, LAI, to representatives of Boeing, Ecology, and ICF International (ICF). (Attachment: draft 2016 schedule).
6. January 14, 2016. Email: "Water Table Max TCE and VC table." From Jennifer Wynkoop, LAI to Robin Harrover, Ecology. (Attachment: table with maximum TCE and VC concentrations for water table wells and June 2015 water table figures).
7. January 15, 2016. Letter: "Status Report: No. 53, October Through December 2015 Activity Period, Boeing Auburn Facility, WAD 041337130, RCRA Corrective Action Agreed Order No. 01HWTRNR-3345." From Jennifer Wynkoop, LAI, to Robin Harrover, Ecology.
8. January 25, 2016. Ecology Listserv (Boeing Fabrication Auburn Site): Boeing Auburn Investigation – looking forward to 2016.
9. January 26, 2016. Letter: Groundwater monitoring results: August and December 2015, Auburn School District warehouse property wells, Auburn, Washington. From Jennifer Wynkoop, LAI, to Cindi Blansfield, Assistant Superintendent of Business and Operations, Auburn School District.

10. January 26, 2016. Letter: Groundwater monitoring results: August and December 2015, City of Auburn wells, Auburn Washington. From Jennifer Wynkoop, LAI, to Chris Thorn, Water Quality Program Coordinator, City of Auburn.
11. January 26, 2016. Letter: Groundwater monitoring results: December 2015, Sentry wells, Pacific, Washington. From Jennifer Wynkoop, LAI, to Jim Morgan, City Engineer, City of Pacific.
12. January 26, 2016. Letter: Groundwater monitoring results: December 2015, Coastal Farm and Ranch well, Auburn, Washington. From Jennifer Wynkoop, LAI, to Byron Baule, Operations Manager, Coastal Farm and Ranch.
13. January 26, 2016. Letter: Groundwater monitoring results: December 2015, Boeing wells on Fana Auburn 234 LLC property, Auburn, Washington. From Jennifer Wynkoop, LAI, to John Powers, Fana Group of Companies.
14. January 26, 2016. Letter: Groundwater monitoring results: December 2015, Boeing wells on Fana Auburn LLC Property, Auburn, Washington. From Jennifer Wynkoop, LAI, to John Powers, Fana Group of Companies.
15. January 26, 2016. Letter: Groundwater monitoring results: August and December 2015, U.S. General Services Administration wells, Auburn, Washington. From Jennifer Wynkoop, LAI, to Richard Hall, Auburn Senior Property Manager, U.S. General Services Administration (GSA).
16. January 26, 2016. Letter: Groundwater monitoring results: December 2015, Boeing wells along the Interurban Trail, Auburn and Algona, Washington. From Jennifer Wynkoop, LAI, to Kurt Krebs, Puget Sound Energy (PSE).
17. January 27, 2016. Letter: Groundwater monitoring results: August and December 2015, City of Algona wells, Algona, Washington. From Jennifer Wynkoop, LAI, to David Hill, Mayor, City of Algona.
18. February 2, 2016. Letter: Groundwater monitoring results: December 2015, 840 Industry Drive North Well, Algona, Washington. From Jennifer Wynkoop, LAI, to Ben Brodsky, Senior Development and Construction Manager, DCT Industrial (DCTI).
19. January 27, 2016. Letter: Groundwater monitoring results: August and December 2015, Primus Wells, Algona, Washington. From Jennifer Wynkoop, LAI, to Peter Wazlawek, Primus International, Inc. (Primus)
20. January 27, 2016. Letter: Groundwater monitoring results: Third and Fourth Quarter 2015, WP Glimcher wells, Auburn, Washington. From Jennifer Wynkoop, LAI, to Christian Faltenberger, General Manager, WP Glimcher.
21. January 27, 2016. Letter: Groundwater monitoring results: August and December 2015, Washington State Department of Transportation wells, Auburn, Washington. From Jennifer Wynkoop, LAI, to Amir Ahmadi, Regional Materials Engineer, Washington State Department of Transportation (WSDOT).
22. February 2, 2016. Letter: Ecology Comments and Approval of Draft 2015 Tier I Commercial Vapor Intrusion Assessment Report, Boeing Auburn Facility by Landau Associates Inc. for the Boeing Company, dated December 16, 2015; FS #2018; CS#5049; EPA #WAD041337130. From Neal Hines, Ecology, to James Bet, Boeing.
23. February 4, 2016. Draft Report: Agency Review Draft 2015 Groundwater Investigation Report, Boeing Auburn Facility, Auburn, Washington.

24. February 5, 2016. Email: “Hi Resolution Map Files Request”. From Robin Harrover, Ecology, to Jennifer Wynkoop, LAI.
25. February 8, 2016. Report: 2015 Tier I Commercial Vapor Intrusion Assessment Report, Boeing Auburn Facility, Auburn, Washington.
26. February 10, 2016. Draft Technical Memorandum: Phase VII Interim Groundwater Monitoring Program, Boeing Auburn Facility, Auburn, Washington. From Jennifer Wynkoop and Sarah Fees, LAI, to Robin Harrover and Neal Hines, Ecology.
27. February 10, 2016. Email: “Display Board for Feb. 27”. From Thea Levkovitz, Ecology, to representatives of Boeing, APAC, City of Algona, and LAI.
28. February 12, 2016. File Transfer: High Resolution Map Files for February Open House. From Sarah Fees, LAI, to Robin Harrover and Thea Levkovitz, Ecology.
29. February 16, 2016. Email: “Hi Res Map Filed for February Open House.” From Robin Harrover, Ecology, to Jennifer Wynkoop, LAI.
30. February 18, 2015. Email: “Display Board for Feb. 27”. From Kamara Sams, Boeing, to Thea Levkovitz, Ecology. (Attachment: Boeing comments to the open house display board).
31. February 19, 2016. File Transfer: Updated High Resolution Maps for February Open House. From Sarah Fees, LAI, to Robin Harrover and Thea Levkovitz, Ecology.
32. February 22, 2016. Ecology Listserv: Boeing Auburn Investigation – Drop-In Open House, Feb. 27, 10 AM – 2 PM.
33. February 23, 2016. Email: “Support materials”. From Thea Levkovitz, Ecology to representatives of Boeing, LAI, APAC, City of Algona, and City of Auburn. (Attachments: Instructions for how to navigate iPad and data graphs of air data).
34. February 24, 2016. Email: “iPad Information for Public Meeting”. From Jennifer Wynkoop, LAI, to Neal Hines, Ecology. (Attachments: comments on iPad information for public meeting).
35. February 24, 2016. File Transfer: Auburn and Pacific Municipal Water Supply Wells Poster. From Sarah Fees, LAI, to Robin Harrover and Thea Levkovitz, Ecology.
36. February 25, 2016. Email: “KMZ file of BOA Water Table Wells”. From Jennifer Wynkoop, LAI, to Ashley Bagley, EnviroIssues. (Attachments: KMZ files of the water table wells.)
37. February 25, 2016. Letter: Response to Ecology Comments on Numerical Groundwater Flow Modeling, Boeing Auburn Facility, Auburn, Washington. From Eric Weber, LAI, to Robin Harrover, Ecology.
38. February 26, 2016. Email: “Phase VII Groundwater Monitoring Plan”. From Robin Harrover, Ecology, to Sarah Fees, LAI, and Neal Hines, Ecology.
39. February 29, 2016. Email: “VI Site Visit”. From Jennifer Wynkoop, LAI, to Neal Hines, Ecology.
40. March 4, 2016. Email: “RE: Phase VII Groundwater Monitoring Plan”. From Neal Hines, Ecology, to Sarah Fees, LAI.
41. March 15, 2016. Meeting: Los Cabos VI Building Survey. Attended by Jennifer Wynkoop, LAI, and Neal Hines, Ecology.
42. March 17, 2016. Ecology listserv: Boeing Auburn Investigation – From Ecology – We missed you!

43. March 20, 2016. Email: "Boeing Auburn Groundwater Contamination Open House Summary". From Thea Levkovitz, Ecology, to Jennifer Wynkoop, LAI. (Attachment: March 15, 2016 Algona open house summary).
44. March 24, 2016. Email: "Los Cabos Restaurant Building Survey". From Jennifer Wynkoop, LAI, to Alex White, Evergreen Investments (Attachment: Los Cabos building survey).
45. March 30, 2016. Report: Draft 2016 Tier II Commercial Vapor Intrusion Assessment Report, Boeing Auburn Facility, Auburn, Washington.

The Auburn Agreed Order became effective on August 14, 2002. As required under Section VI.12 of the Auburn Agreed Order, Boeing is providing Status Report No. 54, which covers the 3-month activity period of January through March 2016.

Work Conducted

General Site-wide Corrective Action Activities

On January 15, 2015, LAI submitted Status Report No. 53 regarding fourth quarter 2015 activities to Ecology and other stakeholders[1] for their records (Reference #7).

As part of various off-site monitoring well access agreement and right-of-way (ROW) permits, Boeing provides semi-annual groundwater data submittals. The following semi-annual groundwater data submittals were distributed during first quarter 2016:

- Data for AGW237(D), AGW238(I), and AGW239(S) located on the Auburn School District warehouse property from the August and December 2015 sampling events to the Auburn School District (Reference #9)
- Data for 35 wells located on City of Algona ROW from the August and December 2015 sampling events to the City of Algona (Reference #17)
- Data for 32 wells located on City of Auburn ROW from the August and December 2015 sampling events to the City of Auburn (Reference #10)
- Sentry well data from the December 2015 sampling event to the City of Pacific (Reference #11)
- AGW236 data from the December 2015 sampling event to Coastal Farm and Ranch (Reference #12)
- AGW276(M) data from the December 2015 sampling event to DCTI (Reference #18)
- AGW179(I) and AGW180(D) data from the December 2015 sampling event to Fana Auburn 234 LLC (Reference #13)
- AGW177(I) and AGW178(D) data from the December 2015 sampling event to Fana Auburn LLC (Reference #14)

[1] A list of stakeholders that receive paper copies of quarterly status reports are listed at the end of this document. Ecology also forwards quarterly status reports via email to representatives of the City of Algona, City of Auburn, City of Pacific, Seattle-King County Health Department, and Washington State Department of Health.

- Data for AGW256(I), AGW257(S), and AGW258(S) from the August and December 2015 sampling events to GSA (Reference #15)
- Data for the 13 wells from the August and December 2015 sampling events to Primus (Reference #19)
- Data for 16 wells located on the Interurban Trail from the December 2015 sampling events to PSE (Reference #16)
- Data for 17 wells located on The Outlet Collection property from the third and fourth quarter 2015 sampling events to WP Glimcher (Reference #20)
- Data for APP-057, APP-058, and APP-069 from the August and December 2015 sampling events to WSDOT (Reference #21).

Ecology project managers, Robin Harrover and Neal Hines, continued to attend regularly scheduled conference calls[2] with Boeing, LAI, and the City of Algona's environmental consultant, ICF. The primary purpose of these calls is to discuss technical aspects of the project scope and schedule, data results, and public outreach. Boeing and Ecology communication personnel also attend these calls. Meeting notes continue to be recorded and distributed by LAI. Boeing created a remediation schedule for 2016 and sent the summary to Ecology on January 14, 2016 (Reference #5) for review during a regularly scheduled conference call.

Remedial Investigation Report

Boeing and LAI continued work on the final remedial investigation (RI) report. The draft RI report is expected to be submitted to Ecology in the third quarter 2016.

Site-wide Groundwater Model

Boeing prepared a Site-wide numerical groundwater model report and submitted it to Ecology in June 2015 and a revised version in July 2015. Ecology provided comments on the report in September 2015. Boeing met with Ecology on November 18, 2015 to discuss the comments and plans to finalize the report. Ecology sent a meeting summary to Boeing on December 4, 2015. Boeing prepared a response to comments, sent to Ecology February 25, 2016 (Reference #37). Boeing plans to finalize the model report and submit to Ecology in the second quarter 2016.

Tier I Commercial Vapor Intrusion Assessment

The Tier I commercial vapor intrusion assessment included collection of soil gas and shallow groundwater samples in City of Algona ROW, City of Auburn ROW, and on The Outlet Collection property. Boeing submitted a report to Ecology summarizing the Tier I commercial vapor intrusion assessment on December 16, 2015. Boeing received comments on this report from Ecology February 2, 2016 (Reference #22). Boeing submitted the final Tier I report to Ecology on February 8, 2016 (Reference #25).

[2] Conference calls were scheduled every 2 weeks in January and then became monthly in February.

Results from the Tier I commercial vapor intrusion assessment activities indicated soil gas concentrations were above screening levels at one location on The Outlet Collection property, indicating the need for additional commercial vapor intrusion assessment activities (Tier II) at an adjacent private property owned by Evergreen Investments of Washington and leased by Los Cabos Restaurant (Los Cabos Property).

Tier II Commercial Vapor Intrusion Assessment

The Tier II commercial vapor intrusion assessment included indoor air and sub-slab sampling locations at Building 17-70 on Boeing property and at The Outlet Collection. Boeing submitted a report summarizing the Tier II commercial vapor intrusion assessment to Ecology on March 30, 2016 (Reference #45).

Boeing is proceeding with additional Tier II assessment at the Los Cabos Property. Boeing completed an access agreement with Evergreen Investments in February 2016. Boeing contacted Ecology on February 29, 2016 about conducting a site visit and building survey (Reference #39). On March 15, 2016, Boeing and Ecology completed the building survey (Reference #41). On March 24, 2016, Boeing sent a copy of the building survey to the property owner (Reference #44). Boeing plans to submit a work plan and complete the indoor air and sub-slab sampling in the second quarter 2016, and to submit a report summarizing the results in the third quarter 2016.

2015 Drilling Program

The 2015 drilling program included installation of wells on City of Auburn ROW, City of Algona ROW, and on one private property (DCTI property). Drilling and installation of monitoring wells on City of Auburn ROW and City of Algona ROW were completed in March and at DCTI property in October 2015. Initial sampling of the new wells took place in April and October 2015, respectively. Boeing submitted the draft 2015 Groundwater Investigations Report to Ecology on February 4, 2016 (Reference #23).

Groundwater Sampling and Surface Water Sampling

On February 10, 2015, Boeing submitted a draft technical memorandum that proposed amendments to the Phase VI groundwater sampling plan (Phase VII; Reference #26). Boeing requested Ecology approval prior to March 1, 2016 to allow for implementation in March 2016. On February 26, 2016, Ecology approved elimination of U.S. Environmental Protection Agency (EPA) Method 8260 Selected Ion Monitoring analysis for tetrachloroethene (PCE)[3] from the groundwater monitoring program; however, requested additional review time for other changes, including changes to sampling frequency (Reference #38 and #40). Boeing completed quarterly groundwater sampling on March 15, 2016.

[3] PCE continues to be analyzed by EPA Method 8260 Scan.

In October 2015, Ecology approved a comparison study for the use of polyethylene diffusion bags to collect volatile organic compound samples at the site. The comparison study was completed at 23 wells during the fourth quarter 2015 groundwater sampling event. During the first quarter 2016, Boeing analyzed and completed statistical analysis of the data. Boeing plans to submit a report to Ecology in the second quarter 2016.

The quarterly groundwater sampling data are provided in Attachment 1. The current monitoring well network is presented on Figure 1-1. A sampling matrix for the March 2016 quarterly sampling event is presented in Table 1-1. A complete summary of analytical results is presented in Table 1-2. Detected compounds are summarized in Table 1-3.

Continued surface water monitoring activities include annual (dry season) surface water sampling at six locations, and wet season surface water sampling at one location (Chicago Avenue ditch). The wet season surface water sampling event at the Chicago Avenue ditch occurred on March 18, 2016. Results are presented in Attachment 1; analytical data is presented in Table 1-4 and the sampling location is shown on Figure 1-1.

Algona Enhanced Natural Attenuation Pilot Test

The enhanced natural attenuation pilot test injection began on August 17, 2015 and was completed on September 4, 2015. Approximately 80,000 gallons of electron donor solution was injected into the shallow water-bearing zone. Boeing is performing quarterly post-injection sampling to monitor the effectiveness of the pilot test injection. The March 2016 sampling event was the second quarterly sampling event following injection activities. A summary of results from the pilot test monitoring wells is provided in Attachment 2. The pilot test injection and monitoring well locations are presented on Figure 2-1. Pilot test data are summarized in Table 2-1.

March 2016 monitoring results indicate the presence of electron donor and enhanced bioremediation at seven wells including the injection wells (IW-34, IW-36, and IW-37); the three downgradient monitoring wells located east of the Primus building (AGW269, AGW270, and AGW271); and one monitoring well located west of the Primus building (AGW275). No substantial changes were observed in the monitored screens of the upgradient well (AGW251) located east of Milwaukee Avenue.

In March 2016, the indications of enhanced bioremediation at the injection wells and the four downgradient wells where electron donor is present include changes in total organic carbon (TOC), aquifer redox conditions, and in the concentrations of trichloroethene (TCE) and/or its degradation breakdown products and end products. TOC, indicating the presence of electron donor, increased from a baseline of less than 10 milligrams per liter (mg/L) to a range of 17.9 to 6,450 mg/L at injection wells and a range of 75.2 to 1080 mg/L at three downgradient monitoring wells (AGW270, AGW271, and AGW275). At monitoring well AGW269, TOC concentrations have declined back to baseline (8.5 mg/L). An enhanced aquifer redox condition, which is desired for complete reductive dechlorination, is indicated at these seven wells by substantial increases in methane, with concentrations ranging

from 1.4 to 28 mg/L. Increases in TCE and/or cis-1,2-dichloroethene observed at some of these wells is consistent with enhanced desorption of contaminant mass from the aquifer matrix. This enhanced desorption is due to a combination of aquifer disturbance during injection, surfactant effects of the injected donor substrates, and surfactant effects of enhanced biological activity (i.e., biosurfactants). Changes in vinyl chloride were observed as a further indication of enhanced bioremediation. The non-toxic degradation end products, ethene and/or ethane, were detected at all seven wells with electron donor indicating complete reductive dechlorination; ethene and ethane were not detected during baseline sampling at these wells.

Communications

The outreach group sent regular updates on activities occurring at the Boeing Auburn site. Ecology provided an outreach update notifying the public about the development of a Spanish-language project website (Reference #2) and a projection of 2016 project activities (Reference #8).

Ecology conducted an open house in Algona on February 27, 2016. The open house was intended to update the public regarding the status of the project, provide information about the transition from RI to feasibility study, and to prepare the public for solicitation of comments on the RI report. In preparation for this meeting, Boeing provided Ecology with a series of materials for visuals and displays (Reference #6, #28, #31, #35, #36) based on Ecology requests (Reference #3, #24, #29). In addition, Ecology submitted materials to stakeholders for review prior to display at the open house (Reference #27 and #33) and Boeing provided comments to Ecology on the display materials (Reference #30 and #34). Ecology notified the public of the open house (Reference #32) and offered alternatives to view the presented information for those that missed the open house (Reference #42). On March 30, Ecology presented Boeing with a summary of the open house including number of presenters and attendees, topics of discussion, and feedback (Reference #43).

City of Algona Communications

The City of Algona continues to be notified of all fieldwork occurring in Algona. The City of Algona's consultant, ICF, continues to participate in project conference calls with Boeing and Ecology and continues to review Algona-related deliverables (e.g., work plans and reports). Ecology also has communications conference calls with Mayor Hill (City of Algona). Ecology shares information from these meetings with Boeing by distributing meeting notes and via discussions during project conference calls.

City of Auburn Communications

Conference calls with the City of Auburn continue to occur monthly. Regular attendees include representatives from Boeing, LAI, the City of Auburn, and Ecology. Meeting notes continue to be recorded and distributed by LAI.

Ecology and City of Auburn met December 9, 2015 to discuss the status of the RI and the transition to the feasibility study. Ecology provided Boeing with notes from a meeting on January 8, 2016 (Reference #4).

17-06 Ongoing Monitoring

Boeing is continuing to monitor petroleum hydrocarbons in well AGW128 in Building 17-06. No measureable product was identified in the well in the first quarter 2016. The well continues to be check monthly for product thickness.

Boeing submitted a technical memorandum presenting the history and status of the petroleum releases at the Building 17-06 chip collection and briquetter systems on January 6, 2016 (Reference #1). Boeing and Ecology discussed the technical memorandum at the following regularly scheduled conference call.

Occurrence of Problems

None noted.

Projected Work for Next Reporting Period March through June 2016

Activities projected for the next reporting period pertain to the Algona pilot test and the ongoing RI including groundwater and vapor intrusion investigations. Tasks during second quarter 2016 are expected to include:

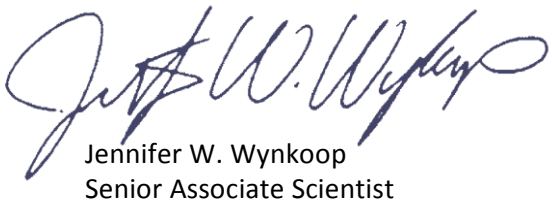
- Finalizing the Tier II commercial vapor intrusion assessment report
- Conducting additional commercial vapor intrusion assessment activities at the Los Cabos Property
- Submitting a report about the 2015 surface water sampling activities
- Finalizing the 2014 Auburn groundwater investigation report
- Finalizing the 2015 groundwater investigation report
- Submitting a passive sampling interim data memorandum
- Submitting a Site-wide natural attenuation assessment work plan
- Continuing work on the final RI report
- Finalizing Phase VII groundwater monitoring plan
- Continuing 17-06 light nonaqueous phase liquid investigation
- Conducting the annual groundwater sampling event in May and June 2016

Other Significant Findings, Changes, and Contacts

None noted.

If you have any questions regarding this status report, or need any other information, please do not hesitate to contact Jim Bet (206) 679-0433 or me (253) 284-4879.

LANDAU ASSOCIATES, INC.



Jennifer W. Wynkoop
Senior Associate Scientist

SMM/SEF/jrc
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cc: James Bet, The Boeing Company (email only)
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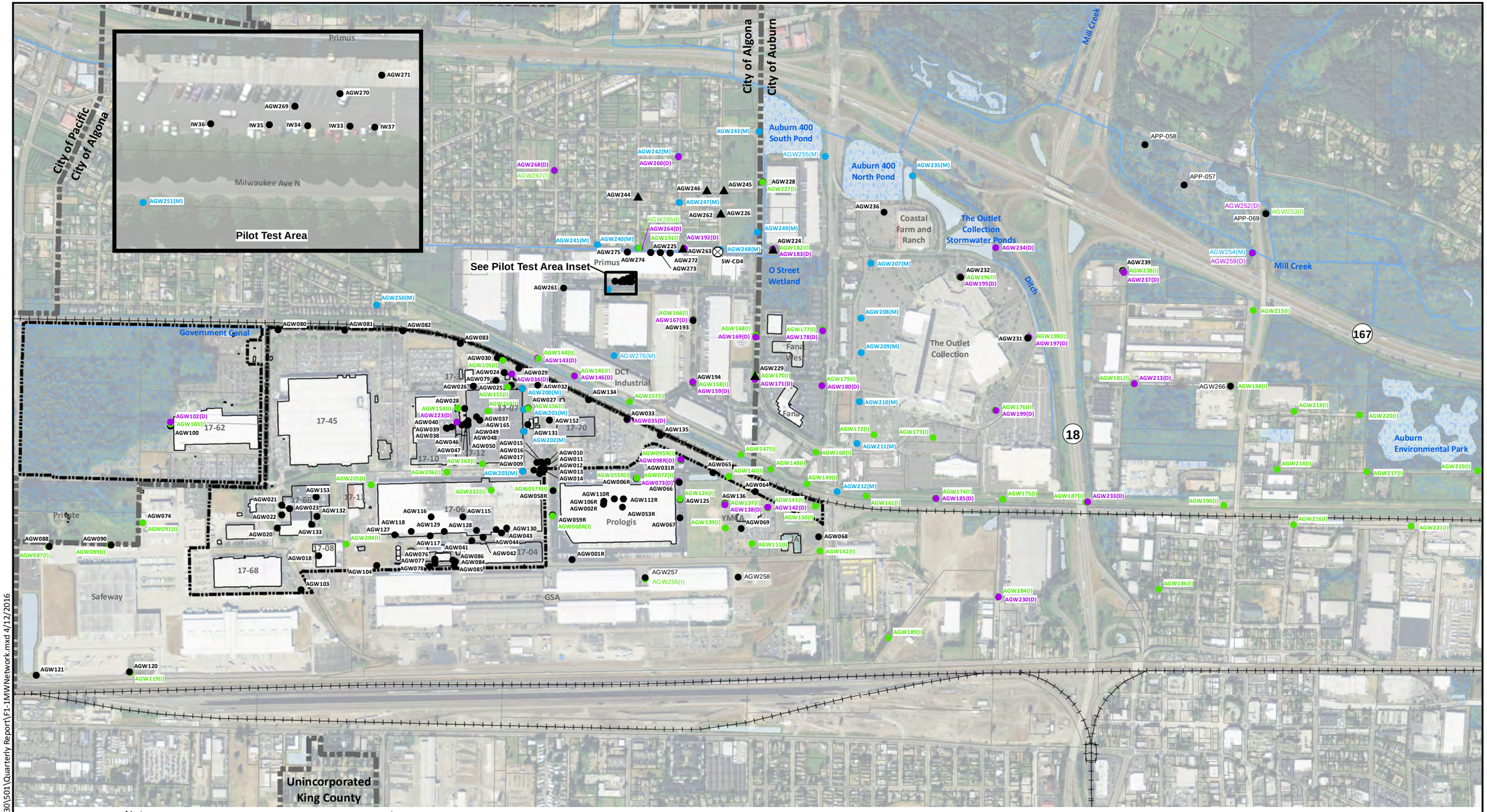
Neal Hines, Washington State Department of Ecology (email only)
Terry Pollard, YMCA Auburn

Attachments: Attachment 1: Groundwater and Surface Water Sampling Results
Attachment 2: Pilot Test Results

ATTACHMENT 1

Groundwater and Surface Water Sampling Results



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Notes

1. Well designations beginning with APP are installed and owned by WSDOT.
2. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- ⊗ Semiannual Surface Water Sampling Location
- ▲ Offsite Water Table Well
- ● Shallow Monitoring Well (2 to 30 ft BGS)
- (I) ● Intermediate Monitoring Well (40 to 60 ft BGS)
- (D) ● Deep Monitoring Well (80 to 100 ft BGS)
- (M) ● Multi-Level Well
- Wetland Areas
- Water Bodies
- Waterways

N

0 1,000 2,000

Scale in Feet

Base Map Source: Geometrix 2003; Parcel Data Source: King County 2015; Aerial Photo Source: Esri World Imagery.

LANDAU ASSOCIATES

Boeing Auburn
Auburn, Washington

Current Monitoring Well Network

Figure 1-1

Table 1-1
1Q 2016 Groundwater Sample Matrix
Boeing Auburn Facility
Auburn, Washington

Field Sample ID	Sample Location	Sample Date	Sample Type	Laboratory SDG	Laboratory Sample ID	Sulfate by EPA 300.0	AMEE by RSK-175	Total Suflide by SM4500-S2-D	TOC by SM 5310C	VOCs by SW-846 8260C	VC by SW-846 8260CSIM
AGW183-20160315	AGW183	3/15/2016	N	1641506	8289785					X	
AGW191-20160315	AGW191	3/15/2016	N	1641506	8289788					X	
AGW192-20160315	AGW192	3/15/2016	N	1641506	8289789					X	
AGW215-20160311	AGW215	3/11/2016	N	1640107	8283545					X	
AGW225-20160302	AGW225	3/2/2016	N	1636962	8269178	X	X	X	X	X	X
AGW226-20160303	AGW226	3/3/2016	N	1637283	8270649	X	X	X	X	X	X
AGW227-20160314	AGW227	3/14/2016	N	1641099	8288075					X	X
AGW228-20160314	AGW228	3/14/2016	N	1641099	8288076					X	X
AGW235-2-20160315	AGW235-2	3/15/2016	N	1641506	8289786					X	
AGW235-4-20160315	AGW235-4	3/15/2016	N	1641506	8289787					X	
AGW237-20160314	AGW237	3/14/2016	N	1641097	8288061					X	X
AGW238-20160311	AGW238	3/11/2016	N	1640107	8283549					X	X
AGW239-20160311	AGW239	3/11/2016	N	1640107	8283548					X	X
AGW240-1-7-20160303	AGW240-1	3/3/2016	N	1637282	8270635	X	X	X	X	X	X
AGW240-5-28-20160303	AGW240-5	3/3/2016	N	1637282	8270633	X	X	X	X	X	X
AGW241-1-6-20160311	AGW241-1	3/11/2016	N	1640108	8283559					X	X
AGW241-5-27-20160311	AGW241-5	3/11/2016	N	1640108	8283560					X	X
AGW242-1-6-20160311	AGW242-1	3/11/2016	N	1640108	8283562					X	X
AGW242-2-16-20160311	AGW242-2	3/11/2016	N	1640108	8283563					X	X
AGW242-5-60-20160311	AGW242-5	3/11/2016	N	1640108	8283564					X	X
AGW243-1-6-20160314	AGW243-1	3/14/2016	N	1641099	8288071					X	X
AGW243-3-25-20160314	AGW243-3	3/14/2016	N	1641099	8288069					X	X
AGW243-5-50-20160314	AGW243-5	3/14/2016	N	1641099	8288070					X	X
AGW244-20160315	AGW244	3/15/2016	N	1641506	8289791					X	X
AGW245-20160315	AGW245	3/15/2016	N	1641505	8289780					X	X
AGW246-20160315	AGW246	3/15/2016	N	1641505	8289781					X	X
AGW247-1-6-20160303	AGW247-1	3/3/2016	N	1637282	8270639	X	X	X	X	X	X
AGW247-5-27-20160303	AGW247-5	3/3/2016	N	1637282	8270637	X	X	X	X	X	X
AGW248-1-5-20160311	AGW248-1	3/11/2016	N	1640107	8283544					X	X
AGW248-5-26-20160311	AGW248-5	3/11/2016	N	1640107	8283543					X	X
AGW249-1-8-20160314	AGW249-1	3/14/2016	N	1641097	8288062					X	X
AGW249-5-29-20160314	AGW249-5	3/14/2016	N	1641097	8288063					X	X
AGW250-1-9-20160311	AGW250-1	3/11/2016	N	1640108	8283553					X	X
AGW250-2-26-20160311	AGW250-2	3/11/2016	N	1640108	8283554					X	X

Table 1-1
1Q 2016 Groundwater Sample Matrix
Boeing Auburn Facility
Auburn, Washington

Field Sample ID	Sample Location	Sample Date	Sample Type	Laboratory SDG	Laboratory Sample ID	Sulfate by EPA 300.0	AMEE by RSK-175	Total Suflide by SM4500-S2-D	TOC by SM 5310C	VOCs by SW-846 8260C	VC by SW-846 8260CSIM
AGW250-3-41-20160311	AGW250-3	3/11/2016	N	1640108	8283555					X	X
AGW250-6-81-20160311	AGW250-6	3/11/2016	N	1640108	8283556					X	X
AGW251-1-8-20160303	AGW251-1	3/3/2016	N	1637283	8270647	X	X	X	X	X	X
AGW251-2-25-20160303	AGW251-2	3/3/2016	N	1637283	8270645	X	X	X	X	X	X
AGW251-3-40-20160303	AGW251-3	3/3/2016	N	1637283	8270643	X	X	X	X	X	X
AGW251-6-76-20160315	AGW251-6	3/15/2016	N	1641505	8289778					X	X
AGW252-20160311	AGW252	3/11/2016	N	1640107	8283551					X	X
AGW253-20160311	AGW253	3/11/2016	N	1640107	8283550					X	X
AGW254-1-6-20160314	AGW254-1	3/14/2016	N	1641099	8288077					X	X
AGW254-2-20-20160315	AGW254-2	3/15/2016	N	1641505	8289774					X	X
AGW254-5-50-20160315	AGW254-5	3/15/2016	N	1641505	8289775					X	X
AGW255-1-13-20160314	AGW255-1	3/14/2016	N	1641099	8288072					X	X
AGW255-3-30-20160314	AGW255-3	3/14/2016	N	1641099	8288073					X	X
AGW255-5-55-20160314	AGW255-5	3/14/2016	N	1641099	8288074					X	X
AGW256-20160311	AGW256	3/11/2016	N	1640107	8283540					X	X
AGW257-20160311	AGW257	3/11/2016	N	1640107	8283541					X	X
AGW258-20160311	AGW258	3/11/2016	N	1640107	8283542					X	X
AGW259-20160315	AGW259	3/15/2016	N	1641505	8289776					X	X
AGW260-20160311	AGW260	3/11/2016	N	1640108	8283561					X	X
AGW261-20160315	AGW261	3/15/2016	N	1641505	8289777					X	X
AGW262-20160315	AGW262	3/15/2016	N	1641505	8289779					X	X
AGW263-20160315	AGW263	3/15/2016	N	1641506	8289790					X	X
AGW264-20160311	AGW264	3/11/2016	N	1640108	8283558					X	X
AGW265-20160311	AGW265	3/11/2016	N	1640108	8283557					X	X
AGW266-20160311	AGW266	3/11/2016	N	1640107	8283547					X	X
AGW267-20160314	AGW267	3/14/2016	N	1641097	8288064					X	X
AGW268-20160314	AGW268	3/14/2016	N	1641097	8288065					X	X
AGW269-20160302	AGW269	3/2/2016	N	1636962	8269176	X	X	X	X	X	X
AGW270-20160302	AGW270	3/2/2016	N	1636962	8269180	X	X	X	X	X	X
AGW271-20160302	AGW271	3/2/2016	N	1636959	8269138	X	X	X	X	X	X
AGW272-20160302	AGW272	3/2/2016	N	1636960	8269144	X	X	X	X	X	X
AGW273-20160302	AGW273	3/2/2016	N	1636960	8269142	X	X	X	X	X	X
AGW274-20160302	AGW274	3/2/2016	N	1636960	8269152	X	X	X	X	X	X
AGW275-20160302	AGW275	3/2/2016	N	1636960	8269148	X	X	X	X	X	X

Table 1-1
1Q 2016 Groundwater Sample Matrix
Boeing Auburn Facility
Auburn, Washington

Field Sample ID	Sample Location	Sample Date	Sample Type	Laboratory SDG	Laboratory Sample ID	Sulfate by EPA 300.0	AMEE by RSK-175	Total Suflide by SM4500-S2-D	TOC by SM 5310C	VOCs by SW-846 8260C	VC by SW-846 8260CSIM
AGW276-1-15-20160302	AGW276-1	3/2/2016	N	1636959	8269135					X	X
AGW276-2-25-20160302	AGW276-2	3/2/2016	N	1636959	8269134					X	X
AGW276-3-35-20160302	AGW276-3	3/2/2016	N	1636959	8269133					X	X
AGW276-4-45-20160302	AGW276-4	3/2/2016	N	1636959	8269132					X	X
AGW276-5-60-20160302	AGW276-5	3/2/2016	N	1636959	8269129					X	X
AGW276-6-80-20160302	AGW276-6	3/2/2016	N	1636959	8269130					X	X
AGW276-7-100-20160302	AGW276-7	3/2/2016	N	1636959	8269128					X	X
IW34-20160302	IW34	3/2/2016	N	1636959	8269136	X	X	X	X	X	X
IW36-20160302	IW36	3/2/2016	N	1636962	8269182	X	X	X	X	X	X
IW37-20160302	IW37	3/2/2016	N	1636960	8269150	X	X	X	X	X	X
AGW900-20160302	AGW275	3/2/2016	FD	1636960	8269146	X	X	X	X	X	X
AGW901-20160302	AGW276-6	3/2/2016	FD	1636959	8269131					X	X
AGW902-20160311	AGW215	3/11/2016	FD	1640107	8283546					X	
AGW903-20160315	AGW192	3/15/2016	FD	1641506	8289792					X	

AMEE = acetylene, methane, ethene, ethane
FD = field duplicate
N = normal
TOC = total organic compound
VC = vinyl chloride
VOC = volatile organic compound

Table 1-2
1Q 2016 Groundwater Anlaytical Results
Boeing Auburn
Auburn, Washington

Sample Location:	AGW183	AGW191	AGW192	AGW192	AGW215	AGW215	AGW225	AGW226	AGW227	AGW228	AGW235-2	AGW235-4	AGW237	AGW238	AGW239	AGW240-1	AGW240-5
Zone:	Deep	Intermediate	Deep	Deep	Intermediate	Intermediate	Shallow	Shallow	Intermediate	Shallow	Shallow	Intermediate	Deep	Intermediate	Shallow	Shallow-WT	Shallow
Laboratory SDG:	1641506	1641506	1641506	1641506	1640107	1640107	1636962	1637283	1641099	1641099	1641506	1641506	1641097	1640107	1640107	1637282	1637282
Laboratory Sample ID:	8289785	8289788	8289789	8289792	8283545	8283546	8269178	8270649	8288075	8288076	8289786	8289787	8288061	8283549	8283548	8270635	8270633
Sample Date:	03/15/16	03/15/16	03/15/16	03/15/16	03/11/16	03/11/16	03/02/16	03/03/16	03/14/16	03/14/16	03/15/16	03/15/16	03/14/16	03/11/16	03/11/16	03/03/16	03/03/16
Sample Type:	N	N	N	FD	N	FD	N	N	N	N	N	N	N	N	N	N	N
VOLATILES (µg/L)																	
Method SW8260C																	
Acetone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone/MEK	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon Disulfide	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.5**	0.5 U	**0.6**	0.5 U	**0.6**	0.5 U	0.5 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.3**	**0.8**	0.2 U	**0.3**	0.2 U	0.2 U
cis-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**4.6**	**3.1**	**2.6**	**3.1**	**1.2**	**8.0**	**0.9**	0.2 U	**13**	0.2 U	**1.7**
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.4**	**0.3**	**0.3**	**0.4**	0.2 U	0.2 U	0.2 U	0.2 U	**0.6**	0.2 U	**0.3**
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (MIBK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**1.9**	**3.6**	**1.9**	**2.2**	0.2 U	**5.3**	**1.4**	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Acetate	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.4**	**0.4**	**0.2**	**0.3**	**2.0**	0.2 U	0.2 U	0.2 U	**1.1**	**0.8**	**2.4**
m,p-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VOLATILES (µg/L)																	
Method 8260C SIM																	
Vinyl Chloride							**0.54**	**0.54**	**0.26**	**0.30**			**0.037**	0.020 U	**1.1**	**1.0**	**3.1**
CONVENTIONALS (mg/L)																	
Sulfate							**3.3**	**6.5**								1.0 U	1.0 U
Sulfide, Total							0.16 U	0.16 U								0.16 U	0.16 U
Total Organic Carbon							**4.3**	**2.4**								**7.9**	**6.9**
NATURAL ATTENUATION PARAMETERS (µg/L)																	
Method RSK-175																	
Acetylene							1.0 U	1.0 U								1.0 U	1.0 U
Ethane							1.0 U	1.0 U								**3.2 J**	1.0 U
Ethene							1.0 U	1.0 U								1.0 U	1.0 U
Methane							**420**	**1300**								**2900**	**1700**

Table 1-2
1Q 2016 Groundwater Anlaytical Results
Boeing Auburn
Auburn, Washington

Sample Location:	AGW241-1	AGW241-5	AGW242-1	AGW242-2	AGW242-5	AGW243-1	AGW243-3	AGW243-5	AGW244	AGW245	AGW246	AGW247-1	AGW247-5	AGW249-1	AGW249-5	AGW248-1	AGW248-5
Zone:	Shallow-WT	Shallow	Shallow-WT	Shallow	Intermediate	Shallow-WT	Shallow	Intermediate	Shallow-WT	Shallow-WT	Shallow-WT	Shallow-WT	Shallow	Shallow-WT	Shallow	Shallow-WT	Shallow
Laboratory SDG:	1640108	1640108	1640108	1640108	1640108	1641099	1641099	1641099	1641506	1641505	1641505	1637282	1637282	1641097	1641097	1640107	1640107
Laboratory Sample ID:	8283559	8283560	8283562	8283563	8283564	8288071	8288069	8288070	8289791	8289780	8289781	8270639	8270637	8288062	8288063	8283544	8283543
Sample Date:	03/11/16	03/11/16	03/11/16	03/11/16	03/11/16	03/14/16	03/14/16	03/14/16	03/15/16	03/15/16	03/15/16	03/03/16	03/03/16	03/14/16	03/14/16	03/11/16	03/11/16
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VOLATILES (µg/L)																	
Method SW8260C																	
Acetone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**5.4**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**5.8**	5.0 U
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone/MEK	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon Disulfide	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.2**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	0.2 U	**0.5**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.9**	**2.2**	0.2 U	**2.1**	0.2 U	**2.0**
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.4**	**0.7**	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (MIBK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.2**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**6.4**	0.2 U	**4.6**
Trichlorofluoromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Acetate	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.2 U	0.2 U	**0.2**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**3.0**	**3.3**	**0.7**	0.2 U	0.2 U	**0.2**
m,p-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VOLATILES (µg/L)																	
Method 8260C SIM																	
Vinyl Chloride	0.020 U	**0.022**	**0.20**	0.020 U	0.020 U	**0.040**	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	**4.0**	**4.5**	**0.70**	**0.10**	**0.078**	**0.20**
CONVENTIONALS (mg/L)																	
Sulfate												1.0 U	1.0 U				
Sulfide, Total												0.16 U	0.16 U				
Total Organic Carbon												**9.4**	**5.7**				
NATURAL ATTENUATION PARAMETERS (µg/L)																	
Method RSK-175																	
Acetylene												1.0 U	1.0 U				
Ethane												1.0 U	1.0 U				
Ethene												1.0 U	1.0 U				
Methane												**7100**	**2000**				

Table 1-2
1Q 2016 Groundwater Anlaytical Results
Boeing Auburn
Auburn, Washington

Sample Location:	AGW250-1	AGW250-2	AGW250-3	AGW250-6	AGW251-1	AGW251-2	AGW251-3	AGW251-6	AGW252	AGW253	AGW254-1	AGW254-2	AGW254-5	AGW255-1	AGW255-3	AGW255-5	AGW256
Zone:	Shallow	Shallow	Intermediate	Deep	Shallow	Shallow	Intermediate	Deep	Deep	Intermediate	Shallow-WT	Shallow	Intermediate	Shallow-WT	Shallow	Intermediate	Intermediate
Laboratory SDG:	1640108	1640108	1640108	1640108	1637283	1637283	1637283	1641505	1640107	1640107	1641099	1641505	1641505	1641099	1641099	1641099	1640107
Laboratory Sample ID:	8283553	8283554	8283555	8283556	8270647	8270645	8270643	8289778	8283551	8283550	8288077	8289774	8289775	8288072	8288073	8288074	8283540
Sample Date:	03/11/16	03/11/16	03/11/16	03/11/16	03/03/16	03/03/16	03/03/16	03/15/16	03/11/16	03/11/16	03/14/16	03/15/16	03/15/16	03/14/16	03/14/16	03/14/16	03/11/16
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VOLATILES (µg/L)																	
Method SW8260C																	
Acetone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone/MEK	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon Disulfide	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	0.2 U	**0.5**	**0.9**	0.2 U	0.2 U	0.2 U	**1.2**	**0.4**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**2.5**	**1.4**	**0.8**	0.2 U
trans-1,2-Dichloroethene	0.2 U	0.2 U	**0.3**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.2**	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (MIBK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.2**	0.2 U	0.2 U	0.2 U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	0.2 U	**0.4**	**0.5**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.5**	0.2 U	0.2 U	**1**
Trichlorofluoromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Acetate	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**3.8**	**5.8**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.2**	0.2 U	**0.2**	0.2 U
m,p-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VOLATILES (µg/L)																	
Method 8260C SIM																	
Vinyl Chloride	0.020 U	**0.042**	**0.052**	0.020 U	**0.15**	**4.9**	**7.8**	**0.19**	**0.028**	0.020 U	0.020 U	**0.053**	0.020 U	**0.25**	**0.21**	**0.22**	0.020 U
CONVENTIONALS (mg/L)																	
Sulfate					**117**	**1.9**	1.0 U										
Sulfide, Total					0.16 U	0.16 U	0.16 U										
Total Organic Carbon					**33.8**	**7.2**	**7.3**										
NATURAL ATTENUATION PARAMETERS (µg/L)																	
Method RSK-175																	
Acetylene					1.0 U	1.0 U	1.0 U										
Ethane					1.0 U	**1.1 J**	1.0 U										
Ethene					1.0 U	**1.9 J**	1.0 U										
Methane					**560**	**2900**	**2600**										

Table 1-2
1Q 2016 Groundwater Anlaytical Results
Boeing Auburn
Auburn, Washington

Sample Location:	AGW257	AGW258	AGW259	AGW260	AGW261	AGW262	AGW263	AGW264	AGW265	AGW266	AGW267	AGW268	AGW269	AGW270	AGW271	AGW272	AGW273
Zone:	Shallow	Shallow	Deep	Deep	Shallow	Shallow-WT	Shallow-WT	Deep	Intermediate	Shallow	Intermediate	Deep	Shallow	Shallow	Shallow	Shallow	Shallow
Laboratory SDG:	1640107	1640107	1641505	1640108	1641505	1641505	1641506	1640108	1640108	1640107	1641097	1641097	1636962	1636962	1636959	1636960	1636960
Laboratory Sample ID:	8283541	8283542	8289776	8283561	8289777	8289779	8289790	8283558	8283557	8283547	8288064	8288065	8269176	8269180	8269138	8269144	8269142
Sample Date:	03/11/16	03/11/16	03/15/16	03/11/16	03/15/16	03/15/16	03/15/16	03/11/16	03/11/16	03/11/16	03/14/16	03/14/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VOLATILES (µg/L)																	
Method SW8260C																	
Acetone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**43**	**62**	5.0 U	5.0 U
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone/MEK	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**12**	**100**	5.0 U	5.0 U
Carbon Disulfide	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 UJ
Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.3**	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	**1.5**	0.2 U	**1.6**	0.2 U	0.2 U	**0.5**	0.2 U	0.2 U	**6.5**	**8.8**	**15**	**5.4**	**3.5**
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	**0.3**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**1**	**1.0**	**2.4**	**0.5**	**0.5**
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (MIBK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	**0.4**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	**2.7**	0.2 U	**0.2**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.7**	**1.8**	**0.3**	0.2 U
Trichlorofluoromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Acetate	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.2**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**3.8**	**1.4**	**2.4**	**1.1**	**3.5**
m,p-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VOLATILES (µg/L)																	
Method 8260C SIM																	
Vinyl Chloride	0.020 U	0.020 U	0.020 U	0.020 U	**0.11**	**0.22**	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	**5.2**	**1.7**	**2.8**	**1.2**	**3.9**
CONVENTIONALS (mg/L)																	
Sulfate													1.0 U	1.0 U	10.0 U	**1.1**	1.0 U
Sulfide, Total													0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Total Organic Carbon													**8.5**	**75.2**	**1080**	**4.1**	**6.1**
NATURAL ATTENUATION PARAMETERS (µg/L)																	
Method RSK-175																	
Acetylene													1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethane													**2.0 J**	**2.8 J**	**3.0 J**	1.0 U	1.0 U
Ethene													1.0 U	1.0 U	**1.5 J**	1.0 U	1.0 U
Methane													**15000**	**22000**	**28000**	**460**	**1300**

Table 1-2
1Q 2016 Groundwater Anlaytical Results
Boeing Auburn
Auburn, Washington

Sample Location:	AGW274	AGW275	AGW275	AGW276-1	AGW276-2	AGW276-3	AGW276-4	AGW276-5	AGW276-6	AGW276-6	AGW276-7	IW34	IW36	IW37
Zone:	Shallow	Shallow	Shallow	Shallow-WT	Shallow	Shallow	Intermediate	Intermediate	Deep	Deep	Deep	Shallow	Shallow	Shallow
Laboratory SDG:	1636960	1636960	1636960	1636959	1636959	1636959	1636959	1636959	1636959	1636959	1636959	1636959	1636962	1636960
Laboratory Sample ID:	8269152	8269148	8269146	8269135	8269134	8269133	8269132	8269129	8269130	8269131	8269128	8269136	8269182	8269150
Sample Date:	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16
Sample Type:	N	N	FD	N	N	N	N	N	N	FD	N	N	N	N
VOLATILES (µg/L)														
Method SW8260C														
Acetone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**150**	5.0 U	**100**
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone/MEK	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**200**	5.0 U	**240**
Carbon Disulfide	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U
Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.4**	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	**2.0**	**0.6**	**0.6**	**1.2**	**1.4**	**3.3**	**0.4**	**7.1**	**1.6**	**1.6**	0.2 U	**16**	**1.5**	**7.7**
trans-1,2-Dichloroethene	**0.4**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.5**	0.2 U	0.2 U	0.2 U	**2.5**	**0.4**	**1.0**
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (MIBK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.2**	**7.7**	0.2 U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.4**	0.2 U	0.2 U
Trichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	**0.4**	0.2 U	0.2 U	0.2 U	**3.4**	**3.3**	0.2 U	**5.3**	0.2 U	**0.8**
Trichlorofluoromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Acetate	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	**4.5**	**5.8**	**5.9**	0.2 U	**0.5**	**0.8**	0.2 U	**0.7**	0.2 U	0.2 U	0.2 U	**0.9**	**4.4**	**0.9**
m,p-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VOLATILES (µg/L)														
Method 8260C SIM														
Vinyl Chloride	**5.5**	**7.7**	**7.6**	**0.18**	**0.72**	**1.0**	**0.076**	**0.96**	**0.13**	**0.13**	0.020 U	**1.1**	**5.7**	**1.2**
CONVENTIONALS (mg/L)														
Sulfate	1.0 U	1.0 U	1.0 U									10.0 U	1.0 U	10.0 U
Sulfide, Total	0.16 U	0.16 U	0.16 U									0.16 U	0.16 U	0.16 U
Total Organic Carbon	**7.0**	**79.7**	**78.7**									**6450**	**17.9**	**2480**
NATURAL ATTENUATION PARAMETERS (µg/L)														
Method RSK-175														
Acetylene	1.0 U	1.0 U	1.0 U									1.0 U	1.0 U	1.0 U
Ethane	1.0 U	**1.6 J**	**1.7 J**									**2.7 J**	**2.0 J**	**2.2 J**
Ethene	1.0 U	**2.2 J**	**2.3 J**									**3.0 J**	1.0 U	**1.8 J**
Methane	**920**	**14000**	**14000**									**15000**	**14000**	**23000**

Bold = Detected compound.
FD = Field duplicate
J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
N = Normal
U = Indicates the compound was undetected at the reported concentration.
UJ = The analyte was not detected in the sample; the reported sample reporting limit is an estimate.

Table 1-3
1Q 2016 Groundwater Detects
Boeing Auburn Facility
Auburn, Washington

Sample Location:	AGW183	AGW191	AGW192	AGW192	AGW215	AGW215	AGW225	AGW226	AGW227	AGW228	AGW235-2	AGW235-4	AGW237	AGW238	AGW239
Zone:	Deep	Intermediate	Deep	Deep	Intermediate	Intermediate	Shallow	Shallow	Intermediate	Shallow	Shallow	Intermediate	Deep	Intermediate	Shallow
Laboratory SDG:	1641506	1641506	1641506	1641506	1640107	1640107	1636962	1637283	1641099	1641099	1641506	1641506	1641097	1640107	1640107
Laboratory Sample ID:	8289785	8289788	8289789	8289792	8283545	8283546	8269178	8270649	8288075	8288076	8289786	8289787	8288061	8283549	8283548
Sample Date:	03/15/16	03/15/16	03/15/16	03/15/16	03/11/16	03/11/16	03/02/16	03/03/16	03/14/16	03/14/16	03/15/16	03/15/16	03/14/16	03/11/16	03/11/16
Sample Type:	N	N	N	FD	N	FD	N	N	N	N	N	N	N	N	N
VOLATILES (µg/L) Method SW8260C															
Acetone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone/MEK	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.5**	0.5 U	**0.6**	0.5 U	**0.6**
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.3**	**0.8**	0.2 U	**0.3**
cis-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**4.6**	**3.1**	**2.6**	**3.1**	**1.2**	**8.0**	**0.9**	0.2 U	**13**
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.4**	**0.3**	**0.3**	**0.4**	0.2 U	0.2 U	0.2 U	0.2 U	**0.6**
Tetrachloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**1.9**	**3.6**	**1.9**	**2.2**	0.2 U	**5.3**	**1.4**	0.2 U	0.2 U
Vinyl Chloride	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.4**	**0.4**	**0.2**	**0.3**	**2.0**	0.2 U	0.2 U	0.2 U	**1.1**
VOLATILES (µg/L) Method 8260C SIM															
Vinyl Chloride							**0.54**	**0.54**	**0.26**	**0.30**			**0.037**	0.020 U	**1.1**
CONVENTIONALS (mg/L)															
Sulfate							**3.3**	**6.5**							
Total Organic Carbon							**4.3**	**2.4**							
NATURAL ATTENUATION PARAMETERS (µg/L) Method RSK-175															
Ethane							1.0 U	1.0 U							
Ethene							1.0 U	1.0 U							
Methane							**420**	**1300**							

Table 1-3
1Q 2016 Groundwater Detects
Boeing Auburn Facility
Auburn, Washington

Sample Location:	AGW240-1	AGW240-5	AGW241-1	AGW241-5	AGW242-1	AGW242-2	AGW242-5	AGW243-1	AGW243-3	AGW243-5	AGW244	AGW245	AGW246	AGW247-1	AGW247-5
Zone:	Shallow-WT	Shallow	Shallow-WT	Shallow	Shallow-WT	Shallow	Intermediate	Shallow-WT	Shallow	Intermediate	Shallow-WT	Shallow-WT	Shallow-WT	Shallow-WT	Shallow
Laboratory SDG:	1637282	1637282	1640108	1640108	1640108	1640108	1640108	1641099	1641099	1641099	1641506	1641505	1641505	1637282	1637282
Laboratory Sample ID:	8270635	8270633	8283559	8283560	8283562	8283563	8283564	8288071	8288069	8288070	8289791	8289780	8289781	8270639	8270637
Sample Date:	03/03/16	03/03/16	03/11/16	03/11/16	03/11/16	03/11/16	03/11/16	03/14/16	03/14/16	03/14/16	03/15/16	03/15/16	03/15/16	03/03/16	03/03/16
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VOLATILES (µg/L) Method SW8260C															
Acetone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**5.4**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone/MEK	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.2**	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	0.2 U	**1.7**	0.2 U	**0.5**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.9**	**2.2**
trans-1,2-Dichloroethene	0.2 U	**0.3**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.4**	**0.7**
Tetrachloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.2**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl Chloride	**0.8**	**2.4**	0.2 U	0.2 U	**0.2**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**3.0**	**3.3**
VOLATILES (µg/L) Method 8260C SIM															
Vinyl Chloride	**1.0**	**3.1**	0.020 U	**0.022**	**0.20**	0.020 U	0.020 U	**0.040**	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	**4.0**	**4.5**
CONVENTIONALS (mg/L)															
Sulfate	1.0 U	1.0 U												1.0 U	1.0 U
Total Organic Carbon	**7.9**	**6.9**												**9.4**	**5.7**
NATURAL ATTENUATION PARAMETERS (µg/L) Method RSK-175															
Ethane	**3.2 J**	1.0 U												1.0 U	1.0 U
Ethene	1.0 U	1.0 U												1.0 U	1.0 U
Methane	**2900**	**1700**												**7100**	**2000**

Table 1-3
1Q 2016 Groundwater Detects
Boeing Auburn Facility
Auburn, Washington

Sample Location:	AGW249-1	AGW249-5	AGW248-1	AGW248-5	AGW250-1	AGW250-2	AGW250-3	AGW250-6	AGW251-1	AGW251-2	AGW251-3	AGW251-6	AGW252	AGW253	AGW254-1
Zone:	Shallow-WT	Shallow	Shallow-WT	Shallow	Shallow	Shallow	Intermediate	Deep	Shallow	Shallow	Intermediate	Deep	Deep	Intermediate	Shallow-WT
Laboratory SDG:	1641097	1641097	1640107	1640107	1640108	1640108	1640108	1640108	1637283	1637283	1637283	1641505	1640107	1640107	1641099
Laboratory Sample ID:	8288062	8288063	8283544	8283543	8283553	8283554	8283555	8283556	8270647	8270645	8270643	8289778	8283551	8283550	8288077
Sample Date:	03/14/16	03/14/16	03/11/16	03/11/16	03/11/16	03/11/16	03/11/16	03/11/16	03/03/16	03/03/16	03/03/16	03/15/16	03/11/16	03/11/16	03/14/16
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VOLATILES (µg/L) Method SW8260C															
Acetone	5.0 U	5.0 U	**5.8**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Butanone/MEK	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	0.2 U	**2.1**	0.2 U	**2.0**	0.2 U	**0.5**	**0.9**	0.2 U	0.2 U	0.2 U	**1.2**	**0.4**	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.3**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	0.2 U	**6.4**	0.2 U	**4.6**	0.2 U	**0.4**	**0.5**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl Chloride	**0.7**	0.2 U	0.2 U	**0.2**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**3.8**	**5.8**	0.2 U	0.2 U	0.2 U	0.2 U
VOLATILES (µg/L) Method 8260C SIM															
Vinyl Chloride	**0.70**	**0.10**	**0.078**	**0.20**	0.020 U	**0.042**	**0.052**	0.020 U	**0.15**	**4.9**	**7.8**	**0.19**	**0.028**	0.020 U	0.020 U
CONVENTIONALS (mg/L)															
Sulfate									**117**	**1.9**	1.0 U				
Total Organic Carbon									**33.8**	**7.2**	**7.3**				
NATURAL ATTENUATION PARAMETERS (µg/L) Method RSK-175															
Ethane									1.0 U	**1.1 J**	1.0 U				
Ethene									1.0 U	**1.9 J**	1.0 U				
Methane									**560**	**2900**	**2600**				

Table 1-3
1Q 2016 Groundwater Detects
Boeing Auburn Facility
Auburn, Washington

Sample Location:	AGW254-2	AGW254-5	AGW255-1	AGW255-3	AGW255-5	AGW256	AGW257	AGW258	AGW259	AGW260	AGW261	AGW262	AGW263	AGW264	AGW265
Zone:	Shallow	Intermediate	Shallow-WT	Shallow	Intermediate	Intermediate	Shallow	Shallow	Deep	Deep	Shallow	Shallow-WT	Shallow-WT	Deep	Intermediate
Laboratory SDG:	1641505	1641505	1641099	1641099	1641099	1640107	1640107	1640107	1641505	1640108	1641505	1641505	1641506	1640108	1640108
Laboratory Sample ID:	8289774	8289775	8288072	8288073	8288074	8283540	8283541	8283542	8289776	8283561	8289777	8289779	8289790	8283558	8283557
Sample Date:	03/15/16	03/15/16	03/14/16	03/14/16	03/14/16	03/11/16	03/11/16	03/11/16	03/15/16	03/11/16	03/15/16	03/15/16	03/15/16	03/11/16	03/11/16
Sample Type:	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
VOLATILES (µg/L) Method SW8260C															
Acetone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 U	5.0 U	5.0 U
2-Butanone/MEK	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	0.2 U	0.2 U	**2.5**	**1.4**	**0.8**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**1.5**	0.2 U	**1.6**	0.2 U	0.2 U
trans-1,2-Dichloroethene	0.2 U	0.2 U	**0.2**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.3**	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.4**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.2 U	**0.2**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	0.2 U	0.2 U	**0.5**	0.2 U	0.2 U	**1**	0.2 U	0.2 U	0.2 U	0.2 U	**2.7**	0.2 U	**0.2**	0.2 U	0.2 U
Vinyl Chloride	0.2 U	0.2 U	**0.2**	0.2 U	**0.2**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.2**	0.2 U	0.2 U	0.2 U
VOLATILES (µg/L) Method 8260C SIM															
Vinyl Chloride	**0.053**	0.020 U	**0.25**	**0.21**	**0.22**	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	**0.11**	**0.22**	0.020 U	0.020 U	0.020 U
CONVENTIONALS (mg/L)															
Sulfate															
Total Organic Carbon															
NATURAL ATTENUATION PARAMETERS (µg/L) Method RSK-175															
Ethane															
Ethene															
Methane															

Table 1-3
1Q 2016 Groundwater Detects
Boeing Auburn Facility
Auburn, Washington

Sample Location:	AGW266	AGW267	AGW268	AGW269	AGW270	AGW271	AGW272	AGW273	AGW274	AGW275	AGW275	AGW276-1	AGW276-2	AGW276-3	AGW276-4
Zone:	Shallow	Intermediate	Deep	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow-WT	Shallow	Shallow	Intermediate
Laboratory SDG:	1640107	1641097	1641097	1636962	1636962	1636959	1636960	1636960	1636960	1636960	1636960	1636959	1636959	1636959	1636959
Laboratory Sample ID:	8283547	8288064	8288065	8269176	8269180	8269138	8269144	8269142	8269152	8269148	8269146	8269135	8269134	8269133	8269132
Sample Date:	03/11/16	03/14/16	03/14/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16
Sample Type:	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N
VOLATILES (µg/L) Method SW8260C															
Acetone	5.0 U	5.0 U	5.0 U	5.0 U	**43**	**62**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2-Butanone/MEK	5.0 U	5.0 U	5.0 U	5.0 U	**12**	**100**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.3**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	**0.5**	0.2 U	0.2 U	**6.5**	**8.8**	**15**	**5.4**	**3.5**	**2.0**	**0.6**	**0.6**	**1.2**	**1.4**	**3.3**	**0.4**
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	**1**	**1.0**	**2.4**	**0.5**	**0.5**	**0.4**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	**0.7**	**1.8**	**0.3**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.4**	0.2 U	0.2 U
Vinyl Chloride	0.2 U	0.2 U	0.2 U	**3.8**	**1.4**	**2.4**	**1.1**	**3.5**	**4.5**	**5.8**	**5.9**	0.2 U	**0.5**	**0.8**	0.2 U
VOLATILES (µg/L) Method 8260C SIM															
Vinyl Chloride	0.020 U	0.020 U	0.020 U	**5.2**	**1.7**	**2.8**	**1.2**	**3.9**	**5.5**	**7.7**	**7.6**	**0.18**	**0.72**	**1.0**	**0.076**
CONVENTIONALS (mg/L)															
Sulfate				1.0 U	1.0 U	10.0 U	**1.1**	1.0 U	1.0 U	1.0 U	1.0 U				
Total Organic Carbon				**8.5**	**75.2**	**1080**	**4.1**	**6.1**	**7.0**	**79.7**	**78.7**				
NATURAL ATTENUATION PARAMETERS (µg/L) Method RSK-175															
Ethane				**2.0 J**	**2.8 J**	**3.0 J**	1.0 U	1.0 U	1.0 U	**1.6 J**	**1.7 J**				
Ethene				1.0 U	1.0 U	**1.5 J**	1.0 U	1.0 U	1.0 U	**2.2 J**	**2.3 J**				
Methane				**15000**	**22000**	**28000**	**460**	**1300**	**920**	**14000**	**14000**				

Table 1-3
1Q 2016 Groundwater Detects
Boeing Auburn Facility
Auburn, Washington

Sample Location:	AGW276-5	AGW276-6	AGW276-6	AGW276-7	IW34	IW36	IW37
Zone:	Intermediate	Deep	Deep	Deep	Shallow	Shallow	Shallow
Laboratory SDG:	1636959	1636959	1636959	1636959	1636959	1636962	1636960
Laboratory Sample ID:	8269129	8269130	8269131	8269128	8269136	8269182	8269150
Sample Date:	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16	03/02/16
Sample Type:	N	N	FD	N	N	N	N
VOLATILES (µg/L) Method SW8260C							
Acetone	5.0 U	5.0 U	5.0 U	5.0 U	**150**	5.0 U	**100**
2-Butanone/MEK	5.0 U	5.0 U	5.0 U	5.0 U	**200**	5.0 U	**240**
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	**0.4**	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	**7.1**	**1.6**	**1.6**	0.2 U	**16**	**1.5**	**7.7**
trans-1,2-Dichloroethene	**0.5**	0.2 U	0.2 U	0.2 U	**2.5**	**0.4**	**1.0**
Tetrachloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	0.2 U	0.2 U	0.2 U	0.2 U	**0.2**	**7.7**	0.2 U
1,1,2-Trichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	**0.4**	0.2 U	0.2 U
Trichloroethene	0.2 U	**3.4**	**3.3**	0.2 U	**5.3**	0.2 U	**0.8**
Vinyl Chloride	**0.7**	0.2 U	0.2 U	0.2 U	**0.9**	**4.4**	**0.9**
VOLATILES (µg/L) Method 8260C SIM							
Vinyl Chloride	**0.96**	**0.13**	**0.13**	0.020 U	**1.1**	**5.7**	**1.2**
CONVENTIONALS (mg/L)							
Sulfate					10.0 U	1.0 U	10.0 U
Total Organic Carbon					**6450**	**17.9**	**2480**
NATURAL ATTENUATION PARAMETERS (µg/L) Method RSK-175							
Ethane					**2.7 J**	**2.0 J**	**2.2 J**
Ethene					**3.0 J**	1.0 U	**1.8 J**
Methane					**15000**	**14000**	**23000**

Bold = Detected compound.
FD = Field duplicate
J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
N = Normal
U = Indicates the compound was undetected at the reported concentration.
UJ = The analyte was not detected in the sample; the reported sample reporting limit is an estimate.

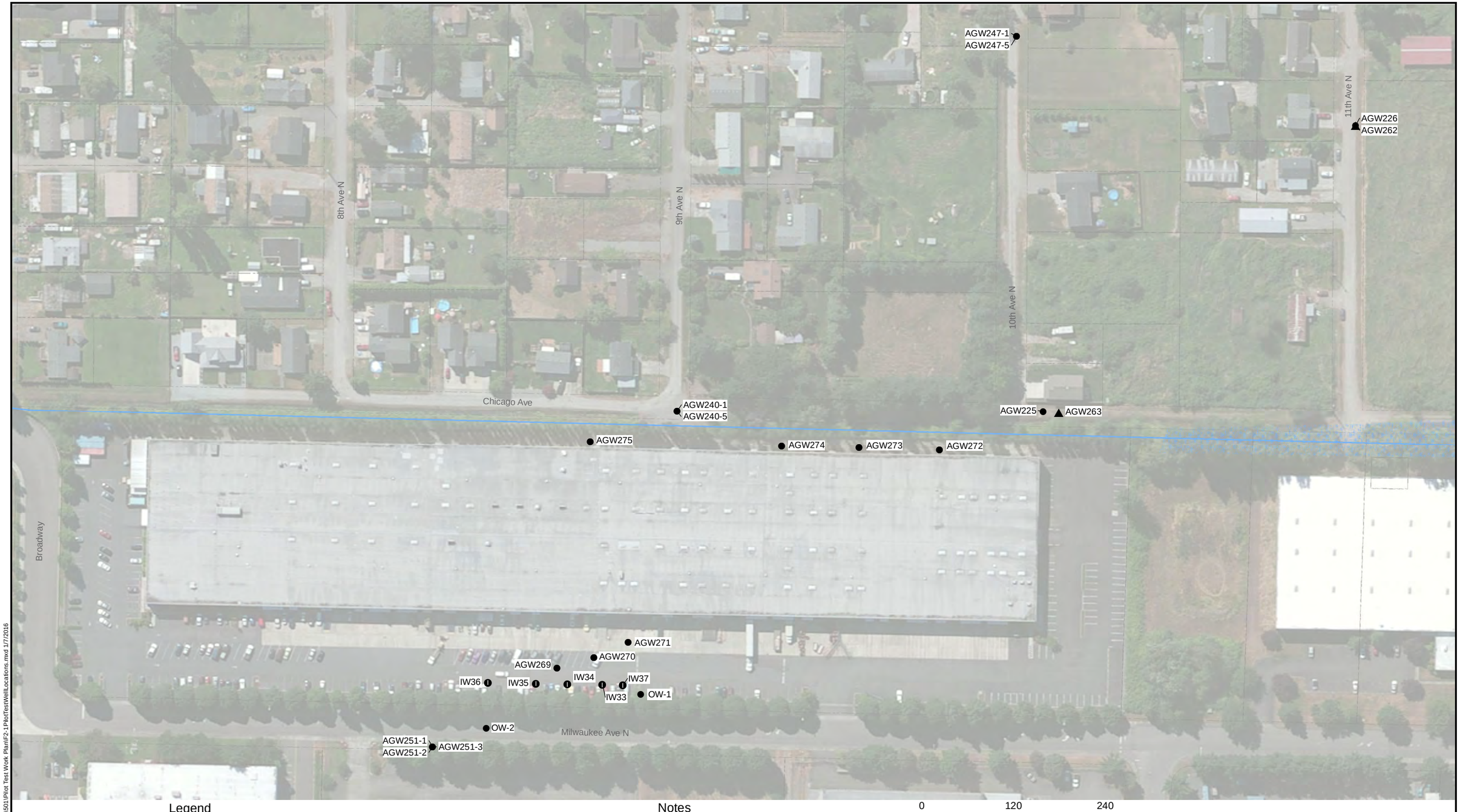
Table 1-4
Semi-annual Surface Water Analytical Results
Boeing Auburn Facility
Auburn, Washington

Sample Location:	SW-CD4	SW-CD4
Laboratory SDG:	1642361	1642361
Laboratory Sample ID:	8294010	8294011
Sample Date:	03/18/16	03/18/16
Sample Type:	N	FD
VOLATILES (µg/L)		
Method SW8260C		
Acetone	**6.8**	**6.5**
Benzene	0.2 U	0.2 U
Bromodichloromethane	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U
Bromomethane	0.5 U	0.5 U
2-Butanone/MEK	5.0 U	5.0 U
Carbon Disulfide	0.5 U	0.5 U
Carbon Tetrachloride	0.2 U	0.2 U
Chlorobenzene	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U
Chloroform	0.2 U	0.2 U
Chloromethane	0.5 U	0.5 U
Dibromochloromethane	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U
1,2-Dichloroethane	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U
cis-1,2-Dichloroethene	**0.7**	**0.7**
trans-1,2-Dichloroethene	0.2 U	0.2 U
1,2-Dichloropropane	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.2 U	0.2 U
trans-1,3-Dichloropropene	0.2 U	0.2 U
Ethylbenzene	0.5 U	0.5 U
2-Hexanone	5.0 U	5.0 U
4-Methyl-2-Pentanone (MIBK)	5.0 U	5.0 U
Methylene Chloride	0.5 U	0.5 U
Styrene	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.2 U	0.2 U
Tetrachloroethene	0.2 U	0.2 U
Toluene	0.2 U	0.2 U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U
1,1,2-Trichloroethane	0.2 U	0.2 U
Trichloroethene	**0.5**	**0.5**
Trichlorofluoromethane	0.5 U	0.5 U
Vinyl Acetate	0.5 U	0.5 U
Vinyl Chloride	**0.2**	**0.3**
m,p-Xylene	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U
VOLATILES (µg/L)		
Method 8260C SIM		
Vinyl Chloride	**0.28**	**0.28**

Bold = Detected compound.
FD = Field duplicate
µg/L = micrograms per liter
N = Normal
U = Indicates the compound was undetected at the reported concentration.

ATTACHMENT 2

Pilot Test Results



Legend

- Offsite Water Table Well
- Shallow Monitoring Well
- Shallow Injection Well
- Waterways

Notes

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 120 240

Scale in Feet

Base map source: Geometrix 2003; Aerial Photo Source: Esri World Imagery; Parcel Data Source: King County GIS 2013

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Boeing Auburn Auburn, Washington	**Pilot Test Well Locations**	Figure 2-1

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Table 2-1
Data Summary Algona Bioremediation Pilot Test
Boeing Auburn Facility
Auburn, Washington

				Volatile Organic Compounds (all units in ug/L)									Aquifer Redox Conditions							Donor Indicators	Molar Fraction								
Well	Aquifer Zone	Date	Elapsed Time from Injection (days)	PCE (µg/L)	TCE (µg/L)	CIS (µg/L)	TRANS (µg/L)	11DCE (µg/L)	VC (µg/L)	Ethene (µg/L)	Ethane (µg/L)	Acetylene (µg/L)	DO (mg/L)	ORP (mV)	Iron II (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Methane (µg/L)	Aquifer Redox State	TOC (mg/L)	PCE	TCE	Sum of cis, trans, 11DCE	VC	Ethene	Ethane	Ethene +Ethane	Total	Max Fraction
AGW225	WT	12/1/2014	-277	<0.2	2.3	5.7	0.6	<0.2	0.5	<1.0	<1.0	<1.0	1.20	-76.8	2.6	4.8	<0.16	290	Fe/S	3.7	0.00	0.19	0.72	0.09	0.00	0.00	0.00	1.00	0.72
		8/14/2015	-21	<0.2	1.9	5.1	0.5	<0.2	0.49	<1.0	<1.0	<1.0	1.39	213.3	6.4	4.1	<0.16	360	Fe/S	4.2	0.00	0.18	0.72	0.10	0.00	0.00	0.00	1.00	0.72
		12/8/2015	95	<0.2	2.1	4.8	0.5	<0.2	0.5	<1.0	<1.0	<1.0	2.0	-54.7	4.0	4.2	<0.16	170	Fe/S	3.8	0.00	0.20	0.70	0.10	0.00	0.00	0.00	1.00	0.70
		3/2/2016	180	<0.2	1.9	4.6	0.4	<0.2	0.54	<1.0	<1.0	<1.0	0.73	-14	2.5	3.3	<0.16	420	Fe/S	4.3	0.00	0.19	0.69	0.12	0.00	0.00	0.00	1.00	0.69
AGW226	WT	8/14/2015	-21	<0.2	4.1	3.1	0.3	<0.2	0.56	<1.0	<1.0	<1.0	0.55	-12.2	2.0	8.0	<0.16	970	S/M	2.6	0.00	0.41	0.47	0.12	0.00	0.00	0.00	1.00	0.47
		12/2/2015	89	<0.2	0.5	1.8	<0.2	<0.2	0.4	<1.0	<1.0	<1.0	7.29	-26.1	2.0	7.8	<0.16	1000	S/M	5.5	0.00	0.13	0.65	0.22	0.00	0.00	0.00	1.00	0.65
		3/3/2016	181	<0.2	3.6	3.1	0.3	<0.2	0.54	<1.0	<1.0	<1.0	0.54	-28.5	2.5	6.5	<0.16	1300	S/M	2.4	0.00	0.39	0.49	0.12	0.00	0.00	0.00	1.00	0.49
AGW240-1	WT	12/1/2014	-277	<0.020	<0.2	<0.2	0.3	<0.2	0.3	<1.0	3.5	<1.0	1.32	-170	2.7	<1.0	<0.16	3200	M	8.6	0.00	0.00	0.02	0.04	0.00	0.94	0.94	1.00	0.94
		8/14/2015	-21	<0.020	<0.2	<0.2	0.2	<0.2	0.049	<1.0	2.5	<1.0	0.54	-67.3	1.8	<1.0	<0.16	2900	M	8.1	0.00	0.00	0.02	0.01	0.00	0.97	0.97	1.00	0.97
		12/7/2015	94	<0.02	<0.2	<0.2	<0.2	<0.2	0.3	<1.0	3.1	<1.0	1.89	-83.3	2.5	<1.0	<0.16	2800	M	7.5	0.00	0.00	0.00	0.04	0.00	0.96	0.96	1.00	0.96
		3/3/2016	181	<0.2	<0.2	<0.2	<0.2	<0.2	1	<1.0	3.2	<1.0	0.73	-13.2	5.0	<1.0	<0.16	2900	M	7.9	0.00	0.00	0.00	0.13	0.00	0.87	0.87	1.00	0.87
AGW240-5	S	12/1/2014	-277	<0.020	<0.2	4.9	0.7	<0.2	6.6	<1.0	1.0	<1.0	0.51	-116	2.8	<1.0	<0.16	2200	M	6.6	0.00	0.00	0.29	0.54	0.00	0.17	0.17	1.00	0.54
		8/14/2015	-21	<0.020	<0.2	3.3	0.4	<0.2	5.6	1.2	<1.0	<1.0	0.77	-41.7	2.8	<1.0	<0.16	2000	M	5.4	0.00	0.00	0.22	0.53	0.25	0.00	0.25	1.00	0.53
		12/7/2015	94	<0.02	<0.2	1.8	0.3	<0.2	4.3	1.3	1.3	<1.0	0.81	-86.8	6.0	<1.0	<0.16	2200	M	6.5	0.00	0.00	0.12	0.38	0.26	0.24	0.50	1.00	0.50
		3/3/2016	181	<0.2	<0.2	1.7	0.3	<0.2	3.1	<1.0	<1.0	<1.0	0.55	-19.2	6.0	<1.0	<0.16	1700	M	6.9	0.00	0.00	0.29	0.71	0.00	0.00	0.00	1.00	0.71
AGW247-1	WT	12/2/2014	-276	<0.020	<0.2	0.8	<0.2	<0.2	0.17	<1.0	1.0	<1.0	0.64	-76.1	2.5	6.3	<0.16	3600	S/M	57.4	0.00	0.00	0.19	0.06	0.00	0.75	0.75	1.00	0.75
		8/14/2015	-21	<0.020	<0.2	3.4	0.4	<0.2	2.5	<1.0	<1.0	<1.0	0.49	-61.4	3.4	<1.0	<0.16	5200	M	9.6	0.00	0.00	0.49	0.51	0.00	0.00	0.00	1.00	0.51
		12/2/2015	89	<0.020	<0.2	1.5	0.3	<0.2	2.1	<1.0	<1.0	<1.0	4.32	-101	5.5	1.1	<0.16	6900	M	13.2	0.00	0.00	0.36	0.64	0.00	0.00	0.00	1.00	0.64
		3/2/2016	180	<0.2	<0.2	0.9	0.4	<0.2	4	<1.0	<1.0	<1.0	0.44	-32.2	6.0	<1.0	<0.16	7100	M	9.4	0.00	0.00	0.17	0.83	0.00	0.00	0.00	1.00	0.83
AGW247-5	S	12/2/2014	-276	<0.020	<0.2	6.6	0.7	<0.2	1.7	<1.0	1.7	<1.0	0.22	-136	5.0	<1.0	<0.16	4000	M	21.3	0.00	0.00	0.47	0.17	0.00	0.36	0.36	1.00	0.47
		8/14/2015	-21	<0.020	<0.2	4.7	0.8	<0.2	3.0	<1.0	<1.0	<1.0	0.54	-90.3	2.4	1.1	<0.16	3400	M	6.2	0.00	0.00	0.54	0.46	0.00	0.00	0.00	1.00	0.54
		12/2/2015	89	<0.020	<0.2	2.9	0.7	<0.2	4.0	<1.0	<1.0	<1.0	4.76	-97.4	4.5	<1.0	<0.16	2100	M	6.7	0.00	0.00	0.37	0.63	0.00	0.00	0.00	1.00	0.63
		3/3/2016	181	<0.2	<0.2	2.2	0.7	<0.2	4.5	<1.0	<1.0	<1.0	0.51	-63.1	6.5	<1.0	<0.16	2000	M	5.7	0.00	0.00	0.29	0.71	0.00	0.00	0.00	1.00	0.71
AGW251-1	WT	12/2/2014	-276	<0.020	<0.2	<0.2	<0.2	<0.2	1.8	2.2	5.8	<1.0	0.83	-73.1	3.4	37.2	<0.16	16000	S/M	27.3	0.00	0.00	0.00	0.10	0.26	0.64	0.90	1.00	0.90
		8/14/2015	-21	<0.020	<0.2	<0.2	<0.2	<0.2	0.62	<1.0	<1.0	<1.0	4.51	208.8	6.8	1.3	<0.16	140	Fe/S	16.9	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00
		12/3/2015	90	<0.020	<0.2	<0.2	<0.2	<0.2	0.23	<1.0	<1.0	<1.0	12.0	-60.5	1.0	280	<0.16	440	Fe/S	8.9	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00
		3/3/2016	181	<0.2	<0.2	<0.2	<0.2	<0.2	0.15	<1.0	<1.0	<1.0	0.85	41.55	1.0	117	<0.16	560	Fe/S	33.8	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00
AGW251-2	S	12/2/2014	-276	<0.020	<0.2	2.0	0.2	<0.2	4.7	3.2	5.9	<1.0	0.49	-142	4.0	1.1	<0.16	8500	M	11.2	0.00	0.00	0.06	0.18	0.28	0.48	0.76	1.00	0.76
		8/14/2015	-21	<0.020	<0.2	<0.2	<0.2	<0.2	5.7	2.2	1.6	<1.0	0.94	210.6	5.2	2.1	<0.16	4800	M	7.1	0.00	0.00	0.00	0.41	0.35	0.24	0.59	1.00	0.59
		12/3/2015	90	<0.020	<0.2	<0.2	<0.2	<0.2	3.9	1.8	1.1	<1.0	13.38	-109	6.0	1.2	<0.16	3900	M	6.8	0.00	0.00	0.00	0.38	0.39	0.22	0.62	1.00	0.62
		3/3/2016	181	<0.2	<0.2	<0.2	<0.2	<0.2	4.9	1.9	1.1	<1.0	0.56	-99.1	1.5	1.9	<0.16	2900	M	7.2	0.00	0.00	0.00	0.43	0.37	0.20	0.57	1.00	0.57
AGW251-3	I	12/2/2014	-276	<0.020	<0.2	5.9	0.5	<0.2	4.3	<1.0	1.2	<1.0	1.09	-112	3.1	<1.0	<0.16	2500	M	7.6	0.00	0.00	0.38	0.39	0.00	0.23	0.23	1.00	0.39
		8/14/2015	-21	<0.020	<0.2	3.0	0.2	<0.2	5.0	<1.0	<1.0	<1.0	1.51	209.7	5.8	<1.0	<0.16	2200	M	6.3	0.00	0.00	0.29	0.71	0.00	0.00	0.00	1.00	0.71
		12/3/2015	90	<0.020	<0.2	3.0	<0.2	<0.2	5.0	<1.0	<1.0	<1.0	10.63	-93.7	6.0	<1.0	<0.16	2100	M	6.1	0.00	0.00	0.28	0.72	0.00	0.00	0.00	1.00	0.72
		3/3/2016	181	<0.2	<0.2	1.2	<0.2	<0.2	7.8	<1.0	<1.0	<1.0	0.59	-50.4	2.0	<1.0	<0.16	2600	M	7.3	0.00	0.00	0.09	0.91	0.00	0.00	0.00	1.00	0.91
AGW269	S	8/14/2015	-21	<0.020	<0.2	6.7	0.7	<0.2	3.2	<1.0	<1.0	<1.0	0.52	-95.9	1.0	1.9	<0.16	1300	M	9.1	0.00	0.00	0.60	0.40	0.00	0.00	0.00	1.00	0.60
		12/7/2015	94	<0.020	0.2	7.4	1.2	<0.2	5.1	<1.0	1.7	<1.0	0.36	-49.0	4.0	<1.0	<0.16	26000	M	122	0.00	0.01	0.39	0.36	0.00	0.25	0.25	1.00	0.39
		3/2/2016	180	<0.2	<0.2	6.5	1	<0.2	5.2	<1.0	2	<1.0	0.27	-43.8	2.0	<1.0	<0.16	15000	M	8.5	0.00	0.00	0.34	0.37	0.00	0.29	0.29	1.00	0.37
AGW270	S	8/13/2015	-22	<0.020	<0.2	7.3	1.0	<0.2	2.2	<1.0	<1.0	<1.0	1.58	199.4	5.8	<1.0	<0.16	750	M	7.2	0.00	0.00	0.71	0.29	0.00	0.00	0.00	1.00	0.71
		12/7/2015	94	<0.020	1.7	10	1.7	<0.2	1.3	1.5	2.0	<1.0	0.30	-11.0	2.5	<1.0	<0.16	23000	M	682	0.00	0.05	0.44	0.08	0.19	0.24	0.44	1.00	0.44
		3/2/2016	180	<0.2	0.7	8.8	1	<0.2	1.7	<1.0	2.8	<1.0	0.30	-38.6	6.5	<1.0	<0.16	22000	M	75.2	0.00	0.02	0.45	0.12	0.00	0.41	0.41	1.00	0.45

Table 2-1
Data Summary Algona Bioremediation Pilot Test
Boeing Auburn Facility
Auburn, Washington

				Volatile Organic Compounds (all units in ug/L)									Aquifer Redox Conditions							Donor Indicators	Molar Fraction								
Well	Aquifer Zone	Date	Elapsed Time from Injection (days)	PCE (µg/L)	TCE (µg/L)	CIS (µg/L)	TRANS (µg/L)	11DCE (µg/L)	VC (µg/L)	Ethene (µg/L)	Ethane (µg/L)	Acetylene (µg/L)	DO (mg/L)	ORP (mV)	Iron II (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Methane (µg/L)	Aquifer Redox State	TOC (mg/L)	PCE	TCE	Sum of cis, trans, 11DCE	VC	Ethene	Ethane	Ethene +Ethane	Total	Max Fraction
AGW271	S	8/13/2015	-22	<0.020	<0.2	6.5	0.7	<0.2	4.6	<1.0	<1.0	<1.0	1.32	204.0	6.2	<1.0	<0.16	2300	M	6.8	0.00	0.00	0.50	0.50	0.00	0.00	0.00	1.00	0.50
		12/7/2015	94	<0.020	1.2	15	1.8	<0.2	5.9	1.2	1.9	<1.0	0.33	22.2	7.0	<1.0	<0.16	19000	M	971	0.00	0.02	0.45	0.25	0.11	0.17	0.28	1.00	0.48
		3/2/2016	180	<0.2	1.8	15	2.4	<0.2	2.8	1.5	3	<1.0	0.37	25.8	6.0	<10.0	<0.16	28000	M	1080	0.00	0.04	0.46	0.11	0.14	0.26	0.39	1.00	0.46
AGW272	S	8/13/2015	-22	<0.020	0.2	7.3	0.6	<0.2	0.66	<1.0	<1.0	<1.0	0.49	-55.2	1.8	1.5	<0.16	400	Fe/S	5.4	0.00	0.02	0.87	0.11	0.00	0.00	0.00	1.00	0.87
		12/7/2015	94	<0.02	0.2	6.4	0.7	<0.2	1.8	<1.0	<1.0	<1.0	1.36	-85.3	4.0	<1.0	<0.16	940	M	3.5	0.00	0.01	0.71	0.28	0.00	0.00	0.00	1.00	0.71
		3/2/2016	180	<0.2	0.3	5.4	0.5	<0.2	1.2	<1.0	<1.0	<1.0	0.91	-71.4	1.0	1.1	<0.16	460	Fe/S	4.1	0.00	0.03	0.74	0.23	0.00	0.00	0.00	1.00	0.74
AGW273	S	8/13/2015	-22	<0.020	<0.2	6.3	0.7	<0.2	4.2	<1.0	<1.0	<1.0	1.61	193.0	4.6	<1.0	<0.16	880	M	6.1	0.00	0.00	0.52	0.48	0.00	0.00	0.00	1.00	0.52
		12/7/2015	94	<0.02	<0.2	3.4	0.6	<0.2	6.0	<1.0	<1.0	<1.0	1.52	-99.3	6.0	<1.0	<0.16	1500	M	6.0	0.00	0.00	0.30	0.70	0.00	0.00	0.00	1.00	0.70
		3/2/2016	180	<0.2	<0.2	3.5	0.5	<0.2	3.9	<1.0	<1.0	<1.0	0.51	-54.3	1.2	<1.0	<0.16	1300	M	6.1	0.00	0.00	0.40	0.60	0.00	0.00	0.00	1.00	0.60
AGW274	S	8/13/2015	-22	<0.020	<0.2	<0.2	<0.2	<0.2	4.0	2.3	<1.0	<1.0	0.54	-36.6	3.6	<1.0	<0.16	1900	M	7.5	0.00	0.00	0.00	0.44	0.56	0.00	0.56	1.00	0.56
		12/7/2015	94	<0.02	<0.2	<0.2	<0.2	<0.2	1.9	1.3	2.2	<1.0	2.07	-95.0	4.0	<1.0	<0.16	2700	M	8.1	0.00	0.00	0.00	0.20	0.31	0.49	0.80	1.00	0.80
		3/2/2016	180	<0.2	<0.2	2	0.4	<0.2	5.5	<1.0	<1.0	<1.0	0.43	-48.9	2.0	<1.0	<0.16	920	M	7	0.00	0.00	0.22	0.78	0.00	0.00	0.00	1.00	0.78
AGW275	S	8/13/2015	-22	<0.020	<0.2	2.3	0.3	<0.2	7.7	<1.0	<1.0	<1.0	0.64	-47.6	3.0	1.0	<0.16	2000	M	7.6	0.00	0.00	0.18	0.82	0.00	0.00	0.00	1.00	0.82
		12/7/2015	94	<0.02	<0.2	2.5	0.3	<0.2	7.7	<1.0	<1.0	<1.0	1.02	-100	4.5	<1.0	<0.16	2100	M	6.9	0.00	0.00	0.19	0.81	0.00	0.00	0.00	1.00	0.81
		3/2/2016	180	<0.2	<0.2	0.6	<0.2	<0.2	7.7	2.2	1.6	<1.0	0.35	-48.5	2.2	<1.0	<0.16	14000	M	79.7	0.00	0.00	0.02	0.47	0.30	0.20	0.50	1.00	0.50
IW33	S	8/13/2015	-22	<0.020	<0.2	6.6	0.8	<0.2	3.0	<1.0	<1.0	<1.0	1.86	-17.1	2.6	<1.0	<0.16	940	M	7.4	0.00	0.00	0.61	0.39	0.00	0.00	0.00	1.00	0.61
IW34	S	8/17/2015	-18	<0.020	0.2	7.6	0.8	<0.2	4.9	<1.0	<1.0	<1.0	0.57	-60.2	4.0	<1.0	<0.16	1900	M	6.9	0.00	0.01	0.52	0.47	0.00	0.00	0.00	1.00	0.52
		12/7/2015	94	<0.10	1.6	8.5	1.2	<0.2	1.1	2.9	1.7	<1.0	1.79	-24.7	9.5	22.5	<0.16	7900	M	6010	0.00	0.04	0.35	0.06	0.36	0.20	0.55	1.00	0.55
		3/2/2016	180	<0.2	5.3	16	2.5	<0.2	1.1	3	2.7	<1.0	0.39	44.1	7.0	<10.0	<0.16	15000	M	6450	0.00	0.09	0.43	0.04	0.24	0.20	0.44	1.00	0.44
IW35	S	8/17/2015	-18	<0.020	<0.2	3.3	0.5	<0.2	3.7	<1.0	<1.0	<1.0	0.77	-22.8	2.0	1.0	<0.16	1800	M	7.2	0.00	0.00	0.40	0.60	0.00	0.00	0.00	1.00	0.60
IW36	S	8/17/2015	-18	<0.020	0.2	3.3	0.7	<0.2	6.0	<1.0	<1.0	<1.0	0.58	-29.5	2.8	<1.0	<0.16	1700	M	7.6	0.00	0.01	0.30	0.69	0.00	0.00	0.00	1.00	0.69
		12/7/2015	94	<0.02	<1.0	1.6	<1.0	<1.0	3.8	<1.0	1.4	<1.0	1.77	-100	6.0	<1.0	<0.16	17000	M	63.7	0.00	0.00	0.13	0.49	0.00	0.38	0.38	1.00	0.49
		3/2/2016	180	<0.2	<0.2	1.5	0.4	<0.2	5.7	<1.0	2	<1.0	0.32	-47.6	1.5	<1.0	<0.16	14000	M	17.9	0.00	0.00	0.11	0.51	0.00	0.38	0.38	1.00	0.51
IW37	S	8/13/2015	-22	<0.020	<0.2	5.3	0.5	<0.2	4.9	<1.0	<1.0	<1.0	0.56	-45.0	2.0	<1.0	<0.16	1800	M	6.6	0.00	0.00	0.43	0.57	0.00	0.00	0.00	1.00	0.57
		12/7/2015	94	0.16	1.3	13	2.0	<0.2	1.5	5.8	3.1	<1.0	1.40	-24.2	9.0	6.6	<0.16	3800	M	4780	0.00	0.02	0.31	0.05	0.41	0.21	0.62	1.00	0.62
		3/2/2016	180	<0.2	0.8	7.7	1.0	<0.2	1.2	1.8	2.2	<1.0	0.47	35.1	5.0	<10.0	<0.16	23000	M	2480	0.00	0.02	0.36	0.08	0.25	0.29	0.54	1.00	0.54

Green shading indicates parameter was not analyzed or not measured.
Blue shading indicates the compound with highest molar fraction per event
WT = Water Table Zone
S = Shallow Zone
I = Intermediate Zone
D = Deep Zone
Fe = Iron-reducing
S = Sulfate-reducing
M = Methanogenic
Notes:
Electron donor injection performed August 18 through September 4, 2015