

October 15, 2015

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. 52, July through September 2015 Activity Period
Boeing Auburn Facility
WAD 041337130, RCRA Corrective Action Agreed Order No. 01HWTRNR-3345
Auburn, Washington
Project No. 0025164.120.501**

Dear Ms. Harrover:

References

1. July 1, 2015. Email message from Sarah Fees, Landau Associates, to Neal Hines, Washington State Department of Ecology. Re: *Boeing Auburn site, commercial Auburn. WA Dept. of Ecology*. (Attachment: groundwater elevation data for requested shallow wells.)
2. July 7, 2015. Email message from Neal Hines, Washington State Department of Ecology, to Jennifer Wynkoop, Landau Associates, and James Bet, The Boeing Company. Re: *clarification for Pilot Study WP*.
3. July 8, 2015. Email message from Jennifer Wynkoop, Landau Associates, to Neal Hines, Washington State Department of Ecology. Re: *clarification for Pilot Study WP*.
4. July 8, 2015. Ecology Listserv (Boeing Fabrication Auburn Site): *Visit Ecology at Algona Days July 18, 2015*.
5. July 8, 2015. Email message from Thea Levkovitz, Washington State Department of Ecology, to representatives of The Boeing Company, City of Algona, City of Auburn, and APAC. Re: *review for Boeing Auburn Website text*. (Attachment: website pages for surface water, groundwater, and soil air results.)
6. July 15, 2015. Email message from Megan Hilfer, The Boeing Company, to representatives of Washington State Department of Ecology, The Boeing Company, City of Algona, City of Auburn, and APAC. Re: *review for Boeing Auburn Website text*. (Attachment: Edits from Boeing/Landau Associates team on website pages.)
7. July 15, 2015. Letter: *Status Report: No. 51, April Through June 2015 Activity Period, Boeing Auburn Facility, WAD 041337130, RCRA Corrective Action Agreed Order No. 01HWTRNR-3345*. From Jennifer Wynkoop, Landau Associates, to Robin Harrover, Washington State Department of Ecology.

8. July 15, 2015. Email message from Robin Harrover, Washington State Department of Ecology, to representatives of City of Auburn, City of Algona, City of Pacific, Washington State Department of Health, APAC, and Public Health – Seattle and King County. Re: *Fw: Boeing Auburn Status Report No. 51*. (Attachment: Quarterly status report No. 51 for April through June 2015.)
9. July 17, 2015. Letter: *Ecology Approval of Agency Review Draft Preliminary Work Plan Enhanced Natural Attenuation Pilot Test, Boeing Auburn Facility by Landau Associates Inc. for the Boeing Company, dated June 9, 2014; FS #2018; CS #5049; EPA #WAD041337130*. From Neal Hines, Washington State Department of Ecology, to James Bet, The Boeing Company.
10. July 18, 2015. Ecology website: *Ecology to be at Second Annual Health Fair – Algona Days*. Found at: <http://www.ecy.wa.gov/programs/hwtr/CleanupSites/boeing-fabn/WhatsNew.html>.
11. July 22, 2015. Email message from Jennifer Wynkoop, Landau Associates, to Thea Levkovitz, Neal Hines, and Robin Harrover, Washington State Department of Ecology. Re: *Pilot Test Schedule*. (Attachment: Tentative pilot test schedule with details of when activities will be taking place.)
12. July 23, 2015. Email message from Jennifer Wynkoop, Landau Associates, to Robin Harrover and Neal Hines, Washington State Department of Ecology. Re: *Revised Model Report*. (Attachment: Revised version of modeling report with corrected elevations and changes marked in redline.)
13. July 23, 2015. Email message from Megan Hilfer, The Boeing Company, to Thea Levkovitz, Washington State Department of Ecology. Re: *Draft pilot test flyer*. (Attachment: draft FAQ-style flyer for Ecology to post and distribute.)
14. July 23, 2015. Letter: *Registration with the Underground Injection Control (UIC) Program, Primus International, 851 Milwaukee Ave N., Algona, WA*. From Mary Shaleen-Hansen, Washington State Department of Ecology, to James Bet, The Boeing Company.
15. July 24, 2015. Report: *Preliminary Work Plan, Enhanced Natural Attenuation Pilot Test, Boeing Auburn Facility, Auburn, Washington*. Prepared for The Boeing Company.
16. July 27, 2015. Letter: *Ecology comment regarding the Agency Review Draft Surface Water Monitoring Work Plan, Boeing Auburn Facility; prepared for the Boeing Company by Landau Associates; Dated June 5, 2015; FS #2018; CS #5049; EPA WAD041337130*. From Robin Harrover, Washington State Department of Ecology, to James Bet, The Boeing Company.
17. July 28, 2015. Email from Thea Levkovitz, Washington State Department of Ecology, to Representatives of City of Auburn, The Boeing Company, Landau Associates, City of Algona, and APAC. Re: *Pilot Study mailer*. (Attachment: Word document and PDF of layout for draft Pilot Study mailer for review.)
18. July 28, 2015. Draft Report: *Agency Review Draft, Natural Attenuation Assessment Report, Boeing Auburn Facility, Auburn, Washington*. Prepared for The Boeing Company.
19. July 29, 2015. Email from Megan Hilfer, The Boeing Company, to Thea Levkovitz, Washington State Department of Ecology and representatives of City of Auburn, The Boeing Company,

- Landau Associates, City of Algona, and APAC. Re: *Pilot Study mailer*. (Attachment: collective comments from Boeing/Landau on the pilot study text document and PDF.)
20. July 29, 2015. Ecology Listserv (Boeing Fabrication Auburn Site): *Pilot Study Starts Mid-August*.
 21. July 29, 2015. Email message from Neal Hines, Washington State Department of Ecology, to James Bet, The Boeing Company. Re: *comparison of CH4 to LEL*. (Attachment: Methane and LEL calculations.)
 22. July 30, 2015. Ecology website. *Will bioremediation help clean up groundwater in Algona and Auburn?* Found at: <http://www.ecy.wa.gov/programs/hwtr/cleanupSites/boeing-fabn/index.html>
 23. August 2015. Ecology Flyer. Re: *Pilot Study Starts Mid-August*.
 24. August 4, 2015. Email message from Thea Levkovitz, Washington State Department of Ecology, to representatives of The Boeing Company, Landau Associates, City of Algona, City of Auburn, and APAC/Futurewise. Re: *Outreach update*.
 25. August 5, 2015. Email message from Sarah Fees, Landau Associates, to Robin Harrover, Washington State Department of Ecology. Re: *CMT Channel Selection*. (Attachment: Time series plots and data for each of the wells that require channel selection.)
 26. August 7, 2015. Letter: *Commercial Vapor Intrusion Assessment Data Submittal, Tier I Soil Gas and Groundwater Resampling – June 2015, Auburn and Algona, Washington*. From Sarah Fees and Jennifer Wynkoop, Landau Associates, to Neal Hines, Washington State Department of Ecology.
 27. August 20, 2015. Email message from Robin Harrover, Washington State Department of Ecology, to Sarah Fees, Landau Associates. Re: *CMT Channel Selection*.
 28. August 24, 2015. Letter: *Ecology approval of proposed CMT Channel Selection; see: email from Sarah Fees to Robin Harrover; email prepared by Landau Associates for the Boeing Company, dated August 05, 2015; 4:03 PM; FS #2018; CS #5049; EPA WAD041337130*. From Robin Harrover, Washington State Department of Ecology, to James Bet, The Boeing Company. (Received September 2, 2015).
 29. August 28, 2015. Report: *Surface Water Monitoring Work Plan, Boeing Auburn Facility, Auburn, Washington*. Prepared for The Boeing Company.
 30. August 31, 2015. Email message from Thea Levkovitz, Washington State Department of Ecology, to representatives of The Boeing Company, Landau Associates, City of Algona, City of Auburn, and APAC. Re: *beta review of Boeing Auburn website*.
 31. September 1, 2015. Email message from Sarah Fees, Landau Associates, to Chris Andersen and Ingrid Gaub, City of Auburn. Re: *Shapefile for Area of Potential Interest*.
 32. September 1, 2015. Letter: *Request for variance, continuous multi-channel tubing multi-level monitoring well, Boeing Auburn facility, Auburn, Washington*. From Jennifer Wynkoop, Landau Associates, to Noel Philip, Washington State Department of Ecology. (Submitted on September 2 via email with variance request form.)
 33. September 2, 2015. Email message from Noel Philip, Washington State Department of Ecology, to Jennifer Wynkoop, Landau Associates. Re: *CMT Variance Request*.

34. September 3, 2015. Letter: *Ecology receipt and comment of Agency Review Draft Groundwater Modeling Report Boeing Auburn Facility by Landau Associates Inc. for the Boeing Company, dated June 23, 2014; FS #2018; CS #5049; EPA #WAD041337130*. From Robin Harrover, Washington State Department of Ecology, to James Bet, The Boeing Company. (Received September 15, 2015.)
35. September 4, 2015. Email message from Megan Hilfer, The Boeing Company, to Thea Levkovitz, Washington State Department of Ecology. Re: *beta review Boeing Auburn website*.
36. September 8, 2015. Email message from Thea Levkovitz, Washington State Department of Ecology, to representatives of The Boeing Company, Landau Associates, City of Algona, City of Auburn, APAC, and Washington State Department of Ecology. Re: *Ecology Blog Pilot study*.
37. September 9, 2015. Letter: *Groundwater monitoring results: March and June 2015, Auburn School District warehouse property wells, Auburn, Washington*. From Jennifer Wynkoop, Landau Associates, to Michael Newman, Deputy Superintendent, Business and Operations, Auburn School District.
38. September 9, 2015. Letter: *Groundwater monitoring results: March, April and June 2015, City of Algona wells, Algona, Washington*. From Jennifer Wynkoop, Landau Associates, to David Hill, Mayor, City of Algona.
39. September 9, 2015. Letter: *Groundwater monitoring results: March, April and June 2015, City of Auburn wells, Auburn Washington*. From Jennifer Wynkoop, Landau Associates, to Chris Thorn, Water Quality Program Coordinator, City of Auburn.
40. September 9, 2015. Letter: *Groundwater monitoring results: June 2015, Sentry wells, Pacific, Washington*. From Jennifer Wynkoop, Landau Associates, to Lance Newkirk, Public Works Manager, City of Pacific.
41. September 9, 2015. Letter: *Groundwater monitoring results: June 2015, Coastal Farm and Ranch well, Auburn, Washington*. From Jennifer Wynkoop, Landau Associates, to Byron Baule, Operations Manager, Coastal Farm and Ranch. (Email only).
42. September 9, 2015. Letter: *Groundwater monitoring results: June 2015, Boeing wells on Fana Auburn 234 LLC property, Auburn, Washington*. From Jennifer Wynkoop, Landau Associates, to John Powers, Fana Group of Companies.
43. September 9, 2015. Letter: *Groundwater monitoring results: June 2015, Boeing wells on Fana Auburn LLC Property, Auburn, Washington*. From Jennifer Wynkoop, Landau Associates, to John Powers, Fana Group of Companies.
44. September 9, 2015. Letter: *Groundwater monitoring results: March and June 2015, U.S. General Services Administration wells, Auburn, Washington*. From Jennifer Wynkoop, Landau Associates, to Richard Hall, Auburn Senior Property Manager, U.S. General Services Administration.
45. September 9, 2015. Letter: *Groundwater monitoring results: June 2015, Boeing wells along the Interurban Trail, Auburn and Algona, Washington*. From Jennifer Wynkoop, Landau Associates, to Kurt Krebs, Puget Sound Energy.

46. September 9, 2015. Letter: *Groundwater monitoring results: March and June 2015, WP Glimcher wells, Auburn, Washington*. From Jennifer Wynkoop, Landau Associates, to Greg Fleser, General Manager, WP Glimcher.
47. September 9, 2015. Letter: *Groundwater monitoring results: March and June 2015, Washington State Department of Transportation wells, Auburn, Washington*. From Jennifer Wynkoop, Landau Associates, to Amir Ahmadi, Regional Materials Engineer, Washington State Department of Transportation. (Email only.)
48. September 11, 2015. Email from Jennifer Wynkoop, Landau Associates, to Greg Fleser, WP Glimcher. Re: *Groundwater Monitoring Results: March and June 2015, WP Glimcher property*. (Correspondence regarding the VI data submittal.)
49. September 14, 2014. Email message from Thea Levkovitz, Washington State Department of Ecology, to representatives of The Boeing Company, Landau Associates, City of Auburn, City of Algona, APAC, and Washington State Department of Ecology. Re: *FB post and tweets for the Algona pilot study blog*.
50. September 17, 2015. Letter: *Ecology Comments, Revisions, and Conditional Approval of Agency Review Draft Natural Attenuation Assessment Report, Boeing Auburn Facility by Landau Associates Inc. for the Boeing Company, dated July 28, 2014; FS #2018; CS #5049; EPA #WAD041337130*. From Neal Hines, Washington State Department of Ecology, to James Bet, The Boeing Company.
51. September 24, 2015. Report: *2014 Surface Water Investigation Report, Boeing Auburn Facility, Auburn, Washington*. Prepared for The Boeing Company.

The Auburn Agreed Order became effective on August 14, 2002. As required under Section VI.12 of the Auburn Agreed Order, The Boeing Company (Boeing) is providing Status Report No. 52, which covers the 3-month activity period of July through September 2015.

Work Conducted

General Site-wide Corrective Action Activities

On July 15, 2015, Landau Associates submitted Status Report No. 51 regarding second quarter 2015 activities to Washington State Department of Ecology (Ecology) and other stakeholders¹ for their records (Reference #7).

As part of various offsite monitoring well access agreements and right-of-way (ROW) permits, Boeing has agreed to provide semiannual groundwater data submittals. The following semiannual groundwater data submittals were distributed during third quarter 2015:

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 representative of the City of Algona, City of Auburn, City of Pacific, Seattle-King County Health Department, and Washington State Department of Health (Reference #8).

- Data for AGW237(D), AGW238(I), and AGW239(S) located on the Auburn School District warehouse property from the March and June 2015 sampling events to the Auburn School District (Reference #35)
- Data for 35 wells located on City of Algona ROW from the March, April, and June 2015 sampling events to the City of Algona (Reference #36)
- Data for 32 wells located on City of Auburn ROW from the March, April, and June 2015 sampling events to the City of Auburn (Reference #37)
- Sentry well data from the June 2015 sampling event to the City of Pacific (Reference #38)
- AGW236 data from the June 2015 sampling event to Coastal Farm and Ranch (Reference #39)
- AGW179(I) and AGW180(D) data from the June 2015 sampling event to Fana Auburn 234 LLC (Reference #40)
- AGW177(I) and AGW178(D) data from the June 2015 sampling event to Fana Auburn LLC (Reference #41)
- Data for AGW256(I), AGW257(S), and AGW258(S) from the March and June 2015 sampling events to U.S. General Services Administration (Reference #42)
- Data for 16 wells located on the Interurban Trail from the June 2015 sampling events to Puget Sound Energy (Reference #43)
- Data for 17 wells located on The Outlet Collection property from the March and June 2015 sampling events to WP Glimcher (Reference #44)
- Data for APP-057, APP-058, and APP-069 from the March and June 2015 sampling events to Washington State Department of Transportation (Reference #45).

Ecology project managers, Robin Harrover and Neal Hines, continued to attend regularly scheduled bi-weekly conference calls with Boeing, Landau Associates, and the City of Algona's environmental consultant, ICF International (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 Landau Associates.

In the second quarter 2015, Boeing and Ecology started discussing a plan for completing the final remedial investigation (RI) report. Boeing created an outline for the final RI report and has plans to review the outline with Ecology in the fourth quarter 2015.

Site-wide Groundwater Model

Boeing prepared a site-wide numerical groundwater model report and submitted it to Ecology in June 2015. Boeing found an error in the groundwater elevation datum being used and revised the model report with corrected elevation information. The revised version of the model report was provided to Ecology on July 23, 2015 (Reference #12). Ecology provided comments on the report on September 3, 2015 (Reference #33). Boeing plans to meet with Ecology in the fourth quarter 2015 to discuss the

comments and plans to finalize the report, which should be completed in the fourth quarter 2015 or first quarter 2016.

Tier I Commercial Vapor Intrusion Assessment

The Tier I commercial vapor intrusion assessment included soil borings, collection of soil gas, and collection of shallow groundwater samples in City of Algona right-of-way (ROW), City of Auburn ROW, and on The Outlet Collection property. The Tier I assessment activities were split into three phases due to timing of access agreements and resampling activities. Phase I of the Tier I assessment activities included work on the Cities of Auburn and Algona ROW, and was completed in March 2015. Phase II of the Tier I assessment activities included work on The Outlet Collection property and resampling of one location on City of Algona ROW, and was completed in April 2015. Phase III of the Tier I assessment activities included resampling at three locations on The Outlet Collection property, and was completed in June 2015. Boeing completed a data submittal regarding this resampling and submitted it to Ecology on August 7, 2015 (Reference #26). Boeing plans to submit a report summarizing the Tier I commercial vapor intrusion assessment in the fourth quarter 2015.

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 at an adjacent private property. Boeing is proceeding with contacting the private property owner and plans to complete the additional assessment activities in the fourth quarter 2015 or first quarter 2016.

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. Building 17-70 sampling and initial sampling at The Outlet Collection occurred in April 2015. Due to the results of the initial sampling at The Outlet Collection, additional indoor air sampling at The Outlet Collection occurred and data was submitted to Ecology in June 2015. There were no detections during the second indoor air sampling event and no further commercial vapor intrusion assessment activities at The Outlet Collection are planned at this time. Boeing submitted the resampling data to WP Glimcher on September 11, 2015 (Reference #47). Boeing plans to submit a report summarizing the Tier II commercial vapor intrusion assessment in the fourth quarter 2015.

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 [DCT Industrial (DCTI) property]. Drilling and installation of monitoring wells on City of Auburn ROW and City of Algona ROW were completed in March 2015. Initial sampling of the new wells took place in April 2015. Boeing plans to submit a report summarizing the 2015 drilling activities in the fourth quarter 2015.

The drilling activities at the DCTI property were delayed until an access agreement could be completed. The access agreement between Boeing and DCTI was completed on August 13, 2015. In preparation for drilling activities, Boeing submitted a variance request to Ecology for installing a continuous multi-channel tubing (CMT) multi-level well on September 1, 2015 (Reference #31). Ecology provided email approval of the CMT variance request on September 2, 2015 (Reference #32). The monitoring well drilling, installation, development, and initial well sampling are expected to occur in the fourth quarter 2015. Boeing plans to either incorporate the results from this drilling into the 2015 drilling program report or present the results as a separate technical memorandum.

2014 Auburn Drilling Program

Well drilling, installation, and development for additional Auburn and U.S. General Services Administration (GSA) wells was completed in November 2014. A deep zone well was installed in February 2015 to replace the deep zone screen of multi-level well AGW254 that was not producing water. Boeing plans to submit a report summarizing the Auburn drilling and sampling activities, including the activities for the replacement well, in the fourth quarter 2015.

Surface Water Sampling

Boeing submitted a draft 2014 Surface Water Investigation report to Ecology in May 2015 and received Ecology comments in June 2015. Boeing finalized the 2014 Surface Water Investigation Report on September 24, 2015 (Reference #48).

Results from the 2014 surface water investigation were used to prepare a surface water monitoring plan for continued surface water sampling activities. Boeing submitted a draft Surface Water Monitoring Work Plan to Ecology in June 2015. Ecology provided comments on the work plan on July 27, 2015 (Reference #16). Boeing finalized the work plan on August 28, 2015 (Reference #29).

The surface water monitoring work plan included: one-time pore water and co-located surface water sampling at four locations on Mill Creek, annual surface water sampling at five locations, and semiannual surface water sampling at one location. Some of the surface water sampling locations were on Washington State Department of Transportation (WSDOT) ROW and required a permit to access the ROW. Landau Associates finalized the permit with WSDOT on August 20, 2015.

Pore water sampling was conducted in September 2015. The sampling included placement of passive diffusion bags (PDB) in pore water sampling canisters at four locations along Mill Creek and the channelized portion of the wetland south of Mill Creek. PDBs and samplers were installed on September 10, 2015. On September 24, 2015, after a 2-week equilibration period, the PDBs were collected and sampled; co-located surface water samples were also collected at the same time. The annual surface water sampling event occurred on September 23, 2015. Results from both of these

sampling events will be presented in a technical memorandum that Boeing plans to submit to Ecology in the fourth quarter 2015.

Algona Natural Attenuation Assessment Activities and Pilot Test

In November 2014, Boeing and Ecology started initial discussions about a possible enhanced natural attenuation pilot test in Algona. Natural attenuation assessment sampling activities in Algona were completed in conjunction with the December 2014 groundwater sampling event in preparation for a possible pilot test. Boeing submitted a natural attenuation assessment report discussing the results of the natural attenuation sampling to Ecology July 28, 2015 (Reference #18). Ecology provided comments on the draft report on September 17, 2015 (Reference #47). Boeing plans to finalize this report in the fourth quarter 2015.

Boeing submitted a preliminary work plan for an enhanced natural attenuation pilot test to Ecology in June 2015. Ecology submitted questions and requested clarification on several aspects of the work plan via email on July 7, 2015 (Reference #2). Landau Associates responded to this email and provided answers to Ecology's questions on July 8, 2015 (Reference #3). Ecology provided comments and approval of the work plan on July 17, 2015 (Reference #9). Boeing finalized the work plan on July 24, 2015 (Reference #15). Landau Associates provided Ecology with a tentative schedule of pilot test activities on July 22, 2015 (Reference #11).

In order to implement pilot test activities, Boeing pursued Underground Injection Control (UIC) registration through Ecology, an access agreement for installing the wells and completing injection activities with a private property (Primus) along Milwaukee Avenue North, and a ROW permit with the City of Algona for installing an observation well on City of Algona ROW. Boeing received the registration of the wells from the Ecology UIC program on July 23, 2015 (Reference #14). The access agreement with Primus was finalized on July 20, 2015. The ROW permit with the City of Algona was finalized on July 30, 2015.

Outreach activities for the pilot test included preparation of a flyer and various email and social media updates. Boeing provided Ecology with draft wording for a frequently asked questions style flyer regarding pilot test activities on July 23, 2015 (Reference #13). Ecology created a mailer using some wording provided by Boeing and sent the draft wording to stakeholders for review on July 28, 2015 (Reference #17). Boeing provided comments on the draft wording in Ecology's mailer on July 29, 2015 (Reference #19). Ecology finalized the mailer and distributed it in early August 2015 (Reference #23). Ecology also distributed notification about the start of the pilot study via the Ecology listserv on July 29, 2015 (Reference #20) and as a "what's new" update on the Ecology website on July 30, 2015 (Reference #22). In addition, Ecology posted information to their blog about the pilot study and provided a notification of this blog post to stakeholders via email on September 8, 2015 (Reference #34). Ecology also posted notifications about the pilot study on their Facebook page and Twitter feed

and provided notification of these to stakeholders via email on September 14, 2015 (Reference #46). In addition to Ecology's communication activities, Boeing and Landau Associates also communicated regularly with the private property owner and tenants regarding pilot test activities. During drilling and injection activities, Landau Associates had a copy of the pilot test flyer and Ecology communications cards available on a sandwich board for distribution.

Drilling and installation of pilot test injection and monitoring wells was completed between July 27 and August 4, 2015. Development of the wells was completed between August 5 and August 10, 2015. Initial sampling of the wells and the baseline sampling for the pilot test was completed on August 13 and 14, 2015. Initial well sampling and baseline pilot test sampling data are provided in Attachment 1. The wells installed for the pilot study will be surveyed in the fourth quarter 2015.

The pilot test injection event began on August 17, 2015 and was completed on September 4, 2015. Boeing plans to complete quarterly sampling following the pilot test to monitor the effectiveness of the pilot test injection. The first quarterly sampling event is planned to coincide with the semiannual groundwater sampling event in December 2015.

Groundwater Sampling and Groundwater Level Monitoring

In preparation for the quarterly groundwater sampling event, Boeing requested Ecology approve specific channels for continued monitoring from multi-level wells that had been sampled for a sufficient number of sampling events. Proposed channels for continued monitoring were sent to Ecology on August 5, 2015 (Reference #25). Ecology provided approval of the proposed channels for continued monitoring via email on August 20, 2015 and provided a formal letter approval on August 24, 2015 (References #27 and #28).

Phase VI (i.e., six) quarterly groundwater sampling took place from August 25 through August 28, 2015. The annual groundwater sampling data are provided in Attachment 1. The current monitoring well network is presented on Figure 1-1. A sampling matrix for the September 2015 quarterly sampling event, including the baseline pilot test sampling, 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.

Boeing collected synoptic water levels from all wells in the monitoring well network in June 2015. Boeing also collected groundwater samples from all wells included in the Phase VI groundwater sampling matrix during the June 2015 groundwater sampling event. Boeing is using the June 2015 groundwater sampling and groundwater elevation data to update the site-wide groundwater concentration contour figures and groundwater elevation contour figures. Boeing plans to submit these figures to Ecology in the fourth quarter 2015.

Communications

Ecology is in the process of updating the Boeing Auburn website. On July 8, 2015, Ecology provided draft website text to stakeholders for review (Reference #5). Boeing provided edits on the website text to Ecology on July 15, 2015 (Reference #6). Ecology sent the beta version of the website to Boeing and other stakeholders for review on August 31, 2015 (Reference #30). Boeing provided comments on the beta version of the website to Ecology on September 4, 2015 (Reference #34).

The outreach group sent regular updates on activities occurring at the Boeing Auburn site. Ecology provided an outreach update to stakeholders regarding Ecology's activities in Algona on August 4, 2015 (Reference #24).

Ecology conducted a comparison of groundwater methane data and expected vapor phase concentrations to lower explosive limit values. Ecology shared this comparison with Boeing on July 29, 2015 (Reference #21). Ecology concluded that methane concentrations in groundwater do not appear to pose an explosive hazard. Ecology also communicated this information with both the City of Algona and the City of Auburn during communications conference calls.

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) typically on a biweekly basis. Ecology shares information from these meetings with Boeing by distributing meeting notes and via discussions during project conference calls.

Ecology attended Algona Days on July 18, 2015. Ecology sent out a notification that they would be attending Algona Days via the Ecology listserv on July 8, 2015 (Reference #4). In addition, Ecology also posted a "what's new" to the Ecology website on July 18, 2015 providing notification that Ecology would be attending Algona Days (Reference #10).

City of Auburn Communications

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

During the August conference call with City of Auburn, Chris Andersen requested a shapefile with an outline of the areas where volatile organic compounds are detected in groundwater. Landau Associates provided the shapefile on September 1, 2015 (reference #31)

In June 2015, Ecology requested groundwater elevation data for a number of shallow wells in commercial Auburn. Landau Associates provided Ecology with groundwater elevation data for these shallow wells on July 1, 2015 (Reference #1).

Other Activities

King County Sewer Replacement

Boeing notified Ecology in April 2015 that King County was planning to install a geotechnical boring and observation well along Perimeter Road around the end of April. The boring was intended to provide planning and design level geotechnical information for the King County sewer replacement project. King County's geotechnical consultant, Terracon, requested additional information from Boeing and Landau Associates related to development of a dewatering plan for the proposed sewer line; Landau Associates provided some hydrogeology references for the Auburn valley and a copy of the draft groundwater modeling report. Terracon reportedly conducted a slug test in the observation well on Perimeter Road; however, they have not yet reported results of the slug test to Boeing. Boeing continues to monitor activities for this project and continues keeping Ecology notified of progress during biweekly project conference calls.

Occurrence of Problems

None noted.

Projected Work for Next Reporting Period October through December 2015

Activities projected for the next reporting period pertain to the Algona pilot test and the ongoing RI including groundwater, vapor intrusion, and surface water investigations. Tasks during fourth quarter 2015 are expected to include:

- Finalizing the site-wide vapor intrusion assessment and approach report
- Submitting the Tier I commercial vapor intrusion assessment report
- Submitting the Tier II commercial vapor intrusion assessment report
- Conducting additional commercial vapor intrusion assessment activities at a private property
- Submitting a technical memorandum about the 2015 surface water sampling activities
- Finalizing the Algona natural attenuation assessment report
- Submitting a report for the 2014 Auburn groundwater investigation
- Submitting a report for the 2015 groundwater investigation
- Install the final monitoring well proposed in the 2015 groundwater investigation work plan at the DCTI property
- Submitting an outline for the final remedial investigation report


- Submitting groundwater elevation and concentration contour figures
- Submitting a Phase VII groundwater monitoring plan
- Conducting the semiannual groundwater sampling event in December 2015.

Other Significant Findings, Changes, and Contacts

The contact for the Auburn School District, Deputy Superintendent Mike Newman, retired. The new contact is Cindi Blansfield (cblansfield@auburn.wednet.edu).

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

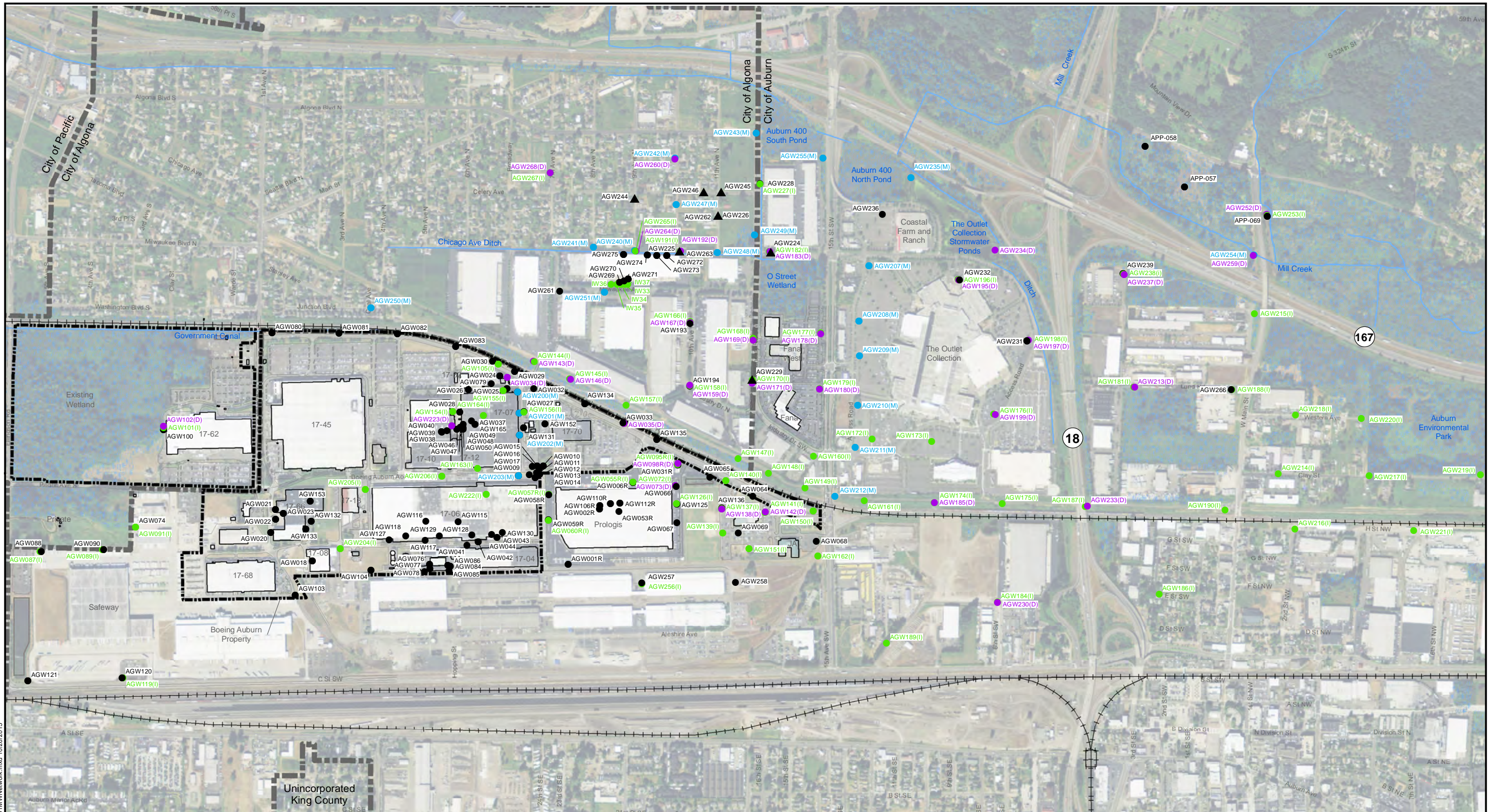
SEF/JWW/jrc

[Y:\025\164\R\QUARTERLY PROGRESS RPTS\2015\3Q15\3Q2015 STATUS RPT.DOCX]

cc: James Bet, The Boeing Company (email only)
Steve Tochko, The Boeing Company (email only)
Megan Hilfer, The Boeing Company (email only)
Nathan Jones, The Boeing Company (email only)
James Swartz, The Boeing Company
Ha Pham, Boeing Realty Corporation (email only)
Neil Smolen, Newmark (email only)
Steve Campbell, Prologis
Neal Hines, Washington State Department of Ecology (email only)
Terry Pollard, YMCA Auburn

Attachment: Attachment 1: Groundwater Sampling Results

Groundwater Sampling Results

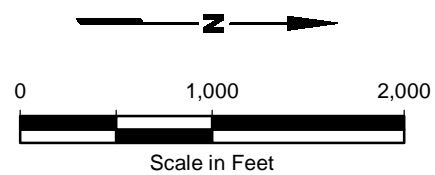


Notes

1. Locations of wells AGW269-AGW275 and IW32-IW36 are approximate pending completion of survey.
2. Well designations beginning with APP are installed and owned by WSDOT.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- ▲ 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



Base map source: Geometrix 2003; Aerial Photo Source: ESRI World Imagery; Parcel Data Source: King County GIS 2012

Boeing Auburn
Auburn, Washington

Current Monitoring Well Network

Figure
1

**Table 1-1
Sample Matrix
Third Quarter 2015
Boeing Auburn**

Location	SDG	Lab ID	Sample Date	VOC SW8260C	PCE SIM	VC SIM	AMEE	Sulfate	Sulfide	TOC
AGW183	1588889	8028393	8/27/2015	x						
AGW191	1588648	8026704	8/26/2015	x						
AGW192	1588648	8026702	8/26/2015	x						
AGW192-Dup	1588648	8026703	8/26/2015	x						
AGW215	1588890	8028408	8/27/2015	x	x					
AGW225	1585147	8008777	8/14/2015	x		x	x	x	x	x
AGW226	1585147	8008779	8/14/2015	x		x	x	x	x	x
AGW227	1588889	8028394	8/27/2015	x		x				
AGW228	1588889	8028395	8/27/2015	x		x				
AGW235-2	1588846	8028125	8/28/2015	x						
AGW235-4	1588846	8028126	8/28/2015	x						
AGW237	1588846	8028119	8/28/2015	x	x	x				
AGW238	1588846	8028123	8/28/2015	x	x	x				
AGW239	1588846	8028124	8/28/2015	x	x	x				
AGW240-1-7	1585148	8008784	8/14/2015	x	x	x	x	x	x	x
AGW240-5	1585148	8008782	8/14/2015	x	x	x	x	x	x	x
AGW241-1	1588648	8026708	8/26/2015	x	x	x				
AGW241-5	1588648	8026707	8/26/2015	x	x	x				
AGW242-1	1588284	8024780	8/25/2015	x	x	x				
AGW242-2	1588284	8024779	8/25/2015	x	x	x				
AGW242-5	1588284	8024778	8/25/2015	x	x	x				
AGW243-1	1588648	8026711	8/26/2015	x	x	x				
AGW243-3	1588648	8026710	8/26/2015	x	x	x				
AGW243-5	1588648	8026709	8/26/2015	x	x	x				
AGW244	1588284	8024781	8/25/2015	x	x	x				
AGW245	1588646	8026695	8/26/2015	x	x	x				
AGW246	1588646	8026692	8/26/2015	x	x	x				
AGW247-1	1585148	8008788	8/14/2015	x	x	x	x	x	x	x
AGW247-5	1585148	8008786	8/14/2015	x	x	x	x	x	x	x
AGW248-1	1588648	8026706	8/26/2015	x	x	x				
AGW248-5	1588648	8026705	8/26/2015	x	x	x				
AGW249-1	1588646	8026693	8/26/2015	x	x	x				
AGW249-5	1588646	8026694	8/26/2015	x	x	x				
AGW250-1	1588283	8024768	8/25/2015	x	x	x				
AGW250-2	1588283	8024770	8/25/2015	x	x	x				
AGW250-3	1588283	8024771	8/25/2015	x	x	x				
AGW250-6	1588283	8024772	8/25/2015	x	x	x				
AGW251	1588889	8028399	8/27/2015	x	x	x				

**Table 1-1
Sample Matrix
Third Quarter 2015
Boeing Auburn**

Table 1-1
Page 2 of 3

Location	SDG	Lab ID	Sample Date	VOC						
				SW8260C	PCE SIM	VC SIM	AMEE	Sulfate	Sulfide	TOC
AGW251-1	1585147	8008775	8/14/2015	x	x	x	x	x	x	x
AGW251-2	1585147	8008773	8/14/2015	x	x	x	x	x	x	x
AGW251-3	1585147	8008769	8/14/2015	x	x	x	x	x	x	x
AGW251-Dup	1585147	8008771	8/14/2015	x	x	x	x	x	x	x
AGW252	1588890	8028405	8/27/2015	x	x	x				
AGW253	1588890	8028404	8/27/2015	x	x	x				
AGW254-1	1588889	8028401	8/27/2015	x	x	x				
AGW254-2	1588889	8028400	8/27/2015	x	x	x				
AGW254-5	1588890	8028410	8/27/2015	x	x	x				
AGW255-1	1588846	8028120	8/28/2015	x	x	x				
AGW255-3	1588846	8028121	8/28/2015	x	x	x				
AGW255-5	1588846	8028122	8/28/2015	x	x	x				
AGW256	1588646	8026689	8/26/2015	x	x	x				
AGW257	1588646	8026690	8/26/2015	x	x	x				
AGW257-Dup	1588646	8026691	8/26/2015	x	x	x				
AGW258	1588646	8026688	8/26/2015	x	x	x				
AGW259	1588890	8028409	8/27/2015	x	x	x				
AGW260	1588284	8024777	8/25/2015	x	x	x				
AGW261	1588889	8028397	8/27/2015	x	x	x				
AGW261-Dup	1588889	8028398	8/27/2015	x	x	x				
AGW262	1588889	8028396	8/27/2015	x	x	x				
AGW263	1588283	8024775	8/25/2015	x	x	x				
AGW264	1588283	8024774	8/25/2015	x	x	x				
AGW265	1588283	8024773	8/25/2015	x	x	x				
AGW266	1588846	8028127	8/28/2015	x	x	x				
AGW267	1588284	8024783	8/25/2015	x	x	x				
AGW268	1588284	8024782	8/25/2015	x	x	x				
AGW269	1585148	8008790	8/14/2015	x	x	x	x	x	x	x
AGW270	1585126	8008695	8/13/2015	x	x	x	x	x	x	x
AGW271	1585126	8008689	8/13/2015	x	x	x	x	x	x	x
AGW272	1585127	8008698	8/13/2015	x	x	x	x	x	x	x
AGW273	1585126	8008693	8/13/2015	x	x	x	x	x	x	x
AGW274	1585127	8008700	8/13/2015	x	x	x	x	x	x	x
AGW275	1585127	8008702	8/13/2015	x	x	x	x	x	x	x
AGW275-Dup	1585127	8008704	8/13/2015	x	x	x	x	x	x	x
APP-057	1588890	8028406	8/27/2015	x	x	x				
APP-058	1588890	8028407	8/27/2015	x	x	x				
APP-069	1588890	8028403	8/27/2015	x	x	x				

**Table 1-1
Sample Matrix
Third Quarter 2015
Boeing Auburn**

Location	SDG	Lab ID	Sample Date	VOC						
				SW8260C	PCE SIM	VC SIM	AMEE	Sulfate	Sulfide	TOC
IW33	1585126	8008691	8/13/2015	x	x	x	x	x	x	x
IW34	1585590	8011033	8/17/2015	x	x	x	x	x	x	x
IW35	1585590	8011035	8/17/2015	x	x	x	x	x	x	x
IW36	1585590	8011037	8/17/2015	x	x	x	x	x	x	x
IW37	1585127	8008706	8/13/2015	x	x	x	x	x	x	x

AMEE = Acetylene, Methane, Ethene, Ethane
PCE = Tetrachloroethene
SDG = Sample Delivery Group
SIM = Selected Ion Method
TOC = Total Organic Compound
VC = Vinyl Chloride
= Volatile Organic Compound

**Table 1-2
Groundwater Sampling Event Results
Third Quarter 2015
Boeing Auburn**

Sample ID:	IW36	IW37
Zone:	Shallow	Shallow
SDG:	1585590	1585127
Lab ID:	8011037	8008706
Sample Date:	8/17/2015	8/13/2015
VOLATILES (µg/L)		
Method SW8260C		
Acetone	5.0 U	5.0 U
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	5.0 U	5.0 UJ
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 UJ
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	3.3	5.3
trans-1,2-Dichloroethene	0.7	0.5
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 UJ
4-Methyl-2-Pentanone (MIBK)	5.0 U	5.0 UJ
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	0.2	0.2 U
Trichlorofluoromethane	0.5 U	0.5 U
Vinyl Acetate	0.5 U	0.5 U
Vinyl Chloride	5.7 J	3.7 J
m,p-Xylene	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U
VOLATILES (µg/L)		
Method 8260C SIM		
Tetrachloroethene	0.020 U	0.020 U
Vinyl Chloride	6.0	4.9
CONVENTIONALS (mg/L)		
Sulfate (EPA300.0)	1.0 U	1.0 U
Total Organic Carbon (SM5310C)	7.6	6.6
Sulfide (SM4500-S2D)	0.16 U	0.16 UJ
NATURAL ATTENUATION PARAMETERS (µg/L)		
Method RSK-175		
Methane	1700	1800
Ethane	1.0 U	1.0 U
Ethene	1.0 U	1.0 U
Acetylene	1.0 U	1.0 U

Bold = Detected Compound

J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

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
Quarterly Groundwater Sampling Event Results - Detected Analytes Only
Third Quarter 2015
Boeing Auburn

Sample ID:	APP-057	APP-058	APP-069	AGW183	AGW191	AGW192	Dup of AGW192 AGW900	AGW215	AGW225	AGW226	AGW227	AGW228	AGW235-2	AGW235-4	AGW237	AGW238
Zone:	Shallow	Shallow	Shallow	Deep	Int.	Deep	Deep	Int.	Water Table	Water Table	Int.	Shallow	Shallow	Int.	Deep	Int.
SDG:	1588890	1588890	1588890	1588889	1588648	1588648	1588648	1588890	1585147	1585147	1588889	1588889	1588846	1588846	1588846	1588846
Lab ID:	8028406	8028407	8028403	8028393	8026704	8026702	8026703	8028408	8008777	8008779	8028394	8028395	8028125	8028126	8028119	8028123
Sample Date:	8/27/2015	8/27/2015	8/27/2015	8/27/2015	8/26/2015	8/26/2015	8/26/2015	8/27/2015	8/14/2015	8/14/2015	8/27/2015	8/27/2015	8/28/2015	8/28/2015	8/28/2015	8/28/2015
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 UJ	5.0 UJ	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon Disulfide	0.5 UJ	0.5 UJ	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	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
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	0.6	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
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	0.3	0.3	0.9
cis-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	5.1	3.1	2.8	3.0	3.3	7.8	1	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	0.2 U	0.2 U	0.5	0.3	0.3	0.4	0.3	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
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
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	1.9	4.1	2.2	1.4	0.2 U	4.1	3.1	0.2 U
Vinyl Chloride	0.2 U	0.2 U	0.2 U	0.2 U	0.2 UJ	0.2 UJ	0.2 UJ	0.2 U	0.4	0.4	0.3	0.3	1.9	0.2 U	0.2 U	0.2 U
VOLATILES (µg/L)																
Method 8260C SIM																
Tetrachloroethene	0.020 U	0.020 U	0.020 U					0.020 U							0.060	0.020 U
Vinyl Chloride	0.020 U	0.020 U	0.020 U						0.49	0.56	0.29	0.33			0.041	0.020 U
CONVENTIONALS (mg/L)																
Sulfate (EPA300.0)									4.1	8						
Total Organic Carbon (SM5310C)									4.2	2.6						
NATURAL ATTENUATION PARAMETERS (µg/L)																
Method RSK-175																
Methane									360	970						
Ethane									1.0 U	1.0 U						
Ethene									1.0 U	1.0 U						

Table 1-3
Quarterly Groundwater Sampling Event Results - Detected Analytes Only
Third Quarter 2015
Boeing Auburn

Sample ID:	AGW239	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	Water Table	Shallow	Water Table	Shallow	Water Table	Shallow	Int.	Water Table	Shallow	Shallow	Water Table	Water Table	Water Table	Water Table	Shallow
SDG:	1588846	1585148	1585148	1588648	1588648	1588284	1588284	1588284	1588648	1588648	1588648	1588284	1588646	1588646	1585148	1585148
Lab ID:	8028124	8008784	8008782	8026708	8026707	8024780	8024779	8024778	8026711	8026710	8026709	8024781	8026695	8026692	8008788	8008786
Sample Date:	8/28/2015	8/14/2015	8/14/2015	8/26/2015	8/26/2015	8/25/2015	8/25/2015	8/25/2015	8/26/2015	8/26/2015	8/26/2015	8/25/2015	8/26/2015	8/26/2015	8/14/2015	8/14/2015
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	6.9	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
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
1,1-Dichloroethane	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.2
1,1-Dichloroethene	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	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	12	0.2 U	3.3	0.2 U	0.6	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	3.4	4.7
trans-1,2-Dichloroethene	0.6	0.2	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	0.4	0.8
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
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	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	0.2 U
Vinyl Chloride	1.1	0.2 U	5.5	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	0.2 U	2.4	3.0
VOLATILES (µg/L)																
Method 8260C SIM																
Tetrachloroethene	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Vinyl Chloride	1.2	0.049	5.6	0.020 U	0.039	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.10	0.020 U	2.5	3.0
CONVENTIONAL (mg/L)																
Sulfate (EPA300.0)		1.0 U	1.0 U												1.0 U	1.1
Total Organic Carbon (SM5310C)		8.1	5.4												9.6	6.2
NATURAL ATTENUATION PARAMETERS (µg/L)																
Method RSK-175																
Methane		2900	2000												5200	3400
Ethane		2.5 J	1.0 U												1.0 U	1.0 U
Ethene		1.0 U	1.2 J												1.0 U	1.0 U

Table 1-3
Quarterly Groundwater Sampling Event Results - Detected Analytes Only
Third Quarter 2015
Boeing Auburn

Sample ID:	AGW248-1	AGW248-5	AGW249-1	AGW249-5	AGW250-1	AGW250-2	AGW250-3	AGW250-6	AGW251-1	AGW251-2	AGW251-3	Dup of AGW251-3				AGW254-1	
	Zone:	Water Table	Shallow	Water Table	Shallow	Water Table	Shallow	Int.	Deep	Water Table	Shallow	Int.	AGW901	AGW251-6	AGW252	AGW253	AGW254-1
SDG:	1588648	1588648	1588646	1588646	1588283	1588283	1588283	1588283	1585147	1585147	1585147	1585147	1588889	1588890	1588890	1588890	1588889
Lab ID:	8026706	8026705	8026693	8026694	8024768	8024770	8024771	8024772	8008775	8008773	8008769	8008771	8028399	8028405	8028404	8028404	8028401
Sample Date:	8/26/2015	8/26/2015	8/26/2015	8/26/2015	8/25/2015	8/25/2015	8/25/2015	8/25/2015	8/14/2015	8/14/2015	8/14/2015	8/14/2015	8/27/2015	8/27/2015	8/27/2015	8/27/2015	8/27/2015
VOLATILES (µg/L)																	
Method SW8260C																	
Acetone	23	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 UJ	5.0 UJ	5.0 UJ	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 UJ	0.5 UJ	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	0.8	0.2 U	0.2 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	1.7	0.2 U	1.9	0.2 U	0.2	0.5	0.2 U	0.2 U	0.2 U	0.2 U	3.0	3.3	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	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2	0.2	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	0.3	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.4
Trichloroethene	0.2 U	4.6	0.2 U	6.5	0.2 U	0.2	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
Vinyl Chloride	0.2 U	0.2 UJ	1.7 J	0.2 UJ	0.2 U	0.2 U	0.2 U	0.2 U	0.9	4.7	3.7	3.9	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
VOLATILES (µg/L)																	
Method 8260C SIM																	
Tetrachloroethene	0.020 U	0.10	0.020 U	0.11	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Vinyl Chloride	0.020 U	0.25	2.8	0.11	0.020 U	0.040	0.053	0.020 U	0.62	5.7	5.0	4.7	0.17	0.028	0.020 U	0.020 U	
CONVENTIONALS (mg/L)																	
Sulfate (EPA300.0)									1.3	2.1	1.0 U	1.0 U					
Total Organic Carbon (SM5310C)									16.9	7.1	6.3	6.0					
NATURAL ATTENUATION PARAMETERS (µg/L)																	
Method RSK-175																	
Methane									140	4800	2200	2200					
Ethane									1.0 U	1.6 J	1.0 U	1.0 U					
Ethene									1.0 U	2.2 J	1.0 U	1.0 U					

Table 1-3
Quarterly Groundwater Sampling Event Results - Detected Analytes Only
Third Quarter 2015
Boeing Auburn

Sample ID:	AGW254-2	AGW254-5	AGW255-1	AGW255-3	AGW255-5	AGW256	AGW257	Dup of AGW257	AGW258	AGW259	AGW260	AGW261	Dup of AGW261	AGW262	AGW263	AGW264
	Shallow	Int.	Shallow	Shallow	Int.	Int.	Shallow	AGW902	Shallow	Deep	Deep	Shallow	AGW901	Water Table	Water Table	Deep
SDG:	1588889	1588890	1588846	1588846	1588846	1588646	1588646	1588646	1588646	1588890	1588284	1588889	1588889	1588889	1588283	1588283
Lab ID:	8028400	8028410	8028120	8028121	8028122	8026689	8026690	8026691	8026688	8028409	8024777	8028397	8028398	8028396	8024775	8024774
Sample Date:	8/27/2015	8/27/2015	8/28/2015	8/28/2015	8/28/2015	8/26/2015	8/26/2015	8/26/2015	8/26/2015	8/27/2015	8/25/2015	8/27/2015	8/27/2015	8/27/2015	8/25/2015	8/25/2015
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
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
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
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
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
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
cis-1,2-Dichloroethene	0.2 U	0.2 U	2.6	1.4	0.8	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1.0	1.0	0.2 U	7.3
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	0.2 U	0.2 U	0.2	0.2	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	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
Toluene	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 U	0.2 U	0.2 U
Trichloroethene	0.2 U	0.2 U	0.5	0.2 U	0.2 U	0.8	0.2	0.3	0.2 U	0.2 U	0.2 U	0.2 U	2.5	2.5	0.2 U	1.0
Vinyl Chloride	0.2 U	0.2 U	0.3	0.2	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	0.3	0.4	0.2 U
VOLATILES (µg/L)																
Method 8260C SIM																
Tetrachloroethene	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.32	0.36	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Vinyl Chloride	0.040	0.020 U	0.25	0.22	0.22	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.074	0.069	0.31	0.45	0.020 U
CONVENTIONAL (mg/L)																
Sulfate (EPA300.0)																
Total Organic Carbon (SM5310C)																
NATURAL ATTENUATION																
PARAMETERS (µg/L)																
Method RSK-175																
Methane																
Ethane																
Ethene																

Table 1-3
Quarterly Groundwater Sampling Event Results - Detected Analytes Only
Third Quarter 2015
Boeing Auburn

Sample ID:	AGW265	AGW266	AGW267	AGW268	AGW269	AGW270	AGW271	AGW272	AGW273	AGW274	AGW275	Dup of AGW275		IW33	IW34	IW35	IW36	IW37	
	AGW900	IW33	IW34	IW35	IW36	IW37													
Zone:	Int.	Shallow	Int.	Deep	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow	
SDG:	1588283	1588846	1588284	1588284	1585148	1585126	1585126	1585127	1585126	1585127	1585127	1585127	1585126	1585126	1585126	1585590	1585590	1585590	1585127
Lab ID:	8024773	8028127	8024783	8024782	8008790	8008695	8008689	8008698	8008693	8008700	8008702	8008704	8008691	8011033	8011035	8011037	8008706		
Sample Date:	8/25/2015	8/28/2015	8/25/2015	8/25/2015	8/14/2015	8/13/2015	8/13/2015	8/13/2015	8/13/2015	8/13/2015	8/13/2015	8/13/2015	8/13/2015	8/13/2015	8/17/2015	8/17/2015	8/17/2015	8/13/2015	
VOLATILES (µg/L)																			
Method SW8260C																			
Acetone	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 UJ	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
Carbon Disulfide	0.5 U	0.5 U	0.5 U	0.5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	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	0.2 U	0.2 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	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	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	0.2 U	0.2 U
cis-1,2-Dichloroethene	0.2 U	0.4	0.2 U	0.2 U	6.7	7.3	6.5	7.3	6.3	0.2 U	2.3	2.4	6.6	7.6	3.3	3.3	5.3		
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.7	1.0	0.7	0.6	0.7	0.2 U	0.3	0.3	0.8	0.8	0.5	0.7	0.5		
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	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	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	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	0.2 U
Vinyl Chloride	0.2 U	0.2 U	0.2 U	0.2 U	2.7	1.8 J	3.6 J	0.6 J	3.6 J	3.1	6.4 J	6.4 J	2.3	4.7	3.7 J	5.7 J	3.7 J		
VOLATILES (µg/L)																			
Method 8260C SIM																			
Tetrachloroethene	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Vinyl Chloride	0.020 U	0.020 U	0.020 U	0.020 U	3.2 J	2.2	4.6	0.66	4.2	4.0	7.7	8.3	3.0	4.9	3.7	6.0	4.9		
CONVENTIONALS (mg/L)																			
Sulfate (EPA300.0)																			
					1.9	1.0 U	1.0 U	1.5	1.0 U	1.0 U	1.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0	1.0 U	1.0 U	1.0 U
Total Organic Carbon (SM5310C)																			
					9.1	7.2	6.8	5.4	6.1	7.5	7.6	7.2	7.4	6.9	7.2	7.6	6.6		
NATURAL ATTENUATION PARAMETERS (µg/L)																			
Method RSK-175																			
Methane					1300	750	2300	400	880	1900	2000	2000	940	1900	1800	1700	1800		
Ethane					1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethene					1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	2.3 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Bold = Detected compound.
J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
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.