8.0 SITE-WIDE GROUNDWATER QUALITY EVALUATION

For the purpose of investigation and cleanup, Site-wide groundwater quality is designated as a separate AOC (AOC A-14). The Site-wide groundwater AOC comprises the TCE and VC groundwater plumes as well as groundwater contamination upgradient of the source of the plumes. Although the plumes have identified source areas that include other SWMUs and AOCs, the purpose of the Site-wide groundwater AOC is to define the nature and extent of groundwater contamination across the Site and develop a Site-wide strategy for addressing the contamination. The Site-wide groundwater AOC is defined based on the areas where groundwater concentrations exceeded the screening level for TCE (0.54 µg/L) or VC (0.029 µg/L) in the most recent sampling results, December 2015, in the shallow zone, intermediate zone, and deep zone. The areal extent of the AOC will be adjusted in the future as additional data is collected. Once groundwater cleanup levels are established in the FS, the extent of the AOC will be defined as the areas that exceed cleanup levels. The current extent of AOC A-14 (area that exceeds screening levels) based on both TCE and VC concentrations is presented on Figure 8-1.

Site-wide groundwater quality was evaluated by reviewing select VOC concentration data (TCA, PCE, TCE, and VC[91]) at all wells across the Site. Concentrations of TCA exceeded screening levels at two locations historically (420 µg/L at well AGW003 in 1996 and 257 µg/L at well AGW002 in 1994) both within the Area 1 plume source area. Concentrations have decreased to below screening levels and TCA is currently not detected at the remaining well (AGW002) in this area[92]. TCA has never been detected above screening levels at any other location and is mostly not detected throughout the Site. PCE has never been detected above current screening levels at the Site[93]. The maximum PCE concentration was 2.2 µg/L at well AGW078. Because concentrations are below screening levels, PCE and TCA did not receive further evaluation as part of the Site-wide groundwater AOC. Maximum and most recent concentrations of PCE, TCE, TCA, and VC at each monitoring well are presented in Table 8-1.

Releases of TCE from the Facility have resulted in two primary contaminated groundwater plumes that extend off Boeing property in portions of Algona and Auburn. The plumes are primarily comprised of TCE and its breakdown products cDCE and VC with minor amounts of tDCE and 1,1-DCE. Because of their relative toxicity, TCE and VC are the primary constituents of concern in Site-wide groundwater. The breakdown products: cDCE, tDCE, and 1,1-DCE do not exceed screening levels at the Site, but are mentioned here because they are intermediate breakdown products between TCE and VC.

[91] Ecology comments on the 2007 revised RI requested an evaluation of Site-wide groundwater quality for VOCs: TCA, PCE, TCE, and VC (Ecology 2008).
[92] AGW003 was decommissioned in 2004.
[93] The PCE screening level was revised upward from 0.081 µg/L to the maximum contaminant level of 5 µg/L in 2012 after Ecology made adjustments to CLARC.

Based on source areas, the Site-wide groundwater plume has been subdivided into the Area 1 plume (originating from former Building 17-05) and the western plume (originating from or near Building 17-07). The plumes can be difficult to delineate due to the relatively complex source history, geology, transformation of VOCs due to biodegradation (natural and induced reductive dechlorination), and complex vertical and horizontal groundwater gradients that cause the plumes to move between groundwater zones and comingle downgradient.

8.1 Source Area

The sources of contamination to the Site-wide groundwater AOC were determined from an understanding of operations and historical TCE use at the Facility and contaminant distribution trends. The source of the Area 1 plume is relatively well understood. Historical data strongly indicate a former TCE degreasing unit and tank line as the source of TCE in groundwater (as discussed in Section 7.0). The source history for the western plume appears to be more complex, but data indicate operations in and adjacent to Building 17-07 as the likely source. In addition to the primary plume source areas, isolated concentrations of TCE (below 2 µg/L) are present in areas of the Facility upgradient of the plume source areas. The TCE concentrations found in upgradient areas are likely the result of minor releases from small, mobile degreasing stations or use of small volume spray canisters. In addition, there appears to be evidence for the presence of several other sources of TCE outside of the Facility.

8.1.1 Trichloroethene Use at the Facility

To investigate TCE use at the Facility, Boeing conducted interviews regarding operations and historical use of TCE with several long-time employees at the Facility and conducted a review of historical documents and Facility engineering drawings. Interviews with long-term employees were conducted in June and July 2011 (LAI 2011b). These interviews resulted in information regarding the use of TCE at the Facility and led to discovery of additional documents regarding TCE use.

Facility engineering reports indicate that Boeing's Use of TCE in stationary vapor degreasing units was discontinued around 1976 when Boeing converted the degreasers to use TCA (Boeing 1976a, b). TCE continued to be used at the Facility in small quantities (spray cans and small mobile cold degreasing stations) up until the 1990s; however, the potential for a release from small quantity containers or units is low. Vapor degreasers using TCA were converted to aqueous degreasers by about 1994. Most likely the significant TCE releases at the Site date back to the approximate 10-year period between 1966 and 1976 when vapor degreasers at the Facility used TCE. There is very low potential for TCE releases from buildings built after TCE use at the Facility diminished, including Building 17-45 and the 17-60 series buildings[94].

[94] Solvent degreasers were present for a short period in Buildings 17-45 and 17-68; however, these degreasers used TCA and were converted to aqueous degreasers within a few years of installation.

Since Boeing began operations at the Facility, the majority of TCE use occurred in three buildings that had stationary TCE vapor degreasers: Building 17-07 and former Buildings 17-03 and 17-05[95]. Former degreasers at Buildings 17-07 and 17-05 both show evidence of a release based on groundwater concentrations and plume configurations. The former degreaser locations in Building 17-05 (SWMUs S-12b and S-12c) are shown on Figure 7-2. Former degreaser locations in Building 17-07 (SWMU S-13a and S-13b) are shown on Figure 8-2. The original TCE degreaser in Building 17-07 (SWMU S-13a) was approximately 4 ft wide, 10 ft long, and 5 ft deep (Boeing 1976b). The degreaser in Building 17-05 (SWMU S-12b) was approximately 12 ft wide, 40 ft long, and 8 ft deep (Boeing 1976a, LAI 2011b).

Small quantities of TCE were present (no more than a few gallons at a time in each unit) in mobile degreasing stations used for cleaning small parts. These stations were primarily used in Buildings 17-07 and 17-10. TCE reportedly was not used in Building 17-06, which primarily houses aluminum mills. TCE was also used in small spray canisters for small parts cleaning throughout the Facility. There is a potential that minor releases of TCE may have occurred as part of incidental cleaning and mobile degreasing activities (LAI 2011b). The quantities of solvents used in these activities was likely limited and groundwater investigation data do not support these areas as significant sources of TCE.

8.1.2 Area 1 Plume

The source of the Area 1 plume has been identified as SWMU S-12b (former TCE degreaser) and AOC A-08 (former tank line adjacent to the degreaser) in former Building 17-05 (currently the Prologis warehouse). Maximum historical TCE concentrations in groundwater near the degreaser and tank line were 5,460 µg/L detected from borehole sample 17-05-GW-4 in 1994 (Kennedy/Jenks 1995) and 1,433 µg/L at monitoring well AGW002 drilled in the same location later in 1994. The degreaser was removed in 1979 and the tank line was decommissioned in 1994. Starting in 2004, Boeing conducted an IRA to clean up the Area 1 source area; the IRA and Area 1 source area are discussed further in Section 7.0 of this report.

Due to the IRA, TCE shallow zone groundwater concentrations at the Area 1 source are currently below the reporting limit; therefore AOC A-08 and S-12b will not be carried forward to the FS. However, TCE and VC concentrations remain above screening levels downgradient of the source area. Remaining groundwater contamination that is present near the source of the Area 1 plume will be addressed in the FS as part of the Site-wide groundwater AOC.

8.1.3 Western Plume

The source area of the western plume (sources and nature of release) was evaluated based on a combination of groundwater concentration trends, Facility history, and soil gas data. Based on spatial TCE concentration trends in groundwater, the western plume appears to originate under or near Building 17-07. Based on the body of evidence evaluated to date, the western plume source appears

[95] A stationary degreaser was also located in Building 17-12; however, this degreaser is identified as a TCA degreaser and there is no evidence that TCE was ever used in this degreaser.

to be mainly related to the original Building 17-07 TCE vapor degreaser (SWMU S-13a). However, there are likely a number of formerly contributing sources to the western plume near Building 17-07 including:

- The chrome waste holding tank (SWMU-34) and piping, which was adjacent to the TCE vapor degreaser and received condensate from the degreaser.
- The north lagoon (SWMU S-26), which received effluent from the chrome waste holding tank.

Current groundwater data and operational changes indicate that none of these sources are currently contributing contamination to groundwater. The locations of each of these SWMUs are shown on Figures 8-2 and 8-3; these SWMUs are also discussed in further detail in the following subsections.

The maximum TCE concentration (11 µg/L at AGW201-6) detected near the western plume source area was in the deep zone (Figure 8-2). TCE concentrations in the deep zone immediately downgradient of the identified source zone area suggests that at least a portion of the original release was a dense non-aqueous phase liquid (DNAPL). The maximum TCE concentrations detected are atypical of source area concentrations, which are typically much higher. However, a rapid reduction in concentrations was observed in the Area 1 plume source area at AGW002 where concentrations went from an initial high of 1,433µg/L in 1994 to 4.6 µg/L in 1996. The rapid aquifer flushing that resulted in the observed concentrations reductions at AGW002 is unusual, but is consistent with the hydrogeologic conceptual model at the Site and may be an explanation for the concentrations that have been observed in the western plume source area.

The exact source or sources of the western plume are difficult to determine based on groundwater spatial concentration trends alone, because the highest current VOC concentrations occur in the plume downgradient of the source area and off Boeing property. In addition to groundwater concentration data, Facility history and soil gas data were used in identifying the western plume source. Current VOC concentrations are discussed in Section 8.2. Maximum TCE and VC concentrations in groundwater since 1995[96] at the western plume source area (Building 17-07) are presented in Figures 8-2 and 8-3, respectively.

Boeing completed a literature review of historical investigation work in and around Building 17-07, including previous soil or groundwater testing and soil removal work in the area of Buildings 17-07, 17-10, and 17-12 including a specific list of reports that Ecology identified[97] (Ecology 2012b). The literature review did not uncover additional information on potential sources of the western plume. In addition to completing Ecology’s requested literature review, Boeing also reviewed Facility plans and diagrams, completed field visits, reviewed groundwater monitoring well data, and conducted interviews with Boeing personnel. Boeing has presented these results in a series of reports (LAI 2010a,

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[96] The timeframe previously agreed upon by Ecology and Boeing was 1995 and later for inclusion of historical data (See Section 3.4).

[97] These reports Ecology identified included Boeing project document numbers: 67, 73, 94, 134, 135, 137, 139, 745, 750, 752, 759, 845, 1528, 1530, 1542, 2046, 2043, 2163, 2428, 2432, 4141, 4142, 5290, 5274, and 5629 (Ecology 2012b).

2011b, 2012a). In 2011, sub-slab soil gas samples were collected at 39 locations beneath Building 17-07 as part of the western plume source evaluation (LAI 2012c). The samples were analyzed for select VOCs including TCE. TCE was detected at 18 of the 39 locations, with the most significant detections near SWMU S-13a (former TCE vapor degreaser). Further discussion of the sub-slab soil gas results is provided in section 8.1.3.1 below.

8.1.3.1 S-13a: Former Building 17-07 Vapor Degreaser

The original Building 17-07 vapor degreaser (SWMU S-13a) was in operation from 1966 to 1995. TCE was used in this original degreaser until 1976 when it was replaced with TCA (Boeing 1976b). The degreaser system was located above a 21.5 ft by 10.5 ft concrete containment sump (Kennedy/Jenks 1996b). This degreaser was decommissioned in 1995 and a new degreaser (SWMU S-13b) was installed nearby. The new system, which was decommissioned in 2007, used TCA.

Multiple borings and wells have been installed in the immediate vicinity of the original degreaser (Section 6.1.5). The maximum TCE groundwater concentration was detected at well AGW037 at 5.3 µg/L in 1996; the most recent TCE concentration at this well is 2.7 µg/L. VC concentrations near the degreaser have been very low or non-detect. Higher TCE concentrations occur in the deep zone downgradient of the degreaser location near the northwest corner of the building (AGW201-6; maximum concentration of 11 µg/L). The most recent TCE concentrations at this location have decreased to 8.2 µg/L. The maximum TCE and VC groundwater concentrations near Building 17-07 are shown on Figures 8-2 and 8-3, respectively.

The sub-slab soil gas sampling results indicate a likely release from the original Building 17-07 degreaser (SWMU S-13a). The sample with the highest TCE concentration (1,010 micrograms per cubic meter [µg/m^3]) was located adjacent to the original degreaser location. Additionally, four out of five samples that exceeded soil gas screening levels were located near the former degreaser location. The sub-slab soil gas sample results indicate that TCE releases likely occurred historically in the SWMU S-13a area. Sub-slab soil gas sample locations and results are shown on Figure 8-4.

8.1.3.2 S-34: Chrome Waste Holding Tank

The chrome waste holding tank (SWMU S-34) is located about 30 ft east of the former SWMU S-13a vapor degreaser. This SWMU was designated in the Agreed Order as not requiring additional investigation (i.e., Column II SWMU). However, interviews and subsequent review of flow and piping diagrams indicated that the tank received rinse water and condensate from the SWMU S-13a vapor degreaser. The chrome tank operated from 1966 to the mid to late 1980s[98]. The tank was a concrete vault with a painted liner, but had no double containment and was apparently also connected to

[98] Conversation between Lauren McIntire, LAI, and Kim Collier, Boeing, regarding Building 17-07 former degreasers, former chrome and cyanide tank line waste holding tanks, former lagoons, and wood surge tank on May 28 and June 4, 2010.

nearby floor drains[99]. The tank discharged to the north lagoon (SWMU S-26) via a piping system along the south end of the building. The location of the chrome tank (SWMU S-34) and the north lagoon (SWMU S-26) are shown on Figures 8-2 and 8-3. A detailed evaluation of the tank as a potential contributing source is presented in a technical memorandum that was previously submitted to Ecology in 2010 (LAI 2012a).

8.1.3.3 S-26: North Lagoon

The north lagoon (SWMU S-26) was located south of Building 17-15 and west of Building 17-07. The lagoon was 100 ft by 180 ft and had an asphalt and fiberglass liner (Boeing 1986a)). The lagoon served as wastewater storage and flow equalization for the treatment plant between 1966 and 1985. Cracks and perforations in the lagoon liners were discovered in 1985 and the lagoon was subsequently removed (Tetra Tech 1998). After removal, Boeing received a clean closure designation for the lagoon in 1987 (Dames & Moore 1988b). Extensive soil and groundwater sampling was conducted as part of the closure process; however, CVOCs were not analyzed in any of the samples. This SWMU was designated in the Agreed Order as not requiring additional investigation (i.e., Column II SWMU). The former lagoon location (SWMU S-26) is shown on Figures 8-2 and 8-3.

During the 1992 and 1993 rinse water treatment plant hydrogeologic investigation (Kennedy/Jenks 1994f), VC was detected at wells AGW024 and AGW025 between 9 and 50 µg/L in groundwater (SWMU S-06; see Section 6.1.1). These wells are located north of the former north lagoon. In addition to VC, 1,1-DCA and cDCE were detected. Given the proximity of these wells to the north lagoon, it is possible that leaks in the lagoon liner were a source of the historically elevated VC concentrations. The VC likely formed from TCE in high TOC-content wastewater that degraded to VC either in the lagoon or in groundwater directly beneath the lagoon. Since 1993, the VC concentrations in this area have largely dissipated or degraded. For example, the VC concentration at AGW024 has decreased from 50 µg/L in 1993[100] to 1.7 µg/L in December 2015. TCE concentrations, which have historically been low in this area, are now non-detect in most wells downgradient of the former lagoon.

8.1.4 Other Sources

There are other possible sources of contamination that could account for portions of the groundwater plumes across the Site and described in the following subsections.

8.1.4.1 Facility

There are likely additional sources of VOCs to the upper aquifer both at the Facility and not associated with the Facility. Other Facility sources may be associated with mobile degreasing, cold cleaning using VOC-containing solvents in spray cans, sewer lines, or incidental spills during storage. These sources

[99] Conversation between Lauren McIntire, LAI, and Kim Collier, Boeing, regarding Building 17-07 former degreasers, former chrome and cyanide tank line waste holding tanks, former lagoons, and wood surge tank on May 28 and June 4, 2010.

[100] This value is not shown on the maximum concentration figures because it was collected before the cutoff for inclusion in the analytical database.

are undefined and largely undocumented due to the age of releases and lack of historical documentation. However, these sources could be responsible for concentrations of VOCs (TCE concentrations less than 2.0 µg/L) detected upgradient of the Area 1 and western plume sources in the shallow zone (e.g., well AGW129 [east side of Building 17-06], and well AGW222-27 [west side of Building 17-06]). These other sources are not indicative of releases of VOCs that require addressing as individual SWMUs outside of the Site-wide groundwater AOC.

8.1.4.2 Off Facility

The documented sources of the western plume and Area 1 plume appear to account for the majority of the groundwater plume to the northwest of the Facility. However, there are portions of the plume that may be the result of sources not associated with the Facility. Advective groundwater flow path lines from Building 17-07 (source of western plume) and former Building 17-05 (source of Area 1 plume) are presented with a plume map representing concentrations of the VOCs of concern (TCE and degradation products) in all groundwater zones on Figure 8-5. These flow path lines are simulated based on current conditions of public supply well pumping systems (see Section 4.2.6.1). Since the facility opened in 1966, public supply well pumping conditions were variable. Changes in supply well pumping may have influenced groundwater directions flow over time. Flow path lines for the current conditions and three alternate conditions are presented on Figure 8-6. The public supply well pumping conditions include: 1) the current conditions of the City of Auburn and City of Pacific public supply wells pumping; 2) a condition when the former City of Algona public supply well was pumping and the City of Auburn and City of Pacific supply wells were pumping; 3) a condition when the City of Pacific and former City of Algona public supply wells were not pumping, but the City of Auburn public supply wells were pumping; and 4) a condition when the City of Pacific public supply wells were pumping, but the City of Algona and City of Auburn public supply wells were not pumping. These different conditions account for much of the current spread of the groundwater plumes originating from the Facility. However, there is an area to the north of the Facility where it appears that groundwater flow from the Facility does not account for the presence of contamination (Figure 8-7). In this area, VOC concentrations may be the result of upgradient sources not related to the Facility.

Sources of contamination not associated with the Facility have been inferred or documented based on data or information collected as part of RI activities. TCE has been detected in two small Group A water systems located east and hydraulically crossgradient and upgradient of the Site. These systems (SAWA and Auburn Mobile Park) pump their water from the upper aquifer (see Section 4.3). Concentrations detected at these systems were less than 5 µg/L (the TCE MCL for drinking water) (WDOH 2012); however, the presence of TCE is an indication of other TCE releases in the vicinity of the Site that are not related to Boeing activities. The sources of these other TCE releases are unknown. Boeing installed a number of RI monitoring wells east and northeast of the Facility that have concentrations of TCE consistent with the contamination noted in the SAWA and Auburn Mobile Park production wells. The Boeing monitoring wells are crossgradient from the Facility and downgradient from the SAWA and Auburn Mobile Park. These locations are intermediate wells

AGW256 (GSA property), AGW162 (JA property), AGW189 (near C Street SW), AGW184 (8th Street SW), AGW186 (E Street SW), and deep well AGW230 (8th Street SW). Additionally, a number of wells north of the Facility between approximately H Street SW and SR 167 appear to be crossgradient of the Facility based on groundwater elevation contours and flow path lines from the numerical groundwater flow model (Figure 8-7). Well locations are shown on Figure 8-1. Groundwater elevation contours are shown on Figures 4-13 through 4-18.

Concentrations of TCE (less than 0.6 µg/L) and VC (less than 0.2 µg/L) were detected west of the Facility in Algona at well AGW250 and nearby borings ASB0235 and ASB0236. These wells are located near the intersection of Coal Avenue and Junction Boulevard. The source of these detections is unknown. They may be an indication of limited releases not associated with the Facility since these sampling locations are upgradient or crossgradient of identified source areas at the Facility. Well AGW250 is shown on Figure 8-1.

The property at 401 Lund Road located just north of SR 18 near the downgradient extent of the groundwater plumes (between wells AGW213 and AGW231) has had confirmed releases of chlorinated solvents to groundwater from a waste oil UST. The property, known as All Service West[101] in the Ecology ISIS database, has Facility Site ID # 55446729 and Cleanup Site ID # 9692. A number of investigations were conducted at the All Service West property between 1997 and 2007 that resulted in the installation of approximately 20 shallow (less than 20 ft deep) monitoring wells and a number of soil borings. Historical concentrations of TCE at the Site were as high as 18 µg/L. More recent groundwater samples from the property showed a maximum TCE concentration of 11 µg/L, detected in 2007 and a maximum VC concentration of 11.3 µg/L, detected in 2009 (G-Logics 2009). The property also had releases of petroleum hydrocarbons from USTs. TCE concentrations in this area may in part be associated with releases from the All Services West Site. The location of the All Services West Site is shown on Figure 8-1.

8.1.5 Summary

The source of the Area 1 plume was identified as the former SWMU S-12b degreaser and associated tank line (AOC A-08). The degreaser and tank line were removed and residual TCE contamination at the source was remediated to below screening levels during the IRA. VOC concentrations are slowly declining in wells located downgradient (north to northwest) of the source area as aquifer flushing occurs.

The source of the western plume appears to be located in Building 17-07. The original Building 17-07 TCE vapor degreaser (SWMU S-13a) appears to be the most likely source based on operational history, groundwater data, and soil gas data. The chrome waste holding tank (SWMU S-34), and the north lagoon (SWMU S-26) may also have contributed to the source; both are in relatively close proximity to

[101] This property is also known as McKesson Water Products property, the DS Waters property, and the Crystal Springs property.

the degreaser and piping diagrams indicate that the three were connected. The structures involved in these releases have been removed and current water quality trends indicate there are no longer sources of TCE at these locations.

The persistent TCE concentrations in the deep zone immediately downgradient of the identified western plume source zone area (e.g., AGW201-6) suggests that at least a portion of the original release was DNAPL. The life cycle of a DNAPL source zone is divided into five stages[102] starting with initial release of DNAPL through to complete DNAPL depletion and can occur over different periods depending on site conditions (Kueper et al. 2014). The western plume source zone is likely in Stage 5 (desorption and back diffusion) of a DNAPL release site where DNAPL has been completely depleted and concentration trends are dominated by back-diffusion from lower permeability portions of the aquifer. At this stage, all VOC mass is either adsorbed to soil particles or dissolved in groundwater. The source area now has the characteristics of a later stage release site (Stage 5) where DNAPL has been depleted and concentrations are dominated by desorption and back diffusion (Kueper et al. 2014). DNAPL releases are typically associated with higher concentrations of VOCs than those observed at and near Building 17-07 (Pankow and Cherry 1996). The low historical and current observed concentrations are most likely related to a number of factors. The original release or releases were probably not extensive (see Section 8.4.2). The relatively coarse-grained nature of soil texture likely resulted in low pore-entry pressures and low DNAPL residual saturation. This would allow the release to move downward to the deep zone easily without an accumulation of significant mass. The relatively high groundwater flux through the aquifer (driven by high rates of recharge from the White River) would also tend to deplete residual DNAPL quickly. Given that the most recent release would have occurred at the Site approximately 40 years ago (mid-1970s), the high degree of aquifer flushing has likely depleted the contaminant mass in the source area causing the resultant low concentrations.

The SWMUs and AOCs associated with plume sources currently have concentrations of TCE and VC below 5 µg/L and do not appear to be contributing as an ongoing source; therefore, they do not need to be carried forward to the FS. Instead, the Area 1 and western plumes where concentrations exceed screening levels are recommended to be brought forward to the FS as part of a single Site-wide groundwater AOC (A-14).

8.2 Nature and Extent of Groundwater Plumes

The plumes originating from the Facility are large, extending approximately 1-mile northwest from the Facility. The direction and extent of the plumes are influenced by groundwater flow as dissolved contaminants move with the groundwater. The plumes are relatively low concentration with most TCE concentrations less than MCL (5 µg/L) and a maximum current (December 2015) TCE concentration of

[102] The five stages of a DNAPL plume are: 1) Initial DNAPL Release, 2) DNAPL Redistribution, 3) Continued DNAPL Dissolution and Aging, 4) Complete DNAPL Depletion, and 5) Desorption and Back Diffusion.

12 μg/L in the intermediate aquifer zone at AGW145. Plume maps for TCE and VC for the water table[103], shallow zone, intermediate zone, and deep zone are presented on Figures 8-8 through 8-15. The lowest and highest concentration intervals in each of these figures represent the corresponding VOC screening level and MCL, respectively.

The current horizontal extent of the Area 1 and western plumes is due to dissolution of TCE at the source and migration of dissolved TCE downgradient with the bulk motion of flowing groundwater (i.e., advection). The resulting spatial distribution of the plumes is affected by aquifer heterogeneity, contaminant transport process such as sorption, dispersion, and contaminant degradation. Other factors that affect the distribution of the plume are the source history (discussed above), differences in public supply well pumping scenarios over time (Figure 8-6), and the presence of complex discharge boundary conditions that include an array of surface water and stormwater control and conveyance structures (e.g., the Chicago Avenue ditch, the Auburn 400 ponds, and Mill Creek) that receive groundwater discharge. The combination of these factors along with contribution from VOC sources outside the Facility has resulted in complex plume geometries in the shallow, intermediate, and deep zones.

8.2.1 Shallow Zone

Groundwater zones are defined based on depth bgs. The shallow zone extends from the water table to 35 ft bgs. The shallowest wells within this zone are screened at or near the water table. The depth of the water table varies considerably across the Site (depending on ground surface elevation), ranging from approximately 15 ft bgs at the Facility to less than 5 ft bgs in northern Algona. Wells defined as water table wells represent the upper portion of the shallow zone. Data from water table wells are mainly used to evaluate the potential for vapor intrusion from contaminated groundwater. However, a discussion is presented below to highlight the differences in data between water table data and concentrations deeper in the shallow zone.

8.2.1.1 Shallow Zone at the Water Table

Water table samples were collected from wells and borehole grab samples screened across the water table. Water table groundwater samples were used to refine the understanding of shallow zone VOC concentrations in select areas and to evaluate the potential for vapor intrusion from groundwater. In addition, groundwater closest to the ground surface also has the potential to impact surface water. Surface water and vapor intrusion evaluations are discussed in Sections 9.0 and 10.0, respectively. The primary focus of water table sampling was in the north portion of the residential area of Algona and near commercial buildings along 15th Street SW, south of The Outlet Collection. The most recent

[103] Water table wells are a subset of the shallow zone wells and are screened at or near the water table. Water table figures have some wells that overlap with the shallow zone figures; however, some wells were installed specifically to monitor the water table (e.g., AGW224, AGW229, etc.) and, therefore, are only presented on the water table figure.

water table TCE and VC concentrations as of December 2015 are presented on Figures 8-8 and 8-9, respectively.

Water table TCE concentrations throughout the Site were mostly non-detect. The highest water table TCE concentrations (2.3 µg/L, 3.7 µg/L, and 4.3 µg/L) were detected at the Facility near and downgradient of the Area 1 and western plume source areas. Generally, water table TCE concentrations are lower downgradient of the Facility. Variability in water table concentrations can be impacted by infiltrating precipitation[104] and the length of the well screens[105], which can cause mixing with deeper water that may have higher concentrations. Downgradient of the Facility, the highest water table TCE concentrations (1.7 µg/L and 1.8 µg/L) were detected in the commercial Algona area at the south end of Milwaukee Avenue North.

Water table VC concentrations throughout the Site were mostly non-detect, but where detected, concentrations ranged from 0.023 µg/L to 2.8 µg/L. The highest water table VC concentrations occurred near The Outlet Collection (2.8 µg/L ASB0258) and north of the Algona residential neighborhood near Boundary Boulevard and O Street SW (1.9 µg/L at AGW249-1). VC concentrations at the water table are variable, most likely because the presence and concentration of VC is determined by breakdown of TCE, which varies based on aquifer redox conditions and availability of organic carbon.

In general, VOC concentrations are lower at the water table in comparison to deeper portions of the shallow zone. TCE was rarely detected at a higher concentration near the water table. VC was more variable, but more often had lower concentrations near the water table.

8.2.1.2 Shallow Zone below the Water Table

At the Facility, TCE concentrations are relatively low in shallow zone groundwater at the western plume source zone (highest TCE concentration 2.3 µg/L at AGW165 and AGW037) and the Area 1 plume source (TCE non-detect at AGW002R, AGW106R, and AGW110R). TCE concentrations tend to be highest downgradient of the Facility near the intersection of O Street SW and 15th Street SW (7.6 µg/L at AGW207-2). The most recent TCE concentrations in the shallow zone as of December 2015 are presented on Figure 8-10.

Shallow zone VC concentration trends are similar to TCE concentration trends at the Facility. VC concentrations are higher in downgradient areas northwest of the Facility near the Chicago Avenue ditch and the northeast corner of the Algona residential neighborhood and beneath The Outlet Collection property in Auburn. In the shallow zone, VC is also detected over a larger spatial extent than TCE, which may indicate TCE has been completely consumed in some areas and only degradation products (e.g., VC) remain. The highest current VC concentrations occur just downgradient of the

[104] Infiltration of precipitation is influenced by the amount of impervious surfaces. The Facility is nearly 100 percent impervious surface, while areas such as residential Algona have significantly less impervious surface.
[105] Screen lengths vary between 2.5 and 15 ft for water table wells.

western plume source area (5.0 µg/L at AGW131) and in the commercial Algona area (7.7 µg/L at AGW275). The most recent VC concentrations in the shallow zone as of December 2015 are presented on Figure 8-11.

8.2.2 Intermediate Zone

The intermediate zone extends from a depth of 35 ft bgs to 75 ft bgs. The distribution of TCE and VC in the intermediate zone reflects the general pattern of contaminant migration from identified Facility source areas northwestward toward groundwater discharge points (surface water and stormwater features). TCE concentrations in the intermediate zone are highest both at and directly downgradient of the source areas. The highest current TCE concentration (12 µg/L) is detected at well AGW145 located directly downgradient (northwest) of Building 17-07. In the Area 1 plume, the highest TCE concentration (8.0 µg/L) is detected at well AGW126 north of the Prologis building and the Area 1 source area. The highest concentrations of VC are detected at AGW155 (3.3 µg/L) near Building 17-07 on Boeing property and at AGW251-3 (5.0 µg/L) in commercial Algona. The most recent TCE and VC concentrations in the intermediate zone as of December 2015 are presented on Figure 8-12 and 8-13, respectively.

The intermediate zone plume distribution differs from the shallow zone distribution in a few prominent ways. For example, TCE and VC in the commercial and residential areas of Algona are less widespread in the intermediate zone. This is attributed in part to groundwater capture by the Chicago Avenue ditch and related stormwater features that cause the intermediate zone groundwater contamination to move back upward with groundwater into the shallow zone. Additionally, the TCE intermediate zone plume extends appreciably further northward than the shallow zone plume. The larger intermediate zone TCE plume footprint may be a result of multiple factors. Possible factors for the spread of the intermediate zone TCE footprint include complex hydrogeology, strong upward vertical gradients to the northwest, changes in contaminant migration pathways as public supply wells are turned on and off (Figure 8-6), and changes in contaminant migration pathways as infiltration rates through the Site change due to commercial development (i.e., development of The Outlet Collection). Additional sources of TCE contamination east of the Facility (associated with detections of TCE at the SAWA and Auburn Mobile Park wells) and north of the Facility (i.e., All Services West) is an explanation for the crossgradient extent of the plume to the north. In addition, higher rates of reductive dechlorination appear to be occurring in the shallow zone associated with wetland or former wetland areas that likely have a relatively high soil fraction of organic carbon. Reductive dechlorination may be preferentially shrinking the extent of the TCE plume in the shallow zone. Preferential shallow zone reductive dechlorination would also explain the much larger VC shallow zone plume footprint relative to the intermediate zone.

8.2.3 Deep Zone

The deep zone extends from 75 ft bgs to the bottom of the upper aquifer (the contact with the Osceola Mudflow; typically between 80 and 110 ft bgs). The distribution of TCE in the deep zone extends north-northwestward from the Facility. The highest TCE concentrations occur near the northwest extent of the plume at wells AGW195 (8.4 µg/L), AGW197 (9.8 µg/L) and AGW199 (8.5 µg/L). The VC deep zone plume is limited in extent with the highest concentration occurring near the western plume source area at well AGW200-6 (1.1 µg/L). The most recent TCE and VC concentrations in the deep zone as of December 2015 are presented on Figures 8-14 and 8-15, respectively.

The deep zone TCE plume lacks distinct definition between the western plume and Area 1 plume. The deep zone TCE plume originates near the western plume source; however, the footprint appears to spread out in an east-west direction with distance from the Boeing property. This spreading is interpreted in part to be the result of flow of the Area 1 plume into the deep zone northwest of the Facility and possible comingling with a dilute source not associated with the Facility.

The TCE deep zone plume footprint is likely to reflect comingling of the western and Area 1 plumes. Based on groundwater flow contours (Section 4.2), contaminant migration from the western plume source area is expected to occur in a northwesterly direction, not northerly. Consequently, much of the TCE deep zone plume is in a crossgradient direction from the expected movement of the western plume. Transverse dispersion (i.e., plume spreading perpendicular to groundwater flow) is a relatively weak process and is unlikely to account for the width of the plume footprint in an east-west direction. The TCE deep zone plume footprint likely reflects comingling of the western and Area 1 plumes.

The easternmost portion of the plume footprint (e.g., at AGW230) represents a separate source not associated with the Facility that is comingling with plumes from the Facility. As shown on Figure 8-7, groundwater flow path lines for different groundwater pumping conditions show a generally northwest flow direction for groundwater originating from the Area 1 plume source. Therefore, groundwater contamination directly north or northeast of the Facility is most likely from a source not associated with the Facility.

8.2.4 Plume Molar Plots

Plume contaminant migration pathways can be difficult to evaluate from single-compound plume maps, in part, due to breakdown of TCE into multiple compounds such as cDCE and VC. To simplify the contaminant migration analysis, concentrations of each constituent (including minor isomers of DCE[106]) were converted into molar equivalents and summed to provide a total molar value for chloroethenes. The resulting molar concentration plume provides an additional method of evaluating the distribution of plume-related VOCs.

Conversion of groundwater mass concentrations (unit µg/L) to total molar equivalents or molar concentrations (unit nanomoles per liter [nmoles/L]) is accomplished by converting each constituent (i.e., TCE, DCE, and VC) concentration separately and then summing the values. The resulting sum

[106] DCE has three isomers: cDCE; 1,1-DCE; and tDCE. CDCE is the predominant isomer; 1,1-DCE and tDCE, if detected, are typically at much lower concentrations than the cDCE isomer (AFCEE 2007).

provides an assessment of the total amount of mass (in nanomoles) at each well location if no biodegradation had occurred. Calculations for the total molar value for chloroethenes are presented in Table 8-2. Molar equivalent figures for total chloroethenes are presented on Figures 8-16 (shallow zone), 8-17 (intermediate zone), and 8-18 (deep zone).

The molar plots demonstrate the effect of western plume vertical movement and surface water capture. Near the western plume source area, a limited area of high molar concentrations occur near the north end of Building 17-07 in all three groundwater zones consistent with Building 17-07 area being the original source location. However, in the shallow zone, molar concentrations decline to zero along Perimeter Road, directly downgradient of the source area (AGW029 and AGW134) before increasing again further downgradient near the Chicago Avenue ditch. These spatial molar concentration trends are consistent with advective contaminant migration downward into the intermediate zone near Perimeter Road (where molar concentrations are high) and then back upward into the shallow zone near the Chicago Avenue ditch in response to groundwater capture by the ditch and associated stormwater drainage features.

The molar plots also demonstrate a similar effect for the Area 1 plume where the plume in the shallow and intermediate zones on the Facility appears to move downward into the deep zone before flowing back into the intermediate and then shallow zone near surface water capture areas. Higher molar equivalent concentrations are present in two areas downgradient of the Area 1 plume at the southwest and western portions of The Outlet Collection (shallow zone wells AGW236 [78 nmoles], AGW207-2 [103 nmoles], AGW208-2 [92 nmoles] and AGW232 [77nmoles]) and north of SR 18 (shallow zone well AGW239 [155 nmoles]). The two distinct areas of higher molar concentrations may be the result of influence from multiple groundwater capture areas (stormwater ponds [Auburn 400 and The Outlet Collection] and Mill Creek). AGW239 is also located directly west of the All Services West property. VOC releases from this property could potentially be contributing to the higher molar concentrations at this well.

8.3 Plume Stability and Mass

Plume stability reflects a constant or decreasing plume mass and spatial extent. Plume stability occurs when the rate of dissolution or back diffusion of mass is equal to or less than the attenuation of the dissolved mass in the plume by sorption, degradation, dispersion (at the plume leading edge), or discharge. Plume stability was evaluated by determining concentration trends at individual wells and by analyzing the center of mass of the plumes between 2011 and 2015. The analysis was performed using Monitoring and Remediation Optimization System (MAROS) software. MAROS was developed for the Air Force Center for Environmental Excellence (AFCEE) by GSI Environmental, Inc. (GSI) and the University of Houston. Individual well time series plots for TCE and VC are presented in Appendix N for visually assessing concentration trends. The MAROS statistical analysis of individual well concentration trends and plume mass is presented in Appendix P as a quantitative measure of concentration trends and plume stability. This MAROS analysis is summarized below.

8.3.1 Concentration Trends at Individual Wells

MAROS analyzes for trends (i.e., increasing, decreasing, stable, etc.) in groundwater monitoring data using the Mann-Kendall statistical test method. The Mann-Kendall method was considered the most appropriate for the data set because it is a nonparametric statistical analysis. Concentration trends were evaluated at 250 individual well locations across the Site using the Mann-Kendall statistic for all data collected from each well location through June 2015[107]. The Mann-Kendall analysis has eight trend classifications (Appendix P). These classifications were simplified for this report to increasing, stable, decreasing, non-detect, no trend, or insufficient data. The insufficient data classification was assigned when there were less than four sample results available at a well. However, if all of the samples collected were non-detect, the well was classified as non-detect, rather than insufficient data. The no trend classification was assigned when there was low statistical confidence in the trend analysis (i.e., a high degree of scatter in the data). If there was a lower degree of scatter in the results with no clear increasing or decreasing trend, a stable classification was assigned. A detailed discussion of trend analysis classifications, methods, and results is presented in Appendix P. Well trends for TCE and VC in each zone (shallow, intermediate, and deep) are presented in Figures 8-19 through 8-24[108]. A summary of the trend analysis in each zone is shown in Table 8-3.

Based on the Mann-Kendall statistical analysis, the majority of wells at the Site have TCE and VC concentration trends classified as non-detect, stable, or decreasing over the analysis period. Of the 250 wells analyzed, a non-detect, stable, or decreasing trend was identified at 210 wells (84 percent) for TCE and 198 wells (79.2 percent) for VC. The number of wells meeting these classifications for both TCE and VC are:

- Non-detect: 78 wells for TCE and 82 wells for VC
- Stable: 30 wells for TCE and 29 wells for VC
- Decreasing: 102 wells for TCE and 87 wells for VC.

A number of wells (24 for TCE and 40 for VC) had insufficient data or were classified as having no trend due to low statistical confidence. Increasing trends were identified at 16 wells (6.4 percent) for TCE and 12 wells (4.8 percent) for VC. Increasing trends for VC are expected at some wells as reductive dechlorination occurs and TCE is converted to VC. For wells with increasing TCE trends, time series data was examined more closely to determine if more recent data was consistent with the overall statistical trend.

Evaluation of the time series plots (Appendix N) for the 16 wells identified with increasing TCE trends indicates that more recent trends for these wells are stable or decreasing when observing the last four sampling events[109]. For wells with long analysis periods, overall statistical trends may be heavily influenced by historical data and may not be representative of recent trends. The last four sampling

[107] At the time of the original analysis only data through June 2015 was available.
[108] Water table well trends for TCE and VC are presented in Appendix P.
[109] Data through December 2015 were used in the additional analysis.

events were used to understand more recent trends for the wells. Additional Mann-Kendall statistical analysis was completed on the 16 wells identified with increasing TCE trends to characterize more recent trends (last four sampling events). The additional analysis indicated that over the last four sampling events, none of the 16 wells showed increasing trends and all were identified as decreasing (3), stable (12), or no trend (1).

8.3.2 Mass Trend Results

Plume stability of the dissolved contaminant mass was evaluated in MAROS using spatial moment analysis. The change in total plume mass over time and the change in the center of mass over time were used to evaluate overall plume stability. Results of the analysis over the period from 2011 to 2015 indicate that the total dissolved mass of TCE and VC, as well as the location of the centers of mass, are stable. The total plume mass and center of mass statistics are presented in Table 8-4. A detailed description of the analysis is presented in Appendix P.

MAROS was used to estimate the dissolved mass of TCE and VC for each year between 2011 and 2015 in each groundwater zone and then to conduct a statistical analysis of the mass trend (increasing, decreasing, stable) over time. The trend in total dissolved mass of TCE and VC between 2011 and 2015 was classified as being stable for all zones with the exception of intermediate zone TCE, which had a decreasing trend in total mass. Stable or decreasing trends in dissolved mass support the conclusion that residual non-aqueous phase mass in source areas has been depleted and attenuation of the dissolved mass is occurring at the same or greater rate as residual desorption and back diffusion from lower permeability zones. The stable or decreasing trends in dissolved mass also supports the conclusion that concentrations are expected to decline over time and substantiates the finding that individual well trends are generally stable or decreasing.

The mass estimates were also used evaluate the total dissolved mass remaining in the aquifer. To account for expected measurement variability, the average mass over the last 5 years (2011 through 2015) was calculated (Table 8-5). The total dissolved mass of TCE is approximately 40 kilograms (kg; 88.2 pounds) and the dissolved mass of VC is approximately 3.5 kg (equal to 16.2 pounds equivalent mass TCE). Most of the dissolved mass of TCE occurs in the intermediate and deep zones (22 and 14 kg, respectively), whereas the majority of VC dissolved mass occurs in the shallow and intermediate zones (1.8 and 1.5 kg, respectively). The total dissolved mass of the plume for TCE and VC (approximately 48 kg equivalents as TCE) represents approximately 8.7 gallons of TCE[110].

The dissolved mass estimates can be used to estimate the fraction of mass sorbed to the aquifer matrix.

[110] Calculations to convert kg to gallons were made using the TCE specific gravity equal to 1.46 g/cm^3.

$$M_S = \frac{K_d * M * M_L}{V} \text{ (Montgomery 2000)}$$

Where:

M_s = mass of sorbed TCE (kg)

M_L = mass of TCE in solution; 40.6 Kg (Table 8-5)

M = Mass of porous medium (kg)

V = Volume of solution (L)

K_d = Distribution Coefficient for TCE (mL/g), from Section 4.4.1); 0.1425 mL/g

This equation can be converted to: $M_S = K_d * \frac{P_b}{\Theta} * M_L$

Where:

$M/V = P_b/\Theta$

P_b = Bulk density; 1.75 g/cm^3

Θ = porosity; 0.3

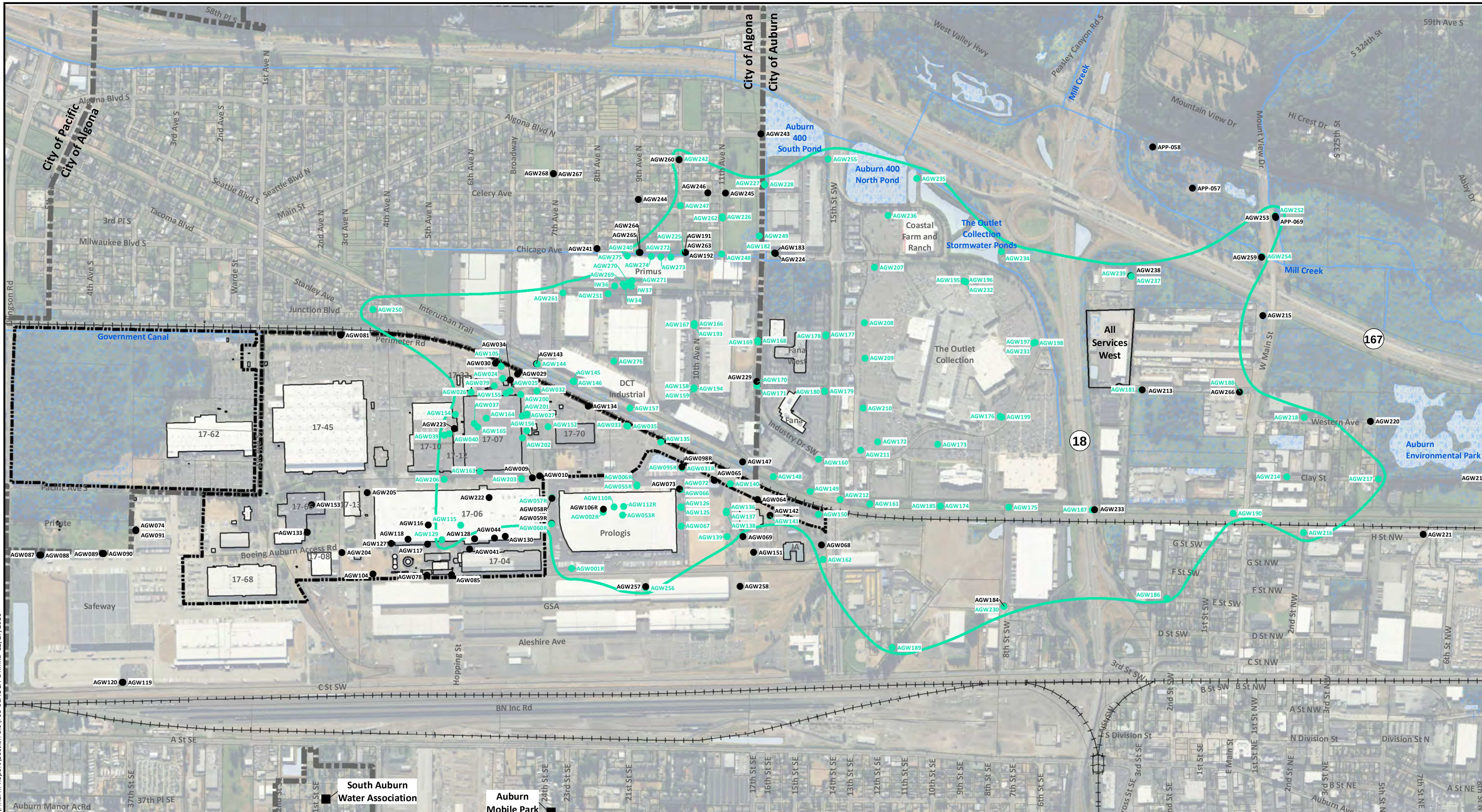
Based on the equation above, the mass of TCE sorbed to the aquifer matrix is 33.7 kg. This equation assumes that the partition coefficient is the same everywhere in the aquifer and that equilibrium sorption conditions are present. Using these simplifying assumptions, an estimate of the total mass of TCE in the aquifer (both sorbed and dissolved) is approximately 74.6 kg. This estimate of total mass of TCE represents approximately 13.5 gallons.

MAROS was also used to provide an estimate of the location of the center of mass of TCE and VC in each groundwater zone. The locations of the center of mass for both constituents for all three groundwater zones are presented on Figure 8-25 for TCE and Figure 8-26 for VC. Over the period of analysis, estimated locations of TCE and VC center of mass were generally stationary for each groundwater zone indicating the distribution of dissolved mass within the plumes appears to be stable (i.e., the center of mass does not appear to be moving downgradient). The relative stability of the VOC mass indicates that the plume is not moving downgradient due to advection. The apparent plume stability may be explained by ongoing back diffusion of TCE from lower permeability zones at a rate similar to the rate of attenuation of the plume by reductive dechlorination (and other mechanisms).

8.3.3 Summary

The quantitative MAROS individual well analysis (using the Mann-Kendall statistic) indicates that the majority of wells are non-detect or have a decreasing or stable concentration trend for TCE and VC. For wells that were initially classified as increasing based on the entire data set, analysis of a more recent data set showed that recent trends at these wells are stable or decreasing.

The mass trend analysis confirmed that total dissolved mass of both TCE and VC is stable or decreasing in all three groundwater zones. The center of mass analysis confirmed that the location of the center of plume mass is stable in all three groundwater zones. There is no evidence that the plume is expanding based on the mass trend analysis. This characterization is consistent with the age of the plumes and attributes of the contaminant distribution and supports the conclusion that concentrations within the plume are expected to decrease over time. Degradation rates will be calculated as part of the work in the FS.



Notes

1. Most recent monitoring well data as of December 2015.
2. SL = Screening Level
3. SL Exceedance = TCE and/or VC exceed their respective SL (TCE = 0.54 µg/L, VC = 0.029 µg/L).
4. Exceedances shown at multilevel wells reflect an exceedance in any channel.
5. The All Services West property is a possible contributing source of VOCs.
6. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- ● No Exceedance
- ● SL Exceedance
- ■ Group A Wells
- SL Exceedance
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000

Scale in Feet

N

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

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Boeing Auburn Remedial Investigation Auburn, Washington	**Extent of AOC A-14**	Figure 8-1

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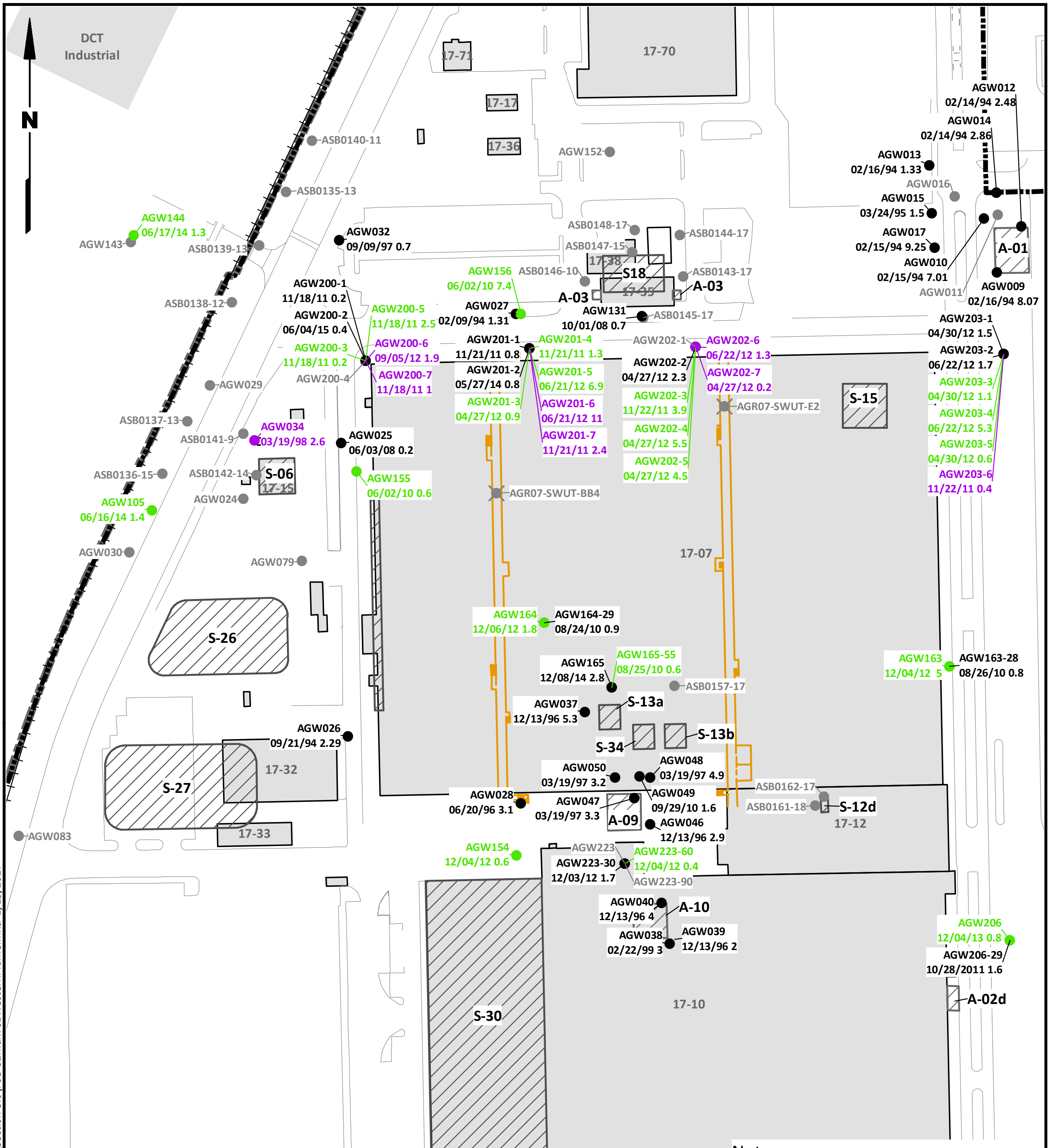

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Legend

- ● Shallow Monitoring Well or Soil Boring
- ● Intermediate Monitoring Well or Soil Boring
- ● Deep Monitoring Well or Soil Boring
- ● Monitoring Location where TCE was Never Detected
- ✕ Utility Tunnel Samples where TCE was Never Detected
- Boeing Property
- City Limits
- Solid Waste Management Unit (SWMU) or Area of Concern (AOC)
- Utility Tunnel

0 200 400

Scale in Feet

Base Map Source: Geometrix 2003

Notes

1. Data presented are the maximum since 1995. For some wells data from 1994 are included where relevant and useful.
2. All concentration shown in µg/L.
3. Monitoring wells or soil borings not shown were never analyzed for VOCs.
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

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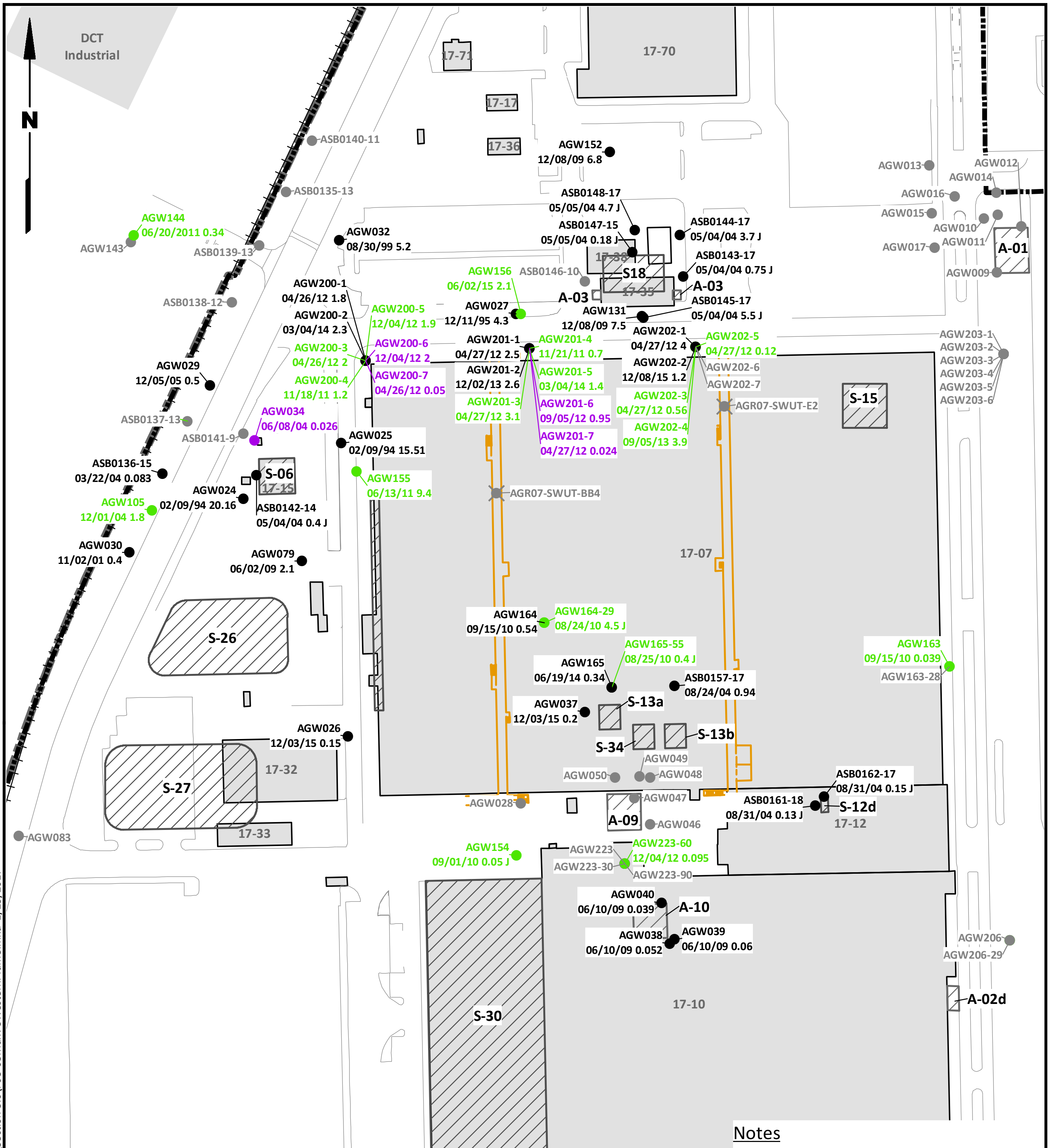
Maximum TCE Concentrations: Western Plume Source Area

Figure 8-2



Legend

- Shallow Monitoring Well or Soil Boring
- Intermediate Monitoring Well or Soil Boring
- Deep Monitoring Well or Soil Boring
- Monitoring Location where VC was Never Detected
- Utility Tunnel Samples where VC was Never Detected
- Boeing Property
- City Limits
- Solid Waste Management Unit (SWMU) or Area of Concern (AOC)
- Utility Tunnel

0 200 400

Scale in Feet

Base Map Source: Geometrix 2003

Notes

1. Data presented are the maximum since 1995. For some wells data from 1994 are included where relevant and useful.
2. All concentration shown in µg/L.
3. Monitoring wells or soil borings not shown were never analyzed for VOCs.
4. J = Estimated concentration.
5. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

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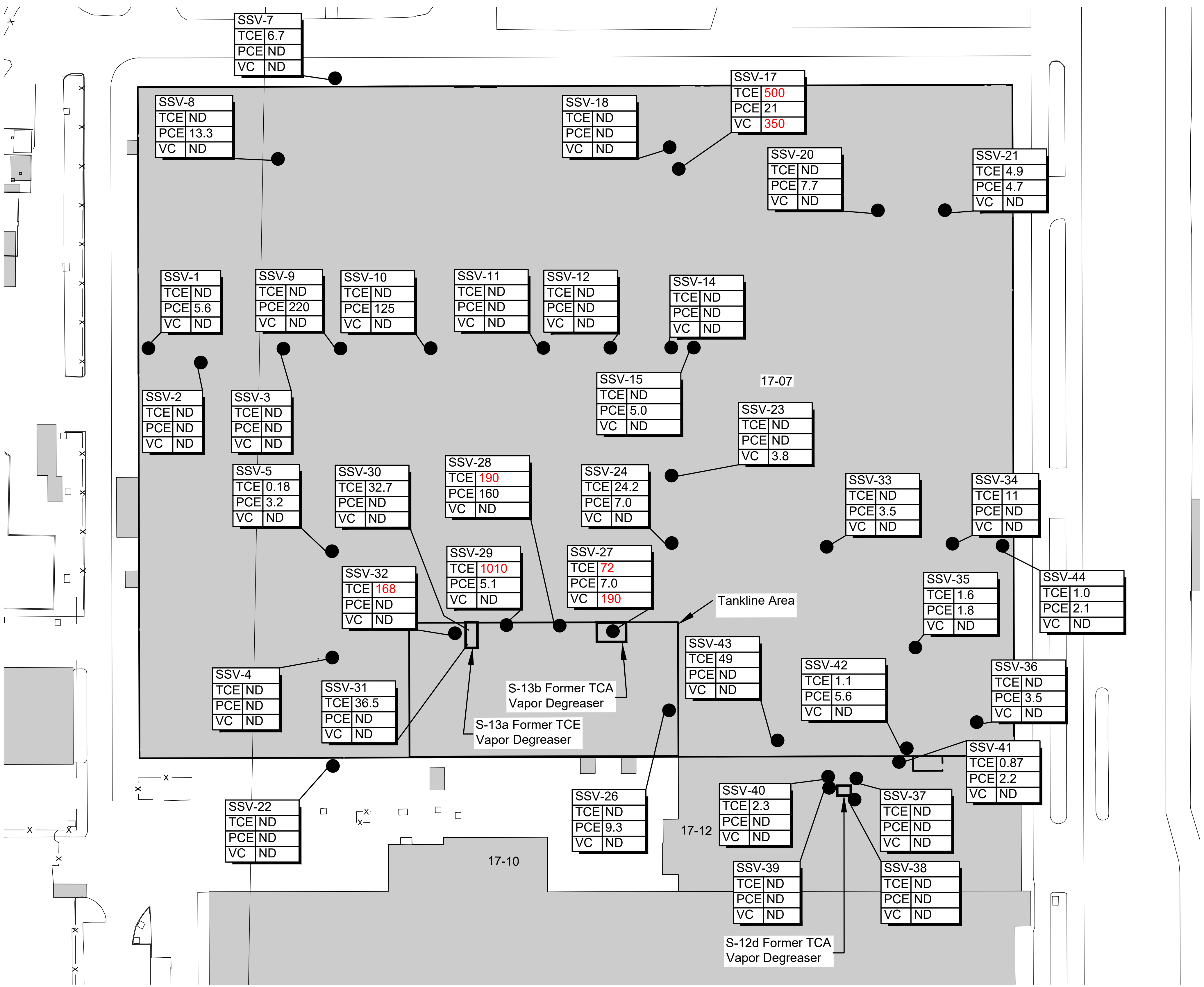
Maximum VC Concentrations: Western Plume Source Area

Figure 8-3



Legend

- ● Sub-slab Gas Sampling Location
- SSV-1 — Sample Designation
- TCE ND — TCE Result shown in µg/m³
- PCE 5.6 — PCE Result shown in µg/m³
- VC ND — VC Result shown in µg/m³

Notes

1. Samples Collected on April 22, 2011, October 6, 2011 or August 16, 2011
2. Detected concentrations of Trichloroethene (TCE),Tetrachloroethene (PCE), and Vinyl Chloride (VC) results are shown in micrograms per cubic meter (µg/m³)
3. Results shown in Red are above MTCA Method C screening levels (SLs) for industrial soil gas. The SLs for TCE, PCE, and VC are 67 µg/m³, 1,300 µg/m³, and 95 µg/m³, respectively.
4. Locations SSV-6, SSV-13, SSV-16, SSV-19 and SSV-25 were not sampled due to wetted slab conditions in the underground tunnels.
5. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Source: Boeing 2011; © Google Earth Pro 2016

Boeing\Proposed Well Locations | G:\Projects\025\164\130\111\Final RI Report\Section 8.0\F08-4 Bldg17-07 SubSlapVaporSampling.dwg (A) "Figure 8-4" 2/8/2017

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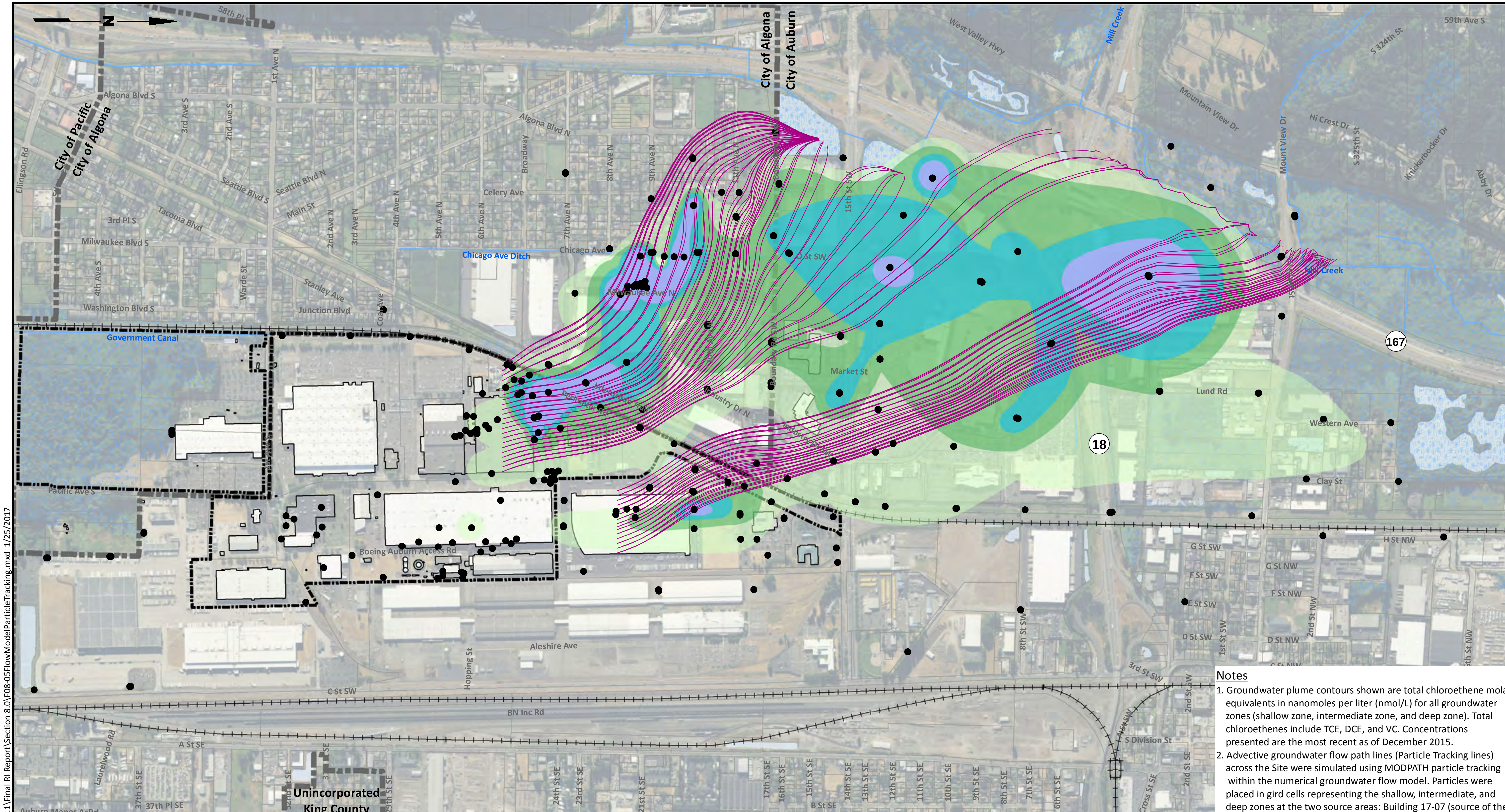
Auburn, Washington

Building 17-07 Sub-Slab Soil Gas Sampling Locations

Figure 8-4



Notes

1. Groundwater plume contours shown are total chloroethene molar equivalents in nanomoles per liter (nmol/L) for all groundwater zones (shallow zone, intermediate zone, and deep zone). Total chloroethenes include TCE, DCE, and VC. Concentrations presented are the most recent as of December 2015.
2. Advective groundwater flow path lines (Particle Tracking lines) across the Site were simulated using MODPATH particle tracking within the numerical groundwater flow model. Particles were placed in gird cells representing the shallow, intermediate, and deep zones at the two source areas: Building 17-07 (source of the Western Plume) and Former Building 17-05; currently Prologis Building (source of the Area 1 Plume). The lines represent the simulated flow path of these particles.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

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

Legend

- Monitoring Well Location
- Particle Tracking Lines
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways
- Nanomole Contour ≥ 100 nmol/L
- Nanomole Contour ≥ 75 nmol/L
- Nanomole Contour ≥ 50 nmol/L
- Nanomole Contour ≥ 25 nmol/L

0 1,000 2,000

Scale in Feet

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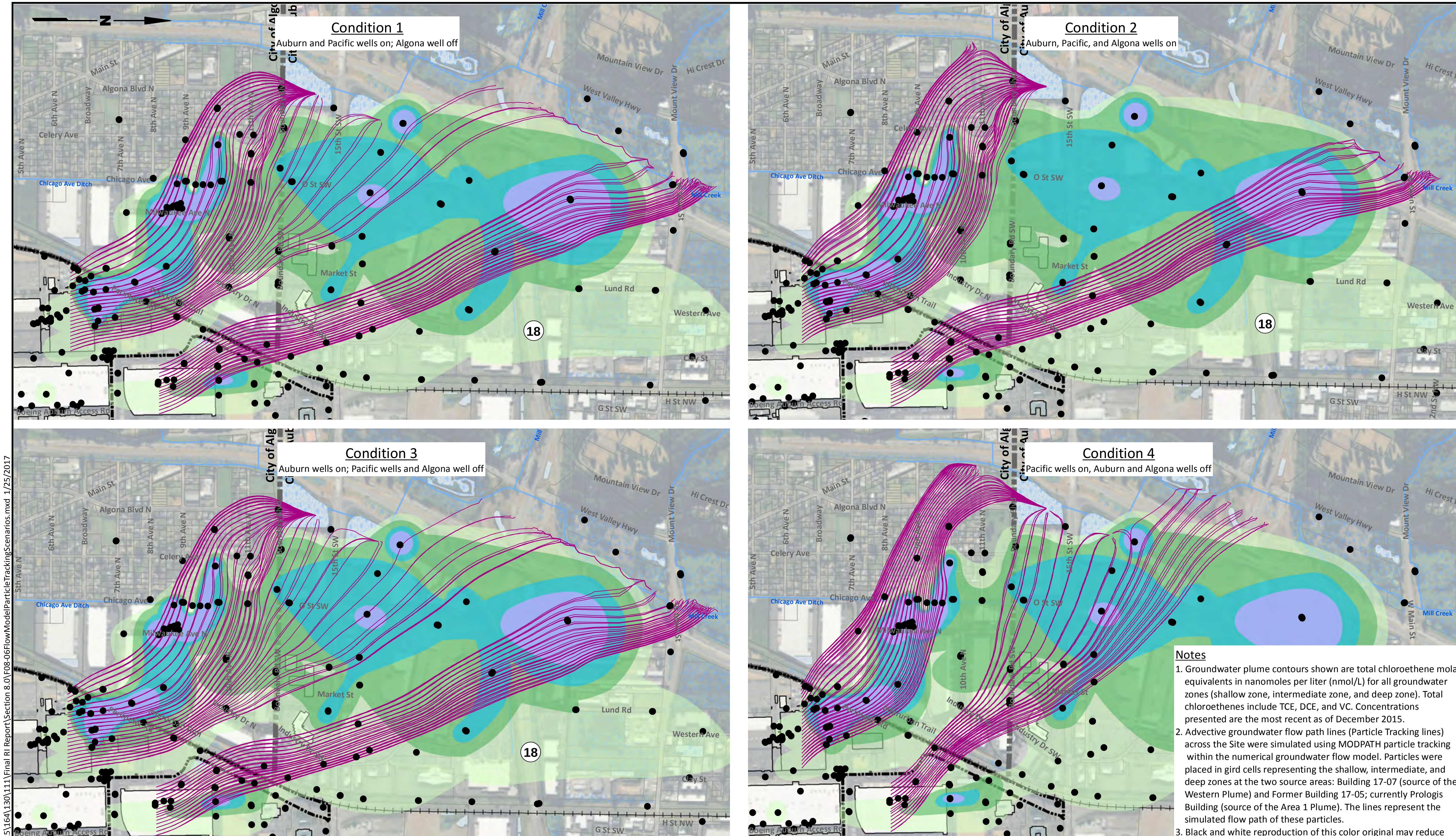
Auburn, Washington

Numerical Groundwater Flow Model Particle Tracking

Figure 8-5



Notes
1. Groundwater plume contours shown are total chloroethene molar equivalents in nanomoles per liter (nmol/L) for all groundwater zones (shallow zone, intermediate zone, and deep zone). Total chloroethenes include TCE, DCE, and VC. Concentrations presented are the most recent as of December 2015.
2. Advective groundwater flow path lines (Particle Tracking lines) across the Site were simulated using MODPATH particle tracking within the numerical groundwater flow model. Particles were placed in gird cells representing the shallow, intermediate, and deep zones at the two source areas: Building 17-07 (source of the Western Plume) and Former Building 17-05; currently Prologis Building (source of the Area 1 Plume). The lines represent the simulated flow path of these particles.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

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

Legend
- Monitoring Well Location
- Particle Tracking Lines
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways
- Nanomole Contour ≥ 100 nmol/L
- Nanomole Contour ≥ 75 nmol/L
- Nanomole Contour ≥ 50 nmol/L
- Nanomole Contour ≥ 25 nmol/L

0 1,250 2,500
Scale in Feet

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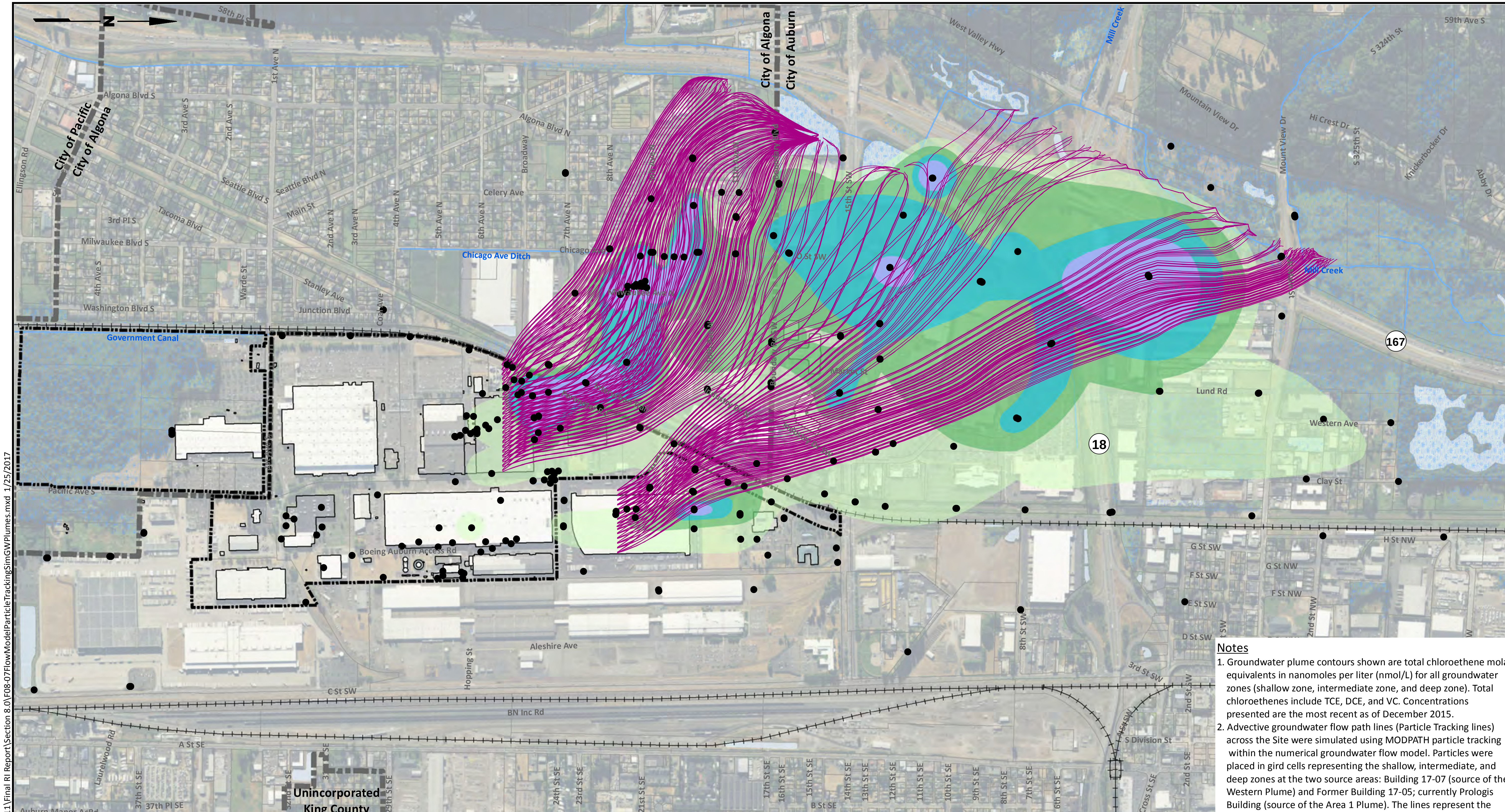
Numerical Groundwater Flow Model Particle Tracking - Variable Pumping Conditions

Figure 8-6



Notes

1. Groundwater plume contours shown are total chloroethene molar equivalents in nanomoles per liter (nmol/L) for all groundwater zones (shallow zone, intermediate zone, and deep zone). Total chloroethenes include TCE, DCE, and VC. Concentrations presented are the most recent as of December 2015.
2. Advective groundwater flow path lines (Particle Tracking lines) across the Site were simulated using MODPATH particle tracking within the numerical groundwater flow model. Particles were placed in gird cells representing the shallow, intermediate, and deep zones at the two source areas: Building 17-07 (source of the Western Plume) and Former Building 17-05; currently Prologis Building (source of the Area 1 Plume). The lines represent the simulated flow path of these particles. Extent of particle tracking lines shown are for all pumping well conditions presented in Figure 8-6.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

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

Legend

- Monitoring Well Location
- Particle Tracking Lines
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways
- Nanomole Contour ≥ 100 nmol/L
- Nanomole Contour ≥ 75 nmol/L
- Nanomole Contour ≥ 50 nmol/L
- Nanomole Contour ≥ 25 nmol/L

0 1,000 2,000

Scale in Feet

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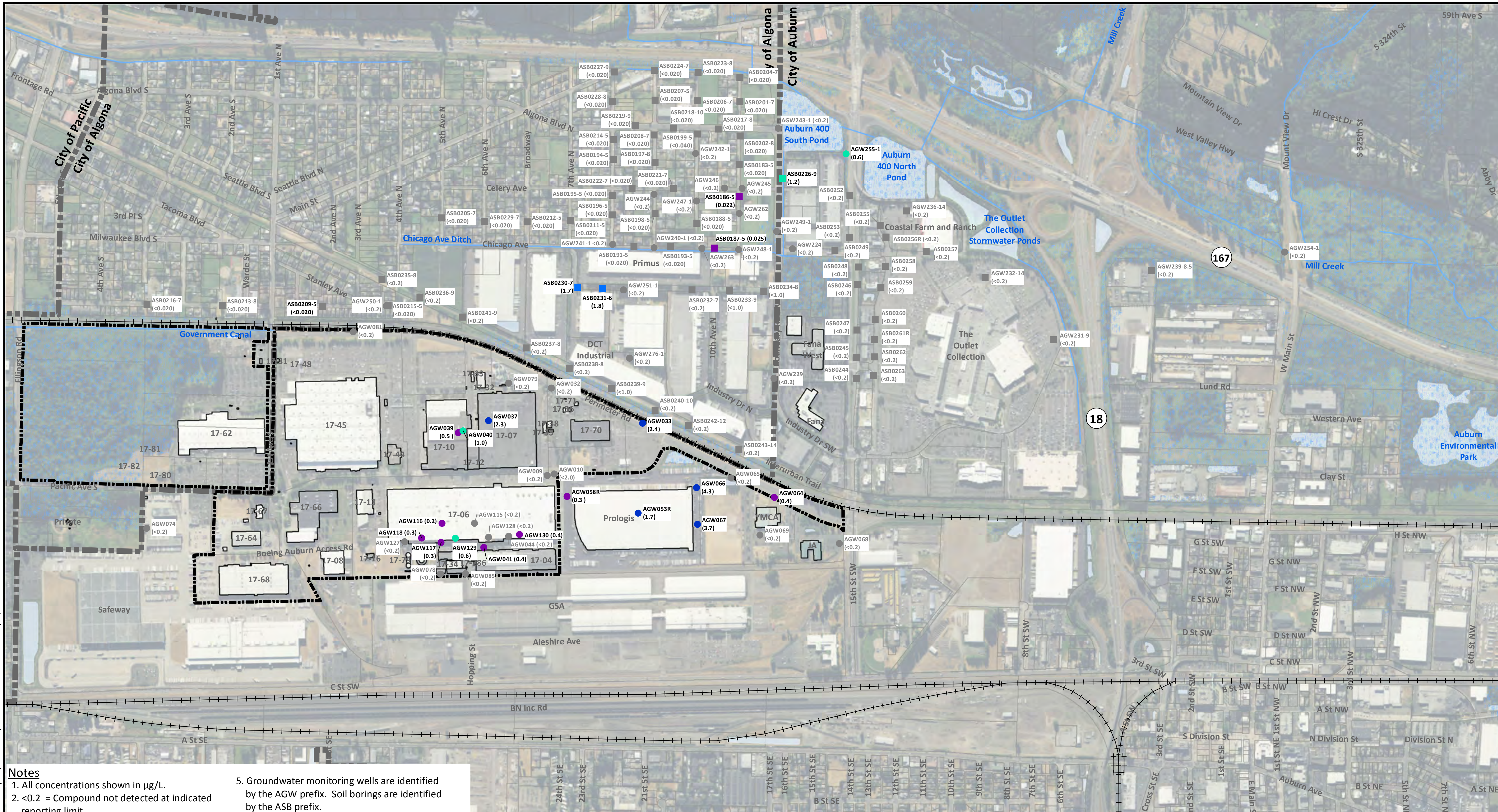
Boeing Auburn Remedial Investigation Auburn, Washington	**Numerical Groundwater Flow Model Particle Tracking - Simulated Extent of Groundwater Plumes**	Figure 8-7



Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Water table wells are screened across the water table. Borehole water table samples are collected from screens across the water table.
4. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
5. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
6. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
7. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW240-1). Channel 1 is screened across the water table.
8. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- ● Water Table Well Location
- ■ Water Table Borehole Grab Sample Location
- TCE Detection (>5 µg/L)
- TCE Detection (>1.6-5 µg/L)
- TCE Detection (0.54-1.6 µg/L)
- TCE Detection (<0.54 µg/L)
- Non-Detect
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000
Scale in Feet

N

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

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Auburn, Washington

Water Table TCE Concentrations Most Recent – December 2015

Figure 8-8

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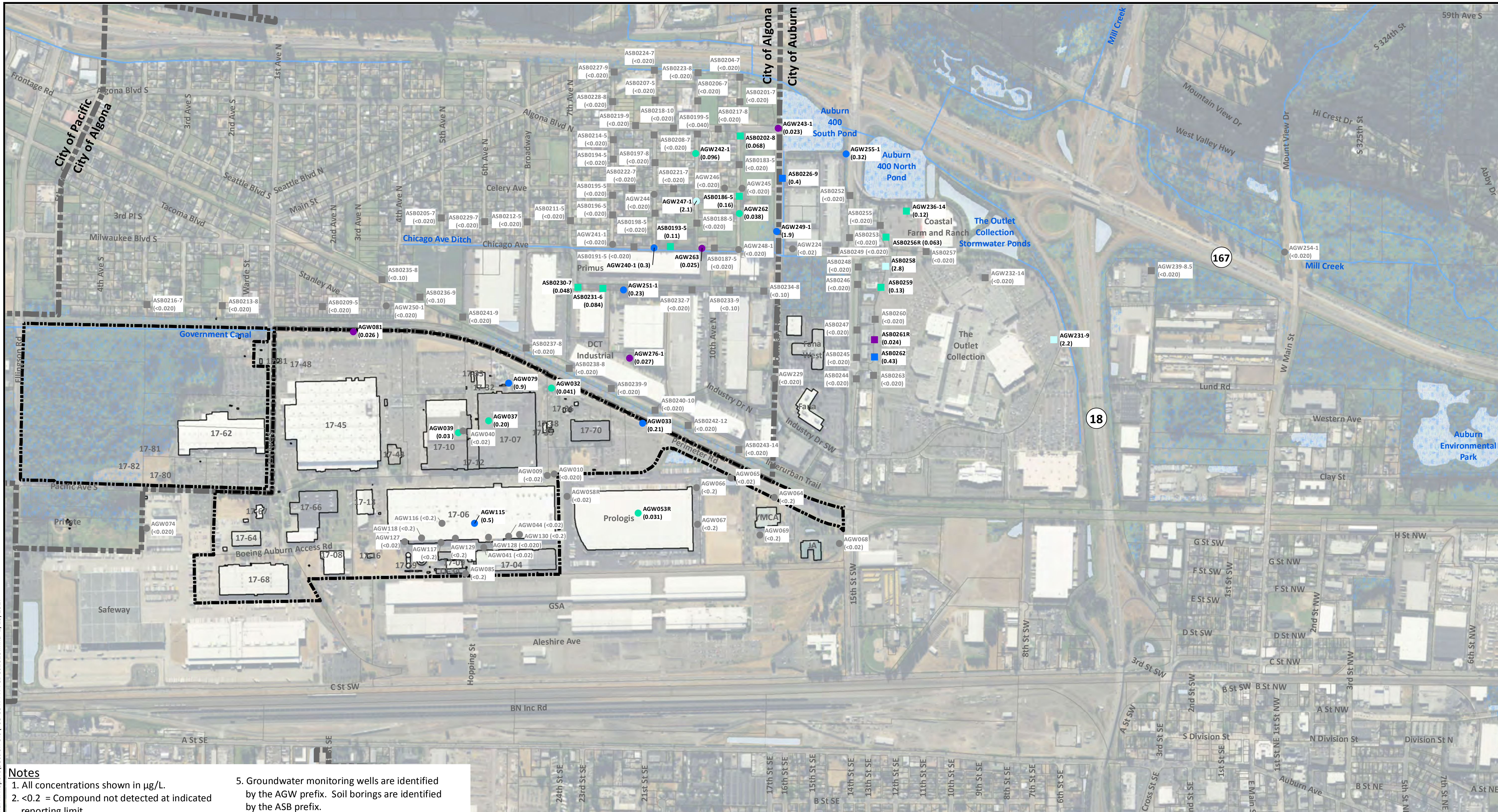

Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Water table wells are screened across the water table. Borehole water table samples are collected from screens across the water table.
4. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
5. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
6. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
7. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW240-1). Channel 1 is screened across the water table.
8. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Water Table Well Location
- Water Table Borehole Grab Sample Location
- Vinyl Chloride Detection (>2.0 µg/L)
- Vinyl Chloride Detection (>0.2-2.0 µg/L)
- Vinyl Chloride Detection (>0.029-0.2 µg/L)
- Vinyl Chloride Detection (<0.029 µg/L)
- Non-Detect
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000

Scale in Feet

N

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

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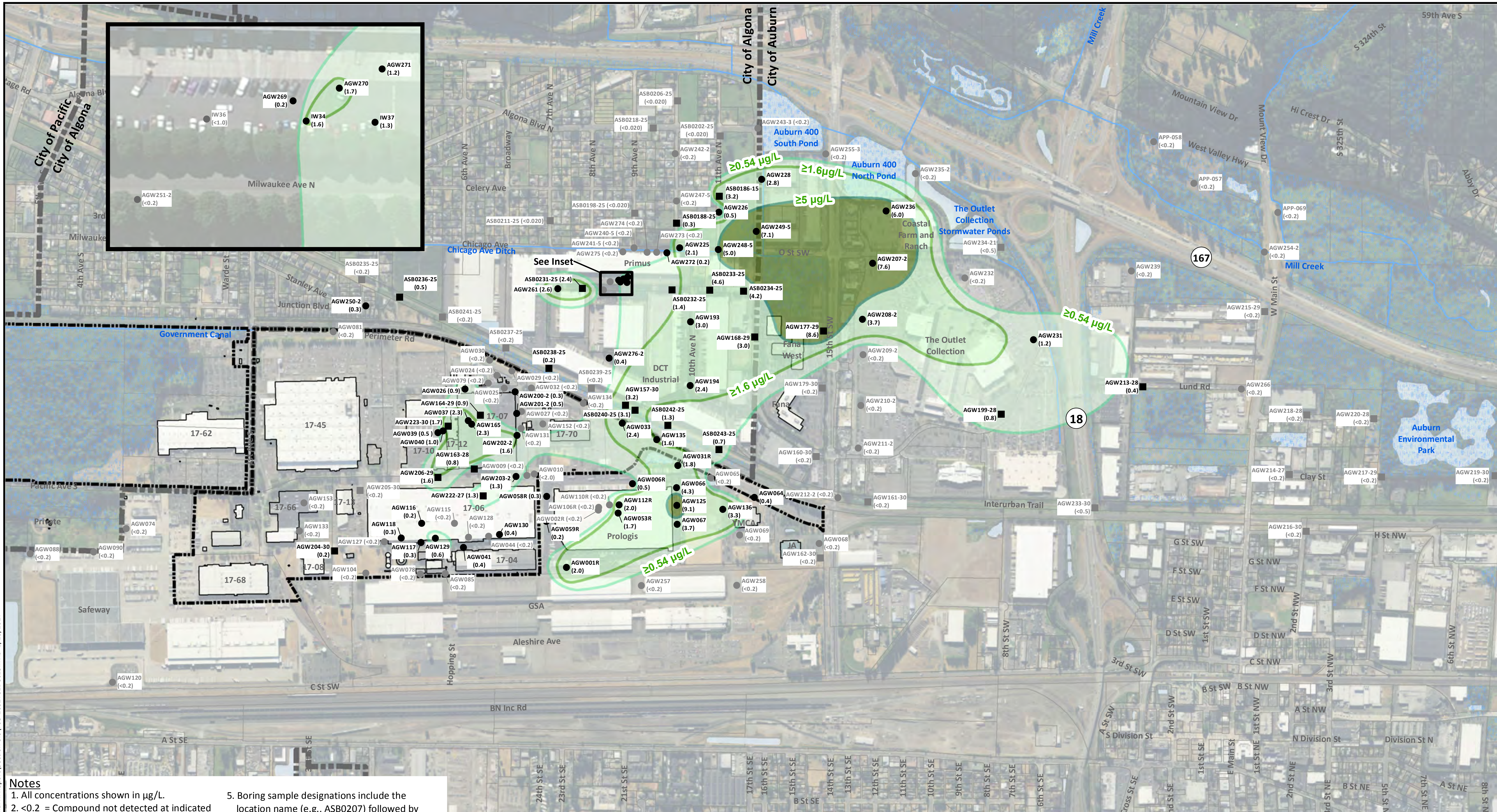
Boeing Auburn
Remedial Investigation
Auburn, Washington

Water Table
Vinyl Chloride Concentrations
Most Recent – December 2015

Figure
8-9



Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
4. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
5. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
7. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Borehole Grab Sample Location
- TCE Contour (≥5.0 µg/L)
- TCE Contour (≥1.6 µg/L)
- TCE Contour (≥0.54 µg/L)
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000

Scale in Feet

N

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

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Shallow Zone TCE Concentrations Most Recent – December 2015

Figure 8-10

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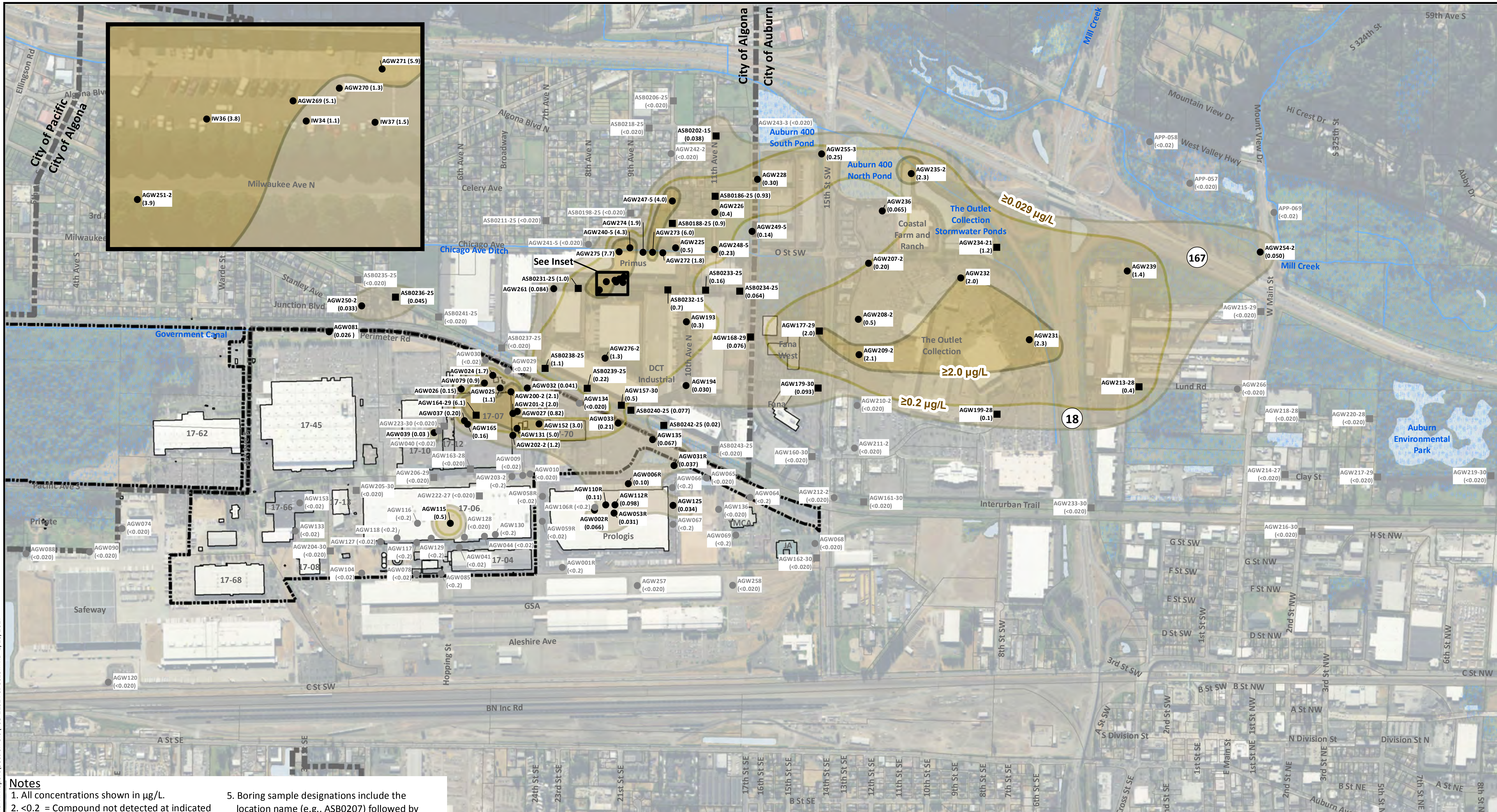

Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
4. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
5. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
7. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Borehole Grab Sample Location
- Vinyl Chloride Contour (≥2.0 µg/L)
- Vinyl Chloride Contour (≥0.2 µg/L)
- Vinyl Chloride Contour (≥0.029 µg/L)
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000

Scale in Feet

N

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

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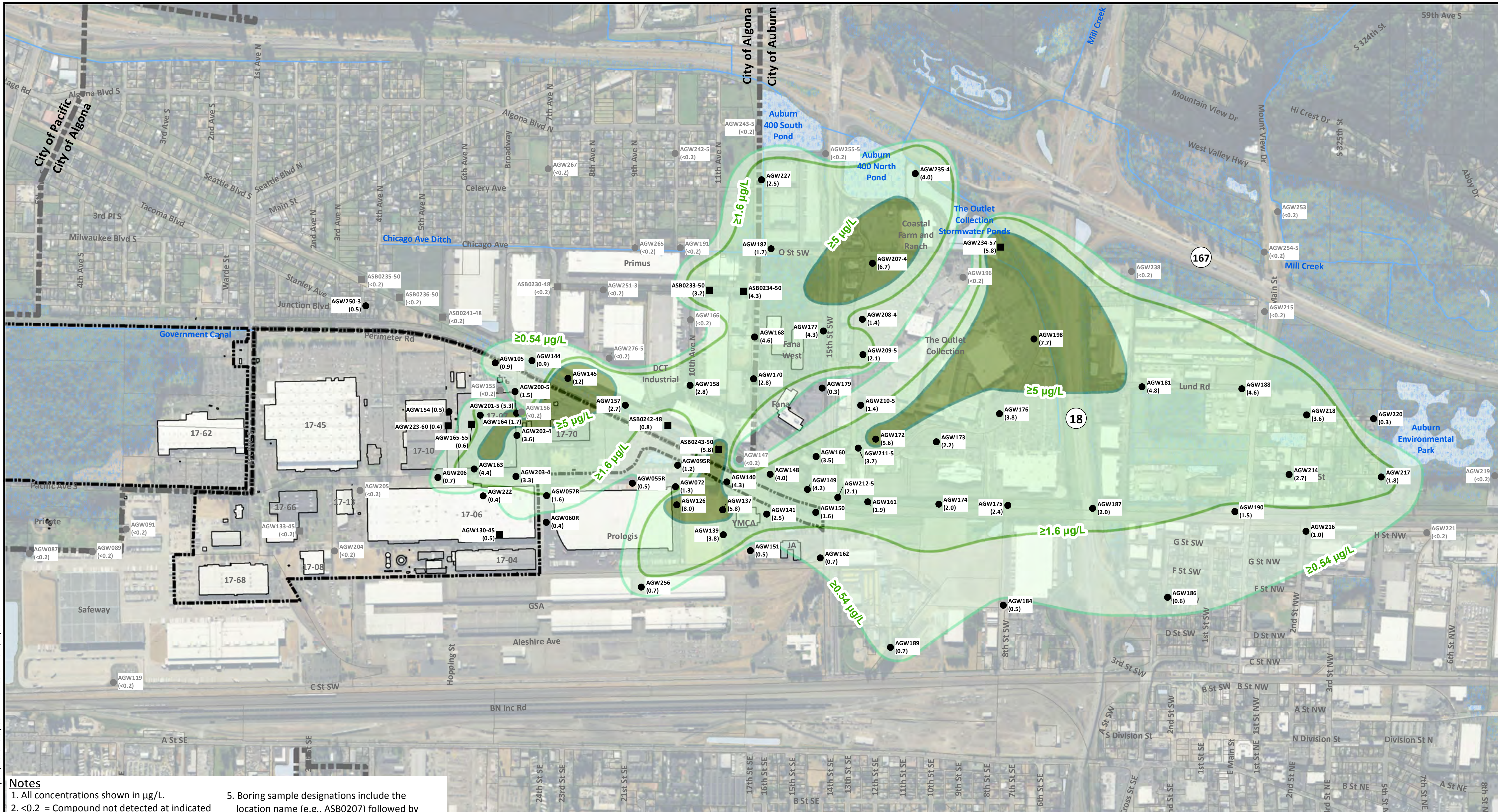
Auburn, Washington

Shallow Zone
Vinyl Chloride Concentrations
Most Recent – December 2015

Figure
8-11



Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
4. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
5. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
7. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Borehole Grab Sample Location
- TCE Contour (≥5.0 µg/L)
- TCE Contour (≥1.6 µg/L)
- TCE Contour (≥0.54 µg/L)
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000

Scale in Feet

N

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

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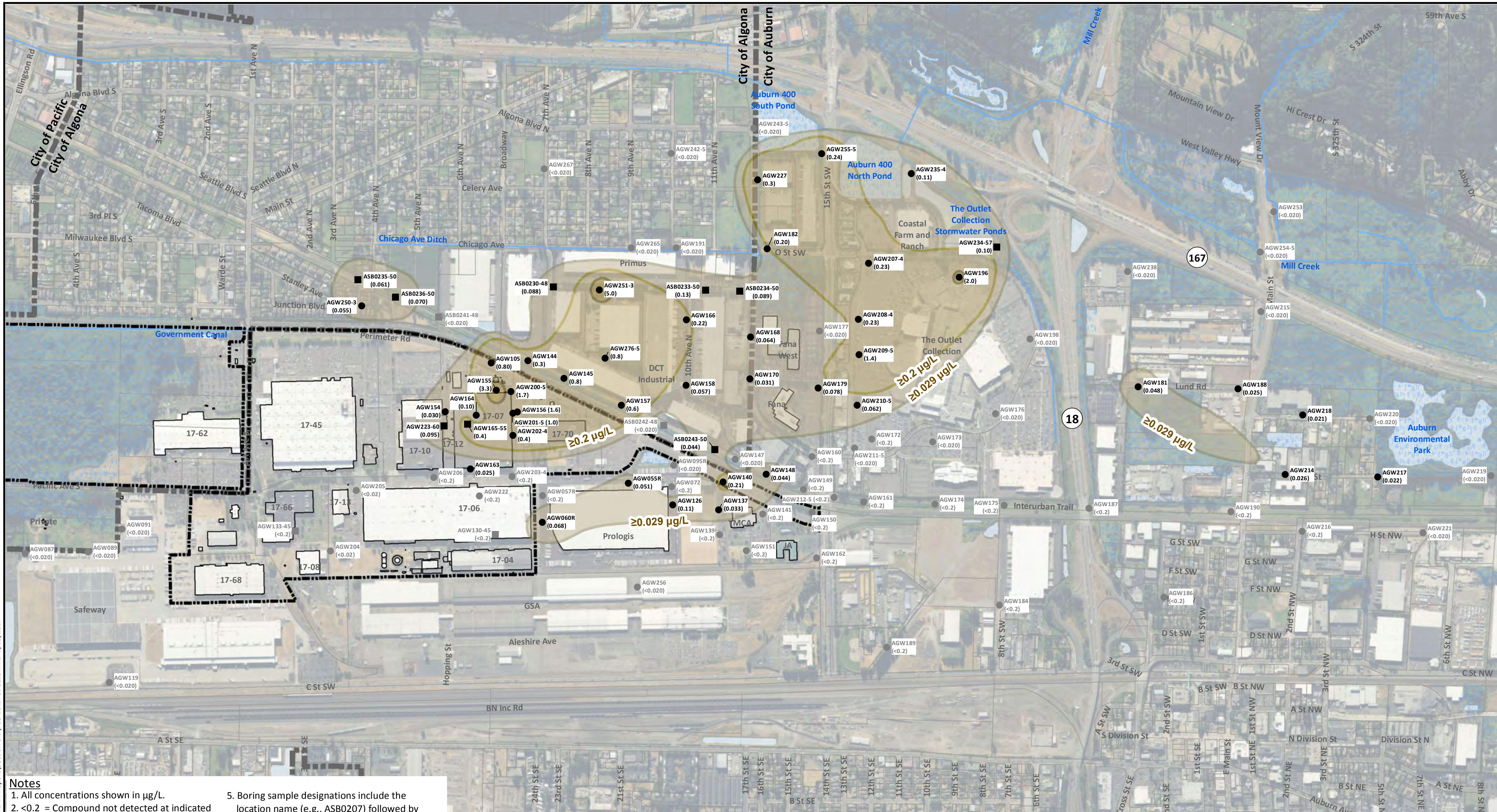
Boeing Auburn Remedial Investigation Auburn, Washington	**Intermediate Zone TCE Concentrations Most Recent – December 2015**	Figure 8-12



Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
4. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
5. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
7. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Borehole Grab Sample Location
- Vinyl Chloride Contour (≥2.0 µg/L)
- Vinyl Chloride Contour (≥0.2 µg/L)
- Vinyl Chloride Contour (≥0.029 µg/L)
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000

Scale in Feet

N

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

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Boeing Auburn Remedial Investigation Auburn, Washington	**Intermediate Zone Vinyl Chloride Concentrations Most Recent – December 2015**	Figure 8-13

Notes
1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
4. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
5. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
7. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend
- Monitoring Well Location
- Borehole Grab Sample Location
- TCE Contour (≥5.0 µg/L)
- TCE Contour (≥1.6 µg/L)
- TCE Contour (≥0.54 µg/L)
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000
Scale in Feet

N

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

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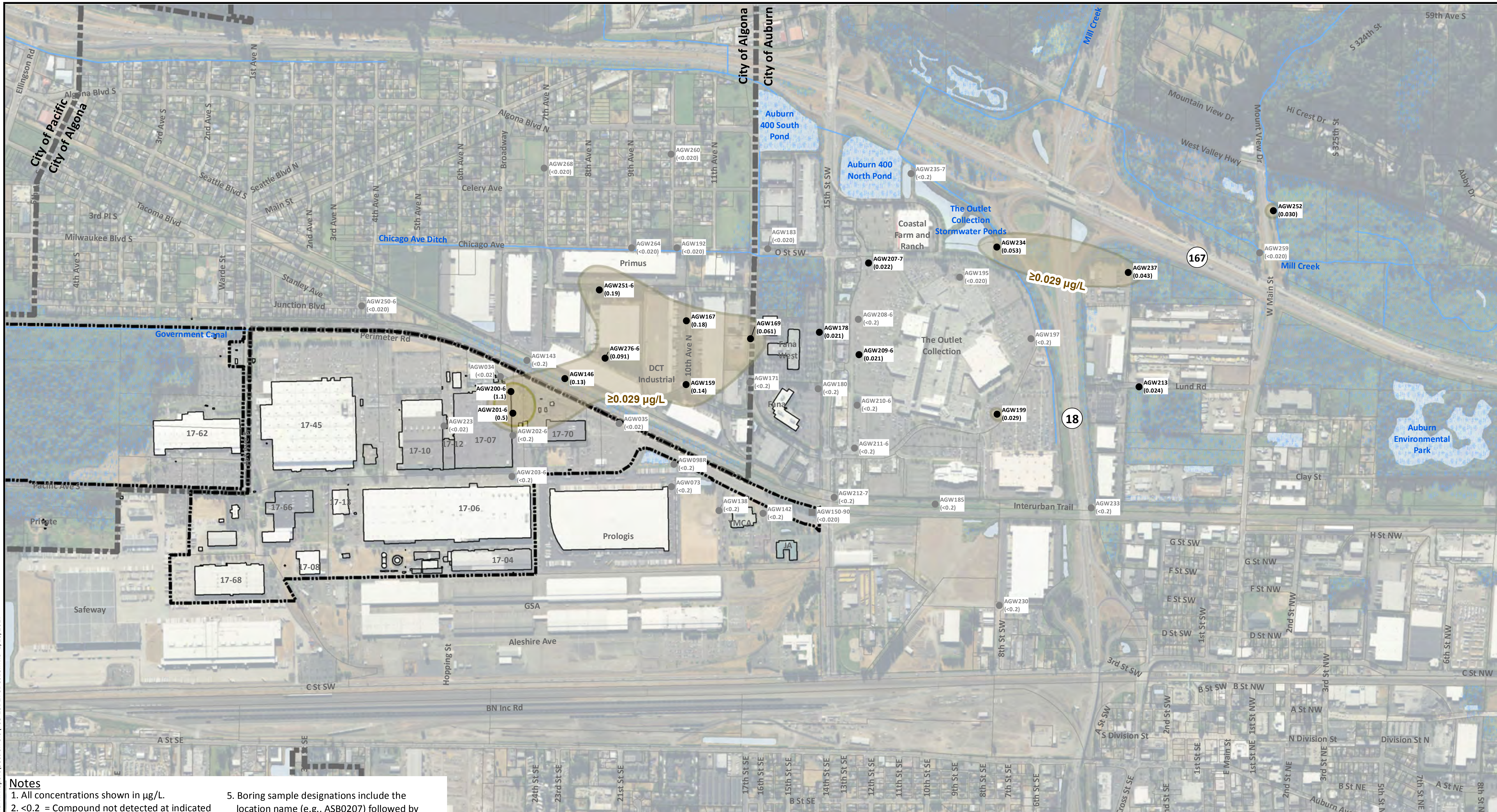
Boeing Auburn Remedial Investigation Auburn, Washington	**Deep Zone TCE Concentrations Most Recent – December 2015**	Figure 8-14



Notes

1. All concentrations shown in µg/L.
2. <0.2 = Compound not detected at indicated reporting limit.
3. Monitoring well results are the most recent. Borehole grab samples include direct-push borings and samples collected from monitoring wells at time of drilling.
4. Groundwater monitoring wells are identified by the AGW prefix. Soil borings are identified by the ASB prefix.
5. Boring sample designations include the location name (e.g., ASB0207) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 7).
6. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW208-2).
7. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Borehole Grab Sample Location
- Vinyl Chloride Contour (≥2.0 µg/L)
- Vinyl Chloride Contour (≥0.2 µg/L)
- Vinyl Chloride Contour (≥0.029 µg/L)
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000

Scale in Feet

N

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

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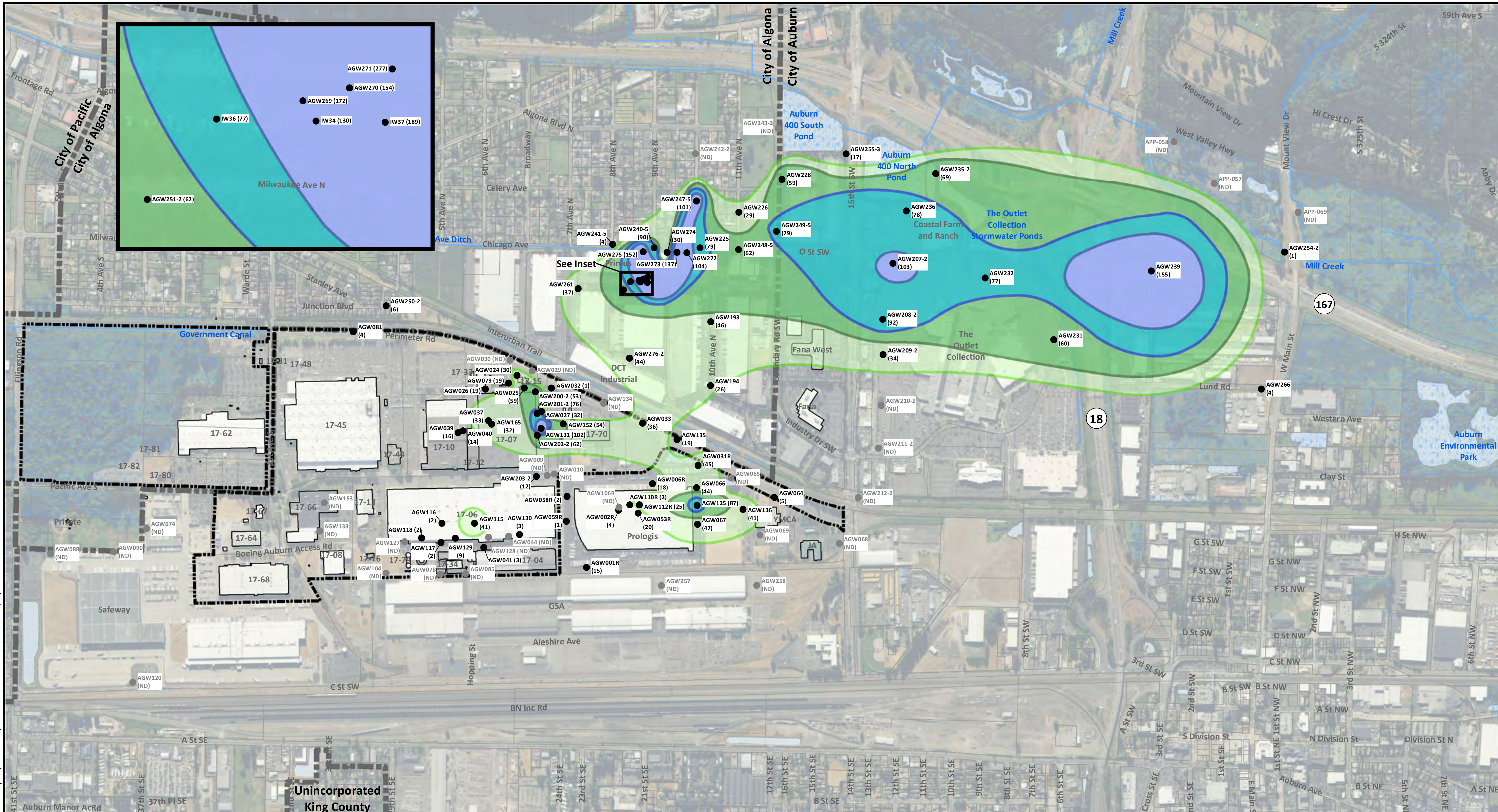
Remedial Investigation
Auburn, Washington

Deep Zone
Vinyl Chloride Concentrations
Most Recent – December 2015

Figure 8-15



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Notes

1. All concentrations shown in nmol/L.
2. Data provided is from June and December 2015.
3. Multilevel wells have seven well channels. Channel designations are included in the well ID (ex: AGW208-1).
4. Total chloroethenes include TCE, DCE, and VC.
5. ND = TCE, DCE, and VC were not detected at the laboratory reporting limits.
6. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Nanomole Contour ≥ 100 nmol/L
- Nanomole Contour ≥ 75 nmol/L
- Nanomole Contour ≥ 50 nmol/L
- Nanomole Contour ≥ 25 nmol/L
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000

Scale in Feet

N

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

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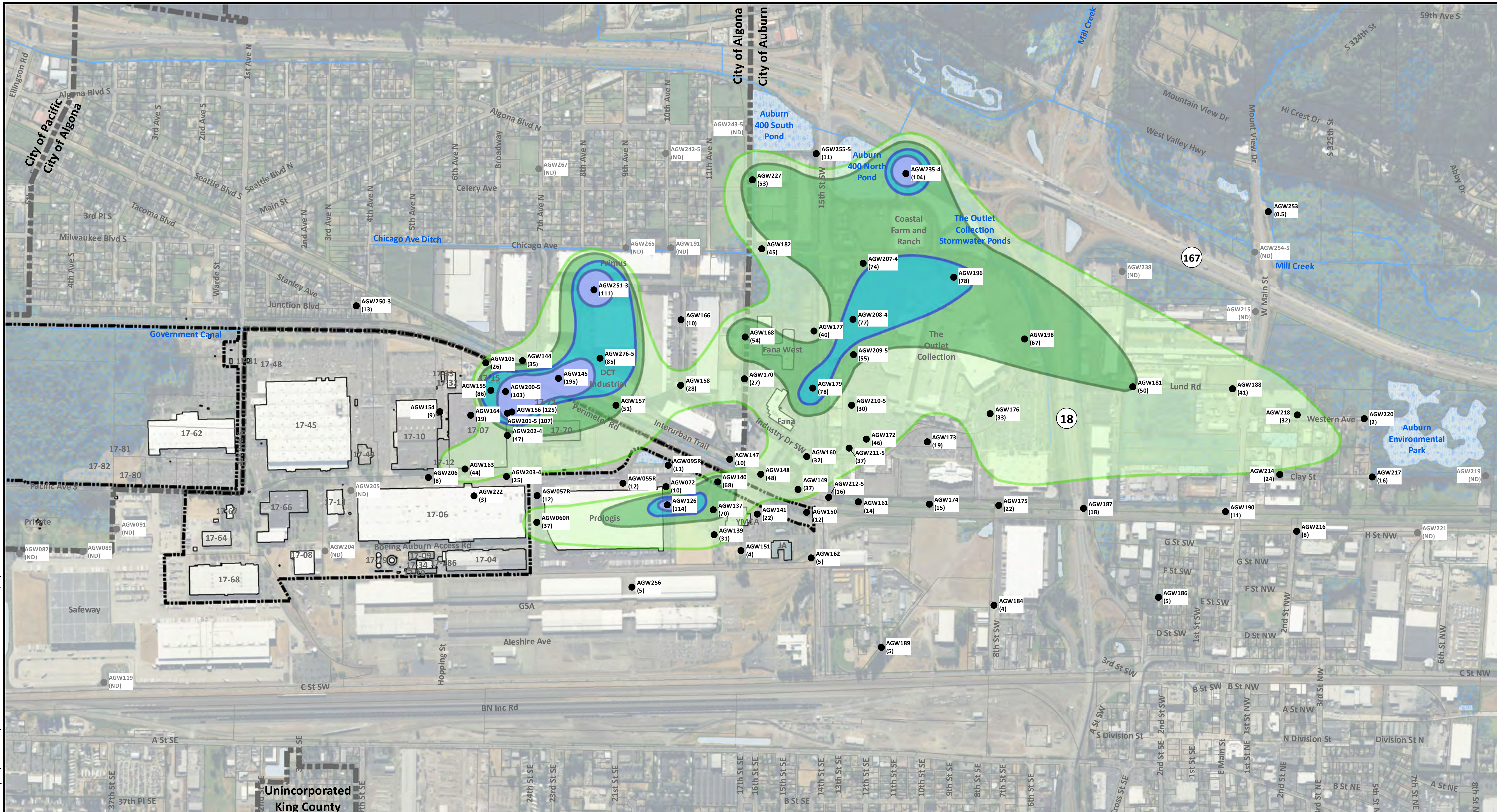
Boeing Auburn
Remedial Investigation
Auburn, Washington

Shallow Zone
Total Chloroethene Molar Equivalents

Figure 8-16



Notes

1. All concentrations shown in nmol/L.
2. Data provided is from June and December 2015.
3. Multilevel wells have seven well channels. Channel designations are included in the well ID (ex: AGW208-1).
4. Total chloroethenes include TCE, DCE, and VC.
5. ND = TCE, DCE, and VC were not detected at the laboratory reporting limits.
6. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Nanomole Contour ≥ 100 nmol/L
- Nanomole Contour ≥ 75 nmol/L
- Nanomole Contour ≥ 50 nmol/L
- Nanomole Contour ≥ 25 nmol/L
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000

Scale in Feet

N

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

Boeing Auburn
Remedial Investigation
Auburn, Washington

Intermediate Zone
Total Chloroethene Molar Equivalents

Figure
8-17

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Notes

1. All concentrations shown in nmol/L.
2. Data provided is from June and December 2015.
3. Multilevel wells have seven well channels. Channel designations are included in the well ID (ex: AGW208-1).
4. Total chloroethenes include TCE, DCE, and VC.
5. ND = TCE, DCE, and VC were not detected at the laboratory reporting limits.
6. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Monitoring Well Location
- Nanomole Contour ≥ 100 nmol/L
- Nanomole Contour ≥ 75 nmol/L
- Nanomole Contour ≥ 50 nmol/L
- Nanomole Contour ≥ 25 nmol/L
- City Limits
- Boeing Property
- Wetland Areas
- Water Bodies
- Waterways

0 1,000 2,000

Scale in Feet

N

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

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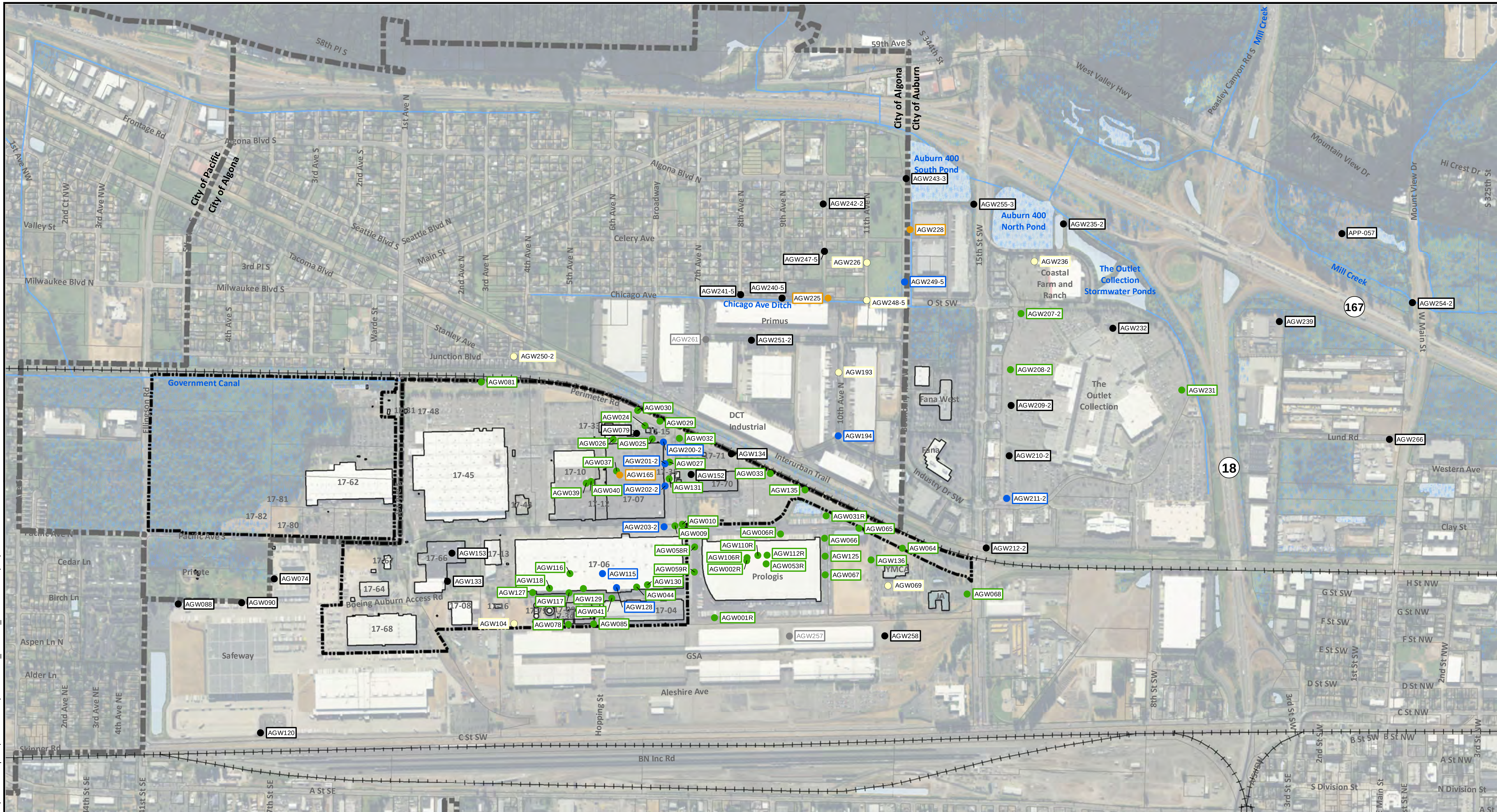
Boeing Auburn Remedial Investigation Auburn, Washington	Deep Zone Total Chloroethene Molar Equivalents	Figure 8-18



Notes

1. TCE and VC concentration trends were determined using the Mann-Kendall test and a trend criterion established by Monitoring and Remediation Optimization System (MAROS) Software.
2. TCE and VC data collected between (Water table and Shallow Zone -Aug 1990; Intermediate Zone - Oct 1996; Deep Zone - Dec 1995) and Jun 2015.
3. Multilevel wells have multiple channels. Channel designations are included in the well ID (ex: AGW208-2).
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Increasing
- Stable
- Decreasing
- Non-Detect; All Samples Collected Non-Detect
- No Trend
- Insufficient Data
- Waterways
- Wetland Areas
- Boeing Property
- City Limits

N

0 1,000 2,000

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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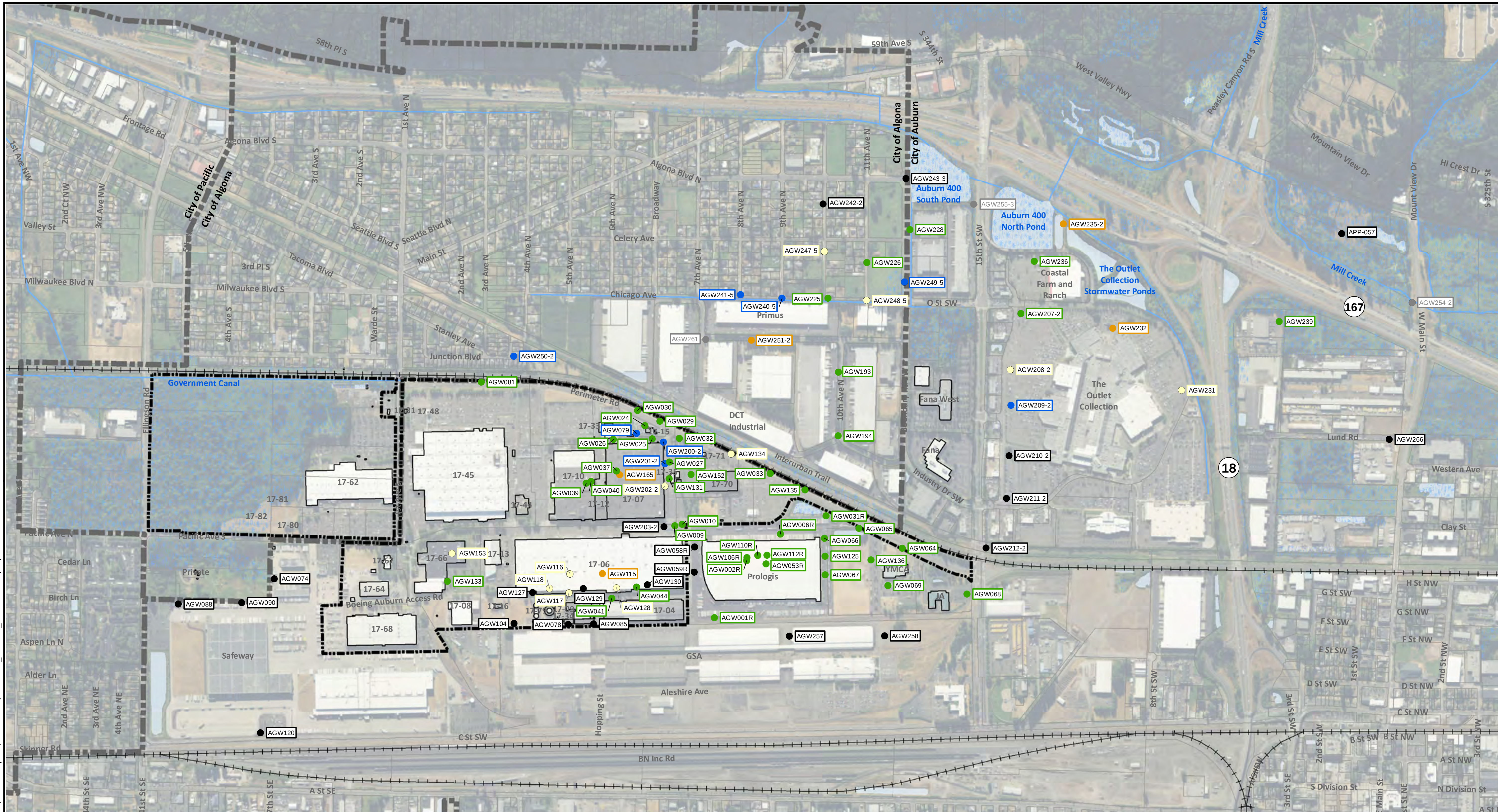
Boeing Auburn Remedial Investigation Auburn, Washington	**Shallow Zone** **TCE Concentration Trends**	Figure 8-19



Notes

1. TCE and VC concentration trends were determined using the Mann-Kendall test and a trend criterion established by Monitoring and Remediation Optimization System (MAROS) Software.
2. TCE and VC data collected between (Water table and Shallow Zone -Aug 1990; Intermediate Zone - Oct 1996; Deep Zone - Dec 1995) and Jun 2015.
3. Multilevel wells have multiple channels. Channel designations are included in the well ID (ex: AGW208-2).
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Increasing
- Stable
- Decreasing
- Non-Detect; All Samples Collected Non-Detect
- No Trend
- Insufficient Data
- Waterways
- Wetland Areas
- Boeing Property
- City Limits

N

Scale in Feet: 0 | 1,000 | 2,000

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

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Boeing Auburn
Remedial Investigation
Auburn, Washington

Shallow Zone
VC Concentration Trends

Figure
8-20

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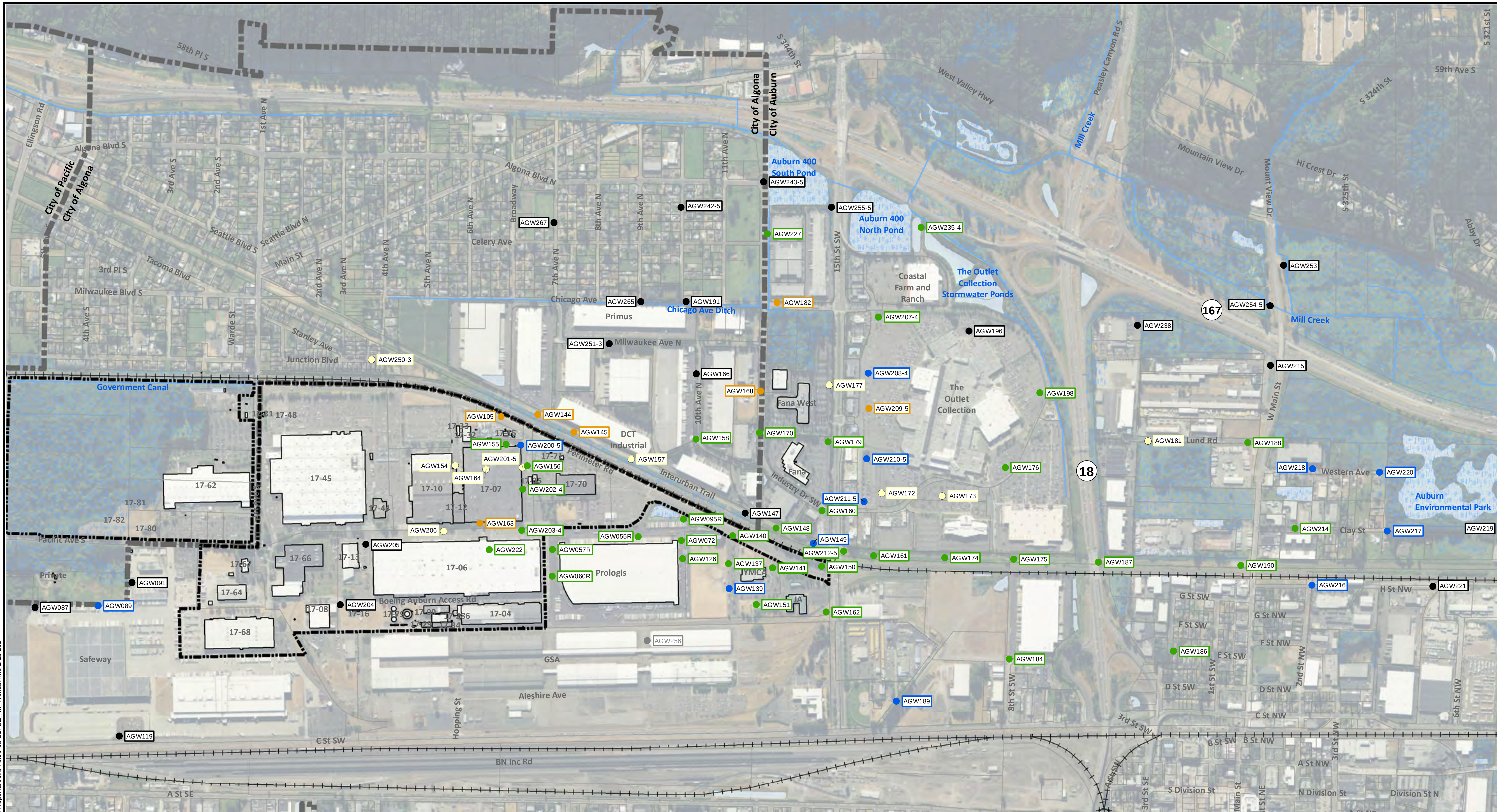

Notes

1. TCE and VC concentration trends were determined using the Mann-Kendall test and a trend criterion established by Monitoring and Remediation Optimization System (MAROS) Software.
2. TCE and VC data collected between (Water table and Shallow Zone -Aug 1990; Intermediate Zone - Oct 1996; Deep Zone - Dec 1995) and Jun 2015.
3. Multilevel wells have multiple channels. Channel designations are included in the well ID (ex: AGW208-2).
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Increasing
- Stable
- Decreasing
- Non-Detect; All Samples Collected Non-Detect
- No Trend
- Insufficient Data
- Waterways
- Wetland Areas
- Boeing Property
- City Limits

N

0 1,000 2,000

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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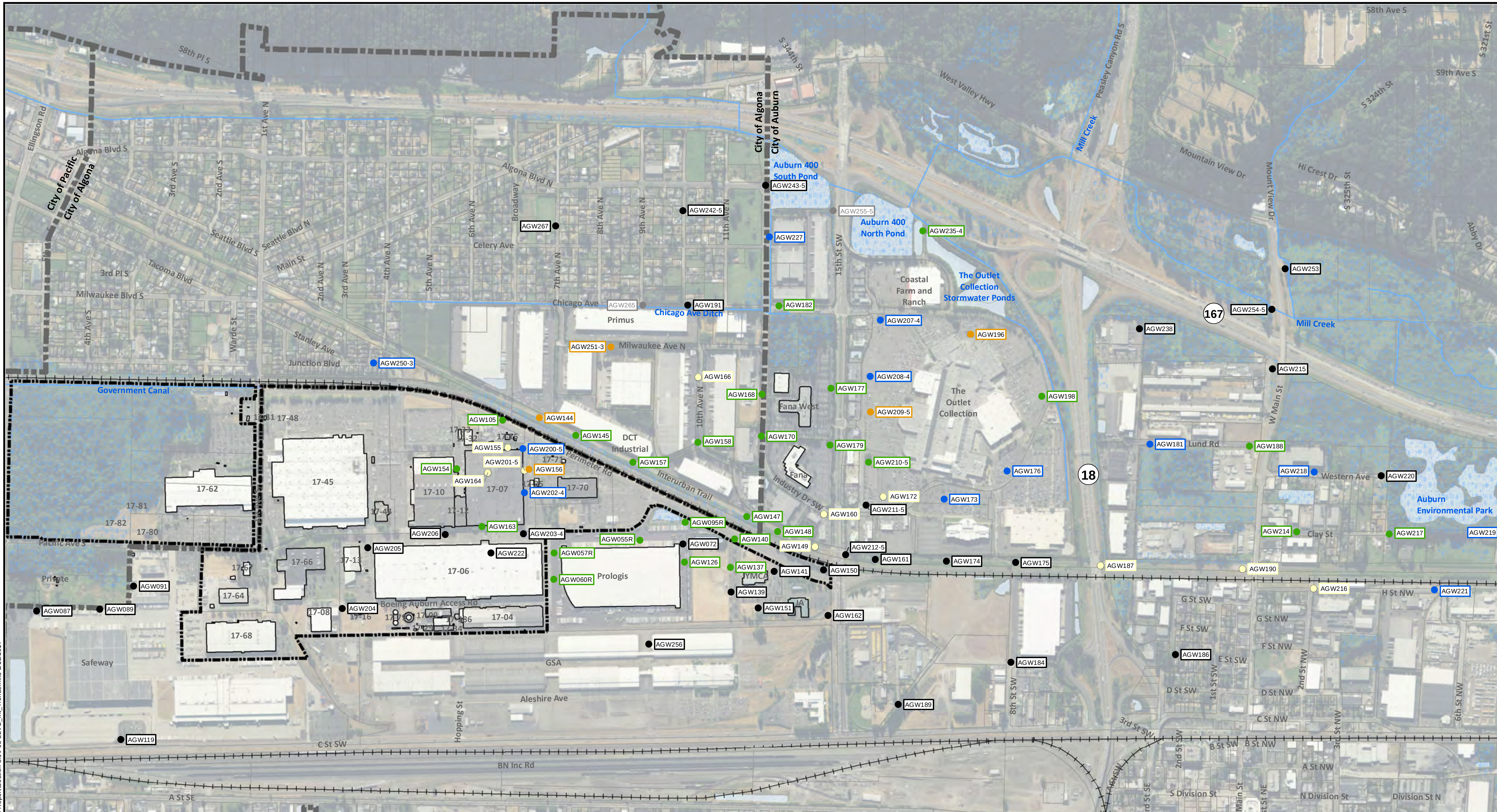
Remedial Investigation
Auburn, Washington

Intermediate Zone
TCE Concentration Trends

Figure
8-21



Notes

1. TCE and VC concentration trends were determined using the Mann-Kendall test and a trend criterion established by Monitoring and Remediation Optimization System (MAROS) Software.
2. TCE and VC data collected between (Water table and Shallow Zone -Aug 1990; Intermediate Zone - Oct 1996; Deep Zone - Dec 1995) and Jun 2015.
3. Multilevel wells have multiple channels. Channel designations are included in the well ID (ex: AGW208-2).
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Increasing
- Stable
- Decreasing
- Non-Detect; All Samples Collected Non-Detect
- No Trend
- Insufficient Data
- Waterways
- Wetland Areas
- Boeing Property
- City Limits

N

0 1,000 2,000

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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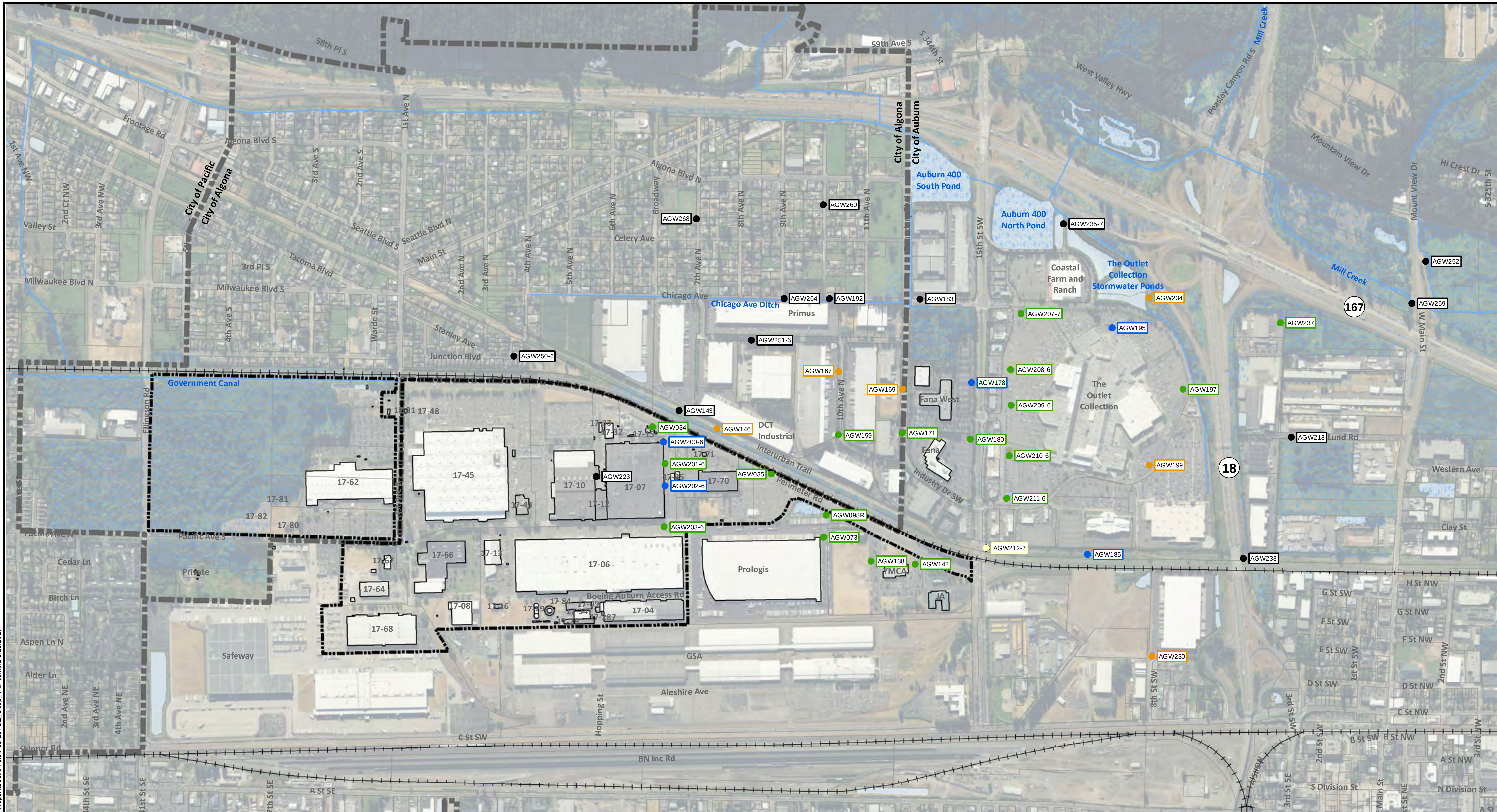
Boeing Auburn Remedial Investigation Auburn, Washington	**Intermediate Zone** **VC Concentration Trends**	Figure 8-22



Notes

1. TCE and VC concentration trends were determined using the Mann-Kendall test and a trend criterion established by Monitoring and Remediation Optimization System (MAROS) Software.
2. TCE and VC data collected between (Water table and Shallow Zone -Aug 1990; Intermediate Zone - Oct 1996; Deep Zone - Dec 1995) and Jun 2015.
3. Multilevel wells have multiple channels. Channel designations are included in the well ID (ex: AGW208-2).
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Increasing
- Stable
- Decreasing
- Non-Detect; All Samples Collected Non-Detect
- No Trend
- Insufficient Data
- Waterways
- Wetland Areas
- Boeing Property
- City Limits

N

0 1,000 2,000

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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Auburn, Washington

Deep Zone
TCE Concentration Trends

Figure
8-23

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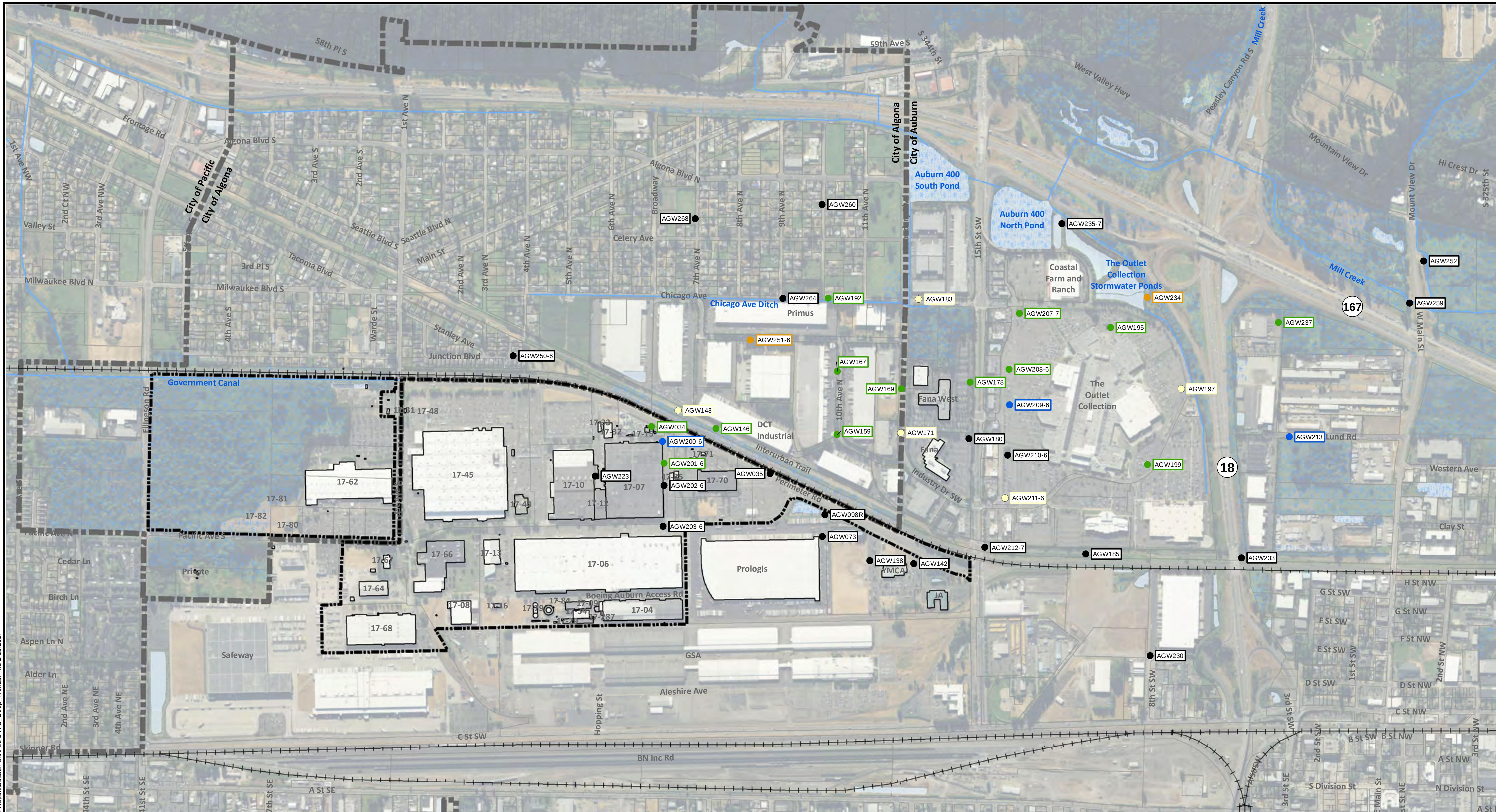

N

0 1,000 2,000

Scale in Feet

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

Notes

1. TCE and VC concentration trends were determined using the Mann-Kendall test and a trend criterion established by Monitoring and Remediation Optimization System (MAROS) Software.
2. TCE and VC data collected between (Water table and Shallow Zone -Aug 1990; Intermediate Zone - Oct 1996; Deep Zone - Dec 1995) and Jun 2015.
3. Multilevel wells have multiple channels. Channel designations are included in the well ID (ex: AGW208-2).
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Legend

- Increasing
- Stable
- Decreasing
- Non-Detect; All Samples Collected Non-Detect
- No Trend
- Insufficient Data
- Waterways
- Wetland Areas
- Boeing Property
- City Limits

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Remedial Investigation
Auburn, Washington

Deep Zone
VC Concentration Trends

Figure
8-24

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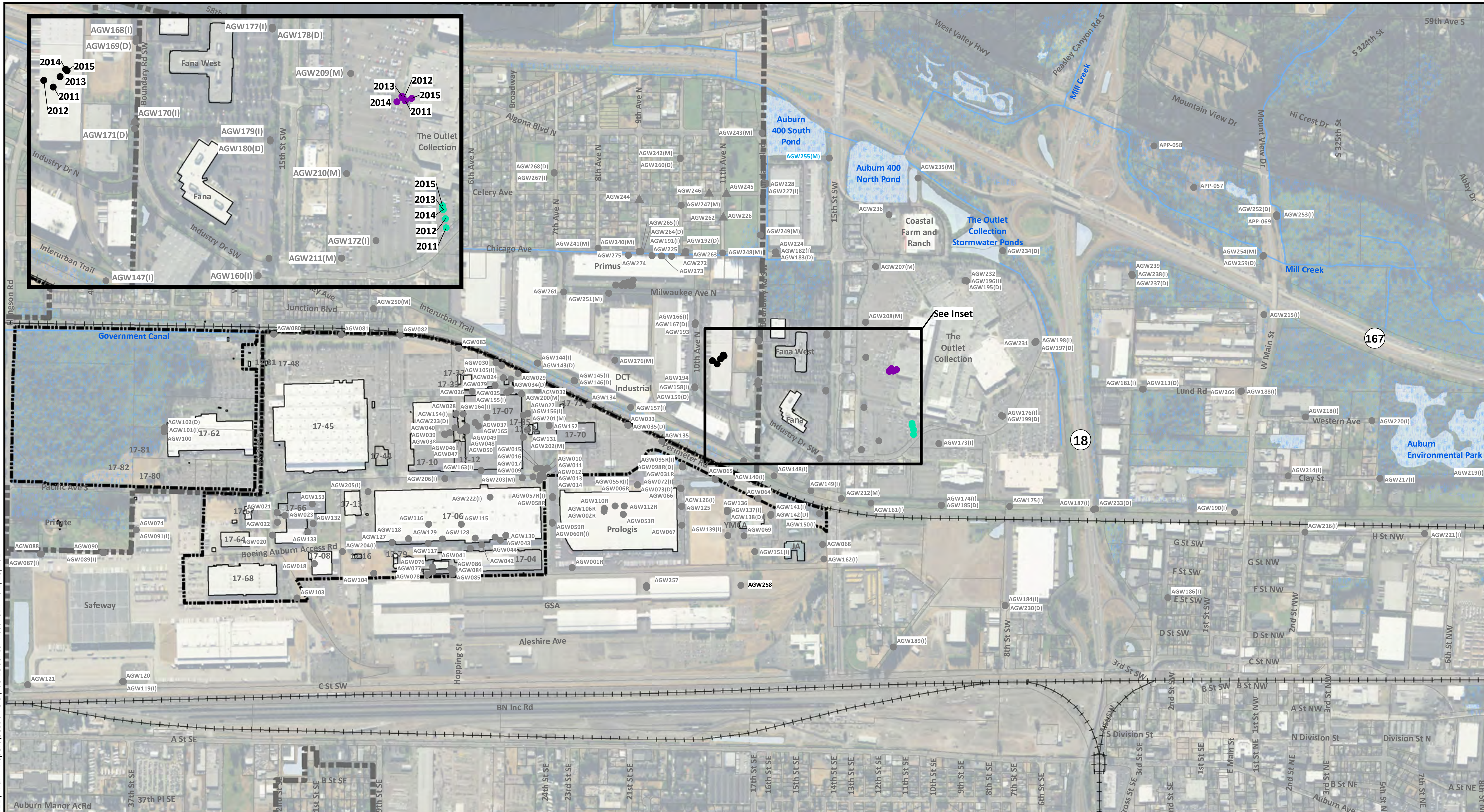

Notes

1. Center of Mass locations were calculated using Monitoring and Remediation Optimization System (MAROS) software.
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

- Shallow Zone Center of Mass
- Intermediate Zone Center of Mass
- Deep Zone Center of Mass
- Offsite Water Table Well
- Monitoring Well
- (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; Parcel Data Source: King County 2015; Aerial Photo Source: Esri World Imagery.

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Auburn, Washington

Estimated TCE Center of Mass Location by Groundwater Zone 2011-2015

Figure 8-25

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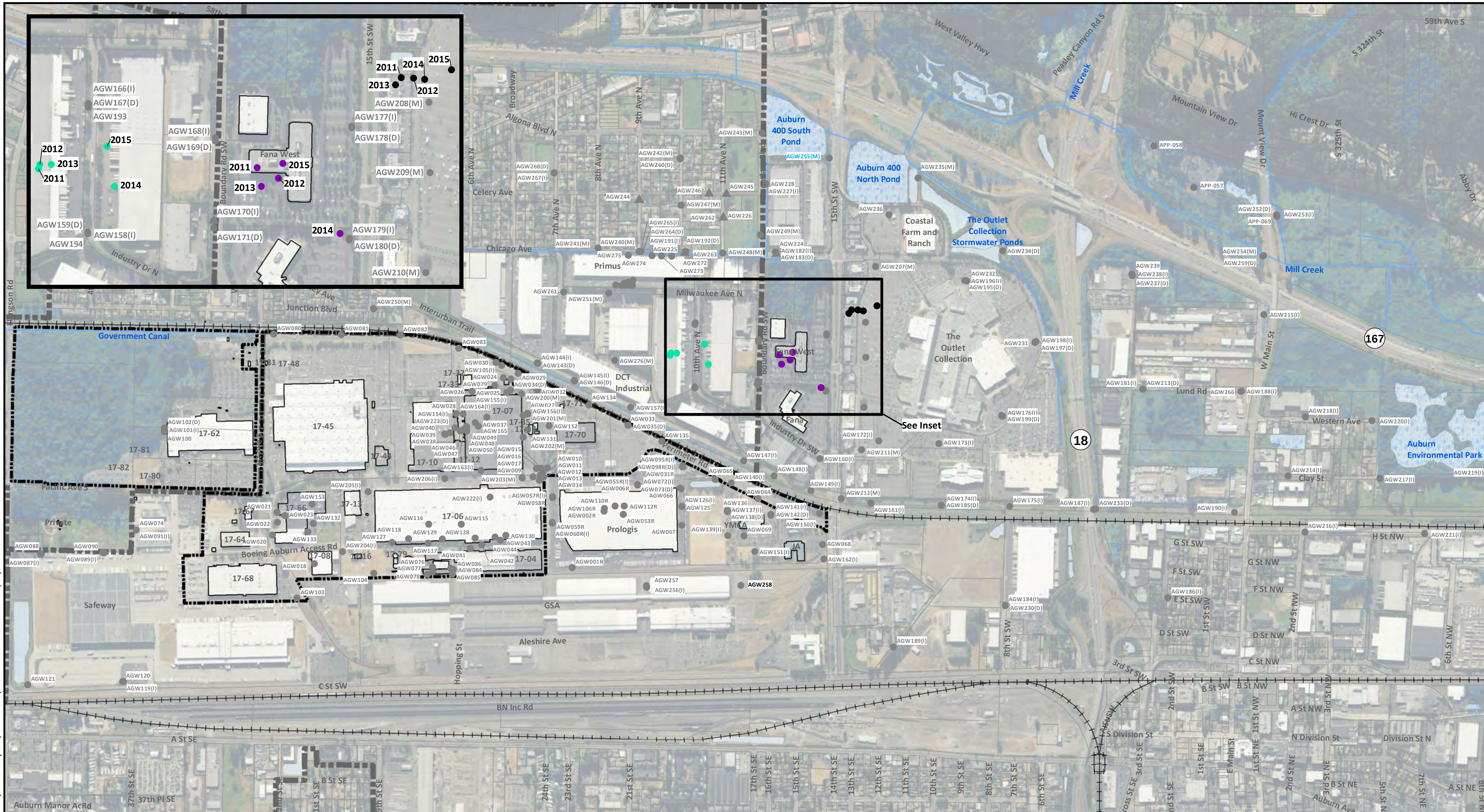

Notes

1. Center of Mass locations were calculated using Monitoring and Remediation Optimization System (MAROS) software.
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

- Shallow Zone Center of Mass
- Intermediate Zone Center of Mass
- Deep Zone Center of Mass
- Offsite Water Table Well
- Monitoring Well
- (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
Remedial Investigation
Auburn, Washington

Estimated VC Center of Mass Location by Groundwater Zone 2011-2015

Figure 8-26

G:\Projects\025\164\130\111\Final RI Report\Section 8.0\F08-26CenterMassVC.mxd 1/13/2017

Table 8-1
Maximum and Most Recent Groundwater Results: TCA, PCE, TCE, and VC
Boeing Auburn Remedial Investigation
Auburn, Washington

Analyte: SL:	1,1,1-Trichloroethane 200 µg/L				Tetrachloroethene 5 µg/L				Trichloroethene 0.54 µg/L				Vinyl Chloride 0.029 µg/L			
Well/Boring	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date
AGW001R	**1.5**	11/06/00	0.5 U	12/01/15	**0.3**	09/03/08	**0.16**	12/01/15	**5.64**	06/28/94	**2**	12/01/15	ND	--	0.2 U	12/01/15
AGW002R	**257**	06/27/94	0.5 U	12/03/15	**0.5**	09/11/97	0.2 U	12/03/15	**1433**	06/27/94	0.2 U	12/03/15	**21**	12/12/95	**0.066**	12/03/15
AGW003R	**420**	06/21/96	**86**	12/09/04	**0.7**	08/30/04	0.6 U	12/09/04	**14**	09/04/98	0.6 U	12/09/04	**0.086**	12/09/04	**0.086**	12/09/04
AGW004	**3.16**	03/30/95	0.2 U	11/01/04	**0.4 J**	06/17/04	0.2 U	11/01/04	**30.7**	06/27/94	**0.3**	11/01/04	ND	--	0.2 U	11/01/04
AGW005	**6.99**	07/26/94	**1.6**	03/14/97	ND	--	1 U	03/14/97	**6**	09/22/94	**2.3**	03/14/97	ND	--	2 U	03/14/97
AGW006	**14.33**	03/22/95	0.5 U	12/01/15	**0.4**	12/21/03	0.2 U	12/01/15	**18.98**	03/22/95	**0.5**	12/01/15	**0.16**	04/02/07	**0.1**	12/01/15
AGW007	ND	--	0.2 U	12/09/04	**0.5**	12/21/03	**0.4**	12/09/04	**4.88**	09/22/94	**1.8**	12/09/04	ND	--	0.020 U	12/09/04
AGW008	ND	--	0.2 U	12/22/03	ND	--	0.2 U	12/22/03	ND	--	0.2 U	12/22/03	ND	--	0.2 U	12/22/03
AGW009	ND	--	0.5 U	06/02/15	**0.3**	12/04/08	**0.14**	06/02/15	**8.07**	02/16/94	0.2 U	06/02/15	ND	--	0.020 U	06/02/15
AGW010	ND	--	5.0 U	12/03/15	**0.15 J**	12/05/11	**0.12**	12/03/15	**7.01**	02/15/94	2.0 U	12/03/15	ND	--	0.020 U	12/03/15
AGW011	ND	--	1 U	03/20/97	ND	--	1 U	03/20/97	ND	--	1 U	03/20/97	ND	--	2 U	03/20/97
AGW012	ND	--	1 U	03/20/97	ND	--	1 U	03/20/97	**2.48**	02/14/94	**1**	03/20/97	ND	--	2 U	03/20/97
AGW013	ND	--	1 U	03/21/97	ND	--	1 U	03/21/97	**1.33**	02/16/94	1 U	03/21/97	ND	--	2 U	03/21/97
AGW014	ND	--	0.2 U	02/20/04	ND	--	0.2 U	02/20/04	**2.86**	02/14/94	0.2 U	02/20/04	ND	--	0.2 U	02/20/04
AGW015	ND	--	0.2 U	06/09/09	ND	--	0.2 U	06/09/09	**1.5**	03/24/95	0.2 U	06/09/09	ND	--	0.020 U	06/09/09
AGW016	ND	--	1 U	03/13/00	ND	--	1 U	03/13/00	ND	--	1 U	03/13/00	ND	--	1 U	03/13/00
AGW017	ND	--	0.2 U	06/09/09	ND	--	0.2 U	06/09/09	**9.25**	02/15/94	**1.3**	06/09/09	ND	--	0.020 U	06/09/09
AGW018	**0.2**	09/08/97	0.2 U	05/23/03	**0.9**	09/08/97	**0.2**	05/23/03	**4.8**	12/19/96	**0.4**	05/23/03	ND	--	0.2 U	05/23/03
AGW019	ND	--	0.2 U	02/17/99	ND	--	0.2 U	02/17/99	ND	--	0.2 U	02/17/99	ND	--	0.2 U	02/17/99
AGW020	ND	--	0.5 U	11/25/14	**0.048**	07/28/14	0.2 U	11/25/14	ND	--	0.2 U	11/25/14	ND	--	0.020 U	11/25/14
AGW021	ND	--	1 UJ	03/11/97	ND	--	1 U	03/11/97	**1.05**	02/08/94	1 U	03/11/97	ND	--	2 UJ	03/11/97
AGW022	ND	--	1 U	03/11/97	ND	--	1 U	03/11/97	ND	--	1 U	03/11/97	ND	--	2 U	03/11/97
AGW023	ND	--	1 U	03/08/00	ND	--	1 U	03/08/00	**1.16**	02/08/94	1 U	03/08/00	ND	--	1 U	03/08/00
AGW024	ND	--	0.5 U	12/08/15	ND	--	0.2 U	12/08/15	ND	--	0.2 U	12/08/15	**20.16**	02/09/94	**1.7**	12/08/15
AGW025	ND	--	0.5 U	12/03/15	ND	--	0.2 U	12/03/15	**0.2**	06/03/08	0.2 U	12/03/15	**15.51**	02/09/94	**1.1**	12/03/15
AGW026	ND	--	0.5 U	12/03/15	ND	--	0.2 U	12/03/15	**2.29**	09/21/94	**0.9**	12/03/15	**0.15**	12/03/15	**0.15**	12/03/15
AGW027	ND	--	0.5 U	12/03/15	ND	--	0.2 U	12/03/15	**1.31**	02/09/94	0.2 U	12/03/15	**4.3**	12/11/95	**0.82**	12/03/15
AGW028	ND	--	0.2 U	09/29/10	**0.049**	09/29/10	**0.049**	09/29/10	**3.1**	06/20/96	**1.2**	09/29/10	ND	--	0.020 U	09/29/10
AGW029	ND	--	0.5 U	06/04/15	ND	--	0.2 U	06/04/15	ND	--	0.2 U	06/04/15	**0.5**	12/05/05	0.020 U	06/04/15
AGW030	ND	--	0.5 U	06/04/15	ND	--	0.2 U	06/04/15	ND	--	0.2 U	06/04/15	**0.4**	11/02/01	0.020 U	06/04/15
AGW031R	**4.18**	03/27/95	0.5 U	11/30/15	ND	--	0.2 U	11/30/15	**10.97**	03/27/95	**1.8**	11/30/15	ND	--	**0.037**	11/30/15
AGW032	ND	--	0.5 U	12/03/15	ND	--	0.020 U	12/03/15	**0.7**	09/09/97	0.2 U	12/03/15	**5.2**	08/30/99	**0.041**	12/03/15
AGW033	ND	--	0.5 U	12/08/15	**0.043**	12/02/10	**0.039**	12/08/15	**8.7**	12/12/95	**2.4**	12/08/15	**1.6**	11/25/02	**0.21**	12/08/15
AGW034	ND	--	0.5 U	06/04/15	ND	--	0.2 U	06/04/15	**2.6**	03/19/98	**0.2**	06/04/15	**0.026**	06/08/04	0.020 U	06/04/15
AGW035	ND	--	0.5 U	06/04/15	ND	--	0.2 U	06/04/15	**5.7**	03/19/98	**1.5**	06/04/15	ND	--	0.020 U	06/04/15
AGW036	ND	--	0.2 U	12/15/03	**0.8**	02/17/99	**0.3**	12/15/03	ND	--	0.2 U	12/15/03	ND	--	0.2 U	12/15/03
AGW037	ND	--	0.5 U	12/03/15	**0.11**	06/10/10	**0.08**	12/03/15	**5.3**	12/13/96	**2.3**	12/03/15	**0.2**	12/03/15	**0.2**	12/03/15
AGW038	ND	--	0.2 U	06/10/09	ND	--	0.2 U	06/10/09	**2.8**	02/22/99	**0.6**	06/10/09	**0.052**	06/10/09	**0.052**	06/10/09
AGW039	ND	--	0.5 U	06/09/15	ND	--	0.2 U	06/09/15	**2**	12/13/96	**0.5**	06/09/15	**0.06**	06/10/09	**0.03**	06/09/15
AGW040	ND	--	0.5 U	06/09/15	**0.092**	12/06/10	**0.034**	06/09/15	**4**	12/13/96	**1**	06/09/15	**0.039**	06/10/09	0.020 U	06/09/15
AGW041	ND	--	0.5 U	06/03/15	**1.6 J**	09/27/96	**0.3**	06/03/15	**2.3 J**	09/27/96	**0.4**	06/03/15	ND	--	0.020 U	06/03/15
AGW042	ND	--	1 U	03/12/97	ND	--	1 U	03/12/97	**1.1 J**	09/27/96	1 U	03/12/97	ND	--	2 U	03/12/97
AGW043	**0.6**	02/15/99	0.2 U	12/18/03	**0.8**	03/24/98	**0.3**	12/18/03	**1.7 J**	09/27/96	**0.6**	12/18/03	ND	--	0.2 U	12/18/03
AGW044	ND	--	0.5 U	06/09/15	**0.1**	06/23/14	**0.046**	06/09/15	**0.2**	12/07/05	0.2 U	06/09/15	ND	--	0.020 U	06/09/15
AGW045	ND	--	1 U	03/12/97	ND	--	1 U	03/12/97	**1.1**	06/11/96	1 U	03/12/97	ND	--	2 U	03/12/97
AGW046	ND	--	0.2 U	09/29/10	**0.054**	09/29/10	**0.054**	09/29/10	**2.9**	12/13/96	**1.2**	09/29/10	ND	--	0.020 U	09/29/10
AGW047	ND	--	0.2 U	09/29/10	**0.062**	09/29/10	**0.062**	09/29/10	**3.3**	03/19/97	**1**	09/29/10	ND	--	0.020 U	09/29/10

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Boeing Auburn Remedial Investigation
Auburn, Washington

Analyte: SL:	1,1,1-Trichloroethane 200 µg/L				Tetrachloroethene 5 µg/L				Trichloroethene 0.54 µg/L				Vinyl Chloride 0.029 µg/L			
Well/Boring	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date
AGW048	ND	--	0.2 U	09/29/10	**0.058**	09/29/10	**0.058**	09/29/10	**4.9**	03/19/97	**1.1**	09/29/10	ND	--	0.020 U	09/29/10
AGW049	ND	--	0.2 U	09/29/10	**0.064**	09/29/10	**0.064**	09/29/10	**1.6**	09/29/10	**1.6**	09/29/10	ND	--	0.020 U	09/29/10
AGW050	ND	--	0.2 U	09/29/10	**0.068**	09/29/10	**0.068**	09/29/10	**3.2**	03/19/97	**1.1**	09/29/10	ND	--	0.020 U	09/29/10
AGW051	**1.5**	02/20/04	**1.5**	02/20/04	ND	--	0.2 U	02/20/04	**3.4**	02/20/04	**3.4**	02/20/04	ND	--	0.2 U	02/20/04
AGW052	**3.6**	10/30/96	**1.4**	02/20/04	**0.3**	02/20/04	**0.3**	02/20/04	**7.1**	12/19/96	**5**	02/20/04	ND	--	0.2 U	02/20/04
AGW053R	**6.5**	02/22/99	0.5 U	12/03/15	**0.3**	06/02/14	**0.22**	12/03/15	**16**	03/26/98	**1.7**	12/03/15	**0.3**	06/12/07	**0.031**	12/03/15
AGW054	ND	--	0.2 U	12/21/03	**0.4**	12/21/03	**0.4**	12/21/03	**2.3**	10/30/96	**1**	12/21/03	ND	--	0.2 U	12/21/03
AGW055R	**9.4**	12/18/96	0.5 U	12/01/15	**0.4**	12/21/03	0.2 U	12/01/15	**13**	03/13/97	**0.5**	12/01/15	**0.34**	03/10/09	**0.051**	12/01/15
AGW056	**4.3**	10/30/96	0.2 U	12/01/05	**0.4**	12/22/03	**0.3**	12/01/05	**3.6**	10/30/96	**1.9**	12/01/05	**0.027**	12/01/05	**0.027**	12/01/05
AGW057R	**0.2**	03/23/98	0.5 U	12/01/15	**1.1**	12/17/96	**0.5**	12/01/15	**9.9**	09/01/98	**1.6**	12/01/15	**0.021**	06/02/09	0.2 U	12/01/15
AGW058R	**0.3**	09/11/97	0.5 U	06/01/15	**1.2**	10/30/96	**0.5**	06/01/15	**7.7**	10/30/96	**0.3**	06/01/15	ND	--	0.020 U	06/01/15
AGW059R	ND	--	0.5 U	06/01/15	**0.6**	06/07/10	**0.4**	06/01/15	**3**	12/16/96	**0.2**	06/01/15	ND	--	0.020 U	06/01/15
AGW060R	ND	--	0.5 U	12/04/15	**1**	10/30/96	0.020 U	12/04/15	**4.2**	10/30/96	**0.4**	12/04/15	**0.14**	06/02/09	**0.068**	12/04/15
AGW061	ND	--	0.2 U	12/16/03	**0.5**	12/16/03	**0.5**	12/16/03	**0.5**	12/16/03	**0.5**	12/16/03	ND	--	0.2 U	12/16/03
AGW062	**1.7**	10/30/96	**0.6**	12/16/03	**0.4**	12/16/03	**0.4**	12/16/03	**2.5**	10/30/96	**1.3**	12/16/03	ND	--	0.2 U	12/16/03
AGW063	ND	--	0.2 U	12/09/04	ND	--	0.2 U	12/09/04	ND	--	0.2 U	12/09/04	ND	--	0.020 U	12/09/04
AGW064	ND	--	0.5 U	11/30/15	ND	--	0.2 U	11/30/15	**0.5**	06/02/08	**0.4**	11/30/15	ND	--	0.2 U	11/30/15
AGW065	ND	--	0.5 U	06/03/15	ND	--	0.2 U	06/03/15	**4.7**	11/01/01	0.2 U	06/03/15	ND	--	0.020 U	06/03/15
AGW066	**4.4 J**	12/11/96	0.5 U	12/04/15	**0.048**	11/30/09	**0.032**	12/04/15	**23**	09/01/98	**4.3**	12/04/15	**0.067**	06/06/06	0.2 U	12/04/15
AGW067	**1.2**	02/22/99	0.5 U	12/04/15	**0.068**	12/04/15	**0.068**	12/04/15	**20 J**	12/11/96	**3.7**	12/04/15	**0.055**	04/02/07	0.2 U	12/04/15
AGW068	ND	--	0.5 U	06/03/15	ND	--	0.2 U	06/03/15	ND	--	0.2 U	06/03/15	ND	--	0.020 U	06/03/15
AGW069	ND	--	0.5 U	11/30/15	ND	--	0.2 U	11/30/15	ND	--	0.2 U	11/30/15	ND	--	0.2 U	11/30/15
AGW072	**2.3**	11/06/00	0.5 U	12/04/15	**0.3**	08/17/04	**0.12**	12/04/15	**5 J**	11/01/01	**1.3**	12/04/15	ND	--	0.2 U	12/04/15
AGW073	**0.3**	05/18/01	0.5 U	12/04/15	ND	--	0.2 U	12/04/15	**0.9**	11/24/02	**0.2**	12/04/15	ND	--	0.2 U	12/04/15
AGW074	ND	--	0.5 U	12/07/15	ND	--	0.2 U	12/07/15	ND	--	0.2 U	12/07/15	ND	--	0.020 U	12/07/15
AGW076	**0.5**	08/31/98	1 U	03/08/00	**1.5**	02/15/99	**1.2**	03/08/00	**1.1**	08/31/98	1 U	03/08/00	ND	--	1 U	03/08/00
AGW077	ND	--	0.2 U	12/12/04	**1.6**	12/12/04	**1.6**	12/12/04	**1**	12/12/04	**1**	12/12/04	ND	--	0.020 U	12/12/04
AGW078	ND	--	0.5 U	06/03/15	**2.2**	05/21/01	**0.22**	06/03/15	**1.5**	08/31/98	0.2 U	06/03/15	ND	--	0.020 U	06/03/15
AGW079	ND	--	0.5 U	12/07/15	**0.029**	12/04/12	0.2 U	12/07/15	ND	--	0.2 U	12/07/15	**2.1**	06/02/09	**0.9**	12/07/15
AGW080	ND	--	0.2 U	11/30/04	ND	--	0.2 U	11/30/04	ND	--	0.2 U	11/30/04	ND	--	0.020 U	11/30/04
AGW081	ND	--	0.5 U	06/04/15	**0.1 J**	12/08/08	0.020 U	06/04/15	**0.5**	09/11/97	0.2 U	06/04/15	**0.055**	06/04/07	**0.026**	06/04/15
AGW082	ND	--	0.2 U	11/30/04	ND	--	0.2 U	11/30/04	ND	--	0.2 U	11/30/04	ND	--	0.020 U	11/30/04
AGW083	ND	--	0.2 U	11/30/04	ND	--	0.2 U	11/30/04	ND	--	0.2 U	11/30/04	ND	--	0.020 U	11/30/04
AGW084	ND	--	0.2 U	12/06/04	**2.2**	05/21/01	**1.3**	12/06/04	**1.4**	05/21/01	**0.9**	12/06/04	ND	--	0.020 U	12/06/04
AGW085	**0.2**	11/08/00	0.5 U	12/08/15	**2**	05/21/01	**0.16**	12/08/15	**2.7**	11/08/00	0.2 U	12/08/15	ND	--	0.2 U	12/08/15
AGW086	ND	--	0.2 U	12/06/04	**2.1**	05/21/01	**1.4**	12/06/04	**1.5**	11/29/01	**1**	12/06/04	ND	--	0.020 U	12/06/04
AGW087	ND	--	0.5 U	12/07/15	**0.4**	11/02/01	0.2 U	12/07/15	ND	--	0.2 U	12/07/15	ND	--	0.020 U	12/07/15
AGW088	ND	--	0.5 U	12/07/15	**0.4**	11/02/01	0.2 U	12/07/15	ND	--	0.2 U	12/07/15	ND	--	0.020 U	12/07/15
AGW089	ND	--	0.5 U	12/07/15	**0.4**	11/02/01	0.2 U	12/07/15	**0.2**	06/21/04	0.2 U	12/07/15	ND	--	0.020 U	12/07/15
AGW090	ND	--	0.5 U	12/07/15	**0.3**	11/02/01	0.2 U	12/07/15	ND	--	0.2 U	12/07/15	ND	--	0.020 U	12/07/15
AGW091	ND	--	0.5 U	12/07/15	**0.2**	11/02/01	0.2 U	12/07/15	ND	--	0.2 U	12/07/15	ND	--	0.020 U	12/07/15
AGW095R	**2.8**	06/07/04	0.5 U	11/30/15	**0.4**	08/17/04	**0.14**	11/30/15	**3.3**	06/11/07	**1.2**	11/30/15	**0.063**	06/08/10	0.020 U	11/30/15
AGW096	ND	--	0.2 U	12/06/04	ND	--	0.2 U	12/06/04	ND	--	0.2 U	12/06/04	ND	--	0.020 U	12/06/04
AGW097	ND	--	0.2 U	12/07/04	**0.2**	06/01/04	0.2 U	12/07/04	ND	--	0.2 U	12/07/04	ND	--	0.020 U	12/07/04
AGW098R	**0.3**	03/13/08	0.5 U	11/30/15	**0.051**	12/10/12	**0.046**	11/30/15	**1.6**	09/11/07	**0.5**	11/30/15	ND	--	0.2 U	11/30/15
AGW099	ND	--	0.2 U	12/07/04	ND	--	0.2 U	12/07/04	ND	--	0.2 U	12/07/04	ND	--	0.020 U	12/07/04
AGW100	ND	--	0.2 U	06/09/09	ND	--	0.2 U	06/09/09	ND	--	0.2 U	06/09/09	ND	--	0.020 U	06/09/09

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Analyte: SL:	1,1,1-Trichloroethane 200 µg/L				Tetrachloroethene 5 µg/L				Trichloroethene 0.54 µg/L				Vinyl Chloride 0.029 µg/L			
Well/Boring	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date
AGW101	ND	--	0.2 U	06/09/09	ND	--	0.2 U	06/09/09	ND	--	0.2 U	06/09/09	ND	--	0.020 U	06/09/09
AGW102	ND	--	0.2 U	11/30/04	ND	--	0.2 U	11/30/04	ND	--	0.2 U	11/30/04	ND	--	0.020 U	11/30/04
AGW103	ND	--	0.5 U	11/25/14	ND	--	0.2 U	11/25/14	ND	--	0.2 U	11/25/14	ND	--	0.020 U	11/25/14
AGW104	ND	--	0.5 U	06/03/15	**1.2**	12/06/04	**0.13**	06/03/15	**0.6**	12/06/04	0.2 U	06/03/15	ND	--	0.020 U	06/03/15
AGW105	ND	--	0.5 U	12/07/15	ND	--	0.2 U	12/07/15	**1.4**	06/16/14	**0.9**	12/07/15	**1.8**	12/01/04	**0.8**	12/07/15
AGW106R	ND	--	0.5 U	12/03/15	ND	--	0.2 U	12/03/15	**120 J**	06/17/04	0.2 U	12/03/15	**45**	03/07/05	0.2 U	12/03/15
AGW107	ND	--	1 U	11/02/04	**0.4 J**	06/16/04	1 U	11/02/04	**69**	08/31/04	**1.1**	11/02/04	ND	--	1 U	11/02/04
AGW108	**0.3 J**	06/16/04	1 U	11/02/04	**0.4 J**	06/16/04	1 U	11/02/04	**6.6 J**	06/16/04	1 U	11/02/04	**3.9**	10/05/04	**1.5**	11/02/04
AGW109	**1**	10/05/04	1 U	11/02/04	**0.4 J**	06/16/04	1 U	11/02/04	**72 J**	06/16/04	1 U	11/02/04	**7.6**	10/05/04	1 U	11/02/04
AGW110R	**7.8 J**	06/17/04	0.5 U	12/03/15	ND	--	0.2 U	12/03/15	**94 J**	06/17/04	0.2 U	12/03/15	**49**	06/02/05	**0.11**	12/03/15
AGW111	**20**	09/01/04	**8.9**	11/03/04	**0.4**	10/05/04	0.4 U	11/03/04	**27**	09/01/04	**14**	11/03/04	**0.5**	10/05/04	0.4 U	11/03/04
AGW112R	**7.8**	10/06/04	0.5 U	12/03/15	**0.4**	11/03/04	**0.2**	12/03/15	**5.2**	10/06/04	**2**	12/03/15	**0.4**	12/06/05	**0.098**	12/03/15
AGW113	**0.2 J**	06/15/04	0.2 U	11/03/04	**0.5**	10/06/04	**0.3**	11/03/04	**1.4**	10/06/04	**0.7**	11/03/04	ND	--	0.2 U	11/03/04
AGW114	**0.4 J**	06/15/04	**0.2**	11/03/04	**0.4**	11/03/04	**0.4**	11/03/04	**21**	09/01/04	**4.6**	11/03/04	ND	--	0.2 U	11/03/04
AGW115	ND	--	0.5 U	12/09/15	**0.4**	06/06/07	**0.031**	12/09/15	**0.6**	06/06/07	0.2 U	12/09/15	**1**	06/12/13	**0.5**	12/09/15
AGW116	ND	--	0.5 U	12/09/15	**1**	12/08/06	**0.5**	12/09/15	**0.5**	06/11/09	**0.2**	12/09/15	**0.022**	06/11/09	0.2 U	12/09/15
AGW117	ND	--	0.5 U	12/09/15	**1.1**	12/08/06	**0.5**	12/09/15	**1**	06/10/14	**0.3**	12/09/15	**0.041 J**	06/06/07	0.2 U	12/09/15
AGW118	ND	--	0.5 U	12/09/15	**1.3**	12/08/06	**0.6**	12/09/15	**0.8**	12/07/05	**0.3**	12/09/15	**0.028**	06/11/09	0.2 U	12/09/15
AGW119	ND	--	0.5 U	12/07/15	ND	--	0.2 U	12/07/15	ND	--	0.2 U	12/07/15	ND	--	0.020 U	12/07/15
AGW120	ND	--	0.5 U	12/07/15	ND	--	0.2 U	12/07/15	ND	--	0.2 U	12/07/15	ND	--	0.020 U	12/07/15
AGW121	ND	--	0.2 U	06/08/09	ND	--	0.2 U	06/08/09	ND	--	0.2 U	06/08/09	ND	--	0.020 U	06/08/09
AGW125	**0.6**	03/13/08	0.5 U	12/04/15	**0.03**	12/07/12	**0.024**	12/04/15	**16**	03/13/08	**9.1**	12/04/15	**0.054**	04/02/07	**0.034**	12/04/15
AGW126	**0.6**	03/13/08	0.5 U	12/04/15	**0.025**	12/07/12	0.020 U	12/04/15	**21**	06/11/07	**8**	12/04/15	**0.17**	12/14/11	**0.11**	12/04/15
AGW127	ND	--	0.5 U	06/03/15	**0.5**	12/10/08	0.2 U	06/03/15	**0.3**	10/01/08	0.2 U	06/03/15	ND	--	0.020 U	06/03/15
AGW128	ND	--	0.5 U	12/09/15	**0.3**	06/14/10	**0.13**	12/09/15	**0.5**	10/01/08	0.2 U	12/09/15	**0.34**	06/12/13	0.020 U	12/09/15
AGW129	ND	--	0.5 U	12/09/15	**0.7**	06/11/09	**0.5**	12/09/15	**1.7**	12/11/08	**0.6**	12/09/15	ND	--	0.2 U	12/09/15
AGW130	ND	--	0.5 U	12/09/15	**0.7**	12/11/08	**0.4**	12/09/15	**0.6**	06/11/09	**0.4**	12/09/15	ND	--	0.2 U	12/09/15
AGW130-35	ND	--	0.2 U	09/11/08	**0.3**	09/11/08	**0.3**	09/11/08	**0.6**	09/11/08	**0.6**	09/11/08	ND	--	0.2 U	09/11/08
AGW130-45	ND	--	0.2 U	09/11/08	**0.2**	09/11/08	**0.2**	09/11/08	**0.5**	09/11/08	**0.5**	09/11/08	ND	--	0.2 U	09/11/08
AGW131	ND	--	0.5 U	12/03/15	ND	--	0.2 U	12/03/15	**0.7**	10/01/08	0.2 U	12/03/15	**7.5**	12/08/09	**5**	12/03/15
AGW132	ND	--	0.2 U	06/09/09	**0.4**	06/09/09	**0.4**	06/09/09	ND	--	0.2 U	06/09/09	**0.1**	06/09/09	**0.1**	06/09/09
AGW133	ND	--	0.5 U	06/03/15	**0.5**	06/09/09	**0.4**	06/03/15	ND	--	0.2 U	06/03/15	**0.13**	06/09/09	0.020 U	06/03/15
AGW133-35	ND	--	0.2 U	09/09/08	ND	--	0.2 U	09/09/08	ND	--	0.2 U	09/09/08	ND	--	0.2 U	09/09/08
AGW133-45	ND	--	0.2 U	09/09/08	ND	--	0.2 U	09/09/08	ND	--	0.2 U	09/09/08	ND	--	0.2 U	09/09/08
AGW134	ND	--	0.5 U	12/08/15	ND	--	0.2 U	12/08/15	ND	--	0.2 U	12/08/15	**0.28**	06/03/09	0.020 U	12/08/15
AGW135	ND	--	0.5 U	12/08/15	**0.3**	12/03/08	**0.16**	12/08/15	**3.1**	12/03/08	**1.6**	12/08/15	**0.16**	12/03/08	**0.067**	12/08/15
AGW136	ND	--	0.5 U	11/30/15	ND	--	0.2 U	11/30/15	**3.9**	12/03/08	**3.3**	11/30/15	**0.029**	06/04/09	0.020 U	11/30/15
AGW136-35	ND	--	0.2 U	09/09/08	ND	--	0.2 U	09/09/08	**5.3**	09/09/08	**5.3**	09/09/08	ND	--	0.2 U	09/09/08
AGW136-45	ND	--	0.2 U	09/09/08	ND	--	0.2 U	09/09/08	**5.7**	09/09/08	**5.7**	09/09/08	ND	--	0.2 U	09/09/08
AGW137	ND	--	0.5 U	11/30/15	ND	--	0.2 U	11/30/15	**6.5**	12/01/09	**5.8**	11/30/15	**0.042**	12/10/08	**0.033**	11/30/15
AGW137-55	ND	--	0.2 U	10/30/08	ND	--	0.2 U	10/30/08	**7.3**	10/30/08	**7.3**	10/30/08	ND	--	0.2 U	10/30/08
AGW137-65	ND	--	0.2 U	10/30/08	ND	--	0.2 U	10/30/08	**7.2**	10/30/08	**7.2**	10/30/08	ND	--	0.2 U	10/30/08
AGW138	ND	--	0.5 U	11/30/15	ND	--	0.2 U	11/30/15	**1**	06/04/09	**0.7**	11/30/15	ND	--	0.2 U	11/30/15
AGW139	**0.2**	12/02/09	0.5 U	11/30/15	**0.2**	09/23/09	**0.089**	11/30/15	**6.1**	06/04/09	**3.8**	11/30/15	ND	--	0.2 U	11/30/15
AGW140	ND	--	0.5 U	12/03/15	ND	--	0.2 U	12/03/15	**8.3**	12/03/09	**4.3**	12/03/15	**1**	12/03/09	**0.21**	12/03/15
AGW141	ND	--	0.5 U	11/30/15	**0.056**	05/30/14	**0.047**	11/30/15	**3.6**	03/12/09	**2.5**	11/30/15	ND	--	0.2 U	11/30/15
AGW142	ND	--	0.5 U	11/30/15	ND	--	0.2 U	11/30/15	**1.2**	12/02/09	**0.3**	11/30/15	ND	--	0.2 U	11/30/15

Table 8-1
Maximum and Most Recent Groundwater Results: TCA, PCE, TCE, and VC
Boeing Auburn Remedial Investigation
Auburn, Washington

Analyte: SL:	1,1,1-Trichloroethane 200 µg/L				Tetrachloroethene 5 µg/L				Trichloroethene 0.54 µg/L				Vinyl Chloride 0.029 µg/L			
Well/Boring	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date
AGW143	ND	--	0.5 U	12/08/15	ND	--	0.2 U	12/08/15	ND	--	0.2 U	12/08/15	ND	--	0.2 U	12/08/15
AGW144	ND	--	0.5 U	12/04/15	ND	--	0.2 U	12/04/15	1.3	06/17/14	0.9	12/04/15	0.34	06/20/11	0.3	12/04/15
AGW145	ND	--	0.5 U	12/04/15	ND	--	0.2 U	12/04/15	15	06/17/14	12	12/04/15	1.8	06/20/11	0.8	12/04/15
AGW146	ND	--	0.5 U	12/04/15	ND	--	0.2 U	12/04/15	5.2	06/17/14	3.9	12/04/15	0.36 J	09/01/10	0.13	12/04/15
AGW147	ND	--	0.5 U	12/02/15	ND	--	0.2 U	12/02/15	ND	--	0.2 U	12/02/15	0.18	03/09/10	0.020 U	12/02/15
AGW148	ND	--	0.5 U	12/02/15	0.047	12/10/12	0.04	12/02/15	6.4	12/02/09	4	12/02/15	0.13	10/28/09	0.044	12/02/15
AGW149	0.2 J	06/23/11	0.5 U	12/02/15	0.039	12/06/13	0.2 U	12/02/15	5.5	06/23/11	4.2	12/02/15	0.025	06/10/10	0.2 U	12/02/15
AGW150	ND	--	0.5 U	11/30/15	0.053	12/10/12	0.2 U	11/30/15	3.6	10/28/09	1.6	11/30/15	ND	--	0.2 U	11/30/15
AGW150-90	ND	--	0.2 U	10/05/09	ND	--	0.2 U	10/05/09	0.3	10/05/09	0.3	10/05/09	ND	--	0.020 U	10/05/09
AGW151	ND	--	0.5 U	11/30/15	0.053	12/02/09	0.2 U	11/30/15	1.2	10/28/09	0.5	11/30/15	ND	--	0.2 U	11/30/15
AGW152	ND	--	0.5 U	12/03/15	ND	--	0.2 U	12/03/15	ND	--	0.2 U	12/03/15	6.8	12/08/09	3	12/03/15
AGW153	ND	--	0.5 U	06/03/15	0.2	06/23/14	0.2 U	06/03/15	ND	--	0.2 U	06/03/15	0.17	10/29/09	0.020 U	06/03/15
AGW154	ND	--	0.5 U	12/03/15	ND	--	0.2 U	12/03/15	0.6	12/04/12	0.5	12/03/15	0.05 J	09/01/10	0.03	12/03/15
AGW155	ND	--	0.5 U	12/03/15	ND	--	0.2 U	12/03/15	0.6	06/02/10	0.2 U	12/03/15	9.4	06/13/11	3.3	12/03/15
AGW156	ND	--	0.5 U	12/03/15	0.022	03/15/10	0.020 U	12/03/15	7.4	06/02/10	0.2 U	12/03/15	2.1	06/02/15	1.6	12/03/15
AGW157	ND	--	0.5 U	12/07/15	0.074	06/17/14	0.029	12/07/15	5.4	06/20/11	2.7	12/07/15	2.2	06/08/10	0.6	12/07/15
AGW157-30	ND	--	0.2 U	03/01/10	0.073	03/01/10	0.073	03/01/10	3.2	03/01/10	3.2	03/01/10	0.5	03/01/10	0.5	03/01/10
AGW158	ND	--	0.5 U	12/09/15	0.3	12/09/15	0.3	12/09/15	4.3	12/15/10	2.8	12/09/15	0.3	03/09/10	0.057	12/09/15
AGW158-30	ND	--	0.2 U	02/24/10	0.13	02/24/10	0.13	02/24/10	2.1	02/24/10	2.1	02/24/10	0.078	02/24/10	0.078	02/24/10
AGW159	ND	--	0.5 U	12/09/15	0.098	03/29/10	0.058	12/09/15	5.7	12/15/10	4.4	12/09/15	0.3	12/15/10	0.14	12/09/15
AGW160	0.3	12/15/10	0.5 U	12/04/15	0.031	12/10/12	0.2 U	12/04/15	5.4	12/15/10	3.5	12/04/15	0.03	03/09/10	0.2 U	12/04/15
AGW160-30	ND	--	0.2 U	02/25/10	ND	--	0.020 U	02/25/10	ND	--	0.2 U	02/25/10	ND	--	0.020 U	02/25/10
AGW161	ND	--	0.5 U	12/02/15	0.053	12/03/13	0.2 U	12/02/15	3.3	12/14/10	1.9	12/02/15	ND	--	0.2 U	12/02/15
AGW161-30	ND	--	0.2 U	03/02/10	ND	--	0.020 U	03/02/10	ND	--	0.2 U	03/02/10	ND	--	0.020 U	03/02/10
AGW162	ND	--	0.5 U	12/07/15	0.029	05/29/14	0.022	12/07/15	1.2	06/09/10	0.7	12/07/15	ND	--	0.2 U	12/07/15
AGW162-30	ND	--	0.2 U	02/24/10	ND	--	0.020 U	02/24/10	ND	--	0.2 U	02/24/10	ND	--	0.020 U	02/24/10
AGW163	ND	--	0.5 U	12/07/15	0.08	03/03/13	0.064	12/07/15	5	12/04/12	4.4	12/07/15	0.039	09/15/10	0.025	12/07/15
AGW163-28	ND	--	0.2 U	08/26/10	0.3	08/26/10	0.3	08/26/10	0.8	08/26/10	0.8	08/26/10	ND	--	0.020 U	08/26/10
AGW164	ND	--	0.5 U	12/08/15	0.078	03/03/13	0.029	12/08/15	1.8	12/06/12	1.7	12/08/15	0.54	09/15/10	0.1	12/08/15
AGW164-29	ND	--	0.2 U	08/24/10	ND	--	0.020 U	08/24/10	0.9	08/24/10	0.9	08/24/10	4.5J	08/24/10	4.5 J	08/24/10
AGW165	ND	--	0.5 U	12/03/15	0.077	12/09/13	0.06	12/03/15	2.8	12/08/14	2.3	12/03/15	0.34	06/19/14	0.16	12/03/15
AGW165-55	ND	--	0.2 U	08/25/10	ND	--	0.020 U	08/25/10	0.6	08/25/10	0.6	08/25/10	0.4 J	08/25/10	0.4 J	08/25/10
AGW166	ND	--	0.5 U	12/09/15	ND	--	0.020 U	12/09/15	ND	--	0.2 U	12/09/15	0.4	04/23/12	0.22	12/09/15
AGW166-30	ND	--	0.2 U	10/26/10	0.089	10/26/10	0.089	10/26/10	3.4	10/26/10	3.4	10/26/10	0.6	10/26/10	0.6	10/26/10
AGW167	ND	--	0.5 U	12/09/15	ND	--	0.2 U	12/09/15	6.3	05/29/14	4.8	12/09/15	0.4	04/23/12	0.18	12/09/15
AGW168	ND	--	0.5 U	12/09/15	0.021	05/29/14	0.020 U	12/09/15	6	05/29/14	4.6	12/09/15	0.24	06/22/11	0.064	12/09/15
AGW168-29	ND	--	0.2 U	10/28/10	0.085	10/28/10	0.085	10/28/10	3	10/28/10	3	10/28/10	0.076	10/28/10	0.076	10/28/10
AGW169	ND	--	0.5 U	12/09/15	ND	--	0.2 U	12/09/15	6.7	05/29/14	5.8	12/09/15	0.2	12/14/10	0.061	12/09/15
AGW170	ND	--	0.5 U	12/09/15	0.3	06/12/12	0.21	12/09/15	4.1	12/14/10	2.8	12/09/15	0.061	12/14/10	0.031	12/09/15
AGW170-28.5	ND	--	0.2 U	11/01/10	0.12	11/01/10	0.12	11/01/10	3.6	11/01/10	3.6	11/01/10	0.069	11/01/10	0.069	11/01/10
AGW171	ND	--	0.5 U	12/09/15	0.12	06/09/15	0.11	12/09/15	3.4	12/15/10	2.2	12/09/15	0.027	12/15/10	0.2 U	12/09/15
AGW172	0.2	12/08/11	0.5 U	12/08/15	0.035	03/04/13	0.2 U	12/08/15	6.8	04/23/12	5.6	12/08/15	0.02	03/08/11	0.2 U	12/08/15
AGW173	ND	--	0.5 U	12/08/15	0.035	03/04/13	0.2 U	12/08/15	4.7	06/13/12	2.2	12/08/15	0.025	06/24/11	0.020 U	12/08/15
AGW173-50	ND	--	0.2 U	09/01/10	ND	--	0.2 U	09/01/10	0.7	09/01/10	0.7	09/01/10	ND	--	0.2 U	09/01/10
AGW174	ND	--	0.5 U	12/02/15	0.023	12/03/13	0.2 U	12/02/15	3.9	12/14/10	2	12/02/15	ND	--	0.2 U	12/02/15
AGW174-59	ND	--	0.2 U	08/23/10	ND	--	0.2 U	08/23/10	1.1	08/23/10	1.1	08/23/10	ND	--	0.2 U	08/23/10
AGW175	ND	--	0.5 U	12/02/15	ND	--	0.2 U	12/02/15	4.3	12/14/10	2.4	12/02/15	ND	--	0.2 U	12/02/15

Table 8-1
Maximum and Most Recent Groundwater Results: TCA, PCE, TCE, and VC
Boeing Auburn Remedial Investigation
Auburn, Washington

Analyte: SL:	1,1,1-Trichloroethane 200 µg/L				Tetrachloroethene 5 µg/L				Trichloroethene 0.54 µg/L				Vinyl Chloride 0.029 µg/L			
Well/Boring	**Max**	**Date**	**Most Recent**	**Date**	**Max**	**Date**	**Most Recent**	**Date**	**Max**	**Date**	**Most Recent**	**Date**	**Max**	**Date**	**Most Recent**	**Date**
AGW176	ND	--	0.5 U	12/09/15	**0.021**	12/10/12	0.2 U	12/09/15	**5.6**	12/15/10	**3.8**	12/09/15	**0.021**	12/15/10	0.020 U	12/09/15
AGW177	ND	--	0.5 U	12/02/15	**0.16**	06/12/12	**0.079**	12/02/15	**6.3**	03/04/14	**4.3**	12/02/15	**0.058**	03/08/11	0.020 U	12/02/15
AGW177-29	ND	--	0.2 U	09/21/10	**0.072**	09/21/10	**0.072**	09/21/10	**8.6**	09/21/10	**8.6**	09/21/10	**2**	09/21/10	**2**	09/21/10
AGW178	ND	--	0.5 U	12/02/15	**0.078**	06/04/15	**0.065**	12/02/15	**6.1**	06/12/12	**4.4**	12/02/15	**0.088**	09/29/10	**0.021**	12/02/15
AGW179	ND	--	0.5 U	12/02/15	ND	--	0.2 U	12/02/15	**1.2**	09/29/10	**0.3**	12/02/15	**0.13**	06/22/11	**0.078**	12/02/15
AGW179-30	ND	--	0.2 U	09/22/10	ND	--	0.020 U	09/22/10	ND	--	0.2 U	09/22/10	**0.093**	09/22/10	**0.093**	09/22/10
AGW180	**0.4**	03/08/11	0.5 U	12/02/15	**0.068**	12/02/15	**0.068**	12/02/15	**6.3**	12/15/10	**3.9**	12/02/15	ND	--	0.2 U	12/02/15
AGW181	ND	--	0.5 U	12/01/15	ND	--	0.2 U	12/01/15	**6.3**	12/02/13	**4.8**	12/01/15	**0.05**	12/04/12	**0.048**	12/01/15
AGW182	ND	--	0.5 U	12/04/15	**0.11**	04/29/11	0.020 U	12/04/15	**6.7**	04/29/11	**1.7**	12/04/15	**0.4**	12/16/11	**0.2**	12/04/15
AGW182-29	ND	--	0.2 U	04/29/11	ND	--	0.2 U	04/29/11	**1.4**	04/29/11	**1.4**	04/29/11	**0.3**	04/29/11	**0.3**	04/29/11
AGW183	ND	--	0.5 U	12/04/15	ND	--	0.2 U	12/04/15	ND	--	0.2 U	12/04/15	**0.044**	09/07/11	0.020 U	12/04/15
AGW184	ND	--	0.5 U	12/01/15	ND	--	0.2 U	12/01/15	**0.9**	05/23/11	**0.5**	12/01/15	ND	--	0.2 U	12/01/15
AGW185	ND	--	0.5 U	12/02/15	ND	--	0.2 U	12/02/15	**4.4**	12/03/12	**3.4**	12/02/15	ND	--	0.2 U	12/02/15
AGW186	ND	--	0.5 U	12/01/15	ND	--	0.2 U	12/01/15	**1.2**	06/24/11	**0.6**	12/01/15	ND	--	0.2 U	12/01/15
AGW187	ND	--	0.5 U	12/02/15	ND	--	0.2 U	12/02/15	**2.9**	12/13/11	**2**	12/02/15	**0.022**	04/25/12	0.2 U	12/02/15
AGW188	ND	--	0.5 U	12/01/15	ND	--	0.2 U	12/01/15	**5.6**	09/04/12	**4.6**	12/01/15	**0.035**	09/08/11	**0.025**	12/01/15
AGW189	ND	--	0.5 U	12/01/15	ND	--	0.2 U	12/01/15	**1.5**	06/24/11	**0.7**	12/01/15	ND	--	0.2 U	12/01/15
AGW190	ND	--	0.5 U	12/08/15	ND	--	0.2 U	12/08/15	**1.9**	06/21/12	**1.5**	12/08/15	**0.021**	09/05/12	0.2 U	12/08/15
AGW191	ND	--	0.5 U	12/08/15	ND	--	0.2 U	12/08/15	ND	--	0.2 U	12/08/15	ND	--	0.020 U	12/08/15
AGW192	ND	--	0.5 U	12/08/15	ND	--	0.2 U	12/08/15	ND	--	0.2 U	12/08/15	**0.13**	09/08/11	0.020 U	12/08/15
AGW192-25	ND	--	0.2 U	08/30/11	ND	--	0.020 U	08/30/11	**1.2**	08/30/11	**1.2**	08/30/11	**0.6**	08/30/11	**0.6**	08/30/11
AGW193	ND	--	0.5 U	12/09/15	**0.11**	06/12/12	**0.074**	12/09/15	**3.8**	03/05/14	**3**	12/09/15	**0.4**	12/05/12	**0.3**	12/09/15
AGW194	ND	--	0.5 U	12/09/15	**0.3**	05/29/14	**0.24**	12/09/15	**2.9**	04/23/12	**2.4**	12/09/15	**0.059**	09/08/11	**0.03**	12/09/15
AGW195	**0.6**	06/11/13	0.5 U	12/07/15	**0.037**	12/10/12	**0.034**	12/07/15	**9.9**	06/11/13	**8.4**	12/07/15	**0.031**	10/19/11	0.020 U	12/07/15
AGW195-30	ND	--	0.2 U	10/02/11	ND	--	0.020 U	10/02/11	ND	--	0.2 U	10/02/11	**0.32**	10/02/11	**0.32**	10/02/11
AGW196	ND	--	0.5 U	12/07/15	ND	--	0.2 U	12/07/15	ND	--	0.2 U	12/07/15	**2.1**	06/04/15	**2**	12/07/15
AGW197	**0.3**	12/08/11	0.5 U	12/09/15	**0.028**	10/19/11	0.020 U	12/09/15	**14**	09/06/12	**9.8**	12/09/15	**0.025**	10/19/11	0.2 U	12/09/15
AGW197-29	ND	--	0.2 U	10/03/11	ND	--	0.020 U	10/03/11	**3.6**	10/03/11	**3.6**	10/03/11	**0.71**	10/03/11	**0.71**	10/03/11
AGW198	**0.3 J**	10/19/11	0.5 U	12/09/15	ND	--	0.2 U	12/09/15	**10**	06/13/12	**7.7**	12/09/15	**0.027**	12/10/12	0.020 U	12/09/15
AGW199	ND	--	0.5 U	12/08/15	ND	--	0.2 U	12/08/15	**9.8**	12/09/14	**8.5**	12/08/15	**0.039**	10/19/11	**0.029**	12/08/15
AGW199-28	ND	--	0.2 U	10/06/11	ND	--	0.020 U	10/06/11	**0.8**	10/06/11	**0.8**	10/06/11	**0.1**	10/06/11	**0.1**	10/06/11
AGW200-1	ND	--	0.5 U	04/26/12	ND	--	0.020 U	04/26/12	**0.2**	11/18/11	0.2 U	04/26/12	**1.8**	04/26/12	**1.8**	04/26/12
AGW200-2	ND	--	0.5 U	12/08/15	ND	--	0.2 U	12/08/15	**0.4**	06/04/15	**0.3**	12/08/15	**2.3**	03/04/14	**2.1**	12/08/15
AGW200-3	ND	--	0.5 U	04/26/12	ND	--	0.020 U	04/26/12	**0.2**	11/18/11	0.2 U	04/26/12	**2**	04/26/12	**2**	04/26/12
AGW200-4	ND	--	0.5 U	04/26/12	ND	--	0.020 U	04/26/12	ND	--	0.2 U	04/26/12	**1.2**	11/18/11	**0.5**	04/26/12
AGW200-5	ND	--	0.5 U	12/08/15	ND	--	0.2 U	12/08/15	**2.5**	11/18/11	**1.5**	12/08/15	**1.9**	12/04/12	**1.7**	12/08/15
AGW200-6	ND	--	0.5 U	12/08/15	ND	--	0.2 U	12/08/15	**1.9**	09/05/12	**0.8**	12/08/15	**2**	12/04/12	**1.1**	12/08/15
AGW200-7	ND	--	0.5 U	04/26/12	ND	--	0.020 U	04/26/12	**1**	11/18/11	**0.9**	04/26/12	**0.05**	04/26/12	**0.05**	04/26/12
AGW201-1	ND	--	0.5 U	04/27/12	**0.024**	11/21/11	0.020 U	04/27/12	**0.8**	11/21/11	**0.6**	04/27/12	**2.5**	04/27/12	**2.5**	04/27/12
AGW201-2	ND	--	0.5 U	12/08/15	**0.021**	11/21/11	0.2 U	12/08/15	**0.8**	05/27/14	**0.5**	12/08/15	**2.6**	12/02/13	**2**	12/08/15
AGW201-3	ND	--	0.5 U	04/27/12	ND	--	0.020 U	04/27/12	**0.9**	04/27/12	**0.9**	04/27/12	**3.1**	04/27/12	**3.1**	04/27/12
AGW201-4	ND	--	0.5 U	04/27/12	ND	--	0.020 U	04/27/12	**1.3**	11/21/11	**0.5**	04/27/12	**0.7**	11/21/11	**0.6**	04/27/12
AGW201-5	ND	--	0.5 U	12/08/15	**0.12**	05/27/14	0.2 U	12/08/15	**6.9**	06/21/12	**5.3**	12/08/15	**1.4**	03/04/14	**1**	12/08/15
AGW201-6	ND	--	0.5 U	12/08/15	**0.076**	11/21/11	**0.056**	12/08/15	**11**	06/21/12	**8.2**	12/08/15	**0.95**	09/05/12	**0.5**	12/08/15
AGW201-7	ND	--	0.5 U	04/27/12	ND	--	0.020 U	04/27/12	**2.4**	11/21/11	**2**	04/27/12	**0.024**	04/27/12	**0.024**	04/27/12
AGW202-1	ND	--	0.5 U	04/27/12	ND	--	0.020 U	04/27/12	ND	--	0.2 U	04/27/12	**4**	04/27/12	**4**	04/27/12
AGW202-2	ND	--	0.5 U	12/08/15	**0.13**	06/04/13	**0.051**	12/08/15	**2.3**	04/27/12	**1.6**	12/08/15	**1.2**	12/08/15	**1.2**	12/08/15

Table 8-1
Maximum and Most Recent Groundwater Results: TCA, PCE, TCE, and VC
Boeing Auburn Remedial Investigation
Auburn, Washington

Analyte: SL:	1,1,1-Trichloroethane 200 µg/L				Tetrachloroethene 5 µg/L				Trichloroethene 0.54 µg/L				Vinyl Chloride 0.029 µg/L			
Well/Boring	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date
AGW202-3	ND	--	0.5 U	04/27/12	**0.099**	11/22/11	**0.071**	04/27/12	**3.9**	11/22/11	**3.6**	04/27/12	**0.56**	04/27/12	**0.56**	04/27/12
AGW202-4	ND	--	0.5 U	12/08/15	**0.16**	04/27/12	0.2 U	12/08/15	**5.5**	04/27/12	**3.6**	12/08/15	**3.9**	09/05/13	**0.4**	12/08/15
AGW202-5	ND	--	0.5 U	04/27/12	**0.26**	11/22/11	**0.25**	04/27/12	**4.5**	04/27/12	**4.5**	04/27/12	**0.12**	04/27/12	**0.12**	04/27/12
AGW202-6	ND	--	0.5 U	12/08/15	ND	--	0.020 U	12/08/15	**1.3**	06/22/12	**1**	12/08/15	ND	--	0.2 U	12/08/15
AGW202-7	ND	--	0.5 U	04/27/12	ND	--	0.020 U	04/27/12	**0.2**	04/27/12	**0.2**	04/27/12	ND	--	0.020 U	04/27/12
AGW203-1	ND	--	0.5 U	04/30/12	**0.23**	04/30/12	**0.23**	04/30/12	**1.5**	04/30/12	**1.5**	04/30/12	ND	--	0.020 U	04/30/12
AGW203-2	ND	--	0.5 U	12/08/15	**0.5**	06/22/12	**0.41**	12/08/15	**1.7**	06/22/12	**1.3**	12/08/15	ND	--	0.2 U	12/08/15
AGW203-3	ND	--	0.5 U	04/30/12	**0.4**	04/30/12	**0.4**	04/30/12	**1.1**	04/30/12	**1.1**	04/30/12	ND	--	0.020 U	04/30/12
AGW203-4	ND	--	0.5 U	12/08/15	**0.6**	06/22/12	**0.42**	12/08/15	**5.3**	06/22/12	**3.3**	12/08/15	ND	--	0.2 U	12/08/15
AGW203-5	ND	--	0.5 U	04/30/12	**0.6**	04/30/12	**0.6**	04/30/12	**0.6**	04/30/12	**0.6**	04/30/12	ND	--	0.020 U	04/30/12
AGW203-6	ND	--	0.5 U	12/08/15	**0.15**	12/04/13	**0.13**	12/08/15	**0.4**	11/22/11	**0.2**	12/08/15	ND	--	0.2 U	12/08/15
AGW204	ND	--	0.5 U	06/02/15	**0.3**	06/02/15	**0.3**	06/02/15	ND	--	0.2 U	06/02/15	ND	--	0.020 U	06/02/15
AGW204-30	ND	--	0.2 U	10/27/11	**0.33**	10/27/11	**0.33**	10/27/11	**0.2**	10/27/11	**0.2**	10/27/11	ND	--	0.020 U	10/27/11
AGW205	ND	--	0.5 U	06/02/15	**0.088**	12/13/11	0.2 U	06/02/15	ND	--	0.2 U	06/02/15	ND	--	0.020 U	06/02/15
AGW205-30	ND	--	0.2 U	10/27/11	**0.17**	10/27/11	**0.17**	10/27/11	ND	--	0.2 U	10/27/11	ND	--	0.020 U	10/27/11
AGW206	ND	--	0.5 U	12/07/15	**0.4**	06/02/15	**0.3**	12/07/15	**0.8**	12/04/13	**0.7**	12/07/15	ND	--	0.2 U	12/07/15
AGW206-29	ND	--	0.2 U	10/28/11	**0.3**	10/28/11	**0.3**	10/28/11	**1.6**	10/28/11	**1.6**	10/28/11	ND	--	0.020 U	10/28/11
AGW207-1	ND	--	0.5 U	04/23/12	**0.026**	12/08/11	0.020 U	04/23/12	**9.1**	04/23/12	**9.1**	04/23/12	**1.3**	04/23/12	**1.3**	04/23/12
AGW207-2	ND	--	0.5 U	11/30/15	**0.04**	03/05/13	0.2 U	11/30/15	**10**	12/04/12	**7.6**	11/30/15	**0.21**	12/08/11	**0.2**	11/30/15
AGW207-3	ND	--	0.5 U	04/23/12	**0.063**	04/23/12	**0.063**	04/23/12	**8.9**	04/23/12	**8.9**	04/23/12	**0.092**	04/23/12	**0.092**	04/23/12
AGW207-4	ND	--	0.5 U	11/30/15	**0.064**	12/08/11	0.2 U	11/30/15	**8.5**	04/23/12	**6.7**	11/30/15	**0.23**	11/30/15	**0.23**	11/30/15
AGW207-5	ND	--	0.5 U	04/23/12	**0.058**	04/23/12	**0.058**	04/23/12	**7.5**	04/23/12	**7.5**	04/23/12	**0.047**	04/23/12	**0.047**	04/23/12
AGW207-7	ND	--	0.5 U	11/30/15	**0.069**	09/04/12	0.2 U	11/30/15	**7.6**	12/04/12	**5.9**	11/30/15	**0.052**	04/23/12	**0.022**	11/30/15
AGW208-1	ND	--	0.5 U	04/23/12	ND	--	0.020 U	04/23/12	**2.5**	04/23/12	**2.5**	04/23/12	**0.98**	04/23/12	**0.98**	04/23/12
AGW208-2	ND	--	0.5 U	12/03/15	**0.021**	12/08/11	0.2 U	12/03/15	**5.7**	12/03/12	**3.7**	12/03/15	**2.2**	05/28/14	**0.5**	12/03/15
AGW208-3	ND	--	0.5 U	04/23/12	**0.022**	12/08/11	0.020 U	04/23/12	**5.4**	12/08/11	**4.5**	04/23/12	**0.53**	12/08/11	**0.23**	04/23/12
AGW208-4	ND	--	0.5 U	12/03/15	**0.066**	04/24/12	0.2 U	12/03/15	**6**	04/24/12	**1.4**	12/03/15	**0.23**	12/03/15	**0.23**	12/03/15
AGW208-5	**0.3**	12/09/11	0.5 U	04/24/12	**0.071**	12/09/11	**0.07**	04/24/12	**7**	04/24/12	**7**	04/24/12	**0.028**	04/24/12	**0.028**	04/24/12
AGW208-6	**0.3**	12/09/11	0.5 U	12/03/15	**0.075**	04/24/12	0.2 U	12/03/15	**7.5**	06/21/12	**5.5**	12/03/15	**0.033**	04/24/12	0.2 U	12/03/15
AGW208-7	ND	--	0.5 U	04/24/12	ND	--	0.020 U	04/24/12	**4.2**	04/24/12	**4.2**	04/24/12	**0.046**	04/24/12	**0.046**	04/24/12
AGW209-1	ND	--	0.5 U	04/24/12	ND	--	0.020 U	04/24/12	ND	--	0.2 U	04/24/12	**2.4**	12/12/11	**2.2**	04/24/12
AGW209-2	ND	--	0.5 U	12/04/15	ND	--	0.2 U	12/04/15	ND	--	0.2 U	12/04/15	**2.8**	03/03/14	**2.1**	12/04/15
AGW209-3	ND	--	0.5 U	04/24/12	ND	--	0.020 U	04/24/12	**0.3**	12/09/11	0.2 U	04/24/12	**4.9**	04/24/12	**4.9**	04/24/12
AGW209-4	ND	--	0.5 U	04/24/12	ND	--	0.020 U	04/24/12	ND	--	0.2 U	04/24/12	**4.8**	04/24/12	**4.8**	04/24/12
AGW209-5	ND	--	0.5 U	12/04/15	ND	--	0.2 U	12/04/15	**2.5**	05/28/14	**2.1**	12/04/15	**1.4**	12/04/15	**1.4**	12/04/15
AGW209-6	**0.4**	12/09/11	0.5 U	12/04/15	**0.065**	09/04/12	0.2 U	12/04/15	**7.4**	06/21/12	**5.7**	12/04/15	**0.024**	05/28/14	**0.021**	12/04/15
AGW209-7	**0.4**	12/09/11	0.5 U	04/24/12	**0.05**	04/24/12	**0.05**	04/24/12	**7.4**	04/24/12	**7.4**	04/24/12	**0.023**	04/24/12	**0.023**	04/24/12
AGW210-1	ND	--	0.5 U	04/24/12	ND	--	0.020 U	04/24/12	ND	--	0.2 U	04/24/12	ND	--	0.020 U	04/24/12
AGW210-2	ND	--	0.5 U	06/02/15	ND	--	0.2 U	06/02/15	ND	--	0.2 U	06/02/15	ND	--	0.020 U	06/02/15
AGW210-3	ND	--	0.5 U	04/25/12	ND	--	0.020 U	04/25/12	ND	--	0.2 U	04/25/12	ND	--	0.020 U	04/25/12
AGW210-4	ND	--	0.5 U	04/25/12	ND	--	0.020 U	04/25/12	**1.6**	04/25/12	**1.6**	04/25/12	**0.071**	04/25/12	**0.071**	04/25/12
AGW210-5	ND	--	0.5 U	12/07/15	ND	--	0.2 U	12/07/15	**3.3**	05/28/14	**1.4**	12/07/15	**0.083**	04/25/12	**0.062**	12/07/15
AGW210-6	**0.3**	12/12/11	0.5 U	12/07/15	ND	--	0.2 U	12/07/15	**6.5**	06/21/12	**4.9**	12/07/15	ND	--	0.2 U	12/07/15
AGW210-7	ND	--	0.5 U	04/25/12	ND	--	0.020 U	04/25/12	ND	--	0.2 U	04/25/12	ND	--	0.020 U	04/25/12
AGW211-1	ND	--	0.5 U	04/25/12	ND	--	0.020 U	04/25/12	ND	--	0.2 U	04/25/12	ND	--	0.020 U	04/25/12
AGW211-2	ND	--	0.5 U	06/02/15	ND	--	0.2 U	06/02/15	**0.3**	03/05/13	0.2 U	06/02/15	ND	--	0.020 U	06/02/15
AGW211-3	ND	--	0.5 U	04/25/12	ND	--	0.020 U	04/25/12	ND	--	0.2 U	04/25/12	ND	--	0.020 U	04/25/12

Table 8-1
Maximum and Most Recent Groundwater Results: TCA, PCE, TCE, and VC
Boeing Auburn Remedial Investigation
Auburn, Washington

Analyte: SL:	1,1,1-Trichloroethane 200 µg/L				Tetrachloroethene 5 µg/L				Trichloroethene 0.54 µg/L				Vinyl Chloride 0.029 µg/L			
Well/Boring	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date
AGW211-4	ND	--	0.5 U	04/25/12	ND	--	0.020 U	04/25/12	**6.3**	04/25/12	**6.3**	04/25/12	ND	--	0.020 U	04/25/12
AGW211-5	ND	--	0.5 U	12/04/15	ND	--	0.2 U	12/04/15	**6**	06/20/12	**3.7**	12/04/15	ND	--	0.020 U	12/04/15
AGW211-6	ND	--	0.5 U	12/04/15	ND	--	0.2 U	12/04/15	**4.9**	06/20/12	**0.9**	12/04/15	**0.21**	09/04/12	0.2 U	12/04/15
AGW211-7	ND	--	0.5 U	04/26/12	ND	--	0.020 U	04/26/12	ND	--	0.2 U	04/26/12	ND	--	0.020 U	04/26/12
AGW212-1	ND	--	0.5 U	04/26/12	ND	--	0.020 U	04/26/12	ND	--	0.2 U	04/26/12	ND	--	0.020 U	04/26/12
AGW212-2	ND	--	0.5 U	06/03/15	ND	--	0.020 U	06/03/15	ND	--	0.2 U	06/03/15	ND	--	0.020 U	06/03/15
AGW212-3	ND	--	0.5 U	04/26/12	ND	--	0.020 U	04/26/12	**0.4**	12/13/11	0.2 U	04/26/12	ND	--	0.020 U	04/26/12
AGW212-5	ND	--	0.5 U	12/07/15	**0.048**	06/03/15	**0.044**	12/07/15	**3.3**	12/13/11	**2.1**	12/07/15	ND	--	0.2 U	12/07/15
AGW212-6	ND	--	0.5 U	04/26/12	ND	--	0.020 U	04/26/12	**2.8**	12/13/11	**2.6**	04/26/12	ND	--	0.020 U	04/26/12
AGW212-7	**0.4**	12/13/11	0.5 U	12/07/15	ND	--	0.020 U	12/07/15	**5.6**	05/28/14	**4.7**	12/07/15	ND	--	0.2 U	12/07/15
AGW213	ND	--	0.5 U	12/01/15	**0.14**	12/04/12	**0.022**	12/01/15	ND	--	0.2 U	12/01/15	**0.029**	09/04/12	**0.024**	12/01/15
AGW213-28	ND	--	0.2 U	11/14/11	**0.04**	11/14/11	**0.04**	11/14/11	**0.4**	11/14/11	**0.4**	11/14/11	**0.4**	11/14/11	**0.4**	11/14/11
AGW214	ND	--	0.5 U	12/01/15	**0.026**	03/04/13	0.2 U	12/01/15	**3.9**	04/27/12	**2.7**	12/01/15	**0.026**	12/01/15	**0.026**	12/01/15
AGW214-27	ND	--	0.2 U	11/15/11	ND	--	0.2 U	11/15/11	**3.2**	11/15/11	**3.2**	11/15/11	ND	--	0.2 U	11/15/11
AGW215	ND	--	0.5 U	12/01/15	**0.025**	03/04/13	0.020 U	12/01/15	ND	--	0.2 U	12/01/15	ND	--	0.020 U	12/01/15
AGW215-29	ND	--	0.2 U	11/16/11	ND	--	0.020 U	11/16/11	ND	--	0.2 U	11/16/11	ND	--	0.020 U	11/16/11
AGW216	ND	--	0.5 U	12/04/15	**0.026**	03/04/13	0.020 U	12/04/15	**1.3**	12/02/13	**1**	12/04/15	**0.022**	06/04/13	0.2 U	12/04/15
AGW216-30	ND	--	0.2 U	11/17/11	ND	--	0.020 U	11/17/11	ND	--	0.2 U	11/17/11	ND	--	0.020 U	11/17/11
AGW217	ND	--	0.5 U	12/01/15	**0.025**	03/04/13	0.020 U	12/01/15	**2.1**	03/03/14	**1.8**	12/01/15	**0.028**	04/27/12	**0.022**	12/01/15
AGW217-29	ND	--	0.2 U	11/18/11	ND	--	0.020 U	11/18/11	ND	--	0.2 U	11/18/11	ND	--	0.020 U	11/18/11
AGW218	ND	--	0.5 U	12/01/15	**0.025**	03/04/13	0.2 U	12/01/15	**4.7**	04/26/12	**3.6**	12/01/15	**0.026**	06/04/13	**0.021**	12/01/15
AGW218-28	ND	--	0.2 U	11/21/11	ND	--	0.020 U	11/21/11	ND	--	0.2 U	11/21/11	ND	--	0.02 U	11/21/11
AGW219	ND	--	0.5 U	12/01/15	ND	--	0.2 U	12/01/15	ND	--	0.2 U	12/01/15	**0.022**	06/04/13	0.020 U	12/01/15
AGW219-30	ND	--	0.2 U	11/22/11	ND	--	0.020 U	11/22/11	ND	--	0.2 U	11/22/11	ND	--	0.02 U	11/22/11
AGW220	ND	--	0.5 U	12/01/15	ND	--	0.020 U	12/01/15	**0.5**	05/27/14	**0.3**	12/01/15	ND	--	0.020 U	12/01/15
AGW220-28	ND	--	0.2 U	11/28/11	ND	--	0.020 U	11/28/11	ND	--	0.2 U	11/28/11	ND	--	0.020 U	11/28/11
AGW221	ND	--	0.5 U	12/03/15	ND	--	0.020 U	12/03/15	ND	--	0.2 U	12/03/15	**0.022**	09/04/12	0.020 U	12/03/15
AGW222	ND	--	0.5 U	12/09/15	**0.5**	06/19/14	**0.2**	12/09/15	**1**	12/27/12	**0.4 J**	12/09/15	ND	--	0.2 U	12/09/15
AGW222-27	ND	--	0.5 U	12/02/12	**0.6**	12/02/12	**0.6**	12/02/12	**1.3**	12/02/12	**1.3**	12/02/12	ND	--	0.020 U	12/02/12
AGW223	ND	--	0.5 U	06/03/15	ND	--	0.020 U	06/03/15	ND	--	0.2 U	06/03/15	ND	--	0.020 U	06/03/15
AGW223-30	ND	--	0.5 U	12/03/12	**0.086**	12/03/12	**0.086**	12/03/12	**1.7**	12/03/12	**1.7**	12/03/12	ND	--	0.020 U	12/03/12
AGW223-60	ND	--	0.5 U	12/04/12	ND	--	0.020 U	12/04/12	**0.4**	12/04/12	**0.4**	12/04/12	**0.095**	12/04/12	**0.095**	12/04/12
AGW223-90	ND	--	0.2 U	12/04/12	ND	--	0.2 U	12/04/12	ND	--	0.2 U	12/04/12	ND	--	0.2 U	12/04/12
AGW224	ND	--	0.5 U	06/05/15	ND	--	0.2 U	06/05/15	ND	--	0.2 U	06/05/15	ND	--	0.020 U	06/05/15
AGW225	ND	--	0.5 U	12/08/15	ND	--	0.2 U	12/08/15	**2.3**	12/01/14	**2.1**	12/08/15	**0.6**	03/05/14	**0.5**	12/08/15
AGW226	ND	--	0.5 U	12/02/15	ND	--	0.2 U	12/02/15	**4.8**	09/10/14	**0.5**	12/02/15	**0.74**	12/04/13	**0.4**	12/02/15
AGW227	ND	--	0.5 U	12/09/15	ND	--	0.2 U	12/09/15	**3.1**	06/05/13	**2.5**	12/09/15	**0.4**	12/04/13	**0.3**	12/09/15
AGW228	ND	--	0.5 U	12/09/15	ND	--	0.2 U	12/09/15	**2.9**	12/02/14	**2.8**	12/09/15	**0.41**	06/05/13	**0.3**	12/09/15
AGW229	ND	--	0.5 U	12/09/15	**0.056**	12/04/13	0.2 U	12/09/15	**2.9**	12/01/14	0.2 U	12/09/15	**0.045**	12/01/14	0.020 U	12/09/15
AGW230	ND	--	0.5 U	12/01/15	ND	--	0.2 U	12/01/15	**1.4**	03/05/14	**1.2**	12/01/15	ND	--	0.2 U	12/01/15
AGW231	ND	--	0.5 U	12/08/15	ND	--	0.2 U	12/08/15	**1.5**	06/11/13	**1.2**	12/08/15	**3.4**	09/06/13	**2.3**	12/08/15
AGW231-9	ND	--	0.5 U	05/19/13	ND	--	0.020 U	05/19/13	ND	--	0.2 U	05/19/13	**2.2**	05/19/13	**2.2**	05/19/13
AGW232	ND	--	0.5 U	12/07/15	ND	--	0.2 U	12/07/15	ND	--	0.2 U	12/07/15	**2**	12/07/15	**2**	12/07/15
AGW232-14	ND	--	0.5 U	05/20/13	ND	--	0.020 U	05/20/13	ND	--	0.2 U	05/20/13	ND	--	0.020 U	05/20/13
AGW233	ND	--	0.5 U	12/07/15	ND	--	0.2 U	12/07/15	ND	--	0.2 U	12/07/15	ND	--	0.2 U	12/07/15
AGW233-30	ND	--	0.5 U	05/21/13	ND	--	0.020 U	05/21/13	ND	--	0.5 U	05/21/13	ND	--	0.020 U	05/21/13
AGW234	ND	--	0.5 U	12/07/15	ND	--	0.2 U	12/07/15	**8.6**	06/05/15	**7.7**	12/07/15	**0.077**	03/06/14	**0.053**	12/07/15

Table 8-1
Maximum and Most Recent Groundwater Results: TCA, PCE, TCE, and VC
Boeing Auburn Remedial Investigation
Auburn, Washington

Analyte: SL:	1,1,1-Trichloroethane 200 µg/L				Tetrachloroethene 5 µg/L				Trichloroethene 0.54 µg/L				Vinyl Chloride 0.029 µg/L			
Well/Boring	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date
AGW234-21	ND	--	0.5 U	05/22/13	ND	--	0.020 U	05/22/13	ND	--	0.5 U	05/22/13	**1.2**	05/22/13	**1.2**	05/22/13
AGW234-57	ND	--	0.5 U	05/22/13	ND	--	0.020 U	05/22/13	**5.8**	05/22/13	**5.8**	05/22/13	**0.1**	05/22/13	**0.1**	05/22/13
AGW235-1	ND	--	0.5 U	09/06/13	ND	--	0.020 U	09/06/13	ND	--	0.2 U	09/06/13	**0.14**	09/06/13	**0.14**	09/06/13
AGW235-2	ND	--	0.5 U	12/08/15	ND	--	0.2 U	12/08/15	ND	--	0.2 U	12/08/15	**2.3**	12/08/15	**2.3**	12/08/15
AGW235-3	ND	--	0.5 U	09/06/13	ND	--	0.020 U	09/06/13	**3.3**	06/12/13	**2.5**	09/06/13	**0.3**	09/06/13	**0.3**	09/06/13
AGW235-4	ND	--	0.5 U	12/08/15	ND	--	0.2 U	12/08/15	**6.2**	06/12/13	**4**	12/08/15	**0.2**	06/12/13	**0.11**	12/08/15
AGW235-5	ND	--	0.5 U	09/06/13	ND	--	0.020 U	09/06/13	**5**	09/06/13	**5**	09/06/13	**0.11**	09/06/13	**0.11**	09/06/13
AGW235-6	ND	--	0.5 U	09/06/13	ND	--	0.020 U	09/06/13	ND	--	0.2 U	09/06/13	ND	--	0.02 U	09/06/13
AGW235-7	ND	--	0.5 U	12/08/15	ND	--	0.2 U	12/08/15	ND	--	0.2 U	12/08/15	ND	--	0.2 U	12/08/15
AGW236	ND	--	0.5 U	12/04/15	ND	--	0.2 U	12/04/15	**8.7**	03/04/14	**6**	12/04/15	**0.074**	03/04/14	**0.065**	12/04/15
AGW236-14	ND	--	0.5 U	05/28/13	ND	--	0.020 U	05/28/13	ND	--	0.2 U	05/28/13	**0.12**	05/28/13	**0.12**	05/28/13
AGW237	ND	--	0.5 U	12/03/15	**0.7**	10/03/13	**0.037**	12/03/15	**12**	10/03/13	**2.4**	12/03/15	**0.096**	10/03/13	**0.043**	12/03/15
AGW238	ND	--	0.5 U	12/03/15	ND	--	0.020 U	12/03/15	ND	--	0.2 U	12/03/15	ND	--	0.020 U	12/03/15
AGW239	ND	--	0.5 U	12/03/15	ND	--	0.020 U	12/03/15	ND	--	0.2 U	12/03/15	**1.4**	12/03/15	**1.4**	12/03/15
AGW239-8.5	ND	--	0.5 U	09/25/13	ND	--	0.020 U	09/25/13	ND	--	0.2 U	09/25/13	ND	--	0.020 U	09/25/13
AGW240-1	ND	--	0.5 U	12/07/15	ND	--	0.020 U	12/07/15	ND	--	0.2 U	12/07/15	**1.1**	03/03/15	**0.3**	12/07/15
AGW240-3	ND	--	0.5 U	06/10/15	ND	--	0.020 U	06/10/15	ND	--	0.2 U	06/10/15	**5.4**	12/01/14	**2.6**	06/10/15
AGW240-5	ND	--	0.5 U	12/07/15	ND	--	0.020 U	12/07/15	ND	--	0.2 U	12/07/15	**6.6**	12/01/14	**4.3**	12/07/15
AGW241-1	ND	--	0.5 U	11/30/15	**0.026**	09/04/14	0.020 U	11/30/15	ND	--	0.2 U	11/30/15	ND	--	0.020 U	11/30/15
AGW241-3	ND	--	0.5 U	06/08/15	ND	--	0.020 U	06/08/15	ND	--	0.2 U	06/08/15	**0.031**	12/03/14	0.020 U	06/08/15
AGW241-5	ND	--	0.5 U	11/30/15	ND	--	0.020 U	11/30/15	ND	--	0.2 U	11/30/15	**0.039**	08/26/15	0.020 U	11/30/15
AGW242-1	ND	--	0.5 U	11/30/15	ND	--	0.020 U	11/30/15	ND	--	0.2 U	11/30/15	**0.4**	03/04/15	**0.096**	11/30/15
AGW242-2	ND	--	0.5 U	11/30/15	ND	--	0.020 U	11/30/15	ND	--	0.2 U	11/30/15	ND	--	0.020 U	11/30/15
AGW242-3	ND	--	0.5 U	12/03/14	ND	--	0.020 U	12/03/14	ND	--	0.2 U	12/03/14	ND	--	0.020 U	12/03/14
AGW242-4	ND	--	0.5 U	12/03/14	ND	--	0.020 U	12/03/14	ND	--	0.2 U	12/03/14	ND	--	0.020 U	12/03/14
AGW242-5	ND	--	0.5 U	11/30/15	ND	--	0.020 U	11/30/15	ND	--	0.2 U	11/30/15	ND	--	0.020 U	11/30/15
AGW242-6	ND	--	0.5 U	12/03/14	ND	--	0.020 U	12/03/14	ND	--	0.2 U	12/03/14	ND	--	0.020 U	12/03/14
AGW243-1	ND	--	0.5 U	11/30/15	**0.024 J**	09/03/14	0.020 U	11/30/15	ND	--	0.2 U	11/30/15	**0.26**	07/14/14	**0.023**	11/30/15
AGW243-3	ND	--	0.5 U	11/30/15	ND	--	0.020 U	11/30/15	ND	--	0.2 U	11/30/15	ND	--	0.020 U	11/30/15
AGW243-5	ND	--	0.5 U	11/30/15	ND	--	0.020 U	11/30/15	ND	--	0.2 U	11/30/15	ND	--	0.020 U	11/30/15
AGW244	ND	--	0.5 U	12/03/15	ND	--	0.020 U	12/03/15	ND	--	0.2 U	12/03/15	**0.14**	07/11/14	0.020 U	12/03/15
AGW245	ND	--	0.5 U	12/03/15	ND	--	0.020 U	12/03/15	**0.5**	07/14/14	0.2 U	12/03/15	**1.5**	07/14/14	0.020 U	12/03/15
AGW246	ND	--	0.5 U	12/03/15	ND	--	0.020 U	12/03/15	ND	--	0.2 U	12/03/15	**0.18**	07/14/14	0.020 U	12/03/15
AGW247-1	ND	--	0.5 U	12/02/15	ND	--	0.020 U	12/02/15	ND	--	0.2 U	12/02/15	**2.5**	08/14/15	**2.1**	12/02/15
AGW247-3	ND	--	0.5 U	06/10/15	ND	--	0.020 U	06/10/15	ND	--	0.2 U	06/10/15	**1.1**	09/04/14	**1**	06/10/15
AGW247-5	ND	--	0.5 U	12/02/15	ND	--	0.020 U	12/02/15	ND	--	0.2 U	12/02/15	**4**	12/02/15	**4**	12/02/15
AGW248-1	ND	--	0.5 U	12/08/15	**0.97**	07/14/14	0.020 U	12/08/15	ND	--	0.2 U	12/08/15	**1.4**	07/14/14	0.020 U	12/08/15
AGW248-3	ND	--	0.5 U	06/09/15	**0.12**	07/14/14	**0.11**	06/09/15	**5.4**	12/01/14	**4.8**	06/09/15	**0.22**	12/01/14	**0.16**	06/09/15
AGW248-5	ND	--	0.5 U	12/08/15	**0.12**	06/09/15	**0.11**	12/08/15	**5.6**	12/01/14	**5**	12/08/15	**0.25**	08/26/15	**0.23**	12/08/15
AGW249-1	ND	--	0.5 U	12/09/15	ND	--	0.020 U	12/09/15	**0.9 J**	07/11/14	0.2 U	12/09/15	**2.8**	08/26/15	**1.9**	12/09/15
AGW249-3	ND	--	0.5 U	06/09/15	**0.12**	06/09/15	**0.12**	06/09/15	**7.1**	12/02/14	**6.3**	06/09/15	**0.21**	12/02/14	**0.16**	06/09/15
AGW249-5	ND	--	0.5 U	12/09/15	**0.12**	12/09/15	**0.12**	12/09/15	**7.9**	12/02/14	**7.1**	12/09/15	**0.21**	12/02/14	**0.14**	12/09/15
AGW250-1	ND	--	0.5 U	11/30/15	ND	--	0.020 U	11/30/15	ND	--	0.2 U	11/30/15	ND	--	0.020 U	11/30/15
AGW250-2	ND	--	0.5 U	11/30/15	ND	--	0.020 U	11/30/15	**0.3**	11/30/15	**0.3**	11/30/15	**0.04**	08/25/15	**0.033**	11/30/15
AGW250-3	ND	--	0.5 U	11/30/15	ND	--	0.020 U	11/30/15	**0.6**	03/03/15	**0.5**	11/30/15	**0.055**	11/30/15	**0.055**	11/30/15
AGW250-4	ND	--	0.5 U	12/03/14	ND	--	0.020 U	12/03/14	ND	--	0.2 U	12/03/14	**0.19**	09/04/14	**0.16**	12/03/14
AGW250-5	ND	--	0.5 U	12/03/14	ND	--	0.020 U	12/03/14	ND	--	0.2 U	12/03/14	ND	--	0.020 U	12/03/14

Table 8-1
Maximum and Most Recent Groundwater Results: TCA, PCE, TCE, and VC
Boeing Auburn Remedial Investigation
Auburn, Washington

Analyte: SL:	1,1,1-Trichloroethane 200 µg/L				Tetrachloroethene 5 µg/L				Trichloroethene 0.54 µg/L				Vinyl Chloride 0.029 µg/L			
Well/Boring	**Max**	**Date**	**Most Recent**	**Date**	**Max**	**Date**	**Most Recent**	**Date**	**Max**	**Date**	**Most Recent**	**Date**	**Max**	**Date**	**Most Recent**	**Date**
AGW250-6	ND	--	0.5 U	12/01/15	ND	--	0.020 U	12/01/15	ND	--	0.2 U	12/01/15	ND	--	0.020 U	12/01/15
AGW250-7	ND	--	0.5 U	12/03/14	ND	--	0.020 U	12/03/14	ND	--	0.2 U	12/03/14	ND	--	0.020 U	12/03/14
AGW251-1	ND	--	0.5 U	12/03/15	ND	--	0.020 U	12/03/15	ND	--	0.2 U	12/03/15	**1.8**	06/08/15	**0.23**	12/03/15
AGW251-2	ND	--	0.5 U	12/03/15	ND	--	0.020 U	12/03/15	ND	--	0.2 U	12/03/15	**6**	03/03/15	**3.9**	12/03/15
AGW251-3	ND	--	0.5 U	12/03/15	ND	--	0.020 U	12/03/15	ND	--	0.2 U	12/03/15	**6.7**	06/08/15	**5**	12/03/15
AGW251-4	ND	--	0.5 U	12/02/14	ND	--	0.020 U	12/02/14	ND	--	0.2 U	12/02/14	**0.2**	12/02/14	**0.2**	12/02/14
AGW251-5	ND	--	0.5 U	12/02/14	ND	--	0.020 U	12/02/14	ND	--	0.2 U	12/02/14	**0.054**	07/11/14	**0.05**	12/02/14
AGW251-6	ND	--	0.5 U	12/03/15	ND	--	0.020 U	12/03/15	ND	--	0.2 U	12/03/15	**0.19**	12/03/15	**0.19**	12/03/15
AGW251-7	ND	--	0.5 U	12/02/14	ND	--	0.020 U	12/02/14	ND	--	0.2 U	12/02/14	**0.052**	07/11/14	**0.038**	12/02/14
AGW252	ND	--	0.5 U	12/03/15	ND	--	0.020 U	12/03/15	ND	--	0.2 U	12/03/15	**0.03**	12/03/15	**0.03**	12/03/15
AGW253	ND	--	0.5 U	12/03/15	ND	--	0.020 U	12/03/15	ND	--	0.2 U	12/03/15	ND	--	0.020 U	12/03/15
AGW254-1	ND	--	0.5 U	12/04/15	ND	--	0.020 U	12/04/15	ND	--	0.2 U	12/04/15	ND	--	0.020 U	12/04/15
AGW254-2	ND	--	0.5 U	12/04/15	ND	--	0.020 U	12/04/15	ND	--	0.2 U	12/04/15	**0.05**	12/04/15	**0.05**	12/04/15
AGW254-3	ND	--	0.5 U	06/05/15	ND	--	0.020 U	06/05/15	ND	--	0.2 U	06/05/15	ND	--	0.020 U	06/05/15
AGW254-4	ND	--	0.5 U	06/05/15	ND	--	0.020 U	06/05/15	ND	--	0.2 U	06/05/15	ND	--	0.020 U	06/05/15
AGW254-5	ND	--	0.5 U	12/04/15	ND	--	0.020 U	12/04/15	ND	--	0.2 U	12/04/15	ND	--	0.020 U	12/04/15
AGW254-6	ND	--	0.5 U	06/05/15	ND	--	0.020 U	06/05/15	ND	--	0.2 U	06/05/15	ND	--	0.020 U	06/05/15
AGW255-1	ND	--	0.5 U	12/04/15	ND	--	0.020 U	12/04/15	**0.7**	06/09/15	**0.6**	12/04/15	**0.32**	12/04/15	**0.32**	12/04/15
AGW255-3	ND	--	0.5 U	12/04/15	ND	--	0.020 U	12/04/15	ND	--	0.2 U	12/04/15	**0.25**	12/04/15	**0.25**	12/04/15
AGW255-5	ND	--	0.5 U	12/04/15	ND	--	0.020 U	12/04/15	ND	--	0.2 U	12/04/15	**0.24**	12/04/15	**0.24**	12/04/15
AGW256	ND	--	0.5 U	12/01/15	ND	--	0.020 U	12/01/15	**1**	06/02/15	**0.7**	12/01/15	ND	--	0.020 U	12/01/15
AGW257	ND	--	0.5 U	12/01/15	**0.45**	06/02/15	**0.29**	12/01/15	**0.3**	06/02/15	0.2 U	12/01/15	ND	--	0.020 U	12/01/15
AGW258	ND	--	0.5 U	12/01/15	ND	--	0.020 U	12/01/15	ND	--	0.2 U	12/01/15	ND	--	0.020 U	12/01/15
AGW259	ND	--	0.5 U	12/04/15	ND	--	0.020 U	12/04/15	ND	--	0.2 U	12/04/15	ND	--	0.020 U	12/04/15
AGW260	ND	--	0.5 U	12/03/15	ND	--	0.020 U	12/03/15	ND	--	0.2 U	12/03/15	ND	--	0.020 U	12/03/15
AGW261	ND	--	0.5 U	12/01/15	ND	--	0.020 U	12/01/15	**2.6**	12/01/15	**2.6**	12/01/15	**0.1**	04/09/15	**0.084**	12/01/15
AGW262	ND	--	0.5 U	12/02/15	ND	--	0.020 U	12/02/15	ND	--	0.2 U	12/02/15	**0.31**	08/27/15	**0.038**	12/02/15
AGW263	ND	--	0.5 U	12/22/15	ND	--	0.020 U	12/22/15	**1.1**	06/08/15	0.2 U	12/22/15	**0.45**	08/25/15	**0.025**	12/22/15
AGW264	ND	--	0.5 U	12/03/15	ND	--	0.020 U	12/03/15	ND	--	0.2 U	12/03/15	ND	--	0.020 U	12/03/15
AGW265	ND	--	0.5 U	12/03/15	ND	--	0.020 U	12/03/15	ND	--	0.2 U	12/03/15	**0.059**	04/09/15	0.020 U	12/03/15
AGW266	ND	--	0.5 U	12/01/15	ND	--	0.020 U	12/01/15	ND	--	0.2 U	12/01/15	ND	--	0.020 U	12/01/15
AGW267	ND	--	0.5 U	12/01/15	ND	--	0.020 U	12/01/15	ND	--	0.2 U	12/01/15	ND	--	0.020 U	12/01/15
AGW268	ND	--	0.5 U	12/01/15	ND	--	0.020 U	12/01/15	ND	--	0.2 U	12/01/15	ND	--	0.020 U	12/01/15
AGW269	ND	--	0.5 U	12/07/15	ND	--	0.020 U	12/07/15	**0.2**	12/07/15	**0.2**	12/07/15	**5.1**	12/07/15	**5.1**	12/07/15
AGW270	ND	--	0.5 U	12/07/15	ND	--	0.020 U	12/07/15	**1.7**	12/07/15	**1.7**	12/07/15	**2.2**	08/13/15	**1.3**	12/07/15
AGW271	ND	--	0.5 U	12/07/15	ND	--	0.020 U	12/07/15	**1.2**	12/07/15	**1.2**	12/07/15	**5.9**	12/07/15	**5.9**	12/07/15
AGW272	ND	--	0.5 U	12/07/15	ND	--	0.020 U	12/07/15	**0.2**	12/07/15	**0.2**	12/07/15	**1.8**	12/07/15	**1.8**	12/07/15
AGW273	ND	--	0.5 U	12/07/15	ND	--	0.020 U	12/07/15	ND	--	0.2 U	12/07/15	**6**	12/07/15	**6**	12/07/15
AGW274	ND	--	0.5 U	12/07/15	ND	--	0.020 U	12/07/15	ND	--	0.2 U	12/07/15	**4**	08/13/15	**1.9**	12/07/15
AGW275	ND	--	0.5 U	12/07/15	ND	--	0.020 U	12/07/15	ND	--	0.2 U	12/07/15	**7.7**	12/07/15	**7.7**	12/07/15
AGW276-1	ND	--	0.5 U	12/08/15	ND	--	0.020 U	12/08/15	ND	--	0.2 U	12/08/15	**0.037**	10/23/15	**0.027**	12/08/15
AGW276-2	ND	--	0.5 U	12/08/15	ND	--	0.020 U	12/08/15	**0.4**	12/08/15	**0.4**	12/08/15	**1.4**	10/23/15	**1.3**	12/08/15
AGW276-3	ND	--	0.5 U	12/08/15	ND	--	0.020 U	12/08/15	ND	--	0.2 U	12/08/15	**3.2**	10/23/15	**2.5**	12/08/15
AGW276-4	ND	--	0.5 U	12/09/15	ND	--	0.020 U	12/09/15	ND	--	0.2 U	12/09/15	**0.094**	10/23/15	**0.038**	12/09/15
AGW276-5	ND	--	0.5 U	12/08/15	ND	--	0.020 U	12/08/15	ND	--	0.2 U	12/08/15	**0.96**	10/23/15	**0.8**	12/08/15
AGW276-6	ND	--	0.5 U	12/08/15	ND	--	0.020 U	12/08/15	**2.5**	12/08/15	**2.5**	12/08/15	**0.092**	10/23/15	**0.091**	12/08/15
AGW276-7	ND	--	0.5 U	12/08/15	ND	--	0.020 U	12/08/15	ND	--	0.2 U	12/08/15	**0.024**	10/23/15	0.020 U	12/08/15

Table 8-1
Maximum and Most Recent Groundwater Results: TCA, PCE, TCE, and VC
Boeing Auburn Remedial Investigation
Auburn, Washington

Analyte: SL:	1,1,1-Trichloroethane 200 µg/L				Tetrachloroethene 5 µg/L				Trichloroethene 0.54 µg/L				Vinyl Chloride 0.029 µg/L			
Well/Boring	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date
APP-057	ND	--	0.5 U	12/09/15	ND	--	0.020 U	12/09/15	ND	--	0.2 U	12/09/15	ND	--	0.020 U	12/09/15
APP-058	ND	--	0.5 U	08/27/15	ND	--	0.020 U	08/27/15	ND	--	0.2 U	08/27/15	ND	--	0.020 U	08/27/15
APP-069	ND	--	0.5 U	08/27/15	ND	--	0.020 U	08/27/15	ND	--	0.2 U	08/27/15	ND	--	0.020 U	08/27/15
ASB0119-20	**0.7**	12/03/03	**0.7**	12/03/03	**0.3**	12/03/03	**0.3**	12/03/03	**2**	12/03/03	**2**	12/03/03	ND	--	0.020 U	--
ASB0119-30	**0.7**	12/03/03	**0.7**	12/03/03	**0.4**	12/03/03	**0.4**	12/03/03	**1.4**	12/03/03	**1.4**	12/03/03	ND	--	0.020 U	--
ASB0120-20	**0.8**	12/04/03	**0.8**	12/04/03	**0.3**	12/04/03	**0.3**	12/04/03	**1.8**	12/04/03	**1.8**	12/04/03	ND	--	0.020 U	--
ASB0120-29	**0.7**	12/04/03	**0.7**	12/04/03	**0.5**	12/04/03	**0.5**	12/04/03	**1.7**	12/04/03	**1.7**	12/04/03	ND	--	0.020 U	--
ASB0121-20	**33**	12/05/03	**33**	12/05/03	**0.3**	12/05/03	**0.3**	12/05/03	**90**	12/05/03	**90**	12/05/03	**0.092**	12/05/03	**0.092**	12/05/03
ASB0122-20	**6.6**	12/04/03	**6.6**	12/04/03	ND	--	0.2 U	--	**10**	12/04/03	**10**	12/04/03	**3**	12/04/03	**3**	12/04/03
ASB0123-20	**1.2**	12/04/03	**1.2**	12/04/03	**0.3**	12/04/03	**0.3**	12/04/03	**1.9**	12/04/03	**1.9**	12/04/03	ND	--	0.020 U	12/04/03
ASB0126-15	ND	--	0.2 U	12/16/03	ND	--	0.2 U	12/16/03	ND	--	0.2 U	12/16/03	ND	--	0.020 U	12/16/03
ASB0126-20	**170**	12/16/03	**170**	12/16/03	**0.7**	12/16/03	**0.7**	12/16/03	**1.6**	12/16/03	**1.6**	12/16/03	**0.053**	12/16/03	**0.053**	12/16/03
ASB0127-20	**4.7**	12/17/03	**4.7**	12/17/03	**0.5**	12/17/03	**0.5**	12/17/03	**38**	12/17/03	**38**	12/17/03	ND	--	0.020 U	12/17/03
ASB0128-20	ND	--	1 U	12/18/03	ND	--	1 U	12/18/03	**19**	12/18/03	**19**	12/18/03	**11**	12/18/03	**11**	12/18/03
ASB0129-20	**0.3**	02/19/04	**0.3**	02/19/04	**0.3**	02/19/04	**0.3**	02/19/04	**1.6**	02/19/04	**1.6**	02/19/04	ND	--	0.2 U	02/19/04
ASB0130-20	ND	--	1 U	02/19/04	ND	--	1 U	02/19/04	**1.6**	02/19/04	**1.6**	02/19/04	ND	--	1 U	02/19/04
ASB0131-20	**0.9**	02/19/04	**0.9**	02/19/04	**0.4**	02/19/04	**0.4**	02/19/04	**35**	02/19/04	**35**	02/19/04	ND	--	0.2 U	02/19/04
ASB0132-20	**9.1**	02/18/04	**9.1**	02/18/04	**0.3**	02/18/04	**0.3**	02/18/04	**11**	02/18/04	**11**	02/18/04	**0.1 J**	02/18/04	**0.1 J**	02/18/04
ASB0133-20	**3.7**	02/18/04	**3.7**	02/18/04	ND	--	1 U	02/18/04	**22**	02/18/04	**22**	02/18/04	ND	--	1 U	02/18/04
ASB0133-30	**4.5**	02/18/04	**4.5**	02/18/04	ND	--	0.4 U	02/18/04	**22**	02/18/04	**22**	02/18/04	**0.2 J**	02/18/04	**0.2 J**	02/18/04
ASB0133-40	**7.9**	02/18/04	**7.9**	02/18/04	**0.3**	02/18/04	**0.3**	02/18/04	**12**	02/18/04	**12**	02/18/04	ND	--	0.2 U	02/18/04
ASB0133-50	**0.6**	02/18/04	**0.6**	02/18/04	**0.3**	02/18/04	**0.3**	02/18/04	**1.8**	02/18/04	**1.8**	02/18/04	ND	--	0.2 U	02/18/04
ASB0134-20	**2.4**	02/18/04	**2.4**	02/18/04	ND	--	1 U	02/18/04	**230**	02/18/04	**230**	02/18/04	ND	--	1 U	02/18/04
ASB0134-30	**0.5**	02/18/04	**0.5**	02/18/04	**0.3**	02/18/04	**0.3**	02/18/04	**50**	02/18/04	**50**	02/18/04	ND	--	0.2 U	02/18/04
ASB0134-40	**0.2**	02/18/04	**0.2**	02/18/04	**0.4**	02/18/04	**0.4**	02/18/04	**11**	02/18/04	**11**	02/18/04	ND	--	0.2 U	02/18/04
ASB0134-50	ND	--	0.2 U	02/18/04	**0.3**	02/18/04	**0.3**	02/18/04	**1.8**	02/18/04	**1.8**	02/18/04	ND	--	0.2 U	02/18/04
ASB0135-13	ND	--	0.2 U	03/22/04	ND	--	0.2 U	03/22/04	ND	--	0.2 U	03/22/04	ND	--	0.020 U	03/22/04
ASB0136-15	ND	--	0.2 U	03/22/04	ND	--	0.2 U	03/22/04	ND	--	0.2 U	03/22/04	**0.083**	03/22/04	**0.083**	03/22/04
ASB0137-13	ND	--	0.2 U	03/22/04	ND	--	0.2 U	03/22/04	ND	--	0.2 U	03/22/04	ND	--	0.020 U	03/22/04
ASB0138-12	ND	--	0.2 U	03/22/04	ND	--	0.2 U	03/22/04	ND	--	0.2 U	03/22/04	ND	--	0.020 U	03/22/04
ASB0139-13	ND	--	0.2 U	03/22/04	ND	--	0.2 U	03/22/04	ND	--	0.2 U	03/22/04	ND	--	0.020 U	03/22/04
ASB0140-11	ND	--	0.2 U	03/22/04	ND	--	0.2 U	03/22/04	ND	--	0.2 U	03/22/04	ND	--	0.020 U	03/22/04
ASB0141-9	ND	--	0.2 UJ	05/04/04	ND	--	0.2 UJ	05/04/04	ND	--	0.2 UJ	05/04/04	ND	--	0.020 UJ	05/04/04
ASB0142-14	ND	--	0.2 UJ	05/04/04	ND	--	0.2 UJ	05/04/04	ND	--	0.2 UJ	05/04/04	**0.4 J**	05/04/04	**0.4 J**	05/04/04
ASB0143-17	ND	--	0.2 UJ	05/04/04	ND	--	0.2 UJ	05/04/04	ND	--	0.2 UJ	05/04/04	**0.75 J**	05/04/04	**0.75 J**	05/04/04
ASB0144-17	ND	--	0.2 UJ	05/04/04	ND	--	0.2 UJ	05/04/04	ND	--	0.2 UJ	05/04/04	**3.7 J**	05/04/04	**3.7 J**	05/04/04
ASB0145-17	ND	--	0.2 UJ	05/04/04	ND	--	0.2 UJ	05/04/04	ND	--	0.2 UJ	05/04/04	**5.5 J**	05/04/04	**5.5 J**	05/04/04
ASB0146-10	ND	--	0.2 UJ	05/05/04	ND	--	0.2 UJ	05/05/04	ND	--	0.2 UJ	05/04/04	ND	--	0.020 U	--
ASB0147-15	ND	--	0.2 UJ	05/05/04	ND	--	0.2 UJ	05/05/04	ND	--	0.2 UJ	05/04/04	**0.18 J**	05/05/04	**0.18 J**	05/05/04
ASB0148-17	ND	--	0.2 UJ	05/05/04	ND	--	0.2 UJ	05/05/04	ND	--	0.2 UJ	05/04/04	**4.7 J**	05/05/04	**4.7 J**	05/05/04
ASB0155-32	ND	--	0.2 U	08/23/04	ND	--	0.2 U	08/23/04	ND	--	0.2 U	08/23/04	ND	--	0.020 U	08/23/04
ASB0156-32	ND	--	0.2 U	08/24/04	ND	--	0.2 U	08/24/04	ND	--	0.2 U	08/24/04	ND	--	0.020 U	08/24/04
ASB0157-17	ND	--	0.2 U	08/24/04	ND	--	0.2 U	08/24/04	ND	--	0.2 U	08/24/04	**0.94**	08/24/04	**0.94**	08/24/04
ASB0158-32	ND	--	0.2 U	8/24/04	ND	--	0.2 U	08/25/04	ND	--	0.2 U	08/25/04	ND	--	0.020 U	08/25/04
ASB0159-19	ND	--	0.2 UJ	8/30/04	**0.6 J**	08/30/04	**0.6 J**	08/30/04	**1.8 J**	08/30/04	**1.8 J**	08/30/04	ND	--	0.020 UJ	08/30/04
ASB0160R-18	ND	--	0.2 U	9/07/04	ND	--	0.2 U	09/07/04	**0.5**	09/07/04	**0.5**	09/07/04	ND	--	0.020 U	09/07/04
ASB0161-18	ND	--	0.2 U	08/31/04	ND	--	0.2 U	08/31/04	ND	--	0.2 U	08/31/04	**0.13 J**	08/31/04	**0.13 J**	08/31/04

Table 8-1
Maximum and Most Recent Groundwater Results: TCA, PCE, TCE, and VC
Boeing Auburn Remedial Investigation
Auburn, Washington

Analyte: SL:	1,1,1-Trichloroethane 200 µg/L				Tetrachloroethene 5 µg/L				Trichloroethene 0.54 µg/L				Vinyl Chloride 0.029 µg/L			
Well/Boring	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date
ASB0162-17	ND	--	0.2 U	08/31/04	ND	--	0.2 U	08/31/04	ND	--	0.2 U	08/31/04	**0.15 J**	08/31/04	**0.15 J**	08/31/04
ASB0164R-20	ND	--	0.2 U	09/02/04	**0.5**	09/02/04	**0.5**	09/02/04	**1.2**	09/02/04	**1.2**	09/02/04	ND	--	0.020 U	09/02/04
ASB0165R-20	ND	--	0.2 U	09/02/04	**0.9**	09/02/04	**0.9**	09/02/04	**0.5**	09/02/04	**0.5**	09/02/04	ND	--	0.020 U	09/02/04
ASB0166R-18	**0.2**	09/02/04	**0.2**	09/02/04	**0.3**	09/02/04	**0.3**	09/02/04	**2**	09/02/04	**2**	09/02/04	ND	--	0.020 U	09/02/04
ASB0167-18	ND	--	0.2 U	09/07/04	**0.4**	09/07/04	**0.4**	09/07/04	**0.8**	09/07/04	**0.8**	09/07/04	ND	--	0.020 U	09/07/04
ASB0168-18	ND	--	0.2 U	09/08/04	**0.2**	09/08/04	**0.2**	09/08/04	**0.6**	09/08/04	**0.6**	09/08/04	ND	--	0.020 U	09/08/04
ASB0169-18	ND	--	0.2 U	09/08/04	**0.2**	09/08/04	**0.2**	09/08/04	**0.6**	09/08/04	**0.6**	09/08/04	**0.025**	09/08/04	**0.025**	09/08/04
ASB0170-18	ND	--	0.2 U	09/09/04	**0.8**	09/09/04	**0.8**	09/09/04	**0.7**	09/09/04	**0.7**	09/09/04	ND	--	0.020 U	09/09/04
ASB0171-18	ND	--	0.2 U	09/09/04	**0.8**	09/09/04	**0.8**	09/09/04	**0.8**	09/09/04	**0.8**	09/09/04	ND	--	0.020 U	09/09/04
ASB0172	ND	--	0.2 U	09/09/04	ND	--	0.2 U	09/09/04	ND	--	0.2 U	09/09/04	ND	--	0.020 U	09/09/04
ASB0177-25	ND	--	0.2 U	09/08/08	ND	--	0.2 U	09/08/08	ND	--	0.2 U	09/08/08	ND	--	0.2 U	09/08/08
ASB0177-35	ND	--	0.2 U	09/08/08	ND	--	0.2 U	09/08/08	ND	--	0.2 U	09/08/08	ND	--	0.2 U	09/08/08
ASB0177-45	ND	--	0.2 U	09/08/08	ND	--	0.2 U	09/08/08	ND	--	0.2 U	09/08/08	ND	--	0.2 U	09/08/08
ASB0179-19	ND	--	0.2 U	10/01/09	**0.2**	10/01/09	**0.2**	**--**	**3.2**	10/01/09	**3.2**	10/01/09	ND	--	0.020 U	--
ASB0181-15	ND	--	0.5 U	04/03/13	ND	--	0.2 U	04/03/13	**3.5**	04/03/13	**3.5**	04/03/13	**2.8**	04/03/13	**2.8**	04/03/13
ASB0181-25	ND	--	0.5 U	04/03/13	ND	--	0.2 U	04/03/13	**5.6**	04/03/13	**5.6**	04/03/13	**0.3**	04/03/13	**0.3**	04/03/13
ASB0181-5	ND	--	2.5 U	04/03/13	ND	--	1 U	04/03/13	**0.13**	04/03/13	**0.13**	04/03/13	**0.22**	04/03/13	**0.22**	04/03/13
ASB0182-15	ND	--	0.5 U	04/04/13	ND	--	0.2 U	04/04/13	**12**	04/04/13	**12**	04/04/13	**0.3**	04/04/13	**0.3**	04/04/13
ASB0182-25	ND	--	0.5 U	04/04/13	ND	--	0.2 U	04/04/13	**7.6**	04/04/13	**7.6**	04/04/13	**0.16**	04/04/13	**0.16**	04/04/13
ASB0182-9	ND	--	0.5 U	04/04/13	ND	--	0.2 U	04/04/13	**2.4**	04/04/13	**2.4**	04/04/13	**2.1**	04/04/13	**2.1**	04/04/13
ASB0183-5	ND	--	2.5 U	04/04/13	ND	--	1 U	04/04/13	ND	--	0.02 U	04/04/13	ND	--	0.020 U	04/04/13
ASB0184-15	ND	--	0.5 U	04/05/13	ND	--	0.2 U	04/05/13	**6.9**	04/05/13	**6.9**	04/05/13	**0.5**	04/05/13	**0.5**	04/05/13
ASB0184-25	ND	--	0.5 U	04/05/13	ND	--	0.2 U	04/05/13	**6.6**	04/05/13	**6.6**	04/05/13	**0.3**	04/05/13	**0.3**	04/05/13
ASB0184-5	ND	--	0.5 U	04/05/13	ND	--	0.2 U	04/05/13	**0.2**	04/05/13	**0.2**	04/05/13	**1.3**	04/05/13	**1.3**	04/05/13
ASB0185-5	ND	--	0.5 U	04/05/13	ND	--	0.2 U	04/05/13	ND	--	0.02 U	04/05/13	**1.1**	04/05/13	**1.1**	04/05/13
ASB0186-15	ND	--	0.5 U	04/08/13	ND	--	0.2 U	04/08/13	**3.2**	04/08/13	**3.2**	04/08/13	**0.6**	04/08/13	**0.6**	04/08/13
ASB0186-25	ND	--	0.5 U	04/08/13	ND	--	0.2 U	04/08/13	**0.039**	04/08/13	**0.039**	04/08/13	**0.93**	04/08/13	**0.93**	04/08/13
ASB0186-5	ND	--	2.5 U	04/08/13	ND	--	1 U	04/08/13	**0.022**	04/08/13	**0.022**	04/08/13	**0.16**	04/08/13	**0.16**	04/08/13
ASB0187-5	ND	--	0.5 U	04/08/13	ND	--	0.2 U	04/08/13	**0.025**	04/08/13	**0.025**	04/08/13	ND	--	0.020 U	04/08/13
ASB0188-15	ND	--	0.5 U	04/09/13	ND	--	0.2 U	04/09/13	**0.13**	04/09/13	**0.13**	04/09/13	**0.7**	04/09/13	**0.7**	04/09/13
ASB0188-25	ND	--	0.5 U	04/09/13	ND	--	0.2 U	04/09/13	**0.3**	04/09/13	**0.3**	04/09/13	**0.9**	04/09/13	**0.9**	04/09/13
ASB0188-5	ND	--	2.5 U	04/09/13	ND	--	1 U	04/09/13	ND	--	0.02 U	04/09/13	ND	--	0.020 U	04/09/13
ASB0189-5	ND	--	2.5 U	04/09/13	ND	--	1 U	04/09/13	ND	--	0.02 U	04/09/13	ND	--	0.020 U	04/09/13
ASB0190-10	ND	--	0.5 U	04/10/13	ND	--	0.2 U	04/10/13	ND	--	0.02 U	04/10/13	**0.4**	04/10/13	**0.4**	04/10/13
ASB0190-15	ND	--	0.5 U	04/10/13	ND	--	0.2 U	04/10/13	**0.031**	04/10/13	**0.031**	04/10/13	**3.8**	04/10/13	**3.8**	04/10/13
ASB0190-25	ND	--	0.5 U	04/10/13	ND	--	0.2 U	04/10/13	**0.049**	04/10/13	**0.049**	04/10/13	**3.3**	04/10/13	**3.3**	04/10/13
ASB0191-5	ND	--	0.5 U	04/10/13	ND	--	0.2 U	04/10/13	ND	--	0.02 U	04/10/13	ND	--	0.020 U	04/10/13
ASB0192-15	ND	--	0.5 U	04/11/13	ND	--	0.2 U	04/11/13	**1.8**	04/11/13	**1.8**	04/11/13	**0.6**	04/11/13	**0.6**	04/11/13
ASB0192-25	ND	--	0.5 U	04/11/13	ND	--	0.2 U	04/11/13	**2.4**	04/11/13	**2.4**	04/11/13	**0.5**	04/11/13	**0.5**	04/11/13
ASB0192-5	ND	--	0.5 U	04/11/13	ND	--	0.2 U	04/11/13	**0.5**	04/11/13	**0.5**	04/11/13	**0.16**	04/11/13	**0.16**	04/11/13
ASB0193-5	ND	--	0.5 U	04/11/13	ND	--	0.2 U	04/11/13	ND	--	0.02 U	04/11/13	**0.11**	04/11/13	**0.11**	04/11/13
ASB0194-5	ND	--	0.5 U	04/12/13	ND	--	0.2 U	04/12/13	ND	--	0.02 U	04/12/13	ND	--	0.020 U	04/12/13
ASB0195-5	ND	--	0.5 U	04/12/13	ND	--	0.2 U	04/12/13	ND	--	0.02 U	04/12/13	ND	--	0.020 U	04/12/13
ASB0196-5	ND	--	0.5 U	04/12/13	ND	--	0.2 U	04/12/13	ND	--	0.02 U	04/12/13	ND	--	0.020 U	04/12/13
ASB0197-8	ND	--	1 U	04/15/13	ND	--	0.4 U	04/15/13	ND	--	0.02 U	04/15/13	ND	--	0.020 U	04/15/13
ASB0198-15	ND	--	0.5 U	04/15/13	ND	--	0.2 U	04/15/13	ND	--	0.02 U	04/15/13	ND	--	0.020 U	04/15/13
ASB0198-25	ND	--	0.5 U	04/15/13	ND	--	0.2 U	04/15/13	ND	--	0.02 U	04/15/13	ND	--	0.020 U	04/15/13

Table 8-1
Maximum and Most Recent Groundwater Results: TCA, PCE, TCE, and VC
Boeing Auburn Remedial Investigation
Auburn, Washington

Analyte:	1,1,1-Trichloroethane				Tetrachloroethene				Trichloroethene				Vinyl Chloride			
SL:	200 µg/L				5 µg/L				0.54 µg/L				0.029 µg/L			
Well/Boring	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date
ASB0198-5	ND	--	1 U	04/15/13	ND	--	0.4 U	04/15/13	ND	--	0.02 U	04/15/13	ND	--	0.020 U	04/15/13
ASB0199-5	ND	--	2.5 U	04/16/13	ND	--	1 U	04/16/13	ND	--	0.04 U	04/16/13	ND	--	0.04 U	04/16/13
ASB0200-15	ND	--	0.5 U	04/16/13	ND	--	0.2 U	04/16/13	ND	--	0.02 U	04/16/13	**0.057**	04/16/13	**0.057**	04/16/13
ASB0200-25	ND	--	0.5 U	04/16/13	ND	--	0.2 U	04/16/13	ND	--	0.02 U	04/16/13	ND	--	0.020 U	04/16/13
ASB0200-5	ND	--	1 U	04/16/13	ND	--	0.4 U	04/16/13	ND	--	0.02 U	04/16/13	**0.024**	04/16/13	**0.024**	04/16/13
ASB0201-7	ND	--	0.5 U	04/17/13	ND	--	0.2 U	04/17/13	ND	--	0.02 U	04/17/13	ND	--	0.020 U	04/17/13
ASB0202-15	ND	--	0.5 U	04/17/13	ND	--	0.2 U	04/17/13	ND	--	0.02 U	04/17/13	**0.038**	04/17/13	**0.038**	04/17/13
ASB0202-25	ND	--	0.5 U	04/17/13	ND	--	0.2 U	04/17/13	ND	--	0.02 U	04/17/13	ND	--	0.020 U	04/17/13
ASB0202-8	ND	--	0.5 U	04/17/13	ND	--	0.2 U	04/17/13	ND	--	0.02 U	04/17/13	**0.068**	04/17/13	**0.068**	04/17/13
ASB0203-15	ND	--	0.5 U	04/18/13	ND	--	0.2 U	04/18/13	ND	--	0.02 U	04/18/13	**0.3**	04/18/13	**0.3**	04/18/13
ASB0203-25	ND	--	0.5 U	04/18/13	ND	--	0.2 U	04/18/13	ND	--	0.02 U	04/18/13	ND	--	0.020 U	04/18/13
ASB0203-7	ND	--	0.5 U	04/18/13	ND	--	0.2 U	04/18/13	ND	--	0.02 U	04/18/13	**0.058**	04/18/13	**0.058**	04/18/13
ASB0204-7	ND	--	0.5 U	04/18/13	ND	--	0.2 U	04/18/13	ND	--	0.02 U	04/18/13	ND	--	0.020 U	04/18/13
ASB0205-7	ND	--	0.5 U	04/18/13	ND	--	0.2 U	04/18/13	ND	--	0.02 U	04/18/13	ND	--	0.020 U	04/18/13
ASB0206-15	ND	--	0.5 U	04/19/13	ND	--	0.2 U	04/19/13	ND	--	0.02 U	04/19/13	ND	--	0.020 U	04/19/13
ASB0206-25	ND	--	0.5 U	04/19/13	ND	--	0.2 U	04/19/13	ND	--	0.02 U	04/19/13	ND	--	0.020 U	04/19/13
ASB0206-7	ND	--	0.5 U	04/19/13	ND	--	0.2 U	04/19/13	ND	--	0.02 U	04/19/13	ND	--	0.020 U	04/19/13
ASB0207-5	ND	--	0.5 U	04/19/13	ND	--	0.2 U	04/19/13	ND	--	0.02 U	04/19/13	ND	--	0.020 U	04/19/13
ASB0208-7	ND	--	0.5 U	04/22/13	ND	--	0.2 U	04/22/13	ND	--	0.02 U	04/22/13	ND	--	0.020 U	04/22/13
ASB0209-5	ND	--	0.5 U	04/22/13	ND	--	0.2 U	04/22/13	ND	--	0.02 U	04/22/13	ND	--	0.020 U	04/22/13
ASB0210-15	ND	--	0.5 U	04/22/13	ND	--	0.2 U	04/22/13	ND	--	0.02 U	04/22/13	**0.022**	04/22/13	**0.022**	04/22/13
ASB0210-25	ND	--	0.5 U	04/22/13	ND	--	0.2 U	04/22/13	**0.02**	04/22/13	**0.02**	04/22/13	**0.02**	04/22/13	**0.02**	04/22/13
ASB0210-8	ND	--	0.5 U	04/22/13	ND	--	0.2 U	04/22/13	ND	--	0.02 U	04/22/13	ND	--	0.020 U	04/22/13
ASB0211-15	ND	--	0.5 U	04/23/13	ND	--	0.2 U	04/23/13	ND	--	0.02 U	04/23/13	ND	--	0.020 U	04/23/13
ASB0211-25	ND	--	0.5 U	04/23/13	ND	--	0.2 U	04/23/13	ND	--	0.02 U	04/23/13	ND	--	0.020 U	04/23/13
ASB0211-5	ND	--	0.5 U	04/23/13	ND	--	0.2 U	04/23/13	ND	--	0.02 U	04/23/13	ND	--	0.020 U	04/23/13
ASB0212-5	ND	--	0.5 U	04/23/13	ND	--	0.2 U	04/23/13	ND	--	0.02 U	04/23/13	ND	--	0.020 U	04/23/13
ASB0213-8	ND	--	0.5 U	04/23/13	ND	--	0.2 U	04/23/13	ND	--	0.02 U	04/23/13	ND	--	0.020 U	04/23/13
ASB0214-5	ND	--	0.5 U	04/24/13	ND	--	0.2 U	04/24/13	ND	--	0.02 U	04/24/13	ND	--	0.020 U	04/24/13
ASB0215-15	ND	--	0.5 U	04/24/13	ND	--	0.2 U	04/24/13	ND	--	0.02 U	04/24/13	ND	--	0.020 U	04/24/13
ASB0215-25	ND	--	0.5 U	04/24/13	ND	--	0.2 U	04/24/13	**0.4**	04/24/13	**0.4**	04/24/13	**0.035**	04/24/13	**0.035**	04/24/13
ASB0215-7	ND	--	0.5 U	04/24/13	ND	--	0.2 U	04/24/13	ND	--	0.02 U	04/24/13	ND	--	0.020 U	04/24/13
ASB0216-7	ND	--	0.5 U	04/24/13	ND	--	0.2 U	04/24/13	ND	--	0.02 U	04/24/13	ND	--	0.020 U	04/24/13
ASB0217-8	ND	--	0.5 U	04/25/13	ND	--	0.2 U	04/24/13	ND	--	0.02 U	04/24/13	ND	--	0.020 U	04/24/13
ASB0218-10	ND	--	0.5 U	04/25/13	ND	--	0.2 U	04/25/13	ND	--	0.02 U	04/25/13	ND	--	0.020 U	04/25/13
ASB0218-15	ND	--	0.5 U	04/25/13	ND	--	0.2 U	04/25/13	ND	--	0.02 U	04/25/13	ND	--	0.020 U	04/25/13
ASB0218-25	ND	--	0.5 U	04/25/13	ND	--	0.2 U	04/25/13	ND	--	0.02 U	04/25/13	ND	--	0.020 U	04/25/13
ASB0219-9	ND	--	0.5 U	04/25/13	ND	--	0.2 U	04/25/13	ND	--	0.02 U	04/25/13	ND	--	0.020 U	04/25/13
ASB0220-5	ND	--	0.5 U	04/26/13	ND	--	0.2 U	04/26/13	ND	--	0.02 U	04/26/13	ND	--	0.020 U	04/26/13
ASB0221-7	ND	--	0.5 U	04/26/13	ND	--	0.2 U	04/26/13	ND	--	0.02 U	04/26/13	ND	--	0.020 U	04/26/13
ASB0222-7	ND	--	0.5 U	04/26/13	ND	--	0.2 U	04/26/13	ND	--	0.02 U	04/26/13	ND	--	0.020 U	04/26/13
ASB0223-8	ND	--	0.5 U	04/29/13	ND	--	0.2 U	04/29/13	ND	--	0.02 U	04/29/13	ND	--	0.020 U	04/29/13
ASB0224-7	ND	--	0.5 U	04/29/13	ND	--	0.2 U	04/29/13	ND	--	0.02 U	04/29/13	ND	--	0.020 U	04/29/13
ASB0225-7	ND	--	0.5 U	04/29/13	ND	--	0.2 U	04/29/13	ND	--	0.02 U	04/29/13	ND	--	0.020 U	04/29/13
ASB0226-9	ND	--	0.5 U	04/29/13	ND	--	0.2 U	04/29/13	**1.2**	04/29/13	**1.2**	04/29/13	**0.4**	04/29/13	**0.4**	04/29/13
ASB0227-9	ND	--	0.5 U	04/30/13	ND	--	0.2 U	04/30/13	ND	--	0.02 U	04/30/13	ND	--	0.020 U	04/30/13
ASB0228-8	ND	--	0.5 U	04/30/13	ND	--	0.2 U	04/30/13	ND	--	0.02 U	04/30/13	ND	--	0.020 U	04/30/13

Table 8-1
Maximum and Most Recent Groundwater Results: TCA, PCE, TCE, and VC
Boeing Auburn Remedial Investigation
Auburn, Washington

Analyte: SL:	1,1,1-Trichloroethane 200 µg/L				Tetrachloroethene 5 µg/L				Trichloroethene 0.54 µg/L				Vinyl Chloride 0.029 µg/L			
Well/Boring	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date
ASB0229-7	ND	--	0.5 U	04/30/13	ND	--	0.2 U	04/30/13	ND	--	0.02 U	04/30/13	ND	--	0.020 U	04/30/13
ASB0230-15	ND	--	0.5 U	06/23/14	ND	--	0.2 U	06/23/14	**3.5**	06/23/14	**3.5**	06/23/14	**0.3**	06/23/14	**0.3**	06/23/14
ASB0230-25	ND	--	0.5 U	06/23/14	ND	--	0.2 U	06/23/14	**3.6**	06/23/14	**3.6**	06/23/14	**0.4**	06/23/14	**0.4**	06/23/14
ASB0230-48	ND	--	0.5 U	06/23/14	ND	--	0.2 U	06/23/14	ND	--	0.2 U	06/23/14	**0.088**	06/23/14	**0.088**	06/23/14
ASB0230-7	ND	--	0.5 U	06/23/14	ND	--	0.2 U	06/23/14	**1.7**	06/23/14	**1.7**	06/23/14	**0.048**	06/23/14	**0.048**	06/23/14
ASB0231-15	ND	--	0.5 U	06/24/14	ND	--	0.2 U	06/24/14	**0.4**	06/24/14	**0.4**	06/24/14	**1**	06/24/14	**1**	06/24/14
ASB0231-25	ND	--	0.5 U	06/24/14	ND	--	0.2 U	06/24/14	**2.4**	06/24/14	**2.4**	06/24/14	**1**	06/24/14	**1**	06/24/14
ASB0231-6	ND	--	0.5 U	06/24/14	ND	--	0.2 U	06/24/14	**1.8**	06/24/14	**1.8**	06/24/14	**0.084**	06/24/14	**0.084**	06/24/14
ASB0232-15	ND	--	0.5 U	06/24/14	ND	--	0.2 U	06/24/14	ND	--	0.2 U	06/24/14	**0.7**	06/24/14	**0.7**	06/24/14
ASB0232-25	ND	--	0.5 U	06/24/14	ND	--	0.2 U	06/24/14	**1.4**	06/24/14	**1.4**	06/24/14	**0.5**	06/24/14	**0.5**	06/24/14
ASB0232-7	ND	--	0.5 U	06/24/14	ND	--	0.2 U	06/24/14	ND	--	0.2 U	06/24/14	ND	--	0.020 U	06/24/14
ASB0233-15	ND	--	0.5 U	06/25/14	ND	--	0.2 U	06/25/14	ND	--	0.2 U	06/25/14	ND	--	0.020 U	06/25/14
ASB0233-25	ND	--	0.5 U	06/25/14	ND	--	0.2 U	06/25/14	**4.6**	06/25/14	**4.6**	06/25/14	**0.16**	06/25/14	**0.16**	06/25/14
ASB0233-50	ND	--	0.5 U	06/25/14	ND	--	0.2 U	06/25/14	**3.2**	06/25/14	**3.2**	06/25/14	**0.13**	06/25/14	**0.13**	06/25/14
ASB0233-9	ND	--	2.5 U	06/25/14	ND	--	1 U	06/25/14	ND	--	1 U	06/25/14	ND	--	0.1 U	06/25/14
ASB0234-15	ND	--	0.5 U	06/26/14	ND	--	0.2 U	06/26/14	ND	--	0.2 U	06/26/14	ND	--	0.020 U	06/26/14
ASB0234-25	ND	--	0.5 U	06/26/14	ND	--	0.2 U	06/26/14	**4.2**	06/26/14	**4.2**	06/26/14	**0.064**	06/26/14	**0.064**	06/26/14
ASB0234-50	ND	--	0.5 U	06/26/14	ND	--	0.2 U	06/26/14	**4.3**	06/26/14	**4.3**	06/26/14	**0.089**	06/26/14	**0.089**	06/26/14
ASB0234-8	ND	--	2.5 U	06/26/14	ND	--	1 U	06/26/14	ND	--	1 U	06/26/14	ND	--	0.1 U	06/26/14
ASB0235-15	ND	--	0.5 U	07/07/14	ND	--	0.2 U	07/07/14	ND	--	0.2 U	07/07/14	ND	--	0.020 U	07/07/14
ASB0235-25	ND	--	0.5 U	07/07/14	ND	--	0.2 U	07/07/14	ND	--	0.2 U	07/07/14	ND	--	0.020 U	07/07/14
ASB0235-50	ND	--	0.5 U	07/07/14	ND	--	0.2 U	07/07/14	ND	--	0.2 U	07/07/14	**0.061**	07/07/14	**0.061**	07/07/14
ASB0235-8	ND	--	0.5 U	07/07/14	ND	--	0.2 U	07/07/14	ND	--	0.2 U	07/07/14	ND	--	0.1 U	07/07/14
ASB0236-15	ND	--	0.5 U	07/08/14	ND	--	0.2 U	07/08/14	ND	--	0.2 U	07/08/14	ND	--	0.02 U	07/08/14
ASB0236-25	ND	--	0.5 U	07/08/14	ND	--	0.2 U	07/08/14	**0.5**	07/08/14	**0.5**	07/08/14	**0.045**	07/08/14	**0.045**	07/08/14
ASB0236-50	ND	--	0.5 U	07/08/14	ND	--	0.2 U	07/08/14	ND	--	0.2 U	07/08/14	**0.07**	07/08/14	**0.07**	07/08/14
ASB0236-9	ND	--	0.5 U	07/08/14	ND	--	0.2 U	07/08/14	ND	--	0.2 U	07/08/14	ND	--	0.1 U	07/08/14
ASB0237-15	ND	--	0.2 U	07/09/14	ND	--	0.2 U	07/09/14	ND	--	0.5 U	07/09/14	ND	--	0.5 U	07/09/14
ASB0237-25	ND	--	0.2 U	07/09/14	ND	--	0.2 U	07/09/14	ND	--	0.5 U	07/09/14	ND	--	0.5 U	07/09/14
ASB0237-8	ND	--	0.2 U	07/09/14	ND	--	5 U	07/09/14	ND	--	0.5 U	07/09/14	ND	--	0.001 U	07/09/14
ASB0238-15	ND	--	0.2 U	07/09/14	ND	--	5 U	07/09/14	ND	--	0.5 U	07/09/14	ND	--	0.5 U	07/09/14
ASB0238-25	ND	--	0.2 U	07/09/14	ND	--	5 U	07/09/14	**0.2**	07/09/14	**0.2**	07/09/14	**1.1**	07/09/14	**1.1**	07/09/14
ASB0238-8	ND	--	0.2 U	07/09/14	ND	--	5 U	07/09/14	ND	--	0.5 U	07/09/14	ND	--	0.5 U	07/09/14
ASB0239-15	ND	--	0.2 U	07/10/14	ND	--	5 U	07/10/14	ND	--	0.5 U	07/10/14	ND	--	0.5 U	07/10/14
ASB0239-25	ND	--	0.2 U	07/10/14	ND	--	5 U	07/10/14	ND	--	0.5 U	07/10/14	**0.22**	07/10/14	**0.22**	07/10/14
ASB0239-9	ND	--	1 U	07/10/14	ND	--	25 U	07/10/14	ND	--	2.5 U	07/10/14	ND	--	0.5 U	07/10/14
ASB0240-10	ND	--	0.2 U	07/10/14	ND	--	5 U	07/10/14	ND	--	0.5 U	07/10/14	ND	--	0.5 U	07/10/14
ASB0240-15	ND	--	0.2 U	07/10/14	ND	--	5 U	07/10/14	ND	--	0.5 U	07/10/14	ND	--	0.5 U	07/10/14
ASB0240-25	ND	--	0.2 U	07/10/14	ND	--	5 U	07/10/14	**3.1**	07/10/14	**3.1**	07/10/14	**0.077**	07/10/14	**0.077**	07/10/14
ASB0241-15	ND	--	0.2 U	07/11/14	ND	--	5 U	07/11/14	ND	--	0.5 U	07/11/14	ND	--	0.5 U	07/11/14
ASB0241-25	ND	--	0.2 U	07/11/14	ND	--	5 U	07/11/14	ND	--	0.5 U	07/11/14	ND	--	0.5 U	07/11/14
ASB0241-48	ND	--	0.2 U	07/11/14	ND	--	5 U	07/11/14	ND	--	0.5 U	07/11/14	ND	--	0.5 U	07/11/14
ASB0241-9	ND	--	0.2 U	07/11/14	ND	--	5 U	07/11/14	ND	--	0.5 U	07/11/14	ND	--	0.5 U	07/11/14
ASB0242-12	ND	--	0.5 U	07/14/14	ND	--	0.2 U	07/14/14	ND	--	0.2 U	07/14/14	ND	--	0.02 U	07/14/14
ASB0242-25	ND	--	0.5 U	07/14/14	**0.2**	07/14/14	**0.2**	07/14/14	**1.3**	07/14/14	**1.3**	07/14/14	**0.02**	07/14/14	**0.02**	07/14/14
ASB0242-48	ND	--	0.5 U	07/14/14	ND	--	0.2 U	07/14/14	**0.8**	07/14/14	**0.8**	07/14/14	ND	--	0.02 U	07/14/14
ASB0243-14	ND	--	0.5 U	07/15/14	ND	--	0.2 U	07/15/14	ND	--	0.2 U	07/15/14	ND	--	0.02 U	07/15/14

Table 8-1
Maximum and Most Recent Groundwater Results: TCA, PCE, TCE, and VC
Boeing Auburn Remedial Investigation
Auburn, Washington

Analyte: SL:	1,1,1-Trichloroethane 200 µg/L				Tetrachloroethene 5 µg/L				Trichloroethene 0.54 µg/L				Vinyl Chloride 0.029 µg/L			
Well/Boring	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date	Max	Date	Most Recent	Date
ASB0243-25	ND	--	0.5 U	07/15/14	ND	--	0.2 U	07/15/14	**0.7**	07/15/14	**0.7**	07/15/14	ND	--	0.020 U	07/15/14
ASB0243-50	ND	--	0.5 U	07/15/14	ND	--	0.2 U	07/15/14	**5.8**	07/15/14	**5.8**	07/15/14	**0.044**	07/15/14	**0.044**	07/15/14
ASB0244-9	ND	--	0.5 U	03/16/15	ND	--	0.2 U	03/16/15	ND	--	0.2 U	03/16/15	ND	--	0.020 U	03/16/15
ASB0245-10	ND	--	0.5 U	03/16/15	ND	--	0.2 U	03/16/15	ND	--	0.2 U	03/16/15	ND	--	0.020 U	03/16/15
ASB0246-10	ND	--	0.5 U	03/16/15	ND	--	0.2 U	03/16/15	ND	--	0.2 U	03/16/15	ND	--	0.020 U	03/16/15
ASB0247-7	ND	--	0.5 U	03/17/15	ND	--	0.2 U	03/17/15	ND	--	0.2 U	03/17/15	ND	--	0.020 U	03/17/15
ASB0248-7	ND	--	0.5 U	03/17/15	ND	--	0.2 U	03/17/15	ND	--	0.2 U	03/17/15	ND	--	0.020 U	03/17/15
ASB0249-7	ND	--	0.5 U	03/17/15	ND	--	0.2 U	03/17/15	ND	--	0.2 U	03/17/15	ND	--	0.020 U	03/17/15
ASB0250-7	ND	--	0.5 U	03/17/15	ND	--	0.2 U	03/17/15	ND	--	0.2 U	03/17/15	**0.22**	03/17/15	**0.22**	03/17/15
ASB0251-7	ND	--	0.5 U	03/18/15	ND	--	0.2 U	03/18/15	ND	--	0.2 U	03/18/15	**0.4**	03/18/15	**0.4**	03/18/15
ASB0251R-8	ND	--	0.5 U	04/26/15	ND	--	0.2 U	04/26/15	ND	--	0.2 U	04/26/15	**0.72**	04/26/15	**0.72**	04/26/15
ASB0252-8	ND	--	0.5 U	03/18/15	ND	--	0.2 U	03/18/15	ND	--	0.2 U	03/18/15	ND	--	0.020 U	03/18/15
ASB0253-8	ND	--	0.5 U	03/18/15	ND	--	0.2 U	03/18/15	ND	--	0.2 U	03/18/15	ND	--	0.020 U	03/18/15
ASB0254-8	ND	--	0.5 U	03/18/15	ND	--	0.2 U	03/18/15	ND	--	0.2 U	03/18/15	ND	--	0.020 U	03/18/15
ASB0255-10	ND	--	0.5 U	04/26/15	ND	--	0.2 U	04/26/15	ND	--	0.2 U	04/26/15	ND	--	0.020 U	04/26/15
ASB0256-12	ND	--	0.5 U	04/27/15	ND	--	0.2 U	04/27/15	ND	--	0.2 U	04/27/15	ND	--	0.020 U	04/27/15
ASB0257-15	ND	--	0.5 U	04/27/15	ND	--	0.2 U	04/27/15	ND	--	0.2 U	04/27/15	ND	--	0.020 U	04/27/15
ASB0258-10	ND	--	0.5 U	04/28/15	ND	--	0.2 U	04/28/15	ND	--	0.2 U	04/28/15	**2.8**	04/28/15	**2.8**	04/28/15
ASB0259-10	ND	--	0.5 U	04/28/15	ND	--	0.2 U	04/28/15	ND	--	0.2 U	04/28/15	**0.13**	04/28/15	**0.13**	04/28/15
ASB0260-8	ND	--	0.5 U	04/28/15	ND	--	0.2 U	04/28/15	ND	--	0.2 U	04/28/15	ND	--	0.020 U	04/28/15
ASB0261-10	ND	--	0.5 U	04/28/15	ND	--	0.2 U	04/28/15	ND	--	0.2 U	04/28/15	**0.024**	04/28/15	**0.024**	04/28/15
ASB0262-10	ND	--	0.5 U	04/29/15	ND	--	0.2 U	04/29/15	ND	--	0.2 U	04/29/15	**0.43**	04/29/15	**0.43**	04/29/15
ASB0263-10	ND	--	0.5 U	04/29/15	ND	--	0.2 U	04/29/15	ND	--	0.2 U	04/29/15	ND	--	0.020 U	04/29/15
IW1	ND	--	0.2 UJ	06/17/04	**0.4 J**	06/17/04	**0.4 J**	06/17/04	**9.4 J**	06/17/04	**9.4 J**	06/17/04	ND	--	0.2 UJ	06/17/04
IW5	ND	--	1 UJ	06/18/04	ND	--	1 UJ	06/18/04	**150 J**	06/18/04	**150 J**	06/18/04	ND	--	1 UJ	06/18/04
IW10	**2.1 J**	06/18/04	**2.1 J**	06/18/04	**0.2 J**	06/18/04	**0.2 J**	06/18/04	**4 J**	06/18/04	**4 J**	06/18/04	ND	--	0.2 UJ	06/18/04
IW33	ND	--	0.5 U	08/13/15	ND	--	0.020 U	08/13/15	ND	--	0.2 U	08/13/15	**3**	08/13/15	**3**	08/13/15
IW34	ND	--	0.5 U	12/07/15	ND	--	0.10 U	12/07/15	**1.6 J**	12/07/15	**1.6 J**	12/07/15	**4.9**	08/17/15	**1.1 J**	12/07/15
IW35	ND	--	0.5 U	08/17/15	ND	--	0.020 U	08/17/15	ND	--	0.2 U	08/17/15	**3.7**	08/17/15	**3.7**	08/17/15
IW36	ND	--	2.5 U	12/07/15	ND	--	0.020 U	12/07/15	**0.2**	08/17/15	1.0 U	12/07/15	**6**	08/17/15	**3.8**	12/07/15
IW37	ND	--	0.5 U	12/07/15	**0.16**	12/07/15	**0.16**	12/07/15	**1.3 J**	12/07/15	**1.3 J**	12/07/15	**4.9**	08/13/15	**1.5 J**	12/07/15

Notes:
1. **Bold** text indicates detected analyte.
2. Green shading indicates exceedance of screening level.
3. Wells and borings not included did not have groundwater samples analyzed for these constituents.
4. Replacement wells (signified by R) maximum and most recent results included comparison with results from the original well.
5. All results are in µg/L.

Abbreviations/Acronyms:
-- = not analyzed.
J=The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
µg/L = micrograms per liter
mg/L = milligrams per liter
ND = The analyte was analyzed for, but was not detected.
SL = screening level
U=The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
UJ= The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Table 8-2
Groundwater Total Chloroethenes Data
Boeing Auburn Remedial Investigation
Auburn, Washington

		VOCs (µg/L)					VOCs (nmol/L)					
Well	Date	TCE	cDCE	tDCE	1,1-DCE	VC	TCE	cDCE	tDCE	1,1-DCE	VC	total cVOC
AGW001R	12/1/2015	2.0	<0.2	<0.2	<0.2	<0.2	15	ND	ND	ND	ND	15
AGW002R	12/3/2015	<0.2	0.3	<0.2	<0.2	0.066	ND	3	ND	ND	1	4
AGW006R	12/1/2015	0.5	1.2	<0.2	<0.2	0.1	4	12	ND	ND	2	18
AGW009	6/2/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW010	12/3/2015	<2.0	<2.0	<2.0	<2.0	<0.020	ND	ND	ND	ND	ND	ND
AGW024	12/8/2015	<0.2	0.3	<0.2	<0.2	1.7	ND	3	ND	ND	27	30
AGW025	12/3/2015	<0.2	3.6	0.4	<0.2	1.1	ND	37	4	ND	18	59
AGW026	12/3/2015	0.9	0.9	<0.2	<0.2	0.15	7	9	ND	ND	2	19
AGW027	12/3/2015	<0.2	1.8	<0.2	<0.2	0.82	ND	19	ND	ND	13	32
AGW029	6/4/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW030	6/4/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW031R	11/30/2015	1.8	3.0	<0.2	<0.2	0.037	14	31	ND	ND	1	45
AGW032	12/3/2015	<0.2	<0.2	<0.2	<0.2	0.041	ND	ND	ND	ND	1	1
AGW033	12/8/2015	2.4	1.4	<0.2	<0.2	0.21	18	14	ND	ND	3	36
AGW034	6/4/2015	0.2	<0.2	<0.2	<0.2	<0.020	2	ND	ND	ND	ND	2
AGW035	6/4/2015	1.5	<0.2	<0.2	<0.2	<0.020	11	ND	ND	ND	ND	11
AGW037	12/3/2015	2.3	1.2	<0.2	<0.2	0.2	18	12	ND	ND	3	33
AGW039	6/9/2015	0.5	1.1	<0.2	<0.2	0.03	4	11	ND	ND	0.5	16
AGW040	6/9/2015	1	0.6	<0.2	<0.2	<0.020	8	6	ND	ND	ND	14
AGW041	6/3/2015	0.4	<0.2	<0.2	<0.2	<0.020	3	ND	ND	ND	ND	3
AGW044	6/9/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW053R	12/3/2015	1.7	0.6	<0.2	<0.2	0.031	13	6	ND	ND	0.5	20
AGW055R	12/1/2015	0.5	0.7	<0.2	<0.2	0.051	4	7	ND	ND	1	12
AGW057R	12/1/2015	1.6	<0.2	<0.2	<0.2	<0.2	12	ND	ND	ND	ND	12
AGW058R	6/1/2015	0.3	<0.2	<0.2	<0.2	<0.020	2	ND	ND	ND	ND	2
AGW059R	6/1/2015	0.2	<0.2	<0.2	<0.2	<0.020	2	ND	ND	ND	ND	2
AGW060R	12/4/2015	0.4	3.2	<0.2	<0.2	0.068	3	33	ND	ND	1	37
AGW064	11/30/2015	0.4	0.2	<0.2	<0.2	<0.2	3	2	ND	ND	ND	5
AGW065	6/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW066	12/4/2015	4.3	1.1	<0.2	<0.2	<0.2	33	11	ND	ND	ND	44
AGW067	12/4/2015	3.7	1.8	<0.2	<0.2	<0.2	28	19	ND	ND	ND	47
AGW068	6/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW069	11/30/2015	<0.2	<0.2	<0.2	<0.2	<0.2	ND	ND	ND	ND	ND	ND
AGW072	12/4/2015	1.3	<0.2	<0.2	<0.2	<0.2	10	ND	ND	ND	ND	10
AGW073	12/4/2015	0.2	<0.2	<0.2	<0.2	<0.2	2	ND	ND	ND	ND	2
AGW074	12/7/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW078	6/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW079	12/7/2015	<0.2	0.4	<0.2	<0.2	0.9	ND	4	ND	ND	14	19
AGW081	6/4/2015	<0.2	0.3	<0.2	<0.2	0.026	ND	3	ND	ND	0.4	4

Table 8-2
Groundwater Total Chloroethenes Data
Boeing Auburn Remedial Investigation
Auburn, Washington

		VOCs (µg/L)					VOCs (nmol/L)					
Well	Date	TCE	cDCE	tDCE	1,1-DCE	VC	TCE	cDCE	tDCE	1,1-DCE	VC	total cVOC
AGW085	12/8/2015	<0.2	<0.2	<0.2	<0.2	<0.2	ND	ND	ND	ND	ND	ND
AGW087	12/7/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW088	12/7/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW089	12/7/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW090	12/7/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW091	12/7/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW095R	11/30/2015	1.2	0.2	<0.2	<0.2	<0.020	9	2	ND	ND	ND	11
AGW098R	11/30/2015	0.5	<0.2	<0.2	<0.2	<0.2	4	ND	ND	ND	ND	4
AGW104	6/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW105	12/7/2015	0.9	0.6	<0.2	<0.2	0.8	7	6	ND	ND	13	26
AGW106R	12/3/2015	<0.2	<0.2	<0.2	<0.2	<0.2	ND	ND	ND	ND	ND	ND
AGW110R	12/3/2015	<0.2	<0.2	<0.2	<0.2	0.11	ND	ND	ND	ND	2	2
AGW112R	12/3/2015	2.0	0.8	<0.2	<0.2	0.098	15	8	ND	ND	2	25
AGW115	12/9/2015	<0.2	3.2	<0.2	<0.2	0.5	ND	33	ND	ND	8	41
AGW116	12/9/2015	0.2	<0.2	<0.2	<0.2	<0.2	2	ND	ND	ND	ND	2
AGW117	12/9/2015	0.3	<0.2	<0.2	<0.2	<0.2	2	ND	ND	ND	ND	2
AGW118	12/9/2015	0.3	<0.2	<0.2	<0.2	<0.2	2	ND	ND	ND	ND	2
AGW119	12/7/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW120	12/7/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW125	12/4/2015	9.1	1.7	<0.2	<0.2	0.034	69	18	ND	ND	1	87
AGW126	12/4/2015	8	4.7	<0.2	0.3	0.11	61	48	ND	3	2	114
AGW127	6/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW128	12/9/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW129	12/9/2015	0.6	0.4	<0.2	<0.2	<0.2	5	4	ND	ND	ND	9
AGW130	12/9/2015	0.4	<0.2	<0.2	<0.2	<0.2	3	ND	ND	ND	ND	3
AGW131	12/3/2015	<0.2	2.1	<0.2	<0.2	5.0	ND	22	ND	ND	80	102
AGW133	6/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW134	12/8/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW135	12/8/2015	1.6	0.6	<0.2	<0.2	0.067	12	6	ND	ND	1	19
AGW136	11/30/2015	3.3	1.5	<0.2	<0.2	<0.020	25	15	ND	ND	ND	41
AGW137	11/30/2015	5.8	2.3	<0.2	0.2	0.033	44	24	ND	2	1	70
AGW138	11/30/2015	0.7	<0.2	<0.2	<0.2	<0.2	5	ND	ND	ND	ND	5
AGW139	11/30/2015	3.8	0.2	<0.2	<0.2	<0.2	29	2	ND	ND	ND	31
AGW140	12/3/2015	4.3	2.9	<0.2	0.2	0.21	33	30	ND	2	3	68
AGW141	11/30/2015	2.5	0.3	<0.2	<0.2	<0.2	19	3	ND	ND	ND	22
AGW142	11/30/2015	0.3	<0.2	<0.2	<0.2	<0.2	2	ND	ND	ND	ND	2
AGW143	12/8/2015	<0.2	<0.2	<0.2	<0.2	<0.2	ND	ND	ND	ND	ND	ND
AGW144	12/4/2015	0.9	1.9	0.4	<0.2	0.3	7	20	4	ND	5	35
AGW145	12/4/2015	12	7.7	1.1	<0.2	0.8	91	79	11	ND	13	195

Table 8-2
Groundwater Total Chloroethenes Data
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Well	Date	VOCs (µg/L)					VOCs (nmol/L)					
		TCE	cDCE	tDCE	1,1-DCE	VC	TCE	cDCE	tDCE	1,1-DCE	VC	total cVOC
AGW146	12/4/2015	3.9	1.8	0.2	<0.2	0.13	30	19	2	ND	2	52
AGW147	12/2/2015	<0.2	1	<0.2	<0.2	<0.020	ND	10	ND	ND	ND	10
AGW148	12/2/2015	4	1.6	<0.2	<0.2	0.044	30	17	ND	ND	1	48
AGW149	12/2/2015	4.2	0.5	<0.2	<0.2	<0.2	32	5	ND	ND	ND	37
AGW150	11/30/2015	1.6	<0.2	<0.2	<0.2	<0.2	12	ND	ND	ND	ND	12
AGW151	11/30/2015	0.5	<0.2	<0.2	<0.2	<0.2	4	ND	ND	ND	ND	4
AGW152	12/3/2015	<0.2	0.6	<0.2	<0.2	3.0	ND	6	ND	ND	48	54
AGW153	6/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW154	12/3/2015	0.5	0.5	<0.2	<0.2	0.03	4	5	ND	ND	0.5	9
AGW155	12/3/2015	<0.2	2.8	0.4	<0.2	3.3	ND	29	4	ND	53	86
AGW156	12/3/2015	<0.2	9.2	0.4	<0.2	1.6	ND	95	4	ND	26	125
AGW157	12/7/2015	2.7	2	<0.2	<0.2	0.6	21	21	ND	ND	10	51
AGW158	12/9/2015	2.8	0.6	<0.2	<0.2	0.057	21	6	ND	ND	1	28
AGW159	12/9/2015	4.4	1	<0.2	<0.2	0.14	33	10	ND	ND	2	46
AGW160	12/4/2015	3.5	0.5	<0.2	<0.2	<0.2	27	5	ND	ND	ND	32
AGW161	12/2/2015	1.9	<0.2	<0.2	<0.2	<0.2	14	ND	ND	ND	ND	14
AGW162	12/7/2015	0.7	<0.2	<0.2	<0.2	<0.2	5	ND	ND	ND	ND	5
AGW163	12/7/2015	4.4	1	<0.2	<0.2	0.025	33	10	ND	ND	0.4	44
AGW164	12/8/2015	1.7	0.4	<0.2	<0.2	0.1	13	4	ND	ND	2	19
AGW165	12/3/2015	2.3	1.2	<0.2	<0.2	0.16	18	12	ND	ND	3	32
AGW166	12/9/2015	<0.2	0.6	<0.2	<0.2	0.22	ND	6	ND	ND	4	10
AGW167	12/9/2015	4.8	2.4	0.3	<0.2	0.18	37	25	3	ND	3	67
AGW168	12/9/2015	4.6	1.7	<0.2	<0.2	0.064	35	18	ND	ND	1	54
AGW169	12/9/2015	5.8	1.6	<0.2	<0.2	0.061	44	17	ND	ND	1	62
AGW170	12/9/2015	2.8	0.5	<0.2	<0.2	0.031	21	5	ND	ND	0.5	27
AGW171	12/9/2015	2.2	<0.2	<0.2	<0.2	<0.2	17	ND	ND	ND	ND	17
AGW172	12/8/2015	5.6	0.3	<0.2	<0.2	<0.2	43	3	ND	ND	ND	46
AGW173	12/8/2015	2.2	0.2	<0.2	<0.2	<0.020	17	2	ND	ND	ND	19
AGW174	12/2/2015	2	<0.2	<0.2	<0.2	<0.2	15	ND	ND	ND	ND	15
AGW175	12/2/2015	2.4	0.4	<0.2	<0.2	<0.2	18	4	ND	ND	ND	22
AGW176	12/9/2015	3.8	0.4	<0.2	<0.2	<0.020	29	4	ND	ND	ND	33
AGW177	12/2/2015	4.3	0.7	<0.2	<0.2	<0.020	33	7	ND	ND	ND	40
AGW178	12/2/2015	4.4	0.5	<0.2	<0.2	0.021	33	5	ND	ND	0.3	39
AGW179	12/2/2015	0.3	7	<0.2	0.2	0.078	2	72	ND	2	1	78
AGW180	12/2/2015	3.9	0.7	<0.2	<0.2	<0.2	30	7	ND	ND	ND	37
AGW181	12/1/2015	4.8	1.2	<0.2	<0.2	0.048	37	12	ND	ND	1	50
AGW182	12/4/2015	1.7	2.5	0.3	<0.2	0.2	13	26	3	ND	3	45
AGW183	12/4/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW184	12/1/2015	0.5	<0.2	<0.2	<0.2	<0.2	4	ND	ND	ND	ND	4

Table 8-2
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		VOCs (µg/L)					VOCs (nmol/L)					
Well	**Date**	**TCE**	**cDCE**	**tDCE**	**1,1-DCE**	**VC**	**TCE**	**cDCE**	**tDCE**	**1,1-DCE**	**VC**	**total cVOC**
AGW185	12/2/2015	3.4	<0.2	<0.2	<0.2	<0.2	26	ND	ND	ND	ND	26
AGW186	12/1/2015	0.6	<0.2	<0.2	<0.2	<0.2	5	ND	ND	ND	ND	5
AGW187	12/2/2015	2	0.3	<0.2	<0.2	<0.2	15	3	ND	ND	ND	18
AGW188	12/1/2015	4.6	0.5	<0.2	<0.2	0.025	35	5	ND	ND	0.4	41
AGW189	12/1/2015	0.7	<0.2	<0.2	<0.2	<0.2	5	ND	ND	ND	ND	5
AGW190	12/8/2015	1.5	<0.2	<0.2	<0.2	<0.2	11	ND	ND	ND	ND	11
AGW191	12/8/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW192	12/8/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW193	12/9/2015	3.0	1.8	<0.2	<0.2	0.3	23	19	ND	ND	5	46
AGW194	12/9/2015	2.4	0.7	<0.2	<0.2	0.03	18	7	ND	ND	0.5	26
AGW195	12/7/2015	8.4	0.8	<0.2	<0.2	<0.020	64	8	ND	ND	ND	72
AGW196	12/7/2015	<0.2	4.2	<0.2	0.3	2	ND	43	ND	3	32	78
AGW197	12/9/2015	9.8	0.8	<0.2	<0.2	<0.2	75	8	ND	ND	ND	83
AGW198	12/9/2015	7.7	0.8	<0.2	<0.2	<0.020	59	8	ND	ND	ND	67
AGW199	12/8/2015	8.5	1.3	<0.2	0.2	0.029	65	13	ND	2	0.5	81
AGW200-2	12/8/2015	0.3	1.5	0.2	<0.2	2.1	2	15	2	ND	34	53
AGW200-5	12/8/2015	1.5	5.6	0.6	<0.2	1.7	11	58	6	ND	27	103
AGW200-6	12/8/2015	0.8	4.5	0.6	<0.2	1.1	6	46	6	ND	18	76
AGW201-2	12/8/2015	0.5	3.6	0.3	<0.2	2.0	4	37	3	ND	32	76
AGW201-5	12/8/2015	5.3	4.5	0.4	<0.2	1	40	46	4	ND	16	107
AGW201-6	12/8/2015	8.2	4.6	0.5	<0.2	0.5	62	47	5	ND	8	123
AGW202-2	12/8/2015	1.6	3.0	<0.2	<0.2	1.2	12	31	ND	ND	19	62
AGW202-4	12/8/2015	3.6	1.3	<0.2	<0.2	0.4	27	13	ND	ND	6	47
AGW202-6	12/8/2015	1	0.3	<0.2	<0.2	<0.2	8	3	ND	ND	ND	11
AGW203-2	12/8/2015	1.3	0.2	<0.2	<0.2	<0.2	10	2	ND	ND	ND	12
AGW203-4	12/8/2015	3.3	<0.2	<0.2	<0.2	<0.2	25	ND	ND	ND	ND	25
AGW203-6	12/8/2015	0.2	<0.2	<0.2	<0.2	<0.2	2	ND	ND	ND	ND	2
AGW204	6/2/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW205	6/2/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW206	12/7/2015	0.7	0.3	<0.2	<0.2	<0.2	5	3	ND	ND	ND	8
AGW207-2	11/30/2015	7.6	4.1	<0.2	<0.2	0.2	58	42	ND	ND	3	103
AGW207-4	11/30/2015	6.7	1.9	<0.2	<0.2	0.23	51	20	ND	ND	4	74
AGW207-7	11/30/2015	5.9	0.7	<0.2	<0.2	0.022	45	7	ND	ND	0.4	52
AGW208-2	12/3/2015	3.7	5.2	<0.2	0.2	0.5	28	54	ND	2	8	92
AGW208-4	12/3/2015	1.4	6.1	<0.2	<0.2	0.23	11	63	ND	ND	4	77
AGW208-6	12/3/2015	5.5	0.6	<0.2	<0.2	<0.2	42	6	ND	ND	ND	48
AGW209-2	12/4/2015	<0.2	<0.2	<0.2	<0.2	2.1	ND	ND	ND	ND	34	34
AGW209-5	12/4/2015	2.1	1.4	<0.2	0.2	1.4	16	14	ND	2	22	55
AGW209-6	12/4/2015	5.7	0.7	<0.2	<0.2	0.021	43	7	ND	ND	0.3	51

Table 8-2
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Well	Date	VOCs (µg/L)					VOCs (nmol/L)					
		TCE	cDCE	tDCE	1,1-DCE	VC	TCE	cDCE	tDCE	1,1-DCE	VC	total cVOC
AGW210-2	6/2/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW210-5	12/7/2015	1.4	1.8	<0.2	<0.2	0.062	11	19	ND	ND	1	30
AGW210-6	12/7/2015	4.9	0.4	<0.2	<0.2	<0.2	37	4	ND	ND	ND	41
AGW211-2	6/2/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW211-5	12/4/2015	3.7	0.9	<0.2	<0.2	<0.020	28	9	ND	ND	ND	37
AGW211-6	12/4/2015	0.9	1.2	<0.2	<0.2	<0.2	7	12	ND	ND	ND	19
AGW212-2	6/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW212-5	12/7/2015	2.1	<0.2	<0.2	<0.2	<0.2	16	ND	ND	ND	ND	16
AGW212-7	12/7/2015	4.7	<0.2	<0.2	<0.2	<0.2	36	ND	ND	ND	ND	36
AGW213	12/1/2015	<0.2	<0.2	<0.2	<0.2	0.024	ND	ND	ND	ND	0.4	0.4
AGW214	12/1/2015	2.7	0.3	<0.2	<0.2	0.026	21	3	ND	ND	0.4	24
AGW215	12/1/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW216	12/4/2015	1	<0.2	<0.2	<0.2	<0.2	8	ND	ND	ND	ND	8
AGW217	12/1/2015	1.8	0.2	<0.2	<0.2	0.022	14	2	ND	ND	0.4	16
AGW218	12/1/2015	3.6	0.4	<0.2	<0.2	0.021	27	4	ND	ND	0.3	32
AGW219	12/1/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW220	12/1/2015	0.3	<0.2	<0.2	<0.2	<0.020	2	ND	ND	ND	ND	2
AGW221	12/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW222	12/9/2015	0.4	<0.2	<0.2	<0.2	<0.2	3	ND	ND	ND	ND	3
AGW223	6/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW224	6/5/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW225	12/8/2015	2.1	4.8	0.5	<0.2	0.5	16	50	5	ND	8	79
AGW226	12/2/2015	0.5	1.8	<0.2	<0.2	0.4	4	19	ND	ND	6	29
AGW227	12/9/2015	2.5	2.5	0.3	<0.2	0.3	19	26	3	ND	5	53
AGW228	12/9/2015	2.8	2.9	0.3	<0.2	0.3	21	30	3	ND	5	59
AGW229	12/9/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW230	12/1/2015	1.2	<0.2	<0.2	<0.2	<0.2	9	ND	ND	ND	ND	9
AGW231	12/8/2015	1.2	1.4	<0.2	<0.2	2.3	9	14	ND	ND	37	60
AGW232	12/7/2015	<0.2	4.1	<0.2	0.3	2.0	ND	42	ND	3	32	77
AGW233	12/7/2015	<0.2	<0.2	<0.2	<0.2	<0.2	ND	ND	ND	ND	ND	ND
AGW234	12/7/2015	7.7	1.7	<0.2	0.4	0.053	59	18	ND	4	1	81
AGW235-2	12/8/2015	<0.2	2.6	0.3	0.2	2.3	ND	27	3	2	37	69
AGW235-4	12/8/2015	4	6.7	<0.2	0.3	0.11	30	69	ND	3	2	104
AGW235-7	12/8/2015	<0.2	<0.2	<0.2	<0.2	<0.2	ND	ND	ND	ND	ND	ND
AGW236	12/4/2015	6.0	3.0	<0.2	<0.2	0.065	46	31	ND	ND	1	78
AGW237	12/3/2015	2.4	1	<0.2	0.9	0.043	18	10	ND	9	1	39
AGW238	12/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW239	12/3/2015	<0.2	12	0.6	0.3	1.4	ND	124	6	3	22	155
AGW240-5	12/7/2015	<0.2	1.8	0.3	<0.2	4.3	ND	19	3	ND	69	90

Table 8-2
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		VOCs (µg/L)					VOCs (nmol/L)					
Well	Date	TCE	cDCE	tDCE	1,1-DCE	VC	TCE	cDCE	tDCE	1,1-DCE	VC	total cVOC
AGW241-5	11/30/2015	<0.2	0.4	<0.2	<0.2	<0.020	ND	4	ND	ND	ND	4
AGW242-2	11/30/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW242-5	11/30/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW243-3	11/30/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW243-5	11/30/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW244	12/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW245	12/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW246	12/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW247-5	12/2/2015	<0.2	2.9	0.7	<0.2	4.0	ND	30	7	ND	64	101
AGW248-5	12/8/2015	5.0	2.0	<0.2	<0.2	0.23	38	21	ND	ND	4	62
AGW249-5	12/9/2015	7.1	2.2	<0.2	<0.2	0.14	54	23	ND	ND	2	79
AGW250-2	11/30/2015	0.3	0.3	<0.2	<0.2	0.033	2	3	ND	ND	1	6
AGW250-3	11/30/2015	0.5	0.8	<0.2	<0.2	0.055	4	8	ND	ND	1	13
AGW250-6	12/1/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW251-2	12/3/2015	<0.2	<0.2	<0.2	<0.2	3.9	ND	ND	ND	ND	62	62
AGW251-3	12/3/2015	<0.2	3	<0.2	<0.2	5	ND	31	ND	ND	80	111
AGW251-6	12/3/2015	<0.2	0.3	<0.2	<0.2	0.19	ND	3	ND	ND	3	6
AGW252	12/3/2015	<0.2	<0.2	<0.2	<0.2	0.03	ND	ND	ND	ND	0.5	0.5
AGW253	12/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW254-2	12/4/2015	<0.2	<0.2	<0.2	<0.2	0.050	ND	ND	ND	ND	1	1
AGW254-5	12/4/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW255-3	12/4/2015	<0.2	1.3	<0.2	<0.2	0.25	ND	13	ND	ND	4	17
AGW255-5	12/4/2015	<0.2	0.7	<0.2	<0.2	0.24	ND	7	ND	ND	4	11
AGW256	12/1/2015	0.7	<0.2	<0.2	<0.2	<0.020	5	ND	ND	ND	ND	5
AGW257	12/1/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW258	12/1/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW259	12/4/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW260	12/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW261	12/1/2015	2.6	1.3	0.2	<0.2	0.084	20	13	2	ND	1	37
AGW264	12/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW265	12/3/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW266	12/1/2015	<0.2	0.4	<0.2	<0.2	<0.020	ND	4	ND	ND	ND	4
AGW267	12/1/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW268	12/1/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
AGW269	12/7/2015	0.2	7.4	1.2	<0.2	5.1	2	76	12	ND	82	172
AGW270	12/7/2015	1.7	10	1.7	<0.2	1.3	13	103	18	ND	21	154
AGW271	12/7/2015	1.2	15	1.8	<0.2	5.9	9	155	19	ND	94	277
AGW272	12/7/2015	0.2	6.4	0.7	<0.2	1.8	2	66	7	ND	29	104
AGW273	12/7/2015	<0.2	3.4	0.6	<0.2	6.0	ND	35	6	ND	96	137

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Boeing Auburn Remedial Investigation
Auburn, Washington

Well	Date	VOCs (µg/L)					VOCs (nmol/L)					
		TCE	cDCE	tDCE	1,1-DCE	VC	TCE	cDCE	tDCE	1,1-DCE	VC	total cVOC
AGW274	12/7/2015	<0.2	<0.2	<0.2	<0.2	1.9	ND	ND	ND	ND	30	30
AGW275	12/7/2015	<0.2	2.5	0.3	<0.2	7.7	ND	26	3	ND	123	152
AGW276-2	12/8/2015	0.4	1.8	0.2	<0.2	1.3	3	19	2	ND	21	44
AGW276-5	12/8/2015	<0.2	6.6	0.4	<0.2	0.8	ND	68	4	ND	13	85
AGW276-6	12/8/2015	2.5	1.4	<0.2	<0.2	0.091	19	14	ND	ND	1	35
APP-057	12/9/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
APP-058	8/27/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
APP-069	8/27/2015	<0.2	<0.2	<0.2	<0.2	<0.020	ND	ND	ND	ND	ND	ND
IW34	12/7/2015	1.6	8.5	1.2	<0.2	1.1	12	88	12	ND	18	130
IW36	12/7/2015	<1.0	1.6	<1.0	<1.0	3.8	ND	17	ND	ND	61	77
IW37	12/7/2015	1.3	13	2	<0.2	1.5	10	134	21	ND	24	189

Note:
1. Data presented is most recent as of December 2015.
2. Total cVOCs include the sum of the chloroethenes (TCE, cDCE, tDCE, 1,1-DCE, and VC).

Abbreviations/Acronyms:
1,1-DCE = 1,1-dichloroethene
cDCE = cis-1,2-dichloroethene
cVOC = chlorinated volatile organic compound
µg/L = micrograms per liter
nmol/L = nanomoles per liter
ND = constituent not detected at reported detection limit
tDCE = trans-1,2-dichloroethene
TCE = trichloroethene
VC = vinyl chloride
VOC = volatile organic compound

Table 8-3
Summary of Indiviual Well Concentration Trend Analysis
Boeing Auburn Remedial Investigation
Auburn, Washington

Trend - Number of Wells	Trichoroethene				
	Water Table	Shallow Zone	Intermediate Zone	Deep Zone	Total
Decreasing	1	46	37	18	**102**
Stable	2	11	12	5	**30**
Non-Detect	12	29	23	14	**78**
Increasing	0	3	7	6	**16**
No Trend	1	7	10	1	**19**
Insufficient Data	2	2	1	0	**5**
Total Number of Wells	**18**	**98**	**90**	**44**	**250**

Trend - Number of Wells	Vinyl Chloride				
	Water Table	Shallow Zone	Intermediate Zone	Deep Zone	Total
Decreasing	3	45	26	13	**87**
Stable	3	11	12	3	**29**
Non-Detect	4	22	35	21	**82**
Increasing	0	5	5	2	**12**
No Trend	5	12	10	5	**32**
Insufficient Data	3	3	2	0	**8**
Total Number of Wells	**18**	**98**	**90**	**44**	**250**

Table 8-4
Plume Mass and Stability MAROS Analysis
Boeing Auburn Remedial Investigation
Auburn, Washington

Year	Shallow Zone - Trichoroethene					Shallow Zone - Vinyl Chloride				
	Change in Total Mass over Time		Change in the Center of Mass over Time			Change in Total Mass over Time		Change in the Center of Mass over Time		
	Est. Mass (kg)	Est. Mass (lbs)	X (ft)	Y (ft)	Source Distance (a)	Est. Mass (kg)	Est. Equiv. Mass TCE (lbs)	X (ft)	Y (ft)	Source Distance (a)
2011	4.3	9.5	1,290,036	109,853	2,120	1.7	7.88	1,289,463	111,272	3,643
2012	4.3	9.5	1,290,001	109,803	2,081	1.8	8.34	1,289,466	111,337	3,704
2013	4.5	9.9	1,289,981	109,889	2,169	1.8	8.34	1,289,501	111,242	3,603
2014	4.1	9.0	1,289,942	109,918	2,208	1.8	8.34	1,289,473	111,395	3,757
2015	3.8	8.4	1,289,950	109,925	2,212	1.8	8.34	1,289,422	111,537	3,908
Coefficient of Variation	0.06		0.03			0.02		0.03		
Mann-Kendall Statistic	-6		8			0		6		
Confidence in Trend	88.3%		95.8%			40.8%		88.3%		
Moment Trend	Stable		Increasing			Stable		No Trend		

Year	Intermediate Zone - Trichloroethene					Intermediate Zone - Vinyl Chloride				
	Change in Total Mass over Time		Change in the Center of Mass over Time			Change in Total Mass over Time		Change in the Center of Mass over Time		
	Est. Mass (kg)	Est. Mass (lbs)	X (ft)	Y (ft)	Source Distance (a)	Est. Mass (kg)	Est. Equiv. Mass TCE (lbs)	X (ft)	Y (ft)	Source Distance (a)
2011	22.0	48.5	1,290,780	111,926	4,127	1.6	7.4	1,289,945	109,356	1,676
2012	24.0	52.9	1,290,731	111,924	4,123	1.5	7.0	1,289,921	109,365	1,694
2013	22.0	48.5	1,290,681	111,909	4,106	1.4	6.5	1,289,922	109,424	1,748
2014	22.0	48.5	1,290,683	111,912	4,109	1.5	7.0	1,290,038	109,758	2,027
2015	20.0	44.1	1,290,663	111,907	4,103	1.3	6.0	1,289,827	109,719	2,056
Coefficient of Variation	0.06		0.00			0.07		0.10		
Mann-Kendall Statistic	-8		-8			-6		10		
Confidence in Trend	95.8%		95.8%			88.3%		99.2%		
Moment Trend	Decreasing		Decreasing			Stable		Increasing		

Table 8-4
Plume Mass and Stability MAROS Analysis
Boeing Auburn Remedial Investigation
Auburn, Washington

Year	Deep Zone - Trichloroethene					Deep Zone - Vinyl Chloride				
	Change in Total Mass over Time		Change in the Center of Mass over Time			Change in Total Mass over Time		Change in the Center of Mass over Time		
	Est. Mass (kg)	Est. Mass (lbs)	X (feet)	Y (feet)	Source Distance (a)	Est. Mass (kg)	Est. Equiv. Mass TCE (lbs)	X (feet)	Y (feet)	Source Distance (a)
2011	14.0	30.9	1,290,110	111,712	3,936	0.24	1.1	1,289,938	110,512	2,783
2012	15.0	33.1	1,290,093	111,697	3,923	0.20	0.9	1,289,995	110,623	2,879
2013	15.0	33.1	1,290,085	111,693	3,920	0.18	0.8	1,290,038	110,533	2,782
2014	14.0	30.9	1,290,114	111,667	3,891	0.24	1.1	1,290,286	110,948	3,158
2015	14.0	30.9	1,290,096	111,745	3,970	0.15	0.7	1,289,916	110,647	2,919
Coefficient of Variation	0.02		0.01			0.2		0.05		
Mann-Kendall Statistic	0		-2			-6		4		
Confidence in Trend	40.8%		59.2%			88.3%		75.8%		
Moment Trend	Stable		Stable			Stable		No Trend		

Note:
(a) AGW201 selected as arbirtary facility source location for analysis purposes.

Abbreviations/Acronyms:
Equiv. = equivalent
Est. = estimated
kg = kilogram
TCE = trichloroethene
lbs = pounds

Table 8-5
Summary of MAROS Plume Mass Analysis
Boeing Auburn Remedial Investigation
Auburn, Washington

Groundwater Zone	Trichloroethene		Vinyl Chloride	
	Average Mass (kg)	Mass Trend	Average Mass (kg)	Mass Trend
Shallow	4.2	Stable	1.8	Stable
Intermediate	22.0	Decreasing	1.5	Stable
Deep	14.4	Stable	0.2	Stable
Total Mass (kg)	40.6		3.5	
Total Plume Mass (kg; equivalents as trichloroethene)	48.0			

Note:

1. Plume mass was calculated by averaging the mass over the last five years (2011 through 2015).

Abbreviation/Acronym:

kg = kilogram