May 21, 2015

Washington State Department of Ecology
3190 160th Avenue Southeast
Bellevue, Washington 98008

Attn: Neal Hines

RE: COMMERCIAL VAPOR INTRUSION DATA SUBMITTAL – MARCH AND APRIL 2015

Dear Mr. Hines:

The Boeing Company (Boeing) completed additional Tier I and Tier II commercial vapor intrusion assessments in March and April 2015. These assessments are briefly described below. Figures showing the sample locations and tables providing the analytical results are attached. A DVD with the laboratory data packages for all analytical results is included with the paper copy of this letter.

Boeing completed additional Tier I vapor intrusion assessments in the commercial areas of Algona and Auburn, Washington to the west and north of the Boeing Auburn Facility (Facility) as described in the Additional Tier I Commercial Vapor Intrusion Assessment Work Plan (Landau Associates 2014). The additional Tier I vapor intrusion assessments were completed in two mobilizations due to delays in finalizing the W.P. Glimcher access agreement. The first mobilization consisted of advancement of temporary borings and collection of shallow groundwater (ASB0244 through ASB0254) and soil gas samples (ASG0244 through ASB0254) at 11 locations in Auburn and Algona right-of-ways (ROWs) from March 16 to March 19, 2015. The second mobilization consisted of advancement of temporary borings and collection of shallow groundwater (ASB0255 through ASB0263) and soil gas samples (ASG0255 through ASG0263) at nine locations on W.P. Glimcher property and resampling at one location (ASB0251R/ASG0251R) in Algona ROW from April 26 to April 29, 2015. The new direct-push boring locations are shown on Figure 1. The shallow groundwater and soil gas sample results are provided on Table 1.

Boeing also completed Tier II vapor intrusion assessments at The Outlet Collection in Auburn and at Building 17-70 at the Facility as described in the Tier II Commercial Vapor Intrusion Assessment Work Plan (Landau Associates 2015). The Tier II vapor intrusion assessments consisted of collecting indoor air, sub-slab soil vapor, and ambient air samples. Building 17-70 sampling occurred on April 20 and 21 and included co-located indoor air and sub-slab soil vapor samples collected at two locations (IA075/SSV069 and IA076/SSV070) and an ambient air sample (AA033) collected from the roof. The

Outlet Collection sampling occurred on April 27 and 28 and included co-located indoor air and sub-slab soil vapor samples collected at three locations (IA077/SSV073, IA079/SSV072, IA081/SSV071), indoor air samples collected in underground service tunnels in two locations (IA078 and IA080), and an ambient air sample (AA034) collected from the roof. The sampling locations for Building 17-70 are shown on Figure 2 and the sampling locations for The Outlet Collection are shown on Figure 3. The air sampling results are provided on Table 2.

Draft reports summarizing the findings of the investigation will be submitted to Washington State Department of Ecology for review in accordance with the schedule outlined in the work plans. If you have any questions about the information contained in this letter, please contact Jennifer Wynkoop at (253) 284-4879 or Jim Bet at (206) 679-0433.

LANDAU ASSOCIATES, INC.

Sarah Fees

Sarah Fees
Project Hydrogeologist

Jennifer Wynkoop
Senior Associate

SEF/JWW/jrc

REFERENCES

Landau Associates. 2014. Report: *Additional Tier I Commercial Vapor Intrusion Assessment Work Plan, Winter 2014/2015, Boeing Auburn Facility, Auburn, Washington*. Prepared for The Boeing Company. December 10.

Landau Associates. 2015. Report: *Tier II Commercial Vapor Intrusion Assessment Work Plan, Winter 2015, Boeing Auburn Facility, Auburn, Washington*. Prepared for The Boeing Company. April 20.

Attachments:

Figure 1: Commercial Vapor Intrusion Assessment and New Direct-Push Locations
Figure 2: Commercial Boeing Building 17-70 Indoor Air and Sub-Slab Soil Vapor Sampling Locations
Figure 3: The Outlet Collection Indoor Air and Sub-Slab Vapor Sampling Locations
Table 1: Soil Gas and Groundwater Analytical Data, Tier I Commercial Vapor Intrusion Sampling
Table 2: Analytical Data, Tier II Commercial Vapor Intrusion Sampling
Laboratory Data Packages (provided on DVD)

cc: Jim Bet, The Boeing Company (email only)
Jim Swortz, The Boeing Company (email only)
Robin Harrover, Washington State Department of Ecology (email only)

G:\Projects\025\164\120\105\Tier 1 Commercial VI Report\F01Tier1CommercialVIAssessment.mxd 5/20/2015 NAD 1983 StatePlane Washington North FIPS 4601 Feet

N

The Outlet Collection

Coastal Farm and Ranch

ASB0257 ASG0257

AGW236-14

AGW207-1

ASB0256 ASG0256

ASB0258 ASG0258

ASB0259 ASG0259

AGW208-1

ASB0261 ASG0261

AGW209-1

AGW210-1

ASB0255 ASG0255

ASB0260 ASG0260

ASB0263 ASG0263

ASB0262 ASG0262

ASB0248 ASG0248

ASB0246 ASG0246

ASB0247 ASG0247

ASB0245 ASG0245

ASB0244 ASG0244

ASB0252 ASG0252

ASB0253 ASG0253

ASB0249 ASG0249

AGW177-29

AGW179-30

Fana West

Fana

Boundary Rd SW

ASB0234-25

11th Ave N

ASB0233-9

Milwaukee Ave N

Industry Dr N

ASB0243-14

AGW193

10th Ave N

AGW194

ASB0232-7

ASB0242-12

ASB0254 ASG0254

9th Ave N

ASB0240-10

Interurban Trail

Perimeter Rd

ASB0251R ASG0251R

ASB0251 ASG0251

AGW251-1

ASB0250 ASG0250

Chicago Ave

8th Ave N

ASB0239-9

ASB0231-6

ASB0230-7

Notes

1. Commercial Groundwater Screening Levels (SL) Protective of Indoor Air:
   Trichloroethene (TCE) = 7.9
   Vinyl Chloride (VC) = 1.0
2. A shallow groundwater sample (e.g. ASB0248) and a soil gas sample (e.g. ASG0248) were collected at each new direct-push location.
3. Multilevel wells have multiple channels. Channel designations are included in the well ID (e.g., AGW207-1). Channel 1 is the shallowest screen.
4. Borehole sample designations include the location name (e.g., ASB0208-1) followed by the depth (feet, below ground surface) at which the sample was collected (e.g., 9).
5. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Base Map Source: Geometrix 2003; Aerial Photo Source: Esri World Imagery.

Legend

- Tier I Direct-Push Location
- Shallow Well
- Borehole Grab Sample
- TCE and/or VC Exceed SL
- TCE and/or VC Detected (Neither Exceed SL)
- TCE and VC Not Detected
- Additional Tier I Assessment Area
- Additional Tier II Assessment Area
- Commercial Building Where Vapor Intrusion Assessments Have Been Conducted

0 300 600

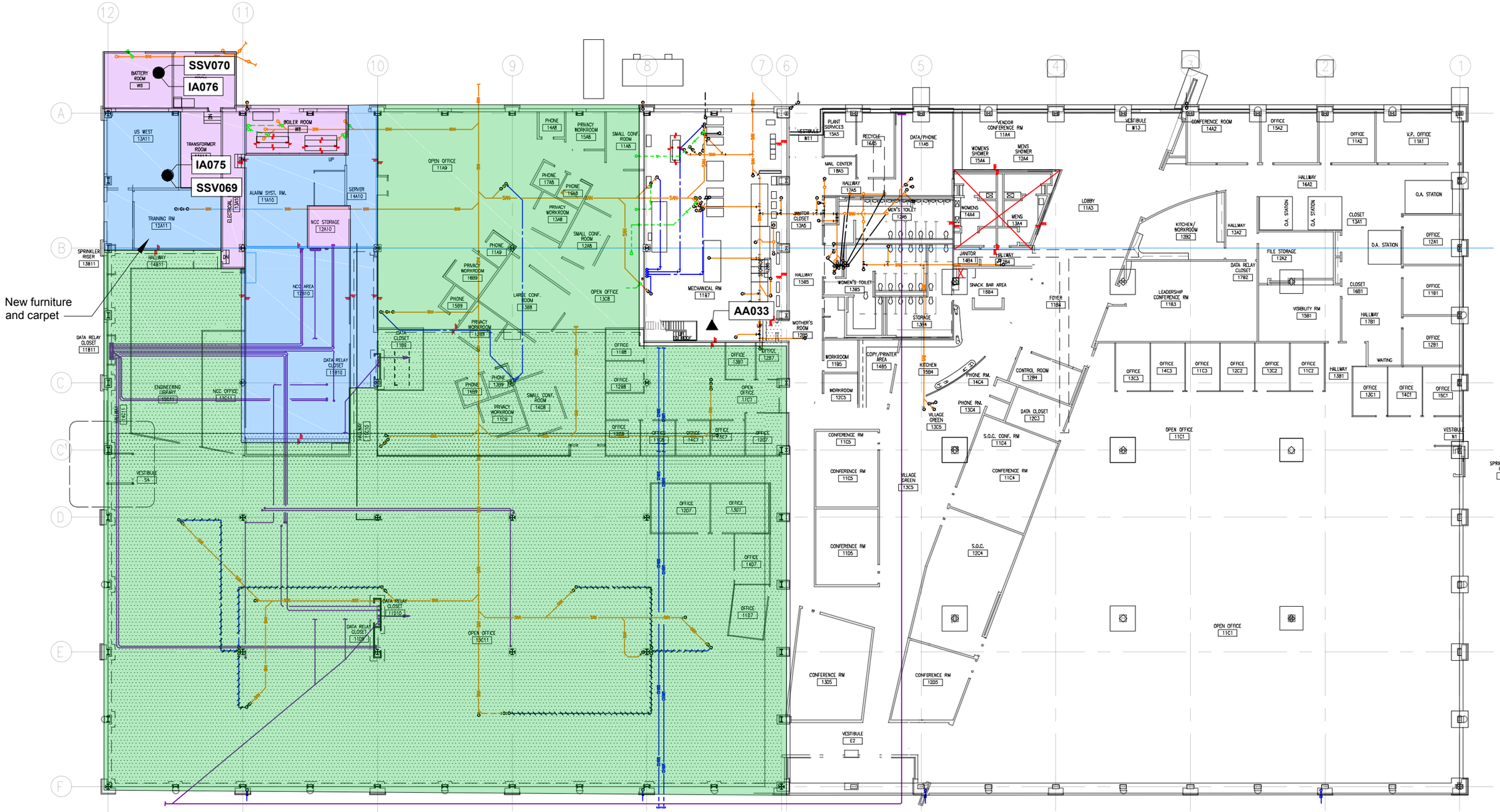
Scale in Feet

LANDAU ASSOCIATES

Boeing Auburn
Auburn, Washington

Tier I Commercial Vapor Intrusion Assessment

Figure 1



Legend

- Co-located sub-slab soil vapor and indoor air sample location.
- Ambient air sample location (on roof).
- Top concrete slab rests on polystyrene foam which rests on slab-on-grade base.
- Raised floor with removable panels above slab-on-grade base.
- Slab-on-grade
- SAN — Sanitary
- V — Vent
- Fiber Optic Cable
- CHWS — Cold Water Supply

N

0 30 60

SCALE IN FEET

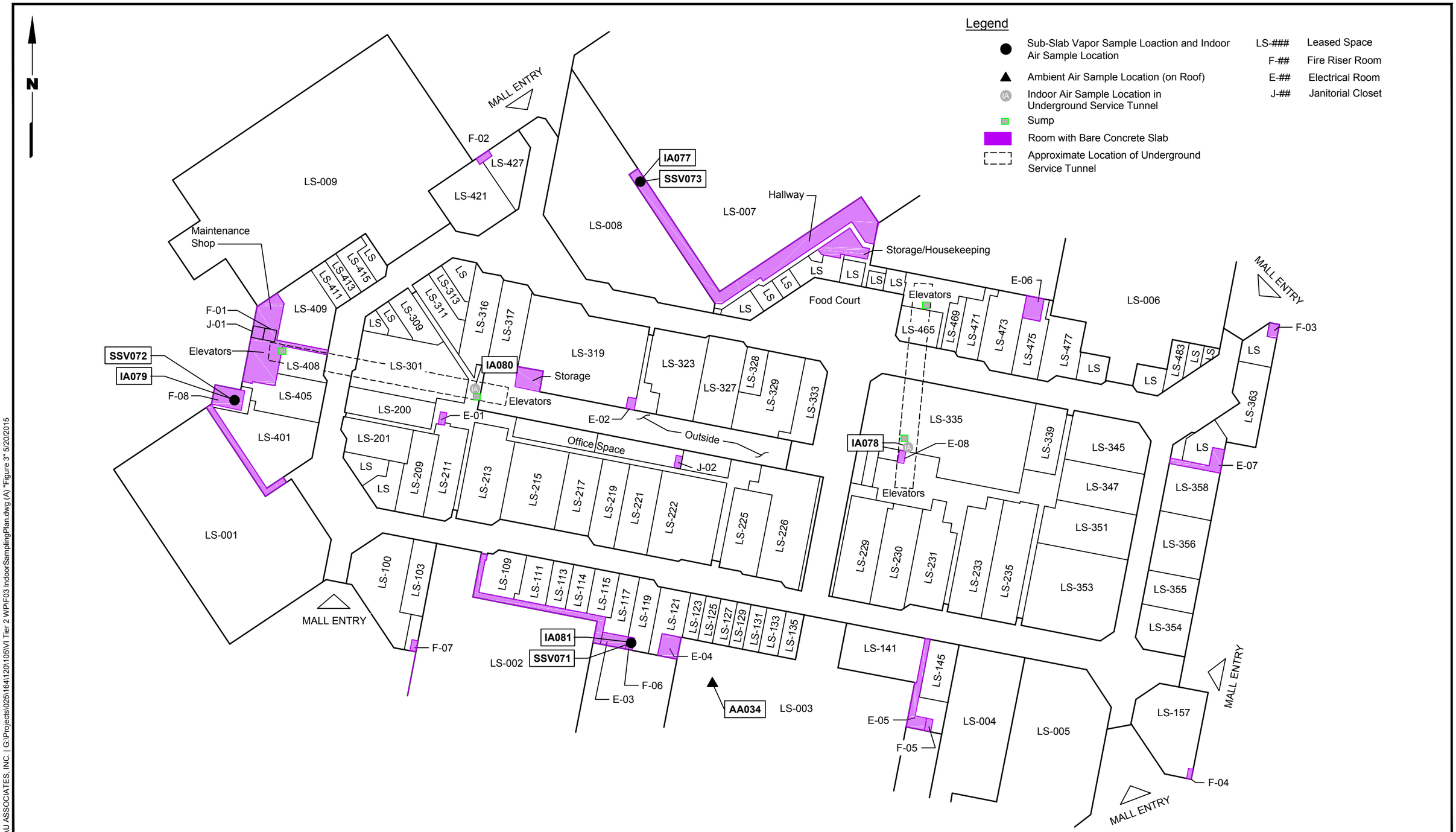
Note

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

LANDAU ASSOCIATES

Boeing Auburn Auburn, Washington	**Commercial Boeing Building 17-70 Indoor Air and Sub-Slab Soil Vapor Sampling Locations**	Figure 2

LANDAU ASSOCIATES, INC. | G:\Projects\025\164\120\105\VI Tier 2 WP\F02 IndoorSampling-Bldg17-70.dwg (A) "Figure 2" 5/20/2015



LANDAU ASSOCIATES, INC. | G:\Projects\025\1641120\105\VI Tier 2 WP\F03 IndoorSamplingPlan.dwg (A) "Figure 3" 5/20/2015

Note

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

0 120 240
Scale in Feet

Source: Glimcher, 2014;

LANDAU ASSOCIATES

Boeing Auburn Auburn, Washington	**The Outlet Collection Indoor Air and Sub-Slab Vapor Sampling Locations**	Figure 3

TABLE 1
SOIL GAS AND GROUNDWATER ANALYTICAL DATA
TIER I COMMERCIAL VAPOR INTRUSION SAMPLING
BOEING AUBURN

	ASG0244 MC032415-11 E503128-05 3/16/2015	ASG0245 MC032415-11 E503128-07 3/16/2015	ASG0246 MC032415-11 E503128-06 3/16/2015	ASG0247 MC032415-11 E503128-01 3/17/2015	ASG0248 MC032415-11 E503128-02 3/17/2015	ASG0249 MC032415-11 E503128-03 3/17/2015	ASG0250 MC032415-11 E503128-04 3/17/2015	ASG0251 MC032415-11 E503128-08 3/18/2015	ASG0251R MC050415-12 E505009-01 4/26/2015	ASG0252 MC032415-11 E503128-11 3/18/2015	ASG0253 MC032415-11 E503128-09 3/18/2015	ASG0254 MC032415-11 E503128-10 3/18/2015	ASG0255 MC050415-12 E505009-05 4/26/2015	ASG0256 MC050415-12 E505009-02 4/27/2015	ASG0257 MC050415-12 E505009-09 4/27/2015	ASG0258 MC050415-12 E505009-08 4/27/2015	ASG0259 MC050415-12 E505009-03 4/28/2015	ASG0260 MC050415-12 E505009-06 4/28/2015
VOLATILES (µg/m3)																		
Method EPA TO-15																		
cis-1,2-Dichloroethene	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	**11**	4.0 U	**5.1**	4.0 U	4.0 U	**30**	4.0 U
Trichloroethene	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	**5.6**	5.5 U	5.5 U	**13**	5.5 U
Vinyl chloride	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	**30**	2.6 U	2.6 U
VOLATILES (ppbv)																		
Method EPA TO-15																		
cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**2.8**	1.0 U	**1.3**	1.0 U	1.0 U	**7.5**	1.0 U
Trichloroethene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.0**	1.0 U	1.0 U	**2.3**	1.0 U
Vinyl chloride	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**11**	1.0 U	1.0 U
HELIUM (%)																		
Method ASTM D1945M	0.10 U	0.10 U	**0.29**	0.10 U	0.10 U	0.10 U	0.10 U	**24.2**	**15.1**	0.10 U	**0.77**	0.10 U	0.10 U	**32.1**	0.10 U	0.10 U	0.10 U	0.10 U

	ASB0244-9 1546966 7814338 3/16/2015	ASB0245-10 1546966 7814340 3/16/2015	ASB0246-10 1546966 7814341 3/16/2015	ASB0247-7 1546966 7814346 3/17/2015	ASB0248-7 1546966 7814345 3/17/2015	ASB0249-7 1546966 7814344 3/17/2015	ASB0250-7 1546966 7814343 3/17/2015	ASB0251-7 1546966 7814349 3/18/2015	ASB0251R-8 1557551 7868473 4/26/2015	ASB0252-8 1546966 7814348 3/18/2015	ASB0253-8 1546966 7814347 3/18/2015	ASB0254-8 1546966 7814342 3/18/2015	ASB0255-10 1557551 7868474 4/26/2015	ASB0256-12 1557551 7868475 4/27/2015	ASB0257-15 1557551 7868476 4/27/2015	ASB0258-10 1557551 7868478 4/28/2015	ASB0259-10 1557551 7868479 4/28/2015	ASB0260-8 1557551 7868480 4/28/2015
VOLATILES (µg/L)																		
Method SW8260C																		
Acetone	5.0 U	5.0 U	5.0 U	5.0 U	**8.7**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**10**	5.0 U	**28**	**15**	**5.1**	5.0 U	5.0 U	5.0 U
Benzene	0.2 U	0.2 U	0.2 U	0.2 U	**0.3**	0.2 U	0.2 U	0.2 U	0.2 U	**0.2**	**0.3**	0.2 U	**0.3**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**6.8**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Carbon Disulfide	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**1.4**	**1.7**	**0.2**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.4**	**0.4**	0.2 U
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.3**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Hexanone	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (MIBK)	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Methylene Chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Tetrachloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	**0.2**	**0.2**	0.2 U	0.2 U	**0.5**	**0.3**	0.2 U	0.2 U	0.2 U	**0.3**	**0.4**	0.2 U	**0.4**	**0.3**	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Acetate	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.2**	**0.4**	**0.6**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**2.4**	0.2 U	0.2 U
m,p-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
VOLATILES (µg/L)																		
Method 8260C SIM																		
Vinyl Chloride	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	**0.22**	**0.32**	**0.72**	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	**2.8**	**0.13**	0.020 U

TABLE 1
SOIL GAS AND GROUNDWATER ANALYTICAL DATA
TIER I COMMERCIAL VAPOR INTRUSION SAMPLING
BOEING AUBURN

	ASG0261 MC050415-12 E505009-10 4/28/2015	ASG0262 MC050415-12 E505009-07 4/29/2015	ASG0263 MC050415-12 E505009-04 4/29/2015
VOLATILES (µg/m3)			
Method EPA TO-15			
cis-1,2-Dichloroethene	4.0 U	4.0 U	4.0 U
Trichloroethene	**8.2**	5.5 U	5.5 U
Vinyl chloride	2.6 U	2.6 U	2.6 U
VOLATILES (ppbv)			
Method EPA TO-15			
cis-1,2-Dichloroethene	1.0 U	1.0 U	1.0 U
Trichloroethene	**1.5**	1.0 U	1.0 U
Vinyl chloride	1.0 U	1.0 U	1.0 U
HELIUM (%)			
Method ASTM D1945M	**25.7**	0.10 U	0.10 U

	ASB0261-10 1557551 7868481 4/28/2015	ASB0262-10 1557551 7868482 4/29/2015	ASB0263-10 1557551 7868483 4/29/2015
VOLATILES (µg/L)			
Method SW8260C			
Acetone	5.0 U	5.0 U	5.0 U
Benzene	0.2 U	0.2 U	0.2 U
Bromodichloromethane	0.5 U	0.5 U	0.5 U
Bromoform	0.5 U	0.5 U	0.5 U
Bromomethane	0.5 U	0.5 U	0.5 U
2-Butanone	5.0 U	5.0 U	5.0 U
Carbon Disulfide	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	0.2 U	0.2 U	0.2 U
Chlorobenzene	0.5 U	0.5 U	0.5 U
Chloroethane	0.5 U	0.5 U	0.5 U
Chloroform	0.2 U	0.2 U	0.2 U
Chloromethane	0.5 U	0.5 U	0.5 U
Dibromochloromethane	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	0.2 U	0.2 U	0.2 U
Ethylbenzene	0.5 U	0.5 U	0.5 U
2-Hexanone	5.0 U	5.0 U	5.0 U
4-Methyl-2-Pentanone (MIBK)	5.0 U	5.0 U	5.0 U
Methylene Chloride	0.5 U	0.5 U	0.5 U
Styrene	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	0.2 U	0.2 U	0.2 U
Tetrachloroethene	0.2 U	0.2 U	0.2 U
Toluene	**0.4**	0.2 U	0.2 U
1,1,2-Trichloro-1,2,2-trifluoroethane	0.5 U	0.5 U	0.5 U
1,1,1-Trichloroethane	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	0.2 U	0.2 U	0.2 U
Trichloroethene	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	0.5 U	0.5 U	0.5 U
Vinyl Acetate	0.5 U	0.5 U	0.5 U
Vinyl Chloride	0.2 U	**0.4**	0.2 U
m,p-Xylene	0.5 U	0.5 U	0.5 U
o-Xylene	0.5 U	0.5 U	0.5 U
VOLATILES (µg/L)			
Method 8260C SIM			
Vinyl Chloride	**0.024**	**0.43**	0.020 U

Bold = Detected compound.
U = Indicates the compound was not detected at the reported concentration

TABLE 2
ANALYTICAL DATA
TIER II COMMERCIAL VAPOR INTRUSION SAMPLING
BOEING AUBURN

	Bldg 17-70 AA033 Ambient Air 1504384A-01A 4/20/2015	Bldg 17-70 IA075 Indoor Air 1504384A-02A 4/20/2015	Bldg 17-70 IA076 Indoor Air 1504384A-03A 4/20/2015	Bldg 17-70 SSV069 Sub-slab Soil Vapor 1504384B-04A 4/21/2015	Bldg 17-70 SSV070 Sub-slab Soil Vapor 1504384B-05A 4/21/2015	The Outlet Collection AA034 Ambient Air 1504515A-04A 4/27/2015	The Outlet Collection IA077 Indoor Air 1504515A-05A 4/27/2015
VOLATILES (µg/m3)							
Method EPA TO-15							
cis-1,2-Dichloroethene	0.69 U	0.66 U	0.59 U	4.1 U	4.1 U	0.69 U	0.66 U
Trichloroethene	0.94 U	0.90 U	0.81 U	5.5 U	5.6 U	0.94 U	0.89 U
Vinyl chloride	0.45 U	0.43 U	0.38 U	2.6 U	2.7 U	0.45 U	0.42 U
VOLATILES (ppbv)							
Method EPA TO-15							
cis-1,2-Dichloroethene	0.18 U	0.17 U	0.15 U	1.0 U	1.0 U	0.18 U	0.17 U
Trichloroethene	0.18 U	0.17 U	0.15 U	1.0 U	1.0 U	0.18 U	0.17 U
Vinyl chloride	0.18 U	0.17 U	0.15 U	1.0 U	1.0 U	0.18 U	0.17 U
HELIUM (%)							
Method ASTM D-1946	--	--	--	0.10 U	0.10 U	--	--

TABLE 2
ANALYTICAL DATA
TIER II COMMERCIAL VAPOR INTRUSION SAMPLING
BOEING AUBURN

	The Outlet Collection IA078 Indoor Air 1504515A-01A 4/27/2015	The Outlet Collection IA079 Indoor Air 1504515A-06A 4/27/2015	The Outlet Collection IA080 Indoor Air 1504515A-02A 4/27/2015	The Outlet Collection IA081 Indoor Air 1504515A-03A 4/27/2015	The Outlet Collection SSV071 Sub-slab Soil Vapor 1504515B-07A 4/28/2015	The Outlet Collection SSV072 Sub-slab Soil Vapor 1504515B-08A 4/28/2015	The Outlet Collection SSV073 Sub-slab Soil apor 1504515B-09A 4/28/2015
VOLATILES (µg/m3)							
Method EPA TO-15							
cis-1,2-Dichloroethene	0.64 U	0.63 U	0.66 U	0.66 U	3.9 U	3.9 U	3.9 U
Trichloroethene	**11**	0.85 U	0.89 U	0.89 U	5.3 U	5.2 U	5.2 U
Vinyl chloride	0.41 U	0.41 U	0.42 U	0.42 U	2.5 U	2.5 U	2.5 U
VOLATILES (ppbv)							
Method EPA TO-15							
cis-1,2-Dichloroethene	0.16 U	0.16 U	0.17 U	0.17 U	1.0 U	0.98 U	0.98 U
Trichloroethene	**2.0**	0.16 U	0.17 U	0.17 U	1.0 U	0.98 U	0.98 U
Vinyl chloride	0.16 U	0.16 U	0.17 U	0.17 U	1.0 U	0.98 U	0.98 U
HELIUM (%)							
Method ASTM D-1946	--	--	--	--	0.10 U	0.098 U	0.098 U

-- = Not Applicable
U = Indicates the compound was not detected at the reported concentration
Bold = Detected compound.