Report
Phase II Environmental Site Assessment
Boeing Buildings 10-13 and 10-16
Renton, Washington

August 7, 2018

Prepared for

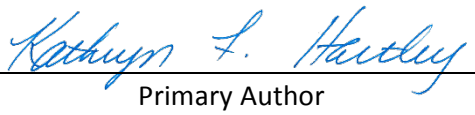
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Phase II Environmental Site Assessment
Boeing Buildings 10-13 and 10-16
Renton, Washington

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LIST OF ABBREVIATIONS AND ACRONYMS

µg/L ..... micrograms per liter
µg/m^3 ..... micrograms per cubic meter
ARI ..... Analytical Resources, Inc.
AST ..... aboveground storage tank
ASTM ..... ASTM International
bgs ..... below ground surface
Boeing ..... The Boeing Company
Ecology ..... Washington State Department of Ecology
ESA ..... environmental site assessment
ft ..... feet
LAI ..... Landau Associates, Inc.
mg/kg ..... milligrams per kilogram
MTCA ..... Model Toxics Control Act
NFA ..... No Further Action
PCB ..... polychlorinated biphenyl
PID ..... photoionization detector
SVOC ..... semivolatile organic compound
TPH ..... total petroleum hydrocarbons
TPH-D ..... diesel-range total petroleum hydrocarbons
TPH-G ..... gasoline-range total petroleum hydrocarbons
TPH-O ..... motor oil-range total petroleum hydrocarbons
VOC ..... volatile organic compound

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1.0 INTRODUCTION

At the request of The Boeing Company (Boeing), Landau Associates, Inc. (LAI) conducted a Phase II environmental site assessment (ESA) for the property located at the addresses 500 Park Avenue North and 535 Garden Avenue North in Renton, Washington (subject property; Figure 1). The subject property is currently owned by Boeing and is developed with two office towers known as Buildings 10-13 and 10-16, and an associated multi-level parking garage.

Boeing conducted this Phase II ESA in general conformance with ASTM International (ASTM) standard E1903-11 as part of an environment, health and safety assessment, which also included an ASTM-compliant Phase I ESA to assess and document current conditions at the subject property as part of planning for the sale of the property. The investigation was completed in two stages and included the collection and laboratory analysis of soil, groundwater, soil gas, indoor air, and ambient air samples. The following sections present the background, scope of services performed, and results of the investigation.

2.0 BACKGROUND

The subject property was originally developed with residential structures by 1905. By 1944, the northwestern corner of the subject property was used for commercial oil and gasoline storage until at least 1962, when the facility was expanded to the east and included a fuel yard with multiple aboveground storage tanks (ASTs). The northern portion of the subject property was also historically developed with a welding shop, blacksmith shop, auto body shop, iron works facility, towing yard, Renton Boiler Works, and an operations center for Pacific Northwest Bell. The subject property was redeveloped with the current office structures and parking garage by 1990. Boeing has been the only occupant of the current office buildings. Current and historical site features are shown on Figure 2.

The Phase I ESA conducted as part of this due diligence assessment indicated the presence of both *recognized environmental conditions* and *controlled recognized environmental conditions* for the subject property. The findings of the Phase I ESA are briefly summarized below. Additional details can be found in the Phase I ESA report (LAI 2017). The following *recognized environmental condition* was identified as part of the Phase I ESA:

- The Pacific Car and Foundry (now PACCAR) property to the east of the subject property is listed on the National Priorities List as a Superfund site. The facility operated as a foundry and manufacturing plant from 1907 until 1988. A remedial investigation was completed in 1989 and cleanup activities were completed by PACCAR in 1997 under a consent decree between PACCAR and the Washington State Department of Ecology (Ecology). Institutional controls were implemented and a restrictive covenant was recorded based on the presence of residual contamination at concentrations greater than the site cleanup levels. Groundwater and surface water monitoring are ongoing. Based on the annual groundwater monitoring report for the 2016 monitoring event, vinyl chloride and dissolved arsenic were detected in groundwater at concentrations greater than the site cleanup levels and the current Model Toxics Control Act (MTCA) Method B cleanup levels directly upgradient of the subject property.

  Subsurface investigations conducted at the subject property between 1989 and 1994 identified vinyl chloride and arsenic in groundwater in the northeastern portion of the subject property and the PACCAR site was identified as the likely source. More recent groundwater data are not available for these constituents. A restrictive covenant is in place that prohibits the use of groundwater at the subject property; however, the vapor intrusion pathway has not been evaluated.

The following *controlled recognized environmental condition* was identified as part of the Phase I ESA (LAI 2017):

- The subject property was historically developed with a petroleum storage and distribution facility and other businesses that involved the use and storage of petroleum products. Subsurface investigations completed at the subject property between 1989 and 1994 identified petroleum hydrocarbons in soil and groundwater in the northern portion of the subject property. Based on the results of groundwater monitoring completed between 1994 and 1999, Ecology issued a No Further Action (NFA) determination for petroleum hydrocarbons at the subject property in 2001. A periodic review was completed by Ecology in

2014 and noted that soil with concentrations of petroleum hydrocarbons greater than the MTCA Method A cleanup level are present at the subject property, but that exposure to the contaminated soil is prevented by structures and asphalt surfaces at the property.

A restrictive covenant was recorded for the subject property as a condition of the 2001 NFA determination. The covenant prohibits the use of groundwater at the subject property due to the potential presence of arsenic and vinyl chloride in groundwater, as discussed above.

Other environmental considerations were identified for the subject property, including the following considerations that were evaluated as part of the Phase II investigation:

- Three emergency generators with integrated or adjacent diesel ASTs are located on the subject property. The ASTs range in capacity from 75 gallons to 660 gallons. The ASTs are routinely maintained by Boeing, no releases from the tanks or generators have been reported, and no evidence of a release was observed at the time of the site reconnaissance.
- Approximately 13 monitoring wells were reportedly installed at the subject property as part of previous investigations completed by Boeing between 1989 and 1999 (Figure 2). Five monitoring wells were found at the subject property during the site reconnaissance. No other monitoring wells were observed and the status of other monitoring wells that were installed as part of previous investigations by Boeing is not known.

This Phase II ESA was completed to evaluate subsurface conditions at the subject property in the areas of the environmental features identified in the Phase I ESA and to document current conditions at the subject property. The scope of work for the Phase II ESA was developed based on the findings of the Phase I ESA, including the results of previous investigations.

3.0 FIELD INVESTIGATION

The first stage of the Phase II field investigation was conducted from September 11 to September 13, 2017, and included the collection of soil, groundwater, and/or soil gas samples from six locations using direct-push drilling and sampling techniques. In addition, groundwater samples were collected from three of the five existing monitoring wells at the subject property. The second stage of the field investigation was conducted on December 22 and 23, 2017, and included collection of soil and/or groundwater samples from four locations using direct-push drilling and sampling techniques, collection of two indoor air samples from each of the two office buildings, and collection of an ambient air sample from the upwind side of the subject property.

The sampling locations are shown on Figure 3 and are described in Table 1. As indicated in Table 1, borings were placed in the vicinity of current environmental features (e.g., ASTs) and near the current office buildings to evaluate potential subsurface impacts associated with known releases at the adjacent PACCAR property to the east of the subject property.

Two soil samples were collected from each of the soil borings, with the exception of borings LAI-B8 and LAI-B9, where three samples were collected. In general, shallow soil samples were collected at depths ranging from 1 to 3.75 feet below ground surface (ft bgs) and deeper samples were collected just above the depth of the groundwater table, which was encountered between 5 and 14 ft bgs during drilling. The soil samples were placed in laboratory-supplied containers and submitted to Analytical Resources, Inc. (ARI) of Tukwila, Washington for laboratory analysis for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), and MTCA metals (arsenic, cadmium, chromium, lead, and mercury). Samples from selected borings were also analyzed for polychlorinated biphenyls (PCBs).

Groundwater grab samples were collected from temporary well screens placed in six of the direct-push borings (LAI-B2, -B4, -B6, -B7, -B8, and -B9). The well screens were either 4 ft or 5 ft in length and were placed to intercept the top of the water table, as shown on the exploration logs provided in Appendix A. In addition, groundwater samples were collected from three existing monitoring wells (LMW-2D, MW-2, and MW-10). All groundwater samples were collected using low-flow sampling techniques. The groundwater samples were collected directly into laboratory-supplied sample containers and submitted to ARI for laboratory analysis for VOCs, SVOCs, TPH, and MTCA metals (dissolved).

Soil gas samples were collected at six locations from a depth of approximately 5 ft bgs. Helium leak tests were completed at each of the soil gas sampling locations prior to sample collection. Soil gas samples were collected in 1-liter Summa canisters fitted with flow controllers to collect the soil gas samples over a period of approximately 5 minutes (flow rate of 200 milliliters/minute). The soil gas samples were submitted to Eurofins Air Toxics, Inc. of Folsom, California for analysis for VOCs by Method TO-15.

Indoor air samples were collected at four locations, two locations in each of the two office buildings. To evaluate background conditions, one ambient air sample was collected from the upwind (northwest) side of the subject property at the same time the indoor air samples were collected. Indoor air and ambient air samples were collected in 6-liter Summa canisters fitted with flow controllers to collect the air samples over a period of approximately 8 hours to simulate a typical work day. The indoor air and ambient air samples were submitted to Eurofins Air Toxics, Inc. for analysis for the VOCs 1,3-butadiene and benzene by Method TO-15. The analyte list of for the indoor air samples was determined based on the analytical results for soil gas samples, as discussed below.

4.0 INVESTIGATION RESULTS

The field investigation included collection of 20 soil samples, 9 groundwater samples, 6 soil gas samples, 4 indoor air samples, and 1 ambient air sample for laboratory analysis. The sections below present the results of the investigation, including physical observations, field-screening results, and the laboratory analytical results.

4.1 Visual/Physical Observations and Field Screening Results

Visual and physical observations were documented by LAI personnel during the subsurface explorations. Exploration logs are included in Appendix A. Observations included soil lithology, presence of any sheen on the soil or groundwater, odor, and visible staining. In addition, selected soil samples were screened for the presence of VOCs using a photoionization detector (PID). These observations are documented on the sample collection forms that are retained in LAI's files, and a brief summary of the field-screening results is included in Table 1. Generally, the soil borings encountered fine to course sand underlain by silty fine sand and silt with fine sand.

No evidence of contamination was observed during field screening, with the following exceptions:

- LAI-B1: A strong petroleum-like odor was observed at 12 ft bgs. VOCs were detected at a concentration of 3.8 parts per million during field screening with a PID. No evidence of contamination was observed at a depth of 14 ft bgs.
- LAI-B7, LAI-B8, LAI-B9: A slightly sweet odor was observed in soil at depths of approximately 13 ft bgs at LAI-B7, 11.5 ft bgs at LAI-B8, and at depths ranging from 10 to 19 ft bgs at LAI-B9. Elevated PID readings were not measured in samples from these borings.

The borings were completed to depths ranging from 10 to 20 ft bgs. Groundwater was encountered during drilling at each of the boring locations at depths ranging from 5 to 14 ft bgs.

4.2 Analytical Results

Copies of the laboratory analytical reports are provided in Appendix B. The laboratory data were reviewed for quality assurance/quality control purposes, and were determined to be acceptable for use. Qualifiers were added to the data as indicated in the data tables. The soil, groundwater, soil gas, and indoor air and ambient air sample analytical results for detected compounds are provided in Tables 2 through 5, respectively. Complete data tables are provided in Appendix C.

To provide context for evaluation of the analytical results, the soil and groundwater results were compared to the MTCA Method A and/or Method B screening levels for unrestricted land uses. The selected MTCA Method B screening levels for groundwater were based on protection of groundwater as drinking water. The selected MTCA Method B screening levels for soil were based on the lower of the screening levels for direct contact and the screening levels for protection of groundwater as drinking water. The soil gas and indoor air sample results were compared to MTCA Method B (unrestricted) screening levels provided in Ecology's Cleanup Level and Risk Calculation database

(Ecology 2015; accessed February 6, 2017) and to modified Method B screening levels calculated for a commercial exposure scenario.[1] The analytical results for the soil, groundwater, indoor air, and soil gas samples are discussed in the following sections.

4.2.1 Soil Analytical Results

The analytical results for the soil samples are provided in Table 2 and are summarized as follows:

- Metals (arsenic, cadmium, chromium, lead, and mercury) were detected in each of the 10 samples analyzed at concentrations greater than the laboratory reporting limits. The detected concentrations were less than the screening levels, with the exception of arsenic. Arsenic was detected in each of the samples at concentrations ranging from 2.31 to 8.87 milligrams per kilogram (mg/kg), which are greater than the Method B screening level (0.67 mg/kg), but less than the Method A cleanup level (20 mg/kg). The Method A cleanup level is based on background concentrations.
- Gasoline-range petroleum hydrocarbons (TPH-G) and naphthalene were detected in 1 of 14 samples analyzed. The detected concentrations of TPH-G (1,010 mg/kg) and naphthalene (13.5 mg/kg) at LAI-B1 are greater than the Method A cleanup levels (100 mg/kg and 5 mg/kg, respectively). The detected concentration of naphthalene is also greater than the Method B screening level of 4.5 mg/kg. There are no Method B screening levels for TPH.

  LAI-B1 was advanced in the drive lane to the south of the east half of Building 10-16. Three additional borings (LAI-B7, -B8, and -B9) were completed around LAI-B1 to delineate the extent of TPH-G and naphthalene in soil; TPH-G and naphthalene were not detected in the soil samples from the additional borings.
- Diesel-range and motor oil-range TPH (TPH-D and TPH-O) were not detected in any of the 10 samples analyzed.
- VOCs were detected at low concentrations in each of the 14 soil samples analyzed. The detected compounds generally consist of fuel-related compounds and non-chlorinated solvents. With the exception of naphthalene at LAI-B1 discussed above, the detected concentrations are significantly below Method A and Method B screening levels.
- SVOCs were detected at low concentrations in 3 of the 10 samples analyzed. The detected concentrations are significantly below Method A and B screening levels.
- PCBs were detected in four of eight samples analyzed. The detected concentration of total PCBs (6.25 mg/kg) in the shallow sample from LAI-B6 is greater than the Method A and Method B screening levels of 1 mg/kg and 0.5 mg/kg, respectively. The detected concentration of PCBs in the deeper sample from the same location (0.1543 mg/kg) is less than the screening levels.

  LAI-B6 was advanced in the drive lane on the north side of the northwest corner of the parking garage, south of Building 10-16. Three additional borings (LAI-B-8, -B9, and –B10) were completed around LAI-B6 to delineate the extent of PCBs in soil. PCBs were detected in two of the six soil samples collected from the additional borings with concentrations of total

[1] Modified Method B screening levels were calculated for a commercial exposure scenario using an exposure frequency of 0.33, which equates to 55 hours of work per week for 52 weeks per year.

PCBs of 0.084 mg/kg and 0.0771 mg/kg. The detected concentrations of PCBs were less than the Method A and Method B screening levels.

As indicated above, arsenic, TPH-G, naphthalene, and PCBs are the only compounds that were detected in soil at concentrations greater than the MTCA Method A or B screening levels. The detected concentrations of arsenic are all below the Method A cleanup level, which is based on background concentrations. The exceedances for TPH-G/naphthalene and PCBs are limited; detected concentrations of TPH-G/naphthalene exceeded screening levels in one sample from boring LAI-B1 and detected concentrations of PCBs exceeded screening levels in one sample from boring LAI-B6.

4.2.2 Groundwater Analytical Results

The analytical results for the groundwater samples are provided in Table 3 and are summarized as follows:

- Dissolved metals (arsenic and chromium) were detected in one or more groundwater samples at concentrations greater than the laboratory reporting limits. Dissolved arsenic was detected in each of the 6 samples analyzed at concentration ranging from 3.75 to 9.32 micrograms per liter (µg/L). The detected concentrations are all greater than the Method B screening level of 0.06 µg/L. The detected concentrations in 5 of the 6 samples are also greater than the Method A cleanup level of 5 µg/L, which is based on a background study. The detected concentrations of dissolved chromium were less than the MTCA Method A and Method B screening levels. Cadmium, lead, and mercury were not detected in any of the groundwater samples at concentrations greater than the laboratory reporting limits.
- TPH-G was detected in one of nine groundwater samples analyzed. The detected concentration at LAI-B7 (603 µg/L) is less than the Method A cleanup level of 1,000 µg/L.
- TPH-D and TPH-O were not detected in any of the groundwater samples at concentrations greater than the laboratory reporting limits.
- Low concentrations of VOCs were detected in six of nine samples analyzed. The detected concentration of vinyl chloride in the sample from existing monitoring well LMW-2D (0.34 µg/L) is greater than the MTCA Method A (0.2 µg/L) and Method B (0.03 µg/L) screening levels. Detected concentrations of acetone, carbon disulfide, sec-butylbenzene, and toluene are less than the MTCA Method A and Method B screening levels.
- SVOCs were not detected in any of the six samples analyzed.

As indicated above, dissolved arsenic and vinyl chloride were detected in groundwater at concentrations greater than screening levels. Vinyl chloride was detected in only one sample, collected from an existing monitoring well (LMW-2D) on the upgradient side of the subject property. Both arsenic and vinyl chloride are contaminants of concern for the PACCAR site located east and upgradient of the subject property. Vinyl chloride and dissolved arsenic have been detected during previous monitoring events at the subject property (including previous samples collected from LMW-2D) and attributed to the PACCAR site. Neither exceedance is likely related to a release at the subject property.

4.2.3 Soil Gas Analytical Results

The analytical results for the six soil gas samples are provided in Table 4 and are summarized as follows:

- The VOCs 1,2,4-trimethylbenzene; 1,3,5-trimethylbenzene; 1,3-butadiene; 2,2,4-trimethylpentane; 2-butanone; 4-ethyltoluene; acetone; benzene; carbon disulfide, chloroform, cyclohexane; dichlorodifluoromethane; ethanol; ethylbenzene; isopropylbenzene; xylenes; n-heptane; n-hexane; n-propylbenzene; styrene; tetrachloroethene; toluene; and trichlorofluoromethane were detected in soil gas at concentrations greater than the laboratory reporting limits. The detected concentrations were less than the MTCA Method B screening levels, where available,[2] with the following exceptions:
  - 1,3-butadiene was detected in five of six soil gas samples at concentrations ranging from 6.4 to 140 micrograms per cubic meter ($\mu g/m^3$). The detected concentrations are greater than the screening level of 2.8 $\mu g/m^3$ for unrestricted land uses, and four of the five detected concentrations are greater than the commercial screening level of 8.3 $\mu g/m^3$.
  - Benzene was detected in five of the six soil gas samples at concentrations ranging from 5.3 to 100 $\mu g/m^3$. Three of the detected concentrations are greater than the screening level of 11 $\mu g/m^3$ for unrestricted land uses. The detected concentration at one location is greater than the screening level of 32 $\mu g/m^3$ for commercial properties.
  - Chloroform was detected in one of six samples. The detected concentration (6.0 $\mu g/m^3$) is greater than the screening levels for unrestricted land uses (3.6 $\mu g/m^3$) and less than the screening level based on commercial use (11 $\mu g/m^3$).

Helium leak tests were completed at each of the soil gas sampling locations to test for leaks in the sample train prior to sample collection. A helium meter was used to measure the concentrations of helium inside the sampling shroud as well as concentrations of helium in the sample train. The helium leak tests did not indicate leaks in the sample train at any of the soil gas sampling locations.

As indicated above, three compounds were detected in soil gas at concentrations greater than the screening levels. Benzene and 1,3-butadiene were generally detected in soil gas at the same locations and the highest concentrations of both constituents were detected in soil gas samples collected from the drive lane south of Building 10-16. Chloroform was detected at a concentration greater than the screening level in one sample in the southern portion of the subject property.

4.2.4 Indoor Air and Ambient Air Analytical Results

The analytical results for the four indoor air samples and the ambient air sample are provided in Table 5 and are summarized below. As indicated above, benzene and 1,3-butadiene were the only constituents detected at concentrations greater than the commercial screening levels for soil gas; therefore, the indoor air and ambient air samples were analyzed for these compounds.

[2] MTCA Method B screening levels are not available for 1,3,5-trimethylbenzene; 2,2,4-trimethylpentane; 4-ethyltoluene; acetone; cyclohexane; ethanol; and n-heptane

- 1,3-butadiene was not detected in any of the indoor air samples or in the ambient air sample at concentrations greater than the laboratory reporting limits.
- Benzene was detected in the ambient air sample at a concentration of 0.75 µg/m^3. Benzene was also detected in each of the four indoor air samples at concentrations ranging from 0.59 to 0.98 µg/m^3. The detected concentrations of benzene in the ambient air sample and the indoor air samples are greater than the screening level for unrestricted use (0.32 µg/m^3). The detected concentrations of benzene in one indoor air sample from Building 10-16 (0.98 µg/m^3 at 1016-IA1) is also greater than the screening level for commercial use (0.96 µg/m^3).

  Detected concentrations of benzene in indoor air were corrected for background by subtracting the concentration of benzene detected in ambient air from the concentration detected in indoor air. In three of the four indoor air samples, concentrations of benzene were less than the concentration in the ambient air sample, making the corrected concentrations zero. Benzene was detected at a concentration greater than the ambient air concentration in one indoor air sample from Building 10-16 (0.98 µg/m^3 at 1016-IA1). When corrected for background, the resulting concentration of benzene in sample 1016-IA1 is 0.23 µg/m^3, which is less than the screening levels for unrestricted and commercial use.

In summary, 1,3-butadiene was not detected in indoor air. Detected concentrations of benzene in indoor air were similar to and in most cases lower than concentrations detected in ambient air. When corrected for ambient air, detected concentrations of benzene in all indoor air samples are less than the indoor air screening levels for unrestricted use.

4.3 Vapor Intrusion Assessment

During the initial subsurface investigation, the VOCs 1,3-butadiene, benzene, and chloroform were detected in soil gas at concentrations greater than the MTCA Method B screening levels for unrestricted land uses. The detected concentrations of 1,3-butadiene and benzene in at least one sample also exceeded the calculated Method B screening levels for commercial exposure scenarios. Due to the presence of VOCs in soil gas at concentrations greater than the soil gas screening levels, the potential for vapor intrusion was further evaluated using the Johnson-Ettinger model and by collection and analysis of indoor air and ambient air samples.

The soil gas data were evaluated using the Johnson-Ettinger model to calculate predicted indoor air concentrations for compounds that were detected in soil gas at concentrations greater than the Method B unrestricted screening levels (1,3-butadiene, benzene, and chloroform). The highest detected concentration for each compound was used in the Johnson-Ettinger model. Building-specific information provided by Boeing and conservative assumptions for air exchange rates were used to calculate predicted indoor air concentrations for each compound. Model input parameters are provided in Table 6 and documentation of the model results is provided in Appendix D.

The output from the Johnson-Ettinger model consists of low, best estimate, and high predicted indoor air concentrations. The predicted indoor air concentrations are provided in Table 6. As shown in the table, the low, best estimate, and high predicted indoor air concentrations for 1,3-butadiene,

benzene, and chloroform are all below the MTCA Method B (unrestricted) and modified MTCA Method B (commercial) indoor air screening levels.

Soil gas samples were collected from outside the footprint of the buildings on the subject property and it is not known if the detected concentrations represent the highest concentrations of VOCs in soil gas at the subject property. Therefore, indoor air and ambient air samples were collected from the subject property as part of the vapor intrusion evaluation. As discussed above, 1,3-butadiene was not detected in indoor air. Detected concentrations of benzene in indoor air were similar to and in most cases lower than concentrations detected in ambient air. When corrected for background, detected concentrations of benzene in all indoor air samples are less than the indoor air screening levels for unrestricted use.

The data indicate that vapor intrusion is not resulting in contaminant concentrations in indoor air that are greater than the indoor air screening levels for unrestricted land uses.

5.0 DISCUSSION

Previous investigations were completed at the subject property between 1989 and 1999. Previous sampling locations are shown on Figure 2. These previous investigations identified an isolated area of petroleum hydrocarbons in groundwater in the northwestern portion of the subject property and isolated areas of petroleum hydrocarbons in soil in the northern portion of the subject property. In addition, previous investigations identified vinyl chloride and dissolved arsenic in groundwater in the northeastern portion of the subject property. The PACCAR site, located adjacent to the east of the subject property, was identified as the likely source of vinyl chloride and dissolved arsenic in groundwater. Based on the results of groundwater monitoring completed between 1994 and 1999, Ecology issued an NFA determination for petroleum hydrocarbons at the subject property in 2001.

A periodic review was completed by Ecology in 2014 and noted that soil with concentrations of petroleum hydrocarbons greater than the MTCA Method A cleanup level are present at the subject property, but that exposure to the contaminated soil is prevented by structures and asphalt surfaces at the property. A restrictive covenant was recorded for the subject property as a condition of the 2001 NFA determination. The covenant prohibits the use of groundwater at the subject property due to the potential presence of arsenic and vinyl chloride in groundwater, as discussed above.

Findings for the current investigation are generally consistent with the findings of the previous investigations and are briefly summarized as follows:

- TPH-G was detected in soil at a concentration above the screening levels for unrestricted land uses in an isolated area beneath the drive lane to the south of the east half of Building 10-16. Detected concentrations of TPH-G in soil from step-out borings were less than the screening level. TPH-G was detected in groundwater downgradient of this area at a concentration less than the screening level. The source is not known; however, there is a known history of petroleum hydrocarbon storage at the subject property and at least one gasoline underground storage tank was present at the subject property prior to development of the current office buildings.
- Total PCBs were detected in soil at a concentration above the screening levels for unrestricted land uses in an isolated area beneath the drive lane at the northeast corner of the parking garage. The source is not known. Detected concentrations of PCBs in soil from step-out borings were less than the screening level.
- Dissolved arsenic and vinyl chloride were detected in groundwater at concentrations greater than screening levels for unrestricted land uses. Both arsenic and vinyl chloride are contaminants of concern for the PACCAR site located east and upgradient of the subject property and Ecology has identified the PACCAR site as the likely source of these compounds in groundwater at the subject property. Vinyl chloride was detected in only one sample, collected from the upgradient side of the subject property. Dissolved arsenic was detected throughout the subject property.
- The potential for vapor intrusion was evaluated through collection and analysis of soil gas and indoor air samples. Three VOCs (1,3-butadiene, chloroform, and benzene) were detected in soil gas at concentrations greater than the screening levels for unrestricted land uses. The

detected concentrations of 1,3-butadiene and benzene were also greater than the modified Method B soil gas screening levels for commercial exposure scenarios. The highest concentrations of 1,3-butadiene and benzene were detected in the drive lane to the south of Building 10-16, where TPH-G was detected in soil and groundwater.

The soil gas data were evaluated using the Johnson-Ettinger model to calculate predicted indoor air concentrations for 1,3-butadiene, benzene, and chloroform. The predicted indoor air concentrations for these compounds are all below the screening levels for unrestricted land uses.

Indoor air and ambient air samples were collected and analyzed for 1,3-butadiene and benzene. 1,3-butadiene was not detected in the indoor air or ambient air samples. The detected concentrations of benzene in indoor air were similar to and in most cases lower than concentrations detected in ambient air. When corrected for background, detected concentrations of benzene in all indoor air samples are less than the indoor air screening levels for unrestricted use.

As indicated above, the data are consistent with findings of previous investigations that identified isolated areas of petroleum hydrocarbons in soil and groundwater in the northern portion of the subject property and vinyl chloride and dissolved arsenic in groundwater on the upgradient side of the subject property. Ecology issued an NFA determination for petroleum hydrocarbons at the subject property in 2001 and restrictive covenants are in place that prohibit the use of groundwater at the subject property due to the potential presence of arsenic and vinyl chloride. PCBs were detected in an isolated area beneath the drive lane at the northeast corner of the parking garage during this investigation. The source of PCBs is not known. The concentrations of the detected constituents do not indicate a potential threat to human health or the environment and remediation is not warranted at this time.

6.0 USE OF THIS REPORT

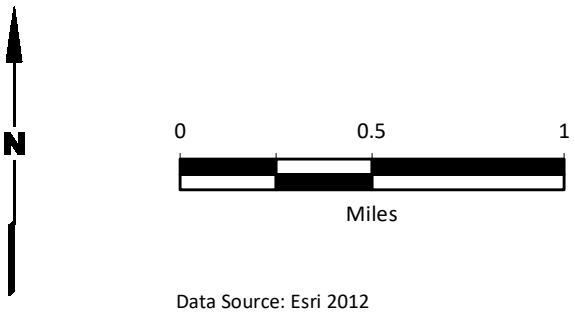
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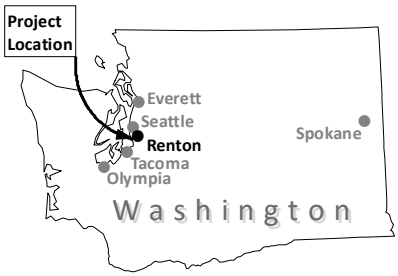
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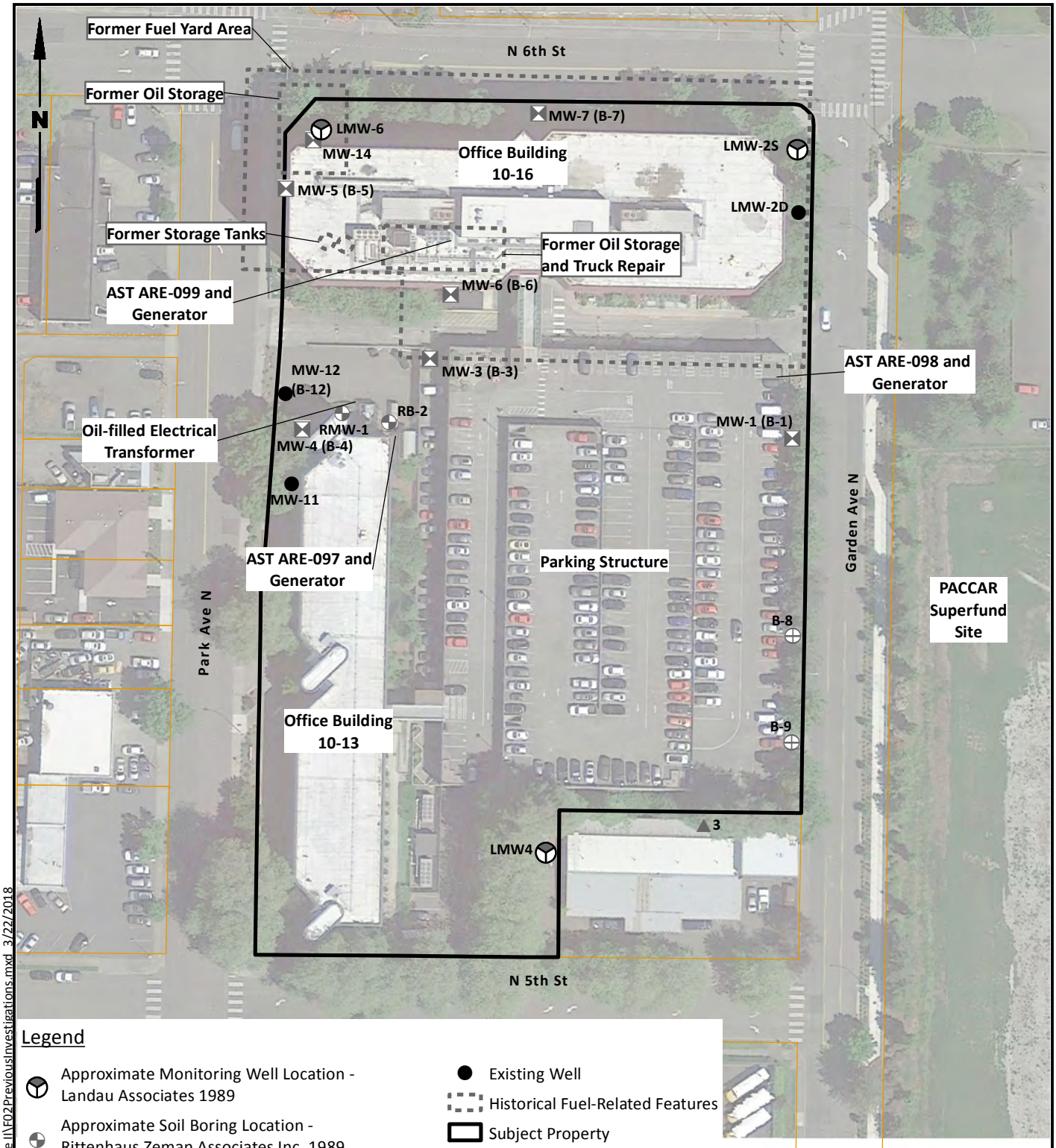


Data Source: Esri 2012

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Boeing Renton Buildings 10-13 and 10-16 Renton, Washington	**Vicinity Map**	Figure 1



Legend

- Approximate Monitoring Well Location - Landau Associates 1989
- Approximate Soil Boring Location - Rittenhaus Zeman Associates Inc. 1989
- Approximate Soil Boring Location - Geotech Consultants Inc. 1993
- Approximate Monitoring Well/Soil Boring Location - Geotech Consultants Inc. 1993-1994
- Approximate Surface Soil Sample - Landau Associates 1999
- Existing Well
- Historical Fuel-Related Features
- Subject Property
- Tax Parcels

Note

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

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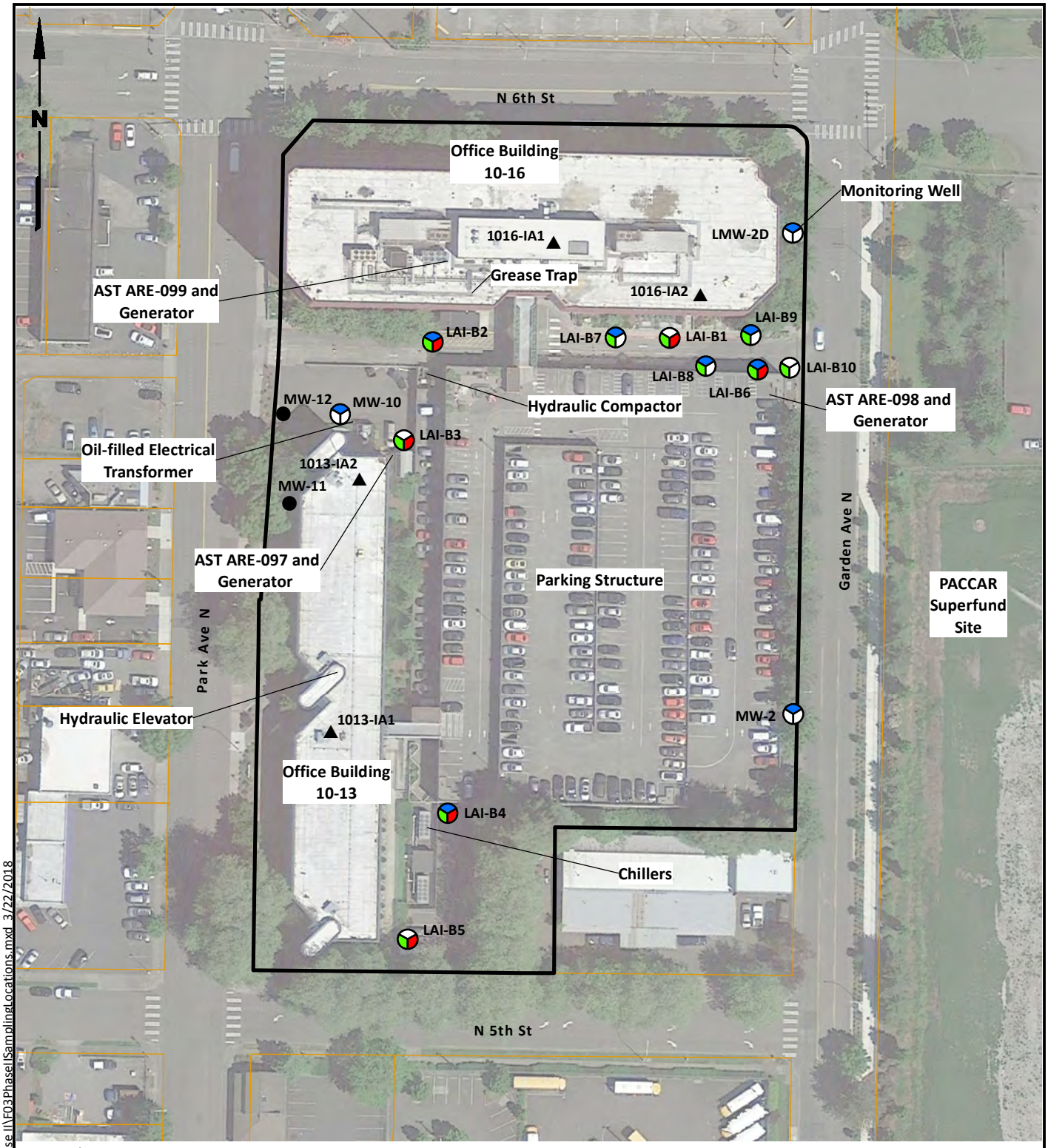
Scale in Feet

Data Source: King County GIS; Esri World Imagery.

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Boeing Renton Buildings 10-13 and 10-16 Renton, Washington	**Previous Investigations**	Figure 2



Legend

- Ambient Air Sample
- Existing Well - No Sampling
- Indoor Air Sample
- Groundwater Sample
- Soil Sample
- Soil Gas Sample
- Subject Property
- Tax Parcels

Note

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

0 100 200

Scale in Feet

Data Source: King County GIS; Esri World Imagery.

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Boeing Renton
Buildings 10-13 and 10-16
Renton, Washington

Phase II Sampling Locations

Figure 3

Table 1
Summary of Sampling Locations
Boeing Buildings 10-13 and 10-16 – Renton, Washington

Boring ID[a]	Description/Location	Depth of Exploration	Field Screening Results	Soil Sample Depth	Soil Sample Analysis[b, c]	Groundwater Sample Depth (Screen Depth)	Groundwater Sample Analysis[b,c, d, f]	Soil Gas Sample Analysis[e]	Indoor Air Sample Analysis
LAI-B1	Southeast corner of Building 10-16	15 ft	Strong petroleum-like odor at 12 ft (PID 3.8 ppm); no odor at 14 ft; groundwater at 13 ft bgs	1-3 ft 11-13 ft	VOCs, SVOCs, HCID, TPH-Gx, TPH-Dx, Metals	--	--	VOCs	--
LAI-B2	South side of Building 10-16 at diesel fuel AST and emergency generator	17 ft	No evidence of contamination; highest PID reading = 0.0 ppm; groundwater at 12 ft bgs	1-3 ft 10-12 ft	VOCs, SVOCs, HCID, TPH-Gx, TPH-Dx, Metals	12-17 ft	VOCs, SVOCs, HCID, TPH-Gx, TPH-Dx, Metals	VOCs	--
LAI-B3	Northeast corner of Building 10-13 at diesel fuel AST and emergency generator	15 ft	No evidence of contamination; highest PID reading = 0.0 ppm; groundwater at 6.5 ft bgs	3.75-5 ft	VOCs, SVOCs, HCID, TPH-Gx, TPH-Dx, Metals	--	--	VOCs	--
LAI-B4	East side of Building 10-13	10 ft	No evidence of contamination; highest PID reading = 0.0 ppm; groundwater at 5 ft bgs	3.5-5 ft	VOCs, SVOCs, HCID, TPH-Gx, TPH-Dx, Metals	5-10 ft	VOCs, SVOCs, HCID, TPH-Gx, TPH-Dx, Metals	VOCs	--
LAI-B5	Southeast corner of Building 10-13	10 ft	No evidence of contamination; highest PID reading = 0.0 ppm; groundwater at 9 ft bgs	1-3 ft 7-9 ft	VOCs, SVOCs, HCID, TPH-Gx, TPH-Dx, Metals	--	--	VOCs	--
LAI-B6	Lower-level parking garage at diesel fuel AST and emergency generator	15 ft	No evidence of contamination; highest PID reading = 0.0 ppm; groundwater at 9 ft bgs	1-3 ft 7-9 ft	VOCs, SVOCs, HCID, TPH-Gx, TPH-Dx, Metals, PCBs	9-14 ft	VOCs, SVOCs, HCID, TPH-Gx, TPH-Dx, Metals	VOCs	--
LAI-B7	Drive lane south of Building 10-16, west of LAI-B1	20 ft	Slightly sweet odor at 13 ft; highest PID reading = 0.0 ppm; groundwater at 11 ft bgs	9-11 ft 13-15 ft	VOCs, TPH-Gx	12-16 ft	VOCs, TPH-Gx	--	--
LAI-B8	Drive lane south of Building 10-16, southeast of LAI-B1 and west of LAI-B6.	20 ft	Slightly sweet odor at 11.5 ft; highest PID reading = 0.0 ppm; groundwater at 14 ft bgs	1-3 ft 5-7 ft 13-15 ft	VOCs, TPH-Gx, PCBs	14-18 ft	VOCs, TPH-Gx	--	--
LAI-B9	Drive lane south of Building 10-16, east of LAI-B1 and north of LAI-B6.	20 ft	Slightly sweet odor from 10-19 ft; highest PID reading = 0.0 ppm; groundwater at 14 ft bgs	1-2 ft 5-7 ft 10-12 ft	VOCs, TPH-Gx, PCBs	12-16 ft	VOCs, TPH-Gx	--	--
LAI-B10	Drive lane south of Building 10-16, east of LAI-B-6	10 ft	No evidence of contamination; highest PID reading = 0.0 ppm; groundwater at 6 ft bgs	1-3 ft 5-7 ft	PCBs	--	--	--	--
LMW-2D	Exisiting monitoring well at northeast corner of subject property	--	--	--	--	29-39	VOCs, SVOCs, HCID, TPH-Gx, TPH-Dx, Metals	--	--
MW-2	Existing monitoring well at southeast corner of subject property	--	--	--	--	~ 26-36	VOCs, SVOCs, HCID, TPH-Gx, TPH-Dx, Metals	--	--
MW-10	Existing monitoring well north of Building 10-13	--	--	--	--	~14-24	VOCs, SVOCs, HCID, TPH-Gx, TPH-Dx, Metals	--	--
1013-IA1	South half of Building 10-13, near center of building	--	--	--	--	--	--	--	VOCs
1013-IA2	Northeast corner of Building 10-13	--	--	--	--	--	--	--	VOCs
1016-IA1	Near center of Building 10-16	--	--	--	--	--	--	--	VOCs
1016-IA2	Southeast corner of Building 10-16	--	--	--	--	--	--	--	VOCs
AA	West property boundary (upwind side of property)	--	--	--	--	--	--	--	VOCs

Notes:

[a] Soil borings will be advanced to a depth of 15 ft bgs, to refusal, or to groundwater (whichever is encountered first).

[b] Samples for TPH will be analyzed initially using the HCID method with follow-up analysis for gasoline-range and/or diesel-range TPH based on the HCID results.

[c] Metals analysis will be for Model Toxics Control Act (MTCA) metals (arsenic, cadmium, chromium, lead, and mercury).

[d] Groundwater samples for metals analysis will be field-filtered and analyzed for dissolved metals.

[e] Soil gas samples will be collected from a depth of 5 ft bgs. Helium leak tests will be completed at all sampling locations.

[f] Include and run trip blanks for groundwater quality assurance/quality control purposes. Request on chain-of-custody form.

Abbreviations and Acronyms:

AST = aboveground storage tank
bgs = below ground surface
ft = foot/feet
HCID = hydrocarbon identification
PID = photoionization detector
PCB = polychlorinated biphenyl
ppm = parts per million
SVOC = semivolatile organic compound
TPH = total petroleum hydrocarbons
TPH-Dx = diesel-range total petroleum hydrocarbon extended analytical method
TPH-Gx = gasoline-range total petroleum hydrocarbon extended analytical method
VOC = volatile organic compound

Table 2
Summary of Detected Compounds – Soil
Boeing Buildings 10-13 and 10-16 – Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date and Laboratory Sample ID								
	Method A	Method B[a]	LAI-B1 LAI-B1-S(1-3)-20170911 9/11/2017 17I0116-04	LAI-B1 LAI-B1-S(11-13)-20170911 9/11/2017 17I0116-06	LAI-B2 LAI-B2-S(1-3)-20170911 9/11/2017 17I0116-08	LAI-B2 LAI-B2-S(10-12)-20170911 9/11/2017 17I0116-09	LAI-B3 LAI-B3-S(3.75-5) 9/11/2017 17I0116-10	LAI-B4 LAI-B4-S(3.5-5)-20170913 9/13/2017 17I0139-01	LAI-B5 LAI-B5-S(1-3)-20170913 9/13/2017 17I0139-03	LAI-B5 LAI-B5-S(7-9)-20170913 9/13/2017 17I0139-04	LAI-B6 LAI-B6-S(1-3)-20170911 9/11/2017 17I0116-01
Metals (mg/kg; EPA 200.8/SW-846 7471B)											
Arsenic	20	0.67	**6.79**	**3.71**	**5.24**	**3.88**	**4.82 J**	**2.70**	**4.86**	**2.31**	**3.77**
Cadmium	2	0.69	0.11 U	0.13 U	**0.19**	**0.14**	**0.52**	0.12 U	0.12 U	0.12 U	**0.13**
Chromium, Total	2,000	120,000	**30.1**	**34.7**	**30.3**	**39.4**	**42.3 J**	**29.2**	**39.1**	**33.7**	**30.4**
Lead	250	3,000	**11.1**	**5.36**	**19.7**	**5.57**	**20.3**	**2.56**	**5.77**	**2.59**	**15.2**
Mercury	2	2.1	0.0240 U	**0.0469**	**0.0261**	**0.0568**	**0.0564**	0.02650 U	**0.09653**	**0.02770**	**0.0708**
Petroleum Hydrocarbons (mg/kg; NWTPH-HCID)											
Gasoline Range Organics	100/30[b]	N/A	11 U	**19**	11 U	14 U	12 U	12 U	12 U	12 U	11 U
Petroleum Hydrocarbons (mg/kg; NWTPH-Gx)											
Petroleum Hydrocarbons as Gasoline	100/30[b]	N/A	--	**1,010**	--	--	--	--	--	--	--
PCBs (mg/kg; SW-846 8082A)											
Aroclor 1254	N/A	0.5	--	--	--	--	--	--	--	--	**6.25**
Aroclor 1260	N/A	0.5	--	--	--	--	--	--	--	--	0.0180 U
Total PCBs	1	0.5	--	--	--	--	--	--	--	--	**6.25**
Volatile Organic Compounds (mg/kg; SW-846 8260C)											
1,2,4-Trimethylbenzene	N/A	N/A	0.00118 U	**58.7**	0.00119 U	0.00157 U	**0.00124**	0.00063 U	0.00059 U	0.00067 U	0.00110 U
1,3,5-Trimethylbenzene	N/A	800	0.00118 U	**5.57**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U	0.00110 U
2-Butanone/MEK	N/A	48,000	0.00592 U	0.00618 U	0.00597 U	0.00786 U	0.00537 U	0.00315 U	0.00294 U	0.00337 U	0.00550 U
4-Isopropyltoluene	NL	NL	0.00118 U	**5.37**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U	0.00110 U
Acetone	N/A	29	**0.0168**	0.00618 U	**0.0705**	**0.0631**	**0.0405**	**0.0102**	**0.0324**	**0.00964**	**0.0253**
Benzene	0.03	0.028	0.00118 U	**0.00351**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U	0.00110 U
Carbon Disulfide	N/A	5.7	0.00118 U	**0.00168 J**	**0.00160 J**	0.00157 U	0.00107 U	**0.00069 J**	0.00059 U	0.00067 U	0.00110 U
Ethylbenzene	6	6.0	0.00118 U	**0.122**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U	0.00110 U
Isopropylbenzene (cumene)	N/A	8,000	0.00118 U	**7.06**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U	0.00110 U
Methylene Chloride	0.02	0.022	0.00237 U	**0.00372**	0.00239 U	0.00314 U	0.00215 U	0.00126 U	0.00118 U	0.00135 U	0.00220 U
Naphthalene	5	4.5	0.00592 U	**13.5**	0.00597 U	0.00786 U	0.00537 UJ	0.00315 U	0.00294 U	0.00337 U	0.00550 U
n-Butylbenzene	N/A	4,000	0.00118 U	**55.6**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U	0.00110 U
n-Propylbenzene	N/A	8,000	0.00118 U	**34.2 J**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U	0.00110 U
sec-Butylbenzene	N/A	8,000	0.00118 U	**9.47**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U	0.00110 U
Toluene	7	4.7	0.00118 U	**0.00206**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U	0.00110 U
Xylenes, Total	9	15	0.00237 U	**0.0263**	0.00239 U	0.00314 U	0.00215 U	0.00126 U	0.00118 U	0.00135 U	0.00220 U
Semivolatile Organic Compounds (mg/kg; SW-846 8270D)											
1-Methylnaphthalene	N/A	34	0.061 U	0.062 U	**1.37**	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U	0.061 U
2-Methylnaphthalene	N/A	320	0.061 U	0.062 U	**2.24**	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U	0.061 U
Butyl Benzyl Phthalate	N/A	13	0.061 U	0.062 U	0.062 U	**0.235**	0.062 U	0.066 U	0.061 U	0.062 U	0.061 U
Fluoranthene	N/A	630	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U	**0.069**
Naphthalene	5	4.5	0.061 U	0.062 U	**0.879**	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U	0.061 U
Pyrene	N/A	650	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U	**0.064**
Total Benzofluoranthenes	NL	1.4	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U	**0.107**

Table 2
Summary of Detected Compounds – Soil
Boeing Buildings 10-13 and 10-16 – Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date and Laboratory Sample ID							
	Method A	Method B[a]	LAI-B6 LAI-B6-S(7-9)-20170911 9/11/2017 17I0116-02	LAI-B7 LAI-B7-S(9-11)-201712 12/22/2017 17L0423-10	LAI-B7 LAI-B7-S(13-15)-201712 12/22/2017 17L0423-12	LAI-B8 LAI-B8-S(1-3)-201712 12/22/2017 17L0423-03	LAI-B8 LAI-B8-S(5-7)-201712 12/22/2017 17L0423-04	LAI-B9 LAI-B9-S(1-2)-201712 12/22/2017 17L0423-06	LAI-B9 LAI-B9-S(5-7)-201712 12/22/2017 17L0423-07	LAI-B9 LAI-B9-S(10-12)-201712 12/22/2017 17L0423-08
Metals (mg/kg; EPA 200.8/SW-846 7471B)										
Arsenic	20	0.67	**8.87**	--	--	--	--	--	--	--
Cadmium	2	0.69	**0.14**	--	--	--	--	--	--	--
Chromium, Total	2,000	120,000	**31.4**	--	--	--	--	--	--	--
Lead	250	3,000	**11.8**	--	--	--	--	--	--	--
Mercury	2	2.1	0.0224 U	--	--	--	--	--	--	--
Petroleum Hydrocarbons (mg/kg; NWTPH-HCID)										
Gasoline Range Organics	100/30[b]	N/A	11 U	--	--	--	--	--	--	--
Petroleum Hydrocarbons (mg/kg; NWTPH-Gx)										
Petroleum Hydrocarbons as Gasoline	100/30[b]	N/A	**--**	7.4 U	9.06 U	--	--	--	--	8.12 U
PCBs (mg/kg; SW-846 8082A)										
Aroclor 1254	N/A	0.5	**0.122**	--	--	0.0188 U	0.0182 U	**0.0632**	0.0196 U	--
Aroclor 1260	N/A	0.5	**0.0323**	--	--	0.0188 U	0.0182 U	**0.0208**	0.0196 U	--
Total PCBs	1	0.5	**0.1543**	--	--	ND	ND	**0.0840**	ND	ND
Volatile Organic Compounds (mg/kg; SW-846 8260C)										
1,2,4-Trimethylbenzene	N/A	N/A	0.00148 U	0.00113 U	0.00157 U	--	--	--	--	0.00116 U
1,3,5-Trimethylbenzene	N/A	800	0.00148 U	0.00113 U	0.00157 U	--	--	--	--	0.00116 U
2-Butanone/MEK	N/A	48,000	0.00741 U	0.00567 U	0.00787 U	--	--	--	--	0.00581 U
4-Isopropyltoluene	NL	NL	0.00148 U	0.00113 U	0.00157 U	--	--	--	--	0.00116 U
Acetone	N/A	29	**0.0192**	**0.0377**	**0.0399**	--	--	--	--	**0.0239**
Benzene	0.03	0.028	0.00148 U	0.00113 U	0.00157 U	--	--	--	--	0.00116 U
Carbon Disulfide	N/A	5.7	0.00148 U	0.00113 U	**0.0171**	--	--	--	--	0.00116 U
Ethylbenzene	6	6.0	0.00148 U	0.00113 U	0.00157 U	--	--	--	--	0.00116 U
Isopropylbenzene (cumene)	N/A	8,000	0.00148 U	0.00113 U	0.00157 U	--	--	--	--	0.00116 U
Methylene Chloride	0.02	0.022	0.00296 U	0.00227 U	0.00315 U	--	--	--	--	0.00232 U
Naphthalene	5	4.5	0.00741 U	0.00567 U	0.00787 U	--	--	--	--	0.00581 U
n-Butylbenzene	N/A	4,000	0.00148 U	0.00113 U	0.00157 U	--	--	--	--	0.00116 U
n-Propylbenzene	N/A	8,000	0.00148 U	0.00113 U	0.00157 U	--	--	--	--	0.00116 U
sec-Butylbenzene	N/A	8,000	0.00148 U	0.00113 U	0.00157 U	--	--	--	--	0.00116 U
Toluene	7	4.7	0.00148 U	0.00113 U	0.00157 U	--	--	--	--	0.00116 U
Xylenes, Total	9	15	0.00296 U	0.00227 U	0.00315 U	--	--	--	--	0.00232 U
Semivolatile Organic Compounds (mg/kg; SW-846 8270D)										
1-Methylnaphthalene	N/A	34	0.062 U	--	--	--	--	--	--	--
2-Methylnaphthalene	N/A	320	0.062 U	--	--	--	--	--	--	--
Butyl Benzyl Phthalate	N/A	13	0.062 U	--	--	--	--	--	--	--
Fluoranthene	N/A	630	0.062 U	--	--	--	--	--	--	--
Naphthalene	5	4.5	0.062 U	--	--	--	--	--	--	--
Pyrene	N/A	650	0.062 U	--	--	--	--	--	--	--
Total Benzofluoranthenes	NL	1.4	0.062 U	--	--	--	--	--	--	--

Table 2
Summary of Detected Compounds – Soil
Boeing Buildings 10-13 and 10-16 – Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date and Laboratory Sample ID		
			LAI-B8 LAI-B8-S(13-15)-201712 12/22/2017	LAI-B10 LAI-B10-S(1-3)-201712 12/22/2017	LAI-B10 LAI-B10-S(5-7)-201712 12/22/2017
	Method A	Method B[a]	17L0423-11	17L0423-01	17L0423-02
Metals (mg/kg; EPA 200.8/SW-846 7471B)					
Arsenic	20	0.67	--	--	--
Cadmium	2	0.69	--	--	--
Chromium, Total	2,000	120,000	--	--	--
Lead	250	3,000	--	--	--
Mercury	2	2.1	--	--	--
Petroleum Hydrocarbons (mg/kg; NWTPH-HCID)					
Gasoline Range Organics	100/30[b]	N/A	--	--	--
Petroleum Hydrocarbons (mg/kg; NWTPH-Gx)					
Petroleum Hydrocarbons as Gasoline	100/30[b]	N/A	7.1 U	--	--
PCBs (mg/kg; SW-846 8082A)					
Aroclor 1254	N/A	0.5	--	**0.0523**	0.0192 U
Aroclor 1260	N/A	0.5	--	**0.0248**	0.0192 U
Total PCBs	1	0.5	ND	**0.0771**	ND
Volatile Organic Compounds (mg/kg; SW-846 8260C)					
1,2,4-Trimethylbenzene	N/A	N/A	0.00136 U	--	--
1,3,5-Trimethylbenzene	N/A	800	0.00136 U	--	--
2-Butanone/MEK	N/A	48,000	**0.0171**	--	--
4-Isopropyltoluene	NL	NL	0.00136 U	--	--
Acetone	N/A	29	**0.106**	--	--
Benzene	0.03	0.028	0.00136 U	--	--
Carbon Disulfide	N/A	5.7	**0.00273**	--	--
Ethylbenzene	6	6.0	0.00136 U	--	--
Isopropylbenzene (cumene)	N/A	8,000	0.00136 U	--	--
Methylene Chloride	0.02	0.022	0.00271 U	--	--
Naphthalene	5	4.5	0.00679 U	--	--
n-Butylbenzene	N/A	4,000	0.00136 U	--	--
n-Propylbenzene	N/A	8,000	0.00136 U	--	--
sec-Butylbenzene	N/A	8,000	0.00136 U	--	--
Toluene	7	4.7	0.00136 U	--	--
Xylenes, Total	9	15	0.00271 U	--	--
Semivolatile Organic Compounds (mg/kg; SW-846 8270D)					
1-Methylnaphthalene	N/A	34	--	--	--
2-Methylnaphthalene	N/A	320	--	--	--
Butyl Benzyl Phthalate	N/A	13	--	--	--
Fluoranthene	N/A	630	--	--	--
Naphthalene	5	4.5	--	--	--
Pyrene	N/A	650	--	--	--
Total Benzofluoranthenes	NL	1.4	--	--	--

Abbreviations and Acronyms:

EPA = US Environmental Protection Agency
ft = feet
ID = identification
mg/kg = milligrams per kilogram
MTCA = Washington State Model Toxics Control Act
-- = not analyzed
N/A = not applicable
NL = not listed

Notes:

U = The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
Bold = detected compound
Blue Box = detected concentration is greater than MTCA Method B screening level.
Green Box = detected concentration is greater than MTCA Method A and MTCA Method B screening levels.

[a] For MTCA Method B screening levels, the most conservative value of either direct contact cancer, direct contact non-cancer, or protective of groundwater was used.
Screening levels for metals would be adjusted up to natural background concentrations.

[b] MTCA Method A screening level is 100 mg/kg if benzene is not present and the total of ethylbenzene, toluene, and xylenes is less than 1% of the gasoline mixture; otherwise the screening level is 30 mg/kg.

Table 3
Summary of Detected Compounds – Groundwater
Boeing Buildings 10-13 and 10-16 – Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date, and Laboratory Sample ID								
			LAI-B2 LAI-B2-GW 9/11/2017	LAI-B4 LAI-B4-GW 9/13/2017	LAI-B6 LAI-B6-GW-20170911 9/11/2017	LMW-2D LMW-2D-20170913 9/13/2017	LAI-B7 LAI-B7-GW-201712 12/22/2017	LAI-B8 LAI-B8-GW-201712 12/22/2017	LAI-B9 LAI-B9-GW-201712 12/22/2017	MW-2 MW-2-20170913 9/13/2017	MW-10 MW-10-20170913 9/13/2017
	Method A	Method B[a]	17I0116-07	17I0139-02	17I0116-03	17I0139-07	17L0423-13	17L0423-05	17L0423-09	17I0139-05	17I0139-06
Metals (µg/L; EPA 200.8/SW-846 7470A)											
Arsenic	5	0.06	**8.39 J**	**3.75**	**9.32**	**5.40**	--	--	--	**5.46**	**8.10**
Chromium, Total	50	100	0.500 U	0.500 U	**0.815**	0.500 U	--	--	--	**0.644**	**0.683**
Petroleum Hydrocarbons (µg/L; NWTPH-HCID/NWTPH-Gx)											
Gasoline Range Organics	1,000/800[b]	N/A	250 U	250 U	250 U	250 UJ	**603**	100 U	100 U	250 U	250 U
Volatile Organic Compounds (µg/L; SW-846 8260C)											
Acetone	N/A	7,200	**8.09 J**	5.00 UJ	**7.74 J**	5.00 UJ	5.00 U	5.00 U	5.00 U	**8.55 J**	5.00 UJ
Carbon Disulfide	N/A	800	**0.27 J**	0.20 U	**0.67 J**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
sec-Butylbenzene	N/A	800	0.20 U	0.20 U	0.20 U	0.20 U	**0.77**	0.20 U	0.20 U	0.20 U	0.20 U
Toluene	1,000	640	0.20 U	**0.62**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Vinyl Chloride	0.2	0.03	0.20 U	0.20 U	0.20 U	**0.34**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Abbreviations and Acronyms:

EPA = US Environmental Protection Agency
GW = groundwater
ID = identification
MTCA = Washington State Model Toxics Control Act
µg/L = micrograms per liter
N/A = not applicable
NL = not listed
-- = not analyzed

Notes:

U = The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected in the sample; the reported sample reporting limit is an estimate.
Bold = detected compound
Blue Box = detected concentration is greater than MTCA Method B screening level.
Green Box = detected concentration is greater than MTCA Method B and MTCA Method A screening level.

[a] For MTCA Method B screening levels, the most conservative value of either cancer, non-cancer, or maximum contaminant level was used. Screening levels for metals would be adjusted up to natural background concentrations.

[b] MTCA Method A screening level is 1,000 µg/L if benzene is not present and the total of ethylbenzene, toluene, and xylenes is less than 1 percent of the gasoline mixture; otherwise the screening level is 800 µg/L.

Table 4
Summary of Detected Compounds – Soil Gas
Boeing Buildings 10-13 and 10-16 – Renton, Washington

Analyte	MTCA Method B Unrestricted Screening Level[a]	Modified MTCA Method B Commercial Screening Level[b]	Sample Location, Field Sample ID, Sample Date, and Laboratory Sample ID					
			LAI-B1 LAI-B1-SG-20170911 9/11/2017 1709312-02A	LAI-B2 LAI-B2-SG-20170911 9/11/2017 1709312-03A	LAI-B3 LAI-B3-SG-20170911 9/11/2017 1709312-04A	LAI-B4 LAI-B4-SG-20170913 9/13/2017 1709312-06A	LAI-B5 LAI-B5-SG-20170913 9/13/2017 1709312-07A	LAI-B6 LAI-B6-SG-20170911 9/11/2017 1709312-01A
Volatile Organic Compounds (µg/m^3; TO-15)								
1,2,4-Trimethylbenzene	107	N/A	**13**	2.3 U	2.2 U	**29**	2.2 U	**54**
1,3,5-Trimethylbenzene	NL	N/A	**9.7**	2.3 U	2.2 U	**8.9**	2.2 U	**20**
1,3-Butadiene	2.8	8.3	**100**	**140**	**73**	1.0 U	**6.4**	**13**
2,2,4-Trimethylpentane	NL	N/A	**2,500**	2.2 U	2.1 U	2.1 U	2.0 U	2.1 U
2-Butanone/MEK	76,000	N/A	**38**	5.6 U	5.3 U	**15**	5.2 U	5.4 U
4-Ethyltoluene	NL	N/A	**11**	2.3 U	2.2 U	**13**	2.2 U	**43**
Acetone	NL	N/A	**190**	**94**	**45**	**120**	**38**	**68**
Benzene	11	32	**100**	**12**	**17**	1.5 U	**6.3**	**5.3**
Carbon Disulfide	11,000	N/A	**290**	**66**	5.6 U	5.7 U	5.5 U	**48**
Chloroform	3.6	11	2.3 U	2.3 U	2.2 U	**6.0**	2.1 U	2.2 U
Cyclohexane	NL	N/A	**370**	**13**	**3.9**	1.6 U	1.5 U	**12**
Dichlorodifluoromethane	1,500	N/A	2.3 U	**11**	2.2 U	2.3 U	2.2 U	**8.9**
Ethanol	NL	N/A	**12**	**11**	3.4 U	**48**	3.3 U	3.4 U
Ethylbenzene	15,000	N/A	**11**	**6.4**	1.9 U	2.0 U	1.9 U	**5.5**
Isopropylbenzene	6,100	N/A	2.3 U	2.3 U	2.2 U	2.2 U	2.2 U	**6.5**
m,p-Xylene	1,500	N/A	**37**	**27**	1.9 U	**8.8**	**17**	**26**
n-Heptane	NL	N/A	**320**	**12**	**8.6**	1.9 U	1.8 U	**18**
n-Hexane	11,000	N/A	**830**	**22**	**20**	**6.3**	**6.4**	**17**
n-Propylbenzene	15,000	N/A	2.3 U	2.3 U	2.2 U	2.2 U	2.2 U	**11**
o-Xylene	1,500	N/A	**19**	**13**	1.9 U	2.0 U	**5.3**	**12**
Styrene	15,000	N/A	**8.8**	**15**	1.9 U	2.0 U	1.9 U	1.9 U
Tetrachloroethene	320	N/A	3.1 U	**13**	**11**	3.1 U	3.0 U	3.1 U
Toluene	76,000	N/A	**160**	**16**	**16**	**7.5**	**8.2**	**14**
Trichlorofluoromethane (CFC 11)	11,000	N/A	**85**	**12**	2.5 U	2.6 U	2.5 U	**88**

Abbreviations and Acronyms:

ID = identification

µg/m^3 = micrograms per cubic meter

MTCA = Washington State Model Toxics Control Act

N/A = not applicable

NL = not listed

Notes:

Bold = detected compound

Blue Box = detected concentration is greater than MTCA Method B Unrestricted screening level.

Green Box = detected concentration is greater than MTCA Method B and Modified MTCA Method B screening level.

U = The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

[a] For MTCA Method B cleanup levels, the most conservative value of either cancer or non-cancer was used.

[b] Modified MTCA Method B screening levels were calculated for a commercial exposure scenario using an exposure frequency of 0.33, which equates to 55 hours per week for 52 weeks per year.

Table 5
Indoor Air/Ambient Air Analytical Results
Boeing Buildings 10-13 and 10-16 – Renton, Washington

Analyte	MTCA Method B Unrestricted Screening Level[a]	Method B Commercial Screening Level[b]	Field Sample ID, Sample Date, and Laboratory Sample ID								
			AA 12/22/2017 1712556-05A/B	1013-IA1 12/22/2017 1712556-01A	1013-IA1 Corrected for Background[c]	1013-IA2 12/22/2017 1712556-02A/	1013-IA2 Corrected for Background[c]	1016-IA1 12/22/2017 1712556-03A/	1016-IA1 Corrected for Background[c]	1016-IA2 12/22/2017 1712556-04A/	1016-IA2 Corrected for Background[c]
1,3-Butadiene	0.083	0.25	0.22 U	0.29 U	N/A	0.29 U	N/A	0.27 U	N/A	0.30 U	N/A
Benzene	0.32	0.96	**0.75**	**0.70**	ND	**0.64**	ND	**0.98**	**0.23**	**0.59**	ND

Notes:

Bold = detected compound

U = The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

All concentrations are reported in micrograms per cubic meter ($\mu g/m^3$).

[a] For MTCA Method B cleanup levels, the most conservative value of either cancer or non-cancer was used.

[b] Modified MTCA Method B screening levels were calculated for a commercial exposure scenario using an exposure frequency of 0.33, which equates to 55 hours per week for 52 weeks per year.

[c] Detected concentrations of benzene in indoor air were corrected for background by subtracting the concentration of benzene detected in ambient air from the concentration detected in indoor air.

Abbreviations and Acronyms:

ID = identification

MTCA = Model Toxics Control Act

N/A = not applicable

ND = detected concentration in indoor air is less than the concentration detected in ambient air

$\mu g/m^3$ = micrograms per cubic meter

Table 6
Predicted Indoor Air Concentrations
Johnson and Ettinger Model
Boeing Buildings 10-13 and 10-16 – Renton, Washington

		Predicted Indoor Air Concentrations (µg/m^3) Air Exchange Rate = 3/hr			MTCA Method B and Modified Method B Indoor Air Screening Levels (µg/m^3)	
	Maximum Detected Concentration in Soil Gas (µg/m^3)	Low Prediction	Best Estimate Prediction	High Prediction	Unrestricted Use	Commercial Use
1,3-Butadiene	140	0.0120	0.064	0.074	0.08	0.25
Chloroform	6	0.00048	0.0022	0.0024	0.11	0.3
Benzene	100	0.0083	0.041	0.047	0.32	0.96

Notes:

µg/m^3 = micrograms per cubic meter
hr = hour
MTCA = Model Toxics Control Act

The following parameters were inputed or changed from the default values:

Soil type:	Sand
Depth of sample:	1.52 meters
Temperature:	13 deg Celsius
Air Exchange Rate:	3 exchanges per hour
Building Mixing Height:	2.59 meters
Building Footprint Area:	743.22 square meters
Depth to base of foundation:	0.1 meters
Slab Thickness:	0.1 meters

APPENDIX A

Exploration Logs

Soil Classification System

MAJOR DIVISIONS			GRAPHIC SYMBOL	USCS LETTER SYMBOL[1]	TYPICAL DESCRIPTIONS [2][3]
COARSE-GRAINED SOIL (More than 50% of material is larger than No. 200 sieve size)	GRAVEL AND GRAVELLY SOIL (More than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (Little or no fines)		GW	Well-graded gravel; gravel/sand mixture(s); little or no fines
				GP	Poorly graded gravel; gravel/sand mixture(s); little or no fines
		GRAVEL WITH FINES (Appreciable amount of fines)		GM	Silty gravel; gravel/sand/silt mixture(s)
				GC	Clayey gravel; gravel/sand/clay mixture(s)
	SAND AND SANDY SOIL (More than 50% of coarse fraction passed through No. 4 sieve)	CLEAN SAND (Little or no fines)		SW	Well-graded sand; gravelly sand; little or no fines
				SP	Poorly graded sand; gravelly sand; little or no fines
		SAND WITH FINES (Appreciable amount of fines)		SM	Silty sand; sand/silt mixture(s)
				SC	Clayey sand; sand/clay mixture(s)
FINE-GRAINED SOIL (More than 50% of material is smaller than No. 200 sieve size)	SILT AND CLAY (Liquid limit less than 50)			ML	Inorganic silt and very fine sand; rock flour; silty or clayey fine sand or clayey silt with slight plasticity
				CL	Inorganic clay of low to medium plasticity; gravelly clay; sandy clay; silty clay; lean clay
				OL	Organic silt; organic, silty clay of low plasticity
	SILT AND CLAY (Liquid limit greater than 50)			MH	Inorganic silt; micaceous or diatomaceous fine sand
				CH	Inorganic clay of high plasticity; fat clay
				OH	Organic clay of medium to high plasticity; organic silt
	HIGHLY ORGANIC SOIL			PT	Peat; humus; swamp soil with high organic content

OTHER MATERIALS	GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
PAVEMENT		AC or PC	Asphalt concrete pavement or Portland cement pavement
ROCK		RK	Rock (See Rock Classification)
WOOD		WD	Wood, lumber, wood chips
DEBRIS		DB	Construction debris, garbage

Notes:
1. USCS letter symbols correspond to symbols used by the Unified Soil Classification System and ASTM classification methods. Dual letter symbols (e.g., SP-SM for sand or gravel) indicate soil with an estimated 5-15% fines. Multiple letter symbols (e.g., ML/CL) indicate borderline or multiple soil classifications.
2. Soil descriptions are based on the general approach presented in the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), outlined in ASTM D 2488. Where laboratory index testing has been conducted, soil classifications are based on the Standard Test Method for Classification of Soils for Engineering Purposes, as outlined in ASTM D 2487.
3. Soil description terminology is based on visual estimates (in the absence of laboratory test data) of the percentages of each soil type and is defined as follows:

Primary Constituent:	> 50% - "GRAVEL," "SAND," "SILT," "CLAY," etc.
Secondary Constituents:	> 30% and ≤ 50% - "very gravelly," "very sandy," "very silty," etc.
	> 15% and ≤ 30% - "gravelly," "sandy," "silty," etc.
Additional Constituents:	> 5% and ≤ 15% - "with gravel," "with sand," "with silt," etc.
	≤ 5% - "with trace gravel," "with trace sand," "with trace silt," etc., or not noted.

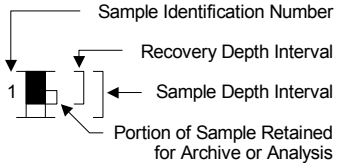
4. Soil density or consistency descriptions are based on judgement using a combination of sampler penetration blow counts, drilling or excavating conditions, field tests, and laboratory tests, as appropriate.

Drilling and Sampling Key

SAMPLER TYPE

Code	Description
a	3.25-inch O.D., 2.42-inch I.D. Split Spoon
b	2.00-inch O.D., 1.50-inch I.D. Split Spoon
c	Shelby Tube
d	Grab Sample
e	Single-Tube Core Barrel
f	Double-Tube Core Barrel
g	2.50-inch O.D., 2.00-inch I.D. WSDOT
h	3.00-inch O.D., 2.375-inch I.D. Mod. California
i	Other - See text if applicable
1	300-lb Hammer, 30-inch Drop
2	140-lb Hammer, 30-inch Drop
3	Pushed
4	Vibrocore (Rotosonic/Geoprobe)
5	Other - See text if applicable

SAMPLE NUMBER & INTERVAL



Field and Lab Test Data

Code	Description
PP = 1.0	Pocket Penetrometer, tsf
TV = 0.5	Torvane, tsf
PID = 100	Photoionization Detector VOC screening, ppm
W = 10	Moisture Content, %
D = 120	Dry Density, pcf
-200 = 60	Material smaller than No. 200 sieve, %
GS	Grain Size - See separate figure for data
AL	Atterberg Limits - See separate figure for data
GT	Other Geotechnical Testing
CA	Chemical Analysis

Groundwater

▽ Approximate water level at time of drilling (ATD)

▼ Approximate water level at time other than ATD

LANDAU ASSOCIATES

Boeing Renton
Buildings 10-13 and 10-16
Renton, Washington

Soil Classification System and Key

Figure A-1

LAI-B1

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Drilling Method: GeoprobeTM Ground Elevation (ft): Not Surveyed	Water Level
0						PC	Concrete **(CONCRETE)**	
				0.0		SP-SM	Grayish brown, fine to coarse SAND with silt; no odor, no sheen (loose, dry) **(FILL)**	
	LAI-B1-S(1-3)	d3		0.0			-lense of concrete rubble	
				0.0		SP-SM	Dark gray, fine to coarse SAND with silt and trace gravel; no odor, no sheen (loose, dry)	
5				0.0				
		d3		0.0		GP	Gravel lense	
						ML	Dark gray SILT; no odor, no sheen (stiff, damp)	
10	LAI-B1-S(9-11)					SP	Brown, fine to coarse SAND with trace silt and gravel; no odor, no sheen (loose, damp)	▽ ATD
				0.0				
	LAI-B1-S(11-13)	d3		3.8		SM	Gray, silty SAND with trace gravel; strong petroleum-like odor, no sheen (medium dense, damp)	
				0.0			-becomes fine to medium SAND; slight odor, no sheen (loose, wet)	
15						ML	Silt lense (stiff, wet)	

Boring Completed 09/11/17
Total Depth of Boring = 15.0 ft.

20

25

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

0025213.190.192 8/7/18 N:\PROJECTS\0025213.190.GPJ SOIL BORING LOG

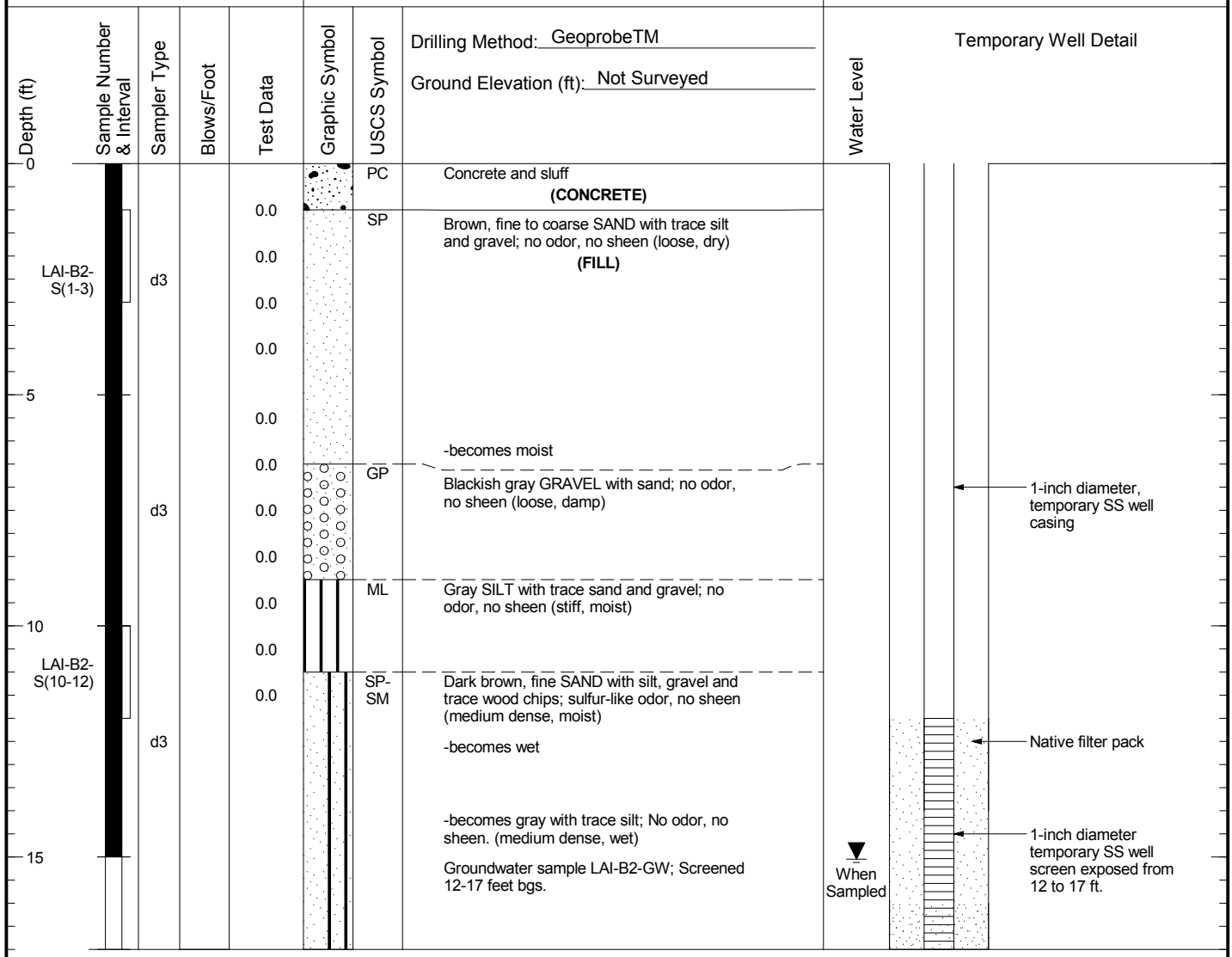
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Boeing Renton
Buildings 10-13 and 10-16
Renton, Washington

Log of Boring LAI-B1

Figure
A-2

LAI-B2



Boring Completed 09/11/17
Total Depth of Boring = 17.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

0025213.190.192 8/7/18 N:\PROJECTS\0025213.190.GPJ WELL LOG

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Boeing Renton
Buildings 10-13 and 10-16
Renton, Washington

Log of Temporary Well LAI-B2

Figure
A-3

LAI-B3

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Water Level
0						AC	Asphalt and road base **(ASPHALT)**
						SM	Gray, silty, fine SAND with trace gravel; no odor, no sheen (medium dense, damp) **(FILL)**
	LAI-B3-S(3.75-5)	d3		0.0			
5						SP	Gray, fine SAND with trace silt; no odor, no sheen (medium dense, wet)
				0.0			ATD
		d3					
				0.0		SM	Gray, very silty, fine SAND; no odor, no sheen (medium dense, wet)
10				0.0			
		d3		0.0			
15							
20							
25							

Drilling Method: GeoprobeTM

Ground Elevation (ft): Not Surveyed

Boring Completed 09/11/17
Total Depth of Boring = 15.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

0025213.190.192 8/7/18 N:\PROJECTS\0025213.190.GPJ SOIL BORING LOG

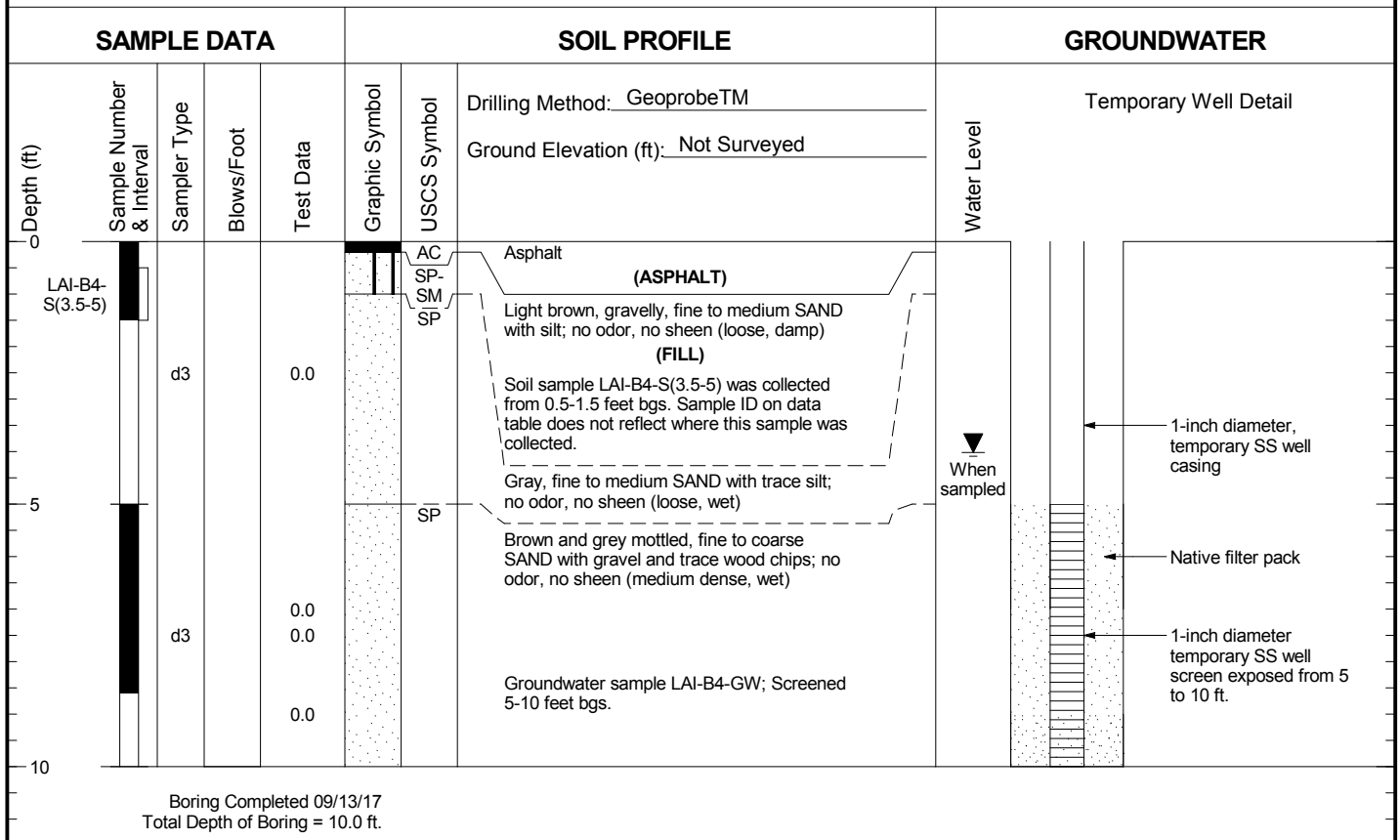
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Boeing Renton
Buildings 10-13 and 10-16
Renton, Washington

Log of Boring LAI-B3

Figure
A-4

LAI-B4



Boring Completed 09/13/17
Total Depth of Boring = 10.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

0025213.190.192 8/7/18 N:\PROJECTS\0025213.190.GPJ WELL LOG

LANDAU ASSOCIATES

Boeing Renton
Buildings 10-13 and 10-16
Renton, Washington

Log of Temporary Well LAI-B4

Figure
A-5

LAI-B5

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Water Level

Drilling Method: GeoprobeTM

Ground Elevation (ft): Not Surveyed

Depth (ft)	Sample Number & Interval	Sampler Type	Test Data	USCS Symbol	Soil Profile
0				AC	Asphalt
				SP-SM ML	**(ASPHALT)** Gray, gravelly SAND with silt; no odor, no sheen (medium dense, damp) **(FILL)**
	LAI-B5-S(1-3)	d3	0.0	SP	Light brown, SILT with interbedded fine sand; no odor, no sheen (stiff, damp)
			0.0		Red-brown, medium to coarse SAND; no odor, no sheen (loose, damp)
5			0.0	SM	Red-brown, very silty SAND with trace gravel; no odor, no sheen (medium dense, damp to moist)
	LAI-B5-S(7-9)	d3	0.0	SP	Light brown, fine to medium SAND with trace silt; no odor, no sheen (medium dense, moist)
					-0.1ft thick lense of gray SILT with sand; no odor, no sheen
					-becomes gray with trace silt; no odor, no sheen (medium dense, wet)
10					Soil sample LAI-B5-S(7-9) was collected from 7.0-8.2 feet bgs. Sample ID on data table does not reflect where this sample was collected.

Water Level: ATD

Boring Completed 09/13/17
Total Depth of Boring = 10.0 ft.

15

20

25

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

0025213.190.192 8/7/18 N:\PROJECTS\0025213.190.GPJ SOIL BORING LOG

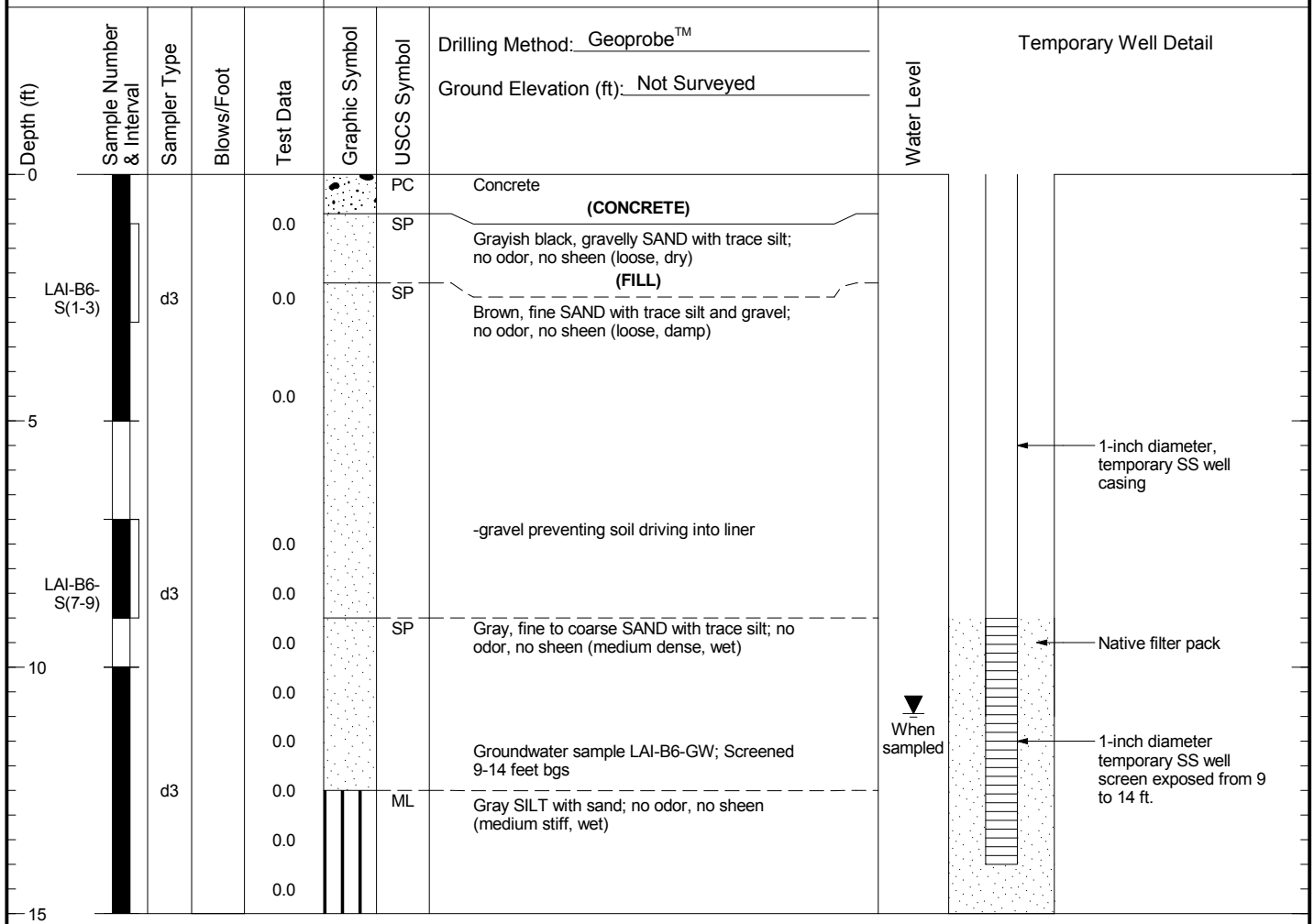
LANDAU ASSOCIATES

Boeing Renton
Buildings 10-13 and 10-16
Renton, Washington

Log of Boring LAI-B5

Figure
A-6

LAI-B6



Boring Completed 09/11/17
Total Depth of Boring = 15.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

0025213.190.192 8/7/18 N:\PROJECTS\0025213.190.GPJ WELL.LOG

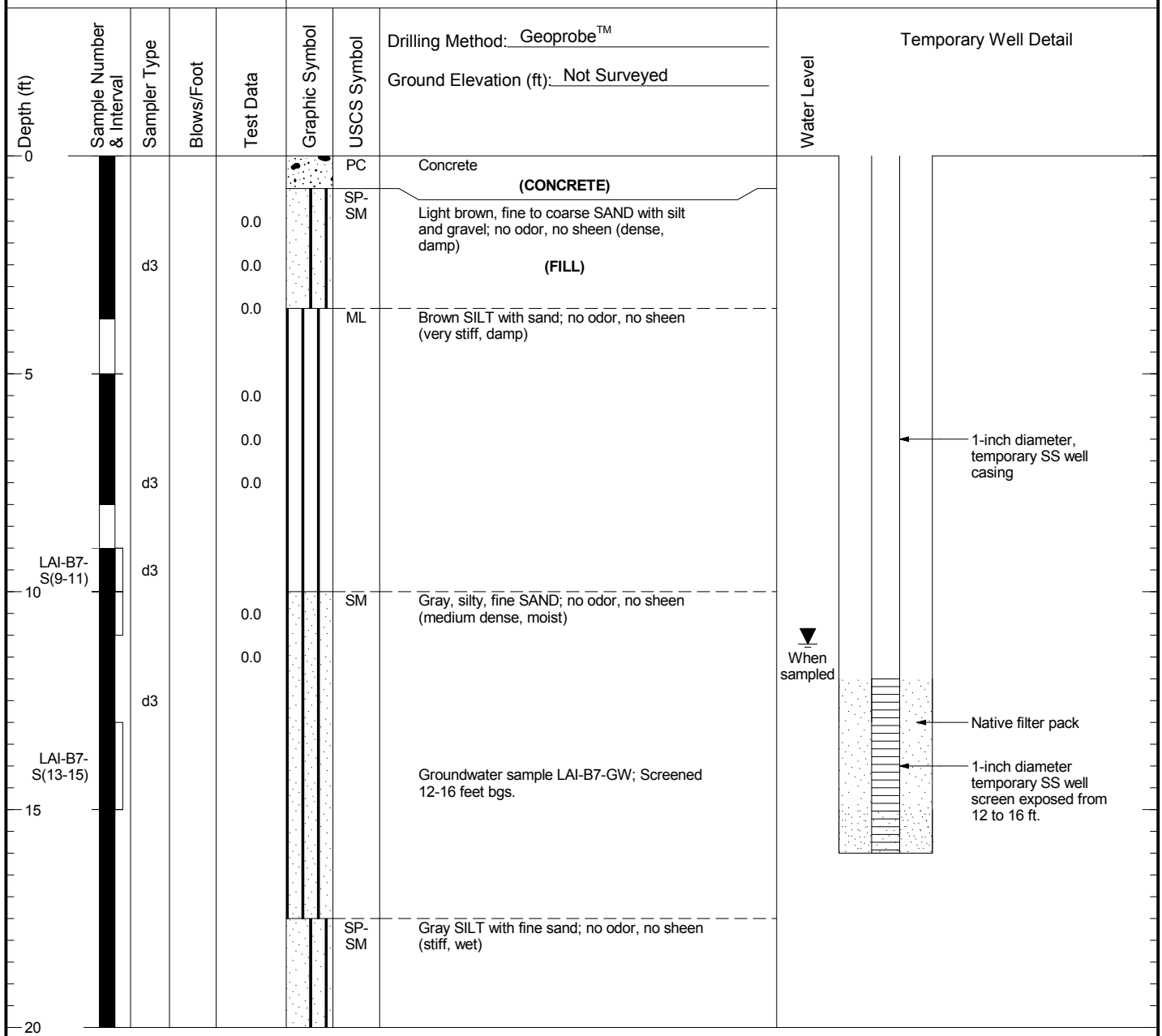
LANDAU ASSOCIATES

Boeing Renton
Buildings 10-13 and 10-16
Renton, Washington

Log of Temporary Well LAI-B6

Figure
A-7

LAI-B7



Boring Completed 12/22/17
Total Depth of Boring = 20.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

0025213.190.192 8/7/18 N:\PROJECTS\0025213.190.GPJ WELL LOG

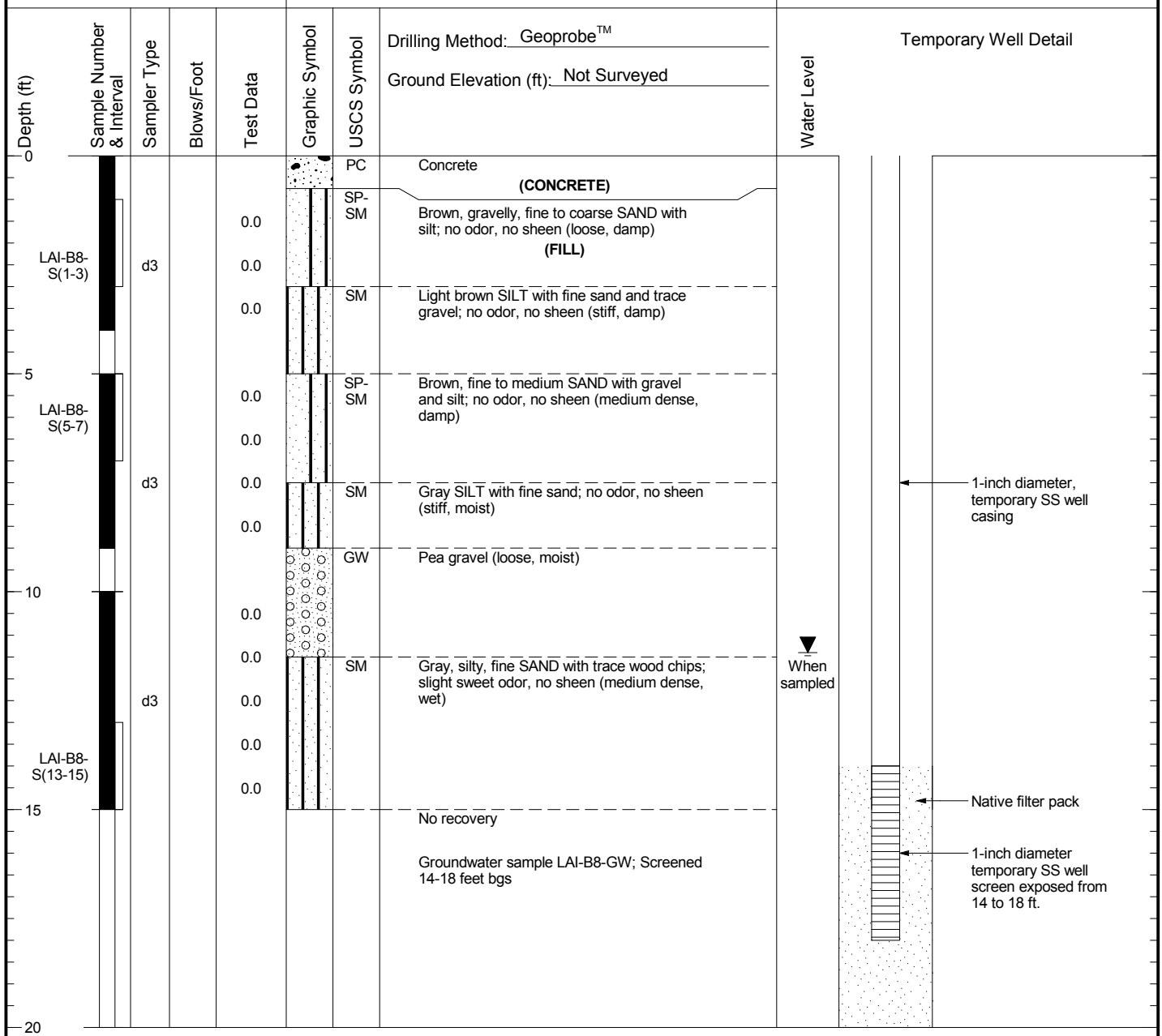
LANDAU ASSOCIATES

Boeing Renton
Buildings 10-13 and 10-16
Renton, Washington

Log of Temporary Well LAI-B7

Figure
A-8

LAI-B8



Boring Completed 12/22/17
Total Depth of Boring = 20.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

0025213.190.192 8/7/18 N:\PROJECTS\0025213.190.GPJ WELL LOG

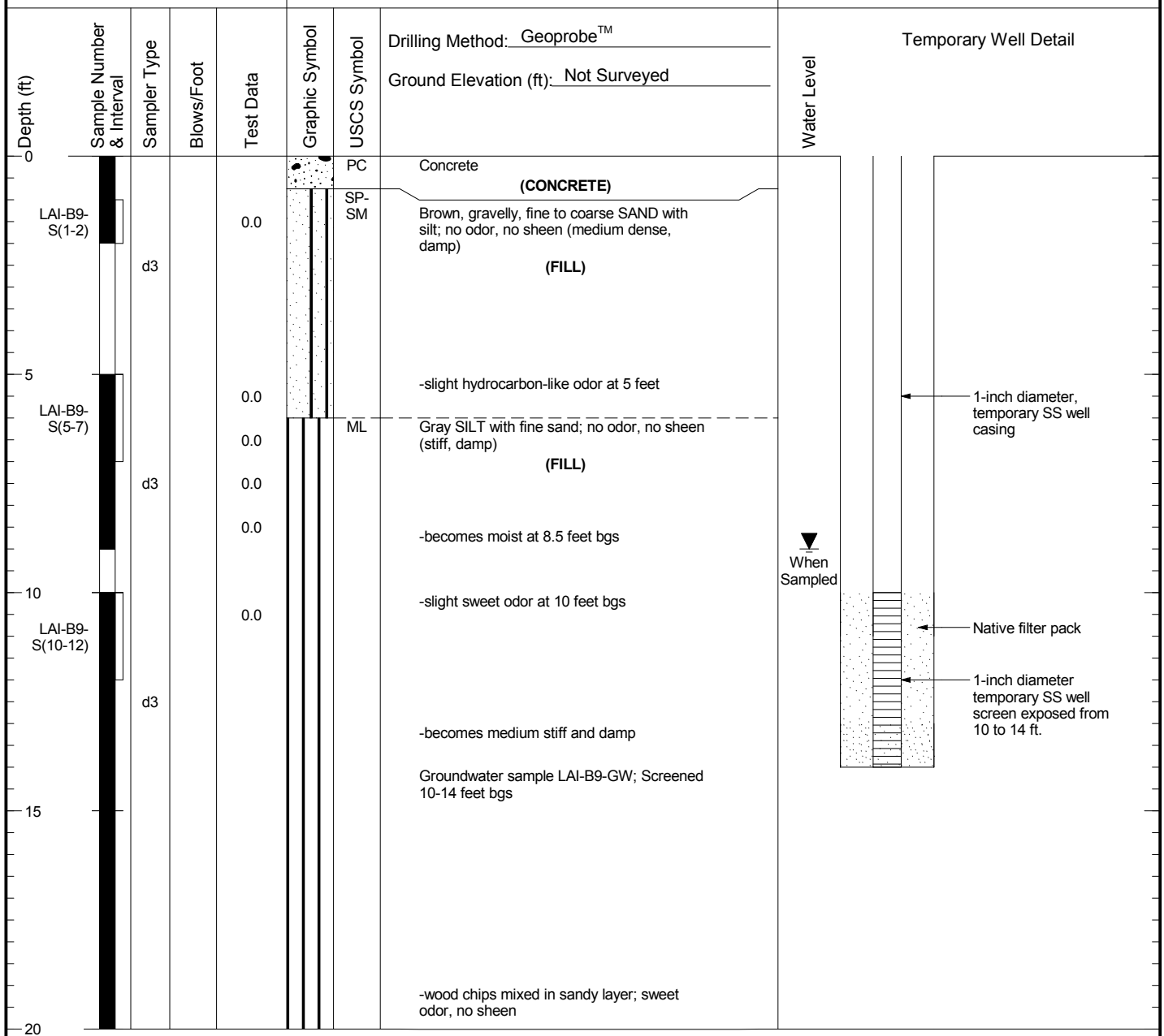
LANDAU ASSOCIATES

Boeing Renton
Buildings 10-13 and 10-16
Renton, Washington

Log of Temporary Well LAI-B8

Figure
A-9

LAI-B9



Boring Completed 12/22/17
Total Depth of Boring = 20.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

0025213.190.192 8/7/18 N:\PROJECTS\0025213.190.GPJ WELL LOG

LANDAU ASSOCIATES

Boeing Renton
Buildings 10-13 and 10-16
Renton, Washington

Log of Temporary Well LAI-B9

Figure
A-10

LAI-B10

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Water Level
0						CONC	Concrete **(CONCRETE)**
				0.0		SP-SM	Light brown, fine to medium SAND with silt and gravel; no odor, no sheen (loose, damp) **(FILL)**
	LAI-B10-S(1-3)	d3		0.0			
				0.0			
						SM	Gray, very silty, fine SAND; no odor, no sheen (medium dense, wet)
5				0.0			▽ ATD
	LAI-B10-S(5-7)	d3					
10							

Drilling Method: Geoprobe™

Ground Elevation (ft): Not Surveyed

Boring Completed 12/22/17
Total Depth of Boring = 10.0 ft.

15
20
25

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

0025213.190.192 8/7/18 N:\PROJECTS\0025213.190.GPJ SOIL BORING LOG

LANDAU ASSOCIATES

Boeing Renton
Buildings 10-13 and 10-16
Renton, Washington

Log of Boring LAI-B10

Figure
A-11

APPENDIX B

Laboratory Analytical Reports

Analytical Resources, Incorporated
Analytical Chemists and Consultants

18 October 2017

Peter Hudelson
The Boeing Company
P.O. Box 3707 MC 9U4-26
Seattle, WA 98124-2207

RE: Renton Phase II Investigation

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
17I0116	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the reqirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006

PJLA Testing
Accreditation # 66169

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 171 0116	Turn-around Requested: Standard	Page: 1	of 2
ARI Client Company: Boeing	Phone: (425) 234-4921	Date: 9/11/17	Ice Present?
Client Contact: Pete Hudelson, Kathryn Hartly (LAI)		No. of Coolers:	Cooler Temps:
Client Project Name: Renton Buildings 10-13 & 10-16 Phase II Investigation			
Client Project #:	Samplers: Stephanie Renando, Jeovani Huerta-Avila		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: VOCs (8260B) full list	SVOCs (8270D)	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx (soil=w/SGC)	Metals 200.8/6020/7471B for 1x9	Dissolved metals 200.8/6020/7471B		Notes/Comments
LAI-B16-S(1-3)	9/11/17	1000	Soil	8	X	X	X			X			
LAI-B16-S(7-9)	9/11/17	1040	Soil	8	X	X	X			X			
LAI-B16-GW	9/11/17	1051	water	12	X	X	X				X		
LAI-B1-S(1-3)	9/11/17	1300	Soil	8	X	X	X			X			~~Archive~~ SAR 9/12/17
LAI-B1-S(9-11)	9/11/17	1315	Soil	8									Archive
LAI-B1-S(11-13)	9/11/17	1400	Soil	8	X	X	X			X			
LAI-B2-GW	9/11/17	1436	water	12	X	X	X				X		
LAI-B2-S(1-3)	9/11/17	1450	Soil	8	X	X	X			X			
LAI-B2-S(10-12)	9/11/17	1500	Soil	8	X	X	X			X			
LAI-B3-S(3.75-5)	9/11/17	1540	Soil	8	X	X	X			X			

Comments/Special Instructions
#= field filtered
Metals list MTCA 5 Arsenic, Cadmium, Chromium, Lead and mercury.
1= Hold pending HCID

	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Printed Name:	Stephanie Renando	Brandon Fisk		
Company:	Landau Associates	ARI		
Date & Time:	9/12/17 @ 945	9/12/17 1448		

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Landau Edmonds

Project Name: Renton Boeing Investigation Phase II

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 17I0116

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? ..... YES NO

Were custody papers properly filled out (ink, signed, etc.) ..... YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 3.6 2.9 ___ ___ ___ ___

Time: 1448

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: D0052O8

Cooler Accepted by: BF Date: 9/12/17 Time: 1448

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? ..... YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? ..... NA YES NO

Were all bottles sealed in individual plastic bags? ..... YES NO

Did all bottles arrive in good condition (unbroken)? ..... YES NO

Were all bottle labels complete and legible? ..... YES NO

Did the number of containers listed on COC match with the number of containers received? ..... YES NO

Did all bottle labels and tags agree with custody papers? ..... YES NO

Were all bottles used correct for the requested analyses? ..... YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? ..... NA YES NO

Was sufficient amount of sample sent in each bottle? ..... YES NO

Date VOC Trip Blank was made at ARI..... SF 9/12/17 NA 9/8/17

Was Sample Split by ARI : NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: [signature] Date: 9/12/17 Time: 1535

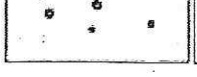
*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

LAI-B2-GW 3 vials PD.

By: SF Date: 9/12/17

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
		

Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 17I0116	Turn-around Requested: Standard	Page: 2 of 2	
ARI Client Company: Boeing/LAI	Phone: (425) 234-4921	Date: 9/11/17	Ice Present?
Client Contact: Pete Hudelson, Kathryn Hartley (LAI)		No. of Coolers:	Cooler Temps:
Client Project Name: Renton Building 10-13 & 10-16 Phase II Investigation			
Client Project #:	Samplers: Stephanie Renando, Jeovani Huerta-Ruiz		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	VOCs (EPA 8260) Full List	SVOC's (EPA 8270)	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx (Soil=w/SGA)	Metals 200.8/7471B	Dissolved Metals 200.8/7471B		Notes/Comments
TRIP BLANKS	—	—	AQ	4	X								Hold 2 VOA's for HCID follow ups

Analysis Requested

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
*Field Filtered Metals List MTCA5 Arsenic, Cadmium, Chromium, Lead, Mercury 1=Hold pending HCID	Printed Name: Stephanie Renando	Printed Name: Brandon Fisk	Printed Name:	Printed Name:
	Company: Landau Associates	Company: ARI	Company:	Company:
	Date & Time: 9/12/17 @ 945	Date & Time: 9/12/17 1448	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

WORK ORDER

17I0116

Client: The Boeing Company	**Project Manager: Kelly Bottem**
Project: Renton Phase II Investigation	**Project Number: Renton Phase II Investigation**

Preservation Confirmation

Container ID	Container Type	pH
17I0116-01 A	Glass WM, Clear, 8 oz	
17I0116-01 B	Glass WM, Clear, 4 oz	
17I0116-01 C	Glass WM, Clear, 2 oz	
17I0116-01 D	VOA Vial, Clear, 40 mL, MeOH	
17I0116-01 E	VOA Vial, Clear, 40 mL, MeOH	
17I0116-01 F	VOA Vial, Clear, 40 mL, MeOH	
17I0116-01 G	VOA Vial, Clear, 40 mL, NaHSO4	
17I0116-01 H	VOA Vial, Clear, 40 mL, NaHSO4	
17I0116-02 A	Glass WM, Clear, 8 oz	
17I0116-02 B	Glass WM, Clear, 4 oz	
17I0116-02 C	Glass WM, Clear, 2 oz	
17I0116-02 D	VOA Vial, Clear, 40 mL, MeOH	
17I0116-02 E	VOA Vial, Clear, 40 mL, MeOH	
17I0116-02 F	VOA Vial, Clear, 40 mL, MeOH	
17I0116-02 G	VOA Vial, Clear, 40 mL, NaHSO4	
17I0116-02 H	VOA Vial, Clear, 40 mL, NaHSO4	
17I0116-03 A	Glass NM, Amber, 500 mL	
17I0116-03 B	Glass NM, Amber, 500 mL	
17I0116-03 C	Glass NM, Amber, 500 mL	
17I0116-03 D	Glass NM, Amber, 500 mL	
17I0116-03 E	Glass NM, Amber, 500 mL	
17I0116-03 F	Glass NM, Amber, 500 mL	
17I0116-03 G	Glass NM, Amber, 500 mL	
17I0116-03 H	HDPE NM, 500 mL, 1:1 HNO3 (FF)	<2 pa07
17I0116-03 I	VOA Vial, Amber, 40 mL, HCL	
17I0116-03 J	VOA Vial, Amber, 40 mL, HCL	
17I0116-03 K	VOA Vial, Amber, 40 mL, HCL	
17I0116-03 L	VOA Vial, Amber, 40 mL, HCL	
17I0116-03 M	VOA Vial, Amber, 40 mL, HCL	
17I0116-04 A	Glass WM, Clear, 8 oz	
17I0116-04 B	Glass WM, Clear, 4 oz	

SF — Reviewed By

9/12/17 — Date

WORK ORDER

17I0116

Client: The Boeing Company | **Project Manager:** Kelly Bottem

Project: Renton Phase II Investigation | **Project Number:** Renton Phase II Investigation

17I0116-04 C	Glass WM, Clear, 2 oz
17I0116-04 D	VOA Vial, Clear, 40 mL, MeOH
17I0116-04 E	VOA Vial, Clear, 40 mL, MeOH
17I0116-04 F	VOA Vial, Clear, 40 mL, MeOH
17I0116-04 G	VOA Vial, Clear, 40 mL, NaHSO4
17I0116-04 H	VOA Vial, Clear, 40 mL, NaHSO4
17I0116-05 A	Glass WM, Clear, 8 oz
17I0116-05 B	Glass WM, Clear, 4 oz
17I0116-05 C	Glass WM, Clear, 2 oz
17I0116-05 D	VOA Vial, Clear, 40 mL, MeOH
17I0116-05 E	VOA Vial, Clear, 40 mL, MeOH
17I0116-05 F	VOA Vial, Clear, 40 mL, MeOH
17I0116-05 G	VOA Vial, Clear, 40 mL, NaHSO4
17I0116-05 H	VOA Vial, Clear, 40 mL, NaHSO4
17I0116-06 A	Glass WM, Clear, 8 oz
17I0116-06 B	Glass WM, Clear, 4 oz
17I0116-06 C	Glass WM, Clear, 2 oz
17I0116-06 D	VOA Vial, Clear, 40 mL, MeOH
17I0116-06 E	VOA Vial, Clear, 40 mL, MeOH
17I0116-06 F	VOA Vial, Clear, 40 mL, MeOH
17I0116-06 G	VOA Vial, Clear, 40 mL, NaHSO4
17I0116-06 H	VOA Vial, Clear, 40 mL, NaHSO4
17I0116-07 A	Glass NM, Amber, 500 mL
17I0116-07 B	Glass NM, Amber, 500 mL
17I0116-07 C	Glass NM, Amber, 500 mL
17I0116-07 D	Glass NM, Amber, 500 mL
17I0116-07 E	Glass NM, Amber, 500 mL
17I0116-07 F	Glass NM, Amber, 500 mL
17I0116-07 G	Glass NM, Amber, 500 mL
17I0116-07 H	HDPE NM, 500 mL, 1:1 HNO3 (FF) <2 pass
17I0116-07 I	VOA Vial, Amber, 40 mL, HCL
17I0116-07 J	VOA Vial, Amber, 40 mL, HCL
17I0116-07 K	VOA Vial, Amber, 40 mL, HCL
17I0116-07 L	VOA Vial, Amber, 40 mL, HCL

SF — Reviewed By

9/12/17 — Date

WORK ORDER

17I0116

Client: The Boeing Company	**Project Manager: Kelly Bottem**
Project: Renton Phase II Investigation	**Project Number: Renton Phase II Investigation**

17I0116-07 M	VOA Vial, Amber, 40 mL, HCL
17I0116-08 A	Glass WM, Clear, 8 oz
17I0116-08 B	Glass WM, Clear, 4 oz
17I0116-08 C	Glass WM, Clear, 2 oz
17I0116-08 D	VOA Vial, Clear, 40 mL, MeOH
17I0116-08 E	VOA Vial, Clear, 40 mL, MeOH
17I0116-08 F	VOA Vial, Clear, 40 mL, MeOH
17I0116-08 G	VOA Vial, Clear, 40 mL, NaHSO4
17I0116-08 H	VOA Vial, Clear, 40 mL, NaHSO4
17I0116-09 A	Glass WM, Clear, 8 oz
17I0116-09 B	Glass WM, Clear, 4 oz
17I0116-09 C	Glass WM, Clear, 2 oz
17I0116-09 D	VOA Vial, Clear, 40 mL, MeOH
17I0116-09 E	VOA Vial, Clear, 40 mL, MeOH
17I0116-09 F	VOA Vial, Clear, 40 mL, MeOH
17I0116-09 G	VOA Vial, Clear, 40 mL, NaHSO4
17I0116-09 H	VOA Vial, Clear, 40 mL, NaHSO4
17I0116-10 A	Glass WM, Clear, 8 oz
17I0116-10 B	Glass WM, Clear, 4 oz
17I0116-10 C	Glass WM, Clear, 2 oz
17I0116-10 D	VOA Vial, Clear, 40 mL, MeOH
17I0116-10 E	VOA Vial, Clear, 40 mL, MeOH
17I0116-10 F	VOA Vial, Clear, 40 mL, MeOH
17I0116-10 G	VOA Vial, Clear, 40 mL, NaHSO4
17I0116-10 H	VOA Vial, Clear, 40 mL, NaHSO4
17I0116-11 A	VOA Vial, Clear, 40 mL, HCL
17I0116-11 B	VOA Vial, Clear, 40 mL, HCL
17I0116-11 C	VOA Vial, Clear, 40 mL, HCL
17I0116-11 D	VOA Vial, Clear, 40 mL, HCL

SF
Preservation Confirmed By

9/12/17
Date

Reviewed By

Date

Analysis added by KFH 9/14/17 9/27/17

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 17I0116	Turn-around Requested: Standard	Page: 1 of 2	
ARI Client Company: Boeing	Phone: (425) 234-4921	Date: 9/11/17	Ice Present?
Client Contact: Pete Hudelson, Kathryn Hartly (LAI)		No. of Coolers:	Cooler Temps:
Client Project Name: Renton Buildings 10-13 & 10-16 Phase II Investigation			
Client Project #:	Samplers: Stephanie Renando, Jeovani Huerta-Avila		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	VOCs (8260B) full list	SVOCs (8270C)	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx (soil=w/SGCl)	Metals 200.8/7471B for TAL	Dissolved metals 200.8/7471B	PCBs (8082A)	Notes/Comments
LAI-B1e-S(1-3)	9/11/17	1000	Soil	8	X	X	X			X		X KFH 9/27/17	
LAI-B1e-S(7-9)	9/11/17	1040	Soil	8	X	X	X			X			
LAI-B1e-GW	9/11/17	1051	water	12	X	X	X				X		
LAI-B1-S(1-3)	9/12/17	1300	Soil	8	X	X	X			X			~~Archive~~ STR 9/12/17
LAI-B1-S(9-11)	9/12/17	1315	Soil	8									Archive
LAI-B1-S(11-13)	9/11/17	1400	Soil	8	X	X	X	X KFH 9/14/17		X			
LAI-B2-GW	9/11/17	1436	water	12	X	X	X				X		
LAI-B2-S(1-3)	9/12/17	1450	Soil	8	X	X	X			X			
LAI-B2-S(10-12)	9/12/17	1500	Soil	8	X	X	X			X			
LAI-B3-S(3.75-5)	9/11/17	1540	Soil	8	X	X	X			X			

Comments/Special Instructions
#= field filtered metals list MTCA 5 Arsenic, Cadmium, Chromium, Lead and mercury.
1= Hold pending HCID

	Relinquished by:	Received by:	Relinquished by:	Received by:
(Signature)				
Printed Name:	Stephanie Renando	Brandon Fisk		
Company:	Landau Associates	ARI		
Date & Time:	9/12/17 @ 945	9/12/17 1448		

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analysis added by KFH 9/14/17 rev 9/15/17

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 17I0116	Turn-around Requested: Standard	Page: 2 of 2	
ARI Client Company: Boeing/LAI	Phone: (425) 234-4921	Date: 9/11/17	Ice Present?
Client Contact: Pete Hudelson, Kathryn Hartley (LAI)		No. of Coolers:	Cooler Temps:
Client Project Name: Renton Building 10-13 & 10-16 Phase II Investigation			
Client Project #:	Samplers: Stephanie Renando, Jeevani Hurtado		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
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Sample ID	Date	Time	Matrix	No. Containers	VOCs (EPA 8260) Full List	SVOC's (EPA 8270)	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx (soil=w/SG)	Metals 200.8/7471B	Dissolved Metals 200.8/7470		Notes/Comments
TRIP BLANKS	—	—	AQ	4	X		KFH 9/14/17	② 9/15/17					① Hold 2 VOA's for HCID follow up ② run trip blank for Gx not HCID

Comments/Special Instructions
*Field Filtered Metals List MTCA5 Arsenic, Cadmium, Chromium, Lead, Mercury
1=Hold pending HCID

	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Printed Name:	Stephanie Renando	Brandon Fisk		
Company:	Landau Associates	ARI		
Date & Time:	9/12/17 @ 945	9/12/17 1448		

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

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Analysis added by KFH 9/11/17, 9/27/17 10/5/17

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 17I0116	Turn-around Requested: Standard
ARI Client Company: Boeing	Phone: (425) 234-4921
Client Contact: Pete Hudelson, Kathryn Hartly (LAI)	
Client Project Name: Renton Buildings 10-13 & 10-16 Phase II Investigation	
Client Project #:	Samplers: Stephanie Renando, Jeovani Huerta-Avila

Page: 1 of 2

Date: 9/11/17 Ice Present?

No. of Coolers: Cooler Temps:

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	VOCs (8260C) Full list	SVOCs (8270D)	NWTPH-HCID	NWTPH-Gx	NWTPH-Dx (soil=w/SG clean)	Metals 200.8/7471B for TAL	Dissolved metals 200.8/7470B	PCBs (8082)	Notes/Comments
LAI-B16-S(1-3)	9/11/17	1000	Soil	8	X	X	X			X		X KFH 9/27/17	
LAI-B16-S(7-9)	9/11/17	1040	Soil	8	X	X	X			X		X KFH 10/5/17	
LAI-B16-GW	9/11/17	1051	water	12	X	X	X				X		
LAI-B1-S(1-3)	9/11/17	1300	Soil	8	X	X	X			X			~~Archive~~ SHR 9/12/17
LAI-B1-S(9-11)	9/11/17	1315	Soil	8									Archive.
LAI-B1-S(11-13)	9/11/17	1400	Soil	8	X	X	X	X KFH 9/11/17		X			
LAI-B2-GW	9/11/17	1436	water	12	X	X	X				X		
LAI-B2-S(1-3)	9/11/17	1450	Soil	8	X	X	X			X			
LAI-B2-S(10-12)	9/11/17	1500	Soil	8	X	X	X			X			
LAI-B3-S(3.75-5)	9/11/17	1540	Soil	8	X	X	X			X			

Comments/Special Instructions
#= field filtered
Metals list MTCA 5 Arsenic, Cadmium, Chromium, Lead and mercury.
1= Hold pending HCID

	Relinquished by:	Received by:	Relinquished by:	Received by:
(Signature)				
Printed Name:	Stephanie Renando	Brandon Fisk		
Company:	Landau Associates	ARI		
Date & Time:	9/12/17 @ 945	9/12/17 1448		

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LAI-B6-S(1-3)	17I0116-01	Solid	11-Sep-2017 10:00	12-Sep-2017 14:48
LAI-B6-S(7-9)	17I0116-02	Solid	11-Sep-2017 10:40	12-Sep-2017 14:48
LAI-B6-GW	17I0116-03	Water	11-Sep-2017 10:51	12-Sep-2017 14:48
LAI-B1-S(1-3)	17I0116-04	Solid	11-Sep-2017 13:00	12-Sep-2017 14:48
LAI-B1-S(9-11)	17I0116-05	Solid	11-Sep-2017 13:15	12-Sep-2017 14:48
LAI-B1-S(11-13)	17I0116-06	Solid	11-Sep-2017 14:00	12-Sep-2017 14:48
LAI-B2-GW	17I0116-07	Water	11-Sep-2017 14:36	12-Sep-2017 14:48
LAI-B2-S(1-3)	17I0116-08	Solid	11-Sep-2017 14:50	12-Sep-2017 14:48
LAI-B2-S(10-12)	17I0116-09	Solid	11-Sep-2017 15:00	12-Sep-2017 14:48
LAI-B3-S(3.75-5)	17I0116-10	Solid	11-Sep-2017 15:40	12-Sep-2017 14:48
Trip Blank	17I0116-11	Water	11-Sep-2017 00:00	12-Sep-2017 14:48

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Case Narrative

Volatiles - EPA Method SW8260C

The sample(s) were run within the recommended holding times with the exception of one of the re-analyses for sample LAI-B1-S (11-13) due to an "E" qualified value.

Initial and continuing calibrations were within method requirements with the exception of all associated "Q" flagged analytes which are out of control low in association with BFI0686 Batch. All associated samples that contain analyte have been flagged with a "Q" qualifier.

Initial and continuing calibrations were within method requirements with the exception of all associated "Q" flagged analytes which are out of control low in association with BFI0563 Batch and out of control high for carbon disulfide. All associated samples that contain analyte have been flagged with a "Q" qualifier.

Initial and continuing calibrations were within method requirements with the exception of all associated "Q" flagged analytes which are out of control high in association with BFI0318 Batch and out of control low for 1,1,2,2-Tetrachloroethane. All associated samples that contain analyte have been flagged with a "Q" qualifier.

Initial and continuing calibrations were within method requirements with the exception of all associated "Q" flagged analytes which are out of control low in association with BFI0274 Batch and out of control high for trichlorofluoromethane chloroethane and 1,1-Dichloroethene. All associated samples that contain analyte have been flagged with a "Q" qualifier.

Initial and continuing calibrations were within method requirements with the exception of all associated "Q" flagged analytes which are out of control high in association with BFI0504 Batch and out of control low for trans-1,4-Dichloro 2-Butene. All associated samples that contain analyte have been flagged with a "Q" qualifier.

Initial and continuing calibrations were within method requirements with the exception of all associated "Q" flagged analytes which are out of control low in association with BFI0625 Batch and out of control high for trichlorofluoromethane. All associated samples that contain analyte have been flagged with a "Q" qualifier.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits with the exception of surrogates flagged on the associated forms. The samples were re-analyzed due to high surrogate recovery and both sets of data have been reported.

The method blank(s) in association with batch BFI0686 contained carbon disulfide. All associated samples that contain analyte have been flagged with a "B" qualifier.

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

The LCS/LCSD percent recoveries and RPD were within control limits.

The Matrix Spike/Matrix Spike duplicate recoveries and RPD were within limits with the exception of analytes flagged on the associated forms.

Semivolatiles - EPA Method SW8270D

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements with the exception of all associated "Q" flagged analytes which are out of control high in association with batches BFI0267 and BFI0204 and pentachlorophenol is out of control low in association with batch BFI0267.
All associated samples that contain analyte have been flagged with a "Q" qualifier.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits with the exception of analytes flagged on the associated forms.

The Matrix Spike/Matrix Spike duplicate recoveries and RPD were within limits with the exception of analytes flagged on the associated forms.

Hydrocarbon Identification (HCID) - WA-Ecology Method NW-HCID

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

Gasoline by NWTPH-g (GC/MS)

The sample(s) were run within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.

Total and Dissolved Metals

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.

The Matrix Spike/Matrix Spike duplicate RPDs were within limits with the exception of analytes flagged on the associated forms.

PCB Aroclors - EPA Method SW8082A

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) contained aroclor 1016 and aroclor 1260 contamination from the spike syringe. Aroclor 1016 or aroclor 1260 are non-detect in the associated sample.

The LCS percent recoveries were within control limits.

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(1-3)

17I0116-01 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 10:00
Analyzed: 21-Sep-2017 13:13

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate)
Preparation Batch: BFI0504 | Sample Size: 4.97 g (wet) | Dry Weight:4.54 g
Prepared: 21-Sep-2017 | Final Volume: 5 mL | % Solids: 91.41

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	1.10	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	1.10	ND	ug/kg	U
Bromomethane	74-83-9	1	1.10	ND	ug/kg	U
Chloroethane	75-00-3	1	1.10	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.10	ND	ug/kg	U
Acrolein	107-02-8	1	5.50	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	2.20	ND	ug/kg	U
Acetone	67-64-1	1	5.50	**25.3**	ug/kg	
1,1-Dichloroethene	75-35-4	1	1.10	ND	ug/kg	U
Bromoethane	74-96-4	1	2.20	ND	ug/kg	U
Iodomethane	74-88-4	1	1.10	ND	ug/kg	U
Methylene Chloride	75-09-2	1	2.20	ND	ug/kg	U
Acrylonitrile	107-13-1	1	5.50	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.10	ND	ug/kg	U
trans-1,2-Dichloroethene	156-60-5	1	1.10	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	5.50	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	1.10	ND	ug/kg	U
2-Butanone	78-93-3	1	5.50	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	1.10	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	1.10	ND	ug/kg	U
Chloroform	67-66-3	1	1.10	ND	ug/kg	U
Bromochloromethane	74-97-5	1	1.10	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.10	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	1.10	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	1.10	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	1.10	ND	ug/kg	U
Benzene	71-43-2	1	1.10	ND	ug/kg	U
Trichloroethene	79-01-6	1	1.10	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	1.10	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	1.10	ND	ug/kg	U
Dibromomethane	74-95-3	1	1.10	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	5.50	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	5.50	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	1.10	ND	ug/kg	U
Toluene	108-88-3	1	1.10	ND	ug/kg	U

The Boeing Company	Project: Renton Phase II Investigation	
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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(1-3)

17I0116-01 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 10:00
Analyzed: 21-Sep-2017 13:13

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	1.10	ND	ug/kg	U
2-Hexanone	591-78-6	1	5.50	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	1.10	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	1.10	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	1.10	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	1.10	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	1.10	ND	ug/kg	U
Chlorobenzene	108-90-7	1	1.10	ND	ug/kg	U
Ethylbenzene	100-41-4	1	1.10	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	1.10	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	2.20	ND	ug/kg	U
o-Xylene	95-47-6	1	1.10	ND	ug/kg	U
Xylenes, total	1330-20-7	1	2.20	ND	ug/kg	U
Styrene	100-42-5	1	1.10	ND	ug/kg	U
Bromoform	75-25-2	1	1.10	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	1.10	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.20	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	5.50	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	1.10	ND	ug/kg	U
Bromobenzene	108-86-1	1	1.10	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	1.10	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	1.10	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	1.10	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	1.10	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	1.10	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	1.10	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	1.10	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	1.10	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	1.10	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	1.10	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	1.10	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.10	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	5.50	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	5.50	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	5.50	ND	ug/kg	U
Naphthalene	91-20-3	1	5.50	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	5.50	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	1.10	ND	ug/kg	U

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(1-3)

17I0116-01 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 10:00
Analyzed: 21-Sep-2017 13:13

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	1.10	ND	ug/kg	U
2-Pentanone	107-87-9	1	5.50	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4			*80-149 %*	*136*	*%*	
Surrogate: Toluene-d8			*77-120 %*	*101*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*98.1*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*104*	*%*	

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(1-3)

17I0116-01 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 10:00
Analyzed: 21-Sep-2017 15:34

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFI0267	Sample Size: 9.07 g (wet)	Dry Weight:8.29 g
	Prepared: 14-Sep-2017	Final Volume: 0.5 mL	% Solids: 91.41
Sample Cleanup:	Cleanup Method: GPC		
	Cleanup Batch: CFI0096	Initial Volume: 0.5 mL	
	Cleaned: 19-Sep-2017	Final Volume: 0.5 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	61	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	1	61	ND	ug/kg	U
2-Chlorophenol	95-57-8	1	61	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	61	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	61	ND	ug/kg	U
Benzyl Alcohol	100-51-6	1	299	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	61	ND	ug/kg	U
2-Methylphenol	95-48-7	1	61	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	61	ND	ug/kg	U
4-Methylphenol	106-44-5	1	61	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	1	61	ND	ug/kg	U
Hexachloroethane	67-72-1	1	61	ND	ug/kg	U
Nitrobenzene	98-95-3	1	61	ND	ug/kg	U
Isophorone	78-59-1	1	61	ND	ug/kg	U
2-Nitrophenol	88-75-5	1	61	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	1	61	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	1	61	ND	ug/kg	U
Benzoic acid	65-85-0	1	606	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	1	299	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	61	ND	ug/kg	U
Naphthalene	91-20-3	1	61	ND	ug/kg	U
4-Chloroaniline	106-47-8	1	299	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	1	61	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	1	299	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	1	61	ND	ug/kg	U
Hexachlorocyclopentadiene	77-47-4	1	299	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	1	299	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	1	299	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	1	61	ND	ug/kg	U
2-Nitroaniline	88-74-4	1	299	ND	ug/kg	U
Dimethylphthalate	131-11-3	1	61	ND	ug/kg	U
Acenaphthylene	208-96-8	1	61	ND	ug/kg	U

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(1-3)

17I0116-01 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 10:00
Analyzed: 21-Sep-2017 15:34

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,6-Dinitrotoluene	606-20-2	1	299	ND	ug/kg	U
3-Nitroaniline	99-09-2	1	299	ND	ug/kg	U
Acenaphthene	83-32-9	1	61	ND	ug/kg	U
2,4-Dinitrophenol	51-28-5	1	606	ND	ug/kg	U
Dibenzofuran	132-64-9	1	61	ND	ug/kg	U
4-Nitrophenol	100-02-7	1	299	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	1	299	ND	ug/kg	U
Fluorene	86-73-7	1	61	ND	ug/kg	U
Diethyl phthalate	84-66-2	1	61	ND	ug/kg	U
4-Chlorophenylphenyl ether	7005-72-3	1	61	ND	ug/kg	U
4-Nitroaniline	100-01-6	1	299	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	1	606	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	1	61	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	1	61	ND	ug/kg	U
Hexachlorobenzene	118-74-1	1	61	ND	ug/kg	U
Pentachlorophenol	87-86-5	1	299	ND	ug/kg	U
Phenanthrene	85-01-8	1	61	ND	ug/kg	U
Anthracene	120-12-7	1	61	ND	ug/kg	U
Carbazole	86-74-8	1	61	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	1	61	ND	ug/kg	U
Fluoranthene	206-44-0	1	61	**69**	ug/kg	
Pyrene	129-00-0	1	61	**64**	ug/kg	
Butylbenzylphthalate	85-68-7	1	61	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	1	61	ND	ug/kg	U
3,3'-Dichlorobenzidine	91-94-1	1	299	ND	ug/kg	U
Chrysene	218-01-9	1	61	ND	ug/kg	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	61	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	1	61	ND	ug/kg	U
Benzo(a)pyrene	50-32-8	1	61	ND	ug/kg	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	61	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	1	61	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	61	ND	ug/kg	U
Benzofluoranthenes, Total		1	61	**107**	ug/kg	
1-Methylnaphthalene	90-12-0	1	61	ND	ug/kg	U
Surrogate: 2-Fluorophenol			*22-120 %*	*63.5*	*%*	
Surrogate: Phenol-d5			*27-120 %*	*68.4*	*%*	
Surrogate: 2-Chlorophenol-d4			*36-120 %*	*72.7*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(1-3)

17I0116-01 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 10:00
Analyzed: 21-Sep-2017 15:34

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichlorobenzene-d4		*38-120 %*	*75.1*	*%*	
Surrogate: Nitrobenzene-d5		*32-120 %*	*70.1*	*%*	
Surrogate: 2-Fluorobiphenyl		*39-120 %*	*79.8*	*%*	
Surrogate: 2,4,6-Tribromophenol		*31-131 %*	*84.9*	*%*	
Surrogate: p-Terphenyl-d14		*31-130 %*	*86.2*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(1-3)

17I0116-01 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-HCID
Instrument: FID3

Sampled: 09/11/2017 10:00
Analyzed: 13-Sep-2017 13:33

Sample Preparation: Preparation Method: EPA 3580A (Vortex)
Preparation Batch: BFI0227
Prepared: 13-Sep-2017
Sample Size: 10 g (wet)
Final Volume: 5 mL
Dry Weight:9.14 g
% Solids: 91.41

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)		1	11	ND	mg/kg	U
Diesel Range Organics (C12-C24)		1	27	ND	mg/kg	U
Motor Oil Range Organics (C24-C38)		1	55	ND	mg/kg	U
Surrogate: o-Terphenyl			*50-150 %*	*118*	*%*	
Surrogate: n-Triacontane			*50-150 %*	*108*	*%*	

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(1-3)

17I0116-01 (Solid)

Aroclor PCB

Method: EPA 8082A
Instrument: ECD7

Sampled: 09/11/2017 10:00
Analyzed: 28-Sep-2017 07:58

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFI0660	Sample Size: 6.08 g (wet)	Dry Weight:5.56 g
	Prepared: 27-Sep-2017	Final Volume: 5 mL	% Solids: 91.41
Sample Cleanup:	Cleanup Method: Sulfuric Acid		
	Cleanup Batch: CFI0128	Initial Volume: 5 mL	
	Cleaned: 27-Sep-2017	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		
	Cleanup Batch: CFI0129	Initial Volume: 5 mL	
	Cleaned: 27-Sep-2017	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	7.2	18.0	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	7.2	18.0	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	7.2	18.0	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	7.2	18.0	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	7.2	18.0	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	7.2	18.0	**5470**	ug/kg	E
Aroclor 1260	11096-82-5	1	8.3	18.0	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	8.3	18.0	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	8.3	18.0	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*108*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*97.6*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*101*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*92.8*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(1-3)

17I0116-01 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8
Instrument: ICPMS2

Sampled: 09/11/2017 10:00
Analyzed: 21-Sep-2017 19:06

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017

Sample Size: 1.027 g (wet)
Final Volume: 50 mL

Dry Weight:0.94 g
% Solids: 91.27

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chromium	7440-47-3	20	0.53	**30.4**	mg/kg	
Lead	7439-92-1	20	0.11	**15.2**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(1-3)

17I0116-01 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED
Instrument: ICPMS2

Sampled: 09/11/2017 10:00
Analyzed: 21-Sep-2017 19:06

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017
Sample Size: 1.027 g (wet)
Final Volume: 50 mL
Dry Weight:0.94 g
% Solids: 91.27

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.21	**3.77**	mg/kg	
Cadmium	7440-43-9	20	0.11	**0.13**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(1-3)

17I0116-01 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B
Instrument: CETAC

Sampled: 09/11/2017 10:00
Analyzed: 14-Sep-2017 14:32

Sample Preparation: Preparation Method: SMM EPA 7471B
Preparation Batch: BFI0238
Prepared: 13-Sep-2017
Sample Size: 0.232 g (wet)
Final Volume: 50 mL
Dry Weight:0.21 g
% Solids: 91.27

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.0236	**0.0708**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(1-3)

17I0116-01RE1 (Solid)

Aroclor PCB

Method: EPA 8082A
Instrument: ECD7

Sampled: 09/11/2017 10:00
Analyzed: 28-Sep-2017 09:03

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFI0660	Sample Size: 6.08 g (wet)	Dry Weight:5.56 g
	Prepared: 27-Sep-2017	Final Volume: 5 mL	% Solids: 91.41
Sample Cleanup:	Cleanup Method: Sulfuric Acid		
	Cleanup Batch: CFI0128	Initial Volume: 5 mL	
	Cleaned: 27-Sep-2017	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		
	Cleanup Batch: CFI0129	Initial Volume: 5 mL	
	Cleaned: 27-Sep-2017	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	20	144	360	ND	ug/kg	U
Aroclor 1221	11104-28-2	20	144	360	ND	ug/kg	U
Aroclor 1232	11141-16-5	20	144	360	ND	ug/kg	U
Aroclor 1242	53469-21-9	20	144	360	ND	ug/kg	U
Aroclor 1248	12672-29-6	20	144	360	ND	ug/kg	U
Aroclor 1254	11097-69-1	20	144	360	**6250**	ug/kg	D
Aroclor 1260	11096-82-5	20	167	360	ND	ug/kg	U
Aroclor 1262	37324-23-5	20	167	360	ND	ug/kg	U
Aroclor 1268	11100-14-4	20	167	360	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*109*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*85.5*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*123*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*87.6*	*%*	

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(7-9)

17I0116-02 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 10:40
Analyzed: 21-Sep-2017 13:35

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate)
Preparation Batch: BFI0504 | Sample Size: 3.76 g (wet) | Dry Weight:3.37 g
Prepared: 21-Sep-2017 | Final Volume: 5 mL | % Solids: 89.72

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	1.48	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	1.48	ND	ug/kg	U
Bromomethane	74-83-9	1	1.48	ND	ug/kg	U
Chloroethane	75-00-3	1	1.48	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.48	ND	ug/kg	U
Acrolein	107-02-8	1	7.41	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	2.96	ND	ug/kg	U
Acetone	67-64-1	1	7.41	**19.2**	ug/kg	
1,1-Dichloroethene	75-35-4	1	1.48	ND	ug/kg	U
Bromoethane	74-96-4	1	2.96	ND	ug/kg	U
Iodomethane	74-88-4	1	1.48	ND	ug/kg	U
Methylene Chloride	75-09-2	1	2.96	ND	ug/kg	U
Acrylonitrile	107-13-1	1	7.41	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.48	ND	ug/kg	U
trans-1,2-Dichloroethene	156-60-5	1	1.48	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	7.41	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	1.48	ND	ug/kg	U
2-Butanone	78-93-3	1	7.41	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	1.48	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	1.48	ND	ug/kg	U
Chloroform	67-66-3	1	1.48	ND	ug/kg	U
Bromochloromethane	74-97-5	1	1.48	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.48	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	1.48	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	1.48	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	1.48	ND	ug/kg	U
Benzene	71-43-2	1	1.48	ND	ug/kg	U
Trichloroethene	79-01-6	1	1.48	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	1.48	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	1.48	ND	ug/kg	U
Dibromomethane	74-95-3	1	1.48	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	7.41	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	7.41	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	1.48	ND	ug/kg	U
Toluene	108-88-3	1	1.48	ND	ug/kg	U

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(7-9)

17I0116-02 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 10:40
Analyzed: 21-Sep-2017 13:35

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	1.48	ND	ug/kg	U
2-Hexanone	591-78-6	1	7.41	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	1.48	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	1.48	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	1.48	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	1.48	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	1.48	ND	ug/kg	U
Chlorobenzene	108-90-7	1	1.48	ND	ug/kg	U
Ethylbenzene	100-41-4	1	1.48	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	1.48	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	2.96	ND	ug/kg	U
o-Xylene	95-47-6	1	1.48	ND	ug/kg	U
Xylenes, total	1330-20-7	1	2.96	ND	ug/kg	U
Styrene	100-42-5	1	1.48	ND	ug/kg	U
Bromoform	75-25-2	1	1.48	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	1.48	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.96	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	7.41	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	1.48	ND	ug/kg	U
Bromobenzene	108-86-1	1	1.48	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	1.48	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	1.48	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	1.48	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	1.48	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	1.48	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	1.48	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	1.48	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	1.48	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	1.48	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	1.48	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	1.48	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.48	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	7.41	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	7.41	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	7.41	ND	ug/kg	U
Naphthalene	91-20-3	1	7.41	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	7.41	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	1.48	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(7-9)

17I0116-02 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 10:40
Analyzed: 21-Sep-2017 13:35

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	1.48	ND	ug/kg	U
2-Pentanone	107-87-9	1	7.41	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4			*80-149 %*	*130*	*%*	
Surrogate: Toluene-d8			*77-120 %*	*102*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*96.9*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*103*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(7-9)

17I0116-02 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 10:40
Analyzed: 21-Sep-2017 16:07

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFI0267	Sample Size: 9.02 g (wet)	Dry Weight:8.09 g
	Prepared: 14-Sep-2017	Final Volume: 0.5 mL	% Solids: 89.72
Sample Cleanup:	Cleanup Method: GPC		
	Cleanup Batch: CFI0096	Initial Volume: 0.5 mL	
	Cleaned: 19-Sep-2017	Final Volume: 0.5 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	62	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	1	62	ND	ug/kg	U
2-Chlorophenol	95-57-8	1	62	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	62	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	62	ND	ug/kg	U
Benzyl Alcohol	100-51-6	1	306	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	62	ND	ug/kg	U
2-Methylphenol	95-48-7	1	62	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	62	ND	ug/kg	U
4-Methylphenol	106-44-5	1	62	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	1	62	ND	ug/kg	U
Hexachloroethane	67-72-1	1	62	ND	ug/kg	U
Nitrobenzene	98-95-3	1	62	ND	ug/kg	U
Isophorone	78-59-1	1	62	ND	ug/kg	U
2-Nitrophenol	88-75-5	1	62	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	1	62	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	1	62	ND	ug/kg	U
Benzoic acid	65-85-0	1	621	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	1	306	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	62	ND	ug/kg	U
Naphthalene	91-20-3	1	62	ND	ug/kg	U
4-Chloroaniline	106-47-8	1	306	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	1	62	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	1	306	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	1	62	ND	ug/kg	U
Hexachlorocyclopentadiene	77-47-4	1	306	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	1	306	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	1	306	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	1	62	ND	ug/kg	U
2-Nitroaniline	88-74-4	1	306	ND	ug/kg	U
Dimethylphthalate	131-11-3	1	62	ND	ug/kg	U
Acenaphthylene	208-96-8	1	62	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(7-9)

17I0116-02 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 10:40
Analyzed: 21-Sep-2017 16:07

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,6-Dinitrotoluene	606-20-2	1	306	ND	ug/kg	U
3-Nitroaniline	99-09-2	1	306	ND	ug/kg	U
Acenaphthene	83-32-9	1	62	ND	ug/kg	U
2,4-Dinitrophenol	51-28-5	1	621	ND	ug/kg	U
Dibenzofuran	132-64-9	1	62	ND	ug/kg	U
4-Nitrophenol	100-02-7	1	306	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	1	306	ND	ug/kg	U
Fluorene	86-73-7	1	62	ND	ug/kg	U
Diethyl phthalate	84-66-2	1	62	ND	ug/kg	U
4-Chlorophenylphenyl ether	7005-72-3	1	62	ND	ug/kg	U
4-Nitroaniline	100-01-6	1	306	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	1	621	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	1	62	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	1	62	ND	ug/kg	U
Hexachlorobenzene	118-74-1	1	62	ND	ug/kg	U
Pentachlorophenol	87-86-5	1	306	ND	ug/kg	U
Phenanthrene	85-01-8	1	62	ND	ug/kg	U
Anthracene	120-12-7	1	62	ND	ug/kg	U
Carbazole	86-74-8	1	62	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	1	62	ND	ug/kg	U
Fluoranthene	206-44-0	1	62	ND	ug/kg	U
Pyrene	129-00-0	1	62	ND	ug/kg	U
Butylbenzylphthalate	85-68-7	1	62	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	1	62	ND	ug/kg	U
3,3'-Dichlorobenzidine	91-94-1	1	306	ND	ug/kg	U
Chrysene	218-01-9	1	62	ND	ug/kg	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	62	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	1	62	ND	ug/kg	U
Benzo(a)pyrene	50-32-8	1	62	ND	ug/kg	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	62	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	1	62	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	62	ND	ug/kg	U
Benzofluoranthenes, Total		1	62	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	1	62	ND	ug/kg	U
Surrogate: 2-Fluorophenol			*22-120 %*	*58.2*	*%*	
Surrogate: Phenol-d5			*27-120 %*	*66.8*	*%*	
Surrogate: 2-Chlorophenol-d4			*36-120 %*	*69.8*	*%*	

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(7-9)

17I0116-02 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 10:40
Analyzed: 21-Sep-2017 16:07

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichlorobenzene-d4		*38-120 %*	*75.4*	*%*	
Surrogate: Nitrobenzene-d5		*32-120 %*	*67.5*	*%*	
Surrogate: 2-Fluorobiphenyl		*39-120 %*	*76.6*	*%*	
Surrogate: 2,4,6-Tribromophenol		*31-131 %*	*57.1*	*%*	
Surrogate: p-Terphenyl-d14		*31-130 %*	*92.9*	*%*	

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(7-9)

17I0116-02 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-HCID
Instrument: FID3

Sampled: 09/11/2017 10:40
Analyzed: 13-Sep-2017 13:53

Sample Preparation: Preparation Method: EPA 3580A (Vortex)
Preparation Batch: BFI0227
Prepared: 13-Sep-2017
Sample Size: 10 g (wet)
Final Volume: 5 mL
Dry Weight:8.97 g
% Solids: 89.72

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)		1	11	ND	mg/kg	U
Diesel Range Organics (C12-C24)		1	28	ND	mg/kg	U
Motor Oil Range Organics (C24-C38)		1	56	ND	mg/kg	U
Surrogate: o-Terphenyl			*50-150 %*	*121*	*%*	
Surrogate: n-Triacontane			*50-150 %*	*112*	*%*	

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(7-9)

17I0116-02 (Solid)

Aroclor PCB

Method: EPA 8082A
Instrument: ECD7

Sampled: 09/11/2017 10:40
Analyzed: 06-Oct-2017 19:17

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFJ0137	Sample Size: 6.09 g (wet)	Dry Weight:5.46 g
	Prepared: 05-Oct-2017	Final Volume: 5 mL	% Solids: 89.72
Sample Cleanup:	Cleanup Method: Silica Gel		
	Cleanup Batch: CFJ0038	Initial Volume: 5 mL	
	Cleaned: 06-Oct-2017	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfuric Acid		
	Cleanup Batch: CFJ0036	Initial Volume: 5 mL	
	Cleaned: 06-Oct-2017	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		
	Cleanup Batch: CFJ0037	Initial Volume: 5 mL	
	Cleaned: 06-Oct-2017	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	7.3	18.3	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	7.3	18.3	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	7.3	18.3	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	7.3	18.3	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	7.3	18.3	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	7.3	18.3	**122**	ug/kg	
Aroclor 1260	11096-82-5	1	8.5	18.3	**32.3**	ug/kg	
Aroclor 1262	37324-23-5	1	8.5	18.3	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	8.5	18.3	ND	ug/kg	U
Surrogate: Decachlorobiphenyl				*40-133 %*	*83.0*	*%*	
Surrogate: Tetrachlorometaxylene				*53-120 %*	*72.8*	*%*	
Surrogate: Decachlorobiphenyl [2C]				*40-133 %*	*76.3*	*%*	
Surrogate: Tetrachlorometaxylene [2C]				*53-120 %*	*69.1*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(7-9)

17I0116-02 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8
Instrument: ICPMS2

Sampled: 09/11/2017 10:40
Analyzed: 21-Sep-2017 19:11

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017
Sample Size: 1.032 g (wet)
Final Volume: 50 mL
Dry Weight:0.92 g
% Solids: 89.05

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chromium	7440-47-3	20	0.54	**31.4**	mg/kg	
Lead	7439-92-1	20	0.11	**11.8**	mg/kg	

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(7-9)

17I0116-02 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED
Instrument: ICPMS2

Sampled: 09/11/2017 10:40
Analyzed: 21-Sep-2017 19:11

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017
Sample Size: 1.032 g (wet)
Final Volume: 50 mL
Dry Weight:0.92 g
% Solids: 89.05

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.22	**8.87**	mg/kg	
Cadmium	7440-43-9	20	0.11	**0.14**	mg/kg	

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-S(7-9)

17I0116-02 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B
Instrument: CETAC

Sampled: 09/11/2017 10:40
Analyzed: 14-Sep-2017 14:38

Sample Preparation: Preparation Method: SMM EPA 7471B
Preparation Batch: BFI0238
Prepared: 13-Sep-2017
Sample Size: 0.251 g (wet)
Final Volume: 50 mL
Dry Weight:0.22 g
% Solids: 89.05

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.0224	ND	mg/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-GW

17I0116-03 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 09/11/2017 10:51
Analyzed: 14-Sep-2017 17:55

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFI0274 Sample Size: 10 mL
Prepared: 14-Sep-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	**7.74**	ug/L	
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	**0.67**	ug/L	
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-GW

17I0116-03 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 09/11/2017 10:51
Analyzed: 14-Sep-2017 17:55

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	ND	ug/L	U

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-GW

17I0116-03 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 09/11/2017 10:51
Analyzed: 14-Sep-2017 17:55

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*150*	*%*	*
Surrogate: Toluene-d8			*80-120 %*	*97.0*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*81.9*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*108*	*%*	

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-GW

17I0116-03 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 10:51
Analyzed: 19-Sep-2017 15:33

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)
Preparation Batch: BFI0204
Prepared: 14-Sep-2017
Sample Size: 500 mL
Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-GW

17I0116-03 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 10:51
Analyzed: 19-Sep-2017 15:33

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzofluoranthenes, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
Surrogate: 2-Fluorophenol			*33-120 %*	*62.3*	*%*	
Surrogate: Phenol-d5			*38-120 %*	*71.7*	*%*	
Surrogate: 2-Chlorophenol-d4			*41-120 %*	*74.3*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*20-120 %*	*68.0*	*%*	
Surrogate: Nitrobenzene-d5			*27-120 %*	*75.8*	*%*	
Surrogate: 2-Fluorobiphenyl			*33-120 %*	*85.6*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-GW

17I0116-03 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 10:51
Analyzed: 19-Sep-2017 15:33

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2,4,6-Tribromophenol		*52-120 %*	*101*	*%*	
Surrogate: p-Terphenyl-d14		*28-120 %*	*93.0*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-GW

17I0116-03 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID
Instrument: FID4

Sampled: 09/11/2017 10:51
Analyzed: 13-Sep-2017 14:21

Sample Preparation: Preparation Method: EPA 3510C SepF
Preparation Batch: BFI0229
Prepared: 13-Sep-2017
Sample Size: 500 mL
Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)		1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)		1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)		1	1.00	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*106*	*%*	
Surrogate: n-Triacontane			*50-150 %*	*99.6*	*%*	

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-GW

17I0116-03 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8
Instrument: ICPMS2

Sampled: 09/11/2017 10:51
Analyzed: 14-Sep-2017 18:43

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix
Preparation Batch: BFI0225 Sample Size: 25 mL
Prepared: 13-Sep-2017 Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chromium, Dissolved	7440-47-3	1	0.500	**0.815**	ug/L	
Lead, Dissolved	7439-92-1	1	0.100	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-GW

17I0116-03 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED
Instrument: ICPMS2

Sampled: 09/11/2017 10:51
Analyzed: 14-Sep-2017 18:43

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix
Preparation Batch: BFI0225 Sample Size: 25 mL
Prepared: 13-Sep-2017 Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.200	**9.32**	ug/L	
Cadmium, Dissolved	7440-43-9	1	0.100	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-GW

17I0116-03 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 7470A
Instrument: CETAC

Sampled: 09/11/2017 10:51
Analyzed: 20-Sep-2017 14:44

Sample Preparation: Preparation Method: TWM EPA 7470A
Preparation Batch: BFI0266
Prepared: 14-Sep-2017
Sample Size: 20 mL
Final Volume: 20 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury, Dissolved	7439-97-6	1	0.000100	ND	mg/L	U

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-GW

17I0116-03RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/11/2017 10:51
Analyzed: 15-Sep-2017 17:46

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFI0318 Sample Size: 10 mL
Prepared: 15-Sep-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	**7.07**	ug/L	
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	**0.37**	ug/L	
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-GW

17I0116-03RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/11/2017 10:51
Analyzed: 15-Sep-2017 17:46

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B6-GW

17I0116-03RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/11/2017 10:51
Analyzed: 15-Sep-2017 17:46

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*108*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*97.4*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*113*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*99.7*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(1-3)

17I0116-04 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 13:00
Analyzed: 21-Sep-2017 13:57

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate)
Preparation Batch: BFI0504 | Sample Size: 4.66 g (wet) | Dry Weight:4.23 g
Prepared: 21-Sep-2017 | Final Volume: 5 mL | % Solids: 90.68

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	1.18	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	1.18	ND	ug/kg	U
Bromomethane	74-83-9	1	1.18	ND	ug/kg	U
Chloroethane	75-00-3	1	1.18	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.18	ND	ug/kg	U
Acrolein	107-02-8	1	5.92	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	2.37	ND	ug/kg	U
Acetone	67-64-1	1	5.92	**16.8**	ug/kg	
1,1-Dichloroethene	75-35-4	1	1.18	ND	ug/kg	U
Bromoethane	74-96-4	1	2.37	ND	ug/kg	U
Iodomethane	74-88-4	1	1.18	ND	ug/kg	U
Methylene Chloride	75-09-2	1	2.37	ND	ug/kg	U
Acrylonitrile	107-13-1	1	5.92	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.18	ND	ug/kg	U
trans-1,2-Dichloroethene	156-60-5	1	1.18	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	5.92	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	1.18	ND	ug/kg	U
2-Butanone	78-93-3	1	5.92	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	1.18	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	1.18	ND	ug/kg	U
Chloroform	67-66-3	1	1.18	ND	ug/kg	U
Bromochloromethane	74-97-5	1	1.18	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.18	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	1.18	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	1.18	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	1.18	ND	ug/kg	U
Benzene	71-43-2	1	1.18	ND	ug/kg	U
Trichloroethene	79-01-6	1	1.18	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	1.18	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	1.18	ND	ug/kg	U
Dibromomethane	74-95-3	1	1.18	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	5.92	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	5.92	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	1.18	ND	ug/kg	U
Toluene	108-88-3	1	1.18	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(1-3)

17I0116-04 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 13:00
Analyzed: 21-Sep-2017 13:57

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	1.18	ND	ug/kg	U
2-Hexanone	591-78-6	1	5.92	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	1.18	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	1.18	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	1.18	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	1.18	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	1.18	ND	ug/kg	U
Chlorobenzene	108-90-7	1	1.18	ND	ug/kg	U
Ethylbenzene	100-41-4	1	1.18	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	1.18	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	2.37	ND	ug/kg	U
o-Xylene	95-47-6	1	1.18	ND	ug/kg	U
Xylenes, total	1330-20-7	1	2.37	ND	ug/kg	U
Styrene	100-42-5	1	1.18	ND	ug/kg	U
Bromoform	75-25-2	1	1.18	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	1.18	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.37	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	5.92	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	1.18	ND	ug/kg	U
Bromobenzene	108-86-1	1	1.18	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	1.18	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	1.18	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	1.18	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	1.18	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	1.18	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	1.18	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	1.18	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	1.18	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	1.18	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	1.18	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	1.18	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.18	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	5.92	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	5.92	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	5.92	ND	ug/kg	U
Naphthalene	91-20-3	1	5.92	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	5.92	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	1.18	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(1-3)

17I0116-04 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 13:00
Analyzed: 21-Sep-2017 13:57

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	1.18	ND	ug/kg	U
2-Pentanone	107-87-9	1	5.92	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4			*80-149 %*	*135*	*%*	
Surrogate: Toluene-d8			*77-120 %*	*105*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*97.2*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*105*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(1-3)

17I0116-04 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 13:00
Analyzed: 21-Sep-2017 16:40

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFI0267	Sample Size: 9.03 g (wet)	Dry Weight:8.19 g
	Prepared: 14-Sep-2017	Final Volume: 0.5 mL	% Solids: 90.68
Sample Cleanup:	Cleanup Method: GPC		
	Cleanup Batch: CFI0096	Initial Volume: 0.5 mL	
	Cleaned: 19-Sep-2017	Final Volume: 0.5 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	61	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	1	61	ND	ug/kg	U
2-Chlorophenol	95-57-8	1	61	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	61	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	61	ND	ug/kg	U
Benzyl Alcohol	100-51-6	1	302	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	61	ND	ug/kg	U
2-Methylphenol	95-48-7	1	61	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	61	ND	ug/kg	U
4-Methylphenol	106-44-5	1	61	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	1	61	ND	ug/kg	U
Hexachloroethane	67-72-1	1	61	ND	ug/kg	U
Nitrobenzene	98-95-3	1	61	ND	ug/kg	U
Isophorone	78-59-1	1	61	ND	ug/kg	U
2-Nitrophenol	88-75-5	1	61	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	1	61	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	1	61	ND	ug/kg	U
Benzoic acid	65-85-0	1	614	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	1	302	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	61	ND	ug/kg	U
Naphthalene	91-20-3	1	61	ND	ug/kg	U
4-Chloroaniline	106-47-8	1	302	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	1	61	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	1	302	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	1	61	ND	ug/kg	U
Hexachlorocyclopentadiene	77-47-4	1	302	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	1	302	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	1	302	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	1	61	ND	ug/kg	U
2-Nitroaniline	88-74-4	1	302	ND	ug/kg	U
Dimethylphthalate	131-11-3	1	61	ND	ug/kg	U
Acenaphthylene	208-96-8	1	61	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(1-3)

17I0116-04 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 13:00
Analyzed: 21-Sep-2017 16:40

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,6-Dinitrotoluene	606-20-2	1	302	ND	ug/kg	U
3-Nitroaniline	99-09-2	1	302	ND	ug/kg	U
Acenaphthene	83-32-9	1	61	ND	ug/kg	U
2,4-Dinitrophenol	51-28-5	1	614	ND	ug/kg	U
Dibenzofuran	132-64-9	1	61	ND	ug/kg	U
4-Nitrophenol	100-02-7	1	302	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	1	302	ND	ug/kg	U
Fluorene	86-73-7	1	61	ND	ug/kg	U
Diethyl phthalate	84-66-2	1	61	ND	ug/kg	U
4-Chlorophenylphenyl ether	7005-72-3	1	61	ND	ug/kg	U
4-Nitroaniline	100-01-6	1	302	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	1	614	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	1	61	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	1	61	ND	ug/kg	U
Hexachlorobenzene	118-74-1	1	61	ND	ug/kg	U
Pentachlorophenol	87-86-5	1	302	ND	ug/kg	U
Phenanthrene	85-01-8	1	61	ND	ug/kg	U
Anthracene	120-12-7	1	61	ND	ug/kg	U
Carbazole	86-74-8	1	61	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	1	61	ND	ug/kg	U
Fluoranthene	206-44-0	1	61	ND	ug/kg	U
Pyrene	129-00-0	1	61	ND	ug/kg	U
Butylbenzylphthalate	85-68-7	1	61	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	1	61	ND	ug/kg	U
3,3'-Dichlorobenzidine	91-94-1	1	302	ND	ug/kg	U
Chrysene	218-01-9	1	61	ND	ug/kg	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	61	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	1	61	ND	ug/kg	U
Benzo(a)pyrene	50-32-8	1	61	ND	ug/kg	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	61	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	1	61	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	61	ND	ug/kg	U
Benzofluoranthenes, Total		1	61	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	1	61	ND	ug/kg	U
Surrogate: 2-Fluorophenol			*22-120 %*	*59.0*	*%*	
Surrogate: Phenol-d5			*27-120 %*	*70.8*	*%*	
Surrogate: 2-Chlorophenol-d4			*36-120 %*	*68.4*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(1-3)

17I0116-04 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 13:00
Analyzed: 21-Sep-2017 16:40

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichlorobenzene-d4		*38-120 %*	*77.5*	*%*	
Surrogate: Nitrobenzene-d5		*32-120 %*	*74.5*	*%*	
Surrogate: 2-Fluorobiphenyl		*39-120 %*	*88.2*	*%*	
Surrogate: 2,4,6-Tribromophenol		*31-131 %*	*49.5*	*%*	
Surrogate: p-Terphenyl-d14		*31-130 %*	*93.8*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(1-3)

17I0116-04 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-HCID
Instrument: FID3

Sampled: 09/11/2017 13:00
Analyzed: 13-Sep-2017 14:12

Sample Preparation: Preparation Method: EPA 3580A (Vortex)
Preparation Batch: BFI0227
Prepared: 13-Sep-2017

Sample Size: 10 g (wet)
Final Volume: 5 mL

Dry Weight:9.07 g
% Solids: 90.68

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)		1	11	ND	mg/kg	U
Diesel Range Organics (C12-C24)		1	28	ND	mg/kg	U
Motor Oil Range Organics (C24-C38)		1	55	ND	mg/kg	U
Surrogate: o-Terphenyl			*50-150 %*	*120*	*%*	
Surrogate: n-Triacontane			*50-150 %*	*110*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(1-3)

17I0116-04 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8
Instrument: ICPMS2

Sampled: 09/11/2017 13:00
Analyzed: 21-Sep-2017 19:16

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017
Sample Size: 1.012 g (wet)
Final Volume: 50 mL
Dry Weight:0.92 g
% Solids: 90.58

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chromium	7440-47-3	20	0.55	**30.1**	mg/kg	
Lead	7439-92-1	20	0.11	**11.1**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(1-3)

17I0116-04 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED
Instrument: ICPMS2

Sampled: 09/11/2017 13:00
Analyzed: 21-Sep-2017 19:16

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017
Sample Size: 1.012 g (wet)
Final Volume: 50 mL
Dry Weight:0.92 g
% Solids: 90.58

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.22	**6.79**	mg/kg	
Cadmium	7440-43-9	20	0.11	ND	mg/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(1-3)

17I0116-04 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B
Instrument: CETAC

Sampled: 09/11/2017 13:00
Analyzed: 14-Sep-2017 14:40

Sample Preparation: Preparation Method: SMM EPA 7471B
Preparation Batch: BFI0238
Prepared: 13-Sep-2017
Sample Size: 0.23 g (wet)
Final Volume: 50 mL
Dry Weight:0.21 g
% Solids: 90.58

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.0240	ND	mg/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 14:00
Analyzed: 21-Sep-2017 14:19

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate)
Preparation Batch: BFI0504 | Sample Size: 5.04 g (wet) | Dry Weight:4.05 g
Prepared: 21-Sep-2017 | Final Volume: 5 mL | % Solids: 80.26

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	1.24	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	1.24	ND	ug/kg	U
Bromomethane	74-83-9	1	1.24	ND	ug/kg	U
Chloroethane	75-00-3	1	1.24	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.24	ND	ug/kg	U
Acrolein	107-02-8	1	6.18	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	2.47	ND	ug/kg	U
Acetone	67-64-1	1	6.18	ND	ug/kg	U
1,1-Dichloroethene	75-35-4	1	1.24	ND	ug/kg	U
Bromoethane	74-96-4	1	2.47	ND	ug/kg	U
Iodomethane	74-88-4	1	1.24	ND	ug/kg	U
Methylene Chloride	75-09-2	1	2.47	**3.72**	ug/kg	
Acrylonitrile	107-13-1	1	6.18	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.24	**1.68**	ug/kg	Q
trans-1,2-Dichloroethene	156-60-5	1	1.24	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	6.18	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	1.24	ND	ug/kg	U
2-Butanone	78-93-3	1	6.18	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	1.24	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	1.24	ND	ug/kg	U
Chloroform	67-66-3	1	1.24	ND	ug/kg	U
Bromochloromethane	74-97-5	1	1.24	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.24	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	1.24	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	1.24	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	1.24	ND	ug/kg	U
Benzene	71-43-2	1	1.24	**3.51**	ug/kg	
Trichloroethene	79-01-6	1	1.24	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	1.24	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	1.24	ND	ug/kg	U
Dibromomethane	74-95-3	1	1.24	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	6.18	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	6.18	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	1.24	ND	ug/kg	U
Toluene	108-88-3	1	1.24	**2.06**	ug/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 14:00
Analyzed: 21-Sep-2017 14:19

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	1.24	ND	ug/kg	U
2-Hexanone	591-78-6	1	6.18	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	1.24	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	1.24	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	1.24	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	1.24	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	1.24	ND	ug/kg	U
Chlorobenzene	108-90-7	1	1.24	ND	ug/kg	U
Ethylbenzene	100-41-4	1	1.24	**122**	ug/kg	
1,1,1,2-Tetrachloroethane	630-20-6	1	1.24	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	2.47	**24.7**	ug/kg	
o-Xylene	95-47-6	1	1.24	**1.63**	ug/kg	
Xylenes, total	1330-20-7	1	2.47	**26.3**	ug/kg	
Styrene	100-42-5	1	1.24	ND	ug/kg	U
Bromoform	75-25-2	1	1.24	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	1.24	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.47	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	6.18	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	1.24	**805**	ug/kg	E
Bromobenzene	108-86-1	1	1.24	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	1.24	**409**	ug/kg	E
2-Chlorotoluene	95-49-8	1	1.24	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	1.24	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	1.24	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	1.24	**267**	ug/kg	E
1,2,4-Trimethylbenzene	95-63-6	1	1.24	**1130**	ug/kg	E
s-Butylbenzene	135-98-8	1	1.24	**440**	ug/kg	E
4-Isopropyl Toluene	99-87-6	1	1.24	**259**	ug/kg	E
1,3-Dichlorobenzene	541-73-1	1	1.24	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	1.24	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	1.24	**949**	ug/kg	E
1,2-Dichlorobenzene	95-50-1	1	1.24	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	6.18	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	6.18	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	6.18	ND	ug/kg	U
Naphthalene	91-20-3	1	6.18	**642**	ug/kg	E
1,2,3-Trichlorobenzene	87-61-6	1	6.18	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	1.24	ND	ug/kg	U

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 14:00
Analyzed: 21-Sep-2017 14:19

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	1.24	ND	ug/kg	U
2-Pentanone	107-87-9	1	6.18	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4			*80-149 %*	*139*	*%*	
Surrogate: Toluene-d8			*77-120 %*	*92.4*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*106*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*101*	*%*	

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction)
Preparation Batch: BFI0563 Sample Size: 4.611 g (wet) Dry Weight:3.70 g
Prepared: 20-Sep-2017 Final Volume: 5 mL % Solids: 80.26

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	50	79.9	ND	ug/kg	U
Vinyl Chloride	75-01-4	50	79.9	ND	ug/kg	U
Bromomethane	74-83-9	50	79.9	ND	ug/kg	U
Chloroethane	75-00-3	50	79.9	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	50	79.9	ND	ug/kg	U
Acrolein	107-02-8	50	399	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	50	160	ND	ug/kg	U
Acetone	67-64-1	50	399	ND	ug/kg	U
1,1-Dichloroethene	75-35-4	50	79.9	ND	ug/kg	U
Bromoethane	74-96-4	50	160	ND	ug/kg	U
Iodomethane	74-88-4	50	79.9	ND	ug/kg	U
Methylene Chloride	75-09-2	50	160	ND	ug/kg	U
Acrylonitrile	107-13-1	50	399	ND	ug/kg	U
Carbon Disulfide	75-15-0	50	79.9	ND	ug/kg	U
trans-1,2-Dichloroethene	156-60-5	50	79.9	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	50	79.9	ND	ug/kg	U
2-Butanone	78-93-3	50	399	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	50	79.9	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	50	79.9	ND	ug/kg	U
Chloroform	67-66-3	50	79.9	ND	ug/kg	U
Bromochloromethane	74-97-5	50	79.9	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	50	79.9	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	50	79.9	ND	ug/kg	U
Carbon tetrachloride	56-23-5	50	79.9	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	50	79.9	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 14:00
Analyzed: 22-Sep-2017 20:45

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Benzene	71-43-2	50	79.9	ND	ug/kg	U
Trichloroethene	79-01-6	50	79.9	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	50	79.9	ND	ug/kg	U
Bromodichloromethane	75-27-4	50	79.9	ND	ug/kg	U
Dibromomethane	74-95-3	50	79.9	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	50	399	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	50	399	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	50	79.9	ND	ug/kg	U
Toluene	108-88-3	50	79.9	ND	ug/kg	U
trans-1,3-Dichloropropene	10061-02-6	50	79.9	ND	ug/kg	U
2-Hexanone	591-78-6	50	399	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	50	79.9	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	50	79.9	ND	ug/kg	U
Tetrachloroethene	127-18-4	50	79.9	ND	ug/kg	U
Dibromochloromethane	124-48-1	50	79.9	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	50	79.9	ND	ug/kg	U
Chlorobenzene	108-90-7	50	79.9	ND	ug/kg	U
Ethylbenzene	100-41-4	50	79.9	**1340**	ug/kg	
1,1,1,2-Tetrachloroethane	630-20-6	50	79.9	ND	ug/kg	U
m,p-Xylene	179601-23-1	50	160	**282**	ug/kg	
o-Xylene	95-47-6	50	79.9	ND	ug/kg	U
Xylenes, total	1330-20-7	50	160	**282**	ug/kg	
Styrene	100-42-5	50	79.9	ND	ug/kg	U
Bromoform	75-25-2	50	79.9	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	50	79.9	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	50	160	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	50	399	ND	ug/kg	U
n-Propylbenzene	103-65-1	50	79.9	**24400**	ug/kg	E
Bromobenzene	108-86-1	50	79.9	ND	ug/kg	U
Isopropyl Benzene	98-82-8	50	79.9	**7060**	ug/kg	
2-Chlorotoluene	95-49-8	50	79.9	ND	ug/kg	U
4-Chlorotoluene	106-43-4	50	79.9	ND	ug/kg	U
t-Butylbenzene	98-06-6	50	79.9	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	50	79.9	**5570**	ug/kg	
1,2,4-Trimethylbenzene	95-63-6	50	79.9	**37000**	ug/kg	E
s-Butylbenzene	135-98-8	50	79.9	**9470**	ug/kg	
4-Isopropyl Toluene	99-87-6	50	79.9	**5370**	ug/kg	
1,3-Dichlorobenzene	541-73-1	50	79.9	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 14:00
Analyzed: 22-Sep-2017 20:45

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
1,4-Dichlorobenzene	106-46-7	50	79.9	ND	ug/kg	U
n-Butylbenzene	104-51-8	50	79.9	**25800**	ug/kg	E
1,2-Dichlorobenzene	95-50-1	50	79.9	ND	ug/kg	U
1,2-Dibromo-3-Chloropropane	96-12-8	50	399	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	50	399	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	50	399	ND	ug/kg	U
Naphthalene	91-20-3	50	399	**13500**	ug/kg	
1,2,3-Trichlorobenzene	87-61-6	50	399	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	50	79.9	ND	ug/kg	U
Methyl tert-butyl Ether	1634-04-4	50	79.9	ND	ug/kg	U
2-Pentanone	107-87-9	50	399	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4			*80-124 %*	*102*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*98.2*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*99.8*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*100*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06 (Solid)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT2

Sampled: 09/11/2017 14:00
Analyzed: 19-Sep-2017 18:17

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction)
Preparation Batch: BFI0368 | Sample Size: 4.819 g (wet) | Dry Weight:3.87 g
Prepared: 18-Sep-2017 | Final Volume: 5 mL | % Solids: 80.26

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		50	7690	**1260000**	ug/kg	E
HC ID: GRO						
Surrogate: Toluene-d8			*80-120 %*	*89.4*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*111*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 14:00
Analyzed: 21-Sep-2017 17:12

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFI0267	Sample Size: 10.17 g (wet)	Dry Weight:8.16 g
	Prepared: 14-Sep-2017	Final Volume: 0.5 mL	% Solids: 80.26
Sample Cleanup:	Cleanup Method: GPC		
	Cleanup Batch: CFI0096	Initial Volume: 0.5 mL	
	Cleaned: 19-Sep-2017	Final Volume: 0.5 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	62	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	1	62	ND	ug/kg	U
2-Chlorophenol	95-57-8	1	62	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	62	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	62	ND	ug/kg	U
Benzyl Alcohol	100-51-6	1	303	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	62	ND	ug/kg	U
2-Methylphenol	95-48-7	1	62	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	62	ND	ug/kg	U
4-Methylphenol	106-44-5	1	62	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	1	62	ND	ug/kg	U
Hexachloroethane	67-72-1	1	62	ND	ug/kg	U
Nitrobenzene	98-95-3	1	62	ND	ug/kg	U
Isophorone	78-59-1	1	62	ND	ug/kg	U
2-Nitrophenol	88-75-5	1	62	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	1	62	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	1	62	ND	ug/kg	U
Benzoic acid	65-85-0	1	616	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	1	303	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	62	ND	ug/kg	U
Naphthalene	91-20-3	1	62	ND	ug/kg	U
4-Chloroaniline	106-47-8	1	303	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	1	62	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	1	303	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	1	62	ND	ug/kg	U
Hexachlorocyclopentadiene	77-47-4	1	303	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	1	303	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	1	303	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	1	62	ND	ug/kg	U
2-Nitroaniline	88-74-4	1	303	ND	ug/kg	U
Dimethylphthalate	131-11-3	1	62	ND	ug/kg	U
Acenaphthylene	208-96-8	1	62	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 14:00
Analyzed: 21-Sep-2017 17:12

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,6-Dinitrotoluene	606-20-2	1	303	ND	ug/kg	U
3-Nitroaniline	99-09-2	1	303	ND	ug/kg	U
Acenaphthene	83-32-9	1	62	ND	ug/kg	U
2,4-Dinitrophenol	51-28-5	1	616	ND	ug/kg	U
Dibenzofuran	132-64-9	1	62	ND	ug/kg	U
4-Nitrophenol	100-02-7	1	303	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	1	303	ND	ug/kg	U
Fluorene	86-73-7	1	62	ND	ug/kg	U
Diethyl phthalate	84-66-2	1	62	ND	ug/kg	U
4-Chlorophenylphenyl ether	7005-72-3	1	62	ND	ug/kg	U
4-Nitroaniline	100-01-6	1	303	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	1	616	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	1	62	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	1	62	ND	ug/kg	U
Hexachlorobenzene	118-74-1	1	62	ND	ug/kg	U
Pentachlorophenol	87-86-5	1	303	ND	ug/kg	U
Phenanthrene	85-01-8	1	62	ND	ug/kg	U
Anthracene	120-12-7	1	62	ND	ug/kg	U
Carbazole	86-74-8	1	62	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	1	62	ND	ug/kg	U
Fluoranthene	206-44-0	1	62	ND	ug/kg	U
Pyrene	129-00-0	1	62	ND	ug/kg	U
Butylbenzylphthalate	85-68-7	1	62	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	1	62	ND	ug/kg	U
3,3'-Dichlorobenzidine	91-94-1	1	303	ND	ug/kg	U
Chrysene	218-01-9	1	62	ND	ug/kg	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	62	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	1	62	ND	ug/kg	U
Benzo(a)pyrene	50-32-8	1	62	ND	ug/kg	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	62	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	1	62	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	62	ND	ug/kg	U
Benzofluoranthenes, Total		1	62	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	1	62	ND	ug/kg	U
Surrogate: 2-Fluorophenol			*22-120 %*	*66.1*	*%*	
Surrogate: Phenol-d5			*27-120 %*	*68.3*	*%*	
Surrogate: 2-Chlorophenol-d4			*36-120 %*	*76.1*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)
17I0116-06 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 14:00
Analyzed: 21-Sep-2017 17:12

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichlorobenzene-d4		*38-120 %*	*77.4*	*%*	
Surrogate: Nitrobenzene-d5		*32-120 %*	*70.7*	*%*	
Surrogate: 2-Fluorobiphenyl		*39-120 %*	*79.3*	*%*	
Surrogate: 2,4,6-Tribromophenol		*31-131 %*	*87.0*	*%*	
Surrogate: p-Terphenyl-d14		*31-130 %*	*86.6*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-HCID
Instrument: FID3

Sampled: 09/11/2017 14:00
Analyzed: 13-Sep-2017 14:32

Sample Preparation: Preparation Method: EPA 3580A (Vortex)
Preparation Batch: BFI0227
Prepared: 13-Sep-2017
Sample Size: 10 g (wet)
Final Volume: 5 mL
Dry Weight:8.03 g
% Solids: 80.26

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)		1	12	**19**	mg/kg	
Diesel Range Organics (C12-C24)		1	31	ND	mg/kg	U
Motor Oil Range Organics (C24-C38)		1	62	ND	mg/kg	U
Surrogate: o-Terphenyl			*50-150 %*	*123*	*%*	
Surrogate: n-Triacontane			*50-150 %*	*110*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8
Instrument: ICPMS2

Sampled: 09/11/2017 14:00
Analyzed: 21-Sep-2017 19:21

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017
Sample Size: 1.01 g (wet)
Final Volume: 50 mL
Dry Weight:0.78 g
% Solids: 77.25

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chromium	7440-47-3	20	0.64	**34.7**	mg/kg	
Lead	7439-92-1	20	0.13	**5.36**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED
Instrument: ICPMS2

Sampled: 09/11/2017 14:00
Analyzed: 21-Sep-2017 19:21

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017
Sample Size: 1.01 g (wet)
Final Volume: 50 mL
Dry Weight:0.78 g
% Solids: 77.25

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.26	**3.71**	mg/kg	
Cadmium	7440-43-9	20	0.13	ND	mg/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B
Instrument: CETAC

Sampled: 09/11/2017 14:00
Analyzed: 14-Sep-2017 14:42

Sample Preparation: Preparation Method: SMM EPA 7471B
Preparation Batch: BFI0238
Prepared: 13-Sep-2017
Sample Size: 0.262 g (wet)
Final Volume: 50 mL
Dry Weight:0.20 g
% Solids: 77.25

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.0247	**0.0469**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06RE1 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 09/11/2017 14:00
Analyzed: 19-Sep-2017 18:17

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFI0686 | Sample Size: 4.819 g (wet) | Dry Weight:3.87 g
Prepared: 19-Sep-2017 | Final Volume: 5 mL | % Solids: 80.26

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	500	769	ND	ug/kg	U
Vinyl Chloride	75-01-4	500	769	ND	ug/kg	U
Bromomethane	74-83-9	500	769	ND	ug/kg	U
Chloroethane	75-00-3	500	769	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	500	769	ND	ug/kg	U
Acrolein	107-02-8	500	3850	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	500	1540	ND	ug/kg	U
Acetone	67-64-1	500	3850	ND	ug/kg	U
1,1-Dichloroethene	75-35-4	500	769	ND	ug/kg	U
Bromoethane	74-96-4	500	1540	ND	ug/kg	U
Iodomethane	74-88-4	500	769	ND	ug/kg	U
Methylene Chloride	75-09-2	500	1540	ND	ug/kg	U
Acrylonitrile	107-13-1	500	3850	ND	ug/kg	U
Carbon Disulfide	75-15-0	500	769	ND	ug/kg	U
trans-1,2-Dichloroethene	156-60-5	500	769	ND	ug/kg	U
Vinyl Acetate	108-05-4	500	3850	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	500	769	ND	ug/kg	U
2-Butanone	78-93-3	500	3850	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	500	769	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	500	769	ND	ug/kg	U
Chloroform	67-66-3	500	769	ND	ug/kg	U
Bromochloromethane	74-97-5	500	769	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	500	769	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	500	769	ND	ug/kg	U
Carbon tetrachloride	56-23-5	500	769	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	500	769	ND	ug/kg	U
Benzene	71-43-2	500	769	ND	ug/kg	U
Trichloroethene	79-01-6	500	769	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	500	769	ND	ug/kg	U
Bromodichloromethane	75-27-4	500	769	ND	ug/kg	U
Dibromomethane	74-95-3	500	769	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	500	3850	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	500	3850	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	500	769	ND	ug/kg	U
Toluene	108-88-3	500	769	ND	ug/kg	U

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06RE1 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 09/11/2017 14:00
Analyzed: 19-Sep-2017 18:17

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	500	769	ND	ug/kg	U
2-Hexanone	591-78-6	500	3850	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	500	769	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	500	769	ND	ug/kg	U
Tetrachloroethene	127-18-4	500	769	ND	ug/kg	U
Dibromochloromethane	124-48-1	500	769	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	500	769	ND	ug/kg	U
Chlorobenzene	108-90-7	500	769	ND	ug/kg	U
Ethylbenzene	100-41-4	500	769	**3310**	ug/kg	D
1,1,1,2-Tetrachloroethane	630-20-6	500	769	ND	ug/kg	U
m,p-Xylene	179601-23-1	500	1540	ND	ug/kg	U
o-Xylene	95-47-6	500	769	ND	ug/kg	U
Xylenes, total	1330-20-7	500	1540	ND	ug/kg	U
Styrene	100-42-5	500	769	ND	ug/kg	U
Bromoform	75-25-2	500	769	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	500	769	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	500	1540	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	500	3850	ND	ug/kg	U
n-Propylbenzene	103-65-1	500	769	**47800**	ug/kg	D, E
Bromobenzene	108-86-1	500	769	ND	ug/kg	U
Isopropyl Benzene	98-82-8	500	769	**20800**	ug/kg	D
2-Chlorotoluene	95-49-8	500	769	ND	ug/kg	U
4-Chlorotoluene	106-43-4	500	769	ND	ug/kg	U
t-Butylbenzene	98-06-6	500	769	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	500	769	**10900**	ug/kg	D
1,2,4-Trimethylbenzene	95-63-6	500	769	**58700**	ug/kg	D
s-Butylbenzene	135-98-8	500	769	**27500**	ug/kg	D
4-Isopropyl Toluene	99-87-6	500	769	**16600**	ug/kg	D
1,3-Dichlorobenzene	541-73-1	500	769	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	500	769	ND	ug/kg	U
n-Butylbenzene	104-51-8	500	769	**55600**	ug/kg	D
1,2-Dichlorobenzene	95-50-1	500	769	ND	ug/kg	U
1,2-Dibromo-3-Chloropropane	96-12-8	500	3850	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	500	3850	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	500	3850	ND	ug/kg	U
Naphthalene	91-20-3	500	3850	**29300**	ug/kg	D
1,2,3-Trichlorobenzene	87-61-6	500	3850	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	500	769	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06RE1 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 09/11/2017 14:00
Analyzed: 19-Sep-2017 18:17

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	500	769	ND	ug/kg	U
2-Pentanone	107-87-9	500	3850	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4			*80-124 %*	*82.5*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*89.4*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*111*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*101*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06RE1 (Solid)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT2

Sampled: 09/11/2017 14:00
Analyzed: 20-Sep-2017 18:34

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction)
Preparation Batch: BFI0456 Sample Size: 4.819 g (wet) Dry Weight:3.87 g
Prepared: 20-Sep-2017 Final Volume: 5 mL % Solids: 80.26

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		500	76900	**1010000**	ug/kg	D
HC ID: GRO						
Surrogate: Toluene-d8			*80-120 %*	*93.8*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*107*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06RE2 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 14:00
Analyzed: 26-Sep-2017 00:40

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction)
Preparation Batch: BFI0625 | Sample Size: 4.611 g (wet) | Dry Weight:3.70 g
Prepared: 19-Sep-2017 | Final Volume: 5 mL | % Solids: 80.26

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	500	799	ND	ug/kg	H, U
Vinyl Chloride	75-01-4	500	799	ND	ug/kg	H, U
Bromomethane	74-83-9	500	799	ND	ug/kg	H, U
Chloroethane	75-00-3	500	799	ND	ug/kg	H, U
Trichlorofluoromethane	75-69-4	500	799	ND	ug/kg	H, U
Acrolein	107-02-8	500	3990	ND	ug/kg	H, U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	500	1600	ND	ug/kg	H, U
Acetone	67-64-1	500	3990	ND	ug/kg	H, U
1,1-Dichloroethene	75-35-4	500	799	ND	ug/kg	H, U
Bromoethane	74-96-4	500	1600	ND	ug/kg	H, U
Iodomethane	74-88-4	500	799	ND	ug/kg	H, U
Methylene Chloride	75-09-2	500	1600	ND	ug/kg	H, U
Acrylonitrile	107-13-1	500	3990	ND	ug/kg	H, U
Carbon Disulfide	75-15-0	500	799	ND	ug/kg	H, U
trans-1,2-Dichloroethene	156-60-5	500	799	ND	ug/kg	H, U
1,1-Dichloroethane	75-34-3	500	799	ND	ug/kg	H, U
2-Butanone	78-93-3	500	3990	ND	ug/kg	H, U
2,2-Dichloropropane	594-20-7	500	799	ND	ug/kg	H, U
cis-1,2-Dichloroethene	156-59-2	500	799	ND	ug/kg	H, U
Chloroform	67-66-3	500	799	ND	ug/kg	H, U
Bromochloromethane	74-97-5	500	799	ND	ug/kg	H, U
1,1,1-Trichloroethane	71-55-6	500	799	ND	ug/kg	H, U
1,1-Dichloropropene	563-58-6	500	799	ND	ug/kg	H, U
Carbon tetrachloride	56-23-5	500	799	ND	ug/kg	H, U
1,2-Dichloroethane	107-06-2	500	799	ND	ug/kg	H, U
Benzene	71-43-2	500	799	ND	ug/kg	H, U
Trichloroethene	79-01-6	500	799	ND	ug/kg	H, U
1,2-Dichloropropane	78-87-5	500	799	ND	ug/kg	H, U
Bromodichloromethane	75-27-4	500	799	ND	ug/kg	H, U
Dibromomethane	74-95-3	500	799	ND	ug/kg	H, U
2-Chloroethyl vinyl ether	110-75-8	500	3990	ND	ug/kg	H, U
4-Methyl-2-Pentanone	108-10-1	500	3990	ND	ug/kg	H, U
cis-1,3-Dichloropropene	10061-01-5	500	799	ND	ug/kg	H, U
Toluene	108-88-3	500	799	ND	ug/kg	H, U
trans-1,3-Dichloropropene	10061-02-6	500	799	ND	ug/kg	H, U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06RE2 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 14:00
Analyzed: 26-Sep-2017 00:40

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2-Hexanone	591-78-6	500	3990	ND	ug/kg	H, U
1,1,2-Trichloroethane	79-00-5	500	799	ND	ug/kg	H, U
1,3-Dichloropropane	142-28-9	500	799	ND	ug/kg	H, U
Tetrachloroethene	127-18-4	500	799	ND	ug/kg	H, U
Dibromochloromethane	124-48-1	500	799	ND	ug/kg	H, U
1,2-Dibromoethane	106-93-4	500	799	ND	ug/kg	H, U
Chlorobenzene	108-90-7	500	799	ND	ug/kg	H, U
Ethylbenzene	100-41-4	500	799	**1280**	ug/kg	H, D
1,1,1,2-Tetrachloroethane	630-20-6	500	799	ND	ug/kg	H, U
m,p-Xylene	179601-23-1	500	1600	ND	ug/kg	H, U
o-Xylene	95-47-6	500	799	ND	ug/kg	H, U
Xylenes, total	1330-20-7	500	1600	ND	ug/kg	H, U
Styrene	100-42-5	500	799	ND	ug/kg	H, U
Bromoform	75-25-2	500	799	ND	ug/kg	H, U
1,1,2,2-Tetrachloroethane	79-34-5	500	799	ND	ug/kg	H, U
1,2,3-Trichloropropane	96-18-4	500	1600	ND	ug/kg	H, U
trans-1,4-Dichloro 2-Butene	110-57-6	500	3990	ND	ug/kg	H, U
n-Propylbenzene	103-65-1	500	799	**34200**	ug/kg	H, D
Bromobenzene	108-86-1	500	799	ND	ug/kg	H, U
Isopropyl Benzene	98-82-8	500	799	**6780**	ug/kg	H, D
2-Chlorotoluene	95-49-8	500	799	ND	ug/kg	H, U
4-Chlorotoluene	106-43-4	500	799	ND	ug/kg	H, U
t-Butylbenzene	98-06-6	500	799	ND	ug/kg	H, U
1,3,5-Trimethylbenzene	108-67-8	500	799	**5190**	ug/kg	H, D
1,2,4-Trimethylbenzene	95-63-6	500	799	**52200**	ug/kg	H, D
s-Butylbenzene	135-98-8	500	799	**9920**	ug/kg	H, D
4-Isopropyl Toluene	99-87-6	500	799	**4590**	ug/kg	H, D
1,3-Dichlorobenzene	541-73-1	500	799	ND	ug/kg	H, U
1,4-Dichlorobenzene	106-46-7	500	799	ND	ug/kg	H, U
n-Butylbenzene	104-51-8	500	799	**28500**	ug/kg	H, D
1,2-Dichlorobenzene	95-50-1	500	799	ND	ug/kg	H, U
1,2-Dibromo-3-Chloropropane	96-12-8	500	3990	ND	ug/kg	H, U
1,2,4-Trichlorobenzene	120-82-1	500	3990	ND	ug/kg	H, U
Hexachloro-1,3-Butadiene	87-68-3	500	3990	ND	ug/kg	H, U
Naphthalene	91-20-3	500	3990	**13000**	ug/kg	H, D
1,2,3-Trichlorobenzene	87-61-6	500	3990	ND	ug/kg	H, U
Dichlorodifluoromethane	75-71-8	500	799	ND	ug/kg	H, U
Methyl tert-butyl Ether	1634-04-4	500	799	ND	ug/kg	H, U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B1-S(11-13)

17I0116-06RE2 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 14:00
Analyzed: 26-Sep-2017 00:40

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	500	3990	ND	ug/kg	H, U
Surrogate: 1,2-Dichloroethane-d4			*80-124 %*	*110*	*%*	H
Surrogate: Toluene-d8			*80-120 %*	*102*	*%*	H
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*98.7*	*%*	H
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*100*	*%*	H

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-GW

17I0116-07 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 09/11/2017 14:36
Analyzed: 14-Sep-2017 18:16

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFI0274 Sample Size: 10 mL
Prepared: 14-Sep-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	**8.09**	ug/L	
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	**0.27**	ug/L	
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-GW

17I0116-07 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 09/11/2017 14:36
Analyzed: 14-Sep-2017 18:16

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	ND	ug/L	U
Methyl tert-butyl Ether	1634-04-4	1	0.50	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-GW

17I0116-07 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 09/11/2017 14:36
Analyzed: 14-Sep-2017 18:16

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2-Pentanone	107-87-9	1	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*150*	*%*	*
Surrogate: Toluene-d8			*80-120 %*	*98.6*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*82.0*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*106*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-GW

17I0116-07 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 14:36
Analyzed: 19-Sep-2017 16:05

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)
Preparation Batch: BFI0204
Prepared: 14-Sep-2017
Sample Size: 500 mL
Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	**1.1**	ug/L	
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-GW

17I0116-07 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 14:36
Analyzed: 19-Sep-2017 16:05

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzofluoranthenes, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
Surrogate: 2-Fluorophenol			*33-120 %*	*72.8*	*%*	
Surrogate: Phenol-d5			*38-120 %*	*77.0*	*%*	
Surrogate: 2-Chlorophenol-d4			*41-120 %*	*83.8*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*20-120 %*	*77.3*	*%*	
Surrogate: Nitrobenzene-d5			*27-120 %*	*79.8*	*%*	
Surrogate: 2-Fluorobiphenyl			*33-120 %*	*85.6*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-GW

17I0116-07 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 14:36
Analyzed: 19-Sep-2017 16:05

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2,4,6-Tribromophenol		*52-120 %*	*109*	*%*	
Surrogate: p-Terphenyl-d14		*28-120 %*	*91.3*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-GW

17I0116-07 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID
Instrument: FID4

Sampled: 09/11/2017 14:36
Analyzed: 13-Sep-2017 14:42

Sample Preparation: Preparation Method: EPA 3510C SepF
Preparation Batch: BFI0229
Prepared: 13-Sep-2017
Sample Size: 500 mL
Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)		1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)		1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)		1	1.00	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*106*	*%*	
Surrogate: n-Triacontane			*50-150 %*	*102*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-GW

17I0116-07 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8
Instrument: ICPMS2

Sampled: 09/11/2017 14:36
Analyzed: 13-Sep-2017 19:34

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix
Preparation Batch: BFI0225 Sample Size: 25 mL
Prepared: 13-Sep-2017 Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chromium, Dissolved	7440-47-3	1	0.500	ND	ug/L	U
Lead, Dissolved	7439-92-1	1	0.100	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-GW

17I0116-07 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED
Instrument: ICPMS2

Sampled: 09/11/2017 14:36
Analyzed: 13-Sep-2017 19:34

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix
Preparation Batch: BFI0225 Sample Size: 25 mL
Prepared: 13-Sep-2017 Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.200	**8.39**	ug/L	
Cadmium, Dissolved	7440-43-9	1	0.100	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-GW

17I0116-07 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 7470A
Instrument: CETAC

Sampled: 09/11/2017 14:36
Analyzed: 20-Sep-2017 14:45

Sample Preparation:
Preparation Method: TWM EPA 7470A
Preparation Batch: BFI0266
Prepared: 14-Sep-2017
Sample Size: 20 mL
Final Volume: 20 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury, Dissolved	7439-97-6	1	0.000100	ND	mg/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-GW

17I0116-07RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/11/2017 14:36
Analyzed: 15-Sep-2017 18:12

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFI0318 Sample Size: 10 mL
Prepared: 15-Sep-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	**6.21**	ug/L	
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-GW

17I0116-07RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/11/2017 14:36
Analyzed: 15-Sep-2017 18:12

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-GW

17I0116-07RE1 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/11/2017 14:36
Analyzed: 15-Sep-2017 18:12

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*111*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*95.6*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*117*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*101*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(1-3)

17I0116-08 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 14:50
Analyzed: 21-Sep-2017 19:25

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate)
Preparation Batch: BFI0504 | Sample Size: 4.7 g (wet) | Dry Weight:4.19 g
Prepared: 21-Sep-2017 | Final Volume: 5 mL | % Solids: 89.10

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	1.19	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	1.19	ND	ug/kg	U
Bromomethane	74-83-9	1	1.19	ND	ug/kg	U
Chloroethane	75-00-3	1	1.19	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.19	ND	ug/kg	U
Acrolein	107-02-8	1	5.97	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	2.39	ND	ug/kg	U
Acetone	67-64-1	1	5.97	**70.5**	ug/kg	
1,1-Dichloroethene	75-35-4	1	1.19	ND	ug/kg	U
Bromoethane	74-96-4	1	2.39	ND	ug/kg	U
Iodomethane	74-88-4	1	1.19	ND	ug/kg	U
Methylene Chloride	75-09-2	1	2.39	ND	ug/kg	U
Acrylonitrile	107-13-1	1	5.97	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.19	**1.60**	ug/kg	Q
trans-1,2-Dichloroethene	156-60-5	1	1.19	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	5.97	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	1.19	ND	ug/kg	U
2-Butanone	78-93-3	1	5.97	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	1.19	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	1.19	ND	ug/kg	U
Chloroform	67-66-3	1	1.19	ND	ug/kg	U
Bromochloromethane	74-97-5	1	1.19	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.19	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	1.19	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	1.19	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	1.19	ND	ug/kg	U
Benzene	71-43-2	1	1.19	ND	ug/kg	U
Trichloroethene	79-01-6	1	1.19	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	1.19	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	1.19	ND	ug/kg	U
Dibromomethane	74-95-3	1	1.19	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	5.97	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	5.97	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	1.19	ND	ug/kg	U
Toluene	108-88-3	1	1.19	ND	ug/kg	U

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(1-3)

17I0116-08 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 14:50
Analyzed: 21-Sep-2017 19:25

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	1.19	ND	ug/kg	U
2-Hexanone	591-78-6	1	5.97	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	1.19	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	1.19	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	1.19	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	1.19	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	1.19	ND	ug/kg	U
Chlorobenzene	108-90-7	1	1.19	ND	ug/kg	U
Ethylbenzene	100-41-4	1	1.19	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	1.19	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	2.39	ND	ug/kg	U
o-Xylene	95-47-6	1	1.19	ND	ug/kg	U
Xylenes, total	1330-20-7	1	2.39	ND	ug/kg	U
Styrene	100-42-5	1	1.19	ND	ug/kg	U
Bromoform	75-25-2	1	1.19	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	1.19	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.39	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	5.97	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	1.19	ND	ug/kg	U
Bromobenzene	108-86-1	1	1.19	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	1.19	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	1.19	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	1.19	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	1.19	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	1.19	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	1.19	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	1.19	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	1.19	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	1.19	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	1.19	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	1.19	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.19	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	5.97	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	5.97	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	5.97	ND	ug/kg	U
Naphthalene	91-20-3	1	5.97	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	5.97	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	1.19	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(1-3)

17I0116-08 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 14:50
Analyzed: 21-Sep-2017 19:25

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	1.19	ND	ug/kg	U
2-Pentanone	107-87-9	1	5.97	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4			*80-149 %*	*129*	*%*	
Surrogate: Toluene-d8			*77-120 %*	*98.5*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*96.7*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*103*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(1-3)

17I0116-08 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 14:50
Analyzed: 21-Sep-2017 17:45

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFI0267	Sample Size: 9.04 g (wet)	Dry Weight:8.05 g
	Prepared: 14-Sep-2017	Final Volume: 0.5 mL	% Solids: 89.10
Sample Cleanup:	Cleanup Method: GPC		
	Cleanup Batch: CFI0096	Initial Volume: 0.5 mL	
	Cleaned: 19-Sep-2017	Final Volume: 0.5 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	62	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	1	62	ND	ug/kg	U
2-Chlorophenol	95-57-8	1	62	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	62	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	62	ND	ug/kg	U
Benzyl Alcohol	100-51-6	1	307	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	62	ND	ug/kg	U
2-Methylphenol	95-48-7	1	62	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	62	ND	ug/kg	U
4-Methylphenol	106-44-5	1	62	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	1	62	ND	ug/kg	U
Hexachloroethane	67-72-1	1	62	ND	ug/kg	U
Nitrobenzene	98-95-3	1	62	ND	ug/kg	U
Isophorone	78-59-1	1	62	ND	ug/kg	U
2-Nitrophenol	88-75-5	1	62	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	1	62	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	1	62	ND	ug/kg	U
Benzoic acid	65-85-0	1	624	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	1	307	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	62	ND	ug/kg	U
Naphthalene	91-20-3	1	62	**879**	ug/kg	
4-Chloroaniline	106-47-8	1	307	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	1	62	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	1	307	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	1	62	**2240**	ug/kg	
Hexachlorocyclopentadiene	77-47-4	1	307	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	1	307	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	1	307	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	1	62	ND	ug/kg	U
2-Nitroaniline	88-74-4	1	307	ND	ug/kg	U
Dimethylphthalate	131-11-3	1	62	ND	ug/kg	U
Acenaphthylene	208-96-8	1	62	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(1-3)

17I0116-08 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 14:50
Analyzed: 21-Sep-2017 17:45

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,6-Dinitrotoluene	606-20-2	1	307	ND	ug/kg	U
3-Nitroaniline	99-09-2	1	307	ND	ug/kg	U
Acenaphthene	83-32-9	1	62	ND	ug/kg	U
2,4-Dinitrophenol	51-28-5	1	624	ND	ug/kg	U
Dibenzofuran	132-64-9	1	62	ND	ug/kg	U
4-Nitrophenol	100-02-7	1	307	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	1	307	ND	ug/kg	U
Fluorene	86-73-7	1	62	ND	ug/kg	U
Diethyl phthalate	84-66-2	1	62	ND	ug/kg	U
4-Chlorophenylphenyl ether	7005-72-3	1	62	ND	ug/kg	U
4-Nitroaniline	100-01-6	1	307	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	1	624	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	1	62	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	1	62	ND	ug/kg	U
Hexachlorobenzene	118-74-1	1	62	ND	ug/kg	U
Pentachlorophenol	87-86-5	1	307	ND	ug/kg	U
Phenanthrene	85-01-8	1	62	ND	ug/kg	U
Anthracene	120-12-7	1	62	ND	ug/kg	U
Carbazole	86-74-8	1	62	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	1	62	ND	ug/kg	U
Fluoranthene	206-44-0	1	62	ND	ug/kg	U
Pyrene	129-00-0	1	62	ND	ug/kg	U
Butylbenzylphthalate	85-68-7	1	62	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	1	62	ND	ug/kg	U
3,3'-Dichlorobenzidine	91-94-1	1	307	ND	ug/kg	U
Chrysene	218-01-9	1	62	ND	ug/kg	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	62	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	1	62	ND	ug/kg	U
Benzo(a)pyrene	50-32-8	1	62	ND	ug/kg	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	62	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	1	62	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	62	ND	ug/kg	U
Benzofluoranthenes, Total		1	62	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	1	62	**1370**	ug/kg	
Surrogate: 2-Fluorophenol			*22-120 %*	*66.1*	*%*	
Surrogate: Phenol-d5			*27-120 %*	*69.2*	*%*	
Surrogate: 2-Chlorophenol-d4			*36-120 %*	*73.9*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(1-3)

17I0116-08 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 14:50
Analyzed: 21-Sep-2017 17:45

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichlorobenzene-d4		*38-120 %*	*72.6*	*%*	
Surrogate: Nitrobenzene-d5		*32-120 %*	*59.1*	*%*	
Surrogate: 2-Fluorobiphenyl		*39-120 %*	*79.7*	*%*	
Surrogate: 2,4,6-Tribromophenol		*31-131 %*	*87.6*	*%*	
Surrogate: p-Terphenyl-d14		*31-130 %*	*88.4*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(1-3)

17I0116-08 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-HCID
Instrument: FID3

Sampled: 09/11/2017 14:50
Analyzed: 13-Sep-2017 14:52

Sample Preparation: Preparation Method: EPA 3580A (Vortex)
Preparation Batch: BFI0227
Prepared: 13-Sep-2017
Sample Size: 10 g (wet)
Final Volume: 5 mL
Dry Weight:8.91 g
% Solids: 89.10

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)		1	11	ND	mg/kg	U
Diesel Range Organics (C12-C24)		1	28	ND	mg/kg	U
Motor Oil Range Organics (C24-C38)		1	56	ND	mg/kg	U
Surrogate: o-Terphenyl			*50-150 %*	*122*	*%*	
Surrogate: n-Triacontane			*50-150 %*	*106*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(1-3)

17I0116-08 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8
Instrument: ICPMS2

Sampled: 09/11/2017 14:50
Analyzed: 21-Sep-2017 19:26

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017

Sample Size: 1.082 g (wet)
Final Volume: 50 mL

Dry Weight:0.96 g
% Solids: 88.39

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chromium	7440-47-3	20	0.52	**30.3**	mg/kg	
Lead	7439-92-1	20	0.10	**19.7**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(1-3)

17I0116-08 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED
Instrument: ICPMS2

Sampled: 09/11/2017 14:50
Analyzed: 21-Sep-2017 19:26

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017
Sample Size: 1.082 g (wet)
Final Volume: 50 mL
Dry Weight:0.96 g
% Solids: 88.39

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.21	**5.24**	mg/kg	
Cadmium	7440-43-9	20	0.10	**0.19**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(1-3)

17I0116-08 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B
Instrument: CETAC

Sampled: 09/11/2017 14:50
Analyzed: 14-Sep-2017 14:43

Sample Preparation: Preparation Method: SMM EPA 7471B
Preparation Batch: BFI0238
Prepared: 13-Sep-2017
Sample Size: 0.238 g (wet)
Final Volume: 50 mL
Dry Weight:0.21 g
% Solids: 88.39

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.0238	**0.0261**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(10-12)

17I0116-09 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 15:00
Analyzed: 21-Sep-2017 21:14

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate)
Preparation Batch: BFI0504 | Sample Size: 4.58 g (wet) | Dry Weight:3.18 g
Prepared: 21-Sep-2017 | Final Volume: 5 mL | % Solids: 69.45

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	1.57	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	1.57	ND	ug/kg	U
Bromomethane	74-83-9	1	1.57	ND	ug/kg	U
Chloroethane	75-00-3	1	1.57	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.57	ND	ug/kg	U
Acrolein	107-02-8	1	7.86	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	3.14	ND	ug/kg	U
Acetone	67-64-1	1	7.86	**63.1**	ug/kg	
1,1-Dichloroethene	75-35-4	1	1.57	ND	ug/kg	U
Bromoethane	74-96-4	1	3.14	ND	ug/kg	U
Iodomethane	74-88-4	1	1.57	ND	ug/kg	U
Methylene Chloride	75-09-2	1	3.14	ND	ug/kg	U
Acrylonitrile	107-13-1	1	7.86	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.57	ND	ug/kg	U
trans-1,2-Dichloroethene	156-60-5	1	1.57	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	7.86	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	1.57	ND	ug/kg	U
2-Butanone	78-93-3	1	7.86	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	1.57	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	1.57	ND	ug/kg	U
Chloroform	67-66-3	1	1.57	ND	ug/kg	U
Bromochloromethane	74-97-5	1	1.57	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.57	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	1.57	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	1.57	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	1.57	ND	ug/kg	U
Benzene	71-43-2	1	1.57	ND	ug/kg	U
Trichloroethene	79-01-6	1	1.57	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	1.57	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	1.57	ND	ug/kg	U
Dibromomethane	74-95-3	1	1.57	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	7.86	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	7.86	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	1.57	ND	ug/kg	U
Toluene	108-88-3	1	1.57	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(10-12)

17I0116-09 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 15:00
Analyzed: 21-Sep-2017 21:14

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	1.57	ND	ug/kg	U
2-Hexanone	591-78-6	1	7.86	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	1.57	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	1.57	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	1.57	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	1.57	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	1.57	ND	ug/kg	U
Chlorobenzene	108-90-7	1	1.57	ND	ug/kg	U
Ethylbenzene	100-41-4	1	1.57	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	1.57	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	3.14	ND	ug/kg	U
o-Xylene	95-47-6	1	1.57	ND	ug/kg	U
Xylenes, total	1330-20-7	1	3.14	ND	ug/kg	U
Styrene	100-42-5	1	1.57	ND	ug/kg	U
Bromoform	75-25-2	1	1.57	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	1.57	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	3.14	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	7.86	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	1.57	ND	ug/kg	U
Bromobenzene	108-86-1	1	1.57	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	1.57	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	1.57	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	1.57	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	1.57	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	1.57	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	1.57	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	1.57	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	1.57	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	1.57	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	1.57	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	1.57	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.57	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	7.86	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	7.86	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	7.86	ND	ug/kg	U
Naphthalene	91-20-3	1	7.86	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	7.86	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	1.57	ND	ug/kg	U

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(10-12)

17I0116-09 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 15:00
Analyzed: 21-Sep-2017 21:14

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	1.57	ND	ug/kg	U
2-Pentanone	107-87-9	1	7.86	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4			*80-149 %*	*130*	*%*	
Surrogate: Toluene-d8			*77-120 %*	*99.9*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*98.4*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*105*	*%*	

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(10-12)

17I0116-09 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 15:00
Analyzed: 21-Sep-2017 18:18

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFI0267	Sample Size: 11.02 g (wet)	Dry Weight:7.65 g
	Prepared: 14-Sep-2017	Final Volume: 0.5 mL	% Solids: 69.45
Sample Cleanup:	Cleanup Method: GPC		
	Cleanup Batch: CFI0096	Initial Volume: 0.5 mL	
	Cleaned: 19-Sep-2017	Final Volume: 0.5 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	66	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	1	66	ND	ug/kg	U
2-Chlorophenol	95-57-8	1	66	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	66	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	66	ND	ug/kg	U
Benzyl Alcohol	100-51-6	1	323	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	66	ND	ug/kg	U
2-Methylphenol	95-48-7	1	66	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	66	ND	ug/kg	U
4-Methylphenol	106-44-5	1	66	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	1	66	ND	ug/kg	U
Hexachloroethane	67-72-1	1	66	ND	ug/kg	U
Nitrobenzene	98-95-3	1	66	ND	ug/kg	U
Isophorone	78-59-1	1	66	ND	ug/kg	U
2-Nitrophenol	88-75-5	1	66	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	1	66	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	1	66	ND	ug/kg	U
Benzoic acid	65-85-0	1	657	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	1	323	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	66	ND	ug/kg	U
Naphthalene	91-20-3	1	66	ND	ug/kg	U
4-Chloroaniline	106-47-8	1	323	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	1	66	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	1	323	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	1	66	ND	ug/kg	U
Hexachlorocyclopentadiene	77-47-4	1	323	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	1	323	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	1	323	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	1	66	ND	ug/kg	U
2-Nitroaniline	88-74-4	1	323	ND	ug/kg	U
Dimethylphthalate	131-11-3	1	66	ND	ug/kg	U
Acenaphthylene	208-96-8	1	66	ND	ug/kg	U

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(10-12)

17I0116-09 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 15:00
Analyzed: 21-Sep-2017 18:18

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,6-Dinitrotoluene	606-20-2	1	323	ND	ug/kg	U
3-Nitroaniline	99-09-2	1	323	ND	ug/kg	U
Acenaphthene	83-32-9	1	66	ND	ug/kg	U
2,4-Dinitrophenol	51-28-5	1	657	ND	ug/kg	U
Dibenzofuran	132-64-9	1	66	ND	ug/kg	U
4-Nitrophenol	100-02-7	1	323	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	1	323	ND	ug/kg	U
Fluorene	86-73-7	1	66	ND	ug/kg	U
Diethyl phthalate	84-66-2	1	66	ND	ug/kg	U
4-Chlorophenylphenyl ether	7005-72-3	1	66	ND	ug/kg	U
4-Nitroaniline	100-01-6	1	323	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	1	657	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	1	66	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	1	66	ND	ug/kg	U
Hexachlorobenzene	118-74-1	1	66	ND	ug/kg	U
Pentachlorophenol	87-86-5	1	323	ND	ug/kg	U
Phenanthrene	85-01-8	1	66	ND	ug/kg	U
Anthracene	120-12-7	1	66	ND	ug/kg	U
Carbazole	86-74-8	1	66	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	1	66	ND	ug/kg	U
Fluoranthene	206-44-0	1	66	ND	ug/kg	U
Pyrene	129-00-0	1	66	ND	ug/kg	U
Butylbenzylphthalate	85-68-7	1	66	**235**	ug/kg	
Benzo(a)anthracene	56-55-3	1	66	ND	ug/kg	U
3,3'-Dichlorobenzidine	91-94-1	1	323	ND	ug/kg	U
Chrysene	218-01-9	1	66	ND	ug/kg	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	66	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	1	66	ND	ug/kg	U
Benzo(a)pyrene	50-32-8	1	66	ND	ug/kg	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	66	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	1	66	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	66	ND	ug/kg	U
Benzofluoranthenes, Total		1	66	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	1	66	ND	ug/kg	U
Surrogate: 2-Fluorophenol			*22-120 %*	*55.5*	*%*	
Surrogate: Phenol-d5			*27-120 %*	*60.0*	*%*	
Surrogate: 2-Chlorophenol-d4			*36-120 %*	*65.8*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(10-12)

17I0116-09 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 15:00
Analyzed: 21-Sep-2017 18:18

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichlorobenzene-d4		*38-120 %*	*63.4*	*%*	
Surrogate: Nitrobenzene-d5		*32-120 %*	*59.7*	*%*	
Surrogate: 2-Fluorobiphenyl		*39-120 %*	*71.7*	*%*	
Surrogate: 2,4,6-Tribromophenol		*31-131 %*	*86.6*	*%*	
Surrogate: p-Terphenyl-d14		*31-130 %*	*78.4*	*%*	

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(10-12)

17I0116-09 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-HCID
Instrument: FID3

Sampled: 09/11/2017 15:00
Analyzed: 13-Sep-2017 15:12

Sample Preparation: Preparation Method: EPA 3580A (Vortex)
Preparation Batch: BFI0227
Prepared: 13-Sep-2017
Sample Size: 10 g (wet)
Final Volume: 5 mL
Dry Weight:6.94 g
% Solids: 69.45

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)		1	14	ND	mg/kg	U
Diesel Range Organics (C12-C24)		1	36	ND	mg/kg	U
Motor Oil Range Organics (C24-C38)		1	72	ND	mg/kg	U
Surrogate: o-Terphenyl			*50-150 %*	*122*	*%*	
Surrogate: n-Triacontane			*50-150 %*	*109*	*%*	

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(10-12)

17I0116-09 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8
Instrument: ICPMS2

Sampled: 09/11/2017 15:00
Analyzed: 21-Sep-2017 19:30

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017

Sample Size: 1.071 g (wet)
Final Volume: 50 mL

Dry Weight:0.72 g
% Solids: 67.43

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chromium	7440-47-3	20	0.69	**39.4**	mg/kg	
Lead	7439-92-1	20	0.14	**5.57**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(10-12)

17I0116-09 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED
Instrument: ICPMS2

Sampled: 09/11/2017 15:00
Analyzed: 21-Sep-2017 19:30

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017
Sample Size: 1.071 g (wet)
Final Volume: 50 mL
Dry Weight:0.72 g
% Solids: 67.43

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.28	**3.88**	mg/kg	
Cadmium	7440-43-9	20	0.14	**0.14**	mg/kg	

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B2-S(10-12)

17I0116-09 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B
Instrument: CETAC

Sampled: 09/11/2017 15:00
Analyzed: 14-Sep-2017 14:45

Sample Preparation: Preparation Method: SMM EPA 7471B
Preparation Batch: BFI0238
Prepared: 13-Sep-2017
Sample Size: 0.248 g (wet)
Final Volume: 50 mL
Dry Weight:0.17 g
% Solids: 67.43

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.0299	**0.0568**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B3-S(3.75-5)

17I0116-10 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 15:40
Analyzed: 21-Sep-2017 15:24

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate)
Preparation Batch: BFI0504 | Sample Size: 5.76 g (wet) | Dry Weight:4.66 g
Prepared: 21-Sep-2017 | Final Volume: 5 mL | % Solids: 80.86

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	1.07	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	1.07	ND	ug/kg	U
Bromomethane	74-83-9	1	1.07	ND	ug/kg	U
Chloroethane	75-00-3	1	1.07	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.07	ND	ug/kg	U
Acrolein	107-02-8	1	5.37	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	2.15	ND	ug/kg	U
Acetone	67-64-1	1	5.37	**40.5**	ug/kg	
1,1-Dichloroethene	75-35-4	1	1.07	ND	ug/kg	U
Bromoethane	74-96-4	1	2.15	ND	ug/kg	U
Iodomethane	74-88-4	1	1.07	ND	ug/kg	U
Methylene Chloride	75-09-2	1	2.15	ND	ug/kg	U
Acrylonitrile	107-13-1	1	5.37	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.07	ND	ug/kg	U
trans-1,2-Dichloroethene	156-60-5	1	1.07	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	5.37	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	1.07	ND	ug/kg	U
2-Butanone	78-93-3	1	5.37	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	1.07	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	1.07	ND	ug/kg	U
Chloroform	67-66-3	1	1.07	ND	ug/kg	U
Bromochloromethane	74-97-5	1	1.07	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.07	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	1.07	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	1.07	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	1.07	ND	ug/kg	U
Benzene	71-43-2	1	1.07	ND	ug/kg	U
Trichloroethene	79-01-6	1	1.07	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	1.07	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	1.07	ND	ug/kg	U
Dibromomethane	74-95-3	1	1.07	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	5.37	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	5.37	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	1.07	ND	ug/kg	U
Toluene	108-88-3	1	1.07	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B3-S(3.75-5)

17I0116-10 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 15:40
Analyzed: 21-Sep-2017 15:24

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	1.07	ND	ug/kg	U
2-Hexanone	591-78-6	1	5.37	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	1.07	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	1.07	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	1.07	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	1.07	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	1.07	ND	ug/kg	U
Chlorobenzene	108-90-7	1	1.07	ND	ug/kg	U
Ethylbenzene	100-41-4	1	1.07	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	1.07	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	2.15	ND	ug/kg	U
o-Xylene	95-47-6	1	1.07	ND	ug/kg	U
Xylenes, total	1330-20-7	1	2.15	ND	ug/kg	U
Styrene	100-42-5	1	1.07	ND	ug/kg	U
Bromoform	75-25-2	1	1.07	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	1.07	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.15	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	5.37	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	1.07	ND	ug/kg	U
Bromobenzene	108-86-1	1	1.07	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	1.07	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	1.07	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	1.07	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	1.07	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	1.07	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	1.07	**1.24**	ug/kg	
s-Butylbenzene	135-98-8	1	1.07	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	1.07	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	1.07	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	1.07	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	1.07	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.07	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	5.37	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	5.37	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	5.37	ND	ug/kg	U
Naphthalene	91-20-3	1	5.37	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	5.37	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	1.07	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B3-S(3.75-5)

17I0116-10 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/11/2017 15:40
Analyzed: 21-Sep-2017 15:24

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	1.07	ND	ug/kg	U
2-Pentanone	107-87-9	1	5.37	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4			*80-149 %*	*121*	*%*	
Surrogate: Toluene-d8			*77-120 %*	*99.4*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*98.6*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*102*	*%*	

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B3-S(3.75-5)

17I0116-10 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 15:40
Analyzed: 21-Sep-2017 18:51

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFI0267	Sample Size: 10.08 g (wet)	Dry Weight:8.15 g
	Prepared: 14-Sep-2017	Final Volume: 0.5 mL	% Solids: 80.86
Sample Cleanup:	Cleanup Method: GPC		
	Cleanup Batch: CFI0096	Initial Volume: 0.5 mL	
	Cleaned: 19-Sep-2017	Final Volume: 0.5 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	62	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	1	62	ND	ug/kg	U
2-Chlorophenol	95-57-8	1	62	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	62	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	62	ND	ug/kg	U
Benzyl Alcohol	100-51-6	1	304	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	62	ND	ug/kg	U
2-Methylphenol	95-48-7	1	62	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	62	ND	ug/kg	U
4-Methylphenol	106-44-5	1	62	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	1	62	ND	ug/kg	U
Hexachloroethane	67-72-1	1	62	ND	ug/kg	U
Nitrobenzene	98-95-3	1	62	ND	ug/kg	U
Isophorone	78-59-1	1	62	ND	ug/kg	U
2-Nitrophenol	88-75-5	1	62	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	1	62	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	1	62	ND	ug/kg	U
Benzoic acid	65-85-0	1	617	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	1	304	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	62	ND	ug/kg	U
Naphthalene	91-20-3	1	62	ND	ug/kg	U
4-Chloroaniline	106-47-8	1	304	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	1	62	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	1	304	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	1	62	ND	ug/kg	U
Hexachlorocyclopentadiene	77-47-4	1	304	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	1	304	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	1	304	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	1	62	ND	ug/kg	U
2-Nitroaniline	88-74-4	1	304	ND	ug/kg	U
Dimethylphthalate	131-11-3	1	62	ND	ug/kg	U
Acenaphthylene	208-96-8	1	62	ND	ug/kg	U

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B3-S(3.75-5)

17I0116-10 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 15:40
Analyzed: 21-Sep-2017 18:51

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,6-Dinitrotoluene	606-20-2	1	304	ND	ug/kg	U
3-Nitroaniline	99-09-2	1	304	ND	ug/kg	U
Acenaphthene	83-32-9	1	62	ND	ug/kg	U
2,4-Dinitrophenol	51-28-5	1	617	ND	ug/kg	U
Dibenzofuran	132-64-9	1	62	ND	ug/kg	U
4-Nitrophenol	100-02-7	1	304	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	1	304	ND	ug/kg	U
Fluorene	86-73-7	1	62	ND	ug/kg	U
Diethyl phthalate	84-66-2	1	62	ND	ug/kg	U
4-Chlorophenylphenyl ether	7005-72-3	1	62	ND	ug/kg	U
4-Nitroaniline	100-01-6	1	304	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	1	617	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	1	62	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	1	62	ND	ug/kg	U
Hexachlorobenzene	118-74-1	1	62	ND	ug/kg	U
Pentachlorophenol	87-86-5	1	304	ND	ug/kg	U
Phenanthrene	85-01-8	1	62	ND	ug/kg	U
Anthracene	120-12-7	1	62	ND	ug/kg	U
Carbazole	86-74-8	1	62	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	1	62	ND	ug/kg	U
Fluoranthene	206-44-0	1	62	ND	ug/kg	U
Pyrene	129-00-0	1	62	ND	ug/kg	U
Butylbenzylphthalate	85-68-7	1	62	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	1	62	ND	ug/kg	U
3,3'-Dichlorobenzidine	91-94-1	1	304	ND	ug/kg	U
Chrysene	218-01-9	1	62	ND	ug/kg	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	62	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	1	62	ND	ug/kg	U
Benzo(a)pyrene	50-32-8	1	62	ND	ug/kg	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	62	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	1	62	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	62	ND	ug/kg	U
Benzofluoranthenes, Total		1	62	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	1	62	ND	ug/kg	U
Surrogate: 2-Fluorophenol			*22-120 %*	*62.1*	*%*	
Surrogate: Phenol-d5			*27-120 %*	*66.7*	*%*	
Surrogate: 2-Chlorophenol-d4			*36-120 %*	*73.2*	*%*	

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B3-S(3.75-5)

17I0116-10 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/11/2017 15:40
Analyzed: 21-Sep-2017 18:51

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichlorobenzene-d4		*38-120 %*	*74.1*	*%*	
Surrogate: Nitrobenzene-d5		*32-120 %*	*68.4*	*%*	
Surrogate: 2-Fluorobiphenyl		*39-120 %*	*81.5*	*%*	
Surrogate: 2,4,6-Tribromophenol		*31-131 %*	*92.1*	*%*	
Surrogate: p-Terphenyl-d14		*31-130 %*	*74.9*	*%*	

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B3-S(3.75-5)

17I0116-10 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-HCID
Instrument: FID3

Sampled: 09/11/2017 15:40
Analyzed: 13-Sep-2017 15:32

Sample Preparation: Preparation Method: EPA 3580A (Vortex)
Preparation Batch: BFI0227
Prepared: 13-Sep-2017

Sample Size: 10 g (wet)
Final Volume: 5 mL

Dry Weight:8.09 g
% Solids: 80.86

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)		1	12	ND	mg/kg	U
Diesel Range Organics (C12-C24)		1	31	ND	mg/kg	U
Motor Oil Range Organics (C24-C38)		1	62	ND	mg/kg	U
Surrogate: o-Terphenyl			*50-150 %*	*121*	*%*	
Surrogate: n-Triacontane			*50-150 %*	*108*	*%*	

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B3-S(3.75-5)

17I0116-10 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8
Instrument: ICPMS2

Sampled: 09/11/2017 15:40
Analyzed: 21-Sep-2017 19:41

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017
Sample Size: 1.035 g (wet)
Final Volume: 50 mL
Dry Weight:0.82 g
% Solids: 79.20

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chromium	7440-47-3	20	0.61	**42.3**	mg/kg	
Lead	7439-92-1	20	0.12	**20.3**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B3-S(3.75-5)

17I0116-10 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED
Instrument: ICPMS2

Sampled: 09/11/2017 15:40
Analyzed: 21-Sep-2017 19:41

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017

Sample Size: 1.035 g (wet)
Final Volume: 50 mL

Dry Weight:0.82 g
% Solids: 79.20

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.24	**4.82**	mg/kg	
Cadmium	7440-43-9	20	0.12	**0.52**	mg/kg	

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

LAI-B3-S(3.75-5)

17I0116-10 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B
Instrument: CETAC

Sampled: 09/11/2017 15:40
Analyzed: 14-Sep-2017 14:46

Sample Preparation: Preparation Method: SMM EPA 7471B
Preparation Batch: BFI0238
Prepared: 13-Sep-2017
Sample Size: 0.224 g (wet)
Final Volume: 50 mL
Dry Weight:0.18 g
% Solids: 79.20

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.0282	**0.0564**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Trip Blank

17I0116-11 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 09/11/2017 00:00
Analyzed: 14-Sep-2017 17:35

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFI0274 Sample Size: 10 mL
Prepared: 14-Sep-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U

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Trip Blank

17I0116-11 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 09/11/2017 00:00
Analyzed: 14-Sep-2017 17:35

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Trip Blank

17I0116-11 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 09/11/2017 00:00
Analyzed: 14-Sep-2017 17:35

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*147*	*%*	*
Surrogate: Toluene-d8			*80-120 %*	*99.0*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*83.6*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*103*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Trip Blank

17I0116-11 (Water)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT2

Sampled: 09/11/2017 00:00
Analyzed: 14-Sep-2017 17:35

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFI0274 Sample Size: 10 mL
Prepared: 14-Sep-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*99.0*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*83.6*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0274 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0274-BLK1)				Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 11:29						
Gasoline Range Organics (Tol-Nap)	ND	100	ug/L							U
Surrogate: Toluene-d8		4.85	ug/L	*5.00*		*97.1*	*80-120*			
Surrogate: 4-Bromofluorobenzene		4.55	ug/L	*5.00*		*91.0*	*80-120*			
Blank (BFI0274-BLK2)				Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 11:29						
Chloromethane	ND	0.50	ug/L							U
Vinyl Chloride	ND	0.20	ug/L							U
Bromomethane	ND	1.00	ug/L							U
Chloroethane	ND	0.20	ug/L							U
Trichlorofluoromethane	ND	0.20	ug/L							U
Acrolein	ND	5.00	ug/L							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.20	ug/L							U
Acetone	ND	5.00	ug/L							U
1,1-Dichloroethene	ND	0.20	ug/L							U
Bromoethane	ND	0.20	ug/L							U
Iodomethane	ND	1.00	ug/L							U
Methylene Chloride	ND	1.00	ug/L							U
Acrylonitrile	ND	1.00	ug/L							U
Carbon Disulfide	ND	0.20	ug/L							U
trans-1,2-Dichloroethene	ND	0.20	ug/L							U
Vinyl Acetate	ND	0.20	ug/L							U
1,1-Dichloroethane	ND	0.20	ug/L							U
2-Butanone	ND	5.00	ug/L							U
2,2-Dichloropropane	ND	0.20	ug/L							U
cis-1,2-Dichloroethene	ND	0.20	ug/L							U
Chloroform	ND	0.20	ug/L							U
Bromochloromethane	ND	0.20	ug/L							U
1,1,1-Trichloroethane	ND	0.20	ug/L							U
1,1-Dichloropropene	ND	0.20	ug/L							U
Carbon tetrachloride	ND	0.20	ug/L							U
1,2-Dichloroethane	ND	0.20	ug/L							U
Benzene	ND	0.20	ug/L							U
Trichloroethene	ND	0.20	ug/L							U
1,2-Dichloropropane	ND	0.20	ug/L							U
Bromodichloromethane	ND	0.20	ug/L							U

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0274 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0274-BLK2)			Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 11:29							
Dibromomethane	ND	0.20	ug/L							U
2-Chloroethyl vinyl ether	ND	1.00	ug/L							U
4-Methyl-2-Pentanone	ND	5.00	ug/L							U
cis-1,3-Dichloropropene	ND	0.20	ug/L							U
Toluene	ND	0.20	ug/L							U
trans-1,3-Dichloropropene	ND	0.20	ug/L							U
2-Hexanone	ND	5.00	ug/L							U
1,1,2-Trichloroethane	ND	0.20	ug/L							U
1,3-Dichloropropane	ND	0.20	ug/L							U
Tetrachloroethene	ND	0.20	ug/L							U
Dibromochloromethane	ND	0.20	ug/L							U
1,2-Dibromoethane	ND	0.20	ug/L							U
Chlorobenzene	ND	0.20	ug/L							U
Ethylbenzene	ND	0.20	ug/L							U
1,1,1,2-Tetrachloroethane	ND	0.20	ug/L							U
m,p-Xylene	ND	0.40	ug/L							U
o-Xylene	ND	0.20	ug/L							U
Xylenes, total	ND	0.60	ug/L							U
Styrene	ND	0.20	ug/L							U
Bromoform	ND	0.20	ug/L							U
1,1,2,2-Tetrachloroethane	ND	0.20	ug/L							U
1,2,3-Trichloropropane	ND	0.50	ug/L							U
trans-1,4-Dichloro 2-Butene	ND	1.00	ug/L							U
n-Propylbenzene	ND	0.20	ug/L							U
Bromobenzene	ND	0.20	ug/L							U
Isopropyl Benzene	ND	0.20	ug/L							U
2-Chlorotoluene	ND	0.20	ug/L							U
4-Chlorotoluene	ND	0.20	ug/L							U
t-Butylbenzene	ND	0.20	ug/L							U
1,3,5-Trimethylbenzene	ND	0.20	ug/L							U
1,2,4-Trimethylbenzene	ND	0.20	ug/L							U
s-Butylbenzene	ND	0.20	ug/L							U
4-Isopropyl Toluene	ND	0.20	ug/L							U
1,3-Dichlorobenzene	ND	0.20	ug/L							U
1,4-Dichlorobenzene	ND	0.20	ug/L							U

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0274 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0274-BLK2)				Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 11:29						
n-Butylbenzene	ND	0.20	ug/L							U
1,2-Dichlorobenzene	ND	0.20	ug/L							U
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L							U
1,2,4-Trichlorobenzene	ND	0.50	ug/L							U
Hexachloro-1,3-Butadiene	ND	0.50	ug/L							U
Naphthalene	ND	0.50	ug/L							U
1,2,3-Trichlorobenzene	ND	0.50	ug/L							U
Dichlorodifluoromethane	ND	0.20	ug/L							U
Methyl tert-butyl Ether	ND	0.50	ug/L							U
2-Pentanone	ND	5.00	ug/L							U
Surrogate: 1,2-Dichloroethane-d4		6.19	ug/L	*5.00*		*124*	*80-129*			
Surrogate: Toluene-d8		4.85	ug/L	*5.00*		*97.1*	*80-120*			
Surrogate: 4-Bromofluorobenzene		4.55	ug/L	*5.00*		*91.0*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4		5.13	ug/L	*5.00*		*103*	*80-120*			
LCS (BFI0274-BS1)				Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 09:28						
Gasoline Range Organics (Tol-Nap)	1020	100	ug/L	1000		102	72-128			
Surrogate: Toluene-d8		4.92	ug/L	*5.00*		*98.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene		4.62	ug/L	*5.00*		*92.5*	*80-120*			
LCS (BFI0274-BS2)				Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 09:48						
Chloromethane	11.0	0.50	ug/L	10.0		110	60-138			
Vinyl Chloride	10.8	0.20	ug/L	10.0		108	66-133			
Bromomethane	11.1	1.00	ug/L	10.0		111	72-131			
Chloroethane	17.3	0.20	ug/L	10.0		173	60-155			*, Q
Trichlorofluoromethane	12.1	0.20	ug/L	10.0		121	80-129			Q
Acrolein	49.6	5.00	ug/L	50.0		99.1	52-144			
1,1,2-Trichloro-1,2,2-Trifluoroethane	11.2	0.20	ug/L	10.0		112	76-129			
Acetone	49.0	5.00	ug/L	50.0		98.0	58-142			
1,1-Dichloroethene	12.1	0.20	ug/L	10.0		121	69-135			Q
Bromoethane	10.6	0.20	ug/L	10.0		106	78-128			
Iodomethane	6.85	1.00	ug/L	10.0		68.5	56-147			Q
Methylene Chloride	10.6	1.00	ug/L	10.0		106	65-135			
Acrylonitrile	8.08	1.00	ug/L	10.0		80.8	64-134			
Carbon Disulfide	10.8	0.20	ug/L	10.0		108	78-125			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0274 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0274-BS2)				Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 09:48						
trans-1,2-Dichloroethene	9.66	0.20	ug/L	10.0		96.6	78-128			
Vinyl Acetate	9.15	0.20	ug/L	10.0		91.5	55-138			
1,1-Dichloroethane	10.8	0.20	ug/L	10.0		108	76-124			
2-Butanone	53.7	5.00	ug/L	50.0		107	61-140			
2,2-Dichloropropane	9.70	0.20	ug/L	10.0		97.0	78-125			
cis-1,2-Dichloroethene	10.3	0.20	ug/L	10.0		103	80-121			
Chloroform	10.9	0.20	ug/L	10.0		109	80-122			
Bromochloromethane	10.8	0.20	ug/L	10.0		108	80-121			
1,1,1-Trichloroethane	11.0	0.20	ug/L	10.0		110	79-123			
1,1-Dichloropropene	10.2	0.20	ug/L	10.0		102	80-120			
Carbon tetrachloride	9.53	0.20	ug/L	10.0		95.3	53-137			
1,2-Dichloroethane	11.3	0.20	ug/L	10.0		113	75-123			
Benzene	10.3	0.20	ug/L	10.0		103	80-120			
Trichloroethene	10.0	0.20	ug/L	10.0		100	80-120			
1,2-Dichloropropane	10.2	0.20	ug/L	10.0		102	80-120			
Bromodichloromethane	10.3	0.20	ug/L	10.0		103	80-121			
Dibromomethane	10.1	0.20	ug/L	10.0		101	80-120			
2-Chloroethyl vinyl ether	8.16	1.00	ug/L	10.0		81.6	74-127			
4-Methyl-2-Pentanone	44.3	5.00	ug/L	50.0		88.6	67-133			
cis-1,3-Dichloropropene	9.32	0.20	ug/L	10.0		93.2	80-124			
Toluene	10.2	0.20	ug/L	10.0		102	80-120			
trans-1,3-Dichloropropene	9.25	0.20	ug/L	10.0		92.5	71-127			
2-Hexanone	47.2	5.00	ug/L	50.0		94.5	69-133			
1,1,2-Trichloroethane	10.1	0.20	ug/L	10.0		101	80-121			
1,3-Dichloropropane	10.1	0.20	ug/L	10.0		101	80-120			
Tetrachloroethene	10.3	0.20	ug/L	10.0		103	80-120			
Dibromochloromethane	9.46	0.20	ug/L	10.0		94.6	65-135			
1,2-Dibromoethane	9.43	0.20	ug/L	10.0		94.3	80-121			
Chlorobenzene	10.6	0.20	ug/L	10.0		106	80-120			
Ethylbenzene	10.2	0.20	ug/L	10.0		102	80-120			
1,1,1,2-Tetrachloroethane	10.0	0.20	ug/L	10.0		100	80-120			
m,p-Xylene	20.8	0.40	ug/L	20.0		104	80-121			
o-Xylene	10.0	0.20	ug/L	10.0		100	80-121			
Xylenes, total	30.8	0.60	ug/L	30.0		103	76-127			
Styrene	10.1	0.20	ug/L	10.0		101	80-124			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0274 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0274-BS2)				Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 09:48						
Bromoform	8.06	0.20	ug/L	10.0		80.6	51-134			
1,1,2,2-Tetrachloroethane	9.13	0.20	ug/L	10.0		91.3	77-123			
1,2,3-Trichloropropane	9.37	0.50	ug/L	10.0		93.7	76-125			
trans-1,4-Dichloro 2-Butene	7.70	1.00	ug/L	10.0		77.0	55-129			Q
n-Propylbenzene	9.74	0.20	ug/L	10.0		97.4	78-130			
Bromobenzene	9.82	0.20	ug/L	10.0		98.2	80-120			
Isopropyl Benzene	9.92	0.20	ug/L	10.0		99.2	80-128			
2-Chlorotoluene	10.0	0.20	ug/L	10.0		100	78-122			
4-Chlorotoluene	9.97	0.20	ug/L	10.0		99.7	80-121			
t-Butylbenzene	9.74	0.20	ug/L	10.0		97.4	78-125			
1,3,5-Trimethylbenzene	10.1	0.20	ug/L	10.0		101	80-129			
1,2,4-Trimethylbenzene	10.0	0.20	ug/L	10.0		100	80-127			
s-Butylbenzene	9.96	0.20	ug/L	10.0		99.6	78-129			
4-Isopropyl Toluene	9.84	0.20	ug/L	10.0		98.4	79-130			
1,3-Dichlorobenzene	9.75	0.20	ug/L	10.0		97.5	80-120			
1,4-Dichlorobenzene	9.86	0.20	ug/L	10.0		98.6	80-120			
n-Butylbenzene	9.77	0.20	ug/L	10.0		97.7	74-129			
1,2-Dichlorobenzene	9.76	0.20	ug/L	10.0		97.6	80-120			
1,2-Dibromo-3-chloropropane	7.24	0.50	ug/L	10.0		72.4	62-123			Q
1,2,4-Trichlorobenzene	9.22	0.50	ug/L	10.0		92.2	64-124			
Hexachloro-1,3-Butadiene	9.06	0.50	ug/L	10.0		90.6	58-123			
Naphthalene	8.31	0.50	ug/L	10.0		83.1	50-134			
1,2,3-Trichlorobenzene	9.22	0.50	ug/L	10.0		92.2	49-133			
Dichlorodifluoromethane	11.5	0.20	ug/L	10.0		115	48-147			
Methyl tert-butyl Ether	9.33	0.50	ug/L	10.0		93.3	71-132			
2-Pentanone	41.9	5.00	ug/L	50.0		83.8	69-134			
Surrogate: 1,2-Dichloroethane-d4		5.58	ug/L	*5.00*		*112*	*80-129*			
Surrogate: Toluene-d8		5.08	ug/L	*5.00*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene		4.82	ug/L	*5.00*		*96.3*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4		5.03	ug/L	*5.00*		*101*	*80-120*			
LCS Dup (BFI0274-BSD1)				Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 10:08						
Gasoline Range Organics (Tol-Nap)	1010	100	ug/L	1000		101	72-128	0.40	30	
Surrogate: Toluene-d8		4.94	ug/L	*5.00*		*98.7*	*80-120*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0274 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0274-BSD1)				Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 10:08						
Surrogate: 4-Bromofluorobenzene		4.62	ug/L	*5.00*		*92.4*	*80-120*			
LCS Dup (BFI0274-BSD2)				Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 10:28						
Chloromethane	10.8	0.50	ug/L	10.0		108	60-138	1.04	30	
Vinyl Chloride	10.8	0.20	ug/L	10.0		108	66-133	0.69	30	
Bromomethane	10.9	1.00	ug/L	10.0		109	72-131	1.56	30	
Chloroethane	17.4	0.20	ug/L	10.0		174	60-155	0.40	30	*, Q
Trichlorofluoromethane	12.0	0.20	ug/L	10.0		120	80-129	1.44	30	Q
Acrolein	52.1	5.00	ug/L	50.0		104	52-144	4.98	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	11.0	0.20	ug/L	10.0		110	76-129	2.01	30	
Acetone	51.8	5.00	ug/L	50.0		104	58-142	5.45	30	
1,1-Dichloroethene	12.1	0.20	ug/L	10.0		121	69-135	0.10	30	Q
Bromoethane	10.4	0.20	ug/L	10.0		104	78-128	2.06	30	
Iodomethane	7.00	1.00	ug/L	10.0		70.0	56-147	2.11	30	Q
Methylene Chloride	10.6	1.00	ug/L	10.0		106	65-135	0.06	30	
Acrylonitrile	8.39	1.00	ug/L	10.0		83.9	64-134	3.83	30	
Carbon Disulfide	10.8	0.20	ug/L	10.0		108	78-125	0.70	30	
trans-1,2-Dichloroethene	9.72	0.20	ug/L	10.0		97.2	78-128	0.53	30	
Vinyl Acetate	9.81	0.20	ug/L	10.0		98.1	55-138	6.96	30	
1,1-Dichloroethane	10.8	0.20	ug/L	10.0		108	76-124	0.32	30	
2-Butanone	52.5	5.00	ug/L	50.0		105	61-140	2.14	30	
2,2-Dichloropropane	9.01	0.20	ug/L	10.0		90.1	78-125	7.39	30	
cis-1,2-Dichloroethene	10.4	0.20	ug/L	10.0		104	80-121	0.81	30	
Chloroform	11.0	0.20	ug/L	10.0		110	80-122	0.44	30	
Bromochloromethane	10.8	0.20	ug/L	10.0		108	80-121	0.27	30	
1,1,1-Trichloroethane	10.7	0.20	ug/L	10.0		107	79-123	2.41	30	
1,1-Dichloropropene	10.0	0.20	ug/L	10.0		100	80-120	2.12	30	
Carbon tetrachloride	9.65	0.20	ug/L	10.0		96.5	53-137	1.29	30	
1,2-Dichloroethane	11.3	0.20	ug/L	10.0		113	75-123	0.72	30	
Benzene	10.3	0.20	ug/L	10.0		103	80-120	0.29	30	
Trichloroethene	9.90	0.20	ug/L	10.0		99.0	80-120	1.06	30	
1,2-Dichloropropane	10.2	0.20	ug/L	10.0		102	80-120	0.36	30	
Bromodichloromethane	10.3	0.20	ug/L	10.0		103	80-121	0.43	30	
Dibromomethane	10.3	0.20	ug/L	10.0		103	80-120	1.17	30	
2-Chloroethyl vinyl ether	8.51	1.00	ug/L	10.0		85.1	74-127	4.24	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0274 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0274-BSD2)				Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 10:28						
4-Methyl-2-Pentanone	47.0	5.00	ug/L	50.0		93.9	67-133	5.79	30	
cis-1,3-Dichloropropene	9.34	0.20	ug/L	10.0		93.4	80-124	0.17	30	
Toluene	10.0	0.20	ug/L	10.0		100	80-120	1.31	30	
trans-1,3-Dichloropropene	9.19	0.20	ug/L	10.0		91.9	71-127	0.64	30	
2-Hexanone	50.0	5.00	ug/L	50.0		100	69-133	5.69	30	
1,1,2-Trichloroethane	10.2	0.20	ug/L	10.0		102	80-121	0.90	30	
1,3-Dichloropropane	10.3	0.20	ug/L	10.0		103	80-120	2.35	30	
Tetrachloroethene	10.3	0.20	ug/L	10.0		103	80-120	0.07	30	
Dibromochloromethane	9.73	0.20	ug/L	10.0		97.3	65-135	2.79	30	
1,2-Dibromoethane	9.67	0.20	ug/L	10.0		96.7	80-121	2.56	30	
Chlorobenzene	10.6	0.20	ug/L	10.0		106	80-120	0.37	30	
Ethylbenzene	10.0	0.20	ug/L	10.0		100	80-120	1.66	30	
1,1,1,2-Tetrachloroethane	10.2	0.20	ug/L	10.0		102	80-120	1.46	30	
m,p-Xylene	21.0	0.40	ug/L	20.0		105	80-121	0.77	30	
o-Xylene	9.81	0.20	ug/L	10.0		98.1	80-121	1.91	30	
Xylenes, total	30.8	0.60	ug/L	30.0		103	76-127	0.09	30	
Styrene	10.0	0.20	ug/L	10.0		100	80-124	0.84	30	
Bromoform	8.19	0.20	ug/L	10.0		81.9	51-134	1.56	30	
1,1,2,2-Tetrachloroethane	9.49	0.20	ug/L	10.0		94.9	77-123	3.86	30	
1,2,3-Trichloropropane	9.85	0.50	ug/L	10.0		98.5	76-125	4.96	30	
trans-1,4-Dichloro 2-Butene	6.94	1.00	ug/L	10.0		69.4	55-129	10.40	30	Q
n-Propylbenzene	9.60	0.20	ug/L	10.0		96.0	78-130	1.42	30	
Bromobenzene	9.78	0.20	ug/L	10.0		97.8	80-120	0.38	30	
Isopropyl Benzene	9.84	0.20	ug/L	10.0		98.4	80-128	0.84	30	
2-Chlorotoluene	9.99	0.20	ug/L	10.0		99.9	78-122	0.07	30	
4-Chlorotoluene	9.87	0.20	ug/L	10.0		98.7	80-121	1.02	30	
t-Butylbenzene	9.73	0.20	ug/L	10.0		97.3	78-125	0.09	30	
1,3,5-Trimethylbenzene	10.1	0.20	ug/L	10.0		101	80-129	0.44	30	
1,2,4-Trimethylbenzene	9.89	0.20	ug/L	10.0		98.9	80-127	1.45	30	
s-Butylbenzene	9.83	0.20	ug/L	10.0		98.3	78-129	1.27	30	
4-Isopropyl Toluene	9.71	0.20	ug/L	10.0		97.1	79-130	1.25	30	
1,3-Dichlorobenzene	9.70	0.20	ug/L	10.0		97.0	80-120	0.54	30	
1,4-Dichlorobenzene	9.75	0.20	ug/L	10.0		97.5	80-120	1.10	30	
n-Butylbenzene	9.59	0.20	ug/L	10.0		95.9	74-129	1.95	30	
1,2-Dichlorobenzene	9.71	0.20	ug/L	10.0		97.1	80-120	0.50	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0274 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0274-BSD2)				Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 10:28						
1,2-Dibromo-3-chloropropane	7.30	0.50	ug/L	10.0		73.0	62-123	0.90	30	Q
1,2,4-Trichlorobenzene	9.21	0.50	ug/L	10.0		92.1	64-124	0.07	30	
Hexachloro-1,3-Butadiene	8.72	0.50	ug/L	10.0		87.2	58-123	3.86	30	
Naphthalene	8.63	0.50	ug/L	10.0		86.3	50-134	3.77	30	
1,2,3-Trichlorobenzene	9.32	0.50	ug/L	10.0		93.2	49-133	1.09	30	
Dichlorodifluoromethane	11.3	0.20	ug/L	10.0		113	48-147	1.93	30	
Methyl tert-butyl Ether	9.57	0.50	ug/L	10.0		95.7	71-132	2.53	30	
2-Pentanone	45.2	5.00	ug/L	50.0		90.4	69-134	7.57	30	
Surrogate: 1,2-Dichloroethane-d4		5.60	ug/L	*5.00*		*112*	*80-129*			
Surrogate: Toluene-d8		5.08	ug/L	*5.00*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene		4.94	ug/L	*5.00*		*98.8*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4		5.16	ug/L	*5.00*		*103*	*80-120*			
Matrix Spike (BFI0274-MS1)	**Source: 17I0116-07**			Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 18:36						
Chloromethane	11.9	0.50	ug/L	10.0	ND	119	60-138			
Vinyl Chloride	11.5	0.20	ug/L	10.0	ND	115	66-133			
Bromomethane	8.99	1.00	ug/L	10.0	ND	89.9	72-131			
Chloroethane	20.0	0.20	ug/L	10.0	ND	200	60-155			*, Q
Trichlorofluoromethane	13.9	0.20	ug/L	10.0	ND	139	80-129			*, Q
Acrolein	53.4	5.00	ug/L	50.0	ND	107	52-144			
1,1,2-Trichloro-1,2,2-Trifluoroethane	12.4	0.20	ug/L	10.0	ND	124	76-129			
Acetone	74.2	5.00	ug/L	50.0	8.09	132	58-142			
1,1-Dichloroethene	13.5	0.20	ug/L	10.0	ND	135	69-135			Q
Bromoethane	11.7	0.20	ug/L	10.0	ND	117	78-128			
Iodomethane	3.83	1.00	ug/L	10.0	ND	38.3	56-147			*, Q
Methylene Chloride	12.1	1.00	ug/L	10.0	ND	121	65-135			
Acrylonitrile	9.68	1.00	ug/L	10.0	ND	96.8	64-134			
Carbon Disulfide	12.4	0.20	ug/L	10.0	0.27	121	78-125			
trans-1,2-Dichloroethene	10.2	0.20	ug/L	10.0	ND	102	78-128			
Vinyl Acetate	8.23	0.20	ug/L	10.0	ND	82.3	55-138			
1,1-Dichloroethane	11.7	0.20	ug/L	10.0	ND	117	76-124			
2-Butanone	68.2	5.00	ug/L	50.0	ND	136	61-140			
2,2-Dichloropropane	7.48	0.20	ug/L	10.0	ND	74.8	78-125			*
cis-1,2-Dichloroethene	10.4	0.20	ug/L	10.0	ND	104	80-121			
Chloroform	12.0	0.20	ug/L	10.0	ND	120	80-122			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0274 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BFI0274-MS1)	**Source: 17I0116-07**		Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 18:36							
Bromochloromethane	11.5	0.20	ug/L	10.0	ND	115	80-121			
1,1,1-Trichloroethane	11.9	0.20	ug/L	10.0	ND	119	79-123			
1,1-Dichloropropene	10.5	0.20	ug/L	10.0	ND	105	80-120			
Carbon tetrachloride	10.5	0.20	ug/L	10.0	ND	105	53-137			
1,2-Dichloroethane	12.5	0.20	ug/L	10.0	ND	125	75-123			*
Benzene	11.0	0.20	ug/L	10.0	ND	110	80-120			
Trichloroethene	10.2	0.20	ug/L	10.0	ND	102	80-120			
1,2-Dichloropropane	10.9	0.20	ug/L	10.0	ND	109	80-120			
Bromodichloromethane	11.3	0.20	ug/L	10.0	ND	113	80-121			
Dibromomethane	11.0	0.20	ug/L	10.0	ND	110	80-120			
2-Chloroethyl vinyl ether	ND	1.00	ug/L	10.0	ND		74-127			*, U
4-Methyl-2-Pentanone	51.8	5.00	ug/L	50.0	ND	104	67-133			
cis-1,3-Dichloropropene	9.07	0.20	ug/L	10.0	ND	90.7	80-124			
Toluene	10.6	0.20	ug/L	10.0	ND	104	80-120			
trans-1,3-Dichloropropene	9.74	0.20	ug/L	10.0	ND	97.4	71-127			
2-Hexanone	54.9	5.00	ug/L	50.0	ND	110	69-133			
1,1,2-Trichloroethane	10.8	0.20	ug/L	10.0	ND	108	80-121			
1,3-Dichloropropane	10.7	0.20	ug/L	10.0	ND	107	80-120			
Tetrachloroethene	10.4	0.20	ug/L	10.0	ND	104	80-120			
Dibromochloromethane	10.0	0.20	ug/L	10.0	ND	100	65-135			
1,2-Dibromoethane	10.1	0.20	ug/L	10.0	ND	101	80-121			
Chlorobenzene	11.0	0.20	ug/L	10.0	ND	110	80-120			
Ethylbenzene	10.2	0.20	ug/L	10.0	ND	102	80-120			
1,1,1,2-Tetrachloroethane	10.4	0.20	ug/L	10.0	ND	104	80-120			
m,p-Xylene	21.6	0.40	ug/L	20.0	ND	107	80-121			
o-Xylene	9.89	0.20	ug/L	10.0	ND	98.9	80-121			
Xylenes, total	31.4	0.60	ug/L	30.0	ND	104	76-127			
Styrene	9.90	0.20	ug/L	10.0	ND	99.0	80-124			
Bromoform	8.54	0.20	ug/L	10.0	ND	85.4	51-134			
1,1,2,2-Tetrachloroethane	10.1	0.20	ug/L	10.0	ND	101	77-123			
1,2,3-Trichloropropane	10.2	0.50	ug/L	10.0	ND	102	76-125			
trans-1,4-Dichloro 2-Butene	7.50	1.00	ug/L	10.0	ND	75.0	55-129			Q
n-Propylbenzene	9.60	0.20	ug/L	10.0	ND	96.0	78-130			
Bromobenzene	9.47	0.20	ug/L	10.0	ND	94.7	80-120			
Isopropyl Benzene	9.53	0.20	ug/L	10.0	ND	95.3	80-128			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0274 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BFI0274-MS1)	**Source: 17I0116-07**		Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 18:36							
2-Chlorotoluene	9.89	0.20	ug/L	10.0	ND	98.9	78-122			
4-Chlorotoluene	9.83	0.20	ug/L	10.0	ND	98.3	80-121			
t-Butylbenzene	9.44	0.20	ug/L	10.0	ND	94.4	78-125			
1,3,5-Trimethylbenzene	9.97	0.20	ug/L	10.0	ND	99.7	80-129			
1,2,4-Trimethylbenzene	9.96	0.20	ug/L	10.0	ND	99.3	80-127			
s-Butylbenzene	9.72	0.20	ug/L	10.0	ND	97.2	78-129			
4-Isopropyl Toluene	9.57	0.20	ug/L	10.0	ND	95.3	79-130			
1,3-Dichlorobenzene	9.63	0.20	ug/L	10.0	ND	96.3	80-120			
1,4-Dichlorobenzene	9.77	0.20	ug/L	10.0	ND	97.7	80-120			
n-Butylbenzene	9.52	0.20	ug/L	10.0	ND	95.2	74-129			
1,2-Dichlorobenzene	9.61	0.20	ug/L	10.0	ND	96.1	80-120			
1,2-Dibromo-3-chloropropane	7.95	0.50	ug/L	10.0	ND	79.5	62-123			Q
1,2,4-Trichlorobenzene	8.85	0.50	ug/L	10.0	ND	88.5	64-124			
Hexachloro-1,3-Butadiene	8.04	0.50	ug/L	10.0	ND	80.4	58-123			
Naphthalene	8.61	0.50	ug/L	10.0	ND	86.1	50-134			
1,2,3-Trichlorobenzene	9.31	0.50	ug/L	10.0	ND	93.1	49-133			
Dichlorodifluoromethane	12.8	0.20	ug/L	10.0	ND	128	48-147			
Methyl tert-butyl Ether	9.88	0.50	ug/L	10.0	ND	98.8	71-132			
2-Pentanone	48.7	5.00	ug/L	50.0	ND	97.4	69-134			
Surrogate: 1,2-Dichloroethane-d4	6.35		ug/L	*5.00*	*7.50*	*127*	*80-129*			
Surrogate: Toluene-d8	5.14		ug/L	*5.00*	*4.93*	*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.83		ug/L	*5.00*	*4.10*	*96.6*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.91		ug/L	*5.00*	*5.30*	*98.3*	*80-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Matrix Spike Dup (BFI0274-MSD1)	**Source: 17I0116-07**		Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 18:57							
Chloromethane	12.6	0.50	ug/L	10.0	ND	126	60-138	6.03	30	
Vinyl Chloride	12.5	0.20	ug/L	10.0	ND	125	66-133	8.02	30	
Bromomethane	10.9	1.00	ug/L	10.0	ND	109	72-131	19.50	30	
Chloroethane	20.0	0.20	ug/L	10.0	ND	200	60-155	0.03	30	*, Q
Trichlorofluoromethane	14.4	0.20	ug/L	10.0	ND	144	80-129	3.50	30	*, Q
Acrolein	56.8	5.00	ug/L	50.0	ND	114	52-144	6.20	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	12.6	0.20	ug/L	10.0	ND	126	76-129	1.50	30	
Acetone	75.1	5.00	ug/L	50.0	8.09	134	58-142	1.20	30	
1,1-Dichloroethene	14.1	0.20	ug/L	10.0	ND	141	69-135	4.57	30	*, Q

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0274 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BFI0274-MSD1)	**Source: 17I0116-07**		Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 18:57							
Bromoethane	12.0	0.20	ug/L	10.0	ND	120	78-128	2.52	30	
Iodomethane	5.53	1.00	ug/L	10.0	ND	55.3	56-147	36.20	30	*, Q
Methylene Chloride	12.2	1.00	ug/L	10.0	ND	122	65-135	0.90	30	
Acrylonitrile	10.2	1.00	ug/L	10.0	ND	102	64-134	5.19	30	
Carbon Disulfide	12.9	0.20	ug/L	10.0	0.27	127	78-125	4.45	30	*
trans-1,2-Dichloroethene	10.6	0.20	ug/L	10.0	ND	106	78-128	3.11	30	
Vinyl Acetate	8.66	0.20	ug/L	10.0	ND	86.6	55-138	5.09	30	
1,1-Dichloroethane	12.3	0.20	ug/L	10.0	ND	123	76-124	5.29	30	
2-Butanone	69.5	5.00	ug/L	50.0	ND	139	61-140	1.88	30	
2,2-Dichloropropane	7.74	0.20	ug/L	10.0	ND	77.4	78-125	3.33	30	*
cis-1,2-Dichloroethene	10.8	0.20	ug/L	10.0	ND	108	80-121	3.55	30	
Chloroform	12.3	0.20	ug/L	10.0	ND	123	80-122	2.77	30	*
Bromochloromethane	11.9	0.20	ug/L	10.0	ND	119	80-121	3.63	30	
1,1,1-Trichloroethane	12.2	0.20	ug/L	10.0	ND	122	79-123	3.08	30	
1,1-Dichloropropene	10.7	0.20	ug/L	10.0	ND	107	80-120	1.90	30	
Carbon tetrachloride	11.0	0.20	ug/L	10.0	ND	110	53-137	4.92	30	
1,2-Dichloroethane	12.8	0.20	ug/L	10.0	ND	128	75-123	2.48	30	*
Benzene	11.2	0.20	ug/L	10.0	ND	112	80-120	1.78	30	
Trichloroethene	10.6	0.20	ug/L	10.0	ND	106	80-120	3.91	30	
1,2-Dichloropropane	11.1	0.20	ug/L	10.0	ND	111	80-120	2.06	30	
Bromodichloromethane	11.7	0.20	ug/L	10.0	ND	117	80-121	3.24	30	
Dibromomethane	11.3	0.20	ug/L	10.0	ND	113	80-120	2.71	30	
2-Chloroethyl vinyl ether	ND	1.00	ug/L	10.0	ND		74-127			*, U
4-Methyl-2-Pentanone	53.2	5.00	ug/L	50.0	ND	106	67-133	2.67	30	
cis-1,3-Dichloropropene	9.33	0.20	ug/L	10.0	ND	93.3	80-124	2.84	30	
Toluene	10.9	0.20	ug/L	10.0	ND	107	80-120	2.31	30	
trans-1,3-Dichloropropene	9.90	0.20	ug/L	10.0	ND	99.0	71-127	1.70	30	
2-Hexanone	56.3	5.00	ug/L	50.0	ND	113	69-133	2.39	30	
1,1,2-Trichloroethane	11.1	0.20	ug/L	10.0	ND	111	80-121	3.28	30	
1,3-Dichloropropane	10.9	0.20	ug/L	10.0	ND	109	80-120	1.93	30	
Tetrachloroethene	9.98	0.20	ug/L	10.0	ND	99.8	80-120	4.36	30	
Dibromochloromethane	10.2	0.20	ug/L	10.0	ND	102	65-135	2.11	30	
1,2-Dibromoethane	10.4	0.20	ug/L	10.0	ND	104	80-121	2.76	30	
Chlorobenzene	11.0	0.20	ug/L	10.0	ND	110	80-120	0.34	30	
Ethylbenzene	10.4	0.20	ug/L	10.0	ND	104	80-120	1.82	30	

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0274 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BFI0274-MSD1)	**Source: 17I0116-07**		Prepared: 14-Sep-2017 Analyzed: 14-Sep-2017 18:57							
1,1,1,2-Tetrachloroethane	10.8	0.20	ug/L	10.0	ND	108	80-120	3.66	30	
m,p-Xylene	21.7	0.40	ug/L	20.0	ND	108	80-121	0.78	30	
o-Xylene	10.1	0.20	ug/L	10.0	ND	101	80-121	2.00	30	
Xylenes, total	31.8	0.60	ug/L	30.0	ND	106	76-127	1.17	30	
Styrene	9.95	0.20	ug/L	10.0	ND	99.5	80-124	0.46	30	
Bromoform	8.57	0.20	ug/L	10.0	ND	85.7	51-134	0.29	30	
1,1,2,2-Tetrachloroethane	10.1	0.20	ug/L	10.0	ND	101	77-123	0.39	30	
1,2,3-Trichloropropane	10.2	0.50	ug/L	10.0	ND	102	76-125	0.31	30	
trans-1,4-Dichloro 2-Butene	7.83	1.00	ug/L	10.0	ND	78.3	55-129	4.23	30	Q
n-Propylbenzene	9.62	0.20	ug/L	10.0	ND	96.2	78-130	0.20	30	
Bromobenzene	9.57	0.20	ug/L	10.0	ND	95.7	80-120	1.03	30	
Isopropyl Benzene	9.64	0.20	ug/L	10.0	ND	96.4	80-128	1.20	30	
2-Chlorotoluene	10.0	0.20	ug/L	10.0	ND	100	78-122	1.11	30	
4-Chlorotoluene	9.82	0.20	ug/L	10.0	ND	98.2	80-121	0.14	30	
t-Butylbenzene	9.53	0.20	ug/L	10.0	ND	95.3	78-125	0.91	30	
1,3,5-Trimethylbenzene	9.98	0.20	ug/L	10.0	ND	99.8	80-129	0.08	30	
1,2,4-Trimethylbenzene	9.99	0.20	ug/L	10.0	ND	99.6	80-127	0.29	30	
s-Butylbenzene	9.86	0.20	ug/L	10.0	ND	98.6	78-129	1.39	30	
4-Isopropyl Toluene	9.77	0.20	ug/L	10.0	ND	97.3	79-130	2.08	30	
1,3-Dichlorobenzene	9.75	0.20	ug/L	10.0	ND	97.5	80-120	1.25	30	
1,4-Dichlorobenzene	9.78	0.20	ug/L	10.0	ND	97.8	80-120	0.19	30	
n-Butylbenzene	9.64	0.20	ug/L	10.0	ND	96.4	74-129	1.23	30	
1,2-Dichlorobenzene	9.82	0.20	ug/L	10.0	ND	98.2	80-120	2.15	30	
1,2-Dibromo-3-chloropropane	8.35	0.50	ug/L	10.0	ND	83.5	62-123	4.97	30	Q
1,2,4-Trichlorobenzene	9.03	0.50	ug/L	10.0	ND	90.3	64-124	2.05	30	
Hexachloro-1,3-Butadiene	8.28	0.50	ug/L	10.0	ND	82.8	58-123	2.88	30	
Naphthalene	8.87	0.50	ug/L	10.0	ND	88.7	50-134	2.93	30	
1,2,3-Trichlorobenzene	9.40	0.50	ug/L	10.0	ND	94.0	49-133	0.99	30	
Dichlorodifluoromethane	13.3	0.20	ug/L	10.0	ND	133	48-147	3.89	30	
Methyl tert-butyl Ether	10.5	0.50	ug/L	10.0	ND	105	71-132	5.84	30	
2-Pentanone	52.0	5.00	ug/L	50.0	ND	104	69-134	6.55	30	
Surrogate: 1,2-Dichloroethane-d4	6.43		ug/L	*5.00*	*7.50*	*129*	*80-129*			
Surrogate: Toluene-d8	5.11		ug/L	*5.00*	*4.93*	*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.80		ug/L	*5.00*	*4.10*	*96.0*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.88		ug/L	*5.00*	*5.30*	*97.7*	*80-120*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0274 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BFI0274-MSD1)	**Source: 17I0116-07**			Prepared: 14-Sep-2017	Analyzed: 14-Sep-2017 18:57					

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0318 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0318-BLK1)			Prepared: 15-Sep-2017 Analyzed: 15-Sep-2017 12:08							
Chloromethane	ND	0.50	ug/L							U
Vinyl Chloride	ND	0.20	ug/L							U
Bromomethane	ND	1.00	ug/L							U
Chloroethane	ND	0.20	ug/L							U
Trichlorofluoromethane	ND	0.20	ug/L							U
Acrolein	ND	5.00	ug/L							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.20	ug/L							U
Acetone	ND	5.00	ug/L							U
1,1-Dichloroethene	ND	0.20	ug/L							U
Bromoethane	ND	0.20	ug/L							U
Iodomethane	ND	1.00	ug/L							U
Methylene Chloride	ND	1.00	ug/L							U
Acrylonitrile	ND	1.00	ug/L							U
Carbon Disulfide	ND	0.20	ug/L							U
trans-1,2-Dichloroethene	ND	0.20	ug/L							U
Vinyl Acetate	ND	0.20	ug/L							U
1,1-Dichloroethane	ND	0.20	ug/L							U
2-Butanone	ND	5.00	ug/L							U
2,2-Dichloropropane	ND	0.20	ug/L							U
cis-1,2-Dichloroethene	ND	0.20	ug/L							U
Chloroform	ND	0.20	ug/L							U
Bromochloromethane	ND	0.20	ug/L							U
1,1,1-Trichloroethane	ND	0.20	ug/L							U
1,1-Dichloropropene	ND	0.20	ug/L							U
Carbon tetrachloride	ND	0.20	ug/L							U
1,2-Dichloroethane	ND	0.20	ug/L							U
Benzene	ND	0.20	ug/L							U
Trichloroethene	ND	0.20	ug/L							U
1,2-Dichloropropane	ND	0.20	ug/L							U
Bromodichloromethane	ND	0.20	ug/L							U
Dibromomethane	ND	0.20	ug/L							U
2-Chloroethyl vinyl ether	ND	1.00	ug/L							U
4-Methyl-2-Pentanone	ND	5.00	ug/L							U
cis-1,3-Dichloropropene	ND	0.20	ug/L							U
Toluene	ND	0.20	ug/L							U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0318 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0318-BLK1)			Prepared: 15-Sep-2017 Analyzed: 15-Sep-2017 12:08							
trans-1,3-Dichloropropene	ND	0.20	ug/L							U
2-Hexanone	ND	5.00	ug/L							U
1,1,2-Trichloroethane	ND	0.20	ug/L							U
1,3-Dichloropropane	ND	0.20	ug/L							U
Tetrachloroethene	ND	0.20	ug/L							U
Dibromochloromethane	ND	0.20	ug/L							U
1,2-Dibromoethane	ND	0.20	ug/L							U
Chlorobenzene	ND	0.20	ug/L							U
Ethylbenzene	ND	0.20	ug/L							U
1,1,1,2-Tetrachloroethane	ND	0.20	ug/L							U
m,p-Xylene	ND	0.40	ug/L							U
o-Xylene	ND	0.20	ug/L							U
Xylenes, total	ND	0.60	ug/L							U
Styrene	ND	0.20	ug/L							U
Bromoform	ND	0.20	ug/L							U
1,1,2,2-Tetrachloroethane	ND	0.20	ug/L							U
1,2,3-Trichloropropane	ND	0.50	ug/L							U
trans-1,4-Dichloro 2-Butene	ND	1.00	ug/L							U
n-Propylbenzene	ND	0.20	ug/L							U
Bromobenzene	ND	0.20	ug/L							U
Isopropyl Benzene	ND	0.20	ug/L							U
2-Chlorotoluene	ND	0.20	ug/L							U
4-Chlorotoluene	ND	0.20	ug/L							U
t-Butylbenzene	ND	0.20	ug/L							U
1,3,5-Trimethylbenzene	ND	0.20	ug/L							U
1,2,4-Trimethylbenzene	ND	0.20	ug/L							U
s-Butylbenzene	ND	0.20	ug/L							U
4-Isopropyl Toluene	ND	0.20	ug/L							U
1,3-Dichlorobenzene	ND	0.20	ug/L							U
1,4-Dichlorobenzene	ND	0.20	ug/L							U
n-Butylbenzene	ND	0.20	ug/L							U
1,2-Dichlorobenzene	ND	0.20	ug/L							U
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L							U
1,2,4-Trichlorobenzene	ND	0.50	ug/L							U
Hexachloro-1,3-Butadiene	ND	0.50	ug/L							U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0318 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0318-BLK1)				Prepared: 15-Sep-2017 Analyzed: 15-Sep-2017 12:08						
Naphthalene	ND	0.50	ug/L							U
1,2,3-Trichlorobenzene	ND	0.50	ug/L							U
Dichlorodifluoromethane	ND	0.20	ug/L							U
Methyl tert-butyl Ether	ND	0.50	ug/L							U
2-Pentanone	ND	5.00	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	5.42		ug/L	*5.00*		*108*	*80-129*			
Surrogate: Toluene-d8	4.87		ug/L	*5.00*		*97.4*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.39		ug/L	*5.00*		*108*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.97		ug/L	*5.00*		*99.4*	*80-120*			
LCS (BFI0318-BS1)				Prepared: 15-Sep-2017 Analyzed: 15-Sep-2017 09:58						
Chloromethane	11.7	0.50	ug/L	10.0		117	60-138			
Vinyl Chloride	11.0	0.20	ug/L	10.0		110	66-133			
Bromomethane	10.0	1.00	ug/L	10.0		100	72-131			
Chloroethane	10.3	0.20	ug/L	10.0		103	60-155			
Trichlorofluoromethane	12.3	0.20	ug/L	10.0		123	80-129			Q
Acrolein	55.4	5.00	ug/L	50.0		111	52-144			
1,1,2-Trichloro-1,2,2-Trifluoroethane	10.6	0.20	ug/L	10.0		106	76-129			
Acetone	49.7	5.00	ug/L	50.0		99.4	58-142			
1,1-Dichloroethene	11.5	0.20	ug/L	10.0		115	69-135			
Bromoethane	10.6	0.20	ug/L	10.0		106	78-128			
Iodomethane	10.1	1.00	ug/L	10.0		101	56-147			
Methylene Chloride	9.11	1.00	ug/L	10.0		91.1	65-135			
Acrylonitrile	9.43	1.00	ug/L	10.0		94.3	64-134			
Carbon Disulfide	8.97	0.20	ug/L	10.0		89.7	78-125			
trans-1,2-Dichloroethene	9.13	0.20	ug/L	10.0		91.3	78-128			
Vinyl Acetate	9.95	0.20	ug/L	10.0		99.5	55-138			
1,1-Dichloroethane	10.3	0.20	ug/L	10.0		103	76-124			
2-Butanone	43.3	5.00	ug/L	50.0		86.6	61-140			
2,2-Dichloropropane	11.5	0.20	ug/L	10.0		115	78-125			
cis-1,2-Dichloroethene	8.81	0.20	ug/L	10.0		88.1	80-121			
Chloroform	9.27	0.20	ug/L	10.0		92.7	80-122			
Bromochloromethane	9.33	0.20	ug/L	10.0		93.3	80-121			
1,1,1-Trichloroethane	11.4	0.20	ug/L	10.0		114	79-123			
1,1-Dichloropropene	10.2	0.20	ug/L	10.0		102	80-120			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0318 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0318-BS1)				Prepared: 15-Sep-2017 Analyzed: 15-Sep-2017 09:58						
Carbon tetrachloride	12.4	0.20	ug/L	10.0		124	53-137			Q
1,2-Dichloroethane	12.4	0.20	ug/L	10.0		124	75-123			*, Q
Benzene	9.25	0.20	ug/L	10.0		92.5	80-120			
Trichloroethene	10.7	0.20	ug/L	10.0		107	80-120			
1,2-Dichloropropane	10.4	0.20	ug/L	10.0		104	80-120			
Bromodichloromethane	9.79	0.20	ug/L	10.0		97.9	80-121			
Dibromomethane	9.28	0.20	ug/L	10.0		92.8	80-120			
2-Chloroethyl vinyl ether	9.70	1.00	ug/L	10.0		97.0	74-127			
4-Methyl-2-Pentanone	49.4	5.00	ug/L	50.0		98.7	67-133			
cis-1,3-Dichloropropene	9.89	0.20	ug/L	10.0		98.9	80-124			
Toluene	10.1	0.20	ug/L	10.0		101	80-120			
trans-1,3-Dichloropropene	10.1	0.20	ug/L	10.0		101	71-127			
2-Hexanone	44.2	5.00	ug/L	50.0		88.3	69-133			
1,1,2-Trichloroethane	9.57	0.20	ug/L	10.0		95.7	80-121			
1,3-Dichloropropane	8.57	0.20	ug/L	10.0		85.7	80-120			
Tetrachloroethene	10.6	0.20	ug/L	10.0		106	80-120			
Dibromochloromethane	9.40	0.20	ug/L	10.0		94.0	65-135			
1,2-Dibromoethane	9.66	0.20	ug/L	10.0		96.6	80-121			
Chlorobenzene	9.74	0.20	ug/L	10.0		97.4	80-120			
Ethylbenzene	9.74	0.20	ug/L	10.0		97.4	80-120			
1,1,1,2-Tetrachloroethane	10.4	0.20	ug/L	10.0		104	80-120			
m,p-Xylene	20.1	0.40	ug/L	20.0		100	80-121			
o-Xylene	9.78	0.20	ug/L	10.0		97.8	80-121			
Xylenes, total	29.9	0.60	ug/L	30.0		99.6	76-127			
Styrene	9.99	0.20	ug/L	10.0		99.9	80-124			
Bromoform	9.01	0.20	ug/L	10.0		90.1	51-134			
1,1,2,2-Tetrachloroethane	7.16	0.20	ug/L	10.0		71.6	77-123			*, Q
1,2,3-Trichloropropane	8.54	0.50	ug/L	10.0		85.4	76-125			
trans-1,4-Dichloro 2-Butene	9.27	1.00	ug/L	10.0		92.7	55-129			
n-Propylbenzene	9.47	0.20	ug/L	10.0		94.7	78-130			
Bromobenzene	9.05	0.20	ug/L	10.0		90.5	80-120			
Isopropyl Benzene	9.52	0.20	ug/L	10.0		95.2	80-128			
2-Chlorotoluene	9.47	0.20	ug/L	10.0		94.7	78-122			
4-Chlorotoluene	9.32	0.20	ug/L	10.0		93.2	80-121			
t-Butylbenzene	10.2	0.20	ug/L	10.0		102	78-125			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0318 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0318-BS1)				Prepared: 15-Sep-2017 Analyzed: 15-Sep-2017 09:58						
1,3,5-Trimethylbenzene	9.91	0.20	ug/L	10.0		99.1	80-129			
1,2,4-Trimethylbenzene	9.80	0.20	ug/L	10.0		98.0	80-127			
s-Butylbenzene	10.1	0.20	ug/L	10.0		101	78-129			
4-Isopropyl Toluene	10.6	0.20	ug/L	10.0		106	79-130			
1,3-Dichlorobenzene	9.55	0.20	ug/L	10.0		95.5	80-120			
1,4-Dichlorobenzene	9.35	0.20	ug/L	10.0		93.5	80-120			
n-Butylbenzene	10.0	0.20	ug/L	10.0		100	74-129			
1,2-Dichlorobenzene	8.94	0.20	ug/L	10.0		89.4	80-120			
1,2-Dibromo-3-chloropropane	8.88	0.50	ug/L	10.0		88.8	62-123			
1,2,4-Trichlorobenzene	11.2	0.50	ug/L	10.0		112	64-124			
Hexachloro-1,3-Butadiene	18.8	0.50	ug/L	10.0		188	58-123			*, Q
Naphthalene	9.51	0.50	ug/L	10.0		95.1	50-134			
1,2,3-Trichlorobenzene	11.0	0.50	ug/L	10.0		110	49-133			
Dichlorodifluoromethane	10.2	0.20	ug/L	10.0		102	48-147			
Methyl tert-butyl Ether	8.91	0.50	ug/L	10.0		89.1	71-132			
2-Pentanone	40.2	5.00	ug/L	50.0		80.5	69-134			
Surrogate: 1,2-Dichloroethane-d4	5.40		ug/L	*5.00*		*108*	*80-129*			
Surrogate: Toluene-d8	5.02		ug/L	*5.00*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.93		ug/L	*5.00*		*119*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.91		ug/L	*5.00*		*98.2*	*80-120*			
LCS Dup (BFI0318-BSD1)				Prepared: 15-Sep-2017 Analyzed: 15-Sep-2017 10:24						
Chloromethane	11.1	0.50	ug/L	10.0		111	60-138	5.29	30	
Vinyl Chloride	10.3	0.20	ug/L	10.0		103	66-133	7.10	30	
Bromomethane	9.51	1.00	ug/L	10.0		95.1	72-131	5.52	30	
Chloroethane	9.91	0.20	ug/L	10.0		99.1	60-155	3.61	30	
Trichlorofluoromethane	11.7	0.20	ug/L	10.0		117	80-129	5.03	30	Q
Acrolein	58.1	5.00	ug/L	50.0		116	52-144	4.71	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	9.95	0.20	ug/L	10.0		99.5	76-129	6.53	30	
Acetone	48.9	5.00	ug/L	50.0		97.7	58-142	1.70	30	
1,1-Dichloroethene	10.8	0.20	ug/L	10.0		108	69-135	6.27	30	
Bromoethane	10.0	0.20	ug/L	10.0		100	78-128	5.42	30	
Iodomethane	9.65	1.00	ug/L	10.0		96.5	56-147	4.73	30	
Methylene Chloride	8.30	1.00	ug/L	10.0		83.0	65-135	9.24	30	
Acrylonitrile	9.12	1.00	ug/L	10.0		91.2	64-134	3.37	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0318 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0318-BSD1)				Prepared: 15-Sep-2017 Analyzed: 15-Sep-2017 10:24						
Carbon Disulfide	8.46	0.20	ug/L	10.0		84.6	78-125	5.85	30	
trans-1,2-Dichloroethene	8.62	0.20	ug/L	10.0		86.2	78-128	5.80	30	
Vinyl Acetate	9.92	0.20	ug/L	10.0		99.2	55-138	0.36	30	
1,1-Dichloroethane	10.2	0.20	ug/L	10.0		102	76-124	1.01	30	
2-Butanone	43.6	5.00	ug/L	50.0		87.2	61-140	0.75	30	
2,2-Dichloropropane	10.7	0.20	ug/L	10.0		107	78-125	7.07	30	
cis-1,2-Dichloroethene	8.43	0.20	ug/L	10.0		84.3	80-121	4.49	30	
Chloroform	9.10	0.20	ug/L	10.0		91.0	80-122	1.79	30	
Bromochloromethane	8.99	0.20	ug/L	10.0		89.9	80-121	3.69	30	
1,1,1-Trichloroethane	10.9	0.20	ug/L	10.0		109	79-123	4.47	30	
1,1-Dichloropropene	10.5	0.20	ug/L	10.0		105	80-120	3.14	30	
Carbon tetrachloride	12.3	0.20	ug/L	10.0		123	53-137	1.45	30	Q
1,2-Dichloroethane	12.7	0.20	ug/L	10.0		127	75-123	2.38	30	*, Q
Benzene	9.22	0.20	ug/L	10.0		92.2	80-120	0.41	30	
Trichloroethene	10.5	0.20	ug/L	10.0		105	80-120	2.51	30	
1,2-Dichloropropane	10.4	0.20	ug/L	10.0		104	80-120	0.71	30	
Bromodichloromethane	9.60	0.20	ug/L	10.0		96.0	80-121	2.01	30	
Dibromomethane	9.65	0.20	ug/L	10.0		96.5	80-120	3.95	30	
2-Chloroethyl vinyl ether	10.5	1.00	ug/L	10.0		105	74-127	7.47	30	
4-Methyl-2-Pentanone	52.2	5.00	ug/L	50.0		104	67-133	5.56	30	
cis-1,3-Dichloropropene	9.80	0.20	ug/L	10.0		98.0	80-124	0.94	30	
Toluene	9.99	0.20	ug/L	10.0		99.9	80-120	0.81	30	
trans-1,3-Dichloropropene	10.2	0.20	ug/L	10.0		102	71-127	1.37	30	
2-Hexanone	46.6	5.00	ug/L	50.0		93.2	69-133	5.35	30	
1,1,2-Trichloroethane	9.17	0.20	ug/L	10.0		91.7	80-121	4.23	30	
1,3-Dichloropropane	8.68	0.20	ug/L	10.0		86.8	80-120	1.23	30	
Tetrachloroethene	10.0	0.20	ug/L	10.0		100	80-120	5.40	30	
Dibromochloromethane	9.46	0.20	ug/L	10.0		94.6	65-135	0.72	30	
1,2-Dibromoethane	10.2	0.20	ug/L	10.0		102	80-121	5.11	30	
Chlorobenzene	9.82	0.20	ug/L	10.0		98.2	80-120	0.84	30	
Ethylbenzene	9.52	0.20	ug/L	10.0		95.2	80-120	2.36	30	
1,1,1,2-Tetrachloroethane	10.4	0.20	ug/L	10.0		104	80-120	0.03	30	
m,p-Xylene	19.3	0.40	ug/L	20.0		96.3	80-121	4.28	30	
o-Xylene	9.47	0.20	ug/L	10.0		94.7	80-121	3.18	30	
Xylenes, total	28.7	0.60	ug/L	30.0		95.7	76-127	3.92	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0318 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0318-BSD1)				Prepared: 15-Sep-2017 Analyzed: 15-Sep-2017 10:24						
Styrene	9.64	0.20	ug/L	10.0		96.4	80-124	3.56	30	
Bromoform	9.50	0.20	ug/L	10.0		95.0	51-134	5.28	30	
1,1,2,2-Tetrachloroethane	7.99	0.20	ug/L	10.0		79.9	77-123	11.00	30	Q
1,2,3-Trichloropropane	8.82	0.50	ug/L	10.0		88.2	76-125	3.22	30	
trans-1,4-Dichloro 2-Butene	9.81	1.00	ug/L	10.0		98.1	55-129	5.67	30	
n-Propylbenzene	9.44	0.20	ug/L	10.0		94.4	78-130	0.35	30	
Bromobenzene	9.43	0.20	ug/L	10.0		94.3	80-120	4.15	30	
Isopropyl Benzene	9.68	0.20	ug/L	10.0		96.8	80-128	1.71	30	
2-Chlorotoluene	9.74	0.20	ug/L	10.0		97.4	78-122	2.84	30	
4-Chlorotoluene	9.55	0.20	ug/L	10.0		95.5	80-121	2.42	30	
t-Butylbenzene	10.2	0.20	ug/L	10.0		102	78-125	0.57	30	
1,3,5-Trimethylbenzene	10.0	0.20	ug/L	10.0		100	80-129	1.03	30	
1,2,4-Trimethylbenzene	9.82	0.20	ug/L	10.0		98.2	80-127	0.19	30	
s-Butylbenzene	10.1	0.20	ug/L	10.0		101	78-129	0.13	30	
4-Isopropyl Toluene	10.8	0.20	ug/L	10.0		108	79-130	1.27	30	
1,3-Dichlorobenzene	9.65	0.20	ug/L	10.0		96.5	80-120	1.03	30	
1,4-Dichlorobenzene	9.41	0.20	ug/L	10.0		94.1	80-120	0.59	30	
n-Butylbenzene	9.93	0.20	ug/L	10.0		99.3	74-129	0.75	30	
1,2-Dichlorobenzene	9.48	0.20	ug/L	10.0		94.8	80-120	5.92	30	
1,2-Dibromo-3-chloropropane	10.3	0.50	ug/L	10.0		103	62-123	14.70	30	
1,2,4-Trichlorobenzene	12.0	0.50	ug/L	10.0		120	64-124	7.14	30	
Hexachloro-1,3-Butadiene	18.5	0.50	ug/L	10.0		185	58-123	1.44	30	*, Q
Naphthalene	10.2	0.50	ug/L	10.0		102	50-134	7.19	30	
1,2,3-Trichlorobenzene	13.4	0.50	ug/L	10.0		134	49-133	19.60	30	*
Dichlorodifluoromethane	9.69	0.20	ug/L	10.0		96.9	48-147	4.61	30	
Methyl tert-butyl Ether	8.95	0.50	ug/L	10.0		89.5	71-132	0.41	30	
2-Pentanone	41.8	5.00	ug/L	50.0		83.7	69-134	3.89	30	
Surrogate: 1,2-Dichloroethane-d4		5.33	ug/L	*5.00*		*107*	*80-129*			
Surrogate: Toluene-d8		5.03	ug/L	*5.00*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene		5.77	ug/L	*5.00*		*115*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4		5.06	ug/L	*5.00*		*101*	*80-120*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0368 - EPA 5035 (Methanol Extraction)

Instrument: NT2 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0368-BLK1)				Prepared: 18-Sep-2017 Analyzed: 19-Sep-2017 12:12						
Gasoline Range Organics (Tol-Nap)	ND	5000	ug/kg							U
Surrogate: Toluene-d8		4.80	ug/kg	*5.00*		*96.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene		4.96	ug/kg	*5.00*		*99.1*	*78-123*			
LCS (BFI0368-BS1)				Prepared: 18-Sep-2017 Analyzed: 19-Sep-2017 10:05						
Gasoline Range Organics (Tol-Nap)	55500	5000	ug/kg	50000		111	70-121			
Surrogate: Toluene-d8		4.84	ug/kg	*5.00*		*96.7*	*80-120*			
Surrogate: 4-Bromofluorobenzene		5.09	ug/kg	*5.00*		*102*	*78-123*			
LCS Dup (BFI0368-BSD1)				Prepared: 18-Sep-2017 Analyzed: 19-Sep-2017 10:25						
Gasoline Range Organics (Tol-Nap)	57900	5000	ug/kg	50000		116	70-121	4.22	30	
Surrogate: Toluene-d8		4.81	ug/kg	*5.00*		*96.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene		5.11	ug/kg	*5.00*		*102*	*78-123*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0456 - EPA 5035 (Methanol Extraction)

Instrument: NT2 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0456-BLK1)				Prepared: 20-Sep-2017 Analyzed: 20-Sep-2017 13:05						
Gasoline Range Organics (Tol-Nap)	ND	5000	ug/kg							U
Surrogate: Toluene-d8		4.74	ug/kg	*5.00*		*94.9*	*80-120*			
Surrogate: 4-Bromofluorobenzene		5.02	ug/kg	*5.00*		*100*	*78-123*			
LCS (BFI0456-BS1)				Prepared: 20-Sep-2017 Analyzed: 20-Sep-2017 10:57						
Gasoline Range Organics (Tol-Nap)	55200		ug/kg	50000		110	70-121			
Surrogate: Toluene-d8		4.69	ug/kg	*5.00*		*93.9*	*80-120*			
Surrogate: 4-Bromofluorobenzene		5.19	ug/kg	*5.00*		*104*	*78-123*			
LCS Dup (BFI0456-BSD1)				Prepared: 20-Sep-2017 Analyzed: 20-Sep-2017 11:17						
Gasoline Range Organics (Tol-Nap)	56500		ug/kg	50000		113	70-121	2.32	30	
Surrogate: Toluene-d8		4.86	ug/kg	*5.00*		*97.3*	*80-120*			
Surrogate: 4-Bromofluorobenzene		5.17	ug/kg	*5.00*		*103*	*78-123*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0504-BLK1)	Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 11:42									
Chloromethane	ND	1.00	ug/kg							U
Vinyl Chloride	ND	1.00	ug/kg							U
Bromomethane	ND	1.00	ug/kg							U
Chloroethane	ND	1.00	ug/kg							U
Trichlorofluoromethane	ND	1.00	ug/kg							U
Acrolein	ND	5.00	ug/kg							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	2.00	ug/kg							U
Acetone	ND	5.00	ug/kg							U
1,1-Dichloroethene	ND	1.00	ug/kg							U
Bromoethane	ND	2.00	ug/kg							U
Iodomethane	ND	1.00	ug/kg							U
Methylene Chloride	ND	2.00	ug/kg							U
Acrylonitrile	ND	5.00	ug/kg							U
Carbon Disulfide	ND	1.00	ug/kg							U
trans-1,2-Dichloroethene	ND	1.00	ug/kg							U
Vinyl Acetate	ND	5.00	ug/kg							U
1,1-Dichloroethane	ND	1.00	ug/kg							U
2-Butanone	ND	5.00	ug/kg							U
2,2-Dichloropropane	ND	1.00	ug/kg							U
cis-1,2-Dichloroethene	ND	1.00	ug/kg							U
Chloroform	ND	1.00	ug/kg							U
Bromochloromethane	ND	1.00	ug/kg							U
1,1,1-Trichloroethane	ND	1.00	ug/kg							U
1,1-Dichloropropene	ND	1.00	ug/kg							U
Carbon tetrachloride	ND	1.00	ug/kg							U
1,2-Dichloroethane	ND	1.00	ug/kg							U
Benzene	ND	1.00	ug/kg							U
Trichloroethene	ND	1.00	ug/kg							U
1,2-Dichloropropane	ND	1.00	ug/kg							U
Bromodichloromethane	ND	1.00	ug/kg							U
Dibromomethane	ND	1.00	ug/kg							U
2-Chloroethyl vinyl ether	ND	5.00	ug/kg							U
4-Methyl-2-Pentanone	ND	5.00	ug/kg							U
cis-1,3-Dichloropropene	ND	1.00	ug/kg							U
Toluene	ND	1.00	ug/kg							U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0504-BLK1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 11:42							
trans-1,3-Dichloropropene	ND	1.00	ug/kg							U
2-Hexanone	ND	5.00	ug/kg							U
1,1,2-Trichloroethane	ND	1.00	ug/kg							U
1,3-Dichloropropane	ND	1.00	ug/kg							U
Tetrachloroethene	ND	1.00	ug/kg							U
Dibromochloromethane	ND	1.00	ug/kg							U
1,2-Dibromoethane	ND	1.00	ug/kg							U
Chlorobenzene	ND	1.00	ug/kg							U
Ethylbenzene	ND	1.00	ug/kg							U
1,1,1,2-Tetrachloroethane	ND	1.00	ug/kg							U
m,p-Xylene	ND	2.00	ug/kg							U
o-Xylene	ND	1.00	ug/kg							U
Xylenes, total	ND	2.00	ug/kg							U
Styrene	ND	1.00	ug/kg							U
Bromoform	ND	1.00	ug/kg							U
1,1,2,2-Tetrachloroethane	ND	1.00	ug/kg							U
1,2,3-Trichloropropane	ND	2.00	ug/kg							U
trans-1,4-Dichloro 2-Butene	ND	5.00	ug/kg							U
n-Propylbenzene	ND	1.00	ug/kg							U
Bromobenzene	ND	1.00	ug/kg							U
Isopropyl Benzene	ND	1.00	ug/kg							U
2-Chlorotoluene	ND	1.00	ug/kg							U
4-Chlorotoluene	ND	1.00	ug/kg							U
t-Butylbenzene	ND	1.00	ug/kg							U
1,3,5-Trimethylbenzene	ND	1.00	ug/kg							U
1,2,4-Trimethylbenzene	ND	1.00	ug/kg							U
s-Butylbenzene	ND	1.00	ug/kg							U
4-Isopropyl Toluene	ND	1.00	ug/kg							U
1,3-Dichlorobenzene	ND	1.00	ug/kg							U
1,4-Dichlorobenzene	ND	1.00	ug/kg							U
n-Butylbenzene	ND	1.00	ug/kg							U
1,2-Dichlorobenzene	ND	1.00	ug/kg							U
1,2-Dibromo-3-chloropropane	ND	5.00	ug/kg							U
1,2,4-Trichlorobenzene	ND	5.00	ug/kg							U
Hexachloro-1,3-Butadiene	ND	5.00	ug/kg							U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0504-BLK1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 11:42							
Naphthalene	ND	5.00	ug/kg							U
1,2,3-Trichlorobenzene	ND	5.00	ug/kg							U
Dichlorodifluoromethane	ND	1.00	ug/kg							U
Methyl tert-butyl Ether	ND	1.00	ug/kg							U
2-Pentanone	ND	5.00	ug/kg							U
Surrogate: 1,2-Dichloroethane-d4	57.3		ug/kg	*50.0*		*115*	*80-149*			
Surrogate: Toluene-d8	51.7		ug/kg	*50.0*		*103*	*77-120*			
Surrogate: 4-Bromofluorobenzene	47.9		ug/kg	*50.0*		*95.8*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	50.5		ug/kg	*50.0*		*101*	*80-120*			
LCS (BFI0504-BS1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 10:41							
Chloromethane	56.0		ug/kg	50.0		112	64-132			
Vinyl Chloride	64.5		ug/kg	50.0		129	74-135			Q
Bromomethane	52.4		ug/kg	50.0		105	53-144			
Chloroethane	56.9		ug/kg	50.0		114	55-149			
Trichlorofluoromethane	83.1		ug/kg	50.0		166	61-164			*, Q
Acrolein	258		ug/kg	250		103	59-140			
1,1,2-Trichloro-1,2,2-Trifluoroethane	62.5		ug/kg	50.0		125	74-143			Q
Acetone	224		ug/kg	250		89.7	48-137			
1,1-Dichloroethene	60.5		ug/kg	50.0		121	77-134			Q
Bromoethane	59.2		ug/kg	50.0		118	65-145			
Iodomethane	50.4		ug/kg	50.0		101	31-162			
Methylene Chloride	53.7		ug/kg	50.0		107	69-129			
Acrylonitrile	49.8		ug/kg	50.0		99.5	69-134			
Carbon Disulfide	62.2		ug/kg	50.0		124	71-137			Q
trans-1,2-Dichloroethene	58.2		ug/kg	50.0		116	79-130			
Vinyl Acetate	53.1		ug/kg	50.0		106	66-141			
1,1-Dichloroethane	57.4		ug/kg	50.0		115	80-126			
2-Butanone	242		ug/kg	250		96.7	70-132			
2,2-Dichloropropane	56.9		ug/kg	50.0		114	77-138			
cis-1,2-Dichloroethene	54.2		ug/kg	50.0		108	80-125			
Chloroform	55.7		ug/kg	50.0		111	80-126			
Bromochloromethane	57.1		ug/kg	50.0		114	80-129			
1,1,1-Trichloroethane	55.9		ug/kg	50.0		112	78-133			
1,1-Dichloropropene	50.8		ug/kg	50.0		102	79-120			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0504-BS1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 10:41							
Carbon tetrachloride	49.2		ug/kg	50.0		98.4	71-129			
1,2-Dichloroethane	45.1		ug/kg	50.0		90.2	76-120			
Benzene	50.1		ug/kg	50.0		100	80-120			
Trichloroethene	50.2		ug/kg	50.0		100	80-120			
1,2-Dichloropropane	51.2		ug/kg	50.0		102	79-120			
Bromodichloromethane	49.3		ug/kg	50.0		98.5	80-122			
Dibromomethane	48.5		ug/kg	50.0		97.1	80-120			
2-Chloroethyl vinyl ether	41.1		ug/kg	50.0		82.1	51-129			
4-Methyl-2-Pentanone	214		ug/kg	250		85.6	73-121			
cis-1,3-Dichloropropene	49.1		ug/kg	50.0		98.2	80-120			
Toluene	50.9		ug/kg	50.0		102	75-120			
trans-1,3-Dichloropropene	48.5		ug/kg	50.0		97.0	80-124			
2-Hexanone	208		ug/kg	250		83.1	68-122			
1,1,2-Trichloroethane	47.4		ug/kg	50.0		94.9	79-120			
1,3-Dichloropropane	45.3		ug/kg	50.0		90.6	78-120			
Tetrachloroethene	48.0		ug/kg	50.0		95.9	74-124			
Dibromochloromethane	45.3		ug/kg	50.0		90.7	74-125			
1,2-Dibromoethane	46.2		ug/kg	50.0		92.3	80-120			
Chlorobenzene	49.0		ug/kg	50.0		98.0	78-120			
Ethylbenzene	48.9		ug/kg	50.0		97.8	80-125			
1,1,1,2-Tetrachloroethane	45.2		ug/kg	50.0		90.5	80-120			
m,p-Xylene	99.2		ug/kg	100		99.2	76-121			
o-Xylene	48.9		ug/kg	50.0		97.9	67-132			
Xylenes, total	148		ug/kg	150		98.8	67-132			
Styrene	50.2		ug/kg	50.0		100	80-120			
Bromoform	42.6		ug/kg	50.0		85.2	64-128			
1,1,2,2-Tetrachloroethane	44.4		ug/kg	50.0		88.9	74-120			
1,2,3-Trichloropropane	41.0		ug/kg	50.0		82.1	73-120			
trans-1,4-Dichloro 2-Butene	39.4		ug/kg	50.0		78.8	65-125			Q
n-Propylbenzene	51.5		ug/kg	50.0		103	72-124			
Bromobenzene	45.7		ug/kg	50.0		91.4	76-120			
Isopropyl Benzene	50.7		ug/kg	50.0		101	74-121			
2-Chlorotoluene	48.9		ug/kg	50.0		97.8	75-120			
4-Chlorotoluene	50.0		ug/kg	50.0		100	69-124			
t-Butylbenzene	49.6		ug/kg	50.0		99.2	72-122			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0504-BS1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 10:41							
1,3,5-Trimethylbenzene	50.4		ug/kg	50.0		101	74-122			
1,2,4-Trimethylbenzene	50.0		ug/kg	50.0		100	75-121			
s-Butylbenzene	50.9		ug/kg	50.0		102	70-128			
4-Isopropyl Toluene	51.6		ug/kg	50.0		103	75-125			
1,3-Dichlorobenzene	49.8		ug/kg	50.0		99.5	75-120			
1,4-Dichlorobenzene	48.6		ug/kg	50.0		97.2	73-120			
n-Butylbenzene	53.3		ug/kg	50.0		107	73-130			
1,2-Dichlorobenzene	46.5		ug/kg	50.0		93.1	76-120			
1,2-Dibromo-3-chloropropane	41.5		ug/kg	50.0		82.9	65-126			
1,2,4-Trichlorobenzene	52.3		ug/kg	50.0		105	66-140			
Hexachloro-1,3-Butadiene	52.6		ug/kg	50.0		105	67-133			
Naphthalene	45.8		ug/kg	50.0		91.5	69-125			
1,2,3-Trichlorobenzene	49.1		ug/kg	50.0		98.2	68-132			
Dichlorodifluoromethane	61.7		ug/kg	50.0		123	67-142			Q
Methyl tert-butyl Ether	52.8		ug/kg	50.0		106	79-127			
2-Pentanone	214		ug/kg	250		85.5	77-120			
Surrogate: 1,2-Dichloroethane-d4		57.9	ug/kg	*50.0*		*116*	*80-149*			
Surrogate: Toluene-d8		52.0	ug/kg	*50.0*		*104*	*77-120*			
Surrogate: 4-Bromofluorobenzene		49.2	ug/kg	*50.0*		*98.3*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4		50.7	ug/kg	*50.0*		*101*	*80-120*			
LCS Dup (BFI0504-BSD1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 11:20							
Chloromethane	56.5		ug/kg	50.0		113	64-132	0.87	30	
Vinyl Chloride	66.5		ug/kg	50.0		133	74-135	3.17	30	Q
Bromomethane	56.0		ug/kg	50.0		112	53-144	6.62	30	
Chloroethane	64.3		ug/kg	50.0		129	55-149	12.10	30	
Trichlorofluoromethane	88.9		ug/kg	50.0		178	61-164	6.77	30	*, Q
Acrolein	255		ug/kg	250		102	59-140	1.12	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	65.1		ug/kg	50.0		130	74-143	4.05	30	Q
Acetone	226		ug/kg	250		90.2	48-137	0.65	30	
1,1-Dichloroethene	59.4		ug/kg	50.0		119	77-134	1.81	30	Q
Bromoethane	62.4		ug/kg	50.0		125	65-145	5.27	30	
Iodomethane	54.2		ug/kg	50.0		108	31-162	7.12	30	
Methylene Chloride	56.7		ug/kg	50.0		113	69-129	5.41	30	
Acrylonitrile	50.9		ug/kg	50.0		102	69-134	2.24	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0504-BSD1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 11:20							
Carbon Disulfide	64.4		ug/kg	50.0		129	71-137	3.49	30	Q
trans-1,2-Dichloroethene	59.1		ug/kg	50.0		118	79-130	1.50	30	
Vinyl Acetate	56.1		ug/kg	50.0		112	66-141	5.49	30	
1,1-Dichloroethane	59.4		ug/kg	50.0		119	80-126	3.47	30	
2-Butanone	253		ug/kg	250		101	70-132	4.56	30	
2,2-Dichloropropane	59.4		ug/kg	50.0		119	77-138	4.41	30	
cis-1,2-Dichloroethene	56.8		ug/kg	50.0		114	80-125	4.82	30	
Chloroform	56.7		ug/kg	50.0		113	80-126	1.66	30	
Bromochloromethane	57.6		ug/kg	50.0		115	80-129	0.76	30	
1,1,1-Trichloroethane	58.4		ug/kg	50.0		117	78-133	4.45	30	
1,1-Dichloropropene	53.4		ug/kg	50.0		107	79-120	5.01	30	
Carbon tetrachloride	51.8		ug/kg	50.0		104	71-129	5.20	30	
1,2-Dichloroethane	45.4		ug/kg	50.0		90.7	76-120	0.56	30	
Benzene	52.9		ug/kg	50.0		106	80-120	5.40	30	
Trichloroethene	53.4		ug/kg	50.0		107	80-120	6.21	30	
1,2-Dichloropropane	52.3		ug/kg	50.0		105	79-120	2.12	30	
Bromodichloromethane	49.5		ug/kg	50.0		99.0	80-122	0.53	30	
Dibromomethane	48.0		ug/kg	50.0		96.0	80-120	1.10	30	
2-Chloroethyl vinyl ether	41.3		ug/kg	50.0		82.6	51-129	0.52	30	
4-Methyl-2-Pentanone	225		ug/kg	250		90.1	73-121	5.07	30	
cis-1,3-Dichloropropene	50.7		ug/kg	50.0		101	80-120	3.27	30	
Toluene	51.8		ug/kg	50.0		104	75-120	1.78	30	
trans-1,3-Dichloropropene	50.0		ug/kg	50.0		100	80-124	3.06	30	
2-Hexanone	212		ug/kg	250		84.9	68-122	2.11	30	
1,1,2-Trichloroethane	48.1		ug/kg	50.0		96.2	79-120	1.40	30	
1,3-Dichloropropane	46.3		ug/kg	50.0		92.6	78-120	2.23	30	
Tetrachloroethene	50.6		ug/kg	50.0		101	74-124	5.46	30	
Dibromochloromethane	46.9		ug/kg	50.0		93.8	74-125	3.40	30	
1,2-Dibromoethane	46.2		ug/kg	50.0		92.4	80-120	0.10	30	
Chlorobenzene	49.8		ug/kg	50.0		99.6	78-120	1.68	30	
Ethylbenzene	51.4		ug/kg	50.0		103	80-125	5.06	30	
1,1,1,2-Tetrachloroethane	47.3		ug/kg	50.0		94.6	80-120	4.49	30	
m,p-Xylene	103		ug/kg	100		103	76-121	4.03	30	
o-Xylene	50.4		ug/kg	50.0		101	67-132	2.96	30	
Xylenes, total	154		ug/kg	150		102	67-132	3.68	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0504-BSD1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 11:20							
Styrene	51.5		ug/kg	50.0		103	80-120	2.58	30	
Bromoform	42.9		ug/kg	50.0		85.7	64-128	0.61	30	
1,1,2,2-Tetrachloroethane	44.3		ug/kg	50.0		88.6	74-120	0.31	30	
1,2,3-Trichloropropane	45.6		ug/kg	50.0		91.1	73-120	10.40	30	
trans-1,4-Dichloro 2-Butene	43.2		ug/kg	50.0		86.3	65-125	9.15	30	Q
n-Propylbenzene	53.5		ug/kg	50.0		107	72-124	3.86	30	
Bromobenzene	47.1		ug/kg	50.0		94.2	76-120	3.10	30	
Isopropyl Benzene	51.9		ug/kg	50.0		104	74-121	2.34	30	
2-Chlorotoluene	50.7		ug/kg	50.0		101	75-120	3.57	30	
4-Chlorotoluene	51.6		ug/kg	50.0		103	69-124	3.09	30	
t-Butylbenzene	51.1		ug/kg	50.0		102	72-122	2.96	30	
1,3,5-Trimethylbenzene	52.0		ug/kg	50.0		104	74-122	3.26	30	
1,2,4-Trimethylbenzene	51.7		ug/kg	50.0		103	75-121	3.31	30	
s-Butylbenzene	52.6		ug/kg	50.0		105	70-128	3.34	30	
4-Isopropyl Toluene	53.4		ug/kg	50.0		107	75-125	3.38	30	
1,3-Dichlorobenzene	50.4		ug/kg	50.0		101	75-120	1.32	30	
1,4-Dichlorobenzene	49.3		ug/kg	50.0		98.6	73-120	1.50	30	
n-Butylbenzene	55.2		ug/kg	50.0		110	73-130	3.49	30	
1,2-Dichlorobenzene	47.7		ug/kg	50.0		95.4	76-120	2.50	30	
1,2-Dibromo-3-chloropropane	39.1		ug/kg	50.0		78.2	65-126	5.83	30	
1,2,4-Trichlorobenzene	53.9		ug/kg	50.0		108	66-140	2.92	30	
Hexachloro-1,3-Butadiene	54.3		ug/kg	50.0		109	67-133	3.21	30	
Naphthalene	45.9		ug/kg	50.0		91.9	69-125	0.39	30	
1,2,3-Trichlorobenzene	50.1		ug/kg	50.0		100	68-132	2.01	30	
Dichlorodifluoromethane	65.2		ug/kg	50.0		130	67-142	5.54	30	Q
Methyl tert-butyl Ether	53.5		ug/kg	50.0		107	79-127	1.46	30	
2-Pentanone	210		ug/kg	250		84.1	77-120	1.59	30	
Surrogate: 1,2-Dichloroethane-d4		57.0	ug/kg	*50.0*		*114*	*80-149*			
Surrogate: Toluene-d8		51.5	ug/kg	*50.0*		*103*	*77-120*			
Surrogate: 4-Bromofluorobenzene		49.5	ug/kg	*50.0*		*99.0*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4		50.6	ug/kg	*50.0*		*101*	*80-120*			
Matrix Spike (BFI0504-MS2)	**Source: 17I0116-10**		Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 20:30							
Chloromethane	41.7		ug/kg	50.0	ND	83.5	64-132			
Vinyl Chloride	57.0		ug/kg	50.0	ND	114	74-135			Q

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BFI0504-MS2)	**Source: 17I0116-10**		Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 20:30							
Bromomethane	21.7		ug/kg	50.0	ND	43.3	53-144			*
Chloroethane	43.0		ug/kg	50.0	ND	85.9	55-149			
Trichlorofluoromethane	63.0		ug/kg	50.0	ND	126	61-164			Q
Acrolein	31.2		ug/kg	250	ND	12.5	59-140			*
1,1,2-Trichloro-1,2,2-Trifluoroethane	58.6		ug/kg	50.0	ND	117	74-143			Q
Acetone	272		ug/kg	250	40.5	95.4	48-137			
1,1-Dichloroethene	55.2		ug/kg	50.0	ND	110	77-134			Q
Bromoethane	57.5		ug/kg	50.0	ND	115	65-145			
Iodomethane	14.6		ug/kg	50.0	ND	29.3	31-162			*
Methylene Chloride	53.3		ug/kg	50.0	ND	105	69-129			
Acrylonitrile	52.5		ug/kg	50.0	ND	105	69-134			
Carbon Disulfide	56.2		ug/kg	50.0	ND	112	71-137			Q
trans-1,2-Dichloroethene	52.3		ug/kg	50.0	ND	105	79-130			
Vinyl Acetate	0.30		ug/kg	50.0	ND	0.600	66-141			*
1,1-Dichloroethane	56.4		ug/kg	50.0	ND	113	80-126			
2-Butanone	268		ug/kg	250	ND	105	70-132			
2,2-Dichloropropane	54.9		ug/kg	50.0	ND	110	77-138			
cis-1,2-Dichloroethene	53.5		ug/kg	50.0	ND	107	80-125			
Chloroform	54.1		ug/kg	50.0	ND	108	80-126			
Bromochloromethane	57.2		ug/kg	50.0	ND	114	80-129			
1,1,1-Trichloroethane	55.6		ug/kg	50.0	ND	111	78-133			
1,1-Dichloropropene	48.0		ug/kg	50.0	ND	96.0	79-120			
Carbon tetrachloride	50.3		ug/kg	50.0	ND	101	71-129			
1,2-Dichloroethane	45.1		ug/kg	50.0	ND	90.2	76-120			
Benzene	48.8		ug/kg	50.0	ND	96.1	80-120			
Trichloroethene	46.1		ug/kg	50.0	ND	92.2	80-120			
1,2-Dichloropropane	49.1		ug/kg	50.0	ND	98.3	79-120			
Bromodichloromethane	47.5		ug/kg	50.0	ND	95.0	80-122			
Dibromomethane	46.8		ug/kg	50.0	ND	93.6	80-120			
2-Chloroethyl vinyl ether	24.9		ug/kg	50.0	ND	49.9	51-129			*
4-Methyl-2-Pentanone	251		ug/kg	250	ND	101	73-121			
cis-1,3-Dichloropropene	43.1		ug/kg	50.0	ND	86.3	88-120			*
Toluene	46.3		ug/kg	50.0	ND	91.9	75-120			
trans-1,3-Dichloropropene	40.4		ug/kg	50.0	ND	80.8	80-124			
2-Hexanone	240		ug/kg	250	ND	95.8	68-122			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BFI0504-MS2)	**Source: 17I0116-10**		Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 20:30							
1,1,2-Trichloroethane	47.1		ug/kg	50.0	ND	94.1	79-120			
1,3-Dichloropropane	46.6		ug/kg	50.0	ND	93.3	78-120			
Tetrachloroethene	44.6		ug/kg	50.0	ND	89.1	74-124			
Dibromochloromethane	44.0		ug/kg	50.0	ND	88.0	74-125			
1,2-Dibromoethane	44.0		ug/kg	50.0	ND	88.1	80-120			
Chlorobenzene	42.5		ug/kg	50.0	ND	84.9	78-120			
Ethylbenzene	44.2		ug/kg	50.0	ND	88.3	80-125			
1,1,1,2-Tetrachloroethane	44.5		ug/kg	50.0	ND	89.1	80-120			
m,p-Xylene	87.8		ug/kg	100	ND	87.8	76-121			
o-Xylene	42.7		ug/kg	50.0	ND	85.3	67-132			
Xylenes, total	130		ug/kg	150	ND	87.0	67-132			
Styrene	36.5		ug/kg	50.0	ND	72.9	80-120			*
Bromoform	44.0		ug/kg	50.0	ND	88.0	64-128			
1,1,2,2-Tetrachloroethane	48.7		ug/kg	50.0	ND	97.4	74-120			
1,2,3-Trichloropropane	50.1		ug/kg	50.0	ND	100	73-120			
trans-1,4-Dichloro 2-Butene	30.6		ug/kg	50.0	ND	61.1	65-125			*, Q
n-Propylbenzene	45.3		ug/kg	50.0	ND	89.0	72-124			
Bromobenzene	39.9		ug/kg	50.0	ND	79.8	76-120			
Isopropyl Benzene	47.9		ug/kg	50.0	ND	95.8	74-121			
2-Chlorotoluene	42.9		ug/kg	50.0	ND	85.7	75-120			
4-Chlorotoluene	40.2		ug/kg	50.0	ND	80.3	69-124			
t-Butylbenzene	44.0		ug/kg	50.0	ND	88.0	72-122			
1,3,5-Trimethylbenzene	44.2		ug/kg	50.0	ND	88.4	74-122			
1,2,4-Trimethylbenzene	42.3		ug/kg	50.0	1.24	82.6	75-121			
s-Butylbenzene	41.9		ug/kg	50.0	ND	83.3	70-128			
4-Isopropyl Toluene	40.8		ug/kg	50.0	ND	81.6	75-125			
1,3-Dichlorobenzene	35.7		ug/kg	50.0	ND	71.4	75-120			*
1,4-Dichlorobenzene	33.3		ug/kg	50.0	ND	66.7	73-120			*
n-Butylbenzene	36.4		ug/kg	50.0	ND	71.0	73-130			*
1,2-Dichlorobenzene	34.3		ug/kg	50.0	ND	68.6	76-120			*
1,2-Dibromo-3-chloropropane	40.6		ug/kg	50.0	ND	81.2	65-126			
1,2,4-Trichlorobenzene	24.5		ug/kg	50.0	ND	48.9	66-140			*
Hexachloro-1,3-Butadiene	23.4		ug/kg	50.0	ND	46.9	67-133			*
Naphthalene	26.2		ug/kg	50.0	ND	49.7	69-125			*
1,2,3-Trichlorobenzene	22.2		ug/kg	50.0	ND	44.3	68-132			*

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BFI0504-MS2)	**Source: 17I0116-10**		Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 20:30							
Dichlorodifluoromethane	58.0		ug/kg	50.0	ND	116	67-142			Q
Methyl tert-butyl Ether	56.0		ug/kg	50.0	ND	112	79-127			
2-Pentanone	241		ug/kg	250	ND	96.2	77-120			
Surrogate: 1,2-Dichloroethane-d4		58.8	ug/kg	*50.0*	*60.4*	*118*	*80-149*			
Surrogate: Toluene-d8		51.1	ug/kg	*50.0*	*49.7*	*102*	*77-120*			
Surrogate: 4-Bromofluorobenzene		48.3	ug/kg	*50.0*	*49.3*	*96.6*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4		49.3	ug/kg	*50.0*	*50.8*	*98.7*	*80-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Matrix Spike Dup (BFI0504-MSD2)	**Source: 17I0116-10**		Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 20:52							
Chloromethane	41.5		ug/kg	50.0	ND	83.1	64-132	0.53	30	
Vinyl Chloride	55.8		ug/kg	50.0	ND	112	74-135	2.14	30	Q
Bromomethane	22.8		ug/kg	50.0	ND	45.6	53-144	5.15	30	*
Chloroethane	41.9		ug/kg	50.0	ND	83.8	55-149	2.54	30	
Trichlorofluoromethane	59.5		ug/kg	50.0	ND	119	61-164	5.76	30	Q
Acrolein	36.2		ug/kg	250	ND	14.5	59-140	15.00	30	*
1,1,2-Trichloro-1,2,2-Trifluoroethane	55.6		ug/kg	50.0	ND	111	74-143	5.18	30	Q
Acetone	250		ug/kg	250	40.5	85.6	48-137	8.48	30	
1,1-Dichloroethene	52.7		ug/kg	50.0	ND	105	77-134	4.60	30	Q
Bromoethane	56.9		ug/kg	50.0	ND	114	65-145	1.01	30	
Iodomethane	14.6		ug/kg	50.0	ND	29.2	31-162	0.20	30	*
Methylene Chloride	55.2		ug/kg	50.0	ND	109	69-129	3.54	30	
Acrylonitrile	50.7		ug/kg	50.0	ND	101	69-134	3.47	30	
Carbon Disulfide	51.2		ug/kg	50.0	ND	102	71-137	9.26	30	Q
trans-1,2-Dichloroethene	49.9		ug/kg	50.0	ND	99.7	79-130	4.87	30	
Vinyl Acetate	0.00		ug/kg	50.0	ND		66-141			*, U
1,1-Dichloroethane	53.5		ug/kg	50.0	ND	107	80-126	5.29	30	
2-Butanone	259		ug/kg	250	ND	102	70-132	3.36	30	
2,2-Dichloropropane	51.5		ug/kg	50.0	ND	103	77-138	6.40	30	
cis-1,2-Dichloroethene	51.5		ug/kg	50.0	ND	103	80-125	3.89	30	
Chloroform	53.2		ug/kg	50.0	ND	106	80-126	1.75	30	
Bromochloromethane	54.6		ug/kg	50.0	ND	109	80-129	4.69	30	
1,1,1-Trichloroethane	52.7		ug/kg	50.0	ND	105	78-133	5.53	30	
1,1-Dichloropropene	45.3		ug/kg	50.0	ND	90.5	79-120	5.92	30	
Carbon tetrachloride	47.7		ug/kg	50.0	ND	95.5	71-129	5.32	30	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BFI0504-MSD2)	**Source: 17I0116-10**		Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 20:52							
1,2-Dichloroethane	43.1		ug/kg	50.0	ND	86.2	76-120	4.43	30	
Benzene	47.0		ug/kg	50.0	ND	92.4	80-120	3.76	30	
Trichloroethene	44.8		ug/kg	50.0	ND	89.5	80-120	2.89	30	
1,2-Dichloropropane	48.1		ug/kg	50.0	ND	96.2	79-120	2.20	30	
Bromodichloromethane	45.6		ug/kg	50.0	ND	91.3	80-122	4.05	30	
Dibromomethane	45.1		ug/kg	50.0	ND	90.2	80-120	3.61	30	
2-Chloroethyl vinyl ether	23.9		ug/kg	50.0	ND	47.7	51-129	4.43	30	*
4-Methyl-2-Pentanone	237		ug/kg	250	ND	94.9	73-121	5.86	30	
cis-1,3-Dichloropropene	41.2		ug/kg	50.0	ND	82.5	88-120	4.54	30	*
Toluene	45.6		ug/kg	50.0	ND	90.4	75-120	1.59	30	
trans-1,3-Dichloropropene	38.2		ug/kg	50.0	ND	76.4	80-124	5.59	30	*
2-Hexanone	226		ug/kg	250	ND	90.6	68-122	5.62	30	
1,1,2-Trichloroethane	45.8		ug/kg	50.0	ND	91.7	79-120	2.62	30	
1,3-Dichloropropane	45.9		ug/kg	50.0	ND	91.8	78-120	1.63	30	
Tetrachloroethene	46.1		ug/kg	50.0	ND	92.3	74-124	3.48	30	
Dibromochloromethane	44.4		ug/kg	50.0	ND	88.8	74-125	0.89	30	
1,2-Dibromoethane	41.3		ug/kg	50.0	ND	82.7	80-120	6.33	30	
Chlorobenzene	42.5		ug/kg	50.0	ND	84.9	78-120	0.00		
Ethylbenzene	45.1		ug/kg	50.0	ND	90.2	80-125	2.05	30	
1,1,1,2-Tetrachloroethane	44.9		ug/kg	50.0	ND	89.7	80-120	0.74	30	
m,p-Xylene	89.1		ug/kg	100	ND	89.1	76-121	1.39	30	
o-Xylene	44.2		ug/kg	50.0	ND	88.3	67-132	3.49	30	
Xylenes, total	133		ug/kg	150	ND	88.8	67-132	2.08	30	
Styrene	36.4		ug/kg	50.0	ND	72.9	80-120	0.01	30	*
Bromoform	43.6		ug/kg	50.0	ND	87.2	64-128	0.88	30	
1,1,2,2-Tetrachloroethane	47.9		ug/kg	50.0	ND	95.8	74-120	1.62	30	
1,2,3-Trichloropropane	47.8		ug/kg	50.0	ND	95.6	73-120	4.69	30	
trans-1,4-Dichloro 2-Butene	29.3		ug/kg	50.0	ND	58.7	65-125	4.04	30	*, Q
n-Propylbenzene	46.0		ug/kg	50.0	ND	90.2	72-124	1.50	30	
Bromobenzene	41.0		ug/kg	50.0	ND	81.9	76-120	2.65	30	
Isopropyl Benzene	49.3		ug/kg	50.0	ND	98.6	74-121	2.90	30	
2-Chlorotoluene	43.9		ug/kg	50.0	ND	87.9	75-120	2.47	30	
4-Chlorotoluene	41.0		ug/kg	50.0	ND	82.0	69-124	2.09	30	
t-Butylbenzene	45.3		ug/kg	50.0	ND	90.7	72-122	2.99	30	
1,3,5-Trimethylbenzene	45.2		ug/kg	50.0	ND	90.4	74-122	2.21	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BFI0504-MSD2)	**Source: 17I0116-10**		Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 20:52							
1,2,4-Trimethylbenzene	43.3		ug/kg	50.0	1.24	84.5	75-121	2.41	30	
s-Butylbenzene	42.2		ug/kg	50.0	ND	84.0	70-128	0.87	30	
4-Isopropyl Toluene	42.1		ug/kg	50.0	ND	84.2	75-125	3.13	30	
1,3-Dichlorobenzene	37.2		ug/kg	50.0	ND	74.4	75-120	4.01	30	*
1,4-Dichlorobenzene	35.2		ug/kg	50.0	ND	70.3	73-120	5.31	30	*
n-Butylbenzene	37.4		ug/kg	50.0	ND	73.0	73-130	2.88	30	
1,2-Dichlorobenzene	36.2		ug/kg	50.0	ND	72.5	76-120	5.56	30	*
1,2-Dibromo-3-chloropropane	40.1		ug/kg	50.0	ND	80.1	65-126	1.29	30	
1,2,4-Trichlorobenzene	25.9		ug/kg	50.0	ND	51.9	66-140	5.82	30	*
Hexachloro-1,3-Butadiene	23.6		ug/kg	50.0	ND	47.2	67-133	0.73	30	*
Naphthalene	27.5		ug/kg	50.0	ND	52.0	69-125	4.67	30	*
1,2,3-Trichlorobenzene	23.8		ug/kg	50.0	ND	47.6	68-132	7.06	30	*
Dichlorodifluoromethane	53.5		ug/kg	50.0	ND	107	67-142	8.13	30	Q
Methyl tert-butyl Ether	53.6		ug/kg	50.0	ND	107	79-127	4.37	30	
2-Pentanone	227		ug/kg	250	ND	90.7	77-120	5.96	30	
Surrogate: 1,2-Dichloroethane-d4	55.6		ug/kg	*50.0*	*60.4*	*111*	*80-149*			
Surrogate: Toluene-d8	50.1		ug/kg	*50.0*	*49.7*	*100*	*77-120*			
Surrogate: 4-Bromofluorobenzene	48.4		ug/kg	*50.0*	*49.3*	*96.7*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	49.8		ug/kg	*50.0*	*50.8*	*99.6*	*80-120*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0563 - EPA 5035 (Methanol Extraction)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0563-BLK1)			Prepared: 22-Sep-2017 Analyzed: 22-Sep-2017 14:47							
Chloromethane	ND	50.0	ug/kg							U
Vinyl Chloride	ND	50.0	ug/kg							U
Bromomethane	ND	50.0	ug/kg							U
Chloroethane	ND	50.0	ug/kg							U
Trichlorofluoromethane	ND	50.0	ug/kg							U
Acrolein	ND	250	ug/kg							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	100	ug/kg							U
Acetone	ND	250	ug/kg							U
1,1-Dichloroethene	ND	50.0	ug/kg							U
Bromoethane	ND	100	ug/kg							U
Iodomethane	ND	50.0	ug/kg							U
Methylene Chloride	ND	100	ug/kg							U
Acrylonitrile	ND	250	ug/kg							U
Carbon Disulfide	ND	50.0	ug/kg							U
trans-1,2-Dichloroethene	ND	50.0	ug/kg							U
Vinyl Acetate	ND	250	ug/kg							U
1,1-Dichloroethane	ND	50.0	ug/kg							U
2-Butanone	ND	250	ug/kg							U
2,2-Dichloropropane	ND	50.0	ug/kg							U
cis-1,2-Dichloroethene	ND	50.0	ug/kg							U
Chloroform	ND	50.0	ug/kg							U
Bromochloromethane	ND	50.0	ug/kg							U
1,1,1-Trichloroethane	ND	50.0	ug/kg							U
1,1-Dichloropropene	ND	50.0	ug/kg							U
Carbon tetrachloride	ND	50.0	ug/kg							U
1,2-Dichloroethane	ND	50.0	ug/kg							U
Benzene	ND	50.0	ug/kg							U
Trichloroethene	ND	50.0	ug/kg							U
1,2-Dichloropropane	ND	50.0	ug/kg							U
Bromodichloromethane	ND	50.0	ug/kg							U
Dibromomethane	ND	50.0	ug/kg							U
2-Chloroethyl vinyl ether	ND	250	ug/kg							U
4-Methyl-2-Pentanone	ND	250	ug/kg							U
cis-1,3-Dichloropropene	ND	50.0	ug/kg							U
Toluene	ND	50.0	ug/kg							U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0563 - EPA 5035 (Methanol Extraction)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0563-BLK1)			Prepared: 22-Sep-2017 Analyzed: 22-Sep-2017 14:47							
trans-1,3-Dichloropropene	ND	50.0	ug/kg							U
2-Hexanone	ND	250	ug/kg							U
1,1,2-Trichloroethane	ND	50.0	ug/kg							U
1,3-Dichloropropane	ND	50.0	ug/kg							U
Tetrachloroethene	ND	50.0	ug/kg							U
Dibromochloromethane	ND	50.0	ug/kg							U
1,2-Dibromoethane	ND	50.0	ug/kg							U
Chlorobenzene	ND	50.0	ug/kg							U
Ethylbenzene	ND	50.0	ug/kg							U
1,1,1,2-Tetrachloroethane	ND	50.0	ug/kg							U
m,p-Xylene	ND	100	ug/kg							U
o-Xylene	ND	50.0	ug/kg							U
Xylenes, total	ND	100	ug/kg							U
Styrene	ND	50.0	ug/kg							U
Bromoform	ND	50.0	ug/kg							U
1,1,2,2-Tetrachloroethane	ND	50.0	ug/kg							U
1,2,3-Trichloropropane	ND	100	ug/kg							U
trans-1,4-Dichloro 2-Butene	ND	250	ug/kg							U
n-Propylbenzene	ND	50.0	ug/kg							U
Bromobenzene	ND	50.0	ug/kg							U
Isopropyl Benzene	ND	50.0	ug/kg							U
2-Chlorotoluene	ND	50.0	ug/kg							U
4-Chlorotoluene	ND	50.0	ug/kg							U
t-Butylbenzene	ND	50.0	ug/kg							U
1,3,5-Trimethylbenzene	ND	50.0	ug/kg							U
1,2,4-Trimethylbenzene	ND	50.0	ug/kg							U
s-Butylbenzene	ND	50.0	ug/kg							U
4-Isopropyl Toluene	ND	50.0	ug/kg							U
1,3-Dichlorobenzene	ND	50.0	ug/kg							U
1,4-Dichlorobenzene	ND	50.0	ug/kg							U
n-Butylbenzene	ND	50.0	ug/kg							U
1,2-Dichlorobenzene	ND	50.0	ug/kg							U
1,2-Dibromo-3-Chloropropane	ND	250	ug/kg							U
1,2,4-Trichlorobenzene	ND	250	ug/kg							U
Hexachloro-1,3-Butadiene	ND	250	ug/kg							U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0563 - EPA 5035 (Methanol Extraction)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0563-BLK1)				Prepared: 22-Sep-2017 Analyzed: 22-Sep-2017 14:47						
Naphthalene	ND	250	ug/kg							U
1,2,3-Trichlorobenzene	ND	250	ug/kg							U
Dichlorodifluoromethane	ND	50.0	ug/kg							U
Methyl tert-butyl Ether	ND	50.0	ug/kg							U
2-Pentanone	ND	250	ug/kg							U
Surrogate: 1,2-Dichloroethane-d4	58.6		ug/kg	*50.0*		*117*	*80-124*			
Surrogate: Toluene-d8	52.5		ug/kg	*50.0*		*105*	*80-120*			
Surrogate: 4-Bromofluorobenzene	47.2		ug/kg	*50.0*		*94.3*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	51.5		ug/kg	*50.0*		*103*	*80-120*			
LCS (BFI0563-BS1)				Prepared: 22-Sep-2017 Analyzed: 22-Sep-2017 13:47						
Chloromethane	2340		ug/kg	2500		93.5	42-153			
Vinyl Chloride	2990		ug/kg	2500		120	74-133			
Bromomethane	1590		ug/kg	2500		63.6	41-147			Q
Chloroethane	2950		ug/kg	2500		118	66-133			
Trichlorofluoromethane	3740		ug/kg	2500		150	60-145			*, Q
Acrolein	13000		ug/kg	12500		104	45-149			
1,1,2-Trichloro-1,2,2-Trifluoroethane	2940		ug/kg	2500		118	70-133			
Acetone	12100		ug/kg	12500		96.5	45-147			
1,1-Dichloroethene	2810		ug/kg	2500		112	67-132			
Bromoethane	2690		ug/kg	2500		108	68-135			
Iodomethane	1850		ug/kg	2500		74.2	42-187			Q
Methylene Chloride	2690		ug/kg	2500		108	53-169			
Acrylonitrile	2460		ug/kg	2500		98.4	63-133			
Carbon Disulfide	3100		ug/kg	2500		124	62-140			Q
trans-1,2-Dichloroethene	2800		ug/kg	2500		112	71-136			
Vinyl Acetate	2610		ug/kg	2500		104	72-127			
1,1-Dichloroethane	2870		ug/kg	2500		115	76-121			
2-Butanone	12300		ug/kg	12500		98.2	65-136			
2,2-Dichloropropane	2680		ug/kg	2500		107	73-129			
cis-1,2-Dichloroethene	2360		ug/kg	2500		94.2	77-121			
Chloroform	2700		ug/kg	2500		108	76-123			
Bromochloromethane	2720		ug/kg	2500		109	78-120			
1,1,1-Trichloroethane	2720		ug/kg	2500		109	76-125			
1,1-Dichloropropene	2560		ug/kg	2500		102	78-120			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0563 - EPA 5035 (Methanol Extraction)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0563-BS1)			Prepared: 22-Sep-2017 Analyzed: 22-Sep-2017 13:47							
Carbon tetrachloride	2530		ug/kg	2500		101	78-120			
1,2-Dichloroethane	2320		ug/kg	2500		92.9	75-120			
Benzene	2560		ug/kg	2500		102	80-120			
Trichloroethene	2490		ug/kg	2500		99.5	77-120			
1,2-Dichloropropane	2580		ug/kg	2500		103	78-120			
Bromodichloromethane	2520		ug/kg	2500		101	73-128			
Dibromomethane	2400		ug/kg	2500		95.8	78-120			
2-Chloroethyl vinyl ether	1700		ug/kg	2500		68.0	66-128			Q
4-Methyl-2-Pentanone	11300		ug/kg	12500		90.3	80-120			
cis-1,3-Dichloropropene	2490		ug/kg	2500		99.5	83-120			
Toluene	2460		ug/kg	2500		98.3	77-120			
trans-1,3-Dichloropropene	2490		ug/kg	2500		99.5	82-120			
2-Hexanone	11300		ug/kg	12500		90.3	73-122			
1,1,2-Trichloroethane	2400		ug/kg	2500		95.8	79-120			
1,3-Dichloropropane	2370		ug/kg	2500		94.6	80-120			
Tetrachloroethene	2400		ug/kg	2500		95.9	76-120			
Dibromochloromethane	2400		ug/kg	2500		95.9	79-120			
1,2-Dibromoethane	2370		ug/kg	2500		94.8	79-120			
Chlorobenzene	2540		ug/kg	2500		102	77-120			
Ethylbenzene	2580		ug/kg	2500		103	79-122			
1,1,1,2-Tetrachloroethane	2410		ug/kg	2500		96.4	78-120			
m,p-Xylene	5260		ug/kg	5000		105	81-122			
o-Xylene	2540		ug/kg	2500		102	79-120			
Xylenes, total	7800		ug/kg	7500		104	80-120			
Styrene	2610		ug/kg	2500		104	77-124			
Bromoform	2230		ug/kg	2500		89.1	80-120			
1,1,2,2-Tetrachloroethane	2410		ug/kg	2500		96.2	79-120			
1,2,3-Trichloropropane	2340		ug/kg	2500		93.5	79-120			
trans-1,4-Dichloro 2-Butene	2130		ug/kg	2500		85.3	75-123			
n-Propylbenzene	2640		ug/kg	2500		106	80-125			
Bromobenzene	2370		ug/kg	2500		94.7	76-120			
Isopropyl Benzene	2580		ug/kg	2500		103	74-130			
2-Chlorotoluene	2520		ug/kg	2500		101	77-120			
4-Chlorotoluene	2560		ug/kg	2500		102	77-121			
t-Butylbenzene	2540		ug/kg	2500		102	74-126			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0563 - EPA 5035 (Methanol Extraction)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0563-BS1)			Prepared: 22-Sep-2017 Analyzed: 22-Sep-2017 13:47							
1,3,5-Trimethylbenzene	2580		ug/kg	2500		103	79-124			
1,2,4-Trimethylbenzene	2590		ug/kg	2500		104	79-125			
s-Butylbenzene	2630		ug/kg	2500		105	80-127			
4-Isopropyl Toluene	2630		ug/kg	2500		105	75-132			
1,3-Dichlorobenzene	2520		ug/kg	2500		101	75-120			
1,4-Dichlorobenzene	2500		ug/kg	2500		99.9	76-120			
n-Butylbenzene	2750		ug/kg	2500		110	79-130			
1,2-Dichlorobenzene	2420		ug/kg	2500		96.9	76-120			
1,2-Dibromo-3-Chloropropane	2250		ug/kg	2500		90.1	75-120			
1,2,4-Trichlorobenzene	2660		ug/kg	2500		107	74-121			
Hexachloro-1,3-Butadiene	2700		ug/kg	2500		108	74-120			
Naphthalene	2380		ug/kg	2500		95.2	75-120			
1,2,3-Trichlorobenzene	2600		ug/kg	2500		104	75-120			
Dichlorodifluoromethane	2470		ug/kg	2500		98.8	62-143			
Methyl tert-butyl Ether	2630		ug/kg	2500		105	68-132			
2-Pentanone	10800		ug/kg	12500		86.5	77-120			
Surrogate: Dibromofluoromethane		56.3	ug/kg	*50.0*		*113*	*30-160*			
Surrogate: 1,2-Dichloroethane-d4		55.4	ug/kg	*50.0*		*111*	*80-124*			
Surrogate: Toluene-d8		50.6	ug/kg	*50.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene		49.4	ug/kg	*50.0*		*98.9*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4		50.8	ug/kg	*50.0*		*102*	*80-120*			
LCS Dup (BFI0563-BSD1)			Prepared: 22-Sep-2017 Analyzed: 22-Sep-2017 14:24							
Chloromethane	2490		ug/kg	2500		99.6	42-153	6.28	30	
Vinyl Chloride	3250		ug/kg	2500		130	74-133	8.37	30	
Bromomethane	1890		ug/kg	2500		75.5	41-147	17.20	30	Q
Chloroethane	3220		ug/kg	2500		129	66-133	8.64	30	
Trichlorofluoromethane	4180		ug/kg	2500		167	60-145	10.90	30	*, Q
Acrolein	12900		ug/kg	12500		103	45-149	0.33	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3260		ug/kg	2500		130	70-133	10.30	30	
Acetone	11900		ug/kg	12500		94.8	45-147	1.74	30	
1,1-Dichloroethene	3050		ug/kg	2500		122	67-132	8.34	30	
Bromoethane	2880		ug/kg	2500		115	68-135	6.88	30	
Iodomethane	1910		ug/kg	2500		76.3	42-187	2.82	30	Q
Methylene Chloride	2740		ug/kg	2500		110	53-169	1.93	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0563 - EPA 5035 (Methanol Extraction)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0563-BSD1)			Prepared: 22-Sep-2017 Analyzed: 22-Sep-2017 14:24							
Acrylonitrile	2420		ug/kg	2500		97.0	63-133	1.42	30	
Carbon Disulfide	3230		ug/kg	2500		129	62-140	4.07	30	Q
trans-1,2-Dichloroethene	2950		ug/kg	2500		118	71-136	5.37	30	
Vinyl Acetate	2680		ug/kg	2500		107	72-127	2.68	30	
1,1-Dichloroethane	2950		ug/kg	2500		118	76-121	2.55	30	
2-Butanone	12100		ug/kg	12500		96.9	65-136	1.34	30	
2,2-Dichloropropane	2580		ug/kg	2500		103	73-129	3.95	30	
cis-1,2-Dichloroethene	2410		ug/kg	2500		96.5	77-121	2.42	30	
Chloroform	2800		ug/kg	2500		112	76-123	3.81	30	
Bromochloromethane	2770		ug/kg	2500		111	78-120	1.81	30	
1,1,1-Trichloroethane	2820		ug/kg	2500		113	76-125	3.50	30	
1,1-Dichloropropene	2690		ug/kg	2500		107	78-120	4.73	30	
Carbon tetrachloride	2600		ug/kg	2500		104	78-120	2.63	30	
1,2-Dichloroethane	2340		ug/kg	2500		93.7	75-120	0.78	30	
Benzene	2600		ug/kg	2500		104	80-120	1.52	30	
Trichloroethene	2610		ug/kg	2500		105	77-120	4.96	30	
1,2-Dichloropropane	2600		ug/kg	2500		104	78-120	0.56	30	
Bromodichloromethane	2520		ug/kg	2500		101	73-128	0.01	30	
Dibromomethane	2480		ug/kg	2500		99.2	78-120	3.50	30	
2-Chloroethyl vinyl ether	1820		ug/kg	2500		72.6	66-128	6.54	30	Q
4-Methyl-2-Pentanone	11400		ug/kg	12500		91.0	80-120	0.73	30	
cis-1,3-Dichloropropene	2530		ug/kg	2500		101	83-120	1.75	30	
Toluene	2580		ug/kg	2500		103	77-120	4.79	30	
trans-1,3-Dichloropropene	2500		ug/kg	2500		100	82-120	0.43	30	
2-Hexanone	11100		ug/kg	12500		88.6	73-122	1.84	30	
1,1,2-Trichloroethane	2420		ug/kg	2500		96.9	79-120	1.15	30	
1,3-Dichloropropane	2450		ug/kg	2500		97.9	80-120	3.43	30	
Tetrachloroethene	2590		ug/kg	2500		104	76-120	7.69	30	
Dibromochloromethane	2430		ug/kg	2500		97.2	79-120	1.26	30	
1,2-Dibromoethane	2360		ug/kg	2500		94.3	79-120	0.58	30	
Chlorobenzene	2530		ug/kg	2500		101	77-120	0.44	30	
Ethylbenzene	2600		ug/kg	2500		104	79-122	1.03	30	
1,1,1,2-Tetrachloroethane	2410		ug/kg	2500		96.3	78-120	0.05	30	
m,p-Xylene	5180		ug/kg	5000		104	81-122	1.47	30	
o-Xylene	2570		ug/kg	2500		103	79-120	1.30	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0563 - EPA 5035 (Methanol Extraction)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0563-BSD1)			Prepared: 22-Sep-2017 Analyzed: 22-Sep-2017 14:24							
Xylenes, total	7760		ug/kg	7500		103	80-120	0.56	30	
Styrene	2540		ug/kg	2500		102	77-124	2.49	30	
Bromoform	2230		ug/kg	2500		89.0	80-120	0.15	30	
1,1,2,2-Tetrachloroethane	2350		ug/kg	2500		94.1	79-120	2.20	30	
1,2,3-Trichloropropane	2270		ug/kg	2500		91.0	79-120	2.67	30	
trans-1,4-Dichloro 2-Butene	2130		ug/kg	2500		85.2	75-123	0.12	30	
n-Propylbenzene	2700		ug/kg	2500		108	80-125	1.99	30	
Bromobenzene	2380		ug/kg	2500		95.3	76-120	0.60	30	
Isopropyl Benzene	2620		ug/kg	2500		105	74-130	1.21	30	
2-Chlorotoluene	2530		ug/kg	2500		101	77-120	0.46	30	
4-Chlorotoluene	2590		ug/kg	2500		104	77-121	1.14	30	
t-Butylbenzene	2590		ug/kg	2500		104	74-126	1.96	30	
1,3,5-Trimethylbenzene	2580		ug/kg	2500		103	79-124	0.17	30	
1,2,4-Trimethylbenzene	2580		ug/kg	2500		103	79-125	0.72	30	
s-Butylbenzene	2670		ug/kg	2500		107	80-127	1.20	30	
4-Isopropyl Toluene	2650		ug/kg	2500		106	75-132	0.96	30	
1,3-Dichlorobenzene	2540		ug/kg	2500		102	75-120	0.80	30	
1,4-Dichlorobenzene	2450		ug/kg	2500		98.1	76-120	1.84	30	
n-Butylbenzene	2790		ug/kg	2500		112	79-130	1.20	30	
1,2-Dichlorobenzene	2420		ug/kg	2500		96.8	76-120	0.20	30	
1,2-Dibromo-3-Chloropropane	2110		ug/kg	2500		84.4	75-120	6.54	30	
1,2,4-Trichlorobenzene	2620		ug/kg	2500		105	74-121	1.72	30	
Hexachloro-1,3-Butadiene	2590		ug/kg	2500		103	74-120	4.28	30	
Naphthalene	2320		ug/kg	2500		92.7	75-120	2.61	30	
1,2,3-Trichlorobenzene	2470		ug/kg	2500		98.7	75-120	5.09	30	
Dichlorodifluoromethane	2990		ug/kg	2500		119	62-143	18.90	30	
Methyl tert-butyl Ether	2690		ug/kg	2500		108	68-132	2.13	30	
2-Pentanone	11400		ug/kg	12500		91.4	77-120	5.53	30	
Surrogate: Dibromofluoromethane		56.8	ug/kg	*50.0*		*114*	*30-160*			
Surrogate: 1,2-Dichloroethane-d4		56.5	ug/kg	*50.0*		*113*	*80-124*			
Surrogate: Toluene-d8		51.4	ug/kg	*50.0*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene		50.4	ug/kg	*50.0*		*101*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4		51.1	ug/kg	*50.0*		*102*	*80-120*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0625 - EPA 5035 (Methanol Extraction)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0625-BLK1)	Prepared: 22-Sep-2017 Analyzed: 25-Sep-2017 17:16									
Chloromethane	ND	50.0	ug/kg							U
Vinyl Chloride	ND	50.0	ug/kg							U
Bromomethane	ND	50.0	ug/kg							U
Chloroethane	ND	50.0	ug/kg							U
Trichlorofluoromethane	ND	50.0	ug/kg							U
Acrolein	ND	250	ug/kg							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	100	ug/kg							U
Acetone	ND	250	ug/kg							U
1,1-Dichloroethene	ND	50.0	ug/kg							U
Bromoethane	ND	100	ug/kg							U
Iodomethane	ND	50.0	ug/kg							U
Methylene Chloride	ND	100	ug/kg							U
Acrylonitrile	ND	250	ug/kg							U
Carbon Disulfide	ND	50.0	ug/kg							U
trans-1,2-Dichloroethene	ND	50.0	ug/kg							U
Vinyl Acetate	ND	250	ug/kg							U
1,1-Dichloroethane	ND	50.0	ug/kg							U
2-Butanone	ND	250	ug/kg							U
2,2-Dichloropropane	ND	50.0	ug/kg							U
cis-1,2-Dichloroethene	ND	50.0	ug/kg							U
Chloroform	ND	50.0	ug/kg							U
Bromochloromethane	ND	50.0	ug/kg							U
1,1,1-Trichloroethane	ND	50.0	ug/kg							U
1,1-Dichloropropene	ND	50.0	ug/kg							U
Carbon tetrachloride	ND	50.0	ug/kg							U
1,2-Dichloroethane	ND	50.0	ug/kg							U
Benzene	ND	50.0	ug/kg							U
Trichloroethene	ND	50.0	ug/kg							U
1,2-Dichloropropane	ND	50.0	ug/kg							U
Bromodichloromethane	ND	50.0	ug/kg							U
Dibromomethane	ND	50.0	ug/kg							U
2-Chloroethyl vinyl ether	ND	250	ug/kg							U
4-Methyl-2-Pentanone	ND	250	ug/kg							U
cis-1,3-Dichloropropene	ND	50.0	ug/kg							U
Toluene	ND	50.0	ug/kg							U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0625 - EPA 5035 (Methanol Extraction)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0625-BLK1)			Prepared: 22-Sep-2017 Analyzed: 25-Sep-2017 17:16							
trans-1,3-Dichloropropene	ND	50.0	ug/kg							U
2-Hexanone	ND	250	ug/kg							U
1,1,2-Trichloroethane	ND	50.0	ug/kg							U
1,3-Dichloropropane	ND	50.0	ug/kg							U
Tetrachloroethene	ND	50.0	ug/kg							U
Dibromochloromethane	ND	50.0	ug/kg							U
1,2-Dibromoethane	ND	50.0	ug/kg							U
Chlorobenzene	ND	50.0	ug/kg							U
Ethylbenzene	ND	50.0	ug/kg							U
1,1,1,2-Tetrachloroethane	ND	50.0	ug/kg							U
m,p-Xylene	ND	100	ug/kg							U
o-Xylene	ND	50.0	ug/kg							U
Xylenes, total	ND	100	ug/kg							U
Styrene	ND	50.0	ug/kg							U
Bromoform	ND	50.0	ug/kg							U
1,1,2,2-Tetrachloroethane	ND	50.0	ug/kg							U
1,2,3-Trichloropropane	ND	100	ug/kg							U
trans-1,4-Dichloro 2-Butene	ND	250	ug/kg							U
n-Propylbenzene	ND	50.0	ug/kg							U
Bromobenzene	ND	50.0	ug/kg							U
Isopropyl Benzene	ND	50.0	ug/kg							U
2-Chlorotoluene	ND	50.0	ug/kg							U
4-Chlorotoluene	ND	50.0	ug/kg							U
t-Butylbenzene	ND	50.0	ug/kg							U
1,3,5-Trimethylbenzene	ND	50.0	ug/kg							U
1,2,4-Trimethylbenzene	ND	50.0	ug/kg							U
s-Butylbenzene	ND	50.0	ug/kg							U
4-Isopropyl Toluene	ND	50.0	ug/kg							U
1,3-Dichlorobenzene	ND	50.0	ug/kg							U
1,4-Dichlorobenzene	ND	50.0	ug/kg							U
n-Butylbenzene	ND	50.0	ug/kg							U
1,2-Dichlorobenzene	ND	50.0	ug/kg							U
1,2-Dibromo-3-Chloropropane	ND	250	ug/kg							U
1,2,4-Trichlorobenzene	ND	250	ug/kg							U
Hexachloro-1,3-Butadiene	ND	250	ug/kg							U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0625 - EPA 5035 (Methanol Extraction)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0625-BLK1)			Prepared: 22-Sep-2017 Analyzed: 25-Sep-2017 17:16							
Naphthalene	ND	250	ug/kg							U
1,2,3-Trichlorobenzene	ND	250	ug/kg							U
Dichlorodifluoromethane	ND	50.0	ug/kg							U
Methyl tert-butyl Ether	ND	50.0	ug/kg							U
2-Pentanone	ND	250	ug/kg							U
Surrogate: 1,2-Dichloroethane-d4	52.8		ug/kg	*50.0*		*106*	*80-124*			
Surrogate: Toluene-d8	50.4		ug/kg	*50.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	47.8		ug/kg	*50.0*		*95.5*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	51.5		ug/kg	*50.0*		*103*	*80-120*			
LCS (BFI0625-BS1)			Prepared: 22-Sep-2017 Analyzed: 25-Sep-2017 16:17							
Chloromethane	2320		ug/kg	2500		92.9	42-153			
Vinyl Chloride	2870		ug/kg	2500		115	74-133			
Bromomethane	1940		ug/kg	2500		77.7	41-147			Q
Chloroethane	2590		ug/kg	2500		104	66-133			
Trichlorofluoromethane	3580		ug/kg	2500		143	60-145			Q
Acrolein	13100		ug/kg	12500		105	45-149			
1,1,2-Trichloro-1,2,2-Trifluoroethane	2990		ug/kg	2500		120	70-133			
Acetone	11800		ug/kg	12500		94.1	45-147			
1,1-Dichloroethene	2780		ug/kg	2500		111	67-132			
Bromoethane	2900		ug/kg	2500		116	68-135			
Iodomethane	2180		ug/kg	2500		87.3	42-187			
Methylene Chloride	2710		ug/kg	2500		108	53-169			
Acrylonitrile	2530		ug/kg	2500		101	63-133			
Carbon Disulfide	2980		ug/kg	2500		119	62-140			
trans-1,2-Dichloroethene	2730		ug/kg	2500		109	71-136			
Vinyl Acetate	2650		ug/kg	2500		106	72-127			
1,1-Dichloroethane	2770		ug/kg	2500		111	76-121			
2-Butanone	12900		ug/kg	12500		103	65-136			
2,2-Dichloropropane	2340		ug/kg	2500		93.5	73-129			
cis-1,2-Dichloroethene	2330		ug/kg	2500		93.3	77-121			
Chloroform	2700		ug/kg	2500		108	76-123			
Bromochloromethane	2790		ug/kg	2500		111	78-120			
1,1,1-Trichloroethane	2690		ug/kg	2500		108	76-125			
1,1-Dichloropropene	2660		ug/kg	2500		107	78-120			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0625 - EPA 5035 (Methanol Extraction)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0625-BS1)			Prepared: 22-Sep-2017 Analyzed: 25-Sep-2017 16:17							
Carbon tetrachloride	2570		ug/kg	2500		103	78-120			
1,2-Dichloroethane	2500		ug/kg	2500		100	75-120			
Benzene	2690		ug/kg	2500		108	80-120			
Trichloroethene	2630		ug/kg	2500		105	77-120			
1,2-Dichloropropane	2710		ug/kg	2500		108	78-120			
Bromodichloromethane	2640		ug/kg	2500		106	73-128			
Dibromomethane	2640		ug/kg	2500		105	78-120			
2-Chloroethyl vinyl ether	1890		ug/kg	2500		75.6	66-128			Q
4-Methyl-2-Pentanone	12600		ug/kg	12500		101	80-120			
cis-1,3-Dichloropropene	2680		ug/kg	2500		107	83-120			
Toluene	2610		ug/kg	2500		104	77-120			
trans-1,3-Dichloropropene	2670		ug/kg	2500		107	82-120			
2-Hexanone	12000		ug/kg	12500		96.4	73-122			
1,1,2-Trichloroethane	2610		ug/kg	2500		105	79-120			
1,3-Dichloropropane	2600		ug/kg	2500		104	80-120			
Tetrachloroethene	2550		ug/kg	2500		102	76-120			
Dibromochloromethane	2590		ug/kg	2500		104	79-120			
1,2-Dibromoethane	2560		ug/kg	2500		103	79-120			
Chlorobenzene	2570		ug/kg	2500		103	77-120			
Ethylbenzene	2640		ug/kg	2500		106	79-122			
1,1,1,2-Tetrachloroethane	2590		ug/kg	2500		104	78-120			
m,p-Xylene	5250		ug/kg	5000		105	81-122			
o-Xylene	2640		ug/kg	2500		106	79-120			
Xylenes, total	7890		ug/kg	7500		105	80-120			
Styrene	2680		ug/kg	2500		107	77-124			
Bromoform	2470		ug/kg	2500		98.6	80-120			
1,1,2,2-Tetrachloroethane	2620		ug/kg	2500		105	79-120			
1,2,3-Trichloropropane	2560		ug/kg	2500		102	79-120			
trans-1,4-Dichloro 2-Butene	2200		ug/kg	2500		87.9	75-123			
n-Propylbenzene	2660		ug/kg	2500		107	80-125			
Bromobenzene	2500		ug/kg	2500		100	76-120			
Isopropyl Benzene	2660		ug/kg	2500		106	74-130			
2-Chlorotoluene	2570		ug/kg	2500		103	77-120			
4-Chlorotoluene	2590		ug/kg	2500		104	77-121			
t-Butylbenzene	2620		ug/kg	2500		105	74-126			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0625 - EPA 5035 (Methanol Extraction)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0625-BS1)			Prepared: 22-Sep-2017 Analyzed: 25-Sep-2017 16:17							
1,3,5-Trimethylbenzene	2660		ug/kg	2500		106	79-124			
1,2,4-Trimethylbenzene	2670		ug/kg	2500		107	79-125			
s-Butylbenzene	2650		ug/kg	2500		106	80-127			
4-Isopropyl Toluene	2680		ug/kg	2500		107	75-132			
1,3-Dichlorobenzene	2590		ug/kg	2500		104	75-120			
1,4-Dichlorobenzene	2530		ug/kg	2500		101	76-120			
n-Butylbenzene	2730		ug/kg	2500		109	79-130			
1,2-Dichlorobenzene	2510		ug/kg	2500		100	76-120			
1,2-Dibromo-3-Chloropropane	2420		ug/kg	2500		96.9	75-120			
1,2,4-Trichlorobenzene	2670		ug/kg	2500		107	74-121			
Hexachloro-1,3-Butadiene	2740		ug/kg	2500		109	74-120			
Naphthalene	2570		ug/kg	2500		103	75-120			
1,2,3-Trichlorobenzene	2690		ug/kg	2500		108	75-120			
Dichlorodifluoromethane	2260		ug/kg	2500		90.4	62-143			
Methyl tert-butyl Ether	2650		ug/kg	2500		106	68-132			
2-Pentanone	12000		ug/kg	12500		95.8	77-120			
Surrogate: Dibromofluoromethane		54.3	ug/kg	*50.0*		*109*	*30-160*			
Surrogate: 1,2-Dichloroethane-d4		54.0	ug/kg	*50.0*		*108*	*80-124*			
Surrogate: Toluene-d8		51.7	ug/kg	*50.0*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene		49.6	ug/kg	*50.0*		*99.3*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4		51.5	ug/kg	*50.0*		*103*	*80-120*			
LCS Dup (BFI0625-BSD1)			Prepared: 22-Sep-2017 Analyzed: 25-Sep-2017 16:54							
Chloromethane	2460		ug/kg	2500		98.5	42-153	5.89	30	
Vinyl Chloride	3080		ug/kg	2500		123	74-133	6.84	30	
Bromomethane	2190		ug/kg	2500		87.7	41-147	12.10	30	Q
Chloroethane	2860		ug/kg	2500		114	66-133	9.99	30	
Trichlorofluoromethane	3710		ug/kg	2500		148	60-145	3.52	30	Q
Acrolein	13100		ug/kg	12500		105	45-149	0.19	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	2990		ug/kg	2500		119	70-133	0.04	30	
Acetone	11700		ug/kg	12500		93.4	45-147	0.75	30	
1,1-Dichloroethene	2920		ug/kg	2500		117	67-132	4.77	30	
Bromoethane	3000		ug/kg	2500		120	68-135	3.47	30	
Iodomethane	2240		ug/kg	2500		89.6	42-187	2.56	30	
Methylene Chloride	2710		ug/kg	2500		108	53-169	0.07	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0625 - EPA 5035 (Methanol Extraction)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0625-BSD1)			Prepared: 22-Sep-2017 Analyzed: 25-Sep-2017 16:54							
Acrylonitrile	2390		ug/kg	2500		95.7	63-133	5.62	30	
Carbon Disulfide	3140		ug/kg	2500		126	62-140	5.41	30	
trans-1,2-Dichloroethene	2770		ug/kg	2500		111	71-136	1.37	30	
Vinyl Acetate	2450		ug/kg	2500		98.0	72-127	7.89	30	
1,1-Dichloroethane	2760		ug/kg	2500		110	76-121	0.50	30	
2-Butanone	11600		ug/kg	12500		92.6	65-136	10.90	30	
2,2-Dichloropropane	2640		ug/kg	2500		106	73-129	12.20	30	
cis-1,2-Dichloroethene	2320		ug/kg	2500		92.6	77-121	0.76	30	
Chloroform	2640		ug/kg	2500		106	76-123	2.28	30	
Bromochloromethane	2750		ug/kg	2500		110	78-120	1.16	30	
1,1,1-Trichloroethane	2690		ug/kg	2500		107	76-125	0.08	30	
1,1-Dichloropropene	2710		ug/kg	2500		108	78-120	1.71	30	
Carbon tetrachloride	2660		ug/kg	2500		106	78-120	3.35	30	
1,2-Dichloroethane	2360		ug/kg	2500		94.3	75-120	5.85	30	
Benzene	2710		ug/kg	2500		108	80-120	0.74	30	
Trichloroethene	2680		ug/kg	2500		107	77-120	2.12	30	
1,2-Dichloropropane	2640		ug/kg	2500		106	78-120	2.62	30	
Bromodichloromethane	2590		ug/kg	2500		104	73-128	1.87	30	
Dibromomethane	2520		ug/kg	2500		101	78-120	4.60	30	
2-Chloroethyl vinyl ether	1820		ug/kg	2500		72.9	66-128	3.62	30	Q
4-Methyl-2-Pentanone	12200		ug/kg	12500		97.2	80-120	3.71	30	
cis-1,3-Dichloropropene	2600		ug/kg	2500		104	83-120	3.35	30	
Toluene	2690		ug/kg	2500		108	77-120	2.93	30	
trans-1,3-Dichloropropene	2570		ug/kg	2500		103	82-120	3.74	30	
2-Hexanone	11600		ug/kg	12500		92.4	73-122	4.16	30	
1,1,2-Trichloroethane	2500		ug/kg	2500		100	79-120	4.29	30	
1,3-Dichloropropane	2510		ug/kg	2500		101	80-120	3.53	30	
Tetrachloroethene	2600		ug/kg	2500		104	76-120	2.06	30	
Dibromochloromethane	2510		ug/kg	2500		101	79-120	3.21	30	
1,2-Dibromoethane	2460		ug/kg	2500		98.6	79-120	3.99	30	
Chlorobenzene	2640		ug/kg	2500		106	77-120	2.74	30	
Ethylbenzene	2690		ug/kg	2500		108	79-122	1.91	30	
1,1,1,2-Tetrachloroethane	2500		ug/kg	2500		100	78-120	3.63	30	
m,p-Xylene	5370		ug/kg	5000		107	81-122	2.20	30	
o-Xylene	2640		ug/kg	2500		106	79-120	0.12	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0625 - EPA 5035 (Methanol Extraction)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0625-BSD1)			Prepared: 22-Sep-2017 Analyzed: 25-Sep-2017 16:54							
Xylenes, total	8010		ug/kg	7500		107	80-120	1.51	30	
Styrene	2630		ug/kg	2500		105	77-124	1.96	30	
Bromoform	2450		ug/kg	2500		97.9	80-120	0.75	30	
1,1,2,2-Tetrachloroethane	2490		ug/kg	2500		99.5	79-120	4.98	30	
1,2,3-Trichloropropane	2440		ug/kg	2500		97.7	79-120	4.75	30	
trans-1,4-Dichloro 2-Butene	2120		ug/kg	2500		84.7	75-123	3.76	30	
n-Propylbenzene	2790		ug/kg	2500		111	80-125	4.48	30	
Bromobenzene	2480		ug/kg	2500		99.2	76-120	0.75	30	
Isopropyl Benzene	2710		ug/kg	2500		108	74-130	1.68	30	
2-Chlorotoluene	2630		ug/kg	2500		105	77-120	2.11	30	
4-Chlorotoluene	2680		ug/kg	2500		107	77-121	3.56	30	
t-Butylbenzene	2650		ug/kg	2500		106	74-126	1.32	30	
1,3,5-Trimethylbenzene	2690		ug/kg	2500		108	79-124	1.09	30	
1,2,4-Trimethylbenzene	2720		ug/kg	2500		109	79-125	1.85	30	
s-Butylbenzene	2750		ug/kg	2500		110	80-127	3.69	30	
4-Isopropyl Toluene	2790		ug/kg	2500		112	75-132	4.12	30	
1,3-Dichlorobenzene	2680		ug/kg	2500		107	75-120	3.05	30	
1,4-Dichlorobenzene	2580		ug/kg	2500		103	76-120	2.17	30	
n-Butylbenzene	2890		ug/kg	2500		116	79-130	5.67	30	
1,2-Dichlorobenzene	2520		ug/kg	2500		101	76-120	0.54	30	
1,2-Dibromo-3-Chloropropane	2110		ug/kg	2500		84.3	75-120	13.90	30	
1,2,4-Trichlorobenzene	2830		ug/kg	2500		113	74-121	5.73	30	
Hexachloro-1,3-Butadiene	2780		ug/kg	2500		111	74-120	1.50	30	
Naphthalene	2500		ug/kg	2500		100	75-120	2.69	30	
1,2,3-Trichlorobenzene	2740		ug/kg	2500		110	75-120	1.81	30	
Dichlorodifluoromethane	2440		ug/kg	2500		97.5	62-143	7.49	30	
Methyl tert-butyl Ether	2540		ug/kg	2500		101	68-132	4.31	30	
2-Pentanone	12500		ug/kg	12500		99.7	77-120	4.00	30	
Surrogate: Dibromofluoromethane		51.3	ug/kg	*50.0*		*103*	*30-160*			
Surrogate: 1,2-Dichloroethane-d4		51.5	ug/kg	*50.0*		*103*	*80-124*			
Surrogate: Toluene-d8		50.9	ug/kg	*50.0*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene		49.8	ug/kg	*50.0*		*99.6*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4		50.3	ug/kg	*50.0*		*101*	*80-120*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0686 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0686-BLK1)			Prepared: 19-Sep-2017 Analyzed: 19-Sep-2017 12:12							
Chloromethane	ND	50.0	ug/kg							U
Vinyl Chloride	ND	50.0	ug/kg							U
Bromomethane	ND	50.0	ug/kg							U
Chloroethane	ND	50.0	ug/kg							U
Trichlorofluoromethane	ND	50.0	ug/kg							U
Acrolein	ND	250	ug/kg							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	100	ug/kg							U
Acetone	ND	250	ug/kg							U
1,1-Dichloroethene	ND	50.0	ug/kg							U
Bromoethane	ND	100	ug/kg							U
Iodomethane	ND	50.0	ug/kg							U
Methylene Chloride	ND	100	ug/kg							U
Acrylonitrile	ND	250	ug/kg							U
Carbon Disulfide	ND	50.0	ug/kg							U
trans-1,2-Dichloroethene	ND	50.0	ug/kg							U
Vinyl Acetate	ND	250	ug/kg							U
1,1-Dichloroethane	ND	50.0	ug/kg							U
2-Butanone	ND	250	ug/kg							U
2,2-Dichloropropane	ND	50.0	ug/kg							U
cis-1,2-Dichloroethene	ND	50.0	ug/kg							U
Chloroform	ND	50.0	ug/kg							U
Bromochloromethane	ND	50.0	ug/kg							U
1,1,1-Trichloroethane	ND	50.0	ug/kg							U
1,1-Dichloropropene	ND	50.0	ug/kg							U
Carbon tetrachloride	ND	50.0	ug/kg							U
1,2-Dichloroethane	ND	50.0	ug/kg							U
Benzene	ND	50.0	ug/kg							U
Trichloroethene	ND	50.0	ug/kg							U
1,2-Dichloropropane	ND	50.0	ug/kg							U
Bromodichloromethane	ND	50.0	ug/kg							U
Dibromomethane	ND	50.0	ug/kg							U
2-Chloroethyl vinyl ether	ND	250	ug/kg							U
4-Methyl-2-Pentanone	ND	250	ug/kg							U
cis-1,3-Dichloropropene	ND	50.0	ug/kg							U
Toluene	ND	50.0	ug/kg							U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0686 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0686-BLK1)			Prepared: 19-Sep-2017 Analyzed: 19-Sep-2017 12:12							
trans-1,3-Dichloropropene	ND	50.0	ug/kg							U
2-Hexanone	ND	250	ug/kg							U
1,1,2-Trichloroethane	ND	50.0	ug/kg							U
1,3-Dichloropropane	ND	50.0	ug/kg							U
Tetrachloroethene	ND	50.0	ug/kg							U
Dibromochloromethane	ND	50.0	ug/kg							U
1,2-Dibromoethane	ND	50.0	ug/kg							U
Chlorobenzene	ND	50.0	ug/kg							U
Ethylbenzene	ND	50.0	ug/kg							U
1,1,1,2-Tetrachloroethane	ND	50.0	ug/kg							U
m,p-Xylene	ND	100	ug/kg							U
o-Xylene	ND	50.0	ug/kg							U
Xylenes, total	ND	100	ug/kg							U
Styrene	ND	50.0	ug/kg							U
Bromoform	ND	50.0	ug/kg							U
1,1,2,2-Tetrachloroethane	ND	50.0	ug/kg							U
1,2,3-Trichloropropane	ND	100	ug/kg							U
trans-1,4-Dichloro 2-Butene	ND	250	ug/kg							U
n-Propylbenzene	ND	50.0	ug/kg							U
Bromobenzene	ND	50.0	ug/kg							U
Isopropyl Benzene	ND	50.0	ug/kg							U
2-Chlorotoluene	ND	50.0	ug/kg							U
4-Chlorotoluene	ND	50.0	ug/kg							U
t-Butylbenzene	ND	50.0	ug/kg							U
1,3,5-Trimethylbenzene	ND	50.0	ug/kg							U
1,2,4-Trimethylbenzene	ND	50.0	ug/kg							U
s-Butylbenzene	ND	50.0	ug/kg							U
4-Isopropyl Toluene	ND	50.0	ug/kg							U
1,3-Dichlorobenzene	ND	50.0	ug/kg							U
1,4-Dichlorobenzene	ND	50.0	ug/kg							U
n-Butylbenzene	ND	50.0	ug/kg							U
1,2-Dichlorobenzene	ND	50.0	ug/kg							U
1,2-Dibromo-3-Chloropropane	ND	250	ug/kg							U
1,2,4-Trichlorobenzene	ND	250	ug/kg							U
Hexachloro-1,3-Butadiene	ND	250	ug/kg							U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0686 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0686-BLK1)				Prepared: 19-Sep-2017 Analyzed: 19-Sep-2017 12:12						
Naphthalene	ND	250	ug/kg							U
1,2,3-Trichlorobenzene	ND	250	ug/kg							U
Dichlorodifluoromethane	ND	50.0	ug/kg							U
Methyl tert-butyl Ether	ND	50.0	ug/kg							U
2-Pentanone	ND	250	ug/kg							U
Surrogate: 1,2-Dichloroethane-d4		4.63	ug/kg	*5.00*		*92.6*	*80-124*			
Surrogate: Toluene-d8		4.80	ug/kg	*5.00*		*96.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene		4.96	ug/kg	*5.00*		*99.1*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4		5.00	ug/kg	*5.00*		*100*	*80-120*			
LCS (BFI0686-BS1)				Prepared: 19-Sep-2017 Analyzed: 19-Sep-2017 10:46						
Chloromethane	427		ug/kg	500		85.4	42-153			
Vinyl Chloride	442		ug/kg	500		88.4	74-133			
Bromomethane	465		ug/kg	500		92.9	41-147			
Chloroethane	431		ug/kg	500		86.3	66-133			
Trichlorofluoromethane	429		ug/kg	500		85.7	60-145			
Acrolein	1990		ug/kg	2500		79.8	45-149			Q
1,1,2-Trichloro-1,2,2-Trifluoroethane	449		ug/kg	500		89.8	70-133			
Acetone	1850		ug/kg	2500		74.2	45-147			Q
1,1-Dichloroethene	432		ug/kg	500		86.3	67-132			
Bromoethane	472		ug/kg	500		94.4	68-135			
Iodomethane	494		ug/kg	500		98.7	42-187			
Methylene Chloride	425		ug/kg	500		85.0	53-169			
Acrylonitrile	398		ug/kg	500		79.5	63-133			Q
Carbon Disulfide	423		ug/kg	500		84.6	62-140			
trans-1,2-Dichloroethene	458		ug/kg	500		91.7	71-136			
Vinyl Acetate	362		ug/kg	500		72.3	72-127			Q
1,1-Dichloroethane	445		ug/kg	500		89.1	76-121			
2-Butanone	2030		ug/kg	2500		81.3	65-136			
2,2-Dichloropropane	483		ug/kg	500		96.6	73-129			
cis-1,2-Dichloroethene	468		ug/kg	500		93.7	77-121			
Chloroform	447		ug/kg	500		89.3	76-123			
Bromochloromethane	474		ug/kg	500		94.9	78-120			
1,1,1-Trichloroethane	456		ug/kg	500		91.3	76-125			
1,1-Dichloropropene	505		ug/kg	500		101	78-120			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0686 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0686-BS1)			Prepared: 19-Sep-2017 Analyzed: 19-Sep-2017 10:46							
Carbon tetrachloride	458		ug/kg	500		91.7	78-120			
1,2-Dichloroethane	433		ug/kg	500		86.5	75-120			
Benzene	481		ug/kg	500		96.3	80-120			
Trichloroethene	485		ug/kg	500		96.9	77-120			
1,2-Dichloropropane	469		ug/kg	500		93.9	78-120			
Bromodichloromethane	454		ug/kg	500		90.8	73-128			
Dibromomethane	448		ug/kg	500		89.7	78-120			
2-Chloroethyl vinyl ether	338		ug/kg	500		67.6	66-128			Q
4-Methyl-2-Pentanone	2070		ug/kg	2500		82.8	80-120			
cis-1,3-Dichloropropene	504		ug/kg	500		101	83-120			
Toluene	480		ug/kg	500		96.0	77-120			
trans-1,3-Dichloropropene	486		ug/kg	500		97.3	82-120			
2-Hexanone	2130		ug/kg	2500		85.2	73-122			
1,1,2-Trichloroethane	448		ug/kg	500		89.6	79-120			
1,3-Dichloropropane	496		ug/kg	500		99.2	80-120			
Tetrachloroethene	526		ug/kg	500		105	76-120			
Dibromochloromethane	496		ug/kg	500		99.1	79-120			
1,2-Dibromoethane	473		ug/kg	500		94.5	79-120			
Chlorobenzene	500		ug/kg	500		100	77-120			
Ethylbenzene	501		ug/kg	500		100	79-122			
1,1,1,2-Tetrachloroethane	504		ug/kg	500		101	78-120			
m,p-Xylene	1090		ug/kg	1000		109	81-122			
o-Xylene	543		ug/kg	500		109	79-120			
Xylenes, total	1640		ug/kg	1500		109	0-200			
Styrene	429		ug/kg	500		85.8	77-124			
Bromoform	389		ug/kg	500		77.7	80-120			Q
1,1,2,2-Tetrachloroethane	442		ug/kg	500		88.4	79-120			
1,2,3-Trichloropropane	437		ug/kg	500		87.4	79-120			
trans-1,4-Dichloro 2-Butene	415		ug/kg	500		83.0	75-123			
n-Propylbenzene	537		ug/kg	500		107	80-125			
Bromobenzene	499		ug/kg	500		99.8	76-120			
Isopropyl Benzene	574		ug/kg	500		115	74-130			
2-Chlorotoluene	527		ug/kg	500		105	77-120			
4-Chlorotoluene	543		ug/kg	500		109	77-121			
t-Butylbenzene	577		ug/kg	500		115	74-126			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0686 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0686-BS1)			Prepared: 19-Sep-2017 Analyzed: 19-Sep-2017 10:46							
1,3,5-Trimethylbenzene	570		ug/kg	500		114	79-124			
1,2,4-Trimethylbenzene	587		ug/kg	500		117	79-125			
s-Butylbenzene	564		ug/kg	500		113	80-127			
4-Isopropyl Toluene	597		ug/kg	500		119	75-132			
1,3-Dichlorobenzene	515		ug/kg	500		103	75-120			
1,4-Dichlorobenzene	490		ug/kg	500		98.1	76-120			
n-Butylbenzene	585		ug/kg	500		117	79-130			
1,2-Dichlorobenzene	484		ug/kg	500		96.7	76-120			
1,2-Dibromo-3-Chloropropane	407		ug/kg	500		81.5	75-120			
1,2,4-Trichlorobenzene	556		ug/kg	500		111	74-121			
Hexachloro-1,3-Butadiene	539		ug/kg	500		108	74-120			
Naphthalene	407		ug/kg	500		81.3	75-120			
1,2,3-Trichlorobenzene	521		ug/kg	500		104	75-120			
Dichlorodifluoromethane	430		ug/kg	500		85.9	62-143			
Methyl tert-butyl Ether	456		ug/kg	500		91.3	68-132			
2-Pentanone	1780		ug/kg	2500		71.2	77-120			Q
Surrogate: Dibromofluoromethane		4.71	ug/kg	*5.00*		*94.1*	*30-160*			
Surrogate: 1,2-Dichloroethane-d4		4.32	ug/kg	*5.00*		*86.5*	*80-124*			
Surrogate: Toluene-d8		4.95	ug/kg	*5.00*		*99.1*	*80-120*			
Surrogate: 4-Bromofluorobenzene		5.49	ug/kg	*5.00*		*110*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4		5.05	ug/kg	*5.00*		*101*	*80-120*			
LCS Dup (BFI0686-BSD1)			Prepared: 19-Sep-2017 Analyzed: 19-Sep-2017 11:06							
Chloromethane	427		ug/kg	500		85.3	42-153	0.08	30	
Vinyl Chloride	446		ug/kg	500		89.3	74-133	1.04	30	
Bromomethane	488		ug/kg	500		97.7	41-147	4.98	30	
Chloroethane	453		ug/kg	500		90.6	66-133	4.91	30	
Trichlorofluoromethane	432		ug/kg	500		86.5	60-145	0.89	30	
Acrolein	2060		ug/kg	2500		82.4	45-149	3.19	30	Q
1,1,2-Trichloro-1,2,2-Trifluoroethane	458		ug/kg	500		91.5	70-133	1.93	30	
Acetone	1890		ug/kg	2500		75.6	45-147	1.90	30	Q
1,1-Dichloroethene	439		ug/kg	500		87.7	67-132	1.63	30	
Bromoethane	464		ug/kg	500		92.8	68-135	1.71	30	
Iodomethane	511		ug/kg	500		102	42-187	3.46	30	
Methylene Chloride	433		ug/kg	500		86.6	53-169	1.80	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0686 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0686-BSD1)			Prepared: 19-Sep-2017 Analyzed: 19-Sep-2017 11:06							
Acrylonitrile	318		ug/kg	500		63.7	63-133	22.10	30	Q
Carbon Disulfide	434		ug/kg	500		86.9	62-140	2.64	30	
trans-1,2-Dichloroethene	468		ug/kg	500		93.6	71-136	2.05	30	
Vinyl Acetate	375		ug/kg	500		75.1	72-127	3.72	30	Q
1,1-Dichloroethane	451		ug/kg	500		90.1	76-121	1.15	30	
2-Butanone	1980		ug/kg	2500		79.3	65-136	2.45	30	
2,2-Dichloropropane	485		ug/kg	500		96.9	73-129	0.30	30	
cis-1,2-Dichloroethene	476		ug/kg	500		95.1	77-121	1.56	30	
Chloroform	451		ug/kg	500		90.2	76-123	1.02	30	
Bromochloromethane	487		ug/kg	500		97.5	78-120	2.66	30	
1,1,1-Trichloroethane	462		ug/kg	500		92.4	76-125	1.28	30	
1,1-Dichloropropene	527		ug/kg	500		105	78-120	4.31	30	
Carbon tetrachloride	493		ug/kg	500		98.7	78-120	7.35	30	
1,2-Dichloroethane	455		ug/kg	500		91.1	75-120	5.11	30	
Benzene	511		ug/kg	500		102	80-120	6.01	30	
Trichloroethene	489		ug/kg	500		97.7	77-120	0.77	30	
1,2-Dichloropropane	483		ug/kg	500		96.6	78-120	2.86	30	
Bromodichloromethane	470		ug/kg	500		94.1	73-128	3.59	30	
Dibromomethane	472		ug/kg	500		94.5	78-120	5.20	30	
2-Chloroethyl vinyl ether	349		ug/kg	500		69.8	66-128	3.24	30	Q
4-Methyl-2-Pentanone	2200		ug/kg	2500		88.1	80-120	6.23	30	
cis-1,3-Dichloropropene	534		ug/kg	500		107	83-120	5.76	30	
Toluene	506		ug/kg	500		101	77-120	5.32	30	
trans-1,3-Dichloropropene	509		ug/kg	500		102	82-120	4.55	30	
2-Hexanone	2280		ug/kg	2500		91.4	73-122	7.02	30	
1,1,2-Trichloroethane	466		ug/kg	500		93.2	79-120	3.86	30	
1,3-Dichloropropane	509		ug/kg	500		102	80-120	2.52	30	
Tetrachloroethene	524		ug/kg	500		105	76-120	0.34	30	
Dibromochloromethane	525		ug/kg	500		105	79-120	5.73	30	
1,2-Dibromoethane	492		ug/kg	500		98.3	79-120	3.94	30	
Chlorobenzene	521		ug/kg	500		104	77-120	4.06	30	
Ethylbenzene	532		ug/kg	500		106	79-122	6.02	30	
1,1,1,2-Tetrachloroethane	533		ug/kg	500		107	78-120	5.44	30	
m,p-Xylene	1130		ug/kg	1000		113	81-122	3.43	30	
o-Xylene	560		ug/kg	500		112	79-120	3.06	30	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Volatile Organic Compounds - Quality Control

Batch BFI0686 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0686-BSD1)			Prepared: 19-Sep-2017 Analyzed: 19-Sep-2017 11:06							
Xylenes, total	1690		ug/kg	1500		113	0-200	3.31	200	
Styrene	447		ug/kg	500		89.5	77-124	4.23	30	
Bromoform	410		ug/kg	500		82.0	80-120	5.42	30	Q
1,1,2,2-Tetrachloroethane	462		ug/kg	500		92.3	79-120	4.31	30	
1,2,3-Trichloropropane	463		ug/kg	500		92.5	79-120	5.73	30	
trans-1,4-Dichloro 2-Butene	448		ug/kg	500		89.6	75-123	7.59	30	
n-Propylbenzene	545		ug/kg	500		109	80-125	1.61	30	
Bromobenzene	513		ug/kg	500		103	76-120	2.77	30	
Isopropyl Benzene	593		ug/kg	500		119	74-130	3.39	30	
2-Chlorotoluene	540		ug/kg	500		108	77-120	2.48	30	
4-Chlorotoluene	560		ug/kg	500		112	77-121	3.20	30	
t-Butylbenzene	582		ug/kg	500		116	74-126	0.81	30	
1,3,5-Trimethylbenzene	577		ug/kg	500		115	79-124	1.30	30	
1,2,4-Trimethylbenzene	597		ug/kg	500		119	79-125	1.78	30	
s-Butylbenzene	580		ug/kg	500		116	80-127	2.76	30	
4-Isopropyl Toluene	612		ug/kg	500		122	75-132	2.55	30	
1,3-Dichlorobenzene	529		ug/kg	500		106	75-120	2.68	30	
1,4-Dichlorobenzene	499		ug/kg	500		99.9	76-120	1.82	30	
n-Butylbenzene	595		ug/kg	500		119	79-130	1.72	30	
1,2-Dichlorobenzene	501		ug/kg	500		100	76-120	3.47	30	
1,2-Dibromo-3-Chloropropane	412		ug/kg	500		82.3	75-120	1.02	30	
1,2,4-Trichlorobenzene	568		ug/kg	500		114	74-121	2.10	30	
Hexachloro-1,3-Butadiene	561		ug/kg	500		112	74-120	3.89	30	
Naphthalene	425		ug/kg	500		85.0	75-120	4.41	30	
1,2,3-Trichlorobenzene	550		ug/kg	500		110	75-120	5.26	30	
Dichlorodifluoromethane	437		ug/kg	500		87.4	62-143	1.74	30	
Methyl tert-butyl Ether	462		ug/kg	500		92.5	68-132	1.31	30	
2-Pentanone	1840		ug/kg	2500		73.6	77-120	3.42	30	Q
Surrogate: Dibromofluoromethane		4.59	ug/kg	*5.00*		*91.8*	*30-160*			
Surrogate: 1,2-Dichloroethane-d4		4.26	ug/kg	*5.00*		*85.2*	*80-124*			
Surrogate: Toluene-d8		4.90	ug/kg	*5.00*		*98.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene		5.35	ug/kg	*5.00*		*107*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4		4.93	ug/kg	*5.00*		*98.7*	*80-120*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Semivolatile Organic Compounds - Quality Control

Batch BFI0204 - EPA 3520C (Liq Liq)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0204-BLK1)	Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 12:13									
Phenol	ND	1.0	ug/L							U
bis(2-chloroethyl) ether	ND	1.0	ug/L							U
2-Chlorophenol	ND	1.0	ug/L							U
1,3-Dichlorobenzene	ND	1.0	ug/L							U
1,4-Dichlorobenzene	ND	1.0	ug/L							U
Benzyl Alcohol	ND	2.0	ug/L							U
1,2-Dichlorobenzene	ND	1.0	ug/L							U
2-Methylphenol	ND	1.0	ug/L							U
2,2'-Oxybis(1-chloropropane)	ND	1.0	ug/L							U
4-Methylphenol	ND	2.0	ug/L							U
N-Nitroso-di-n-Propylamine	ND	1.0	ug/L							U
Hexachloroethane	ND	2.0	ug/L							U
Nitrobenzene	ND	1.0	ug/L							U
Isophorone	ND	1.0	ug/L							U
2-Nitrophenol	ND	3.0	ug/L							U
2,4-Dimethylphenol	ND	3.0	ug/L							U
Bis(2-Chloroethoxy)methane	ND	1.0	ug/L							U
Benzoic acid	ND	20.0	ug/L							U
2,4-Dichlorophenol	ND	3.0	ug/L							U
1,2,4-Trichlorobenzene	ND	1.0	ug/L							U
Naphthalene	ND	1.0	ug/L							U
4-Chloroaniline	ND	5.0	ug/L							U
Hexachlorobutadiene	ND	3.0	ug/L							U
4-Chloro-3-Methylphenol	ND	3.0	ug/L							U
2-Methylnaphthalene	ND	1.0	ug/L							U
Hexachlorocyclopentadiene	ND	5.0	ug/L							U
2,4,6-Trichlorophenol	ND	3.0	ug/L							U
2,4,5-Trichlorophenol	ND	5.0	ug/L							U
2-Chloronaphthalene	ND	1.0	ug/L							U
2-Nitroaniline	ND	3.0	ug/L							U
Dimethylphthalate	ND	1.0	ug/L							U
Acenaphthylene	ND	1.0	ug/L							U
2,6-Dinitrotoluene	ND	3.0	ug/L							U
3-Nitroaniline	ND	3.0	ug/L							U
Acenaphthene	ND	1.0	ug/L							U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Semivolatile Organic Compounds - Quality Control

Batch BFI0204 - EPA 3520C (Liq Liq)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0204-BLK1)			Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 12:13							
2,4-Dinitrophenol	ND	20.0	ug/L							U
Dibenzofuran	ND	1.0	ug/L							U
4-Nitrophenol	ND	10.0	ug/L							U
2,4-Dinitrotoluene	ND	3.0	ug/L							U
Fluorene	ND	1.0	ug/L							U
Diethyl phthalate	ND	1.0	ug/L							U
4-Chlorophenylphenyl ether	ND	1.0	ug/L							U
4-Nitroaniline	ND	3.0	ug/L							U
4,6-Dinitro-2-methylphenol	ND	10.0	ug/L							U
N-Nitrosodiphenylamine	ND	1.0	ug/L							U
4-Bromophenyl phenyl ether	ND	1.0	ug/L							U
Hexachlorobenzene	ND	1.0	ug/L							U
Pentachlorophenol	ND	10.0	ug/L							U
Phenanthrene	ND	1.0	ug/L							U
Anthracene	ND	1.0	ug/L							U
Carbazole	ND	1.0	ug/L							U
Di-n-Butylphthalate	ND	1.0	ug/L							U
Fluoranthene	ND	1.0	ug/L							U
Pyrene	ND	1.0	ug/L							U
Butylbenzylphthalate	ND	1.0	ug/L							U
Benzo(a)anthracene	ND	1.0	ug/L							U
3,3'-Dichlorobenzidine	ND	5.0	ug/L							U
Chrysene	ND	1.0	ug/L							U
bis(2-Ethylhexyl)phthalate	ND	3.0	ug/L							U
Di-n-Octylphthalate	ND	1.0	ug/L							U
Benzo(a)pyrene	ND	1.0	ug/L							U
Indeno(1,2,3-cd)pyrene	ND	1.0	ug/L							U
Dibenzo(a,h)anthracene	ND	1.0	ug/L							U
Benzo(g,h,i)perylene	ND	1.0	ug/L							U
Benzofluoranthenes, Total	ND	2.0	ug/L							U
1-Methylnaphthalene	ND	1.0	ug/L							U
Surrogate: 2-Fluorophenol	27.1		ug/L	*37.5*		*72.2*	*33-120*			
Surrogate: Phenol-d5	28.8		ug/L	*37.5*		*76.7*	*38-120*			
Surrogate: 2-Chlorophenol-d4	30.3		ug/L	*37.5*		*80.9*	*41-120*			
Surrogate: 1,2-Dichlorobenzene-d4	17.0		ug/L	*25.0*		*67.9*	*20-120*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Semivolatile Organic Compounds - Quality Control

Batch BFI0204 - EPA 3520C (Liq Liq)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0204-BLK1)				Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 12:13						
Surrogate: Nitrobenzene-d5	19.5		ug/L	*25.0*		*77.8*	*27-120*			
Surrogate: 2-Fluorobiphenyl	19.5		ug/L	*25.0*		*77.9*	*33-120*			
Surrogate: 2,4,6-Tribromophenol	36.7		ug/L	*37.5*		*97.9*	*52-120*			
Surrogate: p-Terphenyl-d14	24.1		ug/L	*25.0*		*96.3*	*28-120*			
LCS (BFI0204-BS1)				Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 12:46						
Phenol	17.1	1.0	ug/L	25.0		68.5	35-120			
bis(2-chloroethyl) ether	17.4	1.0	ug/L	25.0		69.8	46.5-120			
2-Chlorophenol	17.5	1.0	ug/L	25.0		70.0	48-120			
1,3-Dichlorobenzene	13.0	1.0	ug/L	25.0		52.1	34.2-120			
1,4-Dichlorobenzene	13.4	1.0	ug/L	25.0		53.7	36-120			
Benzyl Alcohol	17.9	2.0	ug/L	25.0		71.6	27.4-120			
1,2-Dichlorobenzene	13.9	1.0	ug/L	25.0		55.7	38.4-120			
2-Methylphenol	16.8	1.0	ug/L	25.0		67.1	47.8-120			
2,2'-Oxybis(1-chloropropane)	17.9	1.0	ug/L	25.0		71.4	40.4-120			
4-Methylphenol	19.0	2.0	ug/L	25.0		76.0	52.3-120			
N-Nitroso-di-n-Propylamine	19.4	1.0	ug/L	25.0		77.4	51.4-120			
Hexachloroethane	11.5	2.0	ug/L	25.0		46.0	29.5-120			
Nitrobenzene	18.8	1.0	ug/L	25.0		75.1	51.5-120			
Isophorone	23.1	1.0	ug/L	25.0		92.6	62.3-128			
2-Nitrophenol	23.0	3.0	ug/L	25.0		92.1	58.6-124			
2,4-Dimethylphenol	12.6	3.0	ug/L	25.0		50.5	38.5-120			
Bis(2-Chloroethoxy)methane	21.0	1.0	ug/L	25.0		84.1	52.9-120			
Benzoic acid	14.8	14.0	ug/L	25.0		59.3	38.2-120			
2,4-Dichlorophenol	21.5	3.0	ug/L	25.0		85.9	43.6-120			
1,2,4-Trichlorobenzene	15.9	1.0	ug/L	25.0		63.7	38.6-120			
Naphthalene	16.0	1.0	ug/L	25.0		64.1	40.5-120			
4-Chloroaniline	78.9	5.0	ug/L	125		63.1	42.7-120			
Hexachlorobutadiene	14.0	3.0	ug/L	25.0		56.2	32.3-120			
4-Chloro-3-Methylphenol	22.3	3.0	ug/L	25.0		89.0	51.9-120			
2-Methylnaphthalene	16.5	1.0	ug/L	25.0		65.9	47.3-120			
Hexachlorocyclopentadiene	101	5.0	ug/L	125		80.4	23.3-120			E
2,4,6-Trichlorophenol	24.7	3.0	ug/L	25.0		98.9	47-120			
2,4,5-Trichlorophenol	24.3	5.0	ug/L	25.0		97.3	48.4-120			
2-Chloronaphthalene	24.4	1.0	ug/L	25.0		97.5	47.7-123			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Semivolatile Organic Compounds - Quality Control

Batch BFI0204 - EPA 3520C (Liq Liq)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0204-BS1)				Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 12:46						
2-Nitroaniline	109	3.0	ug/L	125		87.5	56.8-120			E
Dimethylphthalate	27.1	1.0	ug/L	25.0		108	65.2-125			
Acenaphthylene	22.2	1.0	ug/L	25.0		88.8	44.1-120			
2,6-Dinitrotoluene	148	3.0	ug/L	125		118	69.3-140			Q, E
3-Nitroaniline	118	3.0	ug/L	125		94.2	60.9-120			E
Acenaphthene	20.8	1.0	ug/L	25.0		83.1	50.4-120			
2,4-Dinitrophenol	25.6	20.0	ug/L	25.0		103	33.7-183			Q
Dibenzofuran	21.5	1.0	ug/L	25.0		85.9	49.9-120			
4-Nitrophenol	23.9	10.0	ug/L	25.0		95.7	50.2-136			
2,4-Dinitrotoluene	139	3.0	ug/L	125		111	66.8-132			Q, E
Fluorene	23.7	1.0	ug/L	25.0		94.9	57.8-120			
Diethyl phthalate	25.9	1.0	ug/L	25.0		104	68.1-120			
4-Chlorophenylphenyl ether	25.4	1.0	ug/L	25.0		102	59.1-127			
4-Nitroaniline	125	3.0	ug/L	125		99.7	56-122			E
4,6-Dinitro-2-methylphenol	26.2	10.0	ug/L	25.0		105	37.9-162			
N-Nitrosodiphenylamine	20.5	1.0	ug/L	25.0		81.9	59.6-120			
4-Bromophenyl phenyl ether	22.3	1.0	ug/L	25.0		89.3	59.6-120			
Hexachlorobenzene	20.9	1.0	ug/L	25.0		83.6	53.7-120			
Pentachlorophenol	15.1	10.0	ug/L	25.0		60.6	40.3-128			
Phenanthrene	21.1	1.0	ug/L	25.0		84.4	58.8-120			
Anthracene	19.8	1.0	ug/L	25.0		79.1	60.5-120			
Carbazole	22.3	1.0	ug/L	25.0		89.0	59.7-120			
Di-n-Butylphthalate	24.1	1.0	ug/L	25.0		96.3	71-120			
Fluoranthene	22.5	1.0	ug/L	25.0		90.1	66.7-120			
Pyrene	25.1	1.0	ug/L	25.0		100	62.7-127			
Butylbenzylphthalate	27.1	1.0	ug/L	25.0		108	67.4-128			
Benzo(a)anthracene	25.9	1.0	ug/L	25.0		104	58.3-128			
3,3'-Dichlorobenzidine	90.3	5.0	ug/L	125		72.2	34.1-120			
Chrysene	25.1	1.0	ug/L	25.0		100	58.9-120			
bis(2-Ethylhexyl)phthalate	25.1	3.0	ug/L	25.0		101	68.3-123			
Di-n-Octylphthalate	23.8	1.0	ug/L	25.0		95.3	61.5-120			
Benzo(a)pyrene	22.8	1.0	ug/L	25.0		91.0	70.6-120			
Indeno(1,2,3-cd)pyrene	22.3	1.0	ug/L	25.0		89.4	46.5-120			
Dibenzo(a,h)anthracene	23.4	1.0	ug/L	25.0		93.8	49.6-120			
Benzo(g,h,i)perylene	22.2	1.0	ug/L	25.0		88.9	37-120			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Semivolatile Organic Compounds - Quality Control

Batch BFI0204 - EPA 3520C (Liq Liq)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0204-BS1)				Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 12:46						
Benzofluoranthenes, Total	47.0	2.0	ug/L	50.0		94.0	66.5-120			
1-Methylnaphthalene	17.0	1.0	ug/L	25.0		67.9	46.9-120			
Surrogate: 2-Fluorophenol	23.9		ug/L	*37.5*		*63.8*	*33-120*			
Surrogate: Phenol-d5	26.0		ug/L	*37.5*		*69.4*	*38-120*			
Surrogate: 2-Chlorophenol-d4	28.1		ug/L	*37.5*		*74.8*	*41-120*			
Surrogate: 1,2-Dichlorobenzene-d4	15.0		ug/L	*25.0*		*59.9*	*20-120*			
Surrogate: Nitrobenzene-d5	19.0		ug/L	*25.0*		*76.0*	*27-120*			
Surrogate: 2-Fluorobiphenyl	21.8		ug/L	*25.0*		*87.0*	*33-120*			
Surrogate: 2,4,6-Tribromophenol	44.0		ug/L	*37.5*		*117*	*52-120*			
Surrogate: p-Terphenyl-d14	29.2		ug/L	*25.0*		*117*	*28-120*			
LCS Dup (BFI0204-BSD1)				Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 13:20						
Phenol	16.0	1.0	ug/L	25.0		63.9	35-120	7.06	30	
bis(2-chloroethyl) ether	15.9	1.0	ug/L	25.0		63.7	46.5-120	9.06	30	
2-Chlorophenol	16.0	1.0	ug/L	25.0		64.2	48-120	8.63	30	
1,3-Dichlorobenzene	11.7	1.0	ug/L	25.0		46.7	34.2-120	10.90	30	
1,4-Dichlorobenzene	12.3	1.0	ug/L	25.0		49.2	36-120	8.77	30	
Benzyl Alcohol	17.7	2.0	ug/L	25.0		71.0	27.4-120	0.79	30	
1,2-Dichlorobenzene	12.6	1.0	ug/L	25.0		50.4	38.4-120	9.94	30	
2-Methylphenol	15.4	1.0	ug/L	25.0		61.5	47.8-120	8.70	30	
2,2'-Oxybis(1-chloropropane)	16.6	1.0	ug/L	25.0		66.4	40.4-120	7.31	30	
4-Methylphenol	17.5	2.0	ug/L	25.0		69.9	52.3-120	8.37	30	
N-Nitroso-di-n-Propylamine	19.0	1.0	ug/L	25.0		75.9	51.4-120	2.00	30	
Hexachloroethane	10.2	2.0	ug/L	25.0		41.0	29.5-120	11.60	30	
Nitrobenzene	17.2	1.0	ug/L	25.0		68.8	51.5-120	8.68	30	
Isophorone	23.3	1.0	ug/L	25.0		93.2	62.3-128	0.61	30	
2-Nitrophenol	20.8	3.0	ug/L	25.0		83.1	58.6-124	10.30	30	
2,4-Dimethylphenol	11.7	3.0	ug/L	25.0		46.9	38.5-120	7.44	30	
Bis(2-Chloroethoxy)methane	19.4	1.0	ug/L	25.0		77.6	52.9-120	8.01	30	
Benzoic acid	16.5	14.0	ug/L	25.0		65.8	38.2-120	10.40	30	
2,4-Dichlorophenol	19.8	3.0	ug/L	25.0		79.2	43.6-120	8.13	30	
1,2,4-Trichlorobenzene	14.9	1.0	ug/L	25.0		59.5	38.6-120	6.76	30	
Naphthalene	14.4	1.0	ug/L	25.0		57.6	40.5-120	10.60	30	
4-Chloroaniline	72.7	5.0	ug/L	125		58.2	42.7-120	8.15	30	
Hexachlorobutadiene	12.9	3.0	ug/L	25.0		51.5	32.3-120	8.63	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Semivolatile Organic Compounds - Quality Control

Batch BFI0204 - EPA 3520C (Liq Liq)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0204-BSD1)				Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 13:20						
4-Chloro-3-Methylphenol	21.1	3.0	ug/L	25.0		84.5	51.9-120	5.21	30	
2-Methylnaphthalene	15.8	1.0	ug/L	25.0		63.0	47.3-120	4.50	30	
Hexachlorocyclopentadiene	96.2	5.0	ug/L	125		76.9	23.3-120	4.45	30	E
2,4,6-Trichlorophenol	22.5	3.0	ug/L	25.0		90.2	47-120	9.22	30	
2,4,5-Trichlorophenol	22.8	5.0	ug/L	25.0		91.1	48.4-120	6.61	30	
2-Chloronaphthalene	23.0	1.0	ug/L	25.0		92.2	47.7-123	5.64	30	
2-Nitroaniline	104	3.0	ug/L	125		82.9	56.8-120	5.35	30	E
Dimethylphthalate	26.9	1.0	ug/L	25.0		107	65.2-125	0.93	30	
Acenaphthylene	20.5	1.0	ug/L	25.0		82.1	44.1-120	7.90	30	
2,6-Dinitrotoluene	141	3.0	ug/L	125		113	69.3-140	4.51	30	Q, E
3-Nitroaniline	117	3.0	ug/L	125		93.3	60.9-120	0.95	30	E
Acenaphthene	19.5	1.0	ug/L	25.0		78.1	50.4-120	6.15	30	
2,4-Dinitrophenol	27.6	20.0	ug/L	25.0		111	33.7-183	7.45	30	Q
Dibenzofuran	20.2	1.0	ug/L	25.0		80.9	49.9-120	5.91	30	
4-Nitrophenol	25.0	10.0	ug/L	25.0		100	50.2-136	4.43	30	
2,4-Dinitrotoluene	136	3.0	ug/L	125		109	66.8-132	2.19	30	Q, E
Fluorene	22.7	1.0	ug/L	25.0		90.7	57.8-120	4.50	30	
Diethyl phthalate	26.9	1.0	ug/L	25.0		108	68.1-120	3.86	30	
4-Chlorophenylphenyl ether	24.5	1.0	ug/L	25.0		97.9	59.1-127	3.76	30	
4-Nitroaniline	128	3.0	ug/L	125		102	56-122	2.40	30	E
4,6-Dinitro-2-methylphenol	25.6	10.0	ug/L	25.0		102	37.9-162	2.32	30	
N-Nitrosodiphenylamine	19.1	1.0	ug/L	25.0		76.5	59.6-120	6.83	30	
4-Bromophenyl phenyl ether	21.7	1.0	ug/L	25.0		86.9	59.6-120	2.71	30	
Hexachlorobenzene	20.0	1.0	ug/L	25.0		79.9	53.7-120	4.56	30	
Pentachlorophenol	15.3	10.0	ug/L	25.0		61.2	40.3-128	1.05	30	
Phenanthrene	20.7	1.0	ug/L	25.0		82.7	58.8-120	2.05	30	
Anthracene	18.5	1.0	ug/L	25.0		74.0	60.5-120	6.58	30	
Carbazole	21.8	1.0	ug/L	25.0		87.0	59.7-120	2.23	30	
Di-n-Butylphthalate	25.1	1.0	ug/L	25.0		100	71-120	3.96	30	
Fluoranthene	22.6	1.0	ug/L	25.0		90.6	66.7-120	0.46	30	
Pyrene	27.1	1.0	ug/L	25.0		109	62.7-127	7.87	30	
Butylbenzylphthalate	28.9	1.0	ug/L	25.0		116	67.4-128	6.43	30	
Benzo(a)anthracene	27.6	1.0	ug/L	25.0		110	58.3-128	6.47	30	
3,3'-Dichlorobenzidine	93.3	5.0	ug/L	125		74.6	34.1-120	3.25	30	
Chrysene	26.7	1.0	ug/L	25.0		107	58.9-120	6.05	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Semivolatile Organic Compounds - Quality Control

Batch BFI0204 - EPA 3520C (Liq Liq)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0204-BSD1)				Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 13:20						
bis(2-Ethylhexyl)phthalate	26.8	3.0	ug/L	25.0		107	68.3-123	6.42	30	
Di-n-Octylphthalate	26.0	1.0	ug/L	25.0		104	61.5-120	8.67	30	
Benzo(a)pyrene	24.2	1.0	ug/L	25.0		96.9	70.6-120	6.25	30	
Indeno(1,2,3-cd)pyrene	23.4	1.0	ug/L	25.0		93.4	46.5-120	4.46	30	
Dibenzo(a,h)anthracene	24.7	1.0	ug/L	25.0		98.9	49.6-120	5.34	30	
Benzo(g,h,i)perylene	23.8	1.0	ug/L	25.0		95.1	37-120	6.71	30	
Benzofluoranthenes, Total	48.7	2.0	ug/L	50.0		97.4	66.5-120	3.54	30	
1-Methylnaphthalene	16.0	1.0	ug/L	25.0		63.8	46.9-120	6.18	30	
Surrogate: 2-Fluorophenol	21.3		ug/L	*37.5*		*56.9*	*33-120*			
Surrogate: Phenol-d5	23.9		ug/L	*37.5*		*63.8*	*38-120*			
Surrogate: 2-Chlorophenol-d4	25.2		ug/L	*37.5*		*67.1*	*41-120*			
Surrogate: 1,2-Dichlorobenzene-d4	13.2		ug/L	*25.0*		*52.9*	*20-120*			
Surrogate: Nitrobenzene-d5	16.6		ug/L	*25.0*		*66.4*	*27-120*			
Surrogate: 2-Fluorobiphenyl	19.9		ug/L	*25.0*		*79.8*	*33-120*			
Surrogate: 2,4,6-Tribromophenol	41.1		ug/L	*37.5*		*110*	*52-120*			
Surrogate: p-Terphenyl-d14	30.0		ug/L	*25.0*		*120*	*28-120*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Semivolatile Organic Compounds - Quality Control

Batch BFI0267 - EPA 3546 (Microwave)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0267-BLK1)			Prepared: 14-Sep-2017 Analyzed: 21-Sep-2017 13:22							
Phenol	ND	67	ug/kg							U
bis(2-chloroethyl) ether	ND	67	ug/kg							U
2-Chlorophenol	ND	67	ug/kg							U
1,3-Dichlorobenzene	ND	67	ug/kg							U
1,4-Dichlorobenzene	ND	67	ug/kg							U
Benzyl Alcohol	ND	330	ug/kg							U
1,2-Dichlorobenzene	ND	67	ug/kg							U
2-Methylphenol	ND	67	ug/kg							U
2,2'-Oxybis(1-chloropropane)	ND	67	ug/kg							U
4-Methylphenol	ND	67	ug/kg							U
N-Nitroso-di-n-Propylamine	ND	67	ug/kg							U
Hexachloroethane	ND	67	ug/kg							U
Nitrobenzene	ND	67	ug/kg							U
Isophorone	ND	67	ug/kg							U
2-Nitrophenol	ND	67	ug/kg							U
2,4-Dimethylphenol	ND	67	ug/kg							U
Bis(2-Chloroethoxy)methane	ND	67	ug/kg							U
Benzoic acid	ND	670	ug/kg							U
2,4-Dichlorophenol	ND	330	ug/kg							U
1,2,4-Trichlorobenzene	ND	67	ug/kg							U
Naphthalene	ND	67	ug/kg							U
4-Chloroaniline	ND	330	ug/kg							U
Hexachlorobutadiene	ND	67	ug/kg							U
4-Chloro-3-Methylphenol	ND	330	ug/kg							U
2-Methylnaphthalene	ND	67	ug/kg							U
Hexachlorocyclopentadiene	ND	330	ug/kg							U
2,4,6-Trichlorophenol	ND	330	ug/kg							U
2,4,5-Trichlorophenol	ND	330	ug/kg							U
2-Chloronaphthalene	ND	67	ug/kg							U
2-Nitroaniline	ND	330	ug/kg							U
Dimethylphthalate	ND	67	ug/kg							U
Acenaphthylene	ND	67	ug/kg							U
2,6-Dinitrotoluene	ND	330	ug/kg							U
3-Nitroaniline	ND	330	ug/kg							U
Acenaphthene	ND	67	ug/kg							U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Semivolatile Organic Compounds - Quality Control

Batch BFI0267 - EPA 3546 (Microwave)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0267-BLK1)			Prepared: 14-Sep-2017 Analyzed: 21-Sep-2017 13:22							
2,4-Dinitrophenol	ND	670	ug/kg							U
Dibenzofuran	ND	67	ug/kg							U
4-Nitrophenol	ND	330	ug/kg							U
2,4-Dinitrotoluene	ND	330	ug/kg							U
Fluorene	ND	67	ug/kg							U
Diethyl phthalate	ND	67	ug/kg							U
4-Chlorophenylphenyl ether	ND	67	ug/kg							U
4-Nitroaniline	ND	330	ug/kg							U
4,6-Dinitro-2-methylphenol	ND	670	ug/kg							U
N-Nitrosodiphenylamine	ND	67	ug/kg							U
4-Bromophenyl phenyl ether	ND	67	ug/kg							U
Hexachlorobenzene	ND	67	ug/kg							U
Pentachlorophenol	ND	330	ug/kg							U
Phenanthrene	ND	67	ug/kg							U
Anthracene	ND	67	ug/kg							U
Carbazole	ND	67	ug/kg							U
Di-n-Butylphthalate	ND	67	ug/kg							U
Fluoranthene	ND	67	ug/kg							U
Pyrene	ND	67	ug/kg							U
Butylbenzylphthalate	ND	67	ug/kg							U
Benzo(a)anthracene	ND	67	ug/kg							U
3,3'-Dichlorobenzidine	ND	330	ug/kg							U
Chrysene	ND	67	ug/kg							U
bis(2-Ethylhexyl)phthalate	ND	67	ug/kg							U
Di-n-Octylphthalate	ND	67	ug/kg							U
Benzo(a)pyrene	ND	67	ug/kg							U
Indeno(1,2,3-cd)pyrene	ND	67	ug/kg							U
Dibenzo(a,h)anthracene	ND	67	ug/kg							U
Benzo(g,h,i)perylene	ND	67	ug/kg							U
Benzofluoranthenes, Total	ND	67	ug/kg							U
1-Methylnaphthalene	ND	67	ug/kg							U
Surrogate: 2-Fluorophenol	1580		ug/kg	*2500*		*63.0*	*22-120*			
Surrogate: Phenol-d5	1750		ug/kg	*2500*		*69.8*	*27-120*			
Surrogate: 2-Chlorophenol-d4	1840		ug/kg	*2500*		*73.4*	*36-120*			
Surrogate: 1,2-Dichlorobenzene-d4	1260		ug/kg	*1670*		*75.6*	*38-120*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Semivolatile Organic Compounds - Quality Control

Batch BFI0267 - EPA 3546 (Microwave)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0267-BLK1)				Prepared: 14-Sep-2017	Analyzed: 21-Sep-2017 13:22					
Surrogate: Nitrobenzene-d5	1190		ug/kg	*1670*		*71.3*	*32-120*			
Surrogate: 2-Fluorobiphenyl	1330		ug/kg	*1670*		*80.1*	*39-120*			
Surrogate: 2,4,6-Tribromophenol	1860		ug/kg	*2500*		*74.5*	*31-131*			
Surrogate: p-Terphenyl-d14	1570		ug/kg	*1670*		*94.4*	*31-130*			
LCS (BFI0267-BS1)				Prepared: 14-Sep-2017	Analyzed: 21-Sep-2017 13:55					
Phenol	857	67	ug/kg	1670		51.4	37-120			
bis(2-chloroethyl) ether	862	67	ug/kg	1670		51.7	43-120			
2-Chlorophenol	890	67	ug/kg	1670		53.4	45-120			
1,3-Dichlorobenzene	886	67	ug/kg	1670		53.1	47-120			
1,4-Dichlorobenzene	904	67	ug/kg	1670		54.2	46-120			
Benzyl Alcohol	889	330	ug/kg	1670		53.3	16-120			
1,2-Dichlorobenzene	947	67	ug/kg	1670		56.8	48-120			
2-Methylphenol	807	67	ug/kg	1670		48.4	45-120			
2,2'-Oxybis(1-chloropropane)	899	67	ug/kg	1670		53.9	36-120			
4-Methylphenol	945	67	ug/kg	1670		56.7	47-120			
N-Nitroso-di-n-Propylamine	890	67	ug/kg	1670		53.4	44-120			
Hexachloroethane	928	67	ug/kg	1670		55.7	43-120			
Nitrobenzene	950	67	ug/kg	1670		57.0	39-120			
Isophorone	1090	67	ug/kg	1670		65.3	57-120			
2-Nitrophenol	1120	67	ug/kg	1670		67.4	50-120			
2,4-Dimethylphenol	459	67	ug/kg	1670		27.6	40-120			*
Bis(2-Chloroethoxy)methane	1000	67	ug/kg	1670		60.1	49-120			
Benzoic acid	978	670	ug/kg	1670		58.7	10-160			
2,4-Dichlorophenol	1120	330	ug/kg	1670		67.4	51-120			
1,2,4-Trichlorobenzene	1040	67	ug/kg	1670		62.7	50-120			
Naphthalene	868	67	ug/kg	1670		52.1	50-120			
4-Chloroaniline	4270	330	ug/kg	8330		51.2	17-149			
Hexachlorobutadiene	1070	67	ug/kg	1670		64.1	46-120			
4-Chloro-3-Methylphenol	1130	330	ug/kg	1670		67.8	54-120			
2-Methylnaphthalene	970	67	ug/kg	1670		58.2	54-120			
Hexachlorocyclopentadiene	8030	330	ug/kg	8330		96.3	23-149			
2,4,6-Trichlorophenol	1120	330	ug/kg	1670		67.4	51-120			
2,4,5-Trichlorophenol	1130	330	ug/kg	1670		67.6	52-120			
2-Chloronaphthalene	1210	67	ug/kg	1670		72.6	48-120			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Semivolatile Organic Compounds - Quality Control

Batch BFI0267 - EPA 3546 (Microwave)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0267-BS1)				Prepared: 14-Sep-2017 Analyzed: 21-Sep-2017 13:55						
2-Nitroaniline	6140	330	ug/kg	8330		73.7	51-120			
Dimethylphthalate	1210	67	ug/kg	1670		72.6	56-120			
Acenaphthylene	976	67	ug/kg	1670		58.6	56-120			
2,6-Dinitrotoluene	8970	330	ug/kg	8330		108	54-124			Q
3-Nitroaniline	6170	330	ug/kg	8330		74.0	39-142			
Acenaphthene	1030	67	ug/kg	1670		61.9	48-120			
2,4-Dinitrophenol	830	670	ug/kg	1670		49.8	15-169			Q
Dibenzofuran	1040	67	ug/kg	1670		62.5	55-120			
4-Nitrophenol	973	330	ug/kg	1670		58.4	23-130			
2,4-Dinitrotoluene	8150	330	ug/kg	8330		97.8	57-127			Q
Fluorene	1190	67	ug/kg	1670		71.4	55-120			
Diethyl phthalate	1240	67	ug/kg	1670		74.6	54-120			
4-Chlorophenylphenyl ether	1230	67	ug/kg	1670		74.0	52-120			
4-Nitroaniline	6590	330	ug/kg	8330		79.1	47-124			
4,6-Dinitro-2-methylphenol	1060	670	ug/kg	1670		63.7	10-157			
N-Nitrosodiphenylamine	1050	67	ug/kg	1670		62.9	54-138			
4-Bromophenyl phenyl ether	1140	67	ug/kg	1670		68.5	50-120			
Hexachlorobenzene	1040	67	ug/kg	1670		62.2	50-121			
Pentachlorophenol	425	330	ug/kg	1670		25.5	40-123			*, Q
Phenanthrene	1070	67	ug/kg	1670		64.0	55-120			
Anthracene	1020	67	ug/kg	1670		61.2	57-120			
Carbazole	1080	67	ug/kg	1670		64.8	60-121			
Di-n-Butylphthalate	1190	67	ug/kg	1670		71.3	60-120			
Fluoranthene	1160	67	ug/kg	1670		69.6	52-129			
Pyrene	1340	67	ug/kg	1670		80.4	49-134			
Butylbenzylphthalate	1340	67	ug/kg	1670		80.3	44-144			
Benzo(a)anthracene	1300	67	ug/kg	1670		78.1	56-124			
3,3'-Dichlorobenzidine	4600	330	ug/kg	8330		55.2	37-140			
Chrysene	1190	67	ug/kg	1670		71.2	53-124			
bis(2-Ethylhexyl)phthalate	1300	67	ug/kg	1670		77.8	63-128			
Di-n-Octylphthalate	1220	67	ug/kg	1670		73.2	59-120			
Benzo(b)fluoranthene	1400	67	ug/kg	1670		84.0	42-132			
Benzo(k)fluoranthene	1220	67	ug/kg	1670		73.2	39-129			
Benzo(a)pyrene	1310	67	ug/kg	1670		78.5	53-120			
Indeno(1,2,3-cd)pyrene	1170	67	ug/kg	1670		70.1	40-128			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Semivolatile Organic Compounds - Quality Control

Batch BFI0267 - EPA 3546 (Microwave)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0267-BS1)				Prepared: 14-Sep-2017 Analyzed: 21-Sep-2017 13:55						
Dibenzo(a,h)anthracene	1260	67	ug/kg	1670		75.6	47-123			
Benzo(g,h,i)perylene	1100	67	ug/kg	1670		66.3	44-125			
Benzofluoranthenes, Total	2610	67	ug/kg	3330		78.3	30-160			
1-Methylnaphthalene	981	67	ug/kg	1670		58.9	55-120			
Surrogate: 2-Fluorophenol	1730		ug/kg	*2500*		*69.3*	*22-120*			
Surrogate: Phenol-d5	1710		ug/kg	*2500*		*68.2*	*27-120*			
Surrogate: 2-Chlorophenol-d4	1890		ug/kg	*2500*		*75.7*	*36-120*			
Surrogate: 1,2-Dichlorobenzene-d4	1280		ug/kg	*1670*		*77.0*	*38-120*			
Surrogate: Nitrobenzene-d5	1230		ug/kg	*1670*		*73.7*	*32-120*			
Surrogate: 2-Fluorobiphenyl	1400		ug/kg	*1670*		*84.1*	*39-120*			
Surrogate: 2,4,6-Tribromophenol	2580		ug/kg	*2500*		*103*	*31-131*			
Surrogate: p-Terphenyl-d14	1800		ug/kg	*1670*		*108*	*31-130*			
Matrix Spike (BFI0267-MS1)	**Source: 17I0116-10**			Prepared: 14-Sep-2017 Analyzed: 21-Sep-2017 14:28						
Phenol	853	62	ug/kg	1540	ND	55.3	37-120			
bis(2-chloroethyl) ether	1140	62	ug/kg	1540	ND	73.6	43-120			
2-Chlorophenol	867	62	ug/kg	1540	ND	56.1	45-120			
1,3-Dichlorobenzene	802	62	ug/kg	1540	ND	51.9	47-120			
1,4-Dichlorobenzene	841	62	ug/kg	1540	ND	54.5	46-120			
Benzyl Alcohol	918	306	ug/kg	1540	ND	59.4	16-120			
1,2-Dichlorobenzene	882	62	ug/kg	1540	ND	57.1	48-120			
2-Methylphenol	853	62	ug/kg	1540	ND	55.2	45-120			
2,2'-Oxybis(1-chloropropane)	870	62	ug/kg	1540	ND	56.3	36-120			
4-Methylphenol	925	62	ug/kg	1540	ND	59.9	47-120			
N-Nitroso-di-n-Propylamine	869	62	ug/kg	1540	ND	56.3	44-120			
Hexachloroethane	848	62	ug/kg	1540	ND	54.9	43-120			
Nitrobenzene	840	62	ug/kg	1540	ND	54.4	39-120			
Isophorone	940	62	ug/kg	1540	ND	60.9	57-120			
2-Nitrophenol	990	62	ug/kg	1540	ND	64.1	50-120			
2,4-Dimethylphenol	618	62	ug/kg	1540	ND	40.0	40-120			
Bis(2-Chloroethoxy)methane	904	62	ug/kg	1540	ND	58.6	49-120			
Benzoic acid	977	621	ug/kg	1540	ND	45.9	10-160			
2,4-Dichlorophenol	992	306	ug/kg	1540	ND	64.3	51-120			
1,2,4-Trichlorobenzene	926	62	ug/kg	1540	ND	59.9	50-120			
Naphthalene	796	62	ug/kg	1540	ND	51.5	50-120			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Semivolatile Organic Compounds - Quality Control

Batch BFI0267 - EPA 3546 (Microwave)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BFI0267-MS1)	**Source: 17I0116-10**		Prepared: 14-Sep-2017 Analyzed: 21-Sep-2017 14:28							
4-Chloroaniline	2900	306	ug/kg	7720	ND	37.6	17-149			
Hexachlorobutadiene	935	62	ug/kg	1540	ND	60.5	46-120			
4-Chloro-3-Methylphenol	993	306	ug/kg	1540	ND	64.3	54-120			
2-Methylnaphthalene	863	62	ug/kg	1540	ND	55.9	54-120			
Hexachlorocyclopentadiene	6140	306	ug/kg	7720	ND	79.5	23-149			
2,4,6-Trichlorophenol	1030	306	ug/kg	1540	ND	67.0	51-120			
2,4,5-Trichlorophenol	1030	306	ug/kg	1540	ND	66.5	52-120			
2-Chloronaphthalene	1070	62	ug/kg	1540	ND	69.3	48-120			
2-Nitroaniline	5440	306	ug/kg	7720	ND	70.4	51-120			
Dimethylphthalate	1070	62	ug/kg	1540	ND	69.3	56-120			
Acenaphthylene	877	62	ug/kg	1540	ND	56.8	56-120			
2,6-Dinitrotoluene	7750	306	ug/kg	7720	ND	100	54-124			Q
3-Nitroaniline	4130	306	ug/kg	7720	ND	53.5	39-142			
Acenaphthene	922	62	ug/kg	1540	ND	59.7	48-120			
2,4-Dinitrophenol	597	528	ug/kg	1540	ND	38.6	15-169			Q
Dibenzofuran	959	62	ug/kg	1540	ND	62.1	55-120			
4-Nitrophenol	811	306	ug/kg	1540	ND	52.5	23-130			
2,4-Dinitrotoluene	6940	306	ug/kg	7720	ND	89.8	57-127			Q
Fluorene	1030	62	ug/kg	1540	ND	67.0	55-120			
Diethyl phthalate	1030	62	ug/kg	1540	ND	66.4	54-120			
4-Chlorophenylphenyl ether	1090	62	ug/kg	1540	ND	70.9	52-120			
4-Nitroaniline	4180	306	ug/kg	7720	ND	54.1	47-124			
4,6-Dinitro-2-methylphenol	891	621	ug/kg	1540	ND	57.7	10-157			
N-Nitrosodiphenylamine	950	62	ug/kg	1540	ND	61.5	54-138			
4-Bromophenyl phenyl ether	1030	62	ug/kg	1540	ND	66.9	50-120			
Hexachlorobenzene	973	62	ug/kg	1540	ND	63.0	50-121			
Pentachlorophenol	595	306	ug/kg	1540	ND	38.5	40-123			*, Q
Phenanthrene	1000	62	ug/kg	1540	ND	62.3	55-120			
Anthracene	891	62	ug/kg	1540	ND	57.7	57-120			
Carbazole	930	62	ug/kg	1540	ND	60.2	60-121			
Di-n-Butylphthalate	1050	62	ug/kg	1540	ND	67.9	60-120			
Fluoranthene	1020	62	ug/kg	1540	ND	63.3	52-129			
Pyrene	1030	62	ug/kg	1540	ND	63.6	49-134			
Butylbenzylphthalate	956	62	ug/kg	1540	ND	61.9	44-144			
Benzo(a)anthracene	1080	62	ug/kg	1540	ND	69.8	56-124			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Semivolatile Organic Compounds - Quality Control

Batch BFI0267 - EPA 3546 (Microwave)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike (BFI0267-MS1)	**Source: 17I0116-10**		Prepared: 14-Sep-2017 Analyzed: 21-Sep-2017 14:28							
3,3'-Dichlorobenzidine	1270	306	ug/kg	7720	ND	16.4	37-140			
Chrysene	999	62	ug/kg	1540	ND	62.3	53-124			
bis(2-Ethylhexyl)phthalate	1080	62	ug/kg	1540	ND	67.5	63-128			
Di-n-Octylphthalate	1040	62	ug/kg	1540	ND	67.2	59-120			
Benzo(b)fluoranthene	1080	62	ug/kg	1540	32	68.0	42-132			
Benzo(k)fluoranthene	1090	62	ug/kg	1540	ND	70.6	39-129			
Benzo(a)pyrene	1080	62	ug/kg	1540	ND	69.8	53-120			
Indeno(1,2,3-cd)pyrene	957	62	ug/kg	1540	ND	61.9	40-128			
Dibenzo(a,h)anthracene	1020	62	ug/kg	1540	ND	66.0	47-123			
Benzo(g,h,i)perylene	917	62	ug/kg	1540	ND	59.4	44-125			
Benzofluoranthenes, Total	2160	62	ug/kg	3090	ND	68.1	30-160			
1-Methylnaphthalene	866	62	ug/kg	1540	ND	56.0	55-120			
Surrogate: 2-Fluorophenol	1620		ug/kg	*2320*	*1430*	*69.9*	*22-120*			
Surrogate: Phenol-d5	1690		ug/kg	*2320*	*1540*	*73.0*	*27-120*			
Surrogate: 2-Chlorophenol-d4	1860		ug/kg	*2320*	*1680*	*80.3*	*36-120*			
Surrogate: 1,2-Dichlorobenzene-d4	1200		ug/kg	*1540*	*1140*	*77.9*	*38-120*			
Surrogate: Nitrobenzene-d5	1090		ug/kg	*1540*	*1050*	*70.5*	*32-120*			
Surrogate: 2-Fluorobiphenyl	1250		ug/kg	*1540*	*1250*	*81.2*	*39-120*			
Surrogate: 2,4,6-Tribromophenol	2300		ug/kg	*2320*	*2120*	*99.2*	*31-131*			
Surrogate: p-Terphenyl-d14	1320		ug/kg	*1540*	*1150*	*85.8*	*31-130*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Matrix Spike Dup (BFI0267-MSD1)	**Source: 17I0116-10**		Prepared: 14-Sep-2017 Analyzed: 21-Sep-2017 15:01							
Phenol	869	62	ug/kg	1540	ND	56.5	37-120	1.81	30	
bis(2-chloroethyl) ether	1010	62	ug/kg	1540	ND	65.5	43-120	12.10	30	
2-Chlorophenol	881	62	ug/kg	1540	ND	57.3	45-120	1.61	30	
1,3-Dichlorobenzene	827	62	ug/kg	1540	ND	53.7	47-120	3.00	30	
1,4-Dichlorobenzene	873	62	ug/kg	1540	ND	56.7	46-120	3.64	30	
Benzyl Alcohol	924	305	ug/kg	1540	ND	60.1	16-120	0.73	30	
1,2-Dichlorobenzene	901	62	ug/kg	1540	ND	58.5	48-120	2.04	30	
2-Methylphenol	829	62	ug/kg	1540	ND	53.9	45-120	2.82	30	
2,2'-Oxybis(1-chloropropane)	884	62	ug/kg	1540	ND	57.4	36-120	1.60	30	
4-Methylphenol	942	62	ug/kg	1540	ND	61.2	47-120	1.80	30	
N-Nitroso-di-n-Propylamine	880	62	ug/kg	1540	ND	57.2	44-120	1.24	30	
Hexachloroethane	862	62	ug/kg	1540	ND	56.0	43-120	1.61	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Semivolatile Organic Compounds - Quality Control

Batch BFI0267 - EPA 3546 (Microwave)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BFI0267-MSD1)	**Source: 17I0116-10**		Prepared: 14-Sep-2017 Analyzed: 21-Sep-2017 15:01							
Nitrobenzene	858	62	ug/kg	1540	ND	55.8	39-120	2.08	30	
Isophorone	987	62	ug/kg	1540	ND	64.2	57-120	4.88	30	
2-Nitrophenol	1010	62	ug/kg	1540	ND	65.4	50-120	1.64	30	
2,4-Dimethylphenol	618	62	ug/kg	1540	ND	40.2	40-120	0.02	30	
Bis(2-Chloroethoxy)methane	905	62	ug/kg	1540	ND	58.8	49-120	0.05	30	
Benzoic acid	1050	618	ug/kg	1540	ND	50.6	10-160	7.00	30	
2,4-Dichlorophenol	1040	305	ug/kg	1540	ND	67.3	51-120	4.20	30	
1,2,4-Trichlorobenzene	942	62	ug/kg	1540	ND	61.2	50-120	1.70	30	
Naphthalene	812	62	ug/kg	1540	ND	52.8	50-120	1.98	30	
4-Chloroaniline	3250	305	ug/kg	7690	ND	42.3	17-149	11.50	30	
Hexachlorobutadiene	962	62	ug/kg	1540	ND	62.6	46-120	2.87	30	
4-Chloro-3-Methylphenol	1040	305	ug/kg	1540	ND	67.5	54-120	4.43	30	
2-Methylnaphthalene	888	62	ug/kg	1540	ND	57.8	54-120	2.89	30	
Hexachlorocyclopentadiene	5450	305	ug/kg	7690	ND	70.8	23-149	11.90	30	
2,4,6-Trichlorophenol	1070	305	ug/kg	1540	ND	69.4	51-120	3.19	30	
2,4,5-Trichlorophenol	1050	305	ug/kg	1540	ND	68.4	52-120	2.35	30	
2-Chloronaphthalene	1100	62	ug/kg	1540	ND	71.7	48-120	3.07	30	
2-Nitroaniline	5710	305	ug/kg	7690	ND	74.2	51-120	4.89	30	
Dimethylphthalate	1090	62	ug/kg	1540	ND	70.9	56-120	1.96	30	
Acenaphthylene	895	62	ug/kg	1540	ND	58.2	56-120	2.04	30	
2,6-Dinitrotoluene	7910	305	ug/kg	7690	ND	103	54-124	2.05	30	Q
3-Nitroaniline	4560	305	ug/kg	7690	ND	59.2	39-142	9.77	30	
Acenaphthene	929	62	ug/kg	1540	ND	60.4	48-120	0.72	30	
2,4-Dinitrophenol	602	526	ug/kg	1540	ND	39.1	15-169	0.91	30	Q
Dibenzofuran	945	62	ug/kg	1540	ND	61.5	55-120	1.42	30	
4-Nitrophenol	885	305	ug/kg	1540	ND	57.5	23-130	8.74	30	
2,4-Dinitrotoluene	7170	305	ug/kg	7690	ND	93.3	57-127	3.37	30	Q
Fluorene	1100	62	ug/kg	1540	ND	71.4	55-120	6.06	30	
Diethyl phthalate	1120	62	ug/kg	1540	ND	72.9	54-120	8.97	30	
4-Chlorophenylphenyl ether	1180	62	ug/kg	1540	ND	76.9	52-120	7.79	30	
4-Nitroaniline	4870	305	ug/kg	7690	ND	63.3	47-124	15.40	30	
4,6-Dinitro-2-methylphenol	862	618	ug/kg	1540	ND	56.0	10-157	3.32	30	
N-Nitrosodiphenylamine	1010	62	ug/kg	1540	ND	65.4	54-138	5.69	30	
4-Bromophenyl phenyl ether	1060	62	ug/kg	1540	ND	69.2	50-120	3.01	30	
Hexachlorobenzene	998	62	ug/kg	1540	ND	64.9	50-121	2.51	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Semivolatile Organic Compounds - Quality Control

Batch BFI0267 - EPA 3546 (Microwave)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Matrix Spike Dup (BFI0267-MSD1)	**Source: 17I0116-10**		Prepared: 14-Sep-2017 Analyzed: 21-Sep-2017 15:01							
Pentachlorophenol	654	305	ug/kg	1540	ND	42.5	40-123	9.46	30	Q
Phenanthrene	1020	62	ug/kg	1540	ND	63.5	55-120	1.45	30	
Anthracene	935	62	ug/kg	1540	ND	60.8	57-120	4.81	30	
Carbazole	969	62	ug/kg	1540	ND	63.0	60-121	4.11	30	
Di-n-Butylphthalate	1060	62	ug/kg	1540	ND	69.1	60-120	1.41	30	
Fluoranthene	1040	62	ug/kg	1540	ND	64.6	52-129	1.45	30	
Pyrene	1050	62	ug/kg	1540	ND	65.5	49-134	2.45	30	
Butylbenzylphthalate	1000	62	ug/kg	1540	ND	65.1	44-144	4.61	30	
Benzo(a)anthracene	1100	62	ug/kg	1540	ND	71.5	56-124	2.04	30	
3,3'-Dichlorobenzidine	1810	305	ug/kg	7690	ND	23.5	37-140	35.10	30	*
Chrysene	1030	62	ug/kg	1540	ND	64.3	53-124	2.75	30	
bis(2-Ethylhexyl)phthalate	1150	62	ug/kg	1540	ND	72.6	63-128	6.59	30	
Di-n-Octylphthalate	1090	62	ug/kg	1540	ND	71.1	59-120	5.24	30	
Benzo(b)fluoranthene	1130	62	ug/kg	1540	32	71.5	42-132	4.53	30	
Benzo(k)fluoranthene	1140	62	ug/kg	1540	ND	74.1	39-129	4.48	30	
Benzo(a)pyrene	1130	62	ug/kg	1540	ND	73.3	53-120	4.50	30	
Indeno(1,2,3-cd)pyrene	976	62	ug/kg	1540	ND	63.5	40-128	2.05	30	
Dibenzo(a,h)anthracene	1020	62	ug/kg	1540	ND	66.4	47-123	0.23	30	
Benzo(g,h,i)perylene	892	62	ug/kg	1540	ND	58.0	44-125	2.69	30	
Benzofluoranthenes, Total	2260	62	ug/kg	3080	ND	71.5	30-160	4.33	30	
1-Methylnaphthalene	884	62	ug/kg	1540	ND	57.4	55-120	2.06	30	
Surrogate: 2-Fluorophenol	1660		ug/kg	*2310*	*1430*	*72.1*	*22-120*			
Surrogate: Phenol-d5	1740		ug/kg	*2310*	*1540*	*75.4*	*27-120*			
Surrogate: 2-Chlorophenol-d4	1900		ug/kg	*2310*	*1680*	*82.2*	*36-120*			
Surrogate: 1,2-Dichlorobenzene-d4	1230		ug/kg	*1540*	*1140*	*80.3*	*38-120*			
Surrogate: Nitrobenzene-d5	1100		ug/kg	*1540*	*1050*	*71.6*	*32-120*			
Surrogate: 2-Fluorobiphenyl	1280		ug/kg	*1540*	*1250*	*83.4*	*39-120*			
Surrogate: 2,4,6-Tribromophenol	2460		ug/kg	*2310*	*2120*	*107*	*31-131*			
Surrogate: p-Terphenyl-d14	1380		ug/kg	*1540*	*1150*	*89.9*	*31-130*			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Petroleum Hydrocarbons - Quality Control

Batch BFI0227 - EPA 3580A (Vortex)

Instrument: FID3 Analyst: ML

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0227-BLK1)				Prepared: 13-Sep-2017 Analyzed: 13-Sep-2017 15:52						
Gasoline Range Organics (Tol-C12)	ND	10	mg/kg							U
Diesel Range Organics (C12-C24)	ND	25	mg/kg							U
Motor Oil Range Organics (C24-C38)	ND	50	mg/kg							U
Surrogate: o-Terphenyl	27.2		mg/kg	*22.5*		*121*	*50-150*			
Surrogate: n-Triacontane	24.1		mg/kg	*22.5*		*107*	*50-150*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Petroleum Hydrocarbons - Quality Control

Batch BFI0229 - EPA 3510C SepF

Instrument: FID4 Analyst: ML

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0229-BLK1)				Prepared: 13-Sep-2017 Analyzed: 13-Sep-2017 15:06						
Gasoline Range Organics (Tol-C12)	ND	0.25	mg/L							U
Diesel Range Organics (C12-C24)	ND	0.50	mg/L							U
Motor Oil Range Organics (C24-C38)	ND	1.00	mg/L							U
Surrogate: o-Terphenyl	0.469		mg/L	*0.450*		*104*	*50-150*			
Surrogate: n-Triacontane	0.460		mg/L	*0.450*		*102*	*50-150*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Aroclor PCB - Quality Control

Batch BFI0660 - EPA 3546 (Microwave)

Instrument: ECD7 Analyst: JR

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0660-BLK1)				Prepared: 27-Sep-2017 Analyzed: 28-Sep-2017 07:15							
Aroclor 1016	33.6	8.0	20.0	ug/kg							
Aroclor 1221	ND	8.0	20.0	ug/kg							U
Aroclor 1232	ND	8.0	20.0	ug/kg							U
Aroclor 1242	ND	8.0	20.0	ug/kg							U
Aroclor 1248	ND	8.0	20.0	ug/kg							U
Aroclor 1254	ND	8.0	20.0	ug/kg							U
Aroclor 1260	41.4	9.3	20.0	ug/kg							
Aroclor 1262	ND	9.3	20.0	ug/kg							U
Aroclor 1268	ND	9.3	20.0	ug/kg							U
Surrogate: Decachlorobiphenyl		45.1		ug/kg	*40.0*		*113*	*40-133*			
Surrogate: Tetrachlorometaxylene		39.8		ug/kg	*40.0*		*99.4*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]		43.1		ug/kg	*40.0*		*108*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]		38.3		ug/kg	*40.0*		*95.9*	*53-120*			
LCS (BFI0660-BS1)				Prepared: 27-Sep-2017 Analyzed: 28-Sep-2017 07:36							
Aroclor 1016	493	8.0	20.0	ug/kg	500		98.7	52-120			B
Aroclor 1260	555	9.3	20.0	ug/kg	500		111	57-120			B
Surrogate: Decachlorobiphenyl		44.6		ug/kg	*40.0*		*112*	*40-133*			
Surrogate: Tetrachlorometaxylene		39.6		ug/kg	*40.0*		*99.0*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]		42.9		ug/kg	*40.0*		*107*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]		37.6		ug/kg	*40.0*		*94.1*	*53-120*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Aroclor PCB - Quality Control

Batch BFJ0137 - EPA 3546 (Microwave)

Instrument: ECD7 Analyst: JR

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFJ0137-BLK1)				Prepared: 05-Oct-2017 Analyzed: 06-Oct-2017 18:34							
Aroclor 1016	ND	8.0	20.0	ug/kg							U
Aroclor 1221	ND	8.0	20.0	ug/kg							U
Aroclor 1232	ND	8.0	20.0	ug/kg							U
Aroclor 1242	ND	8.0	20.0	ug/kg							U
Aroclor 1248	ND	8.0	20.0	ug/kg							U
Aroclor 1254	ND	8.0	20.0	ug/kg							U
Aroclor 1260	ND	9.3	20.0	ug/kg							U
Aroclor 1262	ND	9.3	20.0	ug/kg							U
Aroclor 1268	ND	9.3	20.0	ug/kg							U
Surrogate: Decachlorobiphenyl		35.8		ug/kg	*40.0*		*89.6*	*40-133*			
Surrogate: Tetrachlorometaxylene		30.8		ug/kg	*40.0*		*76.9*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]		33.4		ug/kg	*40.0*		*83.5*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]		29.5		ug/kg	*40.0*		*73.9*	*53-120*			
LCS (BFJ0137-BS1)				Prepared: 05-Oct-2017 Analyzed: 06-Oct-2017 18:55							
Aroclor 1016	457	8.0	20.0	ug/kg	500		91.4	52-120			
Aroclor 1260	466	9.3	20.0	ug/kg	500		93.3	57-120			
Surrogate: Decachlorobiphenyl		37.8		ug/kg	*40.0*		*94.6*	*40-133*			
Surrogate: Tetrachlorometaxylene		32.4		ug/kg	*40.0*		*81.0*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]		35.4		ug/kg	*40.0*		*88.4*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]		30.2		ug/kg	*40.0*		*75.5*	*53-120*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Metals and Metallic Compounds - Quality Control

Batch BFI0238 - SMM EPA 7471B

Instrument: CETAC Analyst: MCB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0238-BLK1)			Prepared: 13-Sep-2017 Analyzed: 14-Sep-2017 14:56							
Mercury	ND	0.0250	mg/kg							U
LCS (BFI0238-BS1)			Prepared: 13-Sep-2017 Analyzed: 14-Sep-2017 14:57							
Mercury	0.600	0.0250	mg/kg	0.500		120	80-120			
Duplicate (BFI0238-DUP1)		**Source: 17I0116-10**	Prepared: 13-Sep-2017 Analyzed: 14-Sep-2017 14:48							
Mercury	0.0423	0.0282	mg/kg		0.0564			28.60	20	L
Matrix Spike (BFI0238-MS1)		**Source: 17I0116-10**	Prepared: 13-Sep-2017 Analyzed: 14-Sep-2017 14:50							
Mercury	0.392	0.0278	mg/kg	0.278	0.0564	121	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Metals and Metallic Compounds - Quality Control

Batch BFI0328 - SWN EPA 3050B

Instrument: ICPMS2 Analyst: CC

QC Sample/Analyte	Isotope	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0328-BLK1)				Prepared: 18-Sep-2017 Analyzed: 21-Sep-2017 17:58							
Chromium	52	ND	0.50	mg/kg							U
Chromium	53	ND	0.50	mg/kg							U
Lead	208	ND	0.10	mg/kg							U
Arsenic	75a	ND	0.20	mg/kg							U
Cadmium	111	ND	0.10	mg/kg							U
Cadmium	114	ND	0.10	mg/kg							U
LCS (BFI0328-BS1)				Prepared: 18-Sep-2017 Analyzed: 21-Sep-2017 18:23							
Chromium	52	26.6	0.50	mg/kg	25.0		106	80-120			
Chromium	53	26.2	0.50	mg/kg	25.0		105	80-120			
Lead	208	26.9	0.10	mg/kg	25.0		107	80-120			
Arsenic	75a	24.1	0.20	mg/kg	25.0		96.6	80-120			
Cadmium	111	24.6	0.10	mg/kg	25.0		98.5	80-120			
Cadmium	114	24.7	0.10	mg/kg	25.0		98.6	80-120			
Duplicate (BFI0328-DUP2)			**Source: 17I0116-10**	Prepared: 18-Sep-2017 Analyzed: 21-Sep-2017 19:36							
Chromium	52	36.6	0.61	mg/kg		42.3			14.50	20	
Lead	208	23.5	0.12	mg/kg		20.3			14.40	20	
Arsenic	75a	5.97	0.24	mg/kg		4.82			21.20	20	*
Cadmium	111	0.42	0.12	mg/kg		0.52			20.80	20	L
Matrix Spike (BFI0328-MS2)			**Source: 17I0116-10**	Prepared: 18-Sep-2017 Analyzed: 21-Sep-2017 19:46							
Chromium	52	64.7	0.61	mg/kg	30.4	42.3	73.7	75-125			*
Lead	208	57.0	0.12	mg/kg	30.4	20.3	121	75-125			
Arsenic	75a	34.6	0.24	mg/kg	30.4	4.82	97.7	75-125			
Cadmium	111	31.9	0.12	mg/kg	30.4	0.52	103	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Metals and Metallic Compounds (dissolved) - Quality Control

Batch BFI0225 - REN EPA 600/4-79-020 4.1.4 HNO3 matrix

Instrument: ICPMS2 Analyst: CC

QC Sample/Analyte	Isotope	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0225-BLK1)				Prepared: 13-Sep-2017 Analyzed: 13-Sep-2017 19:24							
Chromium, Dissolved	52	ND	0.500	ug/L							U
Chromium, Dissolved	53	ND	0.500	ug/L							U
Arsenic, Dissolved	75a	ND	0.200	ug/L							U
Cadmium, Dissolved	111	ND	0.100	ug/L							U
Cadmium, Dissolved	114	ND	0.100	ug/L							U
Blank (BFI0225-BLK2)				Prepared: 13-Sep-2017 Analyzed: 14-Sep-2017 18:13							
Lead, Dissolved	208	ND	0.100	ug/L							U
LCS (BFI0225-BS1)				Prepared: 13-Sep-2017 Analyzed: 13-Sep-2017 19:44							
Chromium, Dissolved	52	26.7	0.500	ug/L	25.0		107	80-120			
Chromium, Dissolved	53	25.2	0.500	ug/L	25.0		101	80-120			
Arsenic, Dissolved	75a	25.1	0.200	ug/L	25.0		100	80-120			
Cadmium, Dissolved	111	25.8	0.100	ug/L	25.0		103	80-120			
Cadmium, Dissolved	114	25.9	0.100	ug/L	25.0		103	80-120			
LCS (BFI0225-BS2)				Prepared: 13-Sep-2017 Analyzed: 14-Sep-2017 18:33							
Lead, Dissolved	208	27.5	0.100	ug/L	25.0		110	80-120			
Duplicate (BFI0225-DUP1)			**Source: 17I0116-07**	Prepared: 13-Sep-2017 Analyzed: 13-Sep-2017 19:29							
Chromium, Dissolved	52	ND	0.500	ug/L		ND					L, U
Arsenic, Dissolved	75a	5.80	0.200	ug/L		8.39			36.40	20	*
Cadmium, Dissolved	111	ND	0.100	ug/L		ND					U
Duplicate (BFI0225-DUP2)			**Source: 17I0116-07**	Prepared: 13-Sep-2017 Analyzed: 14-Sep-2017 18:18							
Lead, Dissolved	208	ND	0.100	ug/L		ND					U
Matrix Spike (BFI0225-MS1)			**Source: 17I0116-07**	Prepared: 13-Sep-2017 Analyzed: 13-Sep-2017 19:39							
Chromium, Dissolved	52	24.8	0.500	ug/L	25.0	ND	97.7	75-125			
Arsenic, Dissolved	75a	34.0	0.200	ug/L	25.0	8.39	102	75-125			
Cadmium, Dissolved	111	25.1	0.100	ug/L	25.0	ND	100	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Matrix Spike (BFI0225-MS2)			**Source: 17I0116-07**	Prepared: 13-Sep-2017 Analyzed: 14-Sep-2017 18:28							
Lead, Dissolved	208	25.8	0.100	ug/L	25.0	ND	103	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Metals and Metallic Compounds (dissolved) - Quality Control

Batch BFI0266 - TWM EPA 7470A

Instrument: CETAC Analyst: MCB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0266-BLK1)				Prepared: 14-Sep-2017 Analyzed: 20-Sep-2017 14:41						
Mercury, Dissolved	ND	0.000100	mg/L							U
LCS (BFI0266-BS1)				Prepared: 14-Sep-2017 Analyzed: 20-Sep-2017 14:42						
Mercury, Dissolved	0.00216	0.000100	mg/L	0.00200		108	80-120			
Duplicate (BFI0266-DUP1)		**Source: 17I0116-07**		Prepared: 14-Sep-2017 Analyzed: 20-Sep-2017 14:47						
Mercury, Dissolved	ND	0.000100	mg/L		ND					U
Matrix Spike (BFI0266-MS1)		**Source: 17I0116-07**		Prepared: 14-Sep-2017 Analyzed: 20-Sep-2017 14:49						
Mercury, Dissolved	0.00119	0.000100	mg/L	0.00100	ND	119	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Matrix Spike Dup (BFI0266-MSD1)		**Source: 17I0116-07**		Prepared: 14-Sep-2017 Analyzed: 20-Sep-2017 14:50						
Mercury, Dissolved	0.00118	0.000100	mg/L	0.00100	ND	118	75-125	0.84	20	

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

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The Boeing Company	Project: Renton Phase II Investigation	
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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Certified Analyses included in this Report

Analyte	Certifications
EPA 200.8 in Solid	
Chromium-52	NELAP,DoD-ELAP,WADOE
Chromium-53	NELAP,DoD-ELAP,WADOE
Lead-208	NELAP,DoD-ELAP,WADOE
EPA 200.8 in Water	
Chromium-52	NELAP,WADOE,WA-DW,DoD-ELAP
Chromium-53	NELAP,WADOE,WA-DW,DoD-ELAP
Lead-208	NELAP,WADOE,WA-DW,DoD-ELAP
EPA 200.8 UCT-KED in Solid	
Arsenic-75a	NELAP,DoD-ELAP,WADOE
Cadmium-111	NELAP,DoD-ELAP,WADOE
Cadmium-114	NELAP,DoD-ELAP,WADOE
EPA 200.8 UCT-KED in Water	
Arsenic-75a	NELAP,WADOE,WA-DW,DoD-ELAP
Cadmium-111	NELAP,WADOE,WA-DW,DoD-ELAP
Cadmium-114	NELAP,WADOE,WA-DW,DoD-ELAP
EPA 7470A in Water	
Mercury	WADOE,NELAP,DoD-ELAP,CALAP
EPA 7471B in Solid	
Mercury	WADOE,NELAP,DoD-ELAP,CALAP
EPA 8082A in Solid	
Aroclor 1016	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,NELAP,CALAP,ADEC

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Aroclor 1260 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
EPA 8260C in Solid	
Chloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Vinyl Chloride	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromomethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Chloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Trichlorofluoromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Acrolein	WADOE,DoD-ELAP,NELAP,CALAP
1,1,2-Trichloro-1,2,2-Trifluoroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Acetone	WADOE,DoD-ELAP,NELAP,CALAP
1,1-Dichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromoethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Iodomethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Methylene Chloride	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Acrylonitrile	WADOE,DoD-ELAP,NELAP,CALAP
Carbon Disulfide	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
trans-1,2-Dichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Vinyl Acetate	WADOE,DoD-ELAP,NELAP,CALAP
1,1-Dichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
2-Butanone	WADOE,DoD-ELAP,NELAP,CALAP
2,2-Dichloropropane	WADOE,DoD-ELAP,NELAP,CALAP
cis-1,2-Dichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Chloroform	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromochloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1,1-Trichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1-Dichloropropene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Carbon tetrachloride	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2-Dichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Benzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Trichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2-Dichloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromodichloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Dibromomethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
2-Chloroethyl vinyl ether	WADOE,DoD-ELAP,NELAP
4-Methyl-2-Pentanone	WADOE,DoD-ELAP,NELAP,CALAP

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cis-1,3-Dichloropropene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Toluene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
trans-1,3-Dichloropropene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
2-Hexanone	WADOE,DoD-ELAP,NELAP,CALAP
1,1,2-Trichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,3-Dichloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Tetrachloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Dibromochloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2-Dibromoethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Chlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Ethylbenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1,1,2-Tetrachloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
m,p-Xylene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
o-Xylene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Xylenes, total	WADOE
Styrene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromoform	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1,2,2-Tetrachloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2,3-Trichloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
trans-1,4-Dichloro 2-Butene	WADOE,DoD-ELAP,NELAP
n-Propylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
Bromobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Isopropyl Benzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
2-Chlorotoluene	WADOE,DoD-ELAP,NELAP,CALAP
4-Chlorotoluene	WADOE,DoD-ELAP,NELAP,CALAP
t-Butylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,3,5-Trimethylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,2,4-Trimethylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
s-Butylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
4-Isopropyl Toluene	WADOE,DoD-ELAP,NELAP,CALAP
1,3-Dichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,4-Dichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP
n-Butylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,2-Dichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,2-Dibromo-3-chloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2,4-Trichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Hexachloro-1,3-Butadiene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Naphthalene	WADOE,DoD-ELAP,NELAP,CALAP
1,2,3-Trichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Dichlorodifluoromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC

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Methyl tert-butyl Ether	WADOE,DoD-ELAP,NELAP,CALAP
n-Hexane	WADOE
2-Pentanone	WADOE
Dibromofluoromethane	WADOE
4-Bromofluorobenzene	WADOE
Chloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Vinyl Chloride	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromomethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Chloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Trichlorofluoromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Acrolein	WADOE,DoD-ELAP,NELAP,CALAP
1,1,2-Trichloro-1,2,2-Trifluoroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Acetone	WADOE,DoD-ELAP,NELAP,CALAP
1,1-Dichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromoethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Iodomethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Methylene Chloride	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Acrylonitrile	WADOE,DoD-ELAP,NELAP,CALAP
Carbon Disulfide	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
trans-1,2-Dichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Vinyl Acetate	WADOE,DoD-ELAP,NELAP,CALAP
1,1-Dichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
2-Butanone	WADOE,DoD-ELAP,NELAP,CALAP
2,2-Dichloropropane	WADOE,DoD-ELAP,NELAP,CALAP
cis-1,2-Dichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Chloroform	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromochloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1,1-Trichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1-Dichloropropene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Carbon tetrachloride	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2-Dichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Benzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Trichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2-Dichloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromodichloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Dibromomethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
4-Methyl-2-Pentanone	WADOE,DoD-ELAP,NELAP,CALAP
cis-1,3-Dichloropropene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Toluene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
trans-1,3-Dichloropropene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

2-Hexanone	WADOE,DoD-ELAP,NELAP,CALAP
1,1,2-Trichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,3-Dichloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Tetrachloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Dibromochloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2-Dibromoethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Chlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Ethylbenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1,1,2-Tetrachloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
m,p-Xylene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
o-Xylene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Styrene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromoform	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1,2,2-Tetrachloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2,3-Trichloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
trans-1,4-Dichloro 2-Butene	WADOE
n-Propylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
Bromobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Isopropyl Benzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
2-Chlorotoluene	WADOE,DoD-ELAP,NELAP,CALAP
4-Chlorotoluene	WADOE,DoD-ELAP,NELAP,CALAP
t-Butylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,3,5-Trimethylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,2,4-Trimethylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
s-Butylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
4-Isopropyl Toluene	WADOE,DoD-ELAP,NELAP,CALAP
1,3-Dichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,4-Dichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP
n-Butylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,2-Dichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,2-Dibromo-3-Chloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2,4-Trichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Hexachloro-1,3-Butadiene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Naphthalene	WADOE,DoD-ELAP,NELAP,CALAP
1,2,3-Trichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Dichlorodifluoromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Methyl tert-butyl Ether	WADOE,DoD-ELAP,NELAP,CALAP
n-Hexane	WADOE

EPA 8260C in Water

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Chloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acrolein	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromoethane	DoD-ELAP,NELAP,CALAP,WADOE
Iodomethane	DoD-ELAP,NELAP,CALAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,CALAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,CALAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,CALAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Butanone	DoD-ELAP,NELAP,CALAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,CALAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Dibromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,CALAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Styrene	DoD-ELAP,NELAP,CALAP,WADOE
Bromoform	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,CALAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,CALAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,CALAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
n-Hexane	WADOE
2-Pentanone	WADOE

EPA 8270D in Solid

Phenol	CALAP,DoD-ELAP,NELAP,WADOE
bis(2-chloroethyl) ether	CALAP,DoD-ELAP,NELAP,WADOE
2-Chlorophenol	CALAP,DoD-ELAP,NELAP,WADOE

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

1,3-Dichlorobenzene	CALAP,DoD-ELAP,NELAP,WADOE
1,4-Dichlorobenzene	CALAP,DoD-ELAP,NELAP,WADOE
Benzyl Alcohol	CALAP,DoD-ELAP,NELAP,WADOE
1,2-Dichlorobenzene	CALAP,DoD-ELAP,NELAP,WADOE
2-Methylphenol	CALAP,DoD-ELAP,NELAP,WADOE
2,2'-Oxybis(1-chloropropane)	DoD-ELAP,NELAP
4-Methylphenol	CALAP,DoD-ELAP,NELAP,WADOE
N-Nitroso-di-n-Propylamine	CALAP,DoD-ELAP,NELAP,WADOE
Hexachloroethane	CALAP,DoD-ELAP,NELAP,WADOE
Nitrobenzene	CALAP,DoD-ELAP,NELAP,WADOE
Isophorone	CALAP,DoD-ELAP,NELAP,WADOE
2-Nitrophenol	CALAP,DoD-ELAP,NELAP,WADOE
2,4-Dimethylphenol	CALAP,DoD-ELAP,NELAP,WADOE
Bis(2-Chloroethoxy)methane	CALAP,DoD-ELAP,NELAP,WADOE
Benzoic acid	CALAP,DoD-ELAP,NELAP,WADOE
2,4-Dichlorophenol	CALAP,DoD-ELAP,NELAP,WADOE
1,2,4-Trichlorobenzene	CALAP,DoD-ELAP,NELAP,WADOE
Naphthalene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
4-Chloroaniline	CALAP,DoD-ELAP,NELAP,WADOE
Hexachlorobutadiene	CALAP,DoD-ELAP,NELAP,WADOE
4-Chloro-3-Methylphenol	CALAP,DoD-ELAP,NELAP,WADOE
2-Methylnaphthalene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Hexachlorocyclopentadiene	CALAP,DoD-ELAP,NELAP,WADOE
2,4,6-Trichlorophenol	CALAP,DoD-ELAP,NELAP,WADOE
2,4,5-Trichlorophenol	CALAP,DoD-ELAP,NELAP,WADOE
2-Chloronaphthalene	CALAP,DoD-ELAP,NELAP,WADOE
2-Nitroaniline	CALAP,DoD-ELAP,NELAP,WADOE
Dimethylphthalate	CALAP,DoD-ELAP,NELAP,WADOE
Acenaphthylene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
2,6-Dinitrotoluene	CALAP,DoD-ELAP,NELAP,WADOE
3-Nitroaniline	CALAP,DoD-ELAP,NELAP,WADOE
Acenaphthene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
2,4-Dinitrophenol	CALAP,DoD-ELAP,NELAP,WADOE
Dibenzofuran	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
4-Nitrophenol	CALAP,DoD-ELAP,NELAP,WADOE
2,4-Dinitrotoluene	CALAP,DoD-ELAP,NELAP,WADOE
Fluorene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Diethyl phthalate	CALAP,DoD-ELAP,NELAP,WADOE
4-Chlorophenylphenyl ether	CALAP,DoD-ELAP,NELAP,WADOE
4-Nitroaniline	CALAP,DoD-ELAP,NELAP,WADOE

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

4,6-Dinitro-2-methylphenol	CALAP,DoD-ELAP,NELAP,WADOE
N-Nitrosodiphenylamine	DoD-ELAP,NELAP,WADOE
4-Bromophenyl phenyl ether	CALAP,DoD-ELAP,NELAP,WADOE
Hexachlorobenzene	CALAP,DoD-ELAP,NELAP,WADOE
Pentachlorophenol	CALAP,DoD-ELAP,NELAP,WADOE
Phenanthrene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Anthracene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Carbazole	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Di-n-Butylphthalate	CALAP,DoD-ELAP,NELAP,WADOE
Fluoranthene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Pyrene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Butylbenzylphthalate	CALAP,DoD-ELAP,NELAP,WADOE
Benzo(a)anthracene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
3,3'-Dichlorobenzidine	DoD-ELAP,NELAP,WADOE
Chrysene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
bis(2-Ethylhexyl)phthalate	CALAP,DoD-ELAP,NELAP,WADOE
Di-n-Octylphthalate	CALAP,DoD-ELAP,NELAP,WADOE
Benzo(b)fluoranthene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Benzo(k)fluoranthene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Benzo(a)pyrene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Indeno(1,2,3-cd)pyrene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Dibenzo(a,h)anthracene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Benzo(g,h,i)perylene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Benzofluoranthenes, Total	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
1-Methylnaphthalene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
N-Nitrosodimethylamine	CALAP,DoD-ELAP,NELAP,WADOE
Aniline	CALAP,DoD-ELAP,NELAP,WADOE
Benzidine	CALAP,DoD-ELAP,NELAP,WADOE
Retene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Perylene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Pyridine	CALAP,DoD-ELAP,NELAP,WADOE
N-Nitrosomethylethylamine	CALAP,DoD-ELAP,NELAP,WADOE
2,6-Dichlorophenol	CALAP,DoD-ELAP,NELAP,WADOE
alpha-Terpineol	CALAP,DoD-ELAP,NELAP,WADOE
2,3,4,6-Tetrachlorophenol	CALAP,DoD-ELAP,WADOE
Triphenyl Phosphate	CALAP,DoD-ELAP,NELAP,WADOE
Butyl Diphenyl Phosphate	CALAP,DoD-ELAP,NELAP,WADOE
Dibutyl Phenyl Phosphate	CALAP,DoD-ELAP,NELAP,WADOE
Tributyl Phosphate	CALAP,DoD-ELAP,NELAP,WADOE
Butylated Hydroxytoluene	CALAP,DoD-ELAP,NELAP,WADOE

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Azobenzene (1,2-DP-Hydrazine)	CALAP,DoD-ELAP,NELAP
4-Chloroguaiacol	DoD-ELAP,WADOE
3,4-Dichloroguaiacol	DoD-ELAP,WADOE
4,5-Dichloroguaiacol	DoD-ELAP,WADOE
4,6-Dichloroguaiacol	DoD-ELAP,WADOE
Tetrachloroguaiacol	CALAP,DoD-ELAP,WADOE
3,4,5-Trichloroguaiacol	CALAP,DoD-ELAP,WADOE
3,4,6-Trichloroguaiacol	CALAP,DoD-ELAP,WADOE
4,5,6-Trichloroguaiacol	CALAP,DoD-ELAP,WADOE
Guaiacol	CALAP,DoD-ELAP,WADOE
1,2,4,5-Tetrachlorobenzene	CALAP,DoD-ELAP,WADOE

EPA 8270D in Water

Phenol	CALAP,WADOE,DoD-ELAP,NELAP
bis(2-chloroethyl) ether	CALAP,WADOE,DoD-ELAP,NELAP
2-Chlorophenol	CALAP,WADOE,DoD-ELAP,NELAP
1,3-Dichlorobenzene	CALAP,WADOE,DoD-ELAP,NELAP
1,4-Dichlorobenzene	CALAP,WADOE,DoD-ELAP,NELAP
Benzyl Alcohol	CALAP,WADOE,DoD-ELAP,NELAP
1,2-Dichlorobenzene	CALAP,WADOE,DoD-ELAP,NELAP
2-Methylphenol	CALAP,WADOE,DoD-ELAP,NELAP
4-Methylphenol	CALAP,WADOE,DoD-ELAP,NELAP
N-Nitroso-di-n-Propylamine	CALAP,WADOE,DoD-ELAP,NELAP
Hexachloroethane	CALAP,WADOE,DoD-ELAP,NELAP
Nitrobenzene	CALAP,WADOE,DoD-ELAP,NELAP
Isophorone	CALAP,WADOE,DoD-ELAP,NELAP
2-Nitrophenol	CALAP,WADOE,DoD-ELAP,NELAP
2,4-Dimethylphenol	CALAP,WADOE,DoD-ELAP,NELAP
Bis(2-Chloroethoxy)methane	CALAP,WADOE,DoD-ELAP,NELAP
Benzoic acid	CALAP,WADOE,DoD-ELAP,NELAP
2,4-Dichlorophenol	CALAP,WADOE,DoD-ELAP,NELAP
1,2,4-Trichlorobenzene	CALAP,WADOE,DoD-ELAP,NELAP
Naphthalene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
4-Chloroaniline	CALAP,WADOE,DoD-ELAP,NELAP
Hexachlorobutadiene	CALAP,WADOE,DoD-ELAP,NELAP
4-Chloro-3-Methylphenol	CALAP,WADOE,DoD-ELAP,NELAP
2-Methylnaphthalene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Hexachlorocyclopentadiene	CALAP,WADOE,DoD-ELAP,NELAP
2,4,6-Trichlorophenol	CALAP,WADOE,DoD-ELAP,NELAP
2,4,5-Trichlorophenol	CALAP,WADOE,DoD-ELAP,NELAP

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

2-Chloronaphthalene	CALAP,WADOE,DoD-ELAP,NELAP
2-Nitroaniline	CALAP,WADOE,DoD-ELAP,NELAP
Dimethylphthalate	CALAP,WADOE,DoD-ELAP,NELAP
Acenaphthylene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
2,6-Dinitrotoluene	CALAP,WADOE,DoD-ELAP,NELAP
3-Nitroaniline	CALAP,WADOE,DoD-ELAP,NELAP
Acenaphthene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
2,4-Dinitrophenol	CALAP,WADOE,DoD-ELAP,NELAP
Dibenzofuran	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
4-Nitrophenol	CALAP,WADOE,DoD-ELAP,NELAP
2,4-Dinitrotoluene	CALAP,WADOE,DoD-ELAP,NELAP
Fluorene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Diethyl phthalate	CALAP,WADOE,DoD-ELAP,NELAP
4-Chlorophenylphenyl ether	CALAP,WADOE,DoD-ELAP,NELAP
4-Nitroaniline	CALAP,WADOE,DoD-ELAP,NELAP
4,6-Dinitro-2-methylphenol	CALAP,WADOE,DoD-ELAP,NELAP
4-Bromophenyl phenyl ether	CALAP,WADOE,DoD-ELAP,NELAP
Hexachlorobenzene	CALAP,WADOE,DoD-ELAP,NELAP
Pentachlorophenol	CALAP,WADOE,DoD-ELAP,NELAP
Phenanthrene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Anthracene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Carbazole	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Di-n-Butylphthalate	CALAP,WADOE,DoD-ELAP,NELAP
Fluoranthene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Pyrene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Butylbenzylphthalate	CALAP,WADOE,DoD-ELAP,NELAP
Benzo(a)anthracene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Chrysene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
bis(2-Ethylhexyl)phthalate	CALAP,WADOE,DoD-ELAP,NELAP
Di-n-Octylphthalate	CALAP,WADOE,DoD-ELAP,NELAP
Benzo(b)fluoranthene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Benzo(k)fluoranthene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Benzo(a)pyrene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Indeno(1,2,3-cd)pyrene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Dibenzo(a,h)anthracene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Benzo(g,h,i)perylene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Benzofluoranthenes, Total	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
1-Methylnaphthalene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
N-Nitrosodimethylamine	CALAP,WADOE,DoD-ELAP,NELAP
Aniline	CALAP,WADOE,DoD-ELAP,NELAP

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Benzidine	CALAP,WADOE,DoD-ELAP,NELAP
Retene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Perylene	CALAP,WADOE,ADEC
Pyridine	CALAP,WADOE,DoD-ELAP,NELAP
N-Nitrosomethylethylamine	CALAP
2,6-Dichlorophenol	CALAP,WADOE
alpha-Terpineol	CALAP,WADOE,DoD-ELAP,NELAP
1,4-Dioxane	CALAP,WADOE,DoD-ELAP,NELAP
2,3,4,6-Tetrachlorophenol	CALAP,WADOE,DoD-ELAP
Triphenyl Phosphate	CALAP,WADOE,DoD-ELAP,NELAP
Butyl Diphenyl Phosphate	CALAP,WADOE,DoD-ELAP,NELAP
Dibutyl Phenyl Phosphate	CALAP,WADOE,DoD-ELAP,NELAP
Tributyl Phosphate	CALAP,WADOE,DoD-ELAP,NELAP
Butylated Hydroxytoluene	CALAP,WADOE,DoD-ELAP,NELAP
Azobenzene (1,2-DP-Hydrazine)	CALAP,WADOE,DoD-ELAP,NELAP
Tetrachloroguaiacol	CALAP,WADOE,DoD-ELAP
3,4,5-Trichloroguaiacol	CALAP,WADOE,DoD-ELAP
3,4,6-Trichloroguaiacol	CALAP,WADOE,DoD-ELAP
4,5,6-Trichloroguaiacol	CALAP,WADOE,DoD-ELAP
Guaiacol	CALAP,WADOE,DoD-ELAP
1,2,4,5-Tetrachlorobenzene	CALAP,WADOE,DoD-ELAP,NELAP

NWTPHg in Water

Gasoline Range Organics (Tol-Nap)	WADOE,DoD-ELAP
Gasoline Range Organics (2MP-TMB)	WADOE,DoD-ELAP
Gasoline Range Organics (Tol-C12)	WADOE,DoD-ELAP
Gasoline Range Organics (C6-C10)	WADOE,ADEC,DoD-ELAP
Gasoline Range Organics (C5-C12)	WADOE,DoD-ELAP

NWTPH-HCID in Solid

Gasoline Range Organics (Tol-C12)	NELAP,DoD-ELAP,WADOE
Diesel Range Organics (C12-C24)	NELAP,DoD-ELAP,WADOE
Motor Oil Range Organics (C24-C38)	NELAP,DoD-ELAP,WADOE

NWTPH-HCID in Water

Gasoline Range Organics (Tol-C12)	NELAP,DoD-ELAP,WADOE
Diesel Range Organics (C12-C24)	NELAP,DoD-ELAP,WADOE
Motor Oil Range Organics (C24-C38)	NELAP,DoD-ELAP,WADOE

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	UST-033	09/01/2017
CALAP	California Department of Public Health CAELAP	2748	02/28/2018
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/07/2019
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006	05/11/2018
WADOE	WA Dept of Ecology	C558	06/30/2018
WA-DW	Ecology - Drinking Water	C558	06/30/2018

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	18-Oct-2017 12:05

Notes and Definitions

Y1	Raised reporting limit due to interference
U	This analyte is not detected above the applicable reporting or detection limit.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
P1	The reported value is greater than 40% difference between the concentrations determined on two GC columns where applicable.
M	Estimated value for a GC/MS analyte detected and confirmed by an analyst but with low spectral match parameters.
L	Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to +/- RL instead of 20% RPD
J	Estimated concentration value detected below the reporting limit.
H	Hold time violation - Hold time was exceeded.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
D	The reported value is from a dilution
B	This analyte was detected in the method blank.
*	Flagged value is not within established control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

28 September 2017

Peter Hudelson
The Boeing Company
P.O. Box 3707 MC 9U4-26
Seattle, WA 98124-2207

RE: Renton Phase II Investigation

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
17I0139	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the reqirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.



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ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006

PJLA Testing
Accreditation # 66169

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 1710139	Turn-around Requested: Standard	Page: 1 of	
ARI Client Company: iSOE.org	Phone: (425) 234-4921	Date: 9/13/17	Ice Present?
Client Contact: Pete Huelson, Kathryn Hartley (LAI)		No. of Coolers:	Cooler Temps:
Client Project Name: Renton Buildings 10-13 & 10-16 Phase II investigation			
Client Project #:	Samplers: Jeavan Huerta-Avila, Devan Brandt		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: VOCs (EPA 8260) Full list	SVOCs (8270)	NWTPH-HCID	NWTPH-1 6x	NWTPH-Dx 1 (Soil = w/ SGA)	Metals 200.8 7471B Pur Hg	Diss Metals 200.8 7471B Pur Hg		Notes/Comments
LAI-B4-S(3.5-5)	9/13/17	810	Soil	8	X	X	X			X			
LAI-B4-GW	9/13/17	831	~~S~~ AQ	12	X	X	X				X		
LAI-B5-S(1-3)	9/13/17	855	Soil	8	X	X	X			X			
LAI-B5-S(7-9)	9/13/17	910	Soil	8	X	X	X			X			
MW-2	9/13/17	1130	AQ	12	X	X	X				X		
MW-10	9/13/17	1310	AQ	12	X	X	X				X		
LMW-2D	9/13/17	1450	AQ	12	X	X	X				X		
TRIP BLANKS	—	—	AQ	4	X								Hold 2 weeks for HCID follow-ups

	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Comments/Special Instructions: F = Field Filtered Metals list MTCA5 Arsenic, Cadmium, Chromium, Lead, & Mercury 1 = Hold pending HCID	Printed Name: Jeavan Huerta	Printed Name: Paul Mark	Printed Name:	Printed Name:
	Company: LANDAU Associates	Company: ARI	Company:	Company:
	Date & Time: 9/13/17 @ 1550	Date & Time: 9/13/2017 15:50	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Landau 17I0139

COC No(s): _____ NA

Assigned ARI Job No: 17I0139 SF

Preliminary Examination Phase: 9/14/17

Project Name: _____

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Tracking No: _____ NA

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 4.5 9.1 ___ ___ ___ ___

Time: _____

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: D005206

Cooler Accepted by: PM Date: 9/13/2017 Time: 15:50

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	YES	(NO)
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	(YES)	NO
Were all VOC vials free of air bubbles?	NA	(YES)	(NO) SF
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	NA		

Was Sample Split by ARI : NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: SS Date: 9/14/17 Time: 11:28

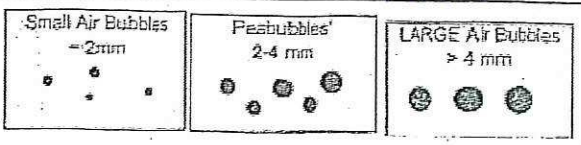
*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

LAI-B4-GW 1vial-1g. LAI MW-2, 2vials-1g. LAI MW 10 - 5vials-1g
LAI-MW 2D - hs 6 vials

By: SF Date: 9/14/17



Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

Analytical Resources, Incorporated
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Cooler Temperature Compliance Form

Cooler#: 2	Temperature(°C): 9.1	
Sample ID	Bottle Count	Bottle Type
Samples received above 6°C		
Sample 17I0139-01	1 Na vial, 1 meOH vial	not used
17I0139-02	3 HCl vials, 5 500mL Ambers	used, 500 mL HCl'd
17I0139-03	1 Na vial, 1 meOH vial	not used
17I0139-04	1 Na vial, 1 meOH vial	not used
17I0139-05	3 HCl vials, 5 500mL Ambers	used, 500 mL Amber HCl'd
17I0139-06	3 HCl vials, 5 500mL Ambers	used (1) 500 mL for HCl'd

Cooler#:	Temperature(°C):	
Sample ID	Bottle Count	Bottle Type
17I0139-07	3 HCl vials, 5 500mL Ambers	used (1) 500 mL HCl'd
17I0139-08	3 HCl vials	D.d not use

Cooler#:	Temperature(°C):	
Sample ID	Bottle Count	Bottle Type

Cooler#:	Temperature(°C):	
Sample ID	Bottle Count	Bottle Type

Completed by: pm Date: 9/13/2017 Time: 16:25

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LAI-B4-S(3.5-5)	17I0139-01	Solid	13-Sep-2017 08:10	13-Sep-2017 15:50
LAI-B4-GW	17I0139-02	Water	13-Sep-2017 08:31	13-Sep-2017 15:50
LAI-B5-S(1-3)	17I0139-03	Solid	13-Sep-2017 08:55	13-Sep-2017 15:50
LAI-B5-S(7-9)	17I0139-04	Solid	13-Sep-2017 09:10	13-Sep-2017 15:50
MW-2	17I0139-05	Water	13-Sep-2017 11:30	13-Sep-2017 15:50
MW-10	17I0139-06	Water	13-Sep-2017 13:10	13-Sep-2017 15:50
LMW-2D	17I0139-07	Water	13-Sep-2017 14:50	13-Sep-2017 15:50
Trip Blank	17I0139-08	Water	13-Sep-2017 08:10	13-Sep-2017 15:50

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Case Narrative

Volatiles - EPA Method SW8260C

The sample(s) were run within the recommended holding times.

Initial and continuing calibrations were within method requirements for the samples associated with BFI0509 Batch with the exception of all associated "Q" flagged analytes which are out of control high and 2-Pentanone, acetone and cis-1,2-Dichloroethene are out of control low. All associated samples that contain analyte have been flagged with a "Q" qualifier.

Initial and continuing calibrations were within method requirements for the samples associated with BFI0504 Batch with the exception of all associated "Q" flagged analytes which are out of control high and trans-1,2-Dichloro-2-Butene is out of control low. All associated samples that contain analyte have been flagged with a "Q" qualifier.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The LCS/LCSD percent recoveries and RPD were within control limits in association with batches BFI0509 and BFI0504 with the exception of analytes flagged on the associated forms.

Semivolatiles - EPA Method SW8270D

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements for the samples associated with BFI0349 Batch with the exception of all associated "Q" flagged analytes which are out of control high and pentachlorophenol is out of control low. All associated samples that contain analyte have been flagged with a "Q" qualifier.

Initial and continuing calibrations were within method requirements for the samples associated with BFI0204 Batch with the exception of all associated "Q" flagged analytes which are out of control high. All associated samples that contain analyte have been flagged with a "Q" qualifier.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits with the exception of analytes flagged on the associated forms.

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Hydrocarbon Identification (HCID) - WA-Ecology Method NW-HCID

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

Total and Dissolved Metals -

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-S(3.5-5)

17I0139-01 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/13/2017 08:10
Analyzed: 21-Sep-2017 15:46

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate)
Preparation Batch: BFI0504 | Sample Size: 9.58 g (wet) | Dry Weight:7.93 g
Prepared: 21-Sep-2017 | Final Volume: 5 mL | % Solids: 82.76

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.63	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	0.63	ND	ug/kg	U
Bromomethane	74-83-9	1	0.63	ND	ug/kg	U
Chloroethane	75-00-3	1	0.63	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	0.63	ND	ug/kg	U
Acrolein	107-02-8	1	3.15	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	1.26	ND	ug/kg	U
Acetone	67-64-1	1	3.15	**10.2**	ug/kg	
1,1-Dichloroethene	75-35-4	1	0.63	ND	ug/kg	U
Bromoethane	74-96-4	1	1.26	ND	ug/kg	U
Iodomethane	74-88-4	1	0.63	ND	ug/kg	U
Methylene Chloride	75-09-2	1	1.26	ND	ug/kg	U
Acrylonitrile	107-13-1	1	3.15	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	0.63	**0.69**	ug/kg	Q
trans-1,2-Dichloroethene	156-60-5	1	0.63	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	3.15	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	0.63	ND	ug/kg	U
2-Butanone	78-93-3	1	3.15	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	0.63	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	0.63	ND	ug/kg	U
Chloroform	67-66-3	1	0.63	ND	ug/kg	U
Bromochloromethane	74-97-5	1	0.63	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	0.63	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	0.63	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	0.63	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	0.63	ND	ug/kg	U
Benzene	71-43-2	1	0.63	ND	ug/kg	U
Trichloroethene	79-01-6	1	0.63	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	0.63	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	0.63	ND	ug/kg	U
Dibromomethane	74-95-3	1	0.63	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	3.15	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	3.15	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	0.63	ND	ug/kg	U
Toluene	108-88-3	1	0.63	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-S(3.5-5)

17I0139-01 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/13/2017 08:10
Analyzed: 21-Sep-2017 15:46

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	0.63	ND	ug/kg	U
2-Hexanone	591-78-6	1	3.15	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	0.63	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	0.63	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	0.63	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	0.63	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	0.63	ND	ug/kg	U
Chlorobenzene	108-90-7	1	0.63	ND	ug/kg	U
Ethylbenzene	100-41-4	1	0.63	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.63	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	1.26	ND	ug/kg	U
o-Xylene	95-47-6	1	0.63	ND	ug/kg	U
Xylenes, total	1330-20-7	1	1.26	ND	ug/kg	U
Styrene	100-42-5	1	0.63	ND	ug/kg	U
Bromoform	75-25-2	1	0.63	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.63	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	1.26	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	3.15	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	0.63	ND	ug/kg	U
Bromobenzene	108-86-1	1	0.63	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	0.63	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	0.63	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	0.63	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	0.63	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	0.63	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	0.63	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	0.63	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	0.63	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	0.63	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	0.63	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	0.63	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	0.63	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	3.15	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	3.15	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	3.15	ND	ug/kg	U
Naphthalene	91-20-3	1	3.15	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	3.15	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	0.63	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-S(3.5-5)

17I0139-01 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/13/2017 08:10
Analyzed: 21-Sep-2017 15:46

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	0.63	ND	ug/kg	U
2-Pentanone	107-87-9	1	3.15	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4			*80-149 %*	*123*	*%*	
Surrogate: Toluene-d8			*77-120 %*	*99.7*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*100*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*105*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-S(3.5-5)

17I0139-01 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 08:10
Analyzed: 27-Sep-2017 01:17

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFI0349	Sample Size: 9.24 g (wet)	Dry Weight:7.65 g
	Prepared: 18-Sep-2017	Final Volume: 0.5 mL	% Solids: 82.76
Sample Cleanup:	Cleanup Method: GPC		
	Cleanup Batch: CFI0108	Initial Volume: 0.5 mL	
	Cleaned: 21-Sep-2017	Final Volume: 0.5 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	66	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	1	66	ND	ug/kg	U
2-Chlorophenol	95-57-8	1	66	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	66	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	66	ND	ug/kg	U
Benzyl Alcohol	100-51-6	1	324	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	66	ND	ug/kg	U
2-Methylphenol	95-48-7	1	66	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	66	ND	ug/kg	U
4-Methylphenol	106-44-5	1	66	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	1	66	ND	ug/kg	U
Hexachloroethane	67-72-1	1	66	ND	ug/kg	U
Nitrobenzene	98-95-3	1	66	ND	ug/kg	U
Isophorone	78-59-1	1	66	ND	ug/kg	U
2-Nitrophenol	88-75-5	1	66	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	1	66	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	1	66	ND	ug/kg	U
Benzoic acid	65-85-0	1	657	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	1	324	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	66	ND	ug/kg	U
Naphthalene	91-20-3	1	66	ND	ug/kg	U
4-Chloroaniline	106-47-8	1	324	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	1	66	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	1	324	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	1	66	ND	ug/kg	U
Hexachlorocyclopentadiene	77-47-4	1	324	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	1	324	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	1	324	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	1	66	ND	ug/kg	U
2-Nitroaniline	88-74-4	1	324	ND	ug/kg	U
Dimethylphthalate	131-11-3	1	66	ND	ug/kg	U
Acenaphthylene	208-96-8	1	66	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-S(3.5-5)

17I0139-01 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 08:10
Analyzed: 27-Sep-2017 01:17

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,6-Dinitrotoluene	606-20-2	1	324	ND	ug/kg	U
3-Nitroaniline	99-09-2	1	324	ND	ug/kg	U
Acenaphthene	83-32-9	1	66	ND	ug/kg	U
2,4-Dinitrophenol	51-28-5	1	657	ND	ug/kg	U
Dibenzofuran	132-64-9	1	66	ND	ug/kg	U
4-Nitrophenol	100-02-7	1	324	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	1	324	ND	ug/kg	U
Fluorene	86-73-7	1	66	ND	ug/kg	U
Diethyl phthalate	84-66-2	1	66	ND	ug/kg	U
4-Chlorophenylphenyl ether	7005-72-3	1	66	ND	ug/kg	U
4-Nitroaniline	100-01-6	1	324	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	1	657	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	1	66	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	1	66	ND	ug/kg	U
Hexachlorobenzene	118-74-1	1	66	ND	ug/kg	U
Pentachlorophenol	87-86-5	1	324	ND	ug/kg	U
Phenanthrene	85-01-8	1	66	ND	ug/kg	U
Anthracene	120-12-7	1	66	ND	ug/kg	U
Carbazole	86-74-8	1	66	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	1	66	ND	ug/kg	U
Fluoranthene	206-44-0	1	66	ND	ug/kg	U
Pyrene	129-00-0	1	66	ND	ug/kg	U
Butylbenzylphthalate	85-68-7	1	66	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	1	66	ND	ug/kg	U
3,3'-Dichlorobenzidine	91-94-1	1	324	ND	ug/kg	U
Chrysene	218-01-9	1	66	ND	ug/kg	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	66	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	1	66	ND	ug/kg	U
Benzo(a)pyrene	50-32-8	1	66	ND	ug/kg	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	66	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	1	66	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	66	ND	ug/kg	U
Benzofluoranthenes, Total		1	66	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	1	66	ND	ug/kg	U
Surrogate: 2-Fluorophenol			*22-120 %*	*57.7*	*%*	
Surrogate: Phenol-d5			*27-120 %*	*59.2*	*%*	
Surrogate: 2-Chlorophenol-d4			*36-120 %*	*67.2*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-S(3.5-5)

17I0139-01 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 08:10
Analyzed: 27-Sep-2017 01:17

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichlorobenzene-d4		*38-120 %*	*70.8*	*%*	
Surrogate: Nitrobenzene-d5		*32-120 %*	*64.2*	*%*	
Surrogate: 2-Fluorobiphenyl		*39-120 %*	*73.3*	*%*	
Surrogate: 2,4,6-Tribromophenol		*31-131 %*	*82.4*	*%*	
Surrogate: p-Terphenyl-d14		*31-130 %*	*80.4*	*%*	

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-S(3.5-5)

17I0139-01 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-HCID
Instrument: FID4

Sampled: 09/13/2017 08:10
Analyzed: 16-Sep-2017 01:11

Sample Preparation: Preparation Method: EPA 3580A (Vortex)
Preparation Batch: BFI0286
Prepared: 14-Sep-2017

Sample Size: 10 g (wet)
Final Volume: 5 mL

Dry Weight:8.28 g
% Solids: 82.76

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)		1	12	ND	mg/kg	U
Diesel Range Organics (C12-C24)		1	30	ND	mg/kg	U
Motor Oil Range Organics (C24-C38)		1	60	ND	mg/kg	U
Surrogate: o-Terphenyl			*50-150 %*	*104*	*%*	
Surrogate: n-Triacontane			*50-150 %*	*98.2*	*%*	

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-S(3.5-5)

17I0139-01 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8
Instrument: ICPMS2

Sampled: 09/13/2017 08:10
Analyzed: 21-Sep-2017 18:29

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017

Sample Size: 1.053 g (wet)
Final Volume: 50 mL

Dry Weight:0.86 g
% Solids: 81.32

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chromium	7440-47-3	20	0.58	**29.2**	mg/kg	
Lead	7439-92-1	20	0.12	**2.56**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-S(3.5-5)

17I0139-01 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED
Instrument: ICPMS2

Sampled: 09/13/2017 08:10
Analyzed: 21-Sep-2017 18:29

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017

Sample Size: 1.053 g (wet)
Final Volume: 50 mL

Dry Weight:0.86 g
% Solids: 81.32

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.23	**2.70**	mg/kg	
Cadmium	7440-43-9	20	0.12	ND	mg/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-S(3.5-5)

17I0139-01 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B
Instrument: CETAC

Sampled: 09/13/2017 08:10
Analyzed: 25-Sep-2017 15:09

Sample Preparation: Preparation Method: SMM EPA 7471B
Preparation Batch: BFI0329
Prepared: 18-Sep-2017
Sample Size: 0.232 g (wet)
Final Volume: 50 mL
Dry Weight:0.19 g
% Solids: 81.32

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.02650	ND	mg/kg	U

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-GW

17I0139-02 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/13/2017 08:31
Analyzed: 21-Sep-2017 19:21

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFI0509 Sample Size: 10 mL
Prepared: 21-Sep-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	**0.62**	ug/L	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-GW

17I0139-02 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/13/2017 08:31
Analyzed: 21-Sep-2017 19:21

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-GW

17I0139-02 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/13/2017 08:31
Analyzed: 21-Sep-2017 19:21

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*109*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*98.7*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*109*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*101*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-GW

17I0139-02 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 08:31
Analyzed: 19-Sep-2017 18:50

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)
Preparation Batch: BFI0204
Prepared: 14-Sep-2017
Sample Size: 500 mL
Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-GW

17I0139-02 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 08:31
Analyzed: 19-Sep-2017 18:50

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzofluoranthenes, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
Surrogate: 2-Fluorophenol			*33-120 %*	*67.0*	*%*	
Surrogate: Phenol-d5			*38-120 %*	*72.2*	*%*	
Surrogate: 2-Chlorophenol-d4			*41-120 %*	*81.8*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*20-120 %*	*75.4*	*%*	
Surrogate: Nitrobenzene-d5			*27-120 %*	*77.2*	*%*	
Surrogate: 2-Fluorobiphenyl			*33-120 %*	*83.0*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-GW

17I0139-02 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 08:31
Analyzed: 19-Sep-2017 18:50

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2,4,6-Tribromophenol		*52-120 %*	*111*	*%*	
Surrogate: p-Terphenyl-d14		*28-120 %*	*52.7*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-GW

17I0139-02 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID
Instrument: FID4

Sampled: 09/13/2017 08:31
Analyzed: 16-Sep-2017 03:01

Sample Preparation: Preparation Method: EPA 3510C SepF
Preparation Batch: BFI0288
Prepared: 14-Sep-2017
Sample Size: 440 mL
Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)		1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)		1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)		1	1.00	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*83.2*	*%*	
Surrogate: n-Triacontane			*50-150 %*	*80.2*	*%*	

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-GW

17I0139-02 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8
Instrument: ICPMS2

Sampled: 09/13/2017 08:31
Analyzed: 19-Sep-2017 18:50

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix
Preparation Batch: BFI0301 Sample Size: 25 mL
Prepared: 15-Sep-2017 Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chromium, Dissolved	7440-47-3	1	0.500	ND	ug/L	U
Lead, Dissolved	7439-92-1	1	0.100	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-GW

17I0139-02 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED
Instrument: ICPMS2

Sampled: 09/13/2017 08:31
Analyzed: 19-Sep-2017 18:50

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix
Preparation Batch: BFI0301 Sample Size: 25 mL
Prepared: 15-Sep-2017 Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.200	**3.75**	ug/L	
Cadmium, Dissolved	7440-43-9	1	0.100	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B4-GW

17I0139-02 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 7470A
Instrument: CETAC

Sampled: 09/13/2017 08:31
Analyzed: 20-Sep-2017 15:20

Sample Preparation:
Preparation Method: TWM EPA 7470A
Preparation Batch: BFI0351
Prepared: 18-Sep-2017
Sample Size: 20 mL
Final Volume: 20 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury, Dissolved	7439-97-6	1	0.000100	ND	mg/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(1-3)

17I0139-03 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/13/2017 08:55
Analyzed: 21-Sep-2017 16:08

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate)
Preparation Batch: BFI0504 | Sample Size: 10.46 g (wet) | Dry Weight:8.51 g
Prepared: 21-Sep-2017 | Final Volume: 5 mL | % Solids: 81.36

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.59	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	0.59	ND	ug/kg	U
Bromomethane	74-83-9	1	0.59	ND	ug/kg	U
Chloroethane	75-00-3	1	0.59	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	0.59	ND	ug/kg	U
Acrolein	107-02-8	1	2.94	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	1.18	ND	ug/kg	U
Acetone	67-64-1	1	2.94	**32.4**	ug/kg	
1,1-Dichloroethene	75-35-4	1	0.59	ND	ug/kg	U
Bromoethane	74-96-4	1	1.18	ND	ug/kg	U
Iodomethane	74-88-4	1	0.59	ND	ug/kg	U
Methylene Chloride	75-09-2	1	1.18	ND	ug/kg	U
Acrylonitrile	107-13-1	1	2.94	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	0.59	ND	ug/kg	U
trans-1,2-Dichloroethene	156-60-5	1	0.59	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	2.94	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	0.59	ND	ug/kg	U
2-Butanone	78-93-3	1	2.94	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	0.59	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	0.59	ND	ug/kg	U
Chloroform	67-66-3	1	0.59	ND	ug/kg	U
Bromochloromethane	74-97-5	1	0.59	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	0.59	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	0.59	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	0.59	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	0.59	ND	ug/kg	U
Benzene	71-43-2	1	0.59	ND	ug/kg	U
Trichloroethene	79-01-6	1	0.59	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	0.59	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	0.59	ND	ug/kg	U
Dibromomethane	74-95-3	1	0.59	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	2.94	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	2.94	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	0.59	ND	ug/kg	U
Toluene	108-88-3	1	0.59	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(1-3)

17I0139-03 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/13/2017 08:55
Analyzed: 21-Sep-2017 16:08

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	0.59	ND	ug/kg	U
2-Hexanone	591-78-6	1	2.94	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	0.59	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	0.59	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	0.59	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	0.59	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	0.59	ND	ug/kg	U
Chlorobenzene	108-90-7	1	0.59	ND	ug/kg	U
Ethylbenzene	100-41-4	1	0.59	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.59	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	1.18	ND	ug/kg	U
o-Xylene	95-47-6	1	0.59	ND	ug/kg	U
Xylenes, total	1330-20-7	1	1.18	ND	ug/kg	U
Styrene	100-42-5	1	0.59	ND	ug/kg	U
Bromoform	75-25-2	1	0.59	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.59	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	1.18	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	2.94	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	0.59	ND	ug/kg	U
Bromobenzene	108-86-1	1	0.59	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	0.59	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	0.59	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	0.59	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	0.59	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	0.59	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	0.59	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	0.59	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	0.59	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	0.59	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	0.59	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	0.59	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	0.59	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	2.94	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	2.94	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	2.94	ND	ug/kg	U
Naphthalene	91-20-3	1	2.94	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	2.94	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	0.59	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(1-3)

17I0139-03 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/13/2017 08:55
Analyzed: 21-Sep-2017 16:08

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	0.59	ND	ug/kg	U
2-Pentanone	107-87-9	1	2.94	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4			*80-149 %*	*126*	*%*	
Surrogate: Toluene-d8			*77-120 %*	*102*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*100*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*105*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(1-3)

17I0139-03 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 08:55
Analyzed: 27-Sep-2017 01:49

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFI0349	Sample Size: 10.12 g (wet)	Dry Weight:8.23 g
	Prepared: 18-Sep-2017	Final Volume: 0.5 mL	% Solids: 81.36
Sample Cleanup:	Cleanup Method: GPC		
	Cleanup Batch: CFI0108	Initial Volume: 0.5 mL	
	Cleaned: 21-Sep-2017	Final Volume: 0.5 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	61	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	1	61	ND	ug/kg	U
2-Chlorophenol	95-57-8	1	61	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	61	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	61	ND	ug/kg	U
Benzyl Alcohol	100-51-6	1	301	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	61	ND	ug/kg	U
2-Methylphenol	95-48-7	1	61	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	61	ND	ug/kg	U
4-Methylphenol	106-44-5	1	61	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	1	61	ND	ug/kg	U
Hexachloroethane	67-72-1	1	61	ND	ug/kg	U
Nitrobenzene	98-95-3	1	61	ND	ug/kg	U
Isophorone	78-59-1	1	61	ND	ug/kg	U
2-Nitrophenol	88-75-5	1	61	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	1	61	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	1	61	ND	ug/kg	U
Benzoic acid	65-85-0	1	610	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	1	301	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	61	ND	ug/kg	U
Naphthalene	91-20-3	1	61	ND	ug/kg	U
4-Chloroaniline	106-47-8	1	301	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	1	61	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	1	301	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	1	61	ND	ug/kg	U
Hexachlorocyclopentadiene	77-47-4	1	301	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	1	301	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	1	301	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	1	61	ND	ug/kg	U
2-Nitroaniline	88-74-4	1	301	ND	ug/kg	U
Dimethylphthalate	131-11-3	1	61	ND	ug/kg	U
Acenaphthylene	208-96-8	1	61	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(1-3)

17I0139-03 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 08:55
Analyzed: 27-Sep-2017 01:49

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,6-Dinitrotoluene	606-20-2	1	301	ND	ug/kg	U
3-Nitroaniline	99-09-2	1	301	ND	ug/kg	U
Acenaphthene	83-32-9	1	61	ND	ug/kg	U
2,4-Dinitrophenol	51-28-5	1	610	ND	ug/kg	U
Dibenzofuran	132-64-9	1	61	ND	ug/kg	U
4-Nitrophenol	100-02-7	1	301	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	1	301	ND	ug/kg	U
Fluorene	86-73-7	1	61	ND	ug/kg	U
Diethyl phthalate	84-66-2	1	61	ND	ug/kg	U
4-Chlorophenylphenyl ether	7005-72-3	1	61	ND	ug/kg	U
4-Nitroaniline	100-01-6	1	301	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	1	610	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	1	61	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	1	61	ND	ug/kg	U
Hexachlorobenzene	118-74-1	1	61	ND	ug/kg	U
Pentachlorophenol	87-86-5	1	301	ND	ug/kg	U
Phenanthrene	85-01-8	1	61	ND	ug/kg	U
Anthracene	120-12-7	1	61	ND	ug/kg	U
Carbazole	86-74-8	1	61	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	1	61	ND	ug/kg	U
Fluoranthene	206-44-0	1	61	ND	ug/kg	U
Pyrene	129-00-0	1	61	ND	ug/kg	U
Butylbenzylphthalate	85-68-7	1	61	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	1	61	ND	ug/kg	U
3,3'-Dichlorobenzidine	91-94-1	1	301	ND	ug/kg	U
Chrysene	218-01-9	1	61	ND	ug/kg	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	61	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	1	61	ND	ug/kg	U
Benzo(a)pyrene	50-32-8	1	61	ND	ug/kg	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	61	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	1	61	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	61	ND	ug/kg	U
Benzofluoranthenes, Total		1	61	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	1	61	ND	ug/kg	U
Surrogate: 2-Fluorophenol			*22-120 %*	*53.8*	*%*	
Surrogate: Phenol-d5			*27-120 %*	*55.3*	*%*	
Surrogate: 2-Chlorophenol-d4			*36-120 %*	*64.2*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(1-3)

17I0139-03 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 08:55
Analyzed: 27-Sep-2017 01:49

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichlorobenzene-d4		*38-120 %*	*65.8*	*%*	
Surrogate: Nitrobenzene-d5		*32-120 %*	*58.2*	*%*	
Surrogate: 2-Fluorobiphenyl		*39-120 %*	*69.3*	*%*	
Surrogate: 2,4,6-Tribromophenol		*31-131 %*	*81.4*	*%*	
Surrogate: p-Terphenyl-d14		*31-130 %*	*79.6*	*%*	

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(1-3)

17I0139-03 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-HCID
Instrument: FID4

Sampled: 09/13/2017 08:55
Analyzed: 16-Sep-2017 01:33

Sample Preparation: Preparation Method: EPA 3580A (Vortex)
Preparation Batch: BFI0286
Prepared: 14-Sep-2017

Sample Size: 10 g (wet)
Final Volume: 5 mL

Dry Weight:8.14 g
% Solids: 81.36

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)		1	12	ND	mg/kg	U
Diesel Range Organics (C12-C24)		1	31	ND	mg/kg	U
Motor Oil Range Organics (C24-C38)		1	61	ND	mg/kg	U
Surrogate: o-Terphenyl			*50-150 %*	*104*	*%*	
Surrogate: n-Triacontane			*50-150 %*	*101*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(1-3)

17I0139-03 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8
Instrument: ICPMS2

Sampled: 09/13/2017 08:55
Analyzed: 21-Sep-2017 18:33

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017

Sample Size: 1.007 g (wet)
Final Volume: 50 mL

Dry Weight:0.82 g
% Solids: 81.66

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chromium	7440-47-3	20	0.61	**39.1**	mg/kg	
Lead	7439-92-1	20	0.12	**5.77**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(1-3)

17I0139-03 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED
Instrument: ICPMS2

Sampled: 09/13/2017 08:55
Analyzed: 21-Sep-2017 18:33

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017
Sample Size: 1.007 g (wet)
Final Volume: 50 mL
Dry Weight:0.82 g
% Solids: 81.66

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.24	**4.86**	mg/kg	
Cadmium	7440-43-9	20	0.12	ND	mg/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(1-3)

17I0139-03 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B
Instrument: CETAC

Sampled: 09/13/2017 08:55
Analyzed: 25-Sep-2017 15:11

Sample Preparation: Preparation Method: SMM EPA 7471B
Preparation Batch: BFI0329
Prepared: 18-Sep-2017
Sample Size: 0.222 g (wet)
Final Volume: 50 mL
Dry Weight:0.18 g
% Solids: 81.66

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.02758	**0.09653**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(7-9)

17I0139-04 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/13/2017 09:10
Analyzed: 21-Sep-2017 16:30

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate)
Preparation Batch: BFI0504 | Sample Size: 9.18 g (wet) | Dry Weight:7.42 g
Prepared: 21-Sep-2017 | Final Volume: 5 mL | % Solids: 80.82

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.67	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	0.67	ND	ug/kg	U
Bromomethane	74-83-9	1	0.67	ND	ug/kg	U
Chloroethane	75-00-3	1	0.67	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	0.67	ND	ug/kg	U
Acrolein	107-02-8	1	3.37	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	1.35	ND	ug/kg	U
Acetone	67-64-1	1	3.37	**9.64**	ug/kg	
1,1-Dichloroethene	75-35-4	1	0.67	ND	ug/kg	U
Bromoethane	74-96-4	1	1.35	ND	ug/kg	U
Iodomethane	74-88-4	1	0.67	ND	ug/kg	U
Methylene Chloride	75-09-2	1	1.35	ND	ug/kg	U
Acrylonitrile	107-13-1	1	3.37	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	0.67	ND	ug/kg	U
trans-1,2-Dichloroethene	156-60-5	1	0.67	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	3.37	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	0.67	ND	ug/kg	U
2-Butanone	78-93-3	1	3.37	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	0.67	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	0.67	ND	ug/kg	U
Chloroform	67-66-3	1	0.67	ND	ug/kg	U
Bromochloromethane	74-97-5	1	0.67	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	0.67	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	0.67	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	0.67	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	0.67	ND	ug/kg	U
Benzene	71-43-2	1	0.67	ND	ug/kg	U
Trichloroethene	79-01-6	1	0.67	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	0.67	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	0.67	ND	ug/kg	U
Dibromomethane	74-95-3	1	0.67	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	3.37	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	3.37	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	0.67	ND	ug/kg	U
Toluene	108-88-3	1	0.67	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(7-9)

17I0139-04 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/13/2017 09:10
Analyzed: 21-Sep-2017 16:30

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	0.67	ND	ug/kg	U
2-Hexanone	591-78-6	1	3.37	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	0.67	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	0.67	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	0.67	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	0.67	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	0.67	ND	ug/kg	U
Chlorobenzene	108-90-7	1	0.67	ND	ug/kg	U
Ethylbenzene	100-41-4	1	0.67	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.67	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	1.35	ND	ug/kg	U
o-Xylene	95-47-6	1	0.67	ND	ug/kg	U
Xylenes, total	1330-20-7	1	1.35	ND	ug/kg	U
Styrene	100-42-5	1	0.67	ND	ug/kg	U
Bromoform	75-25-2	1	0.67	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.67	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	1.35	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	3.37	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	0.67	ND	ug/kg	U
Bromobenzene	108-86-1	1	0.67	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	0.67	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	0.67	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	0.67	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	0.67	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	0.67	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	0.67	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	0.67	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	0.67	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	0.67	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	0.67	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	0.67	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	0.67	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	3.37	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	3.37	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	3.37	ND	ug/kg	U
Naphthalene	91-20-3	1	3.37	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	3.37	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	0.67	ND	ug/kg	U

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(7-9)

17I0139-04 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 09/13/2017 09:10
Analyzed: 21-Sep-2017 16:30

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	0.67	ND	ug/kg	U
2-Pentanone	107-87-9	1	3.37	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4			*80-149 %*	*131*	*%*	
Surrogate: Toluene-d8			*77-120 %*	*99.3*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*98.6*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*105*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(7-9)

17I0139-04 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 09:10
Analyzed: 27-Sep-2017 02:22

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFI0349	Sample Size: 10.04 g (wet)	Dry Weight:8.11 g
	Prepared: 18-Sep-2017	Final Volume: 0.5 mL	% Solids: 80.82
Sample Cleanup:	Cleanup Method: GPC		
	Cleanup Batch: CFI0108	Initial Volume: 0.5 mL	
	Cleaned: 21-Sep-2017	Final Volume: 0.5 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	62	ND	ug/kg	U
bis(2-chloroethyl) ether	111-44-4	1	62	ND	ug/kg	U
2-Chlorophenol	95-57-8	1	62	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	62	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	62	ND	ug/kg	U
Benzyl Alcohol	100-51-6	1	305	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	62	ND	ug/kg	U
2-Methylphenol	95-48-7	1	62	ND	ug/kg	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	62	ND	ug/kg	U
4-Methylphenol	106-44-5	1	62	ND	ug/kg	U
N-Nitroso-di-n-Propylamine	621-64-7	1	62	ND	ug/kg	U
Hexachloroethane	67-72-1	1	62	ND	ug/kg	U
Nitrobenzene	98-95-3	1	62	ND	ug/kg	U
Isophorone	78-59-1	1	62	ND	ug/kg	U
2-Nitrophenol	88-75-5	1	62	ND	ug/kg	U
2,4-Dimethylphenol	105-67-9	1	62	ND	ug/kg	U
Bis(2-Chloroethoxy)methane	111-91-1	1	62	ND	ug/kg	U
Benzoic acid	65-85-0	1	619	ND	ug/kg	U
2,4-Dichlorophenol	120-83-2	1	305	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	62	ND	ug/kg	U
Naphthalene	91-20-3	1	62	ND	ug/kg	U
4-Chloroaniline	106-47-8	1	305	ND	ug/kg	U
Hexachlorobutadiene	87-68-3	1	62	ND	ug/kg	U
4-Chloro-3-Methylphenol	59-50-7	1	305	ND	ug/kg	U
2-Methylnaphthalene	91-57-6	1	62	ND	ug/kg	U
Hexachlorocyclopentadiene	77-47-4	1	305	ND	ug/kg	U
2,4,6-Trichlorophenol	88-06-2	1	305	ND	ug/kg	U
2,4,5-Trichlorophenol	95-95-4	1	305	ND	ug/kg	U
2-Chloronaphthalene	91-58-7	1	62	ND	ug/kg	U
2-Nitroaniline	88-74-4	1	305	ND	ug/kg	U
Dimethylphthalate	131-11-3	1	62	ND	ug/kg	U
Acenaphthylene	208-96-8	1	62	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(7-9)

17I0139-04 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 09:10
Analyzed: 27-Sep-2017 02:22

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,6-Dinitrotoluene	606-20-2	1	305	ND	ug/kg	U
3-Nitroaniline	99-09-2	1	305	ND	ug/kg	U
Acenaphthene	83-32-9	1	62	ND	ug/kg	U
2,4-Dinitrophenol	51-28-5	1	619	ND	ug/kg	U
Dibenzofuran	132-64-9	1	62	ND	ug/kg	U
4-Nitrophenol	100-02-7	1	305	ND	ug/kg	U
2,4-Dinitrotoluene	121-14-2	1	305	ND	ug/kg	U
Fluorene	86-73-7	1	62	ND	ug/kg	U
Diethyl phthalate	84-66-2	1	62	ND	ug/kg	U
4-Chlorophenylphenyl ether	7005-72-3	1	62	ND	ug/kg	U
4-Nitroaniline	100-01-6	1	305	ND	ug/kg	U
4,6-Dinitro-2-methylphenol	534-52-1	1	619	ND	ug/kg	U
N-Nitrosodiphenylamine	86-30-6	1	62	ND	ug/kg	U
4-Bromophenyl phenyl ether	101-55-3	1	62	ND	ug/kg	U
Hexachlorobenzene	118-74-1	1	62	ND	ug/kg	U
Pentachlorophenol	87-86-5	1	305	ND	ug/kg	U
Phenanthrene	85-01-8	1	62	ND	ug/kg	U
Anthracene	120-12-7	1	62	ND	ug/kg	U
Carbazole	86-74-8	1	62	ND	ug/kg	U
Di-n-Butylphthalate	84-74-2	1	62	ND	ug/kg	U
Fluoranthene	206-44-0	1	62	ND	ug/kg	U
Pyrene	129-00-0	1	62	ND	ug/kg	U
Butylbenzylphthalate	85-68-7	1	62	ND	ug/kg	U
Benzo(a)anthracene	56-55-3	1	62	ND	ug/kg	U
3,3'-Dichlorobenzidine	91-94-1	1	305	ND	ug/kg	U
Chrysene	218-01-9	1	62	ND	ug/kg	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	62	ND	ug/kg	U
Di-n-Octylphthalate	117-84-0	1	62	ND	ug/kg	U
Benzo(a)pyrene	50-32-8	1	62	ND	ug/kg	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	62	ND	ug/kg	U
Dibenzo(a,h)anthracene	53-70-3	1	62	ND	ug/kg	U
Benzo(g,h,i)perylene	191-24-2	1	62	ND	ug/kg	U
Benzofluoranthenes, Total		1	62	ND	ug/kg	U
1-Methylnaphthalene	90-12-0	1	62	ND	ug/kg	U
Surrogate: 2-Fluorophenol			*22-120 %*	*56.7*	*%*	
Surrogate: Phenol-d5			*27-120 %*	*59.6*	*%*	
Surrogate: 2-Chlorophenol-d4			*36-120 %*	*67.5*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(7-9)

17I0139-04 (Solid)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 09:10
Analyzed: 27-Sep-2017 02:22

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 1,2-Dichlorobenzene-d4		*38-120 %*	*70.2*	*%*	
Surrogate: Nitrobenzene-d5		*32-120 %*	*62.1*	*%*	
Surrogate: 2-Fluorobiphenyl		*39-120 %*	*70.9*	*%*	
Surrogate: 2,4,6-Tribromophenol		*31-131 %*	*81.8*	*%*	
Surrogate: p-Terphenyl-d14		*31-130 %*	*76.4*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(7-9)

17I0139-04 (Solid)

Petroleum Hydrocarbons

Method: NWTPH-HCID
Instrument: FID4

Sampled: 09/13/2017 09:10
Analyzed: 16-Sep-2017 01:56

Sample Preparation: Preparation Method: EPA 3580A (Vortex)
Preparation Batch: BFI0286
Prepared: 14-Sep-2017

Sample Size: 10 g (wet)
Final Volume: 5 mL

Dry Weight:8.08 g
% Solids: 80.82

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)		1	12	ND	mg/kg	U
Diesel Range Organics (C12-C24)		1	31	ND	mg/kg	U
Motor Oil Range Organics (C24-C38)		1	62	ND	mg/kg	U
Surrogate: o-Terphenyl			*50-150 %*	*97.1*	*%*	
Surrogate: n-Triacontane			*50-150 %*	*97.1*	*%*	

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(7-9)

17I0139-04 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8
Instrument: ICPMS2

Sampled: 09/13/2017 09:10
Analyzed: 21-Sep-2017 18:38

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017

Sample Size: 1.084 g (wet)
Final Volume: 50 mL

Dry Weight:0.85 g
% Solids: 78.15

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chromium	7440-47-3	20	0.59	**33.7**	mg/kg	
Lead	7439-92-1	20	0.12	**2.59**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(7-9)

17I0139-04 (Solid)

Metals and Metallic Compounds

Method: EPA 200.8 UCT-KED
Instrument: ICPMS2

Sampled: 09/13/2017 09:10
Analyzed: 21-Sep-2017 18:38

Sample Preparation: Preparation Method: SWN EPA 3050B
Preparation Batch: BFI0328
Prepared: 18-Sep-2017
Sample Size: 1.084 g (wet)
Final Volume: 50 mL
Dry Weight:0.85 g
% Solids: 78.15

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic	7440-38-2	20	0.24	**2.31**	mg/kg	
Cadmium	7440-43-9	20	0.12	ND	mg/kg	U

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LAI-B5-S(7-9)

17I0139-04 (Solid)

Metals and Metallic Compounds

Method: EPA 7471B
Instrument: CETAC

Sampled: 09/13/2017 09:10
Analyzed: 25-Sep-2017 15:12

Sample Preparation: Preparation Method: SMM EPA 7471B
Preparation Batch: BFI0329
Prepared: 18-Sep-2017
Sample Size: 0.231 g (wet)
Final Volume: 50 mL
Dry Weight:0.18 g
% Solids: 78.15

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury	7439-97-6	1	0.02770	**0.02770**	mg/kg	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-2

17I0139-05 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/13/2017 11:30
Analyzed: 21-Sep-2017 19:47

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFI0509 Sample Size: 10 mL
Prepared: 21-Sep-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	**8.55**	ug/L	Q
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
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MW-2

17I0139-05 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/13/2017 11:30
Analyzed: 21-Sep-2017 19:47

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	ND	ug/L	U

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-2

17I0139-05 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/13/2017 11:30
Analyzed: 21-Sep-2017 19:47

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*111*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*97.4*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*113*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*96.8*	*%*	

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-2

17I0139-05 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 11:30
Analyzed: 19-Sep-2017 19:23

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)
Preparation Batch: BFI0204 Sample Size: 500 mL
Prepared: 14-Sep-2017 Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-2

17I0139-05 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 11:30
Analyzed: 19-Sep-2017 19:23

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzofluoranthenes, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
Surrogate: 2-Fluorophenol			*33-120 %*	*71.4*	*%*	
Surrogate: Phenol-d5			*38-120 %*	*73.0*	*%*	
Surrogate: 2-Chlorophenol-d4			*41-120 %*	*80.5*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*20-120 %*	*76.7*	*%*	
Surrogate: Nitrobenzene-d5			*27-120 %*	*78.9*	*%*	
Surrogate: 2-Fluorobiphenyl			*33-120 %*	*87.6*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-2

17I0139-05 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 11:30
Analyzed: 19-Sep-2017 19:23

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2,4,6-Tribromophenol		*52-120 %*	*109*	*%*	
Surrogate: p-Terphenyl-d14		*28-120 %*	*90.6*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-2

17I0139-05 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID
Instrument: FID4

Sampled: 09/13/2017 11:30
Analyzed: 16-Sep-2017 03:22

Sample Preparation: Preparation Method: EPA 3510C SepF
Preparation Batch: BFI0288
Prepared: 14-Sep-2017
Sample Size: 500 mL
Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)		1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)		1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)		1	1.00	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*88.8*	*%*	
Surrogate: n-Triacontane			*50-150 %*	*84.5*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-2

17I0139-05 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8
Instrument: ICPMS2

Sampled: 09/13/2017 11:30
Analyzed: 19-Sep-2017 18:55

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix
Preparation Batch: BFI0301 Sample Size: 25 mL
Prepared: 15-Sep-2017 Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chromium, Dissolved	7440-47-3	1	0.500	**0.644**	ug/L	
Lead, Dissolved	7439-92-1	1	0.100	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-2

17I0139-05 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED
Instrument: ICPMS2

Sampled: 09/13/2017 11:30
Analyzed: 19-Sep-2017 18:55

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix
Preparation Batch: BFI0301 Sample Size: 25 mL
Prepared: 15-Sep-2017 Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.200	**5.46**	ug/L	
Cadmium, Dissolved	7440-43-9	1	0.100	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-2

17I0139-05 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 7470A
Instrument: CETAC

Sampled: 09/13/2017 11:30
Analyzed: 20-Sep-2017 15:24

Sample Preparation: Preparation Method: TWM EPA 7470A
Preparation Batch: BFI0351
Prepared: 18-Sep-2017
Sample Size: 20 mL
Final Volume: 20 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury, Dissolved	7439-97-6	1	0.000100	ND	mg/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-10

17I0139-06 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/13/2017 13:10
Analyzed: 21-Sep-2017 20:13

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFI0509 Sample Size: 10 mL
Prepared: 21-Sep-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-10

17I0139-06 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/13/2017 13:10
Analyzed: 21-Sep-2017 20:13

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-10

17I0139-06 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/13/2017 13:10
Analyzed: 21-Sep-2017 20:13

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*106*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*95.8*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*110*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*94.4*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-10

17I0139-06 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 13:10
Analyzed: 19-Sep-2017 19:56

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)
Preparation Batch: BFI0204
Prepared: 14-Sep-2017
Sample Size: 500 mL
Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-10

17I0139-06 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 13:10
Analyzed: 19-Sep-2017 19:56

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzofluoranthenes, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
Surrogate: 2-Fluorophenol			*33-120 %*	*71.8*	*%*	
Surrogate: Phenol-d5			*38-120 %*	*72.8*	*%*	
Surrogate: 2-Chlorophenol-d4			*41-120 %*	*81.4*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*20-120 %*	*75.7*	*%*	
Surrogate: Nitrobenzene-d5			*27-120 %*	*81.3*	*%*	
Surrogate: 2-Fluorobiphenyl			*33-120 %*	*84.0*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-10

17I0139-06 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 13:10
Analyzed: 19-Sep-2017 19:56

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2,4,6-Tribromophenol		*52-120 %*	*109*	*%*	
Surrogate: p-Terphenyl-d14		*28-120 %*	*96.5*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-10

17I0139-06 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID
Instrument: FID4

Sampled: 09/13/2017 13:10
Analyzed: 16-Sep-2017 03:46

Sample Preparation: Preparation Method: EPA 3510C SepF
Preparation Batch: BFI0288
Prepared: 14-Sep-2017
Sample Size: 500 mL
Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)		1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)		1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)		1	1.00	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*87.9*	*%*	
Surrogate: n-Triacontane			*50-150 %*	*85.1*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-10

17I0139-06 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8
Instrument: ICPMS2

Sampled: 09/13/2017 13:10
Analyzed: 19-Sep-2017 19:00

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix
Preparation Batch: BFI0301 Sample Size: 25 mL
Prepared: 15-Sep-2017 Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chromium, Dissolved	7440-47-3	1	0.500	**0.683**	ug/L	
Lead, Dissolved	7439-92-1	1	0.100	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-10

17I0139-06 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED
Instrument: ICPMS2

Sampled: 09/13/2017 13:10
Analyzed: 19-Sep-2017 19:00

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix
Preparation Batch: BFI0301 Sample Size: 25 mL
Prepared: 15-Sep-2017 Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.200	**8.10**	ug/L	
Cadmium, Dissolved	7440-43-9	1	0.100	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

MW-10

17I0139-06 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 7470A
Instrument: CETAC

Sampled: 09/13/2017 13:10
Analyzed: 20-Sep-2017 15:26

Sample Preparation:
Preparation Method: TWM EPA 7470A
Preparation Batch: BFI0351
Prepared: 18-Sep-2017
Sample Size: 20 mL
Final Volume: 20 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury, Dissolved	7439-97-6	1	0.000100	ND	mg/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LMW-2D

17I0139-07 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/13/2017 14:50
Analyzed: 21-Sep-2017 20:39

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFI0509 Sample Size: 10 mL
Prepared: 21-Sep-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.20	**0.34**	ug/L	
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LMW-2D

17I0139-07 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/13/2017 14:50
Analyzed: 21-Sep-2017 20:39

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LMW-2D

17I0139-07 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/13/2017 14:50
Analyzed: 21-Sep-2017 20:39

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*109*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*92.4*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*109*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*101*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LMW-2D

17I0139-07 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 14:50
Analyzed: 20-Sep-2017 11:25

Sample Preparation: Preparation Method: EPA 3520C (Liq Liq)
Preparation Batch: BFI0204
Prepared: 14-Sep-2017
Sample Size: 500 mL
Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Phenol	108-95-2	1	1.0	ND	ug/L	U
bis(2-chloroethyl) ether	111-44-4	1	1.0	ND	ug/L	U
2-Chlorophenol	95-57-8	1	1.0	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	1.0	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	1.0	ND	ug/L	U
Benzyl Alcohol	100-51-6	1	2.0	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	1.0	ND	ug/L	U
2-Methylphenol	95-48-7	1	1.0	ND	ug/L	U
2,2'-Oxybis(1-chloropropane)	108-60-1	1	1.0	ND	ug/L	U
4-Methylphenol	106-44-5	1	2.0	ND	ug/L	U
N-Nitroso-di-n-Propylamine	621-64-7	1	1.0	ND	ug/L	U
Hexachloroethane	67-72-1	1	2.0	ND	ug/L	U
Nitrobenzene	98-95-3	1	1.0	ND	ug/L	U
Isophorone	78-59-1	1	1.0	ND	ug/L	U
2-Nitrophenol	88-75-5	1	3.0	ND	ug/L	U
2,4-Dimethylphenol	105-67-9	1	3.0	ND	ug/L	U
Bis(2-Chloroethoxy)methane	111-91-1	1	1.0	ND	ug/L	U
Benzoic acid	65-85-0	1	20.0	ND	ug/L	U
2,4-Dichlorophenol	120-83-2	1	3.0	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	1.0	ND	ug/L	U
Naphthalene	91-20-3	1	1.0	ND	ug/L	U
4-Chloroaniline	106-47-8	1	5.0	ND	ug/L	U
Hexachlorobutadiene	87-68-3	1	3.0	ND	ug/L	U
4-Chloro-3-Methylphenol	59-50-7	1	3.0	ND	ug/L	U
2-Methylnaphthalene	91-57-6	1	1.0	ND	ug/L	U
Hexachlorocyclopentadiene	77-47-4	1	5.0	ND	ug/L	U
2,4,6-Trichlorophenol	88-06-2	1	3.0	ND	ug/L	U
2,4,5-Trichlorophenol	95-95-4	1	5.0	ND	ug/L	U
2-Chloronaphthalene	91-58-7	1	1.0	ND	ug/L	U
2-Nitroaniline	88-74-4	1	3.0	ND	ug/L	U
Dimethylphthalate	131-11-3	1	1.0	ND	ug/L	U
Acenaphthylene	208-96-8	1	1.0	ND	ug/L	U
2,6-Dinitrotoluene	606-20-2	1	3.0	ND	ug/L	U
3-Nitroaniline	99-09-2	1	3.0	ND	ug/L	U
Acenaphthene	83-32-9	1	1.0	ND	ug/L	U

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LMW-2D

17I0139-07 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 14:50
Analyzed: 20-Sep-2017 11:25

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
2,4-Dinitrophenol	51-28-5	1	20.0	ND	ug/L	U
Dibenzofuran	132-64-9	1	1.0	ND	ug/L	U
4-Nitrophenol	100-02-7	1	10.0	ND	ug/L	U
2,4-Dinitrotoluene	121-14-2	1	3.0	ND	ug/L	U
Fluorene	86-73-7	1	1.0	ND	ug/L	U
Diethyl phthalate	84-66-2	1	1.0	ND	ug/L	U
4-Chlorophenylphenyl ether	7005-72-3	1	1.0	ND	ug/L	U
4-Nitroaniline	100-01-6	1	3.0	ND	ug/L	U
4,6-Dinitro-2-methylphenol	534-52-1	1	10.0	ND	ug/L	U
N-Nitrosodiphenylamine	86-30-6	1	1.0	ND	ug/L	U
4-Bromophenyl phenyl ether	101-55-3	1	1.0	ND	ug/L	U
Hexachlorobenzene	118-74-1	1	1.0	ND	ug/L	U
Pentachlorophenol	87-86-5	1	10.0	ND	ug/L	U
Phenanthrene	85-01-8	1	1.0	ND	ug/L	U
Anthracene	120-12-7	1	1.0	ND	ug/L	U
Carbazole	86-74-8	1	1.0	ND	ug/L	U
Di-n-Butylphthalate	84-74-2	1	1.0	ND	ug/L	U
Fluoranthene	206-44-0	1	1.0	ND	ug/L	U
Pyrene	129-00-0	1	1.0	ND	ug/L	U
Butylbenzylphthalate	85-68-7	1	1.0	ND	ug/L	U
Benzo(a)anthracene	56-55-3	1	1.0	ND	ug/L	U
3,3'-Dichlorobenzidine	91-94-1	1	5.0	ND	ug/L	U
Chrysene	218-01-9	1	1.0	ND	ug/L	U
bis(2-Ethylhexyl)phthalate	117-81-7	1	3.0	ND	ug/L	U
Di-n-Octylphthalate	117-84-0	1	1.0	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	1.0	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	1.0	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	1.0	ND	ug/L	U
Benzo(g,h,i)perylene	191-24-2	1	1.0	ND	ug/L	U
Benzofluoranthenes, Total		1	2.0	ND	ug/L	U
1-Methylnaphthalene	90-12-0	1	1.0	ND	ug/L	U
Surrogate: 2-Fluorophenol			*33-120 %*	*74.7*	*%*	
Surrogate: Phenol-d5			*38-120 %*	*75.2*	*%*	
Surrogate: 2-Chlorophenol-d4			*41-120 %*	*86.0*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*20-120 %*	*78.5*	*%*	
Surrogate: Nitrobenzene-d5			*27-120 %*	*81.2*	*%*	
Surrogate: 2-Fluorobiphenyl			*33-120 %*	*85.1*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LMW-2D

17I0139-07 (Water)

Semivolatile Organic Compounds

Method: EPA 8270D
Instrument: NT6

Sampled: 09/13/2017 14:50
Analyzed: 20-Sep-2017 11:25

Analyte	CAS Number	Recovery Limits	Recovery	Units	Notes
Surrogate: 2,4,6-Tribromophenol		*52-120 %*	*99.6*	*%*	
Surrogate: p-Terphenyl-d14		*28-120 %*	*102*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LMW-2D

17I0139-07 (Water)

Petroleum Hydrocarbons

Method: NWTPH-HCID
Instrument: FID4

Sampled: 09/13/2017 14:50
Analyzed: 16-Sep-2017 04:07

Sample Preparation: Preparation Method: EPA 3510C SepF
Preparation Batch: BFI0288
Prepared: 14-Sep-2017
Sample Size: 500 mL
Final Volume: 1 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-C12)		1	0.25	ND	mg/L	U
Diesel Range Organics (C12-C24)		1	0.50	ND	mg/L	U
Motor Oil Range Organics (C24-C38)		1	1.00	ND	mg/L	U
Surrogate: o-Terphenyl			*50-150 %*	*92.4*	*%*	
Surrogate: n-Triacontane			*50-150 %*	*87.6*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LMW-2D

17I0139-07 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8
Instrument: ICPMS2

Sampled: 09/13/2017 14:50
Analyzed: 19-Sep-2017 19:05

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix
Preparation Batch: BFI0301 Sample Size: 25 mL
Prepared: 15-Sep-2017 Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chromium, Dissolved	7440-47-3	1	0.500	ND	ug/L	U
Lead, Dissolved	7439-92-1	1	0.100	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LMW-2D

17I0139-07 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 200.8 UCT-KED
Instrument: ICPMS2

Sampled: 09/13/2017 14:50
Analyzed: 19-Sep-2017 19:05

Sample Preparation: Preparation Method: REN EPA 600/4-79-020 4.1.4 HNO3 matrix
Preparation Batch: BFI0301 Sample Size: 25 mL
Prepared: 15-Sep-2017 Final Volume: 25 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Arsenic, Dissolved	7440-38-2	1	0.200	**5.40**	ug/L	
Cadmium, Dissolved	7440-43-9	1	0.100	ND	ug/L	U

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

LMW-2D

17I0139-07 (Water)

Metals and Metallic Compounds (dissolved)

Method: EPA 7470A
Instrument: CETAC

Sampled: 09/13/2017 14:50
Analyzed: 20-Sep-2017 15:28

Sample Preparation:
Preparation Method: TWM EPA 7470A
Preparation Batch: BFI0351
Prepared: 18-Sep-2017
Sample Size: 20 mL
Final Volume: 20 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Mercury, Dissolved	7439-97-6	1	0.000100	ND	mg/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Trip Blank

17I0139-08 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/13/2017 08:10
Analyzed: 21-Sep-2017 14:27

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFI0509 Sample Size: 10 mL
Prepared: 21-Sep-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Trip Blank

17I0139-08 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/13/2017 08:10
Analyzed: 21-Sep-2017 14:27

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Trip Blank

17I0139-08 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT3

Sampled: 09/13/2017 08:10
Analyzed: 21-Sep-2017 14:27

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*103*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*96.3*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*113*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*96.3*	*%*	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0504-BLK1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 11:42							
Chloromethane	ND	1.00	ug/kg							U
Vinyl Chloride	ND	1.00	ug/kg							U
Bromomethane	ND	1.00	ug/kg							U
Chloroethane	ND	1.00	ug/kg							U
Trichlorofluoromethane	ND	1.00	ug/kg							U
Acrolein	ND	5.00	ug/kg							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	2.00	ug/kg							U
Acetone	ND	5.00	ug/kg							U
1,1-Dichloroethene	ND	1.00	ug/kg							U
Bromoethane	ND	2.00	ug/kg							U
Iodomethane	ND	1.00	ug/kg							U
Methylene Chloride	ND	2.00	ug/kg							U
Acrylonitrile	ND	5.00	ug/kg							U
Carbon Disulfide	ND	1.00	ug/kg							U
trans-1,2-Dichloroethene	ND	1.00	ug/kg							U
Vinyl Acetate	ND	5.00	ug/kg							U
1,1-Dichloroethane	ND	1.00	ug/kg							U
2-Butanone	ND	5.00	ug/kg							U
2,2-Dichloropropane	ND	1.00	ug/kg							U
cis-1,2-Dichloroethene	ND	1.00	ug/kg							U
Chloroform	ND	1.00	ug/kg							U
Bromochloromethane	ND	1.00	ug/kg							U
1,1,1-Trichloroethane	ND	1.00	ug/kg							U
1,1-Dichloropropene	ND	1.00	ug/kg							U
Carbon tetrachloride	ND	1.00	ug/kg							U
1,2-Dichloroethane	ND	1.00	ug/kg							U
Benzene	ND	1.00	ug/kg							U
Trichloroethene	ND	1.00	ug/kg							U
1,2-Dichloropropane	ND	1.00	ug/kg							U
Bromodichloromethane	ND	1.00	ug/kg							U
Dibromomethane	ND	1.00	ug/kg							U
2-Chloroethyl vinyl ether	ND	5.00	ug/kg							U
4-Methyl-2-Pentanone	ND	5.00	ug/kg							U
cis-1,3-Dichloropropene	ND	1.00	ug/kg							U
Toluene	ND	1.00	ug/kg							U

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0504-BLK1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 11:42							
trans-1,3-Dichloropropene	ND	1.00	ug/kg							U
2-Hexanone	ND	5.00	ug/kg							U
1,1,2-Trichloroethane	ND	1.00	ug/kg							U
1,3-Dichloropropane	ND	1.00	ug/kg							U
Tetrachloroethene	ND	1.00	ug/kg							U
Dibromochloromethane	ND	1.00	ug/kg							U
1,2-Dibromoethane	ND	1.00	ug/kg							U
Chlorobenzene	ND	1.00	ug/kg							U
Ethylbenzene	ND	1.00	ug/kg							U
1,1,1,2-Tetrachloroethane	ND	1.00	ug/kg							U
m,p-Xylene	ND	2.00	ug/kg							U
o-Xylene	ND	1.00	ug/kg							U
Xylenes, total	ND	2.00	ug/kg							U
Styrene	ND	1.00	ug/kg							U
Bromoform	ND	1.00	ug/kg							U
1,1,2,2-Tetrachloroethane	ND	1.00	ug/kg							U
1,2,3-Trichloropropane	ND	2.00	ug/kg							U
trans-1,4-Dichloro 2-Butene	ND	5.00	ug/kg							U
n-Propylbenzene	ND	1.00	ug/kg							U
Bromobenzene	ND	1.00	ug/kg							U
Isopropyl Benzene	ND	1.00	ug/kg							U
2-Chlorotoluene	ND	1.00	ug/kg							U
4-Chlorotoluene	ND	1.00	ug/kg							U
t-Butylbenzene	ND	1.00	ug/kg							U
1,3,5-Trimethylbenzene	ND	1.00	ug/kg							U
1,2,4-Trimethylbenzene	ND	1.00	ug/kg							U
s-Butylbenzene	ND	1.00	ug/kg							U
4-Isopropyl Toluene	ND	1.00	ug/kg							U
1,3-Dichlorobenzene	ND	1.00	ug/kg							U
1,4-Dichlorobenzene	ND	1.00	ug/kg							U
n-Butylbenzene	ND	1.00	ug/kg							U
1,2-Dichlorobenzene	ND	1.00	ug/kg							U
1,2-Dibromo-3-chloropropane	ND	5.00	ug/kg							U
1,2,4-Trichlorobenzene	ND	5.00	ug/kg							U
Hexachloro-1,3-Butadiene	ND	5.00	ug/kg							U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0504-BLK1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 11:42							
Naphthalene	ND	5.00	ug/kg							U
1,2,3-Trichlorobenzene	ND	5.00	ug/kg							U
Dichlorodifluoromethane	ND	1.00	ug/kg							U
Methyl tert-butyl Ether	ND	1.00	ug/kg							U
2-Pentanone	ND	5.00	ug/kg							U
Surrogate: 1,2-Dichloroethane-d4	57.3		ug/kg	*50.0*		*115*	*80-149*			
Surrogate: Toluene-d8	51.7		ug/kg	*50.0*		*103*	*77-120*			
Surrogate: 4-Bromofluorobenzene	47.9		ug/kg	*50.0*		*95.8*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	50.5		ug/kg	*50.0*		*101*	*80-120*			
LCS (BFI0504-BS1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 10:41							
Chloromethane	56.0		ug/kg	50.0		112	64-132			
Vinyl Chloride	64.5		ug/kg	50.0		129	74-135			Q
Bromomethane	52.4		ug/kg	50.0		105	53-144			
Chloroethane	56.9		ug/kg	50.0		114	55-149			
Trichlorofluoromethane	83.1		ug/kg	50.0		166	61-164			*, Q
Acrolein	258		ug/kg	250		103	59-140			
1,1,2-Trichloro-1,2,2-Trifluoroethane	62.5		ug/kg	50.0		125	74-143			Q
Acetone	224		ug/kg	250		89.7	48-137			
1,1-Dichloroethene	60.5		ug/kg	50.0		121	77-134			Q
Bromoethane	59.2		ug/kg	50.0		118	65-145			
Iodomethane	50.4		ug/kg	50.0		101	31-162			
Methylene Chloride	53.7		ug/kg	50.0		107	69-129			
Acrylonitrile	49.8		ug/kg	50.0		99.5	69-134			
Carbon Disulfide	62.2		ug/kg	50.0		124	71-137			Q
trans-1,2-Dichloroethene	58.2		ug/kg	50.0		116	79-130			
Vinyl Acetate	53.1		ug/kg	50.0		106	66-141			
1,1-Dichloroethane	57.4		ug/kg	50.0		115	80-126			
2-Butanone	242		ug/kg	250		96.7	70-132			
2,2-Dichloropropane	56.9		ug/kg	50.0		114	77-138			
cis-1,2-Dichloroethene	54.2		ug/kg	50.0		108	80-125			
Chloroform	55.7		ug/kg	50.0		111	80-126			
Bromochloromethane	57.1		ug/kg	50.0		114	80-129			
1,1,1-Trichloroethane	55.9		ug/kg	50.0		112	78-133			
1,1-Dichloropropene	50.8		ug/kg	50.0		102	79-120			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0504-BS1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 10:41							
Carbon tetrachloride	49.2		ug/kg	50.0		98.4	71-129			
1,2-Dichloroethane	45.1		ug/kg	50.0		90.2	76-120			
Benzene	50.1		ug/kg	50.0		100	80-120			
Trichloroethene	50.2		ug/kg	50.0		100	80-120			
1,2-Dichloropropane	51.2		ug/kg	50.0		102	79-120			
Bromodichloromethane	49.3		ug/kg	50.0		98.5	80-122			
Dibromomethane	48.5		ug/kg	50.0		97.1	80-120			
2-Chloroethyl vinyl ether	41.1		ug/kg	50.0		82.1	51-129			
4-Methyl-2-Pentanone	214		ug/kg	250		85.6	73-121			
cis-1,3-Dichloropropene	49.1		ug/kg	50.0		98.2	80-120			
Toluene	50.9		ug/kg	50.0		102	75-120			
trans-1,3-Dichloropropene	48.5		ug/kg	50.0		97.0	80-124			
2-Hexanone	208		ug/kg	250		83.1	68-122			
1,1,2-Trichloroethane	47.4		ug/kg	50.0		94.9	79-120			
1,3-Dichloropropane	45.3		ug/kg	50.0		90.6	78-120			
Tetrachloroethene	48.0		ug/kg	50.0		95.9	74-124			
Dibromochloromethane	45.3		ug/kg	50.0		90.7	74-125			
1,2-Dibromoethane	46.2		ug/kg	50.0		92.3	80-120			
Chlorobenzene	49.0		ug/kg	50.0		98.0	78-120			
Ethylbenzene	48.9		ug/kg	50.0		97.8	80-125			
1,1,1,2-Tetrachloroethane	45.2		ug/kg	50.0		90.5	80-120			
m,p-Xylene	99.2		ug/kg	100		99.2	76-121			
o-Xylene	48.9		ug/kg	50.0		97.9	67-132			
Xylenes, total	148		ug/kg	150		98.8	67-132			
Styrene	50.2		ug/kg	50.0		100	80-120			
Bromoform	42.6		ug/kg	50.0		85.2	64-128			
1,1,2,2-Tetrachloroethane	44.4		ug/kg	50.0		88.9	74-120			
1,2,3-Trichloropropane	41.0		ug/kg	50.0		82.1	73-120			
trans-1,4-Dichloro 2-Butene	39.4		ug/kg	50.0		78.8	65-125			Q
n-Propylbenzene	51.5		ug/kg	50.0		103	72-124			
Bromobenzene	45.7		ug/kg	50.0		91.4	76-120			
Isopropyl Benzene	50.7		ug/kg	50.0		101	74-121			
2-Chlorotoluene	48.9		ug/kg	50.0		97.8	75-120			
4-Chlorotoluene	50.0		ug/kg	50.0		100	69-124			
t-Butylbenzene	49.6		ug/kg	50.0		99.2	72-122			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0504-BS1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 10:41							
1,3,5-Trimethylbenzene	50.4		ug/kg	50.0		101	74-122			
1,2,4-Trimethylbenzene	50.0		ug/kg	50.0		100	75-121			
s-Butylbenzene	50.9		ug/kg	50.0		102	70-128			
4-Isopropyl Toluene	51.6		ug/kg	50.0		103	75-125			
1,3-Dichlorobenzene	49.8		ug/kg	50.0		99.5	75-120			
1,4-Dichlorobenzene	48.6		ug/kg	50.0		97.2	73-120			
n-Butylbenzene	53.3		ug/kg	50.0		107	73-130			
1,2-Dichlorobenzene	46.5		ug/kg	50.0		93.1	76-120			
1,2-Dibromo-3-chloropropane	41.5		ug/kg	50.0		82.9	65-126			
1,2,4-Trichlorobenzene	52.3		ug/kg	50.0		105	66-140			
Hexachloro-1,3-Butadiene	52.6		ug/kg	50.0		105	67-133			
Naphthalene	45.8		ug/kg	50.0		91.5	69-125			
1,2,3-Trichlorobenzene	49.1		ug/kg	50.0		98.2	68-132			
Dichlorodifluoromethane	61.7		ug/kg	50.0		123	67-142			Q
Methyl tert-butyl Ether	52.8		ug/kg	50.0		106	79-127			
2-Pentanone	214		ug/kg	250		85.5	77-120			
Surrogate: 1,2-Dichloroethane-d4		57.9	ug/kg	*50.0*		*116*	*80-149*			
Surrogate: Toluene-d8		52.0	ug/kg	*50.0*		*104*	*77-120*			
Surrogate: 4-Bromofluorobenzene		49.2	ug/kg	*50.0*		*98.3*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4		50.7	ug/kg	*50.0*		*101*	*80-120*			
LCS Dup (BFI0504-BSD1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 11:20							
Chloromethane	56.5		ug/kg	50.0		113	64-132	0.87	30	
Vinyl Chloride	66.5		ug/kg	50.0		133	74-135	3.17	30	Q
Bromomethane	56.0		ug/kg	50.0		112	53-144	6.62	30	
Chloroethane	64.3		ug/kg	50.0		129	55-149	12.10	30	
Trichlorofluoromethane	88.9		ug/kg	50.0		178	61-164	6.77	30	*, Q
Acrolein	255		ug/kg	250		102	59-140	1.12	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	65.1		ug/kg	50.0		130	74-143	4.05	30	Q
Acetone	226		ug/kg	250		90.2	48-137	0.65	30	
1,1-Dichloroethene	59.4		ug/kg	50.0		119	77-134	1.81	30	Q
Bromoethane	62.4		ug/kg	50.0		125	65-145	5.27	30	
Iodomethane	54.2		ug/kg	50.0		108	31-162	7.12	30	
Methylene Chloride	56.7		ug/kg	50.0		113	69-129	5.41	30	
Acrylonitrile	50.9		ug/kg	50.0		102	69-134	2.24	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0504-BSD1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 11:20							
Carbon Disulfide	64.4		ug/kg	50.0		129	71-137	3.49	30	Q
trans-1,2-Dichloroethene	59.1		ug/kg	50.0		118	79-130	1.50	30	
Vinyl Acetate	56.1		ug/kg	50.0		112	66-141	5.49	30	
1,1-Dichloroethane	59.4		ug/kg	50.0		119	80-126	3.47	30	
2-Butanone	253		ug/kg	250		101	70-132	4.56	30	
2,2-Dichloropropane	59.4		ug/kg	50.0		119	77-138	4.41	30	
cis-1,2-Dichloroethene	56.8		ug/kg	50.0		114	80-125	4.82	30	
Chloroform	56.7		ug/kg	50.0		113	80-126	1.66	30	
Bromochloromethane	57.6		ug/kg	50.0		115	80-129	0.76	30	
1,1,1-Trichloroethane	58.4		ug/kg	50.0		117	78-133	4.45	30	
1,1-Dichloropropene	53.4		ug/kg	50.0		107	79-120	5.01	30	
Carbon tetrachloride	51.8		ug/kg	50.0		104	71-129	5.20	30	
1,2-Dichloroethane	45.4		ug/kg	50.0		90.7	76-120	0.56	30	
Benzene	52.9		ug/kg	50.0		106	80-120	5.40	30	
Trichloroethene	53.4		ug/kg	50.0		107	80-120	6.21	30	
1,2-Dichloropropane	52.3		ug/kg	50.0		105	79-120	2.12	30	
Bromodichloromethane	49.5		ug/kg	50.0		99.0	80-122	0.53	30	
Dibromomethane	48.0		ug/kg	50.0		96.0	80-120	1.10	30	
2-Chloroethyl vinyl ether	41.3		ug/kg	50.0		82.6	51-129	0.52	30	
4-Methyl-2-Pentanone	225		ug/kg	250		90.1	73-121	5.07	30	
cis-1,3-Dichloropropene	50.7		ug/kg	50.0		101	80-120	3.27	30	
Toluene	51.8		ug/kg	50.0		104	75-120	1.78	30	
trans-1,3-Dichloropropene	50.0		ug/kg	50.0		100	80-124	3.06	30	
2-Hexanone	212		ug/kg	250		84.9	68-122	2.11	30	
1,1,2-Trichloroethane	48.1		ug/kg	50.0		96.2	79-120	1.40	30	
1,3-Dichloropropane	46.3		ug/kg	50.0		92.6	78-120	2.23	30	
Tetrachloroethene	50.6		ug/kg	50.0		101	74-124	5.46	30	
Dibromochloromethane	46.9		ug/kg	50.0		93.8	74-125	3.40	30	
1,2-Dibromoethane	46.2		ug/kg	50.0		92.4	80-120	0.10	30	
Chlorobenzene	49.8		ug/kg	50.0		99.6	78-120	1.68	30	
Ethylbenzene	51.4		ug/kg	50.0		103	80-125	5.06	30	
1,1,1,2-Tetrachloroethane	47.3		ug/kg	50.0		94.6	80-120	4.49	30	
m,p-Xylene	103		ug/kg	100		103	76-121	4.03	30	
o-Xylene	50.4		ug/kg	50.0		101	67-132	2.96	30	
Xylenes, total	154		ug/kg	150		102	67-132	3.68	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Volatile Organic Compounds - Quality Control

Batch BFI0504 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0504-BSD1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 11:20							
Styrene	51.5		ug/kg	50.0		103	80-120	2.58	30	
Bromoform	42.9		ug/kg	50.0		85.7	64-128	0.61	30	
1,1,2,2-Tetrachloroethane	44.3		ug/kg	50.0		88.6	74-120	0.31	30	
1,2,3-Trichloropropane	45.6		ug/kg	50.0		91.1	73-120	10.40	30	
trans-1,4-Dichloro 2-Butene	43.2		ug/kg	50.0		86.3	65-125	9.15	30	Q
n-Propylbenzene	53.5		ug/kg	50.0		107	72-124	3.86	30	
Bromobenzene	47.1		ug/kg	50.0		94.2	76-120	3.10	30	
Isopropyl Benzene	51.9		ug/kg	50.0		104	74-121	2.34	30	
2-Chlorotoluene	50.7		ug/kg	50.0		101	75-120	3.57	30	
4-Chlorotoluene	51.6		ug/kg	50.0		103	69-124	3.09	30	
t-Butylbenzene	51.1		ug/kg	50.0		102	72-122	2.96	30	
1,3,5-Trimethylbenzene	52.0		ug/kg	50.0		104	74-122	3.26	30	
1,2,4-Trimethylbenzene	51.7		ug/kg	50.0		103	75-121	3.31	30	
s-Butylbenzene	52.6		ug/kg	50.0		105	70-128	3.34	30	
4-Isopropyl Toluene	53.4		ug/kg	50.0		107	75-125	3.38	30	
1,3-Dichlorobenzene	50.4		ug/kg	50.0		101	75-120	1.32	30	
1,4-Dichlorobenzene	49.3		ug/kg	50.0		98.6	73-120	1.50	30	
n-Butylbenzene	55.2		ug/kg	50.0		110	73-130	3.49	30	
1,2-Dichlorobenzene	47.7		ug/kg	50.0		95.4	76-120	2.50	30	
1,2-Dibromo-3-chloropropane	39.1		ug/kg	50.0		78.2	65-126	5.83	30	
1,2,4-Trichlorobenzene	53.9		ug/kg	50.0		108	66-140	2.92	30	
Hexachloro-1,3-Butadiene	54.3		ug/kg	50.0		109	67-133	3.21	30	
Naphthalene	45.9		ug/kg	50.0		91.9	69-125	0.39	30	
1,2,3-Trichlorobenzene	50.1		ug/kg	50.0		100	68-132	2.01	30	
Dichlorodifluoromethane	65.2		ug/kg	50.0		130	67-142	5.54	30	Q
Methyl tert-butyl Ether	53.5		ug/kg	50.0		107	79-127	1.46	30	
2-Pentanone	210		ug/kg	250		84.1	77-120	1.59	30	
Surrogate: 1,2-Dichloroethane-d4		57.0	ug/kg	*50.0*		*114*	*80-149*			
Surrogate: Toluene-d8		51.5	ug/kg	*50.0*		*103*	*77-120*			
Surrogate: 4-Bromofluorobenzene		49.5	ug/kg	*50.0*		*99.0*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4		50.6	ug/kg	*50.0*		*101*	*80-120*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Volatile Organic Compounds - Quality Control

Batch BFI0509 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0509-BLK1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 13:36							
Chloromethane	ND	0.50	ug/L							U
Vinyl Chloride	ND	0.20	ug/L							U
Bromomethane	ND	1.00	ug/L							U
Chloroethane	ND	0.20	ug/L							U
Trichlorofluoromethane	ND	0.20	ug/L							U
Acrolein	ND	5.00	ug/L							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.20	ug/L							U
Acetone	ND	5.00	ug/L							U
1,1-Dichloroethene	ND	0.20	ug/L							U
Bromoethane	ND	0.20	ug/L							U
Iodomethane	ND	1.00	ug/L							U
Methylene Chloride	ND	1.00	ug/L							U
Acrylonitrile	ND	1.00	ug/L							U
Carbon Disulfide	ND	0.20	ug/L							U
trans-1,2-Dichloroethene	ND	0.20	ug/L							U
Vinyl Acetate	ND	0.20	ug/L							U
1,1-Dichloroethane	ND	0.20	ug/L							U
2-Butanone	ND	5.00	ug/L							U
2,2-Dichloropropane	ND	0.20	ug/L							U
cis-1,2-Dichloroethene	ND	0.20	ug/L							U
Chloroform	ND	0.20	ug/L							U
Bromochloromethane	ND	0.20	ug/L							U
1,1,1-Trichloroethane	ND	0.20	ug/L							U
1,1-Dichloropropene	ND	0.20	ug/L							U
Carbon tetrachloride	ND	0.20	ug/L							U
1,2-Dichloroethane	ND	0.20	ug/L							U
Benzene	ND	0.20	ug/L							U
Trichloroethene	ND	0.20	ug/L							U
1,2-Dichloropropane	ND	0.20	ug/L							U
Bromodichloromethane	ND	0.20	ug/L							U
Dibromomethane	ND	0.20	ug/L							U
2-Chloroethyl vinyl ether	ND	1.00	ug/L							U
4-Methyl-2-Pentanone	ND	5.00	ug/L							U
cis-1,3-Dichloropropene	ND	0.20	ug/L							U
Toluene	ND	0.20	ug/L							U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Volatile Organic Compounds - Quality Control

Batch BFI0509 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0509-BLK1)			Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 13:36							
trans-1,3-Dichloropropene	ND	0.20	ug/L							U
2-Hexanone	ND	5.00	ug/L							U
1,1,2-Trichloroethane	ND	0.20	ug/L							U
1,3-Dichloropropane	ND	0.20	ug/L							U
Tetrachloroethene	ND	0.20	ug/L							U
Dibromochloromethane	ND	0.20	ug/L							U
1,2-Dibromoethane	ND	0.20	ug/L							U
Chlorobenzene	ND	0.20	ug/L							U
Ethylbenzene	ND	0.20	ug/L							U
1,1,1,2-Tetrachloroethane	ND	0.20	ug/L							U
m,p-Xylene	ND	0.40	ug/L							U
o-Xylene	ND	0.20	ug/L							U
Xylenes, total	ND	0.60	ug/L							U
Styrene	ND	0.20	ug/L							U
Bromoform	ND	0.20	ug/L							U
1,1,2,2-Tetrachloroethane	ND	0.20	ug/L							U
1,2,3-Trichloropropane	ND	0.50	ug/L							U
trans-1,4-Dichloro 2-Butene	ND	1.00	ug/L							U
n-Propylbenzene	ND	0.20	ug/L							U
Bromobenzene	ND	0.20	ug/L							U
Isopropyl Benzene	ND	0.20	ug/L							U
2-Chlorotoluene	ND	0.20	ug/L							U
4-Chlorotoluene	ND	0.20	ug/L							U
t-Butylbenzene	ND	0.20	ug/L							U
1,3,5-Trimethylbenzene	ND	0.20	ug/L							U
1,2,4-Trimethylbenzene	ND	0.20	ug/L							U
s-Butylbenzene	ND	0.20	ug/L							U
4-Isopropyl Toluene	ND	0.20	ug/L							U
1,3-Dichlorobenzene	ND	0.20	ug/L							U
1,4-Dichlorobenzene	ND	0.20	ug/L							U
n-Butylbenzene	ND	0.20	ug/L							U
1,2-Dichlorobenzene	ND	0.20	ug/L							U
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L							U
1,2,4-Trichlorobenzene	ND	0.50	ug/L							U
Hexachloro-1,3-Butadiene	ND	0.50	ug/L							U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Volatile Organic Compounds - Quality Control

Batch BFI0509 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0509-BLK1)				Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 13:36						
Naphthalene	ND	0.50	ug/L							U
1,2,3-Trichlorobenzene	ND	0.50	ug/L							U
Dichlorodifluoromethane	ND	0.20	ug/L							U
Methyl tert-butyl Ether	ND	0.50	ug/L							U
2-Pentanone	ND	5.00	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	5.43		ug/L	*5.00*		*109*	*80-129*			
Surrogate: Toluene-d8	4.74		ug/L	*5.00*		*94.9*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.61		ug/L	*5.00*		*112*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.18		ug/L	*5.00*		*104*	*80-120*			
LCS (BFI0509-BS1)				Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 10:59						
Chloromethane	10.8	0.50	ug/L	10.0		108	60-138			
Vinyl Chloride	10.3	0.20	ug/L	10.0		103	66-133			
Bromomethane	9.74	1.00	ug/L	10.0		97.4	72-131			
Chloroethane	9.81	0.20	ug/L	10.0		98.1	60-155			
Trichlorofluoromethane	12.4	0.20	ug/L	10.0		124	80-129			Q
Acrolein	52.8	5.00	ug/L	50.0		106	52-144			
1,1,2-Trichloro-1,2,2-Trifluoroethane	9.95	0.20	ug/L	10.0		99.5	76-129			
Acetone	37.6	5.00	ug/L	50.0		75.2	58-142			Q
1,1-Dichloroethene	10.7	0.20	ug/L	10.0		107	69-135			
Bromoethane	10.1	0.20	ug/L	10.0		101	78-128			
Iodomethane	9.18	1.00	ug/L	10.0		91.8	56-147			
Methylene Chloride	8.22	1.00	ug/L	10.0		82.2	65-135			
Acrylonitrile	9.04	1.00	ug/L	10.0		90.4	64-134			
Carbon Disulfide	8.41	0.20	ug/L	10.0		84.1	78-125			
trans-1,2-Dichloroethene	8.38	0.20	ug/L	10.0		83.8	78-128			
Vinyl Acetate	9.12	0.20	ug/L	10.0		91.2	55-138			
1,1-Dichloroethane	9.68	0.20	ug/L	10.0		96.8	76-124			
2-Butanone	40.1	5.00	ug/L	50.0		80.2	61-140			
2,2-Dichloropropane	10.7	0.20	ug/L	10.0		107	78-125			
cis-1,2-Dichloroethene	7.91	0.20	ug/L	10.0		79.1	80-121			*, Q
Chloroform	8.51	0.20	ug/L	10.0		85.1	80-122			
Bromochloromethane	8.87	0.20	ug/L	10.0		88.7	80-121			
1,1,1-Trichloroethane	11.0	0.20	ug/L	10.0		110	79-123			
1,1-Dichloropropene	10.0	0.20	ug/L	10.0		100	80-120			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Volatile Organic Compounds - Quality Control

Batch BFI0509 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0509-BS1)				Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 10:59						
Carbon tetrachloride	12.8	0.20	ug/L	10.0		128	53-137			Q
1,2-Dichloroethane	12.4	0.20	ug/L	10.0		124	75-123			*, Q
Benzene	8.82	0.20	ug/L	10.0		88.2	80-120			
Trichloroethene	10.3	0.20	ug/L	10.0		103	80-120			
1,2-Dichloropropane	10.1	0.20	ug/L	10.0		101	80-120			
Bromodichloromethane	9.45	0.20	ug/L	10.0		94.5	80-121			
Dibromomethane	8.89	0.20	ug/L	10.0		88.9	80-120			
2-Chloroethyl vinyl ether	9.52	1.00	ug/L	10.0		95.2	74-127			
4-Methyl-2-Pentanone	47.5	5.00	ug/L	50.0		95.0	67-133			
cis-1,3-Dichloropropene	9.43	0.20	ug/L	10.0		94.3	80-124			
Toluene	9.70	0.20	ug/L	10.0		97.0	80-120			
trans-1,3-Dichloropropene	9.59	0.20	ug/L	10.0		95.9	71-127			
2-Hexanone	44.4	5.00	ug/L	50.0		88.8	69-133			
1,1,2-Trichloroethane	8.73	0.20	ug/L	10.0		87.3	80-121			
1,3-Dichloropropane	8.73	0.20	ug/L	10.0		87.3	80-120			
Tetrachloroethene	11.0	0.20	ug/L	10.0		110	80-120			
Dibromochloromethane	10.3	0.20	ug/L	10.0		103	65-135			
1,2-Dibromoethane	9.41	0.20	ug/L	10.0		94.1	80-121			
Chlorobenzene	10.2	0.20	ug/L	10.0		102	80-120			
Ethylbenzene	10.1	0.20	ug/L	10.0		101	80-120			
1,1,1,2-Tetrachloroethane	11.1	0.20	ug/L	10.0		111	80-120			
m,p-Xylene	20.1	0.40	ug/L	20.0		101	80-121			
o-Xylene	10.1	0.20	ug/L	10.0		101	80-121			
Xylenes, total	30.2	0.60	ug/L	30.0		101	76-127			
Styrene	10.1	0.20	ug/L	10.0		101	80-124			
Bromoform	10.8	0.20	ug/L	10.0		108	51-134			
1,1,2,2-Tetrachloroethane	8.14	0.20	ug/L	10.0		81.4	77-123			
1,2,3-Trichloropropane	9.21	0.50	ug/L	10.0		92.1	76-125			
trans-1,4-Dichloro 2-Butene	10.7	1.00	ug/L	10.0		107	55-129			
n-Propylbenzene	10.4	0.20	ug/L	10.0		104	78-130			
Bromobenzene	10.5	0.20	ug/L	10.0		105	80-120			
Isopropyl Benzene	10.8	0.20	ug/L	10.0		108	80-128			
2-Chlorotoluene	10.5	0.20	ug/L	10.0		105	78-122			
4-Chlorotoluene	10.3	0.20	ug/L	10.0		103	80-121			
t-Butylbenzene	11.6	0.20	ug/L	10.0		116	78-125			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Volatile Organic Compounds - Quality Control

Batch BFI0509 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0509-BS1)				Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 10:59						
1,3,5-Trimethylbenzene	11.1	0.20	ug/L	10.0		111	80-129			
1,2,4-Trimethylbenzene	11.0	0.20	ug/L	10.0		110	80-127			
s-Butylbenzene	11.2	0.20	ug/L	10.0		112	78-129			
4-Isopropyl Toluene	11.8	0.20	ug/L	10.0		118	79-130			
1,3-Dichlorobenzene	10.5	0.20	ug/L	10.0		105	80-120			
1,4-Dichlorobenzene	10.3	0.20	ug/L	10.0		103	80-120			
n-Butylbenzene	11.1	0.20	ug/L	10.0		111	74-129			
1,2-Dichlorobenzene	9.95	0.20	ug/L	10.0		99.5	80-120			
1,2-Dibromo-3-chloropropane	8.79	0.50	ug/L	10.0		87.9	62-123			
1,2,4-Trichlorobenzene	11.2	0.50	ug/L	10.0		112	64-124			
Hexachloro-1,3-Butadiene	20.6	0.50	ug/L	10.0		206	58-123			*, Q
Naphthalene	9.14	0.50	ug/L	10.0		91.4	50-134			
1,2,3-Trichlorobenzene	10.7	0.50	ug/L	10.0		107	49-133			
Dichlorodifluoromethane	9.52	0.20	ug/L	10.0		95.2	48-147			
Methyl tert-butyl Ether	8.10	0.50	ug/L	10.0		81.0	71-132			
2-Pentanone	39.8	5.00	ug/L	50.0		79.6	69-134			Q
Surrogate: 1,2-Dichloroethane-d4	5.25		ug/L	*5.00*		*105*	*80-129*			
Surrogate: Toluene-d8	4.79		ug/L	*5.00*		*95.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.43		ug/L	*5.00*		*109*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.86		ug/L	*5.00*		*97.1*	*80-120*			
LCS Dup (BFI0509-BSD1)				Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 11:25						
Chloromethane	10.6	0.50	ug/L	10.0		106	60-138	2.20	30	
Vinyl Chloride	9.69	0.20	ug/L	10.0		96.9	66-133	5.69	30	
Bromomethane	8.95	1.00	ug/L	10.0		89.5	72-131	8.49	30	
Chloroethane	9.44	0.20	ug/L	10.0		94.4	60-155	3.87	30	
Trichlorofluoromethane	11.5	0.20	ug/L	10.0		115	80-129	7.16	30	Q
Acrolein	48.7	5.00	ug/L	50.0		97.4	52-144	8.16	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	9.85	0.20	ug/L	10.0		98.5	76-129	1.10	30	
Acetone	28.9	5.00	ug/L	50.0		57.7	58-142	26.30	30	*, Q
1,1-Dichloroethene	10.3	0.20	ug/L	10.0		103	69-135	4.01	30	
Bromoethane	9.56	0.20	ug/L	10.0		95.6	78-128	5.53	30	
Iodomethane	9.08	1.00	ug/L	10.0		90.8	56-147	1.08	30	
Methylene Chloride	7.96	1.00	ug/L	10.0		79.6	65-135	3.18	30	
Acrylonitrile	8.98	1.00	ug/L	10.0		89.8	64-134	0.64	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Volatile Organic Compounds - Quality Control

Batch BFI0509 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0509-BSD1)				Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 11:25						
Carbon Disulfide	8.16	0.20	ug/L	10.0		81.6	78-125	3.03	30	
trans-1,2-Dichloroethene	8.07	0.20	ug/L	10.0		80.7	78-128	3.67	30	
Vinyl Acetate	8.39	0.20	ug/L	10.0		83.9	55-138	8.40	30	
1,1-Dichloroethane	9.16	0.20	ug/L	10.0		91.6	76-124	5.49	30	
2-Butanone	38.6	5.00	ug/L	50.0		77.1	61-140	3.96	30	
2,2-Dichloropropane	10.2	0.20	ug/L	10.0		102	78-125	4.74	30	
cis-1,2-Dichloroethene	7.51	0.20	ug/L	10.0		75.1	80-121	5.09	30	*, Q
Chloroform	8.18	0.20	ug/L	10.0		81.8	80-122	3.85	30	
Bromochloromethane	7.95	0.20	ug/L	10.0		79.5	80-121	10.90	30	*
1,1,1-Trichloroethane	10.7	0.20	ug/L	10.0		107	79-123	2.24	30	
1,1-Dichloropropene	9.46	0.20	ug/L	10.0		94.6	80-120	5.56	30	
Carbon tetrachloride	12.4	0.20	ug/L	10.0		124	53-137	2.74	30	Q
1,2-Dichloroethane	11.8	0.20	ug/L	10.0		118	75-123	5.32	30	Q
Benzene	8.57	0.20	ug/L	10.0		85.7	80-120	2.91	30	
Trichloroethene	10.0	0.20	ug/L	10.0		100	80-120	2.34	30	
1,2-Dichloropropane	9.45	0.20	ug/L	10.0		94.5	80-120	6.47	30	
Bromodichloromethane	9.62	0.20	ug/L	10.0		96.2	80-121	1.80	30	
Dibromomethane	8.62	0.20	ug/L	10.0		86.2	80-120	3.05	30	
2-Chloroethyl vinyl ether	9.35	1.00	ug/L	10.0		93.5	74-127	1.80	30	
4-Methyl-2-Pentanone	49.0	5.00	ug/L	50.0		97.9	67-133	3.01	30	
cis-1,3-Dichloropropene	9.39	0.20	ug/L	10.0		93.9	80-124	0.38	30	
Toluene	9.34	0.20	ug/L	10.0		93.4	80-120	3.77	30	
trans-1,3-Dichloropropene	9.76	0.20	ug/L	10.0		97.6	71-127	1.81	30	
2-Hexanone	45.9	5.00	ug/L	50.0		91.9	69-133	3.44	30	
1,1,2-Trichloroethane	8.92	0.20	ug/L	10.0		89.2	80-121	2.08	30	
1,3-Dichloropropane	8.83	0.20	ug/L	10.0		88.3	80-120	1.07	30	
Tetrachloroethene	10.8	0.20	ug/L	10.0		108	80-120	2.44	30	
Dibromochloromethane	10.2	0.20	ug/L	10.0		102	65-135	1.14	30	
1,2-Dibromoethane	9.24	0.20	ug/L	10.0		92.4	80-121	1.81	30	
Chlorobenzene	9.86	0.20	ug/L	10.0		98.6	80-120	3.36	30	
Ethylbenzene	9.56	0.20	ug/L	10.0		95.6	80-120	5.19	30	
1,1,1,2-Tetrachloroethane	10.9	0.20	ug/L	10.0		109	80-120	2.62	30	
m,p-Xylene	19.6	0.40	ug/L	20.0		97.9	80-121	2.83	30	
o-Xylene	9.80	0.20	ug/L	10.0		98.0	80-121	2.92	30	
Xylenes, total	29.4	0.60	ug/L	30.0		97.9	76-127	2.86	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Volatile Organic Compounds - Quality Control

Batch BFI0509 - EPA 5030 (Purge and Trap)

Instrument: NT3 Analyst: PC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0509-BSD1)				Prepared: 21-Sep-2017 Analyzed: 21-Sep-2017 11:25						
Styrene	9.79	0.20	ug/L	10.0		97.9	80-124	2.88	30	
Bromoform	10.9	0.20	ug/L	10.0		109	51-134	0.79	30	
1,1,2,2-Tetrachloroethane	7.99	0.20	ug/L	10.0		79.9	77-123	1.83	30	
1,2,3-Trichloropropane	9.78	0.50	ug/L	10.0		97.8	76-125	5.99	30	
trans-1,4-Dichloro 2-Butene	10.5	1.00	ug/L	10.0		105	55-129	1.29	30	
n-Propylbenzene	9.98	0.20	ug/L	10.0		99.8	78-130	4.21	30	
Bromobenzene	9.90	0.20	ug/L	10.0		99.0	80-120	5.66	30	
Isopropyl Benzene	10.1	0.20	ug/L	10.0		101	80-128	6.96	30	
2-Chlorotoluene	10.0	0.20	ug/L	10.0		100	78-122	4.90	30	
4-Chlorotoluene	9.90	0.20	ug/L	10.0		99.0	80-121	4.37	30	
t-Butylbenzene	10.8	0.20	ug/L	10.0		108	78-125	6.98	30	
1,3,5-Trimethylbenzene	10.4	0.20	ug/L	10.0		104	80-129	5.83	30	
1,2,4-Trimethylbenzene	10.4	0.20	ug/L	10.0		104	80-127	5.22	30	
s-Butylbenzene	10.6	0.20	ug/L	10.0		106	78-129	5.27	30	
4-Isopropyl Toluene	11.4	0.20	ug/L	10.0		114	79-130	3.45	30	
1,3-Dichlorobenzene	9.98	0.20	ug/L	10.0		99.8	80-120	5.37	30	
1,4-Dichlorobenzene	10.1	0.20	ug/L	10.0		101	80-120	1.69	30	
n-Butylbenzene	10.6	0.20	ug/L	10.0		106	74-129	4.46	30	
1,2-Dichlorobenzene	10.1	0.20	ug/L	10.0		101	80-120	1.81	30	
1,2-Dibromo-3-chloropropane	9.66	0.50	ug/L	10.0		96.6	62-123	9.50	30	
1,2,4-Trichlorobenzene	12.8	0.50	ug/L	10.0		128	64-124	13.40	30	*
Hexachloro-1,3-Butadiene	20.7	0.50	ug/L	10.0		207	58-123	0.29	30	*, Q
Naphthalene	9.92	0.50	ug/L	10.0		99.2	50-134	8.11	30	
1,2,3-Trichlorobenzene	13.5	0.50	ug/L	10.0		135	49-133	23.50	30	*
Dichlorodifluoromethane	8.97	0.20	ug/L	10.0		89.7	48-147	6.03	30	
Methyl tert-butyl Ether	7.86	0.50	ug/L	10.0		78.6	71-132	2.96	30	
2-Pentanone	40.6	5.00	ug/L	50.0		81.2	69-134	1.91	30	Q
Surrogate: 1,2-Dichloroethane-d4	5.19		ug/L	*5.00*		*104*	*80-129*			
Surrogate: Toluene-d8	4.82		ug/L	*5.00*		*96.4*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.59		ug/L	*5.00*		*112*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.78		ug/L	*5.00*		*95.7*	*80-120*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Semivolatile Organic Compounds - Quality Control

Batch BFI0204 - EPA 3520C (Liq Liq)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0204-BLK1)			Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 12:13							
Phenol	ND	1.0	ug/L							U
bis(2-chloroethyl) ether	ND	1.0	ug/L							U
2-Chlorophenol	ND	1.0	ug/L							U
1,3-Dichlorobenzene	ND	1.0	ug/L							U
1,4-Dichlorobenzene	ND	1.0	ug/L							U
Benzyl Alcohol	ND	2.0	ug/L							U
1,2-Dichlorobenzene	ND	1.0	ug/L							U
2-Methylphenol	ND	1.0	ug/L							U
2,2'-Oxybis(1-chloropropane)	ND	1.0	ug/L							U
4-Methylphenol	ND	2.0	ug/L							U
N-Nitroso-di-n-Propylamine	ND	1.0	ug/L							U
Hexachloroethane	ND	2.0	ug/L							U
Nitrobenzene	ND	1.0	ug/L							U
Isophorone	ND	1.0	ug/L							U
2-Nitrophenol	ND	3.0	ug/L							U
2,4-Dimethylphenol	ND	3.0	ug/L							U
Bis(2-Chloroethoxy)methane	ND	1.0	ug/L							U
Benzoic acid	ND	20.0	ug/L							U
2,4-Dichlorophenol	ND	3.0	ug/L							U
1,2,4-Trichlorobenzene	ND	1.0	ug/L							U
Naphthalene	ND	1.0	ug/L							U
4-Chloroaniline	ND	5.0	ug/L							U
Hexachlorobutadiene	ND	3.0	ug/L							U
4-Chloro-3-Methylphenol	ND	3.0	ug/L							U
2-Methylnaphthalene	ND	1.0	ug/L							U
Hexachlorocyclopentadiene	ND	5.0	ug/L							U
2,4,6-Trichlorophenol	ND	3.0	ug/L							U
2,4,5-Trichlorophenol	ND	5.0	ug/L							U
2-Chloronaphthalene	ND	1.0	ug/L							U
2-Nitroaniline	ND	3.0	ug/L							U
Dimethylphthalate	ND	1.0	ug/L							U
Acenaphthylene	ND	1.0	ug/L							U
2,6-Dinitrotoluene	ND	3.0	ug/L							U
3-Nitroaniline	ND	3.0	ug/L							U
Acenaphthene	ND	1.0	ug/L							U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Semivolatile Organic Compounds - Quality Control

Batch BFI0204 - EPA 3520C (Liq Liq)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0204-BLK1)			Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 12:13							
2,4-Dinitrophenol	ND	20.0	ug/L							U
Dibenzofuran	ND	1.0	ug/L							U
4-Nitrophenol	ND	10.0	ug/L							U
2,4-Dinitrotoluene	ND	3.0	ug/L							U
Fluorene	ND	1.0	ug/L							U
Diethyl phthalate	ND	1.0	ug/L							U
4-Chlorophenylphenyl ether	ND	1.0	ug/L							U
4-Nitroaniline	ND	3.0	ug/L							U
4,6-Dinitro-2-methylphenol	ND	10.0	ug/L							U
N-Nitrosodiphenylamine	ND	1.0	ug/L							U
4-Bromophenyl phenyl ether	ND	1.0	ug/L							U
Hexachlorobenzene	ND	1.0	ug/L							U
Pentachlorophenol	ND	10.0	ug/L							U
Phenanthrene	ND	1.0	ug/L							U
Anthracene	ND	1.0	ug/L							U
Carbazole	ND	1.0	ug/L							U
Di-n-Butylphthalate	ND	1.0	ug/L							U
Fluoranthene	ND	1.0	ug/L							U
Pyrene	ND	1.0	ug/L							U
Butylbenzylphthalate	ND	1.0	ug/L							U
Benzo(a)anthracene	ND	1.0	ug/L							U
3,3'-Dichlorobenzidine	ND	5.0	ug/L							U
Chrysene	ND	1.0	ug/L							U
bis(2-Ethylhexyl)phthalate	ND	3.0	ug/L							U
Di-n-Octylphthalate	ND	1.0	ug/L							U
Benzo(a)pyrene	ND	1.0	ug/L							U
Indeno(1,2,3-cd)pyrene	ND	1.0	ug/L							U
Dibenzo(a,h)anthracene	ND	1.0	ug/L							U
Benzo(g,h,i)perylene	ND	1.0	ug/L							U
Benzofluoranthenes, Total	ND	2.0	ug/L							U
1-Methylnaphthalene	ND	1.0	ug/L							U
Surrogate: 2-Fluorophenol	27.1		ug/L	*37.5*		*72.2*	*33-120*			
Surrogate: Phenol-d5	28.8		ug/L	*37.5*		*76.7*	*38-120*			
Surrogate: 2-Chlorophenol-d4	30.3		ug/L	*37.5*		*80.9*	*41-120*			
Surrogate: 1,2-Dichlorobenzene-d4	17.0		ug/L	*25.0*		*67.9*	*20-120*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Semivolatile Organic Compounds - Quality Control

Batch BFI0204 - EPA 3520C (Liq Liq)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0204-BLK1)				Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 12:13						
Surrogate: Nitrobenzene-d5	19.5		ug/L	*25.0*		*77.8*	*27-120*			
Surrogate: 2-Fluorobiphenyl	19.5		ug/L	*25.0*		*77.9*	*33-120*			
Surrogate: 2,4,6-Tribromophenol	36.7		ug/L	*37.5*		*97.9*	*52-120*			
Surrogate: p-Terphenyl-d14	24.1		ug/L	*25.0*		*96.3*	*28-120*			
LCS (BFI0204-BS1)				Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 12:46						
Phenol	17.1	1.0	ug/L	25.0		68.5	35-120			
bis(2-chloroethyl) ether	17.4	1.0	ug/L	25.0		69.8	46.5-120			
2-Chlorophenol	17.5	1.0	ug/L	25.0		70.0	48-120			
1,3-Dichlorobenzene	13.0	1.0	ug/L	25.0		52.1	34.2-120			
1,4-Dichlorobenzene	13.4	1.0	ug/L	25.0		53.7	36-120			
Benzyl Alcohol	17.9	2.0	ug/L	25.0		71.6	27.4-120			
1,2-Dichlorobenzene	13.9	1.0	ug/L	25.0		55.7	38.4-120			
2-Methylphenol	16.8	1.0	ug/L	25.0		67.1	47.8-120			
2,2'-Oxybis(1-chloropropane)	17.9	1.0	ug/L	25.0		71.4	40.4-120			
4-Methylphenol	19.0	2.0	ug/L	25.0		76.0	52.3-120			
N-Nitroso-di-n-Propylamine	19.4	1.0	ug/L	25.0		77.4	51.4-120			
Hexachloroethane	11.5	2.0	ug/L	25.0		46.0	29.5-120			
Nitrobenzene	18.8	1.0	ug/L	25.0		75.1	51.5-120			
Isophorone	23.1	1.0	ug/L	25.0		92.6	62.3-128			
2-Nitrophenol	23.0	3.0	ug/L	25.0		92.1	58.6-124			
2,4-Dimethylphenol	12.6	3.0	ug/L	25.0		50.5	38.5-120			
Bis(2-Chloroethoxy)methane	21.0	1.0	ug/L	25.0		84.1	52.9-120			
Benzoic acid	14.8	14.0	ug/L	25.0		59.3	38.2-120			
2,4-Dichlorophenol	21.5	3.0	ug/L	25.0		85.9	43.6-120			
1,2,4-Trichlorobenzene	15.9	1.0	ug/L	25.0		63.7	38.6-120			
Naphthalene	16.0	1.0	ug/L	25.0		64.1	40.5-120			
4-Chloroaniline	78.9	5.0	ug/L	125		63.1	42.7-120			
Hexachlorobutadiene	14.0	3.0	ug/L	25.0		56.2	32.3-120			
4-Chloro-3-Methylphenol	22.3	3.0	ug/L	25.0		89.0	51.9-120			
2-Methylnaphthalene	16.5	1.0	ug/L	25.0		65.9	47.3-120			
Hexachlorocyclopentadiene	101	5.0	ug/L	125		80.4	23.3-120			E
2,4,6-Trichlorophenol	24.7	3.0	ug/L	25.0		98.9	47-120			
2,4,5-Trichlorophenol	24.3	5.0	ug/L	25.0		97.3	48.4-120			
2-Chloronaphthalene	24.4	1.0	ug/L	25.0		97.5	47.7-123			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Semivolatile Organic Compounds - Quality Control

Batch BFI0204 - EPA 3520C (Liq Liq)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0204-BS1)				Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 12:46						
2-Nitroaniline	109	3.0	ug/L	125		87.5	56.8-120			E
Dimethylphthalate	27.1	1.0	ug/L	25.0		108	65.2-125			
Acenaphthylene	22.2	1.0	ug/L	25.0		88.8	44.1-120			
2,6-Dinitrotoluene	148	3.0	ug/L	125		118	69.3-140			Q, E
3-Nitroaniline	118	3.0	ug/L	125		94.2	60.9-120			E
Acenaphthene	20.8	1.0	ug/L	25.0		83.1	50.4-120			
2,4-Dinitrophenol	25.6	20.0	ug/L	25.0		103	33.7-183			Q
Dibenzofuran	21.5	1.0	ug/L	25.0		85.9	49.9-120			
4-Nitrophenol	23.9	10.0	ug/L	25.0		95.7	50.2-136			
2,4-Dinitrotoluene	139	3.0	ug/L	125		111	66.8-132			Q, E
Fluorene	23.7	1.0	ug/L	25.0		94.9	57.8-120			
Diethyl phthalate	25.9	1.0	ug/L	25.0		104	68.1-120			
4-Chlorophenylphenyl ether	25.4	1.0	ug/L	25.0		102	59.1-127			
4-Nitroaniline	125	3.0	ug/L	125		99.7	56-122			E
4,6-Dinitro-2-methylphenol	26.2	10.0	ug/L	25.0		105	37.9-162			
N-Nitrosodiphenylamine	20.5	1.0	ug/L	25.0		81.9	59.6-120			
4-Bromophenyl phenyl ether	22.3	1.0	ug/L	25.0		89.3	59.6-120			
Hexachlorobenzene	20.9	1.0	ug/L	25.0		83.6	53.7-120			
Pentachlorophenol	15.1	10.0	ug/L	25.0		60.6	40.3-128			
Phenanthrene	21.1	1.0	ug/L	25.0		84.4	58.8-120			
Anthracene	19.8	1.0	ug/L	25.0		79.1	60.5-120			
Carbazole	22.3	1.0	ug/L	25.0		89.0	59.7-120			
Di-n-Butylphthalate	24.1	1.0	ug/L	25.0		96.3	71-120			
Fluoranthene	22.5	1.0	ug/L	25.0		90.1	66.7-120			
Pyrene	25.1	1.0	ug/L	25.0		100	62.7-127			
Butylbenzylphthalate	27.1	1.0	ug/L	25.0		108	67.4-128			
Benzo(a)anthracene	25.9	1.0	ug/L	25.0		104	58.3-128			
3,3'-Dichlorobenzidine	90.3	5.0	ug/L	125		72.2	34.1-120			
Chrysene	25.1	1.0	ug/L	25.0		100	58.9-120			
bis(2-Ethylhexyl)phthalate	25.1	3.0	ug/L	25.0		101	68.3-123			
Di-n-Octylphthalate	23.8	1.0	ug/L	25.0		95.3	61.5-120			
Benzo(a)pyrene	22.8	1.0	ug/L	25.0		91.0	70.6-120			
Indeno(1,2,3-cd)pyrene	22.3	1.0	ug/L	25.0		89.4	46.5-120			
Dibenzo(a,h)anthracene	23.4	1.0	ug/L	25.0		93.8	49.6-120			
Benzo(g,h,i)perylene	22.2	1.0	ug/L	25.0		88.9	37-120			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Semivolatile Organic Compounds - Quality Control

Batch BFI0204 - EPA 3520C (Liq Liq)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0204-BS1)				Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 12:46						
Benzofluoranthenes, Total	47.0	2.0	ug/L	50.0		94.0	66.5-120			
1-Methylnaphthalene	17.0	1.0	ug/L	25.0		67.9	46.9-120			
Surrogate: 2-Fluorophenol	23.9		ug/L	*37.5*		*63.8*	*33-120*			
Surrogate: Phenol-d5	26.0		ug/L	*37.5*		*69.4*	*38-120*			
Surrogate: 2-Chlorophenol-d4	28.1		ug/L	*37.5*		*74.8*	*41-120*			
Surrogate: 1,2-Dichlorobenzene-d4	15.0		ug/L	*25.0*		*59.9*	*20-120*			
Surrogate: Nitrobenzene-d5	19.0		ug/L	*25.0*		*76.0*	*27-120*			
Surrogate: 2-Fluorobiphenyl	21.8		ug/L	*25.0*		*87.0*	*33-120*			
Surrogate: 2,4,6-Tribromophenol	44.0		ug/L	*37.5*		*117*	*52-120*			
Surrogate: p-Terphenyl-d14	29.2		ug/L	*25.0*		*117*	*28-120*			
LCS Dup (BFI0204-BSD1)				Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 13:20						
Phenol	16.0	1.0	ug/L	25.0		63.9	35-120	7.06	30	
bis(2-chloroethyl) ether	15.9	1.0	ug/L	25.0		63.7	46.5-120	9.06	30	
2-Chlorophenol	16.0	1.0	ug/L	25.0		64.2	48-120	8.63	30	
1,3-Dichlorobenzene	11.7	1.0	ug/L	25.0		46.7	34.2-120	10.90	30	
1,4-Dichlorobenzene	12.3	1.0	ug/L	25.0		49.2	36-120	8.77	30	
Benzyl Alcohol	17.7	2.0	ug/L	25.0		71.0	27.4-120	0.79	30	
1,2-Dichlorobenzene	12.6	1.0	ug/L	25.0		50.4	38.4-120	9.94	30	
2-Methylphenol	15.4	1.0	ug/L	25.0		61.5	47.8-120	8.70	30	
2,2'-Oxybis(1-chloropropane)	16.6	1.0	ug/L	25.0		66.4	40.4-120	7.31	30	
4-Methylphenol	17.5	2.0	ug/L	25.0		69.9	52.3-120	8.37	30	
N-Nitroso-di-n-Propylamine	19.0	1.0	ug/L	25.0		75.9	51.4-120	2.00	30	
Hexachloroethane	10.2	2.0	ug/L	25.0		41.0	29.5-120	11.60	30	
Nitrobenzene	17.2	1.0	ug/L	25.0		68.8	51.5-120	8.68	30	
Isophorone	23.3	1.0	ug/L	25.0		93.2	62.3-128	0.61	30	
2-Nitrophenol	20.8	3.0	ug/L	25.0		83.1	58.6-124	10.30	30	
2,4-Dimethylphenol	11.7	3.0	ug/L	25.0		46.9	38.5-120	7.44	30	
Bis(2-Chloroethoxy)methane	19.4	1.0	ug/L	25.0		77.6	52.9-120	8.01	30	
Benzoic acid	16.5	14.0	ug/L	25.0		65.8	38.2-120	10.40	30	
2,4-Dichlorophenol	19.8	3.0	ug/L	25.0		79.2	43.6-120	8.13	30	
1,2,4-Trichlorobenzene	14.9	1.0	ug/L	25.0		59.5	38.6-120	6.76	30	
Naphthalene	14.4	1.0	ug/L	25.0		57.6	40.5-120	10.60	30	
4-Chloroaniline	72.7	5.0	ug/L	125		58.2	42.7-120	8.15	30	
Hexachlorobutadiene	12.9	3.0	ug/L	25.0		51.5	32.3-120	8.63	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Semivolatile Organic Compounds - Quality Control

Batch BFI0204 - EPA 3520C (Liq Liq)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0204-BSD1)				Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 13:20						
4-Chloro-3-Methylphenol	21.1	3.0	ug/L	25.0		84.5	51.9-120	5.21	30	
2-Methylnaphthalene	15.8	1.0	ug/L	25.0		63.0	47.3-120	4.50	30	
Hexachlorocyclopentadiene	96.2	5.0	ug/L	125		76.9	23.3-120	4.45	30	E
2,4,6-Trichlorophenol	22.5	3.0	ug/L	25.0		90.2	47-120	9.22	30	
2,4,5-Trichlorophenol	22.8	5.0	ug/L	25.0		91.1	48.4-120	6.61	30	
2-Chloronaphthalene	23.0	1.0	ug/L	25.0		92.2	47.7-123	5.64	30	
2-Nitroaniline	104	3.0	ug/L	125		82.9	56.8-120	5.35	30	E
Dimethylphthalate	26.9	1.0	ug/L	25.0		107	65.2-125	0.93	30	
Acenaphthylene	20.5	1.0	ug/L	25.0		82.1	44.1-120	7.90	30	
2,6-Dinitrotoluene	141	3.0	ug/L	125		113	69.3-140	4.51	30	Q, E
3-Nitroaniline	117	3.0	ug/L	125		93.3	60.9-120	0.95	30	E
Acenaphthene	19.5	1.0	ug/L	25.0		78.1	50.4-120	6.15	30	
2,4-Dinitrophenol	27.6	20.0	ug/L	25.0		111	33.7-183	7.45	30	Q
Dibenzofuran	20.2	1.0	ug/L	25.0		80.9	49.9-120	5.91	30	
4-Nitrophenol	25.0	10.0	ug/L	25.0		100	50.2-136	4.43	30	
2,4-Dinitrotoluene	136	3.0	ug/L	125		109	66.8-132	2.19	30	Q, E
Fluorene	22.7	1.0	ug/L	25.0		90.7	57.8-120	4.50	30	
Diethyl phthalate	26.9	1.0	ug/L	25.0		108	68.1-120	3.86	30	
4-Chlorophenylphenyl ether	24.5	1.0	ug/L	25.0		97.9	59.1-127	3.76	30	
4-Nitroaniline	128	3.0	ug/L	125		102	56-122	2.40	30	E
4,6-Dinitro-2-methylphenol	25.6	10.0	ug/L	25.0		102	37.9-162	2.32	30	
N-Nitrosodiphenylamine	19.1	1.0	ug/L	25.0		76.5	59.6-120	6.83	30	
4-Bromophenyl phenyl ether	21.7	1.0	ug/L	25.0		86.9	59.6-120	2.71	30	
Hexachlorobenzene	20.0	1.0	ug/L	25.0		79.9	53.7-120	4.56	30	
Pentachlorophenol	15.3	10.0	ug/L	25.0		61.2	40.3-128	1.05	30	
Phenanthrene	20.7	1.0	ug/L	25.0		82.7	58.8-120	2.05	30	
Anthracene	18.5	1.0	ug/L	25.0		74.0	60.5-120	6.58	30	
Carbazole	21.8	1.0	ug/L	25.0		87.0	59.7-120	2.23	30	
Di-n-Butylphthalate	25.1	1.0	ug/L	25.0		100	71-120	3.96	30	
Fluoranthene	22.6	1.0	ug/L	25.0		90.6	66.7-120	0.46	30	
Pyrene	27.1	1.0	ug/L	25.0		109	62.7-127	7.87	30	
Butylbenzylphthalate	28.9	1.0	ug/L	25.0		116	67.4-128	6.43	30	
Benzo(a)anthracene	27.6	1.0	ug/L	25.0		110	58.3-128	6.47	30	
3,3'-Dichlorobenzidine	93.3	5.0	ug/L	125		74.6	34.1-120	3.25	30	
Chrysene	26.7	1.0	ug/L	25.0		107	58.9-120	6.05	30	

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Semivolatile Organic Compounds - Quality Control

Batch BFI0204 - EPA 3520C (Liq Liq)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFI0204-BSD1)				Prepared: 14-Sep-2017 Analyzed: 19-Sep-2017 13:20						
bis(2-Ethylhexyl)phthalate	26.8	3.0	ug/L	25.0		107	68.3-123	6.42	30	
Di-n-Octylphthalate	26.0	1.0	ug/L	25.0		104	61.5-120	8.67	30	
Benzo(a)pyrene	24.2	1.0	ug/L	25.0		96.9	70.6-120	6.25	30	
Indeno(1,2,3-cd)pyrene	23.4	1.0	ug/L	25.0		93.4	46.5-120	4.46	30	
Dibenzo(a,h)anthracene	24.7	1.0	ug/L	25.0		98.9	49.6-120	5.34	30	
Benzo(g,h,i)perylene	23.8	1.0	ug/L	25.0		95.1	37-120	6.71	30	
Benzofluoranthenes, Total	48.7	2.0	ug/L	50.0		97.4	66.5-120	3.54	30	
1-Methylnaphthalene	16.0	1.0	ug/L	25.0		63.8	46.9-120	6.18	30	
Surrogate: 2-Fluorophenol	21.3		ug/L	*37.5*		*56.9*	*33-120*			
Surrogate: Phenol-d5	23.9		ug/L	*37.5*		*63.8*	*38-120*			
Surrogate: 2-Chlorophenol-d4	25.2		ug/L	*37.5*		*67.1*	*41-120*			
Surrogate: 1,2-Dichlorobenzene-d4	13.2		ug/L	*25.0*		*52.9*	*20-120*			
Surrogate: Nitrobenzene-d5	16.6		ug/L	*25.0*		*66.4*	*27-120*			
Surrogate: 2-Fluorobiphenyl	19.9		ug/L	*25.0*		*79.8*	*33-120*			
Surrogate: 2,4,6-Tribromophenol	41.1		ug/L	*37.5*		*110*	*52-120*			
Surrogate: p-Terphenyl-d14	30.0		ug/L	*25.0*		*120*	*28-120*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Semivolatile Organic Compounds - Quality Control

Batch BFI0349 - EPA 3546 (Microwave)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0349-BLK1)			Prepared: 18-Sep-2017 Analyzed: 27-Sep-2017 00:12							
Phenol	ND	67	ug/kg							U
bis(2-chloroethyl) ether	ND	67	ug/kg							U
2-Chlorophenol	ND	67	ug/kg							U
1,3-Dichlorobenzene	ND	67	ug/kg							U
1,4-Dichlorobenzene	ND	67	ug/kg							U
Benzyl Alcohol	ND	330	ug/kg							U
1,2-Dichlorobenzene	ND	67	ug/kg							U
2-Methylphenol	ND	67	ug/kg							U
2,2'-Oxybis(1-chloropropane)	ND	67	ug/kg							U
4-Methylphenol	ND	67	ug/kg							U
N-Nitroso-di-n-Propylamine	ND	67	ug/kg							U
Hexachloroethane	ND	67	ug/kg							U
Nitrobenzene	ND	67	ug/kg							U
Isophorone	ND	67	ug/kg							U
2-Nitrophenol	ND	67	ug/kg							U
2,4-Dimethylphenol	ND	67	ug/kg							U
Bis(2-Chloroethoxy)methane	ND	67	ug/kg							U
Benzoic acid	ND	670	ug/kg							U
2,4-Dichlorophenol	ND	330	ug/kg							U
1,2,4-Trichlorobenzene	ND	67	ug/kg							U
Naphthalene	ND	67	ug/kg							U
4-Chloroaniline	ND	330	ug/kg							U
Hexachlorobutadiene	ND	67	ug/kg							U
4-Chloro-3-Methylphenol	ND	330	ug/kg							U
2-Methylnaphthalene	ND	67	ug/kg							U
Hexachlorocyclopentadiene	ND	330	ug/kg							U
2,4,6-Trichlorophenol	ND	330	ug/kg							U
2,4,5-Trichlorophenol	ND	330	ug/kg							U
2-Chloronaphthalene	ND	67	ug/kg							U
2-Nitroaniline	ND	330	ug/kg							U
Dimethylphthalate	ND	67	ug/kg							U
Acenaphthylene	ND	67	ug/kg							U
2,6-Dinitrotoluene	ND	330	ug/kg							U
3-Nitroaniline	ND	330	ug/kg							U
Acenaphthene	ND	67	ug/kg							U

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Semivolatile Organic Compounds - Quality Control

Batch BFI0349 - EPA 3546 (Microwave)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0349-BLK1)			Prepared: 18-Sep-2017 Analyzed: 27-Sep-2017 00:12							
2,4-Dinitrophenol	ND	670	ug/kg							U
Dibenzofuran	ND	67	ug/kg							U
4-Nitrophenol	ND	330	ug/kg							U
2,4-Dinitrotoluene	ND	330	ug/kg							U
Fluorene	ND	67	ug/kg							U
Diethyl phthalate	ND	67	ug/kg							U
4-Chlorophenylphenyl ether	ND	67	ug/kg							U
4-Nitroaniline	ND	330	ug/kg							U
4,6-Dinitro-2-methylphenol	ND	670	ug/kg							U
N-Nitrosodiphenylamine	ND	67	ug/kg							U
4-Bromophenyl phenyl ether	ND	67	ug/kg							U
Hexachlorobenzene	ND	67	ug/kg							U
Pentachlorophenol	ND	330	ug/kg							U
Phenanthrene	ND	67	ug/kg							U
Anthracene	ND	67	ug/kg							U
Carbazole	ND	67	ug/kg							U
Di-n-Butylphthalate	ND	67	ug/kg							U
Fluoranthene	ND	67	ug/kg							U
Pyrene	ND	67	ug/kg							U
Butylbenzylphthalate	ND	67	ug/kg							U
Benzo(a)anthracene	ND	67	ug/kg							U
3,3'-Dichlorobenzidine	ND	330	ug/kg							U
Chrysene	ND	67	ug/kg							U
bis(2-Ethylhexyl)phthalate	ND	67	ug/kg							U
Di-n-Octylphthalate	ND	67	ug/kg							U
Benzo(a)pyrene	ND	67	ug/kg							U
Indeno(1,2,3-cd)pyrene	ND	67	ug/kg							U
Dibenzo(a,h)anthracene	ND	67	ug/kg							U
Benzo(g,h,i)perylene	ND	67	ug/kg							U
Benzofluoranthenes, Total	ND	67	ug/kg							U
1-Methylnaphthalene	ND	67	ug/kg							U
Surrogate: 2-Fluorophenol	1400		ug/kg	*2500*		*55.9*	*22-120*			
Surrogate: Phenol-d5	1460		ug/kg	*2500*		*58.5*	*27-120*			
Surrogate: 2-Chlorophenol-d4	1640		ug/kg	*2500*		*65.5*	*36-120*			
Surrogate: 1,2-Dichlorobenzene-d4	1150		ug/kg	*1670*		*69.1*	*38-120*			

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Semivolatile Organic Compounds - Quality Control

Batch BFI0349 - EPA 3546 (Microwave)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0349-BLK1)				Prepared: 18-Sep-2017 Analyzed: 27-Sep-2017 00:12						
Surrogate: Nitrobenzene-d5	1070		ug/kg	*1670*		*64.4*	*32-120*			
Surrogate: 2-Fluorobiphenyl	1170		ug/kg	*1670*		*70.4*	*39-120*			
Surrogate: 2,4,6-Tribromophenol	1760		ug/kg	*2500*		*70.5*	*31-131*			
Surrogate: p-Terphenyl-d14	1360		ug/kg	*1670*		*81.7*	*31-130*			
LCS (BFI0349-BS1)				Prepared: 18-Sep-2017 Analyzed: 27-Sep-2017 00:44						
Phenol	1060	67	ug/kg	1670		63.7	37-120			
bis(2-chloroethyl) ether	1130	67	ug/kg	1670		67.8	43-120			
2-Chlorophenol	1170	67	ug/kg	1670		70.1	45-120			
1,3-Dichlorobenzene	1140	67	ug/kg	1670		68.3	47-120			
1,4-Dichlorobenzene	1170	67	ug/kg	1670		70.4	46-120			
Benzyl Alcohol	1160	330	ug/kg	1670		69.8	16-120			
1,2-Dichlorobenzene	1220	67	ug/kg	1670		73.0	48-120			
2-Methylphenol	1070	67	ug/kg	1670		64.5	45-120			
2,2'-Oxybis(1-chloropropane)	1090	67	ug/kg	1670		65.6	36-120			
4-Methylphenol	1230	67	ug/kg	1670		74.1	47-120			
N-Nitroso-di-n-Propylamine	1110	67	ug/kg	1670		66.8	44-120			
Hexachloroethane	1190	67	ug/kg	1670		71.3	43-120			
Nitrobenzene	1150	67	ug/kg	1670		68.9	39-120			
Isophorone	1330	67	ug/kg	1670		79.6	57-120			
2-Nitrophenol	1460	67	ug/kg	1670		87.8	50-120			Q
2,4-Dimethylphenol	764	67	ug/kg	1670		45.8	40-120			
Bis(2-Chloroethoxy)methane	1240	67	ug/kg	1670		74.4	49-120			
Benzoic acid	1020	670	ug/kg	1670		61.4	10-160			
2,4-Dichlorophenol	1380	330	ug/kg	1670		82.8	51-120			
1,2,4-Trichlorobenzene	1330	67	ug/kg	1670		79.8	50-120			
Naphthalene	1140	67	ug/kg	1670		68.5	50-120			
4-Chloroaniline	4580	330	ug/kg	8330		55.0	17-149			
Hexachlorobutadiene	1380	67	ug/kg	1670		82.7	46-120			Q
4-Chloro-3-Methylphenol	1390	330	ug/kg	1670		83.5	54-120			
2-Methylnaphthalene	1190	67	ug/kg	1670		71.3	54-120			
Hexachlorocyclopentadiene	7580	330	ug/kg	8330		90.9	23-149			E
2,4,6-Trichlorophenol	1360	330	ug/kg	1670		81.6	51-120			
2,4,5-Trichlorophenol	1350	330	ug/kg	1670		80.9	52-120			
2-Chloronaphthalene	1540	67	ug/kg	1670		92.3	48-120			Q

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Semivolatile Organic Compounds - Quality Control

Batch BFI0349 - EPA 3546 (Microwave)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0349-BS1)				Prepared: 18-Sep-2017 Analyzed: 27-Sep-2017 00:44						
2-Nitroaniline	6000	330	ug/kg	8330		72.0	51-120			E
Dimethylphthalate	1480	67	ug/kg	1670		88.8	56-120			
Acenaphthylene	1300	67	ug/kg	1670		78.2	56-120			
2,6-Dinitrotoluene	8630	330	ug/kg	8330		104	54-124			Q, E
3-Nitroaniline	6310	330	ug/kg	8330		75.7	39-142			E
Acenaphthene	1230	67	ug/kg	1670		73.9	48-120			
2,4-Dinitrophenol	908	670	ug/kg	1670		54.5	15-169			Q
Dibenzofuran	1300	67	ug/kg	1670		77.8	55-120			
4-Nitrophenol	1110	330	ug/kg	1670		66.5	23-130			
2,4-Dinitrotoluene	8190	330	ug/kg	8330		98.3	57-127			Q, E
Fluorene	1440	67	ug/kg	1670		86.5	55-120			Q
Diethyl phthalate	1460	67	ug/kg	1670		87.3	54-120			
4-Chlorophenylphenyl ether	1530	67	ug/kg	1670		91.9	52-120			Q
4-Nitroaniline	6830	330	ug/kg	8330		81.9	47-124			Q, E
4,6-Dinitro-2-methylphenol	1390	670	ug/kg	1670		83.4	10-157			Q
N-Nitrosodiphenylamine	1390	67	ug/kg	1670		83.4	54-138			
4-Bromophenyl phenyl ether	1480	67	ug/kg	1670		88.7	50-120			
Hexachlorobenzene	1440	67	ug/kg	1670		86.1	50-121			
Pentachlorophenol	520	330	ug/kg	1670		31.2	40-123			*, Q
Phenanthrene	1380	67	ug/kg	1670		83.0	55-120			
Anthracene	1290	67	ug/kg	1670		77.2	57-120			
Carbazole	1360	67	ug/kg	1670		81.4	60-121			
Di-n-Butylphthalate	1540	67	ug/kg	1670		92.3	60-120			
Fluoranthene	1510	67	ug/kg	1670		90.7	52-129			
Pyrene	1610	67	ug/kg	1670		96.8	49-134			
Butylbenzylphthalate	1720	67	ug/kg	1670		103	44-144			Q
Benzo(a)anthracene	1720	67	ug/kg	1670		103	56-124			Q
3,3'-Dichlorobenzidine	5890	330	ug/kg	8330		70.7	37-140			Q
Chrysene	1610	67	ug/kg	1670		96.6	53-124			
bis(2-Ethylhexyl)phthalate	1620	67	ug/kg	1670		97.3	63-128			
Di-n-Octylphthalate	1590	67	ug/kg	1670		95.3	59-120			
Benzo(b)fluoranthene	1610	67	ug/kg	1670		96.6	42-132			
Benzo(k)fluoranthene	1630	67	ug/kg	1670		97.7	39-129			
Benzo(a)pyrene	1570	67	ug/kg	1670		94.4	53-120			
Indeno(1,2,3-cd)pyrene	1390	67	ug/kg	1670		83.4	40-128			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Semivolatile Organic Compounds - Quality Control

Batch BFI0349 - EPA 3546 (Microwave)

Instrument: NT6 Analyst: VTS

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFI0349-BS1)				Prepared: 18-Sep-2017 Analyzed: 27-Sep-2017 00:44						
Dibenzo(a,h)anthracene	1470	67	ug/kg	1670		88.1	47-123			
Benzo(g,h,i)perylene	1290	67	ug/kg	1670		77.2	44-125			
Benzofluoranthenes, Total	3210	67	ug/kg	3330		96.4	30-160			
1-Methylnaphthalene	1200	67	ug/kg	1670		71.9	55-120			
Surrogate: 2-Fluorophenol	1660		ug/kg	*2500*		*66.4*	*22-120*			
Surrogate: Phenol-d5	1680		ug/kg	*2500*		*67.3*	*27-120*			
Surrogate: 2-Chlorophenol-d4	1860		ug/kg	*2500*		*74.4*	*36-120*			
Surrogate: 1,2-Dichlorobenzene-d4	1270		ug/kg	*1670*		*76.5*	*38-120*			
Surrogate: Nitrobenzene-d5	1190		ug/kg	*1670*		*71.2*	*32-120*			
Surrogate: 2-Fluorobiphenyl	1360		ug/kg	*1670*		*81.3*	*39-120*			
Surrogate: 2,4,6-Tribromophenol	2390		ug/kg	*2500*		*95.6*	*31-131*			
Surrogate: p-Terphenyl-d14	1780		ug/kg	*1670*		*107*	*31-130*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Petroleum Hydrocarbons - Quality Control

Batch BFI0286 - EPA 3580A (Vortex)

Instrument: FID4 Analyst: JR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0286-BLK1)				Prepared: 14-Sep-2017 Analyzed: 16-Sep-2017 00:50						
Gasoline Range Organics (Tol-C12)	ND	10	mg/kg							U
Diesel Range Organics (C12-C24)	ND	25	mg/kg							U
Motor Oil Range Organics (C24-C38)	ND	50	mg/kg							U
Surrogate: o-Terphenyl	23.7		mg/kg	*22.5*		*105*	*50-150*			
Surrogate: n-Triacontane	23.1		mg/kg	*22.5*		*102*	*50-150*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Petroleum Hydrocarbons - Quality Control

Batch BFI0288 - EPA 3510C SepF

Instrument: FID4 Analyst: JR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0288-BLK1)			Prepared: 14-Sep-2017 Analyzed: 16-Sep-2017 02:17							
Gasoline Range Organics (Tol-C12)	ND	0.25	mg/L							U
Diesel Range Organics (C12-C24)	ND	0.50	mg/L							U
Motor Oil Range Organics (C24-C38)	ND	1.00	mg/L							U
Surrogate: o-Terphenyl	0.302		mg/L	*0.450*		*67.0*	*50-150*			
Surrogate: n-Triacontane	0.280		mg/L	*0.450*		*62.1*	*50-150*			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Metals and Metallic Compounds - Quality Control

Batch BFI0328 - SWN EPA 3050B

Instrument: ICPMS2 Analyst: CC

QC Sample/Analyte	Isotope	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0328-BLK1)				Prepared: 18-Sep-2017 Analyzed: 21-Sep-2017 17:58							
Chromium	52	ND	0.50	mg/kg							U
Chromium	53	ND	0.50	mg/kg							U
Lead	208	ND	0.10	mg/kg							U
Arsenic	75a	ND	0.20	mg/kg							U
Cadmium	111	ND	0.10	mg/kg							U
Cadmium	114	ND	0.10	mg/kg							U
LCS (BFI0328-BS1)				Prepared: 18-Sep-2017 Analyzed: 21-Sep-2017 18:23							
Chromium	52	26.6	0.50	mg/kg	25.0		106	80-120			
Chromium	53	26.2	0.50	mg/kg	25.0		105	80-120			
Lead	208	26.9	0.10	mg/kg	25.0		107	80-120			
Arsenic	75a	24.1	0.20	mg/kg	25.0		96.6	80-120			
Cadmium	111	24.6	0.10	mg/kg	25.0		98.5	80-120			
Cadmium	114	24.7	0.10	mg/kg	25.0		98.6	80-120			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Metals and Metallic Compounds - Quality Control

Batch BFI0329 - SMM EPA 7471B

Instrument: CETAC Analyst: MCB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0329-BLK1)			Prepared: 18-Sep-2017 Analyzed: 25-Sep-2017 15:02							
Mercury	ND	0.02500	mg/kg							U
LCS (BFI0329-BS1)			Prepared: 18-Sep-2017 Analyzed: 25-Sep-2017 15:04							
Mercury	0.5725	0.02500	mg/kg	0.5000		115	80-120			

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Metals and Metallic Compounds (dissolved) - Quality Control

Batch BFI0301 - REN EPA 600/4-79-020 4.1.4 HNO3 matrix

Instrument: ICPMS2 Analyst: CC

QC Sample/Analyte	Isotope	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0301-BLK1)				Prepared: 15-Sep-2017 Analyzed: 22-Sep-2017 17:00							
Chromium, Dissolved	52	ND	0.500	ug/L							U
Chromium, Dissolved	53	ND	0.500	ug/L							U
Lead, Dissolved	208	ND	0.100	ug/L							U
Arsenic, Dissolved	75a	ND	0.200	ug/L							U
Cadmium, Dissolved	111	ND	0.100	ug/L							U
Cadmium, Dissolved	114	ND	0.100	ug/L							U
LCS (BFI0301-BS1)				Prepared: 15-Sep-2017 Analyzed: 22-Sep-2017 16:16							
Chromium, Dissolved	52	25.1	0.500	ug/L	25.0		101	80-120			
Chromium, Dissolved	53	25.0	0.500	ug/L	25.0		100	80-120			
Lead, Dissolved	208	25.9	0.100	ug/L	25.0		103	80-120			
Arsenic, Dissolved	75a	25.1	0.200	ug/L	25.0		101	80-120			
Cadmium, Dissolved	111	25.2	0.100	ug/L	25.0		101	80-120			
Cadmium, Dissolved	114	25.0	0.100	ug/L	25.0		99.8	80-120			

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Metals and Metallic Compounds (dissolved) - Quality Control

Batch BFI0351 - TWM EPA 7470A

Instrument: CETAC Analyst: MCB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFI0351-BLK1)			Prepared: 18-Sep-2017 Analyzed: 20-Sep-2017 15:16							
Mercury, Dissolved	ND	0.000100	mg/L							U
LCS (BFI0351-BS1)			Prepared: 18-Sep-2017 Analyzed: 20-Sep-2017 15:18							
Mercury, Dissolved	0.00222	0.000100	mg/L	0.00200		111	80-120			
Duplicate (BFI0351-DUP1)	**Source: 17I0139-02**		Prepared: 18-Sep-2017 Analyzed: 20-Sep-2017 15:21							
Mercury, Dissolved	ND	0.000100	mg/L		ND					U
Matrix Spike (BFI0351-MS1)	**Source: 17I0139-02**		Prepared: 18-Sep-2017 Analyzed: 20-Sep-2017 15:23							
Mercury, Dissolved	0.00113	0.000100	mg/L	0.00100	ND	113	75-125			

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Certified Analyses included in this Report

Analyte	Certifications
EPA 200.8 in Solid	
Chromium-52	NELAP,DoD-ELAP,WADOE
Chromium-53	NELAP,DoD-ELAP,WADOE
Lead-208	NELAP,DoD-ELAP,WADOE
EPA 200.8 in Water	
Chromium-52	NELAP,WADOE,WA-DW,DoD-ELAP
Chromium-53	NELAP,WADOE,WA-DW,DoD-ELAP
Lead-208	NELAP,WADOE,WA-DW,DoD-ELAP
EPA 200.8 UCT-KED in Solid	
Arsenic-75a	NELAP,DoD-ELAP,WADOE
Cadmium-111	NELAP,DoD-ELAP,WADOE
Cadmium-114	NELAP,DoD-ELAP,WADOE
EPA 200.8 UCT-KED in Water	
Arsenic-75a	NELAP,WADOE,WA-DW,DoD-ELAP
Cadmium-111	NELAP,WADOE,WA-DW,DoD-ELAP
Cadmium-114	NELAP,WADOE,WA-DW,DoD-ELAP
EPA 7470A in Water	
Mercury	WADOE,NELAP,DoD-ELAP,CALAP
EPA 7471B in Solid	
Mercury	WADOE,NELAP,DoD-ELAP,CALAP
EPA 8260C in Solid	
Chloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Vinyl Chloride	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromomethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Chloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Trichlorofluoromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Acrolein	WADOE,DoD-ELAP,NELAP,CALAP
1,1,2-Trichloro-1,2,2-Trifluoroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Acetone	WADOE,DoD-ELAP,NELAP,CALAP
1,1-Dichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromoethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Iodomethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Methylene Chloride	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Acrylonitrile	WADOE,DoD-ELAP,NELAP,CALAP

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Carbon Disulfide	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
trans-1,2-Dichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Vinyl Acetate	WADOE,DoD-ELAP,NELAP,CALAP
1,1-Dichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
2-Butanone	WADOE,DoD-ELAP,NELAP,CALAP
2,2-Dichloropropane	WADOE,DoD-ELAP,NELAP,CALAP
cis-1,2-Dichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Chloroform	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromochloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1,1-Trichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1-Dichloropropene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Carbon tetrachloride	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2-Dichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Benzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Trichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2-Dichloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromodichloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Dibromomethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
2-Chloroethyl vinyl ether	WADOE,DoD-ELAP,NELAP
4-Methyl-2-Pentanone	WADOE,DoD-ELAP,NELAP,CALAP
cis-1,3-Dichloropropene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Toluene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
trans-1,3-Dichloropropene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
2-Hexanone	WADOE,DoD-ELAP,NELAP,CALAP
1,1,2-Trichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,3-Dichloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Tetrachloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Dibromochloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2-Dibromoethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Chlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Ethylbenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1,1,2-Tetrachloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
m,p-Xylene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
o-Xylene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Xylenes, total	WADOE
Styrene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromoform	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1,2,2-Tetrachloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2,3-Trichloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
trans-1,4-Dichloro 2-Butene	WADOE,DoD-ELAP,NELAP

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

n-Propylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
Bromobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Isopropyl Benzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
2-Chlorotoluene	WADOE,DoD-ELAP,NELAP,CALAP
4-Chlorotoluene	WADOE,DoD-ELAP,NELAP,CALAP
t-Butylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,3,5-Trimethylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,2,4-Trimethylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
s-Butylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
4-Isopropyl Toluene	WADOE,DoD-ELAP,NELAP,CALAP
1,3-Dichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,4-Dichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP
n-Butylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,2-Dichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,2-Dibromo-3-chloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2,4-Trichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Hexachloro-1,3-Butadiene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Naphthalene	WADOE,DoD-ELAP,NELAP,CALAP
1,2,3-Trichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Dichlorodifluoromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Methyl tert-butyl Ether	WADOE,DoD-ELAP,NELAP,CALAP
n-Hexane	WADOE
2-Pentanone	WADOE
Dibromofluoromethane	WADOE
4-Bromofluorobenzene	WADOE

EPA 8260C in Water

Chloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acrolein	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromoethane	DoD-ELAP,NELAP,CALAP,WADOE
Iodomethane	DoD-ELAP,NELAP,CALAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,CALAP,WADOE

The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Carbon Disulfide	DoD-ELAP,NELAP,CALAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,CALAP,WADOE
1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Butanone	DoD-ELAP,NELAP,CALAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,CALAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,CALAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Styrene	DoD-ELAP,NELAP,CALAP,WADOE
Bromoform	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,CALAP,WADOE

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The Boeing Company	Project: Renton Phase II Investigation	
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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Bromobenzene	DoD-ELAP,NELAP,CALAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,CALAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,CALAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
n-Hexane	WADOE
2-Pentanone	WADOE

EPA 8270D in Solid

Phenol	CALAP,DoD-ELAP,NELAP,WADOE
bis(2-chloroethyl) ether	CALAP,DoD-ELAP,NELAP,WADOE
2-Chlorophenol	CALAP,DoD-ELAP,NELAP,WADOE
1,3-Dichlorobenzene	CALAP,DoD-ELAP,NELAP,WADOE
1,4-Dichlorobenzene	CALAP,DoD-ELAP,NELAP,WADOE
Benzyl Alcohol	CALAP,DoD-ELAP,NELAP,WADOE
1,2-Dichlorobenzene	CALAP,DoD-ELAP,NELAP,WADOE
2-Methylphenol	CALAP,DoD-ELAP,NELAP,WADOE
2,2'-Oxybis(1-chloropropane)	DoD-ELAP,NELAP
4-Methylphenol	CALAP,DoD-ELAP,NELAP,WADOE
N-Nitroso-di-n-Propylamine	CALAP,DoD-ELAP,NELAP,WADOE
Hexachloroethane	CALAP,DoD-ELAP,NELAP,WADOE
Nitrobenzene	CALAP,DoD-ELAP,NELAP,WADOE
Isophorone	CALAP,DoD-ELAP,NELAP,WADOE
2-Nitrophenol	CALAP,DoD-ELAP,NELAP,WADOE
2,4-Dimethylphenol	CALAP,DoD-ELAP,NELAP,WADOE

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Bis(2-Chloroethoxy)methane	CALAP,DoD-ELAP,NELAP,WADOE
Benzoic acid	CALAP,DoD-ELAP,NELAP,WADOE
2,4-Dichlorophenol	CALAP,DoD-ELAP,NELAP,WADOE
1,2,4-Trichlorobenzene	CALAP,DoD-ELAP,NELAP,WADOE
Naphthalene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
4-Chloroaniline	CALAP,DoD-ELAP,NELAP,WADOE
Hexachlorobutadiene	CALAP,DoD-ELAP,NELAP,WADOE
4-Chloro-3-Methylphenol	CALAP,DoD-ELAP,NELAP,WADOE
2-Methylnaphthalene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Hexachlorocyclopentadiene	CALAP,DoD-ELAP,NELAP,WADOE
2,4,6-Trichlorophenol	CALAP,DoD-ELAP,NELAP,WADOE
2,4,5-Trichlorophenol	CALAP,DoD-ELAP,NELAP,WADOE
2-Chloronaphthalene	CALAP,DoD-ELAP,NELAP,WADOE
2-Nitroaniline	CALAP,DoD-ELAP,NELAP,WADOE
Dimethylphthalate	CALAP,DoD-ELAP,NELAP,WADOE
Acenaphthylene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
2,6-Dinitrotoluene	CALAP,DoD-ELAP,NELAP,WADOE
3-Nitroaniline	CALAP,DoD-ELAP,NELAP,WADOE
Acenaphthene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
2,4-Dinitrophenol	CALAP,DoD-ELAP,NELAP,WADOE
Dibenzofuran	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
4-Nitrophenol	CALAP,DoD-ELAP,NELAP,WADOE
2,4-Dinitrotoluene	CALAP,DoD-ELAP,NELAP,WADOE
Fluorene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Diethyl phthalate	CALAP,DoD-ELAP,NELAP,WADOE
4-Chlorophenylphenyl ether	CALAP,DoD-ELAP,NELAP,WADOE
4-Nitroaniline	CALAP,DoD-ELAP,NELAP,WADOE
4,6-Dinitro-2-methylphenol	CALAP,DoD-ELAP,NELAP,WADOE
N-Nitrosodiphenylamine	DoD-ELAP,NELAP,WADOE
4-Bromophenyl phenyl ether	CALAP,DoD-ELAP,NELAP,WADOE
Hexachlorobenzene	CALAP,DoD-ELAP,NELAP,WADOE
Pentachlorophenol	CALAP,DoD-ELAP,NELAP,WADOE
Phenanthrene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Anthracene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Carbazole	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Di-n-Butylphthalate	CALAP,DoD-ELAP,NELAP,WADOE
Fluoranthene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Pyrene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Butylbenzylphthalate	CALAP,DoD-ELAP,NELAP,WADOE
Benzo(a)anthracene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC

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3,3'-Dichlorobenzidine	DoD-ELAP,NELAP,WADOE
Chrysene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
bis(2-Ethylhexyl)phthalate	CALAP,DoD-ELAP,NELAP,WADOE
Di-n-Octylphthalate	CALAP,DoD-ELAP,NELAP,WADOE
Benzo(b)fluoranthene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Benzo(k)fluoranthene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Benzo(a)pyrene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Indeno(1,2,3-cd)pyrene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Dibenzo(a,h)anthracene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Benzo(g,h,i)perylene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Benzofluoranthenes, Total	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
1-Methylnaphthalene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
N-Nitrosodimethylamine	CALAP,DoD-ELAP,NELAP,WADOE
Aniline	CALAP,DoD-ELAP,NELAP,WADOE
Benzidine	CALAP,DoD-ELAP,NELAP,WADOE
Retene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Perylene	CALAP,DoD-ELAP,NELAP,WADOE,ADEC
Pyridine	CALAP,DoD-ELAP,NELAP,WADOE
N-Nitrosomethylethylamine	CALAP,DoD-ELAP,NELAP,WADOE
2,6-Dichlorophenol	CALAP,DoD-ELAP,NELAP,WADOE
alpha-Terpineol	CALAP,DoD-ELAP,NELAP,WADOE
2,3,4,6-Tetrachlorophenol	CALAP,DoD-ELAP,WADOE
Triphenyl Phosphate	CALAP,DoD-ELAP,NELAP,WADOE
Butyl Diphenyl Phosphate	CALAP,DoD-ELAP,NELAP,WADOE
Dibutyl Phenyl Phosphate	CALAP,DoD-ELAP,NELAP,WADOE
Tributyl Phosphate	CALAP,DoD-ELAP,NELAP,WADOE
Butylated Hydroxytoluene	CALAP,DoD-ELAP,NELAP,WADOE
Azobenzene (1,2-DP-Hydrazine)	CALAP,DoD-ELAP,NELAP
4-Chloroguaiacol	DoD-ELAP,WADOE
3,4-Dichloroguaiacol	DoD-ELAP,WADOE
4,5-Dichloroguaiacol	DoD-ELAP,WADOE
4,6-Dichloroguaiacol	DoD-ELAP,WADOE
Tetrachloroguaiacol	CALAP,DoD-ELAP,WADOE
3,4,5-Trichloroguaiacol	CALAP,DoD-ELAP,WADOE
3,4,6-Trichloroguaiacol	CALAP,DoD-ELAP,WADOE
4,5,6-Trichloroguaiacol	CALAP,DoD-ELAP,WADOE
Guaiacol	CALAP,DoD-ELAP,WADOE
1,2,4,5-Tetrachlorobenzene	CALAP,DoD-ELAP,WADOE

EPA 8270D in Water

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Phenol	CALAP,WADOE,DoD-ELAP,NELAP
bis(2-chloroethyl) ether	CALAP,WADOE,DoD-ELAP,NELAP
2-Chlorophenol	CALAP,WADOE,DoD-ELAP,NELAP
1,3-Dichlorobenzene	CALAP,WADOE,DoD-ELAP,NELAP
1,4-Dichlorobenzene	CALAP,WADOE,DoD-ELAP,NELAP
Benzyl Alcohol	CALAP,WADOE,DoD-ELAP,NELAP
1,2-Dichlorobenzene	CALAP,WADOE,DoD-ELAP,NELAP
2-Methylphenol	CALAP,WADOE,DoD-ELAP,NELAP
4-Methylphenol	CALAP,WADOE,DoD-ELAP,NELAP
N-Nitroso-di-n-Propylamine	CALAP,WADOE,DoD-ELAP,NELAP
Hexachloroethane	CALAP,WADOE,DoD-ELAP,NELAP
Nitrobenzene	CALAP,WADOE,DoD-ELAP,NELAP
Isophorone	CALAP,WADOE,DoD-ELAP,NELAP
2-Nitrophenol	CALAP,WADOE,DoD-ELAP,NELAP
2,4-Dimethylphenol	CALAP,WADOE,DoD-ELAP,NELAP
Bis(2-Chloroethoxy)methane	CALAP,WADOE,DoD-ELAP,NELAP
Benzoic acid	CALAP,WADOE,DoD-ELAP,NELAP
2,4-Dichlorophenol	CALAP,WADOE,DoD-ELAP,NELAP
1,2,4-Trichlorobenzene	CALAP,WADOE,DoD-ELAP,NELAP
Naphthalene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
4-Chloroaniline	CALAP,WADOE,DoD-ELAP,NELAP
Hexachlorobutadiene	CALAP,WADOE,DoD-ELAP,NELAP
4-Chloro-3-Methylphenol	CALAP,WADOE,DoD-ELAP,NELAP
2-Methylnaphthalene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Hexachlorocyclopentadiene	CALAP,WADOE,DoD-ELAP,NELAP
2,4,6-Trichlorophenol	CALAP,WADOE,DoD-ELAP,NELAP
2,4,5-Trichlorophenol	CALAP,WADOE,DoD-ELAP,NELAP
2-Chloronaphthalene	CALAP,WADOE,DoD-ELAP,NELAP
2-Nitroaniline	CALAP,WADOE,DoD-ELAP,NELAP
Dimethylphthalate	CALAP,WADOE,DoD-ELAP,NELAP
Acenaphthylene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
2,6-Dinitrotoluene	CALAP,WADOE,DoD-ELAP,NELAP
3-Nitroaniline	CALAP,WADOE,DoD-ELAP,NELAP
Acenaphthene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
2,4-Dinitrophenol	CALAP,WADOE,DoD-ELAP,NELAP
Dibenzofuran	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
4-Nitrophenol	CALAP,WADOE,DoD-ELAP,NELAP
2,4-Dinitrotoluene	CALAP,WADOE,DoD-ELAP,NELAP
Fluorene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Diethyl phthalate	CALAP,WADOE,DoD-ELAP,NELAP

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

4-Chlorophenylphenyl ether	CALAP,WADOE,DoD-ELAP,NELAP
4-Nitroaniline	CALAP,WADOE,DoD-ELAP,NELAP
4,6-Dinitro-2-methylphenol	CALAP,WADOE,DoD-ELAP,NELAP
4-Bromophenyl phenyl ether	CALAP,WADOE,DoD-ELAP,NELAP
Hexachlorobenzene	CALAP,WADOE,DoD-ELAP,NELAP
Pentachlorophenol	CALAP,WADOE,DoD-ELAP,NELAP
Phenanthrene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Anthracene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Carbazole	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Di-n-Butylphthalate	CALAP,WADOE,DoD-ELAP,NELAP
Fluoranthene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Pyrene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Butylbenzylphthalate	CALAP,WADOE,DoD-ELAP,NELAP
Benzo(a)anthracene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Chrysene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
bis(2-Ethylhexyl)phthalate	CALAP,WADOE,DoD-ELAP,NELAP
Di-n-Octylphthalate	CALAP,WADOE,DoD-ELAP,NELAP
Benzo(b)fluoranthene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Benzo(k)fluoranthene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Benzo(a)pyrene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Indeno(1,2,3-cd)pyrene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Dibenzo(a,h)anthracene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Benzo(g,h,i)perylene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Benzofluoranthenes, Total	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
1-Methylnaphthalene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
N-Nitrosodimethylamine	CALAP,WADOE,DoD-ELAP,NELAP
Aniline	CALAP,WADOE,DoD-ELAP,NELAP
Benzidine	CALAP,WADOE,DoD-ELAP,NELAP
Retene	CALAP,WADOE,ADEC,DoD-ELAP,NELAP
Perylene	CALAP,WADOE,ADEC
Pyridine	CALAP,WADOE,DoD-ELAP,NELAP
N-Nitrosomethylethylamine	CALAP
2,6-Dichlorophenol	CALAP,WADOE
alpha-Terpineol	CALAP,WADOE,DoD-ELAP,NELAP
1,4-Dioxane	CALAP,WADOE,DoD-ELAP,NELAP
2,3,4,6-Tetrachlorophenol	CALAP,WADOE,DoD-ELAP
Triphenyl Phosphate	CALAP,WADOE,DoD-ELAP,NELAP
Butyl Diphenyl Phosphate	CALAP,WADOE,DoD-ELAP,NELAP
Dibutyl Phenyl Phosphate	CALAP,WADOE,DoD-ELAP,NELAP
Tributyl Phosphate	CALAP,WADOE,DoD-ELAP,NELAP

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Butylated Hydroxytoluene	CALAP,WADOE,DoD-ELAP,NELAP
Azobenzene (1,2-DP-Hydrazine)	CALAP,WADOE,DoD-ELAP,NELAP
Tetrachloroguaiacol	CALAP,WADOE,DoD-ELAP
3,4,5-Trichloroguaiacol	CALAP,WADOE,DoD-ELAP
3,4,6-Trichloroguaiacol	CALAP,WADOE,DoD-ELAP
4,5,6-Trichloroguaiacol	CALAP,WADOE,DoD-ELAP
Guaiacol	CALAP,WADOE,DoD-ELAP
1,2,4,5-Tetrachlorobenzene	CALAP,WADOE,DoD-ELAP,NELAP

NWTPH-HCID in Solid

Gasoline Range Organics (Tol-C12)	NELAP,DoD-ELAP,WADOE
Diesel Range Organics (C12-C24)	NELAP,DoD-ELAP,WADOE
Motor Oil Range Organics (C24-C38)	NELAP,DoD-ELAP,WADOE

NWTPH-HCID in Water

Gasoline Range Organics (Tol-C12)	NELAP,DoD-ELAP,WADOE
Diesel Range Organics (C12-C24)	NELAP,DoD-ELAP,WADOE
Motor Oil Range Organics (C24-C38)	NELAP,DoD-ELAP,WADOE

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	UST-033	09/01/2017
CALAP	California Department of Public Health CAELAP	2748	02/28/2018
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/07/2019
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006	05/11/2018
WADOE	WA Dept of Ecology	C558	06/30/2018
WA-DW	Ecology - Drinking Water	C558	06/30/2018

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The Boeing Company	Project: Renton Phase II Investigation	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	28-Sep-2017 08:43

Notes and Definitions

U	This analyte is not detected above the applicable reporting or detection limit.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
M	Estimated value for a GC/MS analyte detected and confirmed by an analyst but with low spectral match parameters.
J	Estimated concentration value detected below the reporting limit.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
D	The reported value is from a dilution
*	Flagged value is not within established control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

08 January 2018

Peter Hudelson
The Boeing Company
P.O. Box 3707 MC 9U4-26
Seattle, WA 98124-2207

RE: Renton Phase II Supplemental

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
17L0423	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the reqirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.



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ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006

PJLA Testing
Accreditation # 66169

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Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 17L0423	Turn-around Requested: Standard	Page: 1 of 2	
ARI Client Company: Boeing	Phone: (425) 234-4921	Date: 12/22/17	Ice Present?
Client Contact: Pete Hudelson, Kathryn Hartley (LAI)		No. of Coolers:	Cooler Temps:
Client Project Name: Renton Building 5 Supplemental Phase II 10-13/10-16			
Client Project #: 0025213.190	Samplers: Steph Remanda		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
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Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: VOCs (8260 full list)	Analysis Requested: PCB's 8082	Analysis Requested: TPH-G NWTPH-Gx	Notes/Comments
LAI-B10-S(1-3)	12/22/17	1000	Soil	2		X		
LAI-B10-S(5-7)	12/22/17	1025	Soil	2		X		
LAI-B8-S(1-3)	12/22/17	1110	Soil	2		X		
LAI-B8-S(5-7)	12/22/17	1140	Soil	2		X		DO NOT RUN VOC's SAR 12/22/17
LAI-B8-GW	12/22/17	1220	H2O	5	X		X	
LAI-B9-S(1-2)	12/22/17	1315	Soil	1	X	X		
LAI-B9-S(5-7)	12/22/17	1330	Soil	7		X		
LAI-B9-S(10-12)	12/22/17	1410	Soil	6	X		X	
LAI-B9-GW	12/22/17	1400	H2O	5	X		X	
LAI-B7-S(9-11)	12/22/17	1620	Soil	6	X		X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Invoice to Pete Hudelson @ Boeing	Printed Name: Stephanie Remanda	Printed Name: Ken Brown	Printed Name: Ken Brown	Printed Name: Stephanie Fisher
	Company: Landau Associates	Company: Landau Associates	Company: Landau Associates	Company: ARI
	Date & Time: 12/22/17 @ 16:50	Date & Time: 12/22/17 16:50	Date & Time: 12/22/17 17:10	Date & Time: 12/22/17 1710

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 17L0423	Turn-around Requested: Standard	Page: 2 of 2	
ARI Client Company: Boeing	Phone: (425) 234-4921	Date: 12/22/17	Ice Present?
Client Contact: Pete Hudelson, Kathryn Hartley		No. of Coolers:	Cooler Temps:
Client Project Name: Renton Buildings 10-13/10-16 Supplemental Phase II			
Client Project #: 0025213.190	Samplers: Steph Renardo		

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Analytical Chemists and Consultants
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Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: VOCs (8260) SVOCs (8270)	Analysis Requested: PCB's 8082	Analysis Requested: TPH-G NWTPH-Gx	Notes/Comments
LAI-B8-S(13-15)	12/22/17	1152	Soil	6	X		X	
LAI-B7-S(13-15)	12/22/17	1600	Soil	6	X		X	
LAI-B7-GW	12/22/17	1540	H2O	5	X		X	
Trip Blanks	—	—	H2O	4	X		X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Invoice to: Pete Hudelson @ Boeing	Printed Name: Stephanie Renardo	Printed Name: Ken Brown	Printed Name: Ken Brown	Printed Name: Stephanie Fisher
	Company: Landau Associate	Company: Landau Associates	Company: LAI	Company: ARI
	Date & Time: 12/22/17 @ 1650	Date & Time: 12-22-17 16:50	Date & Time: 12-22-17 17:10	Date & Time: 12/22/17 1710

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Boeing/Landau

COC No(s): _____ NA

Assigned ARI Job No: 17L0423

Project Name: _____

Delivered by: Fed-Ex UPS Courier ~~Hand Delivered~~ Other: _____

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 4.3

Time: _____

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: D00256S

Cooler Accepted by: SF Date: 12/22/17 Time: 1710

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ...	Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	YES	NO
Were all bottles sealed in individual plastic bags?		YES	NO
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA	12/18/17 & 12/19/17	

Was Sample Split by ARI : NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: BF Date: 12/26/17 Time: 734

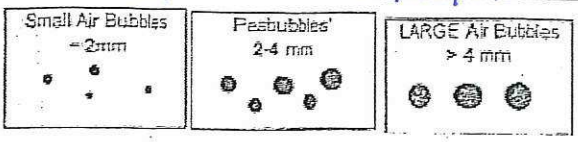
*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

COC lists 7 samples for LAL-139-S(5-7), but some of those containers are voas which ~~wher~~ BF 12/26/17 weren't checked for analysis on COC

By: BF Date: 12/26/17 TBs - 3 have pb



Small → "sm"	(< 2 mm)
Peabubbles → "pb"	(2 to < 4 mm)
Large → "lg"	(4 to < 6 mm)
Headspace → "hs"	(> 6 mm)

The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LAI-B10-S(1-3)	17L0423-01	Solid	22-Dec-2017 10:00	22-Dec-2017 17:10
LAI-B10-S(5-7)	17L0423-02	Solid	22-Dec-2017 10:25	22-Dec-2017 17:10
LAI-B8-S(1-3)	17L0423-03	Solid	22-Dec-2017 11:10	22-Dec-2017 17:10
LAI-B8-S(5-7)	17L0423-04	Solid	22-Dec-2017 11:40	22-Dec-2017 17:10
LAI-B8-GW	17L0423-05	Water	22-Dec-2017 12:20	22-Dec-2017 17:10
LAI-B9-S(1-2)	17L0423-06	Solid	22-Dec-2017 13:15	22-Dec-2017 17:10
LAI-B9-S(5-7)	17L0423-07	Solid	22-Dec-2017 13:30	22-Dec-2017 17:10
LAI-B9-S(10-12)	17L0423-08	Solid	22-Dec-2017 14:10	22-Dec-2017 17:10
LAI-B9-GW	17L0423-09	Water	22-Dec-2017 14:00	22-Dec-2017 17:10
LAI-B7-S(9-11)	17L0423-10	Solid	22-Dec-2017 16:20	22-Dec-2017 17:10
LAI-B8-S(13-15)	17L0423-11	Solid	22-Dec-2017 11:52	22-Dec-2017 17:10
LAI-B7-S(13-15)	17L0423-12	Solid	22-Dec-2017 16:00	22-Dec-2017 17:10
LAI-B7-GW	17L0423-13	Water	22-Dec-2017 15:40	22-Dec-2017 17:10
Trip Blanks	17L0423-14	Water	22-Dec-2017 00:00	22-Dec-2017 17:10

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Case Narrative

PCB Aroclors - EPA Method SW8082A

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.

Gasoline by NWTPH-g (GC/MS)

The sample(s) were run within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.

Volatiles - EPA Method SW8260C

The sample(s) were run within the recommended holding times.

Initial and continuing calibrations were within method requirements with the exception of the CCALs in association with batches BGA0052 and BGA0084 which are out of control high for all associated "Q" flagged analytes. All associated samples that contain analyte have been flagged with a "Q" qualifier.

Initial and continuing calibrations were within method requirements with the exception of the CCAL in association with batch BFL0583 which is out of control low for all associated "Q" flagged analytes. All associated samples that contain analyte have been flagged with a "Q" qualifier.

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits with the exception of the blank associated with batch BGA0052 which contained methylene chloride. All associated samples that contain analyte have been flagged with a "B" qualifier.

The LCS/LCSD percent recoveries and RPD were within control limits with the exception of analytes flagged on the associated forms.

The trip blank was analyzed from a vial that contained a peabubble.

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B10-S(1-3)

17L0423-01 (Solid)

Aroclor PCB

Method: EPA 8082A
Instrument: ECD7

Sampled: 12/22/2017 10:00
Analyzed: 04-Jan-2018 00:20

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFL0613	Sample Size: 6.11 g (wet)	Dry Weight:5.47 g
	Prepared: 27-Dec-2017	Final Volume: 5 mL	% Solids: 89.46
Sample Cleanup:	Cleanup Method: Sulfuric Acid		
	Cleanup Batch: CGA0003	Initial Volume: 5 mL	
	Cleaned: 02-Jan-2018	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		
	Cleanup Batch: CGA0004	Initial Volume: 5 mL	
	Cleaned: 02-Jan-2018	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	18.3	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	18.3	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	18.3	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	18.3	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	18.3	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	18.3	**52.3**	ug/kg	
Aroclor 1260	11096-82-5	1	18.3	**24.8**	ug/kg	
Aroclor 1262	37324-23-5	1	18.3	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	18.3	ND	ug/kg	U
Surrogate: Decachlorobiphenyl			*40-133 %*	*83.8*	*%*	
Surrogate: Tetrachlorometaxylene			*53-120 %*	*87.3*	*%*	
Surrogate: Decachlorobiphenyl [2C]			*40-133 %*	*78.7*	*%*	
Surrogate: Tetrachlorometaxylene [2C]			*53-120 %*	*85.7*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B10-S(1-3)

17L0423-01 (Solid)

Extractions

Method: PSEP 1986
Instrument: N/A

Sampled: 12/22/2017 10:00
Analyzed: 26-Dec-2017 14:19

Sample Preparation: Preparation Method: No Prep-Organics
Preparation Batch: BFL0597
Prepared: 26-Dec-2017
Sample Size: 1 g (wet)
Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids		1	0.01	**89.46**	%	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B10-S(5-7)

17L0423-02 (Solid)

Aroclor PCB

Method: EPA 8082A
Instrument: ECD7

Sampled: 12/22/2017 10:25
Analyzed: 04-Jan-2018 00:42

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFL0613	Sample Size: 7.07 g (wet)	Dry Weight:5.22 g
	Prepared: 27-Dec-2017	Final Volume: 5 mL	% Solids: 73.81
Sample Cleanup:	Cleanup Method: Sulfuric Acid		
	Cleanup Batch: CGA0003	Initial Volume: 5 mL	
	Cleaned: 02-Jan-2018	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		
	Cleanup Batch: CGA0004	Initial Volume: 5 mL	
	Cleaned: 02-Jan-2018	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	19.2	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	19.2	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	19.2	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	19.2	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	19.2	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	19.2	ND	ug/kg	U
Aroclor 1260	11096-82-5	1	19.2	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	19.2	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	19.2	ND	ug/kg	U
Surrogate: Decachlorobiphenyl			*40-133 %*	*86.1*	*%*	
Surrogate: Tetrachlorometaxylene			*53-120 %*	*85.3*	*%*	
Surrogate: Decachlorobiphenyl [2C]			*40-133 %*	*80.0*	*%*	
Surrogate: Tetrachlorometaxylene [2C]			*53-120 %*	*86.6*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B10-S(5-7)

17L0423-02 (Solid)

Extractions

Method: PSEP 1986
Instrument: N/A

Sampled: 12/22/2017 10:25
Analyzed: 26-Dec-2017 14:19

Sample Preparation: Preparation Method: No Prep-Organics
Preparation Batch: BFL0597
Prepared: 26-Dec-2017
Sample Size: 1 g (wet)
Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids		1	0.01	**73.81**	%	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B8-S(1-3)

17L0423-03 (Solid)

Aroclor PCB

Method: EPA 8082A
Instrument: ECD7

Sampled: 12/22/2017 11:10
Analyzed: 04-Jan-2018 01:04

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFL0613	Sample Size: 6.12 g (wet)	Dry Weight:5.31 g
	Prepared: 27-Dec-2017	Final Volume: 5 mL	% Solids: 86.79
Sample Cleanup:	Cleanup Method: Sulfuric Acid		
	Cleanup Batch: CGA0003	Initial Volume: 5 mL	
	Cleaned: 02-Jan-2018	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		
	Cleanup Batch: CGA0004	Initial Volume: 5 mL	
	Cleaned: 02-Jan-2018	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	18.8	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	18.8	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	18.8	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	18.8	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	18.8	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	18.8	ND	ug/kg	U
Aroclor 1260	11096-82-5	1	18.8	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	18.8	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	18.8	ND	ug/kg	U
Surrogate: Decachlorobiphenyl			*40-133 %*	*94.7*	*%*	
Surrogate: Tetrachlorometaxylene			*53-120 %*	*91.7*	*%*	
Surrogate: Decachlorobiphenyl [2C]			*40-133 %*	*89.2*	*%*	
Surrogate: Tetrachlorometaxylene [2C]			*53-120 %*	*90.8*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B8-S(1-3)

17L0423-03 (Solid)

Extractions

Method: PSEP 1986
Instrument: N/A

Sampled: 12/22/2017 11:10
Analyzed: 26-Dec-2017 14:19

Sample Preparation: Preparation Method: No Prep-Organics
Preparation Batch: BFL0597
Prepared: 26-Dec-2017
Sample Size: 1 g (wet)
Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids		1	0.01	**86.79**	%	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B8-S(5-7)

17L0423-04 (Solid)

Aroclor PCB

Method: EPA 8082A
Instrument: ECD7

Sampled: 12/22/2017 11:40
Analyzed: 04-Jan-2018 01:27

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFL0613	Sample Size: 6.06 g (wet)	Dry Weight:5.50 g
	Prepared: 27-Dec-2017	Final Volume: 5 mL	% Solids: 90.77
Sample Cleanup:	Cleanup Method: Sulfuric Acid		
	Cleanup Batch: CGA0003	Initial Volume: 5 mL	
	Cleaned: 02-Jan-2018	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		
	Cleanup Batch: CGA0004	Initial Volume: 5 mL	
	Cleaned: 02-Jan-2018	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	18.2	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	18.2	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	18.2	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	18.2	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	18.2	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	18.2	ND	ug/kg	U
Aroclor 1260	11096-82-5	1	18.2	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	18.2	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	18.2	ND	ug/kg	U
Surrogate: Decachlorobiphenyl			*40-133 %*	*88.7*	*%*	
Surrogate: Tetrachlorometaxylene			*53-120 %*	*90.6*	*%*	
Surrogate: Decachlorobiphenyl [2C]			*40-133 %*	*85.6*	*%*	
Surrogate: Tetrachlorometaxylene [2C]			*53-120 %*	*88.6*	*%*	

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B8-S(5-7)

17L0423-04 (Solid)

Extractions

Method: PSEP 1986
Instrument: N/A

Sampled: 12/22/2017 11:40
Analyzed: 26-Dec-2017 14:19

Sample Preparation: Preparation Method: No Prep-Organics
Preparation Batch: BFL0597
Prepared: 26-Dec-2017
Sample Size: 1 g (wet)
Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids		1	0.01	**90.77**	%	

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B8-GW

17L0423-05 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 12/22/2017 12:20
Analyzed: 26-Dec-2017 12:16

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFL0583 Sample Size: 10 mL
Prepared: 26-Dec-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U

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Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B8-GW

17L0423-05 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 12/22/2017 12:20
Analyzed: 26-Dec-2017 12:16

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B8-GW

17L0423-05 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 12/22/2017 12:20
Analyzed: 26-Dec-2017 12:16

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*98.0*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*95.1*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*92.2*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*102*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B8-GW

17L0423-05 (Water)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT2

Sampled: 12/22/2017 12:20
Analyzed: 26-Dec-2017 12:16

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFL0583 Sample Size: 10 mL
Prepared: 26-Dec-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*95.1*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*92.2*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B9-S(1-2)

17L0423-06 (Solid)

Aroclor PCB

Method: EPA 8082A
Instrument: ECD7

Sampled: 12/22/2017 13:15
Analyzed: 04-Jan-2018 01:49

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFL0613	Sample Size: 6.07 g (wet)	Dry Weight:5.25 g
	Prepared: 27-Dec-2017	Final Volume: 5 mL	% Solids: 86.47
Sample Cleanup:	Cleanup Method: Sulfuric Acid		
	Cleanup Batch: CGA0003	Initial Volume: 5 mL	
	Cleaned: 02-Jan-2018	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		
	Cleanup Batch: CGA0004	Initial Volume: 5 mL	
	Cleaned: 02-Jan-2018	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	19.1	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	19.1	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	19.1	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	19.1	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	19.1	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	19.1	**63.2**	ug/kg	
Aroclor 1260	11096-82-5	1	19.1	**20.8**	ug/kg	
Aroclor 1262	37324-23-5	1	19.1	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	19.1	ND	ug/kg	U
Surrogate: Decachlorobiphenyl			*40-133 %*	*87.1*	*%*	
Surrogate: Tetrachlorometaxylene			*53-120 %*	*83.4*	*%*	
Surrogate: Decachlorobiphenyl [2C]			*40-133 %*	*80.9*	*%*	
Surrogate: Tetrachlorometaxylene [2C]			*53-120 %*	*94.4*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B9-S(1-2)

17L0423-06 (Solid)

Extractions

Method: PSEP 1986
Instrument: N/A

Sampled: 12/22/2017 13:15
Analyzed: 26-Dec-2017 14:19

Sample Preparation: Preparation Method: No Prep-Organics
Preparation Batch: BFL0597
Prepared: 26-Dec-2017
Sample Size: 1 g (wet)
Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids		1	0.01	**86.47**	%	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B9-S(5-7)

17L0423-07 (Solid)

Aroclor PCB

Method: EPA 8082A
Instrument: ECD7

Sampled: 12/22/2017 13:30
Analyzed: 04-Jan-2018 02:11

Sample Preparation:	Preparation Method: EPA 3546 (Microwave)		
	Preparation Batch: BFL0613	Sample Size: 7.01 g (wet)	Dry Weight:5.11 g
	Prepared: 27-Dec-2017	Final Volume: 5 mL	% Solids: 72.89
Sample Cleanup:	Cleanup Method: Sulfuric Acid		
	Cleanup Batch: CGA0003	Initial Volume: 5 mL	
	Cleaned: 02-Jan-2018	Final Volume: 5 mL	
Sample Cleanup:	Cleanup Method: Sulfur		
	Cleanup Batch: CGA0004	Initial Volume: 5 mL	
	Cleaned: 02-Jan-2018	Final Volume: 5 mL	

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Aroclor 1016	12674-11-2	1	19.6	ND	ug/kg	U
Aroclor 1221	11104-28-2	1	19.6	ND	ug/kg	U
Aroclor 1232	11141-16-5	1	19.6	ND	ug/kg	U
Aroclor 1242	53469-21-9	1	19.6	ND	ug/kg	U
Aroclor 1248	12672-29-6	1	19.6	ND	ug/kg	U
Aroclor 1254	11097-69-1	1	19.6	ND	ug/kg	U
Aroclor 1260	11096-82-5	1	19.6	ND	ug/kg	U
Aroclor 1262	37324-23-5	1	19.6	ND	ug/kg	U
Aroclor 1268	11100-14-4	1	19.6	ND	ug/kg	U
Surrogate: Decachlorobiphenyl			*40-133 %*	*85.2*	*%*	
Surrogate: Tetrachlorometaxylene			*53-120 %*	*91.9*	*%*	
Surrogate: Decachlorobiphenyl [2C]			*40-133 %*	*82.9*	*%*	
Surrogate: Tetrachlorometaxylene [2C]			*53-120 %*	*91.5*	*%*	

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B9-S(5-7)

17L0423-07 (Solid)

Extractions

Method: PSEP 1986
Instrument: N/A

Sampled: 12/22/2017 13:30
Analyzed: 26-Dec-2017 14:19

Sample Preparation: Preparation Method: No Prep-Organics
Preparation Batch: BFL0597
Prepared: 26-Dec-2017
Sample Size: 1 g (wet)
Final Volume: 1 g

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Total Solids		1	0.01	**72.89**	%	

The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B9-S(10-12)

17L0423-08 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 12/22/2017 14:10
Analyzed: 04-Jan-2018 12:50

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate)
Preparation Batch: BGA0084 | Sample Size: 5.64 g (wet) | Dry Weight:4.31 g
Prepared: 04-Jan-2018 | Final Volume: 5 mL | % Solids: 76.33

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	1.16	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	1.16	ND	ug/kg	U
Bromomethane	74-83-9	1	1.16	ND	ug/kg	U
Chloroethane	75-00-3	1	1.16	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.16	ND	ug/kg	U
Acrolein	107-02-8	1	5.81	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	2.32	ND	ug/kg	U
Acetone	67-64-1	1	5.81	**23.9**	ug/kg	
1,1-Dichloroethene	75-35-4	1	1.16	ND	ug/kg	U
Bromoethane	74-96-4	1	2.32	ND	ug/kg	U
Iodomethane	74-88-4	1	1.16	ND	ug/kg	U
Methylene Chloride	75-09-2	1	2.32	ND	ug/kg	U
Acrylonitrile	107-13-1	1	5.81	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.16	ND	ug/kg	U
trans-1,2-Dichloroethene	156-60-5	1	1.16	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	5.81	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	1.16	ND	ug/kg	U
2-Butanone	78-93-3	1	5.81	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	1.16	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	1.16	ND	ug/kg	U
Chloroform	67-66-3	1	1.16	ND	ug/kg	U
Bromochloromethane	74-97-5	1	1.16	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.16	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	1.16	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	1.16	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	1.16	ND	ug/kg	U
Benzene	71-43-2	1	1.16	ND	ug/kg	U
Trichloroethene	79-01-6	1	1.16	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	1.16	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	1.16	ND	ug/kg	U
Dibromomethane	74-95-3	1	1.16	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	5.81	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	5.81	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	1.16	ND	ug/kg	U
Toluene	108-88-3	1	1.16	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B9-S(10-12)

17L0423-08 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 12/22/2017 14:10
Analyzed: 04-Jan-2018 12:50

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	1.16	ND	ug/kg	U
2-Hexanone	591-78-6	1	5.81	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	1.16	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	1.16	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	1.16	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	1.16	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	1.16	ND	ug/kg	U
Chlorobenzene	108-90-7	1	1.16	ND	ug/kg	U
Ethylbenzene	100-41-4	1	1.16	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	1.16	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	2.32	ND	ug/kg	U
o-Xylene	95-47-6	1	1.16	ND	ug/kg	U
Xylenes, total	1330-20-7	1	2.32	ND	ug/kg	U
Styrene	100-42-5	1	1.16	ND	ug/kg	U
Bromoform	75-25-2	1	1.16	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	1.16	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.32	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	5.81	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	1.16	ND	ug/kg	U
Bromobenzene	108-86-1	1	1.16	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	1.16	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	1.16	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	1.16	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	1.16	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	1.16	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	1.16	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	1.16	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	1.16	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	1.16	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	1.16	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	1.16	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.16	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	5.81	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	5.81	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	5.81	ND	ug/kg	U
Naphthalene	91-20-3	1	5.81	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	5.81	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	1.16	ND	ug/kg	U

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B9-S(10-12)

17L0423-08 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 12/22/2017 14:10
Analyzed: 04-Jan-2018 12:50

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	1.16	ND	ug/kg	U
2-Pentanone	107-87-9	1	5.81	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4			*80-149 %*	*122*	*%*	
Surrogate: Toluene-d8			*77-120 %*	*102*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*102*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*104*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B9-S(10-12)

17L0423-08 (Solid)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT2

Sampled: 12/22/2017 14:10
Analyzed: 26-Dec-2017 13:16

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction)
Preparation Batch: BFL0591 | Sample Size: 4.985 g (wet) | Dry Weight:3.81 g
Prepared: 26-Dec-2017 | Final Volume: 5 mL | % Solids: 76.33

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		50	8120	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*98.8*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*104*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B9-GW

17L0423-09 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 12/22/2017 14:00
Analyzed: 26-Dec-2017 12:36

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFL0583 Sample Size: 10 mL
Prepared: 26-Dec-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B9-GW

17L0423-09 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 12/22/2017 14:00
Analyzed: 26-Dec-2017 12:36

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B9-GW

17L0423-09 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 12/22/2017 14:00
Analyzed: 26-Dec-2017 12:36

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*101*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*93.7*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*92.6*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*106*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B9-GW

17L0423-09 (Water)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT2

Sampled: 12/22/2017 14:00
Analyzed: 26-Dec-2017 12:36

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFL0583 Sample Size: 10 mL
Prepared: 26-Dec-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*93.7*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*92.6*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B7-S(9-11)

17L0423-10 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 12/22/2017 16:20
Analyzed: 03-Jan-2018 13:41

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate)
Preparation Batch: BGA0052 | Sample Size: 5.63 g (wet) | Dry Weight:4.41 g
Prepared: 03-Jan-2018 | Final Volume: 5 mL | % Solids: 78.37

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	1.13	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	1.13	ND	ug/kg	U
Bromomethane	74-83-9	1	1.13	ND	ug/kg	U
Chloroethane	75-00-3	1	1.13	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.13	ND	ug/kg	U
Acrolein	107-02-8	1	5.67	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	2.27	ND	ug/kg	U
Acetone	67-64-1	1	5.67	**37.7**	ug/kg	
1,1-Dichloroethene	75-35-4	1	1.13	ND	ug/kg	U
Bromoethane	74-96-4	1	2.27	ND	ug/kg	U
Iodomethane	74-88-4	1	1.13	ND	ug/kg	U
Methylene Chloride	75-09-2	1	2.27	ND	ug/kg	U
Acrylonitrile	107-13-1	1	5.67	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.13	ND	ug/kg	U
trans-1,2-Dichloroethene	156-60-5	1	1.13	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	5.67	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	1.13	ND	ug/kg	U
2-Butanone	78-93-3	1	5.67	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	1.13	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	1.13	ND	ug/kg	U
Chloroform	67-66-3	1	1.13	ND	ug/kg	U
Bromochloromethane	74-97-5	1	1.13	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.13	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	1.13	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	1.13	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	1.13	ND	ug/kg	U
Benzene	71-43-2	1	1.13	ND	ug/kg	U
Trichloroethene	79-01-6	1	1.13	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	1.13	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	1.13	ND	ug/kg	U
Dibromomethane	74-95-3	1	1.13	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	5.67	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	5.67	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	1.13	ND	ug/kg	U
Toluene	108-88-3	1	1.13	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B7-S(9-11)

17L0423-10 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 12/22/2017 16:20
Analyzed: 03-Jan-2018 13:41

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	1.13	ND	ug/kg	U
2-Hexanone	591-78-6	1	5.67	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	1.13	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	1.13	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	1.13	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	1.13	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	1.13	ND	ug/kg	U
Chlorobenzene	108-90-7	1	1.13	ND	ug/kg	U
Ethylbenzene	100-41-4	1	1.13	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	1.13	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	2.27	ND	ug/kg	U
o-Xylene	95-47-6	1	1.13	ND	ug/kg	U
Xylenes, total	1330-20-7	1	2.27	ND	ug/kg	U
Styrene	100-42-5	1	1.13	ND	ug/kg	U
Bromoform	75-25-2	1	1.13	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	1.13	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.27	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	5.67	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	1.13	ND	ug/kg	U
Bromobenzene	108-86-1	1	1.13	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	1.13	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	1.13	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	1.13	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	1.13	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	1.13	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	1.13	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	1.13	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	1.13	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	1.13	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	1.13	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	1.13	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.13	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	5.67	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	5.67	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	5.67	ND	ug/kg	U
Naphthalene	91-20-3	1	5.67	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	5.67	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	1.13	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B7-S(9-11)

17L0423-10 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 12/22/2017 16:20
Analyzed: 03-Jan-2018 13:41

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	1.13	ND	ug/kg	U
2-Pentanone	107-87-9	1	5.67	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4			*80-149 %*	*118*	*%*	
Surrogate: Toluene-d8			*77-120 %*	*102*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*101*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*105*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B7-S(9-11)

17L0423-10 (Solid)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT2

Sampled: 12/22/2017 16:20
Analyzed: 26-Dec-2017 13:37

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction)
Preparation Batch: BFL0591 | Sample Size: 5.301 g (wet) | Dry Weight:4.15 g
Prepared: 26-Dec-2017 | Final Volume: 5 mL | % Solids: 78.37

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		50	7400	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*96.0*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*102*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B8-S(13-15)

17L0423-11 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 12/22/2017 11:52
Analyzed: 04-Jan-2018 13:12

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate)
Preparation Batch: BGA0084 | Sample Size: 4.55 g (wet) | Dry Weight:3.68 g
Prepared: 04-Jan-2018 | Final Volume: 5 mL | % Solids: 80.96

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	1.36	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	1.36	ND	ug/kg	U
Bromomethane	74-83-9	1	1.36	ND	ug/kg	U
Chloroethane	75-00-3	1	1.36	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.36	ND	ug/kg	U
Acrolein	107-02-8	1	6.79	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	2.71	ND	ug/kg	U
Acetone	67-64-1	1	6.79	**106**	ug/kg	
1,1-Dichloroethene	75-35-4	1	1.36	ND	ug/kg	U
Bromoethane	74-96-4	1	2.71	ND	ug/kg	U
Iodomethane	74-88-4	1	1.36	ND	ug/kg	U
Methylene Chloride	75-09-2	1	2.71	ND	ug/kg	U
Acrylonitrile	107-13-1	1	6.79	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.36	**2.73**	ug/kg	Q
trans-1,2-Dichloroethene	156-60-5	1	1.36	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	6.79	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	1.36	ND	ug/kg	U
2-Butanone	78-93-3	1	6.79	**17.1**	ug/kg	
2,2-Dichloropropane	594-20-7	1	1.36	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	1.36	ND	ug/kg	U
Chloroform	67-66-3	1	1.36	ND	ug/kg	U
Bromochloromethane	74-97-5	1	1.36	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.36	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	1.36	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	1.36	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	1.36	ND	ug/kg	U
Benzene	71-43-2	1	1.36	ND	ug/kg	U
Trichloroethene	79-01-6	1	1.36	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	1.36	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	1.36	ND	ug/kg	U
Dibromomethane	74-95-3	1	1.36	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	6.79	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	6.79	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	1.36	ND	ug/kg	U
Toluene	108-88-3	1	1.36	ND	ug/kg	U

The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B8-S(13-15)

17L0423-11 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 12/22/2017 11:52
Analyzed: 04-Jan-2018 13:12

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	1.36	ND	ug/kg	U
2-Hexanone	591-78-6	1	6.79	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	1.36	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	1.36	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	1.36	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	1.36	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	1.36	ND	ug/kg	U
Chlorobenzene	108-90-7	1	1.36	ND	ug/kg	U
Ethylbenzene	100-41-4	1	1.36	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	1.36	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	2.71	ND	ug/kg	U
o-Xylene	95-47-6	1	1.36	ND	ug/kg	U
Xylenes, total	1330-20-7	1	2.71	ND	ug/kg	U
Styrene	100-42-5	1	1.36	ND	ug/kg	U
Bromoform	75-25-2	1	1.36	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	1.36	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	2.71	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	6.79	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	1.36	ND	ug/kg	U
Bromobenzene	108-86-1	1	1.36	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	1.36	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	1.36	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	1.36	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	1.36	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	1.36	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	1.36	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	1.36	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	1.36	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	1.36	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	1.36	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	1.36	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.36	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	6.79	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	6.79	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	6.79	ND	ug/kg	U
Naphthalene	91-20-3	1	6.79	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	6.79	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	1.36	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B8-S(13-15)

17L0423-11 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 12/22/2017 11:52
Analyzed: 04-Jan-2018 13:12

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	1.36	ND	ug/kg	U
2-Pentanone	107-87-9	1	6.79	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4			*80-149 %*	*122*	*%*	
Surrogate: Toluene-d8			*77-120 %*	*103*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*102*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*102*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B8-S(13-15)

17L0423-11 (Solid)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT2

Sampled: 12/22/2017 11:52
Analyzed: 26-Dec-2017 13:57

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction)
Preparation Batch: BFL0591 Sample Size: 5.215 g (wet) Dry Weight:4.22 g
Prepared: 26-Dec-2017 Final Volume: 5 mL % Solids: 80.96

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		50	7100	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*96.0*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*102*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B7-S(13-15)

17L0423-12 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 12/22/2017 16:00
Analyzed: 03-Jan-2018 14:25

Sample Preparation: Preparation Method: EPA 5035 (Sodium Bisulfate)
Preparation Batch: BGA0052 | Sample Size: 4.24 g (wet) | Dry Weight:3.18 g
Prepared: 03-Jan-2018 | Final Volume: 5 mL | % Solids: 74.91

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	1.57	ND	ug/kg	U
Vinyl Chloride	75-01-4	1	1.57	ND	ug/kg	U
Bromomethane	74-83-9	1	1.57	ND	ug/kg	U
Chloroethane	75-00-3	1	1.57	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	1	1.57	ND	ug/kg	U
Acrolein	107-02-8	1	7.87	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	3.15	ND	ug/kg	U
Acetone	67-64-1	1	7.87	**39.9**	ug/kg	
1,1-Dichloroethene	75-35-4	1	1.57	ND	ug/kg	U
Bromoethane	74-96-4	1	3.15	ND	ug/kg	U
Iodomethane	74-88-4	1	1.57	ND	ug/kg	U
Methylene Chloride	75-09-2	1	3.15	ND	ug/kg	U
Acrylonitrile	107-13-1	1	7.87	ND	ug/kg	U
Carbon Disulfide	75-15-0	1	1.57	**17.1**	ug/kg	
trans-1,2-Dichloroethene	156-60-5	1	1.57	ND	ug/kg	U
Vinyl Acetate	108-05-4	1	7.87	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	1	1.57	ND	ug/kg	U
2-Butanone	78-93-3	1	7.87	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	1	1.57	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	1	1.57	ND	ug/kg	U
Chloroform	67-66-3	1	1.57	ND	ug/kg	U
Bromochloromethane	74-97-5	1	1.57	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	1	1.57	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	1	1.57	ND	ug/kg	U
Carbon tetrachloride	56-23-5	1	1.57	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	1	1.57	ND	ug/kg	U
Benzene	71-43-2	1	1.57	ND	ug/kg	U
Trichloroethene	79-01-6	1	1.57	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	1	1.57	ND	ug/kg	U
Bromodichloromethane	75-27-4	1	1.57	ND	ug/kg	U
Dibromomethane	74-95-3	1	1.57	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	1	7.87	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	1	7.87	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	1	1.57	ND	ug/kg	U
Toluene	108-88-3	1	1.57	ND	ug/kg	U

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B7-S(13-15)

17L0423-12 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 12/22/2017 16:00
Analyzed: 03-Jan-2018 14:25

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	1.57	ND	ug/kg	U
2-Hexanone	591-78-6	1	7.87	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	1	1.57	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	1	1.57	ND	ug/kg	U
Tetrachloroethene	127-18-4	1	1.57	ND	ug/kg	U
Dibromochloromethane	124-48-1	1	1.57	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	1	1.57	ND	ug/kg	U
Chlorobenzene	108-90-7	1	1.57	ND	ug/kg	U
Ethylbenzene	100-41-4	1	1.57	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	1	1.57	ND	ug/kg	U
m,p-Xylene	179601-23-1	1	3.15	ND	ug/kg	U
o-Xylene	95-47-6	1	1.57	ND	ug/kg	U
Xylenes, total	1330-20-7	1	3.15	ND	ug/kg	U
Styrene	100-42-5	1	1.57	ND	ug/kg	U
Bromoform	75-25-2	1	1.57	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	1	1.57	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	1	3.15	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	7.87	ND	ug/kg	U
n-Propylbenzene	103-65-1	1	1.57	ND	ug/kg	U
Bromobenzene	108-86-1	1	1.57	ND	ug/kg	U
Isopropyl Benzene	98-82-8	1	1.57	ND	ug/kg	U
2-Chlorotoluene	95-49-8	1	1.57	ND	ug/kg	U
4-Chlorotoluene	106-43-4	1	1.57	ND	ug/kg	U
t-Butylbenzene	98-06-6	1	1.57	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	1	1.57	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	1	1.57	ND	ug/kg	U
s-Butylbenzene	135-98-8	1	1.57	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	1	1.57	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	1	1.57	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	1	1.57	ND	ug/kg	U
n-Butylbenzene	104-51-8	1	1.57	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	1	1.57	ND	ug/kg	U
1,2-Dibromo-3-chloropropane	96-12-8	1	7.87	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	1	7.87	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	1	7.87	ND	ug/kg	U
Naphthalene	91-20-3	1	7.87	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	1	7.87	ND	ug/kg	U
Dichlorodifluoromethane	75-71-8	1	1.57	ND	ug/kg	U

The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B7-S(13-15)

17L0423-12 (Solid)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT5

Sampled: 12/22/2017 16:00
Analyzed: 03-Jan-2018 14:25

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	1.57	ND	ug/kg	U
2-Pentanone	107-87-9	1	7.87	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4			*80-149 %*	*123*	*%*	
Surrogate: Toluene-d8			*77-120 %*	*102*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*101*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*102*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B7-S(13-15)

17L0423-12 (Solid)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT2

Sampled: 12/22/2017 16:00
Analyzed: 26-Dec-2017 14:18

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction)
Preparation Batch: BFL0591 | Sample Size: 4.52 g (wet) | Dry Weight:3.39 g
Prepared: 26-Dec-2017 | Final Volume: 5 mL | % Solids: 74.91

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		50	9060	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*98.7*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*102*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B7-GW

17L0423-13 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 12/22/2017 15:40
Analyzed: 26-Dec-2017 12:56

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFL0583 Sample Size: 10 mL
Prepared: 26-Dec-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	16.0	ND	ug/L	Y1, U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B7-GW

17L0423-13 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 12/22/2017 15:40
Analyzed: 26-Dec-2017 12:56

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.20	**0.77**	ug/L	
4-Isopropyl Toluene	99-87-6	1	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B7-GW

17L0423-13 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 12/22/2017 15:40
Analyzed: 26-Dec-2017 12:56

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*93.6*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*96.0*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*89.9*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*108*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

LAI-B7-GW

17L0423-13 (Water)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT2

Sampled: 12/22/2017 15:40
Analyzed: 26-Dec-2017 12:56

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFL0583 Sample Size: 10 mL
Prepared: 26-Dec-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		1	100	**603**	ug/L	
HC ID: GRO						
Surrogate: Toluene-d8			*80-120 %*	*96.0*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*89.9*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Trip Blanks

17L0423-14 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 12/22/2017 00:00
Analyzed: 26-Dec-2017 11:55

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFL0583 Sample Size: 10 mL
Prepared: 26-Dec-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	1	0.50	ND	ug/L	U
Vinyl Chloride	75-01-4	1	0.20	ND	ug/L	U
Bromomethane	74-83-9	1	1.00	ND	ug/L	U
Chloroethane	75-00-3	1	0.20	ND	ug/L	U
Trichlorofluoromethane	75-69-4	1	0.20	ND	ug/L	U
Acrolein	107-02-8	1	5.00	ND	ug/L	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1	0.20	ND	ug/L	U
Acetone	67-64-1	1	5.00	ND	ug/L	U
1,1-Dichloroethene	75-35-4	1	0.20	ND	ug/L	U
Bromoethane	74-96-4	1	0.20	ND	ug/L	U
Iodomethane	74-88-4	1	1.00	ND	ug/L	U
Methylene Chloride	75-09-2	1	1.00	ND	ug/L	U
Acrylonitrile	107-13-1	1	1.00	ND	ug/L	U
Carbon Disulfide	75-15-0	1	0.20	ND	ug/L	U
trans-1,2-Dichloroethene	156-60-5	1	0.20	ND	ug/L	U
Vinyl Acetate	108-05-4	1	0.20	ND	ug/L	U
1,1-Dichloroethane	75-34-3	1	0.20	ND	ug/L	U
2-Butanone	78-93-3	1	5.00	ND	ug/L	U
2,2-Dichloropropane	594-20-7	1	0.20	ND	ug/L	U
cis-1,2-Dichloroethene	156-59-2	1	0.20	ND	ug/L	U
Chloroform	67-66-3	1	0.20	ND	ug/L	U
Bromochloromethane	74-97-5	1	0.20	ND	ug/L	U
1,1,1-Trichloroethane	71-55-6	1	0.20	ND	ug/L	U
1,1-Dichloropropene	563-58-6	1	0.20	ND	ug/L	U
Carbon tetrachloride	56-23-5	1	0.20	ND	ug/L	U
1,2-Dichloroethane	107-06-2	1	0.20	ND	ug/L	U
Benzene	71-43-2	1	0.20	ND	ug/L	U
Trichloroethene	79-01-6	1	0.20	ND	ug/L	U
1,2-Dichloropropane	78-87-5	1	0.20	ND	ug/L	U
Bromodichloromethane	75-27-4	1	0.20	ND	ug/L	U
Dibromomethane	74-95-3	1	0.20	ND	ug/L	U
2-Chloroethyl vinyl ether	110-75-8	1	1.00	ND	ug/L	U
4-Methyl-2-Pentanone	108-10-1	1	5.00	ND	ug/L	U
cis-1,3-Dichloropropene	10061-01-5	1	0.20	ND	ug/L	U
Toluene	108-88-3	1	0.20	ND	ug/L	U

The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Trip Blanks

17L0423-14 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 12/22/2017 00:00
Analyzed: 26-Dec-2017 11:55

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	1	0.20	ND	ug/L	U
2-Hexanone	591-78-6	1	5.00	ND	ug/L	U
1,1,2-Trichloroethane	79-00-5	1	0.20	ND	ug/L	U
1,3-Dichloropropane	142-28-9	1	0.20	ND	ug/L	U
Tetrachloroethene	127-18-4	1	0.20	ND	ug/L	U
Dibromochloromethane	124-48-1	1	0.20	ND	ug/L	U
1,2-Dibromoethane	106-93-4	1	0.20	ND	ug/L	U
Chlorobenzene	108-90-7	1	0.20	ND	ug/L	U
Ethylbenzene	100-41-4	1	0.20	ND	ug/L	U
1,1,1,2-Tetrachloroethane	630-20-6	1	0.20	ND	ug/L	U
m,p-Xylene	179601-23-1	1	0.40	ND	ug/L	U
o-Xylene	95-47-6	1	0.20	ND	ug/L	U
Xylenes, total	1330-20-7	1	0.60	ND	ug/L	U
Styrene	100-42-5	1	0.20	ND	ug/L	U
Bromoform	75-25-2	1	0.20	ND	ug/L	U
1,1,2,2-Tetrachloroethane	79-34-5	1	0.20	ND	ug/L	U
1,2,3-Trichloropropane	96-18-4	1	0.50	ND	ug/L	U
trans-1,4-Dichloro 2-Butene	110-57-6	1	1.00	ND	ug/L	U
n-Propylbenzene	103-65-1	1	0.20	ND	ug/L	U
Bromobenzene	108-86-1	1	0.20	ND	ug/L	U
Isopropyl Benzene	98-82-8	1	0.20	ND	ug/L	U
2-Chlorotoluene	95-49-8	1	0.20	ND	ug/L	U
4-Chlorotoluene	106-43-4	1	0.20	ND	ug/L	U
t-Butylbenzene	98-06-6	1	0.20	ND	ug/L	U
1,3,5-Trimethylbenzene	108-67-8	1	0.20	ND	ug/L	U
1,2,4-Trimethylbenzene	95-63-6	1	0.20	ND	ug/L	U
s-Butylbenzene	135-98-8	1	0.20	ND	ug/L	U
4-Isopropyl Toluene	99-87-6	1	0.20	ND	ug/L	U
1,3-Dichlorobenzene	541-73-1	1	0.20	ND	ug/L	U
1,4-Dichlorobenzene	106-46-7	1	0.20	ND	ug/L	U
n-Butylbenzene	104-51-8	1	0.20	ND	ug/L	U
1,2-Dichlorobenzene	95-50-1	1	0.20	ND	ug/L	U
1,2-Dibromo-3-chloropropane	96-12-8	1	0.50	ND	ug/L	U
1,2,4-Trichlorobenzene	120-82-1	1	0.50	ND	ug/L	U
Hexachloro-1,3-Butadiene	87-68-3	1	0.50	ND	ug/L	U
Naphthalene	91-20-3	1	0.50	ND	ug/L	U
1,2,3-Trichlorobenzene	87-61-6	1	0.50	ND	ug/L	U
Dichlorodifluoromethane	75-71-8	1	0.20	ND	ug/L	U

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Trip Blanks

17L0423-14 (Water)

Volatile Organic Compounds

Method: EPA 8260C
Instrument: NT2

Sampled: 12/22/2017 00:00
Analyzed: 26-Dec-2017 11:55

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Methyl tert-butyl Ether	1634-04-4	1	0.50	ND	ug/L	U
2-Pentanone	107-87-9	1	5.00	ND	ug/L	U
Surrogate: 1,2-Dichloroethane-d4			*80-129 %*	*96.2*	*%*	
Surrogate: Toluene-d8			*80-120 %*	*97.2*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*89.8*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4			*80-120 %*	*101*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Trip Blanks

17L0423-14 (Water)

Volatile Organic Compounds

Method: NWTPHg
Instrument: NT2

Sampled: 12/22/2017 00:00
Analyzed: 26-Dec-2017 11:55

Sample Preparation: Preparation Method: EPA 5030 (Purge and Trap)
Preparation Batch: BFL0583 Sample Size: 10 mL
Prepared: 26-Dec-2017 Final Volume: 10 mL

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)		1	100	ND	ug/L	U
Surrogate: Toluene-d8			*80-120 %*	*97.2*	*%*	
Surrogate: 4-Bromofluorobenzene			*80-120 %*	*89.8*	*%*	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BFL0583 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFL0583-BLK1)			Prepared: 26-Dec-2017 Analyzed: 26-Dec-2017 08:53							
Chloromethane	ND	0.50	ug/L							U
Vinyl Chloride	ND	0.20	ug/L							U
Bromomethane	ND	1.00	ug/L							U
Chloroethane	ND	0.20	ug/L							U
Trichlorofluoromethane	ND	0.20	ug/L							U
Acrolein	ND	5.00	ug/L							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.20	ug/L							U
Acetone	ND	5.00	ug/L							U
1,1-Dichloroethene	ND	0.20	ug/L							U
Bromoethane	ND	0.20	ug/L							U
Iodomethane	ND	1.00	ug/L							U
Methylene Chloride	ND	1.00	ug/L							U
Acrylonitrile	ND	1.00	ug/L							U
Carbon Disulfide	ND	0.20	ug/L							U
trans-1,2-Dichloroethene	ND	0.20	ug/L							U
Vinyl Acetate	ND	0.20	ug/L							U
1,1-Dichloroethane	ND	0.20	ug/L							U
2-Butanone	ND	5.00	ug/L							U
2,2-Dichloropropane	ND	0.20	ug/L							U
cis-1,2-Dichloroethene	ND	0.20	ug/L							U
Chloroform	ND	0.20	ug/L							U
Bromochloromethane	ND	0.20	ug/L							U
1,1,1-Trichloroethane	ND	0.20	ug/L							U
1,1-Dichloropropene	ND	0.20	ug/L							U
Carbon tetrachloride	ND	0.20	ug/L							U
1,2-Dichloroethane	ND	0.20	ug/L							U
Benzene	ND	0.20	ug/L							U
Trichloroethene	ND	0.20	ug/L							U
1,2-Dichloropropane	ND	0.20	ug/L							U
Bromodichloromethane	ND	0.20	ug/L							U
Dibromomethane	ND	0.20	ug/L							U
2-Chloroethyl vinyl ether	ND	1.00	ug/L							U
4-Methyl-2-Pentanone	ND	5.00	ug/L							U
cis-1,3-Dichloropropene	ND	0.20	ug/L							U
Toluene	ND	0.20	ug/L							U

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BFL0583 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFL0583-BLK1)			Prepared: 26-Dec-2017 Analyzed: 26-Dec-2017 08:53							
trans-1,3-Dichloropropene	ND	0.20	ug/L							U
2-Hexanone	ND	5.00	ug/L							U
1,1,2-Trichloroethane	ND	0.20	ug/L							U
1,3-Dichloropropane	ND	0.20	ug/L							U
Tetrachloroethene	ND	0.20	ug/L							U
Dibromochloromethane	ND	0.20	ug/L							U
1,2-Dibromoethane	ND	0.20	ug/L							U
Chlorobenzene	ND	0.20	ug/L							U
Ethylbenzene	ND	0.20	ug/L							U
1,1,1,2-Tetrachloroethane	ND	0.20	ug/L							U
m,p-Xylene	ND	0.40	ug/L							U
o-Xylene	ND	0.20	ug/L							U
Xylenes, total	ND	0.60	ug/L							U
Styrene	ND	0.20	ug/L							U
Bromoform	ND	0.20	ug/L							U
1,1,2,2-Tetrachloroethane	ND	0.20	ug/L							U
1,2,3-Trichloropropane	ND	0.50	ug/L							U
trans-1,4-Dichloro 2-Butene	ND	1.00	ug/L							U
n-Propylbenzene	ND	0.20	ug/L							U
Bromobenzene	ND	0.20	ug/L							U
Isopropyl Benzene	ND	0.20	ug/L							U
2-Chlorotoluene	ND	0.20	ug/L							U
4-Chlorotoluene	ND	0.20	ug/L							U
t-Butylbenzene	ND	0.20	ug/L							U
1,3,5-Trimethylbenzene	ND	0.20	ug/L							U
1,2,4-Trimethylbenzene	ND	0.20	ug/L							U
s-Butylbenzene	ND	0.20	ug/L							U
4-Isopropyl Toluene	ND	0.20	ug/L							U
1,3-Dichlorobenzene	ND	0.20	ug/L							U
1,4-Dichlorobenzene	ND	0.20	ug/L							U
n-Butylbenzene	ND	0.20	ug/L							U
1,2-Dichlorobenzene	ND	0.20	ug/L							U
1,2-Dibromo-3-chloropropane	ND	0.50	ug/L							U
1,2,4-Trichlorobenzene	ND	0.50	ug/L							U
Hexachloro-1,3-Butadiene	ND	0.50	ug/L							U

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BFL0583 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFL0583-BLK1)				Prepared: 26-Dec-2017 Analyzed: 26-Dec-2017 08:53						
Naphthalene	ND	0.50	ug/L							U
1,2,3-Trichlorobenzene	ND	0.50	ug/L							U
Dichlorodifluoromethane	ND	0.20	ug/L							U
Methyl tert-butyl Ether	ND	0.50	ug/L							U
2-Pentanone	ND	5.00	ug/L							U
Surrogate: 1,2-Dichloroethane-d4	4.61		ug/L	*5.00*		*92.3*	*80-129*			
Surrogate: Toluene-d8	4.77		ug/L	*5.00*		*95.4*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.65		ug/L	*5.00*		*92.9*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.24		ug/L	*5.00*		*105*	*80-120*			
Blank (BFL0583-BLK2)				Prepared: 26-Dec-2017 Analyzed: 26-Dec-2017 08:53						
Gasoline Range Organics (Tol-Nap)	ND	100	ug/L							U
Surrogate: Toluene-d8	4.77		ug/L	*5.00*		*95.4*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.65		ug/L	*5.00*		*92.9*	*80-120*			
LCS (BFL0583-BS1)				Prepared: 26-Dec-2017 Analyzed: 26-Dec-2017 07:52						
Chloromethane	8.31	0.50	ug/L	10.0		83.1	60-138			
Vinyl Chloride	9.39	0.20	ug/L	10.0		93.9	66-133			
Bromomethane	7.77	1.00	ug/L	10.0		77.7	72-131			Q
Chloroethane	11.5	0.20	ug/L	10.0		115	60-155			
Trichlorofluoromethane	8.46	0.20	ug/L	10.0		84.6	80-129			
Acrolein	40.1	5.00	ug/L	50.0		80.3	52-144			
1,1,2-Trichloro-1,2,2-Trifluoroethane	9.28	0.20	ug/L	10.0		92.8	76-129			
Acetone	42.7	5.00	ug/L	50.0		85.4	58-142			
1,1-Dichloroethene	9.21	0.20	ug/L	10.0		92.1	69-135			
Bromoethane	9.42	0.20	ug/L	10.0		94.2	78-128			
Iodomethane	3.38	1.00	ug/L	10.0		33.8	56-147			*, Q
Methylene Chloride	9.44	1.00	ug/L	10.0		94.4	65-135			
Acrylonitrile	9.14	1.00	ug/L	10.0		91.4	64-134			
Carbon Disulfide	9.14	0.20	ug/L	10.0		91.4	78-125			
trans-1,2-Dichloroethene	9.96	0.20	ug/L	10.0		99.6	78-128			
Vinyl Acetate	8.67	0.20	ug/L	10.0		86.7	55-138			
1,1-Dichloroethane	9.62	0.20	ug/L	10.0		96.2	76-124			
2-Butanone	47.6	5.00	ug/L	50.0		95.2	61-140			
2,2-Dichloropropane	9.87	0.20	ug/L	10.0		98.7	78-125			

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BFL0583 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFL0583-BS1)				Prepared: 26-Dec-2017 Analyzed: 26-Dec-2017 07:52						
cis-1,2-Dichloroethene	9.96	0.20	ug/L	10.0		99.6	80-121			
Chloroform	9.51	0.20	ug/L	10.0		95.1	80-122			
Bromochloromethane	10.5	0.20	ug/L	10.0		105	80-121			
1,1,1-Trichloroethane	9.48	0.20	ug/L	10.0		94.8	79-123			
1,1-Dichloropropene	10.7	0.20	ug/L	10.0		107	80-120			
Carbon tetrachloride	9.59	0.20	ug/L	10.0		95.9	53-137			
1,2-Dichloroethane	9.41	0.20	ug/L	10.0		94.1	75-123			
Benzene	10.2	0.20	ug/L	10.0		102	80-120			
Trichloroethene	10.1	0.20	ug/L	10.0		101	80-120			
1,2-Dichloropropane	9.98	0.20	ug/L	10.0		99.8	80-120			
Bromodichloromethane	9.63	0.20	ug/L	10.0		96.3	80-121			
Dibromomethane	10.0	0.20	ug/L	10.0		100	80-120			
2-Chloroethyl vinyl ether	8.77	1.00	ug/L	10.0		87.7	74-127			
4-Methyl-2-Pentanone	52.0	5.00	ug/L	50.0		104	67-133			
cis-1,3-Dichloropropene	10.8	0.20	ug/L	10.0		108	80-124			
Toluene	10.2	0.20	ug/L	10.0		102	80-120			
trans-1,3-Dichloropropene	10.1	0.20	ug/L	10.0		101	71-127			
2-Hexanone	53.3	5.00	ug/L	50.0		107	69-133			
1,1,2-Trichloroethane	10.2	0.20	ug/L	10.0		102	80-121			
1,3-Dichloropropane	10.5	0.20	ug/L	10.0		105	80-120			
Tetrachloroethene	10.2	0.20	ug/L	10.0		102	80-120			
Dibromochloromethane	10.3	0.20	ug/L	10.0		103	65-135			
1,2-Dibromoethane	10.6	0.20	ug/L	10.0		106	80-121			
Chlorobenzene	10.2	0.20	ug/L	10.0		102	80-120			
Ethylbenzene	10.6	0.20	ug/L	10.0		106	80-120			
1,1,1,2-Tetrachloroethane	10.1	0.20	ug/L	10.0		101	80-120			
m,p-Xylene	22.4	0.40	ug/L	20.0		112	80-121			
o-Xylene	11.3	0.20	ug/L	10.0		113	80-121			
Xylenes, total	33.7	0.60	ug/L	30.0		112	76-127			
Styrene	8.70	0.20	ug/L	10.0		87.0	80-124			
Bromoform	10.9	0.20	ug/L	10.0		109	51-134			
1,1,2,2-Tetrachloroethane	10.3	0.20	ug/L	10.0		103	77-123			
1,2,3-Trichloropropane	10.3	0.50	ug/L	10.0		103	76-125			
trans-1,4-Dichloro 2-Butene	9.97	1.00	ug/L	10.0		99.7	55-129			
n-Propylbenzene	11.3	0.20	ug/L	10.0		113	78-130			

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BFL0583 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BFL0583-BS1)				Prepared: 26-Dec-2017 Analyzed: 26-Dec-2017 07:52						
Bromobenzene	10.5	0.20	ug/L	10.0		105	80-120			
Isopropyl Benzene	12.0	0.20	ug/L	10.0		120	80-128			
2-Chlorotoluene	11.1	0.20	ug/L	10.0		111	78-122			
4-Chlorotoluene	11.3	0.20	ug/L	10.0		113	80-121			
t-Butylbenzene	11.8	0.20	ug/L	10.0		118	78-125			
1,3,5-Trimethylbenzene	11.7	0.20	ug/L	10.0		117	80-129			
1,2,4-Trimethylbenzene	11.7	0.20	ug/L	10.0		117	80-127			
s-Butylbenzene	11.7	0.20	ug/L	10.0		117	78-129			
4-Isopropyl Toluene	8.51	0.20	ug/L	10.0		85.1	79-130			
1,3-Dichlorobenzene	10.8	0.20	ug/L	10.0		108	80-120			
1,4-Dichlorobenzene	10.1	0.20	ug/L	10.0		101	80-120			
n-Butylbenzene	11.4	0.20	ug/L	10.0		114	74-129			
1,2-Dichlorobenzene	10.4	0.20	ug/L	10.0		104	80-120			
1,2-Dibromo-3-chloropropane	10.0	0.50	ug/L	10.0		100	62-123			
1,2,4-Trichlorobenzene	10.9	0.50	ug/L	10.0		109	64-124			
Hexachloro-1,3-Butadiene	9.03	0.50	ug/L	10.0		90.3	58-123			
Naphthalene	10.1	0.50	ug/L	10.0		101	50-134			
1,2,3-Trichlorobenzene	10.6	0.50	ug/L	10.0		106	49-133			
Dichlorodifluoromethane	8.28	0.20	ug/L	10.0		82.8	48-147			
Methyl tert-butyl Ether	9.96	0.50	ug/L	10.0		99.6	71-132			
2-Pentanone	46.2	5.00	ug/L	50.0		92.4	69-134			
Surrogate: 1,2-Dichloroethane-d4	4.49		ug/L	*5.00*		*89.9*	*80-129*			
Surrogate: Toluene-d8	5.03		ug/L	*5.00*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.24		ug/L	*5.00*		*105*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	4.97		ug/L	*5.00*		*99.5*	*80-120*			
LCS (BFL0583-BS2)				Prepared: 26-Dec-2017 Analyzed: 26-Dec-2017 07:31						
Gasoline Range Organics (Tol-Nap)	867	100	ug/L	1000		86.7	72-128			
Surrogate: Toluene-d8	4.91		ug/L	*5.00*		*98.3*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.03		ug/L	*5.00*		*101*	*80-120*			
LCS Dup (BFL0583-BSD1)				Prepared: 26-Dec-2017 Analyzed: 26-Dec-2017 08:32						
Chloromethane	8.09	0.50	ug/L	10.0		80.9	60-138	2.58	30	
Vinyl Chloride	9.30	0.20	ug/L	10.0		93.0	66-133	0.92	30	
Bromomethane	8.04	1.00	ug/L	10.0		80.4	72-131	3.35	30	Q

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P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BFL0583 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFL0583-BSD1)				Prepared: 26-Dec-2017 Analyzed: 26-Dec-2017 08:32						
Chloroethane	10.6	0.20	ug/L	10.0		106	60-155	8.56	30	
Trichlorofluoromethane	8.50	0.20	ug/L	10.0		85.0	80-129	0.48	30	
Acrolein	41.4	5.00	ug/L	50.0		82.8	52-144	3.06	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	9.20	0.20	ug/L	10.0		92.0	76-129	0.84	30	
Acetone	44.7	5.00	ug/L	50.0		89.4	58-142	4.48	30	
1,1-Dichloroethene	9.17	0.20	ug/L	10.0		91.7	69-135	0.48	30	
Bromoethane	9.38	0.20	ug/L	10.0		93.8	78-128	0.45	30	
Iodomethane	3.68	1.00	ug/L	10.0		36.8	56-147	8.64	30	*, Q
Methylene Chloride	9.52	1.00	ug/L	10.0		95.2	65-135	0.80	30	
Acrylonitrile	9.10	1.00	ug/L	10.0		91.0	64-134	0.45	30	
Carbon Disulfide	9.16	0.20	ug/L	10.0		91.6	78-125	0.17	30	
trans-1,2-Dichloroethene	9.75	0.20	ug/L	10.0		97.5	78-128	2.13	30	
Vinyl Acetate	9.08	0.20	ug/L	10.0		90.8	55-138	4.62	30	
1,1-Dichloroethane	9.66	0.20	ug/L	10.0		96.6	76-124	0.35	30	
2-Butanone	49.7	5.00	ug/L	50.0		99.5	61-140	4.44	30	
2,2-Dichloropropane	9.73	0.20	ug/L	10.0		97.3	78-125	1.44	30	
cis-1,2-Dichloroethene	10.2	0.20	ug/L	10.0		102	80-121	2.40	30	
Chloroform	9.54	0.20	ug/L	10.0		95.4	80-122	0.33	30	
Bromochloromethane	10.5	0.20	ug/L	10.0		105	80-121	0.09	30	
1,1,1-Trichloroethane	9.45	0.20	ug/L	10.0		94.5	79-123	0.24	30	
1,1-Dichloropropene	10.8	0.20	ug/L	10.0		108	80-120	0.71	30	
Carbon tetrachloride	9.44	0.20	ug/L	10.0		94.4	53-137	1.61	30	
1,2-Dichloroethane	9.42	0.20	ug/L	10.0		94.2	75-123	0.12	30	
Benzene	10.3	0.20	ug/L	10.0		103	80-120	0.53	30	
Trichloroethene	10.4	0.20	ug/L	10.0		104	80-120	2.79	30	
1,2-Dichloropropane	10.2	0.20	ug/L	10.0		102	80-120	1.91	30	
Bromodichloromethane	9.68	0.20	ug/L	10.0		96.8	80-121	0.51	30	
Dibromomethane	10.1	0.20	ug/L	10.0		101	80-120	1.05	30	
2-Chloroethyl vinyl ether	8.95	1.00	ug/L	10.0		89.5	74-127	2.05	30	
4-Methyl-2-Pentanone	54.6	5.00	ug/L	50.0		109	67-133	4.73	30	
cis-1,3-Dichloropropene	11.1	0.20	ug/L	10.0		111	80-124	2.38	30	
Toluene	10.3	0.20	ug/L	10.0		103	80-120	1.26	30	
trans-1,3-Dichloropropene	10.1	0.20	ug/L	10.0		101	71-127	0.55	30	
2-Hexanone	54.9	5.00	ug/L	50.0		110	69-133	2.99	30	
1,1,2-Trichloroethane	10.3	0.20	ug/L	10.0		103	80-121	0.93	30	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BFL0583 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFL0583-BSD1)				Prepared: 26-Dec-2017 Analyzed: 26-Dec-2017 08:32						
1,3-Dichloropropane	10.7	0.20	ug/L	10.0		107	80-120	1.26	30	
Tetrachloroethene	10.2	0.20	ug/L	10.0		102	80-120	0.06	30	
Dibromochloromethane	10.4	0.20	ug/L	10.0		104	65-135	1.21	30	
1,2-Dibromoethane	10.8	0.20	ug/L	10.0		108	80-121	1.83	30	
Chlorobenzene	10.3	0.20	ug/L	10.0		103	80-120	0.56	30	
Ethylbenzene	10.5	0.20	ug/L	10.0		105	80-120	0.20	30	
1,1,1,2-Tetrachloroethane	10.2	0.20	ug/L	10.0		102	80-120	1.08	30	
m,p-Xylene	22.3	0.40	ug/L	20.0		112	80-121	0.33	30	
o-Xylene	11.2	0.20	ug/L	10.0		112	80-121	1.14	30	
Xylenes, total	33.5	0.60	ug/L	30.0		112	76-127	0.60	30	
Styrene	8.72	0.20	ug/L	10.0		87.2	80-124	0.29	30	
Bromoform	11.4	0.20	ug/L	10.0		114	51-134	5.04	30	
1,1,2,2-Tetrachloroethane	10.7	0.20	ug/L	10.0		107	77-123	3.65	30	
1,2,3-Trichloropropane	10.6	0.50	ug/L	10.0		106	76-125	2.92	30	
trans-1,4-Dichloro 2-Butene	10.1	1.00	ug/L	10.0		101	55-129	1.22	30	
n-Propylbenzene	11.5	0.20	ug/L	10.0		115	78-130	1.94	30	
Bromobenzene	10.8	0.20	ug/L	10.0		108	80-120	2.33	30	
Isopropyl Benzene	12.0	0.20	ug/L	10.0		120	80-128	0.23	30	
2-Chlorotoluene	11.3	0.20	ug/L	10.0		113	78-122	2.00	30	
4-Chlorotoluene	11.3	0.20	ug/L	10.0		113	80-121	0.53	30	
t-Butylbenzene	12.1	0.20	ug/L	10.0		121	78-125	1.99	30	
1,3,5-Trimethylbenzene	11.8	0.20	ug/L	10.0		118	80-129	0.77	30	
1,2,4-Trimethylbenzene	11.9	0.20	ug/L	10.0		119	80-127	2.06	30	
s-Butylbenzene	11.9	0.20	ug/L	10.0		119	78-129	1.56	30	
4-Isopropyl Toluene	8.57	0.20	ug/L	10.0		85.7	79-130	0.81	30	
1,3-Dichlorobenzene	10.7	0.20	ug/L	10.0		107	80-120	0.11	30	
1,4-Dichlorobenzene	10.2	0.20	ug/L	10.0		102	80-120	1.34	30	
n-Butylbenzene	11.6	0.20	ug/L	10.0		116	74-129	1.39	30	
1,2-Dichlorobenzene	10.4	0.20	ug/L	10.0		104	80-120	0.74	30	
1,2-Dibromo-3-chloropropane	10.2	0.50	ug/L	10.0		102	62-123	1.98	30	
1,2,4-Trichlorobenzene	10.9	0.50	ug/L	10.0		109	64-124	0.02	30	
Hexachloro-1,3-Butadiene	9.74	0.50	ug/L	10.0		97.4	58-123	7.54	30	
Naphthalene	10.3	0.50	ug/L	10.0		103	50-134	1.65	30	
1,2,3-Trichlorobenzene	10.8	0.50	ug/L	10.0		108	49-133	1.67	30	
Dichlorodifluoromethane	8.05	0.20	ug/L	10.0		80.5	48-147	2.77	30	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BFL0583 - EPA 5030 (Purge and Trap)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BFL0583-BSD1)				Prepared: 26-Dec-2017 Analyzed: 26-Dec-2017 08:32						
Methyl tert-butyl Ether	10.3	0.50	ug/L	10.0		103	71-132	3.37	30	
2-Pentanone	48.1	5.00	ug/L	50.0		96.1	69-134	3.96	30	
Surrogate: 1,2-Dichloroethane-d4	4.28		ug/L	*5.00*		*85.6*	*80-129*			
Surrogate: Toluene-d8	5.05		ug/L	*5.00*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.03		ug/L	*5.00*		*101*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	5.02		ug/L	*5.00*		*100*	*80-120*			
LCS Dup (BFL0583-BSD2)				Prepared: 26-Dec-2017 Analyzed: 26-Dec-2017 08:12						
Gasoline Range Organics (Tol-Nap)	921	100	ug/L	1000		92.1	72-128	6.03	30	
Surrogate: Toluene-d8	4.93		ug/L	*5.00*		*98.6*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.10		ug/L	*5.00*		*102*	*80-120*			

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BFL0591 - EPA 5035 (Methanol Extraction)

Instrument: NT2 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFL0591-BLK1)				Prepared: 26-Dec-2017 Analyzed: 26-Dec-2017 08:53						
Gasoline Range Organics (Tol-Nap)	ND	5000	ug/kg							U
Surrogate: Toluene-d8	4.77		ug/kg	*5.00*		*95.4*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.65		ug/kg	*5.00*		*92.9*	*78-123*			
LCS (BFL0591-BS1)				Prepared: 26-Dec-2017 Analyzed: 26-Dec-2017 07:31						
Gasoline Range Organics (Tol-Nap)	43300		ug/kg	50000		86.7	70-121			
Surrogate: Toluene-d8	4.91		ug/kg	*5.00*		*98.3*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.03		ug/kg	*5.00*		*101*	*78-123*			
LCS Dup (BFL0591-BSD1)				Prepared: 26-Dec-2017 Analyzed: 26-Dec-2017 08:12						
Gasoline Range Organics (Tol-Nap)	46000		ug/kg	50000		92.1	70-121	6.03	30	
Surrogate: Toluene-d8	4.93		ug/kg	*5.00*		*98.6*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.10		ug/kg	*5.00*		*102*	*78-123*			

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BGA0052 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BGA0052-BLK1)			Prepared: 03-Jan-2018 Analyzed: 03-Jan-2018 12:03							
Chloromethane	ND	1.00	ug/kg							U
Vinyl Chloride	ND	1.00	ug/kg							U
Bromomethane	ND	1.00	ug/kg							U
Chloroethane	ND	1.00	ug/kg							U
Trichlorofluoromethane	ND	1.00	ug/kg							U
Acrolein	ND	5.00	ug/kg							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	2.00	ug/kg							U
Acetone	ND	5.00	ug/kg							U
1,1-Dichloroethene	ND	1.00	ug/kg							U
Bromoethane	ND	2.00	ug/kg							U
Iodomethane	ND	1.00	ug/kg							U
Methylene Chloride	3.53	2.00	ug/kg							*
Acrylonitrile	ND	5.00	ug/kg							U
Carbon Disulfide	ND	1.00	ug/kg							U
trans-1,2-Dichloroethene	ND	1.00	ug/kg							U
Vinyl Acetate	ND	5.00	ug/kg							U
1,1-Dichloroethane	ND	1.00	ug/kg							U
2-Butanone	ND	5.00	ug/kg							U
2,2-Dichloropropane	ND	1.00	ug/kg							U
cis-1,2-Dichloroethene	ND	1.00	ug/kg							U
Chloroform	ND	1.00	ug/kg							U
Bromochloromethane	ND	1.00	ug/kg							U
1,1,1-Trichloroethane	ND	1.00	ug/kg							U
1,1-Dichloropropene	ND	1.00	ug/kg							U
Carbon tetrachloride	ND	1.00	ug/kg							U
1,2-Dichloroethane	ND	1.00	ug/kg							U
Benzene	ND	1.00	ug/kg							U
Trichloroethene	ND	1.00	ug/kg							U
1,2-Dichloropropane	ND	1.00	ug/kg							U
Bromodichloromethane	ND	1.00	ug/kg							U
Dibromomethane	ND	1.00	ug/kg							U
2-Chloroethyl vinyl ether	ND	5.00	ug/kg							U
4-Methyl-2-Pentanone	ND	5.00	ug/kg							U
cis-1,3-Dichloropropene	ND	1.00	ug/kg							U
Toluene	ND	1.00	ug/kg							U

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BGA0052 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BGA0052-BLK1)			Prepared: 03-Jan-2018 Analyzed: 03-Jan-2018 12:03							
trans-1,3-Dichloropropene	ND	1.00	ug/kg							U
2-Hexanone	ND	5.00	ug/kg							U
1,1,2-Trichloroethane	ND	1.00	ug/kg							U
1,3-Dichloropropane	ND	1.00	ug/kg							U
Tetrachloroethene	ND	1.00	ug/kg							U
Dibromochloromethane	ND	1.00	ug/kg							U
1,2-Dibromoethane	ND	1.00	ug/kg							U
Chlorobenzene	ND	1.00	ug/kg							U
Ethylbenzene	ND	1.00	ug/kg							U
1,1,1,2-Tetrachloroethane	ND	1.00	ug/kg							U
m,p-Xylene	ND	2.00	ug/kg							U
o-Xylene	ND	1.00	ug/kg							U
Xylenes, total	ND	2.00	ug/kg							U
Styrene	ND	1.00	ug/kg							U
Bromoform	ND	1.00	ug/kg							U
1,1,2,2-Tetrachloroethane	ND	1.00	ug/kg							U
1,2,3-Trichloropropane	ND	2.00	ug/kg							U
trans-1,4-Dichloro 2-Butene	ND	5.00	ug/kg							U
n-Propylbenzene	ND	1.00	ug/kg							U
Bromobenzene	ND	1.00	ug/kg							U
Isopropyl Benzene	ND	1.00	ug/kg							U
2-Chlorotoluene	ND	1.00	ug/kg							U
4-Chlorotoluene	ND	1.00	ug/kg							U
t-Butylbenzene	ND	1.00	ug/kg							U
1,3,5-Trimethylbenzene	ND	1.00	ug/kg							U
1,2,4-Trimethylbenzene	ND	1.00	ug/kg							U
s-Butylbenzene	ND	1.00	ug/kg							U
4-Isopropyl Toluene	ND	1.00	ug/kg							U
1,3-Dichlorobenzene	ND	1.00	ug/kg							U
1,4-Dichlorobenzene	ND	1.00	ug/kg							U
n-Butylbenzene	ND	1.00	ug/kg							U
1,2-Dichlorobenzene	ND	1.00	ug/kg							U
1,2-Dibromo-3-chloropropane	ND	5.00	ug/kg							U
1,2,4-Trichlorobenzene	ND	5.00	ug/kg							U
Hexachloro-1,3-Butadiene	ND	5.00	ug/kg							U

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BGA0052 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BGA0052-BLK1)			Prepared: 03-Jan-2018 Analyzed: 03-Jan-2018 12:03							
Naphthalene	ND	5.00	ug/kg							U
1,2,3-Trichlorobenzene	ND	5.00	ug/kg							U
Dichlorodifluoromethane	ND	1.00	ug/kg							U
Methyl tert-butyl Ether	ND	1.00	ug/kg							U
2-Pentanone	ND	5.00	ug/kg							U
Surrogate: 1,2-Dichloroethane-d4	52.7		ug/kg	*50.0*		*105*	*80-149*			
Surrogate: Toluene-d8	49.8		ug/kg	*50.0*		*99.7*	*77-120*			
Surrogate: 4-Bromofluorobenzene	49.5		ug/kg	*50.0*		*99.0*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	50.6		ug/kg	*50.0*		*101*	*80-120*			
LCS (BGA0052-BS1)			Prepared: 03-Jan-2018 Analyzed: 03-Jan-2018 10:53							
Chloromethane	54.0		ug/kg	50.0		108	64-132			
Vinyl Chloride	60.7		ug/kg	50.0		121	74-135			Q
Bromomethane	51.3		ug/kg	50.0		103	53-144			
Chloroethane	58.5		ug/kg	50.0		117	55-149			
Trichlorofluoromethane	70.7		ug/kg	50.0		141	61-164			Q
Acrolein	249		ug/kg	250		99.5	59-140			
1,1,2-Trichloro-1,2,2-Trifluoroethane	57.9		ug/kg	50.0		116	74-143			
Acetone	231		ug/kg	250		92.4	48-137			
1,1-Dichloroethene	55.0		ug/kg	50.0		110	77-134			
Bromoethane	54.4		ug/kg	50.0		109	65-145			
Iodomethane	68.8		ug/kg	50.0		138	31-162			Q
Methylene Chloride	54.5		ug/kg	50.0		109	69-129			B
Acrylonitrile	50.2		ug/kg	50.0		100	69-134			
Carbon Disulfide	57.5		ug/kg	50.0		115	71-137			
trans-1,2-Dichloroethene	56.0		ug/kg	50.0		112	79-130			
Vinyl Acetate	50.9		ug/kg	50.0		102	66-141			
1,1-Dichloroethane	53.9		ug/kg	50.0		108	80-126			
2-Butanone	248		ug/kg	250		99.4	70-132			
2,2-Dichloropropane	56.2		ug/kg	50.0		112	77-138			
cis-1,2-Dichloroethene	53.5		ug/kg	50.0		107	80-125			
Chloroform	53.5		ug/kg	50.0		107	80-126			
Bromochloromethane	54.0		ug/kg	50.0		108	80-129			
1,1,1-Trichloroethane	55.1		ug/kg	50.0		110	78-133			
1,1-Dichloropropene	54.7		ug/kg	50.0		109	79-120			

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BGA0052 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BGA0052-BS1)			Prepared: 03-Jan-2018 Analyzed: 03-Jan-2018 10:53							
Carbon tetrachloride	57.4		ug/kg	50.0		115	71-129			
1,2-Dichloroethane	48.8		ug/kg	50.0		97.5	76-120			
Benzene	53.8		ug/kg	50.0		108	80-120			
Trichloroethene	53.4		ug/kg	50.0		107	80-120			
1,2-Dichloropropane	50.8		ug/kg	50.0		102	79-120			
Bromodichloromethane	53.0		ug/kg	50.0		106	80-122			
Dibromomethane	50.6		ug/kg	50.0		101	80-120			
2-Chloroethyl vinyl ether	49.9		ug/kg	50.0		99.9	51-129			
4-Methyl-2-Pentanone	255		ug/kg	250		102	73-121			
cis-1,3-Dichloropropene	52.9		ug/kg	50.0		106	80-120			
Toluene	52.8		ug/kg	50.0		106	75-120			
trans-1,3-Dichloropropene	52.6		ug/kg	50.0		105	80-124			
2-Hexanone	253		ug/kg	250		101	68-122			
1,1,2-Trichloroethane	49.3		ug/kg	50.0		98.7	79-120			
1,3-Dichloropropane	51.9		ug/kg	50.0		104	78-120			
Tetrachloroethene	55.9		ug/kg	50.0		112	74-124			
Dibromochloromethane	53.2		ug/kg	50.0		106	74-125			
1,2-Dibromoethane	51.7		ug/kg	50.0		103	80-120			
Chlorobenzene	53.8		ug/kg	50.0		108	78-120			
Ethylbenzene	55.4		ug/kg	50.0		111	80-125			
1,1,1,2-Tetrachloroethane	54.3		ug/kg	50.0		109	80-120			
m,p-Xylene	113		ug/kg	100		113	76-121			
o-Xylene	54.3		ug/kg	50.0		109	67-132			
Xylenes, total	167		ug/kg	150		111	67-132			
Styrene	54.6		ug/kg	50.0		109	80-120			
Bromoform	51.1		ug/kg	50.0		102	64-128			
1,1,2,2-Tetrachloroethane	51.2		ug/kg	50.0		102	74-120			
1,2,3-Trichloropropane	51.3		ug/kg	50.0		103	73-120			
trans-1,4-Dichloro 2-Butene	50.8		ug/kg	50.0		102	65-125			
n-Propylbenzene	56.2		ug/kg	50.0		112	72-124			
Bromobenzene	53.8		ug/kg	50.0		108	76-120			
Isopropyl Benzene	56.0		ug/kg	50.0		112	74-121			
2-Chlorotoluene	55.4		ug/kg	50.0		111	75-120			
4-Chlorotoluene	56.5		ug/kg	50.0		113	69-124			
t-Butylbenzene	55.5		ug/kg	50.0		111	72-122			

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BGA0052 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BGA0052-BS1)				Prepared: 03-Jan-2018 Analyzed: 03-Jan-2018 10:53						
1,3,5-Trimethylbenzene	56.4		ug/kg	50.0		113	74-122			
1,2,4-Trimethylbenzene	55.2		ug/kg	50.0		110	75-121			
s-Butylbenzene	56.4		ug/kg	50.0		113	70-128			
4-Isopropyl Toluene	56.7		ug/kg	50.0		113	75-125			
1,3-Dichlorobenzene	54.7		ug/kg	50.0		109	75-120			
1,4-Dichlorobenzene	53.3		ug/kg	50.0		107	73-120			
n-Butylbenzene	57.7		ug/kg	50.0		115	73-130			
1,2-Dichlorobenzene	53.0		ug/kg	50.0		106	76-120			
1,2-Dibromo-3-chloropropane	50.8		ug/kg	50.0		102	65-126			
1,2,4-Trichlorobenzene	56.6		ug/kg	50.0		113	66-140			
Hexachloro-1,3-Butadiene	57.6		ug/kg	50.0		115	67-133			
Naphthalene	54.2		ug/kg	50.0		108	69-125			
1,2,3-Trichlorobenzene	55.0		ug/kg	50.0		110	68-132			
Dichlorodifluoromethane	60.9		ug/kg	50.0		122	67-142			Q
Methyl tert-butyl Ether	51.4		ug/kg	50.0		103	79-127			
2-Pentanone	255		ug/kg	250		102	77-120			
Surrogate: 1,2-Dichloroethane-d4	49.3		ug/kg	*50.0*		*98.7*	*80-149*			
Surrogate: Toluene-d8	49.7		ug/kg	*50.0*		*99.4*	*77-120*			
Surrogate: 4-Bromofluorobenzene	50.2		ug/kg	*50.0*		*100*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	50.7		ug/kg	*50.0*		*101*	*80-120*			
LCS Dup (BGA0052-BSD1)				Prepared: 03-Jan-2018 Analyzed: 03-Jan-2018 11:41						
Chloromethane	52.4		ug/kg	50.0		105	64-132	3.07	30	
Vinyl Chloride	59.9		ug/kg	50.0		120	74-135	1.42	30	Q
Bromomethane	54.9		ug/kg	50.0		110	53-144	6.90	30	
Chloroethane	58.8		ug/kg	50.0		118	55-149	0.57	30	
Trichlorofluoromethane	72.8		ug/kg	50.0		146	61-164	2.83	30	Q
Acrolein	235		ug/kg	250		94.1	59-140	5.60	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	59.5		ug/kg	50.0		119	74-143	2.73	30	
Acetone	215		ug/kg	250		86.0	48-137	7.19	30	
1,1-Dichloroethene	56.7		ug/kg	50.0		113	77-134	2.94	30	
Bromoethane	55.7		ug/kg	50.0		111	65-145	2.34	30	
Iodomethane	62.9		ug/kg	50.0		126	31-162	8.85	30	Q
Methylene Chloride	53.2		ug/kg	50.0		106	69-129	2.49	30	B
Acrylonitrile	46.6		ug/kg	50.0		93.2	69-134	7.41	30	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BGA0052 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BGA0052-BSD1)			Prepared: 03-Jan-2018 Analyzed: 03-Jan-2018 11:41							
Carbon Disulfide	58.2		ug/kg	50.0		116	71-137	1.35	30	
trans-1,2-Dichloroethene	56.6		ug/kg	50.0		113	79-130	1.17	30	
Vinyl Acetate	49.0		ug/kg	50.0		98.1	66-141	3.73	30	
1,1-Dichloroethane	54.4		ug/kg	50.0		109	80-126	0.87	30	
2-Butanone	227		ug/kg	250		90.9	70-132	8.89	30	
2,2-Dichloropropane	57.0		ug/kg	50.0		114	77-138	1.51	30	
cis-1,2-Dichloroethene	53.2		ug/kg	50.0		106	80-125	0.67	30	
Chloroform	54.4		ug/kg	50.0		109	80-126	1.56	30	
Bromochloromethane	53.4		ug/kg	50.0		107	80-129	1.16	30	
1,1,1-Trichloroethane	55.7		ug/kg	50.0		111	78-133	0.95	30	
1,1-Dichloropropene	54.3		ug/kg	50.0		109	79-120	0.76	30	
Carbon tetrachloride	56.7		ug/kg	50.0		113	71-129	1.20	30	
1,2-Dichloroethane	47.7		ug/kg	50.0		95.5	76-120	2.12	30	
Benzene	52.8		ug/kg	50.0		106	80-120	1.83	30	
Trichloroethene	53.9		ug/kg	50.0		108	80-120	0.93	30	
1,2-Dichloropropane	50.0		ug/kg	50.0		99.9	79-120	1.69	30	
Bromodichloromethane	51.8		ug/kg	50.0		104	80-122	2.38	30	
Dibromomethane	48.6		ug/kg	50.0		97.2	80-120	3.98	30	
2-Chloroethyl vinyl ether	47.0		ug/kg	50.0		93.9	51-129	6.19	30	
4-Methyl-2-Pentanone	226		ug/kg	250		90.5	73-121	11.80	30	
cis-1,3-Dichloropropene	51.5		ug/kg	50.0		103	80-120	2.71	30	
Toluene	51.0		ug/kg	50.0		102	75-120	3.43	30	
trans-1,3-Dichloropropene	50.5		ug/kg	50.0		101	80-124	4.18	30	
2-Hexanone	224		ug/kg	250		89.4	68-122	12.40	30	
1,1,2-Trichloroethane	47.0		ug/kg	50.0		94.0	79-120	4.83	30	
1,3-Dichloropropane	49.2		ug/kg	50.0		98.4	78-120	5.23	30	
Tetrachloroethene	55.8		ug/kg	50.0		112	74-124	0.26	30	
Dibromochloromethane	50.8		ug/kg	50.0		102	74-125	4.62	30	
1,2-Dibromoethane	48.5		ug/kg	50.0		97.0	80-120	6.40	30	
Chlorobenzene	51.8		ug/kg	50.0		104	78-120	3.81	30	
Ethylbenzene	53.5		ug/kg	50.0		107	80-125	3.41	30	
1,1,1,2-Tetrachloroethane	52.7		ug/kg	50.0		105	80-120	3.04	30	
m,p-Xylene	107		ug/kg	100		107	76-121	5.30	30	
o-Xylene	52.2		ug/kg	50.0		104	67-132	3.91	30	
Xylenes, total	159		ug/kg	150		106	67-132	4.85	30	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BGA0052 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BGA0052-BSD1)			Prepared: 03-Jan-2018 Analyzed: 03-Jan-2018 11:41							
Styrene	51.6		ug/kg	50.0		103	80-120	5.65	30	
Bromoform	48.8		ug/kg	50.0		97.7	64-128	4.62	30	
1,1,2,2-Tetrachloroethane	48.1		ug/kg	50.0		96.2	74-120	6.16	30	
1,2,3-Trichloropropane	48.0		ug/kg	50.0		95.9	73-120	6.79	30	
trans-1,4-Dichloro 2-Butene	48.3		ug/kg	50.0		96.6	65-125	5.10	30	
n-Propylbenzene	56.0		ug/kg	50.0		112	72-124	0.40	30	
Bromobenzene	52.4		ug/kg	50.0		105	76-120	2.66	30	
Isopropyl Benzene	54.9		ug/kg	50.0		110	74-121	1.89	30	
2-Chlorotoluene	54.4		ug/kg	50.0		109	75-120	1.82	30	
4-Chlorotoluene	54.8		ug/kg	50.0		110	69-124	3.12	30	
t-Butylbenzene	53.7		ug/kg	50.0		107	72-122	3.29	30	
1,3,5-Trimethylbenzene	54.6		ug/kg	50.0		109	74-122	3.24	30	
1,2,4-Trimethylbenzene	53.4		ug/kg	50.0		107	75-121	3.32	30	
s-Butylbenzene	55.2		ug/kg	50.0		110	70-128	2.18	30	
4-Isopropyl Toluene	55.9		ug/kg	50.0		112	75-125	1.43	30	
1,3-Dichlorobenzene	53.0		ug/kg	50.0		106	75-120	3.26	30	
1,4-Dichlorobenzene	52.0		ug/kg	50.0		104	73-120	2.54	30	
n-Butylbenzene	57.4		ug/kg	50.0		115	73-130	0.51	30	
1,2-Dichlorobenzene	50.9		ug/kg	50.0		102	76-120	3.90	30	
1,2-Dibromo-3-chloropropane	46.0		ug/kg	50.0		92.0	65-126	10.00	30	
1,2,4-Trichlorobenzene	55.3		ug/kg	50.0		111	66-140	2.37	30	
Hexachloro-1,3-Butadiene	56.2		ug/kg	50.0		112	67-133	2.50	30	
Naphthalene	49.4		ug/kg	50.0		98.9	69-125	9.12	30	
1,2,3-Trichlorobenzene	52.9		ug/kg	50.0		106	68-132	3.91	30	
Dichlorodifluoromethane	61.5		ug/kg	50.0		123	67-142	0.90	30	Q
Methyl tert-butyl Ether	50.5		ug/kg	50.0		101	79-127	1.70	30	
2-Pentanone	239		ug/kg	250		95.7	77-120	6.34	30	
Surrogate: 1,2-Dichloroethane-d4	51.1		ug/kg	*50.0*		*102*	*80-149*			
Surrogate: Toluene-d8	50.0		ug/kg	*50.0*		*100*	*77-120*			
Surrogate: 4-Bromofluorobenzene	49.5		ug/kg	*50.0*		*99.0*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	49.8		ug/kg	*50.0*		*99.5*	*80-120*			

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BGA0084 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BGA0084-BLK1)			Prepared: 04-Jan-2018 Analyzed: 04-Jan-2018 11:53							
Chloromethane	ND	1.00	ug/kg							U
Vinyl Chloride	ND	1.00	ug/kg							U
Bromomethane	ND	1.00	ug/kg							U
Chloroethane	ND	1.00	ug/kg							U
Trichlorofluoromethane	ND	1.00	ug/kg							U
Acrolein	ND	5.00	ug/kg							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	2.00	ug/kg							U
Acetone	ND	5.00	ug/kg							U
1,1-Dichloroethene	ND	1.00	ug/kg							U
Bromoethane	ND	2.00	ug/kg							U
Iodomethane	ND	1.00	ug/kg							U
Methylene Chloride	ND	2.00	ug/kg							U
Acrylonitrile	ND	5.00	ug/kg							U
Carbon Disulfide	ND	1.00	ug/kg							U
trans-1,2-Dichloroethene	ND	1.00	ug/kg							U
Vinyl Acetate	ND	5.00	ug/kg							U
1,1-Dichloroethane	ND	1.00	ug/kg							U
2-Butanone	ND	5.00	ug/kg							U
2,2-Dichloropropane	ND	1.00	ug/kg							U
cis-1,2-Dichloroethene	ND	1.00	ug/kg							U
Chloroform	ND	1.00	ug/kg							U
Bromochloromethane	ND	1.00	ug/kg							U
1,1,1-Trichloroethane	ND	1.00	ug/kg							U
1,1-Dichloropropene	ND	1.00	ug/kg							U
Carbon tetrachloride	ND	1.00	ug/kg							U
1,2-Dichloroethane	ND	1.00	ug/kg							U
Benzene	ND	1.00	ug/kg							U
Trichloroethene	ND	1.00	ug/kg							U
1,2-Dichloropropane	ND	1.00	ug/kg							U
Bromodichloromethane	ND	1.00	ug/kg							U
Dibromomethane	ND	1.00	ug/kg							U
2-Chloroethyl vinyl ether	ND	5.00	ug/kg							U
4-Methyl-2-Pentanone	ND	5.00	ug/kg							U
cis-1,3-Dichloropropene	ND	1.00	ug/kg							U
Toluene	ND	1.00	ug/kg							U

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BGA0084 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BGA0084-BLK1)			Prepared: 04-Jan-2018 Analyzed: 04-Jan-2018 11:53							
trans-1,3-Dichloropropene	ND	1.00	ug/kg							U
2-Hexanone	ND	5.00	ug/kg							U
1,1,2-Trichloroethane	ND	1.00	ug/kg							U
1,3-Dichloropropane	ND	1.00	ug/kg							U
Tetrachloroethene	ND	1.00	ug/kg							U
Dibromochloromethane	ND	1.00	ug/kg							U
1,2-Dibromoethane	ND	1.00	ug/kg							U
Chlorobenzene	ND	1.00	ug/kg							U
Ethylbenzene	ND	1.00	ug/kg							U
1,1,1,2-Tetrachloroethane	ND	1.00	ug/kg							U
m,p-Xylene	ND	2.00	ug/kg							U
o-Xylene	ND	1.00	ug/kg							U
Xylenes, total	ND	2.00	ug/kg							U
Styrene	ND	1.00	ug/kg							U
Bromoform	ND	1.00	ug/kg							U
1,1,2,2-Tetrachloroethane	ND	1.00	ug/kg							U
1,2,3-Trichloropropane	ND	2.00	ug/kg							U
trans-1,4-Dichloro 2-Butene	ND	5.00	ug/kg							U
n-Propylbenzene	ND	1.00	ug/kg							U
Bromobenzene	ND	1.00	ug/kg							U
Isopropyl Benzene	ND	1.00	ug/kg							U
2-Chlorotoluene	ND	1.00	ug/kg							U
4-Chlorotoluene	ND	1.00	ug/kg							U
t-Butylbenzene	ND	1.00	ug/kg							U
1,3,5-Trimethylbenzene	ND	1.00	ug/kg							U
1,2,4-Trimethylbenzene	ND	1.00	ug/kg							U
s-Butylbenzene	ND	1.00	ug/kg							U
4-Isopropyl Toluene	ND	1.00	ug/kg							U
1,3-Dichlorobenzene	ND	1.00	ug/kg							U
1,4-Dichlorobenzene	ND	1.00	ug/kg							U
n-Butylbenzene	ND	1.00	ug/kg							U
1,2-Dichlorobenzene	ND	1.00	ug/kg							U
1,2-Dibromo-3-chloropropane	ND	5.00	ug/kg							U
1,2,4-Trichlorobenzene	ND	5.00	ug/kg							U
Hexachloro-1,3-Butadiene	ND	5.00	ug/kg							U

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BGA0084 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BGA0084-BLK1)			Prepared: 04-Jan-2018 Analyzed: 04-Jan-2018 11:53							
Naphthalene	ND	5.00	ug/kg							U
1,2,3-Trichlorobenzene	ND	5.00	ug/kg							U
Dichlorodifluoromethane	ND	1.00	ug/kg							U
Methyl tert-butyl Ether	ND	1.00	ug/kg							U
2-Pentanone	ND	5.00	ug/kg							U
Surrogate: 1,2-Dichloroethane-d4	53.7		ug/kg	*50.0*		*107*	*80-149*			
Surrogate: Toluene-d8	50.5		ug/kg	*50.0*		*101*	*77-120*			
Surrogate: 4-Bromofluorobenzene	51.2		ug/kg	*50.0*		*102*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	50.2		ug/kg	*50.0*		*100*	*80-120*			
LCS (BGA0084-BS1)			Prepared: 04-Jan-2018 Analyzed: 04-Jan-2018 11:31							
Chloromethane	58.9		ug/kg	50.0		118	64-132			
Vinyl Chloride	62.5		ug/kg	50.0		125	74-135			Q
Bromomethane	63.5		ug/kg	50.0		127	53-144			Q
Chloroethane	61.5		ug/kg	50.0		123	55-149			Q
Trichlorofluoromethane	72.1		ug/kg	50.0		144	61-164			Q
Acrolein	259		ug/kg	250		103	59-140			
1,1,2-Trichloro-1,2,2-Trifluoroethane	59.6		ug/kg	50.0		119	74-143			
Acetone	236		ug/kg	250		94.3	48-137			
1,1-Dichloroethene	57.9		ug/kg	50.0		116	77-134			
Bromoethane	58.9		ug/kg	50.0		118	65-145			
Iodomethane	49.8		ug/kg	50.0		99.5	31-162			
Methylene Chloride	55.3		ug/kg	50.0		111	69-129			
Acrylonitrile	51.5		ug/kg	50.0		103	69-134			
Carbon Disulfide	60.4		ug/kg	50.0		121	71-137			Q
trans-1,2-Dichloroethene	58.7		ug/kg	50.0		117	79-130			
Vinyl Acetate	54.9		ug/kg	50.0		110	66-141			
1,1-Dichloroethane	58.8		ug/kg	50.0		118	80-126			
2-Butanone	251		ug/kg	250		101	70-132			
2,2-Dichloropropane	60.6		ug/kg	50.0		121	77-138			Q
cis-1,2-Dichloroethene	57.8		ug/kg	50.0		116	80-125			
Chloroform	58.9		ug/kg	50.0		118	80-126			
Bromochloromethane	59.1		ug/kg	50.0		118	80-129			
1,1,1-Trichloroethane	58.7		ug/kg	50.0		117	78-133			
1,1-Dichloropropene	55.9		ug/kg	50.0		112	79-120			

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BGA0084 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BGA0084-BS1)			Prepared: 04-Jan-2018 Analyzed: 04-Jan-2018 11:31							
Carbon tetrachloride	58.6		ug/kg	50.0		117	71-129			
1,2-Dichloroethane	52.9		ug/kg	50.0		106	76-120			
Benzene	56.0		ug/kg	50.0		112	80-120			
Trichloroethene	55.2		ug/kg	50.0		110	80-120			
1,2-Dichloropropane	55.1		ug/kg	50.0		110	79-120			
Bromodichloromethane	57.5		ug/kg	50.0		115	80-122			
Dibromomethane	54.3		ug/kg	50.0		109	80-120			
2-Chloroethyl vinyl ether	51.9		ug/kg	50.0		104	51-129			
4-Methyl-2-Pentanone	251		ug/kg	250		100	73-121			
cis-1,3-Dichloropropene	56.4		ug/kg	50.0		113	80-120			
Toluene	54.7		ug/kg	50.0		109	75-120			
trans-1,3-Dichloropropene	56.0		ug/kg	50.0		112	80-124			
2-Hexanone	241		ug/kg	250		96.5	68-122			
1,1,2-Trichloroethane	52.5		ug/kg	50.0		105	79-120			
1,3-Dichloropropane	53.5		ug/kg	50.0		107	78-120			
Tetrachloroethene	53.4		ug/kg	50.0		107	74-124			
Dibromochloromethane	54.6		ug/kg	50.0		109	74-125			
1,2-Dibromoethane	54.0		ug/kg	50.0		108	80-120			
Chlorobenzene	54.4		ug/kg	50.0		109	78-120			
Ethylbenzene	55.3		ug/kg	50.0		111	80-125			
1,1,1,2-Tetrachloroethane	56.3		ug/kg	50.0		113	80-120			
m,p-Xylene	111		ug/kg	100		111	76-121			
o-Xylene	54.5		ug/kg	50.0		109	67-132			
Xylenes, total	166		ug/kg	150		110	67-132			
Styrene	56.0		ug/kg	50.0		112	80-120			
Bromoform	51.7		ug/kg	50.0		103	64-128			
1,1,2,2-Tetrachloroethane	50.9		ug/kg	50.0		102	74-120			
1,2,3-Trichloropropane	49.9		ug/kg	50.0		99.7	73-120			
trans-1,4-Dichloro 2-Butene	49.1		ug/kg	50.0		98.3	65-125			
n-Propylbenzene	55.3		ug/kg	50.0		111	72-124			
Bromobenzene	53.7		ug/kg	50.0		107	76-120			
Isopropyl Benzene	55.1		ug/kg	50.0		110	74-121			
2-Chlorotoluene	55.7		ug/kg	50.0		111	75-120			
4-Chlorotoluene	56.0		ug/kg	50.0		112	69-124			
t-Butylbenzene	54.9		ug/kg	50.0		110	72-122			

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BGA0084 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BGA0084-BS1)				Prepared: 04-Jan-2018 Analyzed: 04-Jan-2018 11:31						
1,3,5-Trimethylbenzene	55.6		ug/kg	50.0		111	74-122			
1,2,4-Trimethylbenzene	55.2		ug/kg	50.0		110	75-121			
s-Butylbenzene	55.4		ug/kg	50.0		111	70-128			
4-Isopropyl Toluene	55.6		ug/kg	50.0		111	75-125			
1,3-Dichlorobenzene	53.6		ug/kg	50.0		107	75-120			
1,4-Dichlorobenzene	52.8		ug/kg	50.0		106	73-120			
n-Butylbenzene	56.2		ug/kg	50.0		112	73-130			
1,2-Dichlorobenzene	53.3		ug/kg	50.0		107	76-120			
1,2-Dibromo-3-chloropropane	48.0		ug/kg	50.0		96.1	65-126			
1,2,4-Trichlorobenzene	56.3		ug/kg	50.0		113	66-140			
Hexachloro-1,3-Butadiene	56.5		ug/kg	50.0		113	67-133			
Naphthalene	53.1		ug/kg	50.0		106	69-125			
1,2,3-Trichlorobenzene	55.1		ug/kg	50.0		110	68-132			
Dichlorodifluoromethane	46.5		ug/kg	50.0		93.0	67-142			
Methyl tert-butyl Ether	56.9		ug/kg	50.0		114	79-127			
2-Pentanone	248		ug/kg	250		99.1	77-120			
Surrogate: 1,2-Dichloroethane-d4	53.4		ug/kg	*50.0*		*107*	*80-149*			
Surrogate: Toluene-d8	50.9		ug/kg	*50.0*		*102*	*77-120*			
Surrogate: 4-Bromofluorobenzene	49.8		ug/kg	*50.0*		*99.5*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	50.3		ug/kg	*50.0*		*101*	*80-120*			
LCS Dup (BGA0084-BSD1)				Prepared: 04-Jan-2018 Analyzed: 04-Jan-2018 12:15						
Chloromethane	58.3		ug/kg	50.0		117	64-132	1.01	30	
Vinyl Chloride	63.1		ug/kg	50.0		126	74-135	0.89	30	Q
Bromomethane	61.7		ug/kg	50.0		123	53-144	2.95	30	Q
Chloroethane	60.1		ug/kg	50.0		120	55-149	2.42	30	Q
Trichlorofluoromethane	72.6		ug/kg	50.0		145	61-164	0.65	30	Q
Acrolein	257		ug/kg	250		103	59-140	0.66	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	60.7		ug/kg	50.0		121	74-143	1.77	30	
Acetone	245		ug/kg	250		97.8	48-137	3.69	30	
1,1-Dichloroethene	57.5		ug/kg	50.0		115	77-134	0.83	30	
Bromoethane	58.0		ug/kg	50.0		116	65-145	1.47	30	
Iodomethane	48.8		ug/kg	50.0		97.6	31-162	1.98	30	
Methylene Chloride	54.4		ug/kg	50.0		109	69-129	1.74	30	
Acrylonitrile	52.7		ug/kg	50.0		105	69-134	2.42	30	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BGA0084 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BGA0084-BSD1)			Prepared: 04-Jan-2018 Analyzed: 04-Jan-2018 12:15							
Carbon Disulfide	59.0		ug/kg	50.0		118	71-137	2.42	30	Q
trans-1,2-Dichloroethene	58.1		ug/kg	50.0		116	79-130	1.10	30	
Vinyl Acetate	54.0		ug/kg	50.0		108	66-141	1.61	30	
1,1-Dichloroethane	57.0		ug/kg	50.0		114	80-126	3.08	30	
2-Butanone	258		ug/kg	250		103	70-132	2.53	30	
2,2-Dichloropropane	60.3		ug/kg	50.0		121	77-138	0.40	30	Q
cis-1,2-Dichloroethene	56.0		ug/kg	50.0		112	80-125	3.15	30	
Chloroform	56.3		ug/kg	50.0		113	80-126	4.37	30	
Bromochloromethane	54.4		ug/kg	50.0		109	80-129	8.26	30	
1,1,1-Trichloroethane	58.0		ug/kg	50.0		116	78-133	1.32	30	
1,1-Dichloropropene	55.5		ug/kg	50.0		111	79-120	0.83	30	
Carbon tetrachloride	57.5		ug/kg	50.0		115	71-129	2.03	30	
1,2-Dichloroethane	50.7		ug/kg	50.0		101	76-120	4.14	30	
Benzene	53.4		ug/kg	50.0		107	80-120	4.60	30	
Trichloroethene	53.8		ug/kg	50.0		108	80-120	2.61	30	
1,2-Dichloropropane	52.9		ug/kg	50.0		106	79-120	4.15	30	
Bromodichloromethane	54.6		ug/kg	50.0		109	80-122	5.17	30	
Dibromomethane	52.7		ug/kg	50.0		105	80-120	3.07	30	
2-Chloroethyl vinyl ether	50.4		ug/kg	50.0		101	51-129	2.95	30	
4-Methyl-2-Pentanone	254		ug/kg	250		102	73-121	1.31	30	
cis-1,3-Dichloropropene	54.1		ug/kg	50.0		108	80-120	4.17	30	
Toluene	52.9		ug/kg	50.0		106	75-120	3.34	30	
trans-1,3-Dichloropropene	53.6		ug/kg	50.0		107	80-124	4.40	30	
2-Hexanone	244		ug/kg	250		97.6	68-122	1.22	30	
1,1,2-Trichloroethane	50.7		ug/kg	50.0		101	79-120	3.53	30	
1,3-Dichloropropane	50.9		ug/kg	50.0		102	78-120	4.94	30	
Tetrachloroethene	53.4		ug/kg	50.0		107	74-124	0.09	30	
Dibromochloromethane	51.3		ug/kg	50.0		103	74-125	6.13	30	
1,2-Dibromoethane	52.4		ug/kg	50.0		105	80-120	3.02	30	
Chlorobenzene	52.5		ug/kg	50.0		105	78-120	3.48	30	
Ethylbenzene	54.2		ug/kg	50.0		108	80-125	2.00	30	
1,1,1,2-Tetrachloroethane	53.1		ug/kg	50.0		106	80-120	5.86	30	
m,p-Xylene	108		ug/kg	100		108	76-121	2.58	30	
o-Xylene	53.2		ug/kg	50.0		106	67-132	2.42	30	
Xylenes, total	161		ug/kg	150		108	67-132	2.53	30	

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Volatile Organic Compounds - Quality Control

Batch BGA0084 - EPA 5035 (Sodium Bisulfate)

Instrument: NT5 Analyst: LH

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BGA0084-BSD1)			Prepared: 04-Jan-2018 Analyzed: 04-Jan-2018 12:15							
Styrene	53.5		ug/kg	50.0		107	80-120	4.55	30	
Bromoform	49.6		ug/kg	50.0		99.2	64-128	4.15	30	
1,1,2,2-Tetrachloroethane	50.0		ug/kg	50.0		100	74-120	1.77	30	
1,2,3-Trichloropropane	50.3		ug/kg	50.0		101	73-120	0.83	30	
trans-1,4-Dichloro 2-Butene	50.4		ug/kg	50.0		101	65-125	2.59	30	
n-Propylbenzene	55.5		ug/kg	50.0		111	72-124	0.34	30	
Bromobenzene	51.6		ug/kg	50.0		103	76-120	3.94	30	
Isopropyl Benzene	54.3		ug/kg	50.0		109	74-121	1.43	30	
2-Chlorotoluene	54.3		ug/kg	50.0		109	75-120	2.44	30	
4-Chlorotoluene	55.4		ug/kg	50.0		111	69-124	1.08	30	
t-Butylbenzene	53.6		ug/kg	50.0		107	72-122	2.25	30	
1,3,5-Trimethylbenzene	54.6		ug/kg	50.0		109	74-122	1.65	30	
1,2,4-Trimethylbenzene	54.2		ug/kg	50.0		108	75-121	1.76	30	
s-Butylbenzene	54.8		ug/kg	50.0		110	70-128	0.95	30	
4-Isopropyl Toluene	55.1		ug/kg	50.0		110	75-125	0.80	30	
1,3-Dichlorobenzene	53.2		ug/kg	50.0		106	75-120	0.77	30	
1,4-Dichlorobenzene	52.4		ug/kg	50.0		105	73-120	0.77	30	
n-Butylbenzene	56.9		ug/kg	50.0		114	73-130	1.23	30	
1,2-Dichlorobenzene	51.9		ug/kg	50.0		104	76-120	2.76	30	
1,2-Dibromo-3-chloropropane	50.7		ug/kg	50.0		101	65-126	5.43	30	
1,2,4-Trichlorobenzene	56.6		ug/kg	50.0		113	66-140	0.57	30	
Hexachloro-1,3-Butadiene	56.2		ug/kg	50.0		112	67-133	0.64	30	
Naphthalene	51.8		ug/kg	50.0		104	69-125	2.50	30	
1,2,3-Trichlorobenzene	53.5		ug/kg	50.0		107	68-132	3.06	30	
Dichlorodifluoromethane	55.9		ug/kg	50.0		112	67-142	18.30	30	
Methyl tert-butyl Ether	55.5		ug/kg	50.0		111	79-127	2.43	30	
2-Pentanone	265		ug/kg	250		106	77-120	6.79	30	
Surrogate: 1,2-Dichloroethane-d4	55.1		ug/kg	*50.0*		*110*	*80-149*			
Surrogate: Toluene-d8	50.6		ug/kg	*50.0*		*101*	*77-120*			
Surrogate: 4-Bromofluorobenzene	50.1		ug/kg	*50.0*		*100*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	51.2		ug/kg	*50.0*		*102*	*80-120*			

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Aroclor PCB - Quality Control

Batch BFL0613 - EPA 3546 (Microwave)

Instrument: ECD7 Analyst: JR

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BFL0613-BLK1)				Prepared: 27-Dec-2017 Analyzed: 03-Jan-2018 20:59						
Aroclor 1016	ND	20.0	ug/kg							U
Aroclor 1221	ND	20.0	ug/kg							U
Aroclor 1232	ND	20.0	ug/kg							U
Aroclor 1242	ND	20.0	ug/kg							U
Aroclor 1248	ND	20.0	ug/kg							U
Aroclor 1254	ND	20.0	ug/kg							U
Aroclor 1260	ND	20.0	ug/kg							U
Aroclor 1262	ND	20.0	ug/kg							U
Aroclor 1268	ND	20.0	ug/kg							U
Surrogate: Decachlorobiphenyl	35.9		ug/kg	*40.0*		*89.7*	*40-133*			
Surrogate: Tetrachlorometaxylene	35.9		ug/kg	*40.0*		*89.8*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	34.5		ug/kg	*40.0*		*86.3*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	35.0		ug/kg	*40.0*		*87.4*	*53-120*			
LCS (BFL0613-BS1)				Prepared: 27-Dec-2017 Analyzed: 03-Jan-2018 21:21						
Aroclor 1016	461	20.0	ug/kg	500		92.2	52-120			
Aroclor 1260	480	20.0	ug/kg	500		95.9	57-120			
Surrogate: Decachlorobiphenyl	36.1		ug/kg	*40.0*		*90.2*	*40-133*			
Surrogate: Tetrachlorometaxylene	35.4		ug/kg	*40.0*		*88.6*	*53-120*			
Surrogate: Decachlorobiphenyl [2C]	34.3		ug/kg	*40.0*		*85.7*	*40-133*			
Surrogate: Tetrachlorometaxylene [2C]	34.6		ug/kg	*40.0*		*86.5*	*53-120*			

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Certified Analyses included in this Report

Analyte	Certifications
EPA 8082A in Solid	
Aroclor 1016	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1016 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1221 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1232 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1242 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1248 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1254 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1260 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1262 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Aroclor 1268 [2C]	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
EPA 8260C in Solid	
Chloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Vinyl Chloride	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromomethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Chloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Trichlorofluoromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Acrolein	WADOE,DoD-ELAP,NELAP,CALAP
1,1,2-Trichloro-1,2,2-Trifluoroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Acetone	WADOE,DoD-ELAP,NELAP,CALAP
1,1-Dichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromoethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Iodomethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Methylene Chloride	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Acrylonitrile	WADOE,DoD-ELAP,NELAP,CALAP
Carbon Disulfide	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
trans-1,2-Dichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Vinyl Acetate	WADOE,DoD-ELAP,NELAP,CALAP

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

1,1-Dichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
2-Butanone	WADOE,DoD-ELAP,NELAP,CALAP
2,2-Dichloropropane	WADOE,DoD-ELAP,NELAP,CALAP
cis-1,2-Dichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Chloroform	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromochloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1,1-Trichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1-Dichloropropene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Carbon tetrachloride	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2-Dichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Benzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Trichloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2-Dichloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromodichloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Dibromomethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
2-Chloroethyl vinyl ether	WADOE,DoD-ELAP,NELAP
4-Methyl-2-Pentanone	WADOE,DoD-ELAP,NELAP,CALAP
cis-1,3-Dichloropropene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Toluene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
trans-1,3-Dichloropropene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
2-Hexanone	WADOE,DoD-ELAP,NELAP,CALAP
1,1,2-Trichloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,3-Dichloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Tetrachloroethene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Dibromochloromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2-Dibromoethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Chlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Ethylbenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1,1,2-Tetrachloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
m,p-Xylene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
o-Xylene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Xylenes, total	WADOE
Styrene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Bromoform	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,1,2,2-Tetrachloroethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2,3-Trichloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
trans-1,4-Dichloro 2-Butene	WADOE,DoD-ELAP,NELAP
n-Propylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
Bromobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Isopropyl Benzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

2-Chlorotoluene	WADOE,DoD-ELAP,NELAP,CALAP
4-Chlorotoluene	WADOE,DoD-ELAP,NELAP,CALAP
t-Butylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,3,5-Trimethylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,2,4-Trimethylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
s-Butylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
4-Isopropyl Toluene	WADOE,DoD-ELAP,NELAP,CALAP
1,3-Dichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,4-Dichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP
n-Butylbenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,2-Dichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP
1,2-Dibromo-3-chloropropane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
1,2,4-Trichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Hexachloro-1,3-Butadiene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Naphthalene	WADOE,DoD-ELAP,NELAP,CALAP
1,2,3-Trichlorobenzene	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Dichlorodifluoromethane	WADOE,DoD-ELAP,NELAP,CALAP,ADEC
Methyl tert-butyl Ether	WADOE,DoD-ELAP,NELAP,CALAP
n-Hexane	WADOE
2-Pentanone	WADOE
Dibromofluoromethane	WADOE
4-Bromofluorobenzene	WADOE

EPA 8260C in Water

Chloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Vinyl Chloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromomethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Trichlorofluoromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acrolein	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acetone	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromoethane	DoD-ELAP,NELAP,CALAP,WADOE
Iodomethane	DoD-ELAP,NELAP,CALAP,WADOE
Methylene Chloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Acrylonitrile	DoD-ELAP,NELAP,CALAP,WADOE
Carbon Disulfide	DoD-ELAP,NELAP,CALAP,WADOE
trans-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Vinyl Acetate	DoD-ELAP,NELAP,CALAP,WADOE

The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

1,1-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Butanone	DoD-ELAP,NELAP,CALAP,WADOE
2,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
cis-1,2-Dichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Chloroform	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,1-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Carbon tetrachloride	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Benzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Trichloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Bromodichloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dibromomethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Chloroethyl vinyl ether	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
4-Methyl-2-Pentanone	DoD-ELAP,NELAP,CALAP,WADOE
cis-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Toluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
trans-1,3-Dichloropropene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
2-Hexanone	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2-Trichloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,3-Dichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Tetrachloroethene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dibromochloromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dibromoethane	DoD-ELAP,NELAP,CALAP,WADOE
Chlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Ethylbenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,1,1,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
m,p-Xylene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
o-Xylene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Styrene	DoD-ELAP,NELAP,CALAP,WADOE
Bromoform	DoD-ELAP,NELAP,CALAP,WADOE
1,1,2,2-Tetrachloroethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,3-Trichloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
trans-1,4-Dichloro 2-Butene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
n-Propylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
Bromobenzene	DoD-ELAP,NELAP,CALAP,WADOE
Isopropyl Benzene	DoD-ELAP,NELAP,CALAP,WADOE
2-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

4-Chlorotoluene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
t-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,3,5-Trimethylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,2,4-Trimethylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
s-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
4-Isopropyl Toluene	DoD-ELAP,NELAP,CALAP,WADOE
1,3-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,4-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
n-Butylbenzene	DoD-ELAP,NELAP,CALAP,WADOE
1,2-Dichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2-Dibromo-3-chloropropane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,4-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Hexachloro-1,3-Butadiene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Naphthalene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
1,2,3-Trichlorobenzene	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Dichlorodifluoromethane	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
Methyl tert-butyl Ether	DoD-ELAP,ADEC,NELAP,CALAP,WADOE
n-Hexane	WADOE
2-Pentanone	WADOE

NWTPHg in Water

Gasoline Range Organics (Tol-Nap)	WADOE,DoD-ELAP
Gasoline Range Organics (2MP-TMB)	WADOE,DoD-ELAP
Gasoline Range Organics (Tol-C12)	WADOE,DoD-ELAP
Gasoline Range Organics (C6-C10)	WADOE,ADEC,DoD-ELAP
Gasoline Range Organics (C5-C12)	WADOE,DoD-ELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	UST-033	05/11/2018
CALAP	California Department of Public Health CAELAP	2748	02/28/2018
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	02/07/2019
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006	05/11/2018
WADOE	WA Dept of Ecology	C558	06/30/2018
WA-DW	Ecology - Drinking Water	C558	06/30/2018

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The Boeing Company	Project: Renton Phase II Supplemental	
P.O. Box 3707 MC 9U4-26	Project Number: Renton Phase II Investigation	**Reported:**
Seattle WA, 98124-2207	Project Manager: Peter Hudelson	08-Jan-2018 11:16

Notes and Definitions

Y1	Raised reporting limit due to interference
U	This analyte is not detected above the applicable reporting or detection limit.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
P1	The reported value is greater than 40% difference between the concentrations determined on two GC columns where applicable.
NRS	This surrogate not reported due to chromatographic interference
J	Estimated concentration value detected below the reporting limit.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
D	The reported value is from a dilution
B	This analyte was detected in the method blank.
*	Flagged value is not within established control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

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9/29/2017

Ms. Kathryn Hartley
Landau Associates, Inc.
130 2nd Avenue South

Edmonds WA 98020

Project Name: Boeing Renton Buildings 10-13/10-16 Phas
Project #:
Workorder #: 1709312

Dear Ms. Kathryn Hartley

The following report includes the data for the above referenced project for sample(s) received on 9/15/2017 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kelly Buettner

Project Manager

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WORK ORDER #: 1709312

Work Order Summary

CLIENT:	Ms. Kathryn Hartley Landau Associates, Inc. 130 2nd Avenue South Edmonds, WA 98020	**BILL TO:**	Accounts Payable Eurofins Lancaster Laboratories Environmental, LLC 2425 New Holland Pike Lancaster, PA 17605-2425
PHONE:	425-329-0268	**P.O. #**	
FAX:	425-778-6409	**PROJECT #**	Boeing Renton Buildings 10-13/10-16 Phas
DATE RECEIVED:	09/15/2017	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	09/29/2017		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	LAI-B6-SG	TO-15	3.9 "Hg	14.4 psi
02A	LAI-B1-SG	TO-15	4.3 "Hg	14.5 psi
03A	LAI-B2-SG	TO-15	4.5 "Hg	14.8 psi
04A	LAI-B3-SG	TO-15	3.3 "Hg	14.6 psi
05A	Ambient	TO-15	3.7 "Hg	14.6 psi
06A	LAI-B4-SG	TO-15	3.5 "Hg	15.1 psi
07A	LAI-B5-SG	TO-15	2.4 "Hg	15.1 psi
08A	Lab Blank	TO-15	NA	NA
09A	CCV	TO-15	NA	NA
10A	LCS	TO-15	NA	NA
10AA	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 09/29/17

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-16-11, UT NELAP CA0093332016-7, VA NELAP - 8113, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2016, Expiration date: 10/17/2017.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
EPA Method TO-15
Landau Associates, Inc.
Workorder# 1709312

Seven 1 Liter Summa Canister samples were received on September 15, 2017. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: LAI-B6-SG

Lab ID#: 1709312-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	1.8	5.6	8.9
1,3-Butadiene	1.1	6.0	2.5	13
Freon 11	1.1	16	6.4	88
Acetone	11	29	27	68
Carbon Disulfide	4.6	15	14	48
Hexane	1.1	4.9	4.0	17
Cyclohexane	1.1	3.4	3.9	12
Benzene	1.1	1.6	3.6	5.3
Heptane	1.1	4.3	4.7	18
Toluene	1.1	3.8	4.3	14
Ethyl Benzene	1.1	1.3	4.9	5.5
m,p-Xylene	1.1	6.0	5.0	26
o-Xylene	1.1	2.7	5.0	12
Cumene	1.1	1.3	5.6	6.5
Propylbenzene	1.1	2.2	5.6	11
4-Ethyltoluene	1.1	8.8	5.6	43
1,3,5-Trimethylbenzene	1.1	4.1	5.6	20
1,2,4-Trimethylbenzene	1.1	11	5.6	54

Client Sample ID: LAI-B1-SG

Lab ID#: 1709312-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	1.2	46	2.6	100
Freon 11	1.2	15	6.5	85
Ethanol	4.6	6.5	8.7	12
Acetone	12	81	28	190
Carbon Disulfide	4.6	94	14	290
Hexane	1.2	240	4.1	830
2-Butanone (Methyl Ethyl Ketone)	4.6	13	14	38
Cyclohexane	1.2	110	4.0	370
2,2,4-Trimethylpentane	1.2	540 E	5.4	2500 E
Benzene	1.2	31	3.7	100

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: LAI-B1-SG

Lab ID#: 1709312-02A

Heptane	1.2	78	4.8	320
Toluene	1.2	44	4.4	160
Ethyl Benzene	1.2	2.6	5.0	11
m,p-Xylene	1.2	8.6	5.0	37
o-Xylene	1.2	4.3	5.0	19
Styrene	1.2	2.1	4.9	8.8
4-Ethyltoluene	1.2	2.3	5.7	11
1,3,5-Trimethylbenzene	1.2	2.0	5.7	9.7
1,2,4-Trimethylbenzene	1.2	2.7	5.7	13

Client Sample ID: LAI-B2-SG

Lab ID#: 1709312-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	2.2	5.8	11
1,3-Butadiene	1.2	66	2.6	140
Freon 11	1.2	2.1	6.6	12
Ethanol	4.7	5.8	8.9	11
Acetone	12	40	28	94
Carbon Disulfide	4.7	21	15	66
Hexane	1.2	6.2	4.2	22
Cyclohexane	1.2	3.8	4.1	13
Benzene	1.2	3.7	3.8	12
Heptane	1.2	3.0	4.8	12
Toluene	1.2	4.4	4.4	16
Tetrachloroethene	1.2	1.9	8.0	13
Ethyl Benzene	1.2	1.5	5.1	6.4
m,p-Xylene	1.2	6.2	5.1	27
o-Xylene	1.2	3.1	5.1	13
Styrene	1.2	3.4	5.0	15

Client Sample ID: LAI-B3-SG

Lab ID#: 1709312-04A

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: LAI-B3-SG

Lab ID#: 1709312-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	1.1	33	2.5	73
Acetone	11	19	27	45
Hexane	1.1	5.8	3.9	20
Cyclohexane	1.1	1.1	3.8	3.9
Benzene	1.1	5.4	3.6	17
Heptane	1.1	2.1	4.6	8.6
Toluene	1.1	4.3	4.2	16
Tetrachloroethene	1.1	1.6	7.6	11

Client Sample ID: Ambient

Lab ID#: 1709312-05A

No Detections Were Found.

Client Sample ID: LAI-B4-SG

Lab ID#: 1709312-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	4.6	25	8.6	48
Acetone	11	52	27	120
Hexane	1.1	1.8	4.0	6.3
2-Butanone (Methyl Ethyl Ketone)	4.6	5.1	14	15
Chloroform	1.1	1.2	5.6	6.0
Toluene	1.1	2.0	4.3	7.5
m,p-Xylene	1.1	2.0	5.0	8.8
4-Ethyltoluene	1.1	2.6	5.6	13
1,3,5-Trimethylbenzene	1.1	1.8	5.6	8.9
1,2,4-Trimethylbenzene	1.1	6.0	5.6	29

Client Sample ID: LAI-B5-SG

Lab ID#: 1709312-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)

eurofins | Air Toxics

Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: LAI-B5-SG

Lab ID#: 1709312-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	1.1	2.9	2.4	6.4
Acetone	11	16	26	38
Hexane	1.1	1.8	3.9	6.4
Benzene	1.1	2.0	3.5	6.3
Toluene	1.1	2.2	4.1	8.2
m,p-Xylene	1.1	3.8	4.8	17
o-Xylene	1.1	1.2	4.8	5.3

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Client Sample ID: LAI-B6-SG

Lab ID#: 1709312-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092113**	**Date of Collection:**	**9/11/17 12:15:00 PM**
Dil. Factor:	**2.28**	**Date of Analysis:**	**9/21/17 03:03 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	1.8	5.6	8.9
Freon 114	1.1	Not Detected	8.0	Not Detected
Chloromethane	11	Not Detected	24	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
1,3-Butadiene	1.1	6.0	2.5	13
Bromomethane	11	Not Detected	44	Not Detected
Chloroethane	4.6	Not Detected	12	Not Detected
Freon 11	1.1	16	6.4	88
Ethanol	4.6	Not Detected	8.6	Not Detected
Freon 113	1.1	Not Detected	8.7	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Acetone	11	29	27	68
2-Propanol	4.6	Not Detected	11	Not Detected
Carbon Disulfide	4.6	15	14	48
3-Chloropropene	4.6	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	40	Not Detected
Methyl tert-butyl ether	4.6	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Hexane	1.1	4.9	4.0	17
1,1-Dichloroethane	1.1	Not Detected	4.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.6	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.4	Not Detected
Chloroform	1.1	Not Detected	5.6	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Cyclohexane	1.1	3.4	3.9	12
Carbon Tetrachloride	1.1	Not Detected	7.2	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.3	Not Detected
Benzene	1.1	1.6	3.6	5.3
1,2-Dichloroethane	1.1	Not Detected	4.6	Not Detected
Heptane	1.1	4.3	4.7	18
Trichloroethene	1.1	Not Detected	6.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.3	Not Detected
1,4-Dioxane	4.6	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.6	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.7	Not Detected
Toluene	1.1	3.8	4.3	14
trans-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Tetrachloroethene	1.1	Not Detected	7.7	Not Detected
2-Hexanone	4.6	Not Detected	19	Not Detected

eurofins | Air Toxics

Client Sample ID: LAI-B6-SG

Lab ID#: 1709312-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092113**	**Date of Collection:**	**9/11/17 12:15:00 PM**
Dil. Factor:	**2.28**	**Date of Analysis:**	**9/21/17 03:03 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.7	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.8	Not Detected
Chlorobenzene	1.1	Not Detected	5.2	Not Detected
Ethyl Benzene	1.1	1.3	4.9	5.5
m,p-Xylene	1.1	6.0	5.0	26
o-Xylene	1.1	2.7	5.0	12
Styrene	1.1	Not Detected	4.8	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	1.3	5.6	6.5
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.8	Not Detected
Propylbenzene	1.1	2.2	5.6	11
4-Ethyltoluene	1.1	8.8	5.6	43
1,3,5-Trimethylbenzene	1.1	4.1	5.6	20
1,2,4-Trimethylbenzene	1.1	11	5.6	54
1,3-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.9	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
1,2,4-Trichlorobenzene	4.6	Not Detected	34	Not Detected
Hexachlorobutadiene	4.6	Not Detected	49	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	89	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: LAI-B1-SG

Lab ID#: 1709312-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092112**	**Date of Collection:**	**9/11/17 1:30:00 PM**
Dil. Factor:	**2.32**	**Date of Analysis:**	**9/21/17 02:37 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	5.7	Not Detected
Freon 114	1.2	Not Detected	8.1	Not Detected
Chloromethane	12	Not Detected	24	Not Detected
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
1,3-Butadiene	1.2	46	2.6	100
Bromomethane	12	Not Detected	45	Not Detected
Chloroethane	4.6	Not Detected	12	Not Detected
Freon 11	1.2	15	6.5	85
Ethanol	4.6	6.5	8.7	12
Freon 113	1.2	Not Detected	8.9	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Acetone	12	81	28	190
2-Propanol	4.6	Not Detected	11	Not Detected
Carbon Disulfide	4.6	94	14	290
3-Chloropropene	4.6	Not Detected	14	Not Detected
Methylene Chloride	12	Not Detected	40	Not Detected
Methyl tert-butyl ether	4.6	Not Detected	17	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Hexane	1.2	240	4.1	830
1,1-Dichloroethane	1.2	Not Detected	4.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.6	13	14	38
cis-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.4	Not Detected
Chloroform	1.2	Not Detected	5.7	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.3	Not Detected
Cyclohexane	1.2	110	4.0	370
Carbon Tetrachloride	1.2	Not Detected	7.3	Not Detected
2,2,4-Trimethylpentane	1.2	540 E	5.4	2500 E
Benzene	1.2	31	3.7	100
1,2-Dichloroethane	1.2	Not Detected	4.7	Not Detected
Heptane	1.2	78	4.8	320
Trichloroethene	1.2	Not Detected	6.2	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.4	Not Detected
1,4-Dioxane	4.6	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	7.8	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.3	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	4.8	Not Detected
Toluene	1.2	44	4.4	160
trans-1,3-Dichloropropene	1.2	Not Detected	5.3	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.3	Not Detected
Tetrachloroethene	1.2	Not Detected	7.9	Not Detected
2-Hexanone	4.6	Not Detected	19	Not Detected

eurofins | Air Toxics

Client Sample ID: LAI-B1-SG

Lab ID#: 1709312-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092112**	**Date of Collection:**	**9/11/17 1:30:00 PM**
Dil. Factor:	**2.32**	**Date of Analysis:**	**9/21/17 02:37 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.2	Not Detected	9.9	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	8.9	Not Detected
Chlorobenzene	1.2	Not Detected	5.3	Not Detected
Ethyl Benzene	1.2	2.6	5.0	11
m,p-Xylene	1.2	8.6	5.0	37
o-Xylene	1.2	4.3	5.0	19
Styrene	1.2	2.1	4.9	8.8
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.7	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.0	Not Detected
Propylbenzene	1.2	Not Detected	5.7	Not Detected
4-Ethyltoluene	1.2	2.3	5.7	11
1,3,5-Trimethylbenzene	1.2	2.0	5.7	9.7
1,2,4-Trimethylbenzene	1.2	2.7	5.7	13
1,3-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.0	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected
1,2,4-Trichlorobenzene	4.6	Not Detected	34	Not Detected
Hexachlorobutadiene	4.6	Not Detected	49	Not Detected

E = Exceeds instrument calibration range.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130
1,2-Dichloroethane-d4	120	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: LAI-B2-SG

Lab ID#: 1709312-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092111**	**Date of Collection:**	**9/11/17 4:00:00 PM**
Dil. Factor:	**2.36**	**Date of Analysis:**	**9/21/17 02:11 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	2.2	5.8	11
Freon 114	1.2	Not Detected	8.2	Not Detected
Chloromethane	12	Not Detected	24	Not Detected
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
1,3-Butadiene	1.2	66	2.6	140
Bromomethane	12	Not Detected	46	Not Detected
Chloroethane	4.7	Not Detected	12	Not Detected
Freon 11	1.2	2.1	6.6	12
Ethanol	4.7	5.8	8.9	11
Freon 113	1.2	Not Detected	9.0	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Acetone	12	40	28	94
2-Propanol	4.7	Not Detected	12	Not Detected
Carbon Disulfide	4.7	21	15	66
3-Chloropropene	4.7	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	41	Not Detected
Methyl tert-butyl ether	4.7	Not Detected	17	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Hexane	1.2	6.2	4.2	22
1,1-Dichloroethane	1.2	Not Detected	4.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.7	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.5	Not Detected
Chloroform	1.2	Not Detected	5.8	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.4	Not Detected
Cyclohexane	1.2	3.8	4.1	13
Carbon Tetrachloride	1.2	Not Detected	7.4	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.5	Not Detected
Benzene	1.2	3.7	3.8	12
1,2-Dichloroethane	1.2	Not Detected	4.8	Not Detected
Heptane	1.2	3.0	4.8	12
Trichloroethene	1.2	Not Detected	6.3	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.4	Not Detected
1,4-Dioxane	4.7	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	7.9	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	4.8	Not Detected
Toluene	1.2	4.4	4.4	16
trans-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.4	Not Detected
Tetrachloroethene	1.2	1.9	8.0	13
2-Hexanone	4.7	Not Detected	19	Not Detected

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Client Sample ID: LAI-B2-SG

Lab ID#: 1709312-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092111**	**Date of Collection:**	**9/11/17 4:00:00 PM**
Dil. Factor:	**2.36**	**Date of Analysis:**	**9/21/17 02:11 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.1	Not Detected
Chlorobenzene	1.2	Not Detected	5.4	Not Detected
Ethyl Benzene	1.2	1.5	5.1	6.4
m,p-Xylene	1.2	6.2	5.1	27
o-Xylene	1.2	3.1	5.1	13
Styrene	1.2	3.4	5.0	15
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.8	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.1	Not Detected
Propylbenzene	1.2	Not Detected	5.8	Not Detected
4-Ethyltoluene	1.2	Not Detected	5.8	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.8	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	5.8	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.1	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.1	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.1	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.1	Not Detected
1,2,4-Trichlorobenzene	4.7	Not Detected	35	Not Detected
Hexachlorobutadiene	4.7	Not Detected	50	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	95	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: LAI-B3-SG

Lab ID#: 1709312-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092110**	**Date of Collection:**	**9/11/17 5:00:00 PM**
Dil. Factor:	**2.24**	**Date of Analysis:**	**9/21/17 01:45 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.5	Not Detected
Freon 114	1.1	Not Detected	7.8	Not Detected
Chloromethane	11	Not Detected	23	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
1,3-Butadiene	1.1	33	2.5	73
Bromomethane	11	Not Detected	43	Not Detected
Chloroethane	4.5	Not Detected	12	Not Detected
Freon 11	1.1	Not Detected	6.3	Not Detected
Ethanol	4.5	Not Detected	8.4	Not Detected
Freon 113	1.1	Not Detected	8.6	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Acetone	11	19	27	45
2-Propanol	4.5	Not Detected	11	Not Detected
Carbon Disulfide	4.5	Not Detected	14	Not Detected
3-Chloropropene	4.5	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	39	Not Detected
Methyl tert-butyl ether	4.5	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Hexane	1.1	5.8	3.9	20
1,1-Dichloroethane	1.1	Not Detected	4.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.5	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.3	Not Detected
Chloroform	1.1	Not Detected	5.5	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Cyclohexane	1.1	1.1	3.8	3.9
Carbon Tetrachloride	1.1	Not Detected	7.0	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.2	Not Detected
Benzene	1.1	5.4	3.6	17
1,2-Dichloroethane	1.1	Not Detected	4.5	Not Detected
Heptane	1.1	2.1	4.6	8.6
Trichloroethene	1.1	Not Detected	6.0	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.2	Not Detected
1,4-Dioxane	4.5	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.5	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.6	Not Detected
Toluene	1.1	4.3	4.2	16
trans-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Tetrachloroethene	1.1	1.6	7.6	11
2-Hexanone	4.5	Not Detected	18	Not Detected

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Client Sample ID: LAI-B3-SG

Lab ID#: 1709312-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092110**	**Date of Collection: 9/11/17 5:00:00 PM**	
Dil. Factor:	**2.24**	**Date of Analysis: 9/21/17 01:45 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.5	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.6	Not Detected
Chlorobenzene	1.1	Not Detected	5.2	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	1.1	Not Detected	4.9	Not Detected
o-Xylene	1.1	Not Detected	4.9	Not Detected
Styrene	1.1	Not Detected	4.8	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	Not Detected	5.5	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.7	Not Detected
Propylbenzene	1.1	Not Detected	5.5	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.5	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.5	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.5	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.8	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,2,4-Trichlorobenzene	4.5	Not Detected	33	Not Detected
Hexachlorobutadiene	4.5	Not Detected	48	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: Ambient

Lab ID#: 1709312-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092109**	**Date of Collection:**	**9/11/17 5:10:00 PM**
Dil. Factor:	**2.27**	**Date of Analysis:**	**9/21/17 01:19 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.6	Not Detected
Freon 114	1.1	Not Detected	7.9	Not Detected
Chloromethane	11	Not Detected	23	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
1,3-Butadiene	1.1	Not Detected	2.5	Not Detected
Bromomethane	11	Not Detected	44	Not Detected
Chloroethane	4.5	Not Detected	12	Not Detected
Freon 11	1.1	Not Detected	6.4	Not Detected
Ethanol	4.5	Not Detected	8.6	Not Detected
Freon 113	1.1	Not Detected	8.7	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Acetone	11	Not Detected	27	Not Detected
2-Propanol	4.5	Not Detected	11	Not Detected
Carbon Disulfide	4.5	Not Detected	14	Not Detected
3-Chloropropene	4.5	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	39	Not Detected
Methyl tert-butyl ether	4.5	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Hexane	1.1	Not Detected	4.0	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.5	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.3	Not Detected
Chloroform	1.1	Not Detected	5.5	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Cyclohexane	1.1	Not Detected	3.9	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.1	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.3	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.6	Not Detected
Heptane	1.1	Not Detected	4.6	Not Detected
Trichloroethene	1.1	Not Detected	6.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.2	Not Detected
1,4-Dioxane	4.5	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.6	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.6	Not Detected
Toluene	1.1	Not Detected	4.3	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Tetrachloroethene	1.1	Not Detected	7.7	Not Detected
2-Hexanone	4.5	Not Detected	18	Not Detected

eurofins | Air Toxics

Client Sample ID: Ambient

Lab ID#: 1709312-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092109**	**Date of Collection:**	**9/11/17 5:10:00 PM**
Dil. Factor:	**2.27**	**Date of Analysis:**	**9/21/17 01:19 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.7	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.7	Not Detected
Chlorobenzene	1.1	Not Detected	5.2	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	1.1	Not Detected	4.9	Not Detected
o-Xylene	1.1	Not Detected	4.9	Not Detected
Styrene	1.1	Not Detected	4.8	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	Not Detected	5.6	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.8	Not Detected
Propylbenzene	1.1	Not Detected	5.6	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.6	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.9	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
1,2,4-Trichlorobenzene	4.5	Not Detected	34	Not Detected
Hexachlorobutadiene	4.5	Not Detected	48	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	89	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: LAI-B4-SG

Lab ID#: 1709312-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092108**	**Date of Collection:**	**9/13/17 9:40:00 AM**
Dil. Factor:	**2.29**	**Date of Analysis:**	**9/21/17 12:52 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.7	Not Detected
Freon 114	1.1	Not Detected	8.0	Not Detected
Chloromethane	11	Not Detected	24	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
1,3-Butadiene	1.1	Not Detected	2.5	Not Detected
Bromomethane	11	Not Detected	44	Not Detected
Chloroethane	4.6	Not Detected	12	Not Detected
Freon 11	1.1	Not Detected	6.4	Not Detected
Ethanol	4.6	25	8.6	48
Freon 113	1.1	Not Detected	8.8	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Acetone	11	52	27	120
2-Propanol	4.6	Not Detected	11	Not Detected
Carbon Disulfide	4.6	Not Detected	14	Not Detected
3-Chloropropene	4.6	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	40	Not Detected
Methyl tert-butyl ether	4.6	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Hexane	1.1	1.8	4.0	6.3
1,1-Dichloroethane	1.1	Not Detected	4.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.6	5.1	14	15
cis-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.4	Not Detected
Chloroform	1.1	1.2	5.6	6.0
1,1,1-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Cyclohexane	1.1	Not Detected	3.9	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.2	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.3	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.6	Not Detected
Heptane	1.1	Not Detected	4.7	Not Detected
Trichloroethene	1.1	Not Detected	6.2	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.3	Not Detected
1,4-Dioxane	4.6	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.7	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.7	Not Detected
Toluene	1.1	2.0	4.3	7.5
trans-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Tetrachloroethene	1.1	Not Detected	7.8	Not Detected
2-Hexanone	4.6	Not Detected	19	Not Detected

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Client Sample ID: LAI-B4-SG

Lab ID#: 1709312-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092108**	**Date of Collection:**	**9/13/17 9:40:00 AM**
Dil. Factor:	**2.29**	**Date of Analysis:**	**9/21/17 12:52 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.8	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.8	Not Detected
Chlorobenzene	1.1	Not Detected	5.3	Not Detected
Ethyl Benzene	1.1	Not Detected	5.0	Not Detected
m,p-Xylene	1.1	2.0	5.0	8.8
o-Xylene	1.1	Not Detected	5.0	Not Detected
Styrene	1.1	Not Detected	4.9	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	Not Detected	5.6	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.9	Not Detected
Propylbenzene	1.1	Not Detected	5.6	Not Detected
4-Ethyltoluene	1.1	2.6	5.6	13
1,3,5-Trimethylbenzene	1.1	1.8	5.6	8.9
1,2,4-Trimethylbenzene	1.1	6.0	5.6	29
1,3-Dichlorobenzene	1.1	Not Detected	6.9	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.9	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.9	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.9	Not Detected
1,2,4-Trichlorobenzene	4.6	Not Detected	34	Not Detected
Hexachlorobutadiene	4.6	Not Detected	49	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: LAI-B5-SG

Lab ID#: 1709312-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092107**	**Date of Collection:**	**9/13/17 10:30:00 AM**
Dil. Factor:	**2.20**	**Date of Analysis:**	**9/21/17 12:26 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.4	Not Detected
Freon 114	1.1	Not Detected	7.7	Not Detected
Chloromethane	11	Not Detected	23	Not Detected
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
1,3-Butadiene	1.1	2.9	2.4	6.4
Bromomethane	11	Not Detected	43	Not Detected
Chloroethane	4.4	Not Detected	12	Not Detected
Freon 11	1.1	Not Detected	6.2	Not Detected
Ethanol	4.4	Not Detected	8.3	Not Detected
Freon 113	1.1	Not Detected	8.4	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Acetone	11	16	26	38
2-Propanol	4.4	Not Detected	11	Not Detected
Carbon Disulfide	4.4	Not Detected	14	Not Detected
3-Chloropropene	4.4	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	38	Not Detected
Methyl tert-butyl ether	4.4	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Hexane	1.1	1.8	3.9	6.4
1,1-Dichloroethane	1.1	Not Detected	4.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.4	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.2	Not Detected
Chloroform	1.1	Not Detected	5.4	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Cyclohexane	1.1	Not Detected	3.8	Not Detected
Carbon Tetrachloride	1.1	Not Detected	6.9	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.1	Not Detected
Benzene	1.1	2.0	3.5	6.3
1,2-Dichloroethane	1.1	Not Detected	4.4	Not Detected
Heptane	1.1	Not Detected	4.5	Not Detected
Trichloroethene	1.1	Not Detected	5.9	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.1	Not Detected
1,4-Dioxane	4.4	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.4	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.5	Not Detected
Toluene	1.1	2.2	4.1	8.2
trans-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Tetrachloroethene	1.1	Not Detected	7.5	Not Detected
2-Hexanone	4.4	Not Detected	18	Not Detected

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Client Sample ID: LAI-B5-SG

Lab ID#: 1709312-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092107**	**Date of Collection:**	**9/13/17 10:30:00 AM**
Dil. Factor:	**2.20**	**Date of Analysis:**	**9/21/17 12:26 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.4	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.4	Not Detected
Chlorobenzene	1.1	Not Detected	5.1	Not Detected
Ethyl Benzene	1.1	Not Detected	4.8	Not Detected
m,p-Xylene	1.1	3.8	4.8	17
o-Xylene	1.1	1.2	4.8	5.3
Styrene	1.1	Not Detected	4.7	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.4	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.6	Not Detected
Propylbenzene	1.1	Not Detected	5.4	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.4	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.7	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
1,2,4-Trichlorobenzene	4.4	Not Detected	33	Not Detected
Hexachlorobutadiene	4.4	Not Detected	47	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	91	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1709312-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092105**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/21/17 09:37 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 1709312-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092105**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/21/17 09:37 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	91	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: CCV

Lab ID#: 1709312-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092102**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/21/17 08:01 AM**	

Compound	%Recovery
Freon 12	85
Freon 114	93
Chloromethane	86
Vinyl Chloride	88
1,3-Butadiene	83
Bromomethane	96
Chloroethane	88
Freon 11	85
Ethanol	85
Freon 113	94
1,1-Dichloroethene	87
Acetone	80
2-Propanol	79
Carbon Disulfide	84
3-Chloropropene	85
Methylene Chloride	86
Methyl tert-butyl ether	78
trans-1,2-Dichloroethene	100
Hexane	81
1,1-Dichloroethane	87
2-Butanone (Methyl Ethyl Ketone)	85
cis-1,2-Dichloroethene	80
Tetrahydrofuran	78
Chloroform	88
1,1,1-Trichloroethane	86
Cyclohexane	84
Carbon Tetrachloride	90
2,2,4-Trimethylpentane	82
Benzene	96
1,2-Dichloroethane	90
Heptane	94
Trichloroethene	95
1,2-Dichloropropane	96
1,4-Dioxane	94
Bromodichloromethane	97
cis-1,3-Dichloropropene	94
4-Methyl-2-pentanone	86
Toluene	96
trans-1,3-Dichloropropene	87
1,1,2-Trichloroethane	99
Tetrachloroethene	98
2-Hexanone	93

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Client Sample ID: CCV

Lab ID#: 1709312-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092102**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/21/17 08:01 AM**	

Compound	%Recovery
Dibromochloromethane	99
1,2-Dibromoethane (EDB)	96
Chlorobenzene	96
Ethyl Benzene	96
m,p-Xylene	97
o-Xylene	94
Styrene	106
Bromoform	101
Cumene	96
1,1,2,2-Tetrachloroethane	98
Propylbenzene	96
4-Ethyltoluene	102
1,3,5-Trimethylbenzene	104
1,2,4-Trimethylbenzene	95
1,3-Dichlorobenzene	101
1,4-Dichlorobenzene	101
alpha-Chlorotoluene	98
1,2-Dichlorobenzene	102
1,2,4-Trichlorobenzene	100
Hexachlorobutadiene	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	86	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: LCS

Lab ID#: 1709312-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/21/17 08:26 AM**	

Compound	%Recovery	Method Limits
Freon 12	90	70-130
Freon 114	101	70-130
Chloromethane	89	70-130
Vinyl Chloride	94	70-130
1,3-Butadiene	86	70-130
Bromomethane	98	70-130
Chloroethane	92	70-130
Freon 11	91	70-130
Ethanol	92	70-130
Freon 113	96	70-130
1,1-Dichloroethene	89	70-130
Acetone	84	70-130
2-Propanol	84	70-130
Carbon Disulfide	77	70-130
3-Chloropropene	84	70-130
Methylene Chloride	88	70-130
Methyl tert-butyl ether	79	70-130
trans-1,2-Dichloroethene	90	70-130
Hexane	84	70-130
1,1-Dichloroethane	89	70-130
2-Butanone (Methyl Ethyl Ketone)	87	70-130
cis-1,2-Dichloroethene	91	70-130
Tetrahydrofuran	79	70-130
Chloroform	90	70-130
1,1,1-Trichloroethane	90	70-130
Cyclohexane	89	70-130
Carbon Tetrachloride	92	70-130
2,2,4-Trimethylpentane	86	70-130
Benzene	101	70-130
1,2-Dichloroethane	93	70-130
Heptane	96	70-130
Trichloroethene	102	70-130
1,2-Dichloropropane	100	70-130
1,4-Dioxane	97	70-130
Bromodichloromethane	102	70-130
cis-1,3-Dichloropropene	92	70-130
4-Methyl-2-pentanone	89	70-130
Toluene	101	70-130
trans-1,3-Dichloropropene	91	70-130
1,1,2-Trichloroethane	101	70-130
Tetrachloroethene	100	70-130
2-Hexanone	95	70-130

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Client Sample ID: LCS

Lab ID#: 1709312-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/21/17 08:26 AM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	102	70-130
1,2-Dibromoethane (EDB)	99	70-130
Chlorobenzene	98	70-130
Ethyl Benzene	99	70-130
m,p-Xylene	98	70-130
o-Xylene	99	70-130
Styrene	110	70-130
Bromoform	108	70-130
Cumene	98	70-130
1,1,2,2-Tetrachloroethane	99	70-130
Propylbenzene	101	70-130
4-Ethyltoluene	104	70-130
1,3,5-Trimethylbenzene	105	70-130
1,2,4-Trimethylbenzene	99	70-130
1,3-Dichlorobenzene	104	70-130
1,4-Dichlorobenzene	104	70-130
alpha-Chlorotoluene	104	70-130
1,2-Dichlorobenzene	105	70-130
1,2,4-Trichlorobenzene	105	70-130
Hexachlorobutadiene	106	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	86	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: LCSD

Lab ID#: 1709312-10AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/21/17 08:51 AM**	

Compound	%Recovery	Method Limits
Freon 12	88	70-130
Freon 114	100	70-130
Chloromethane	87	70-130
Vinyl Chloride	92	70-130
1,3-Butadiene	84	70-130
Bromomethane	99	70-130
Chloroethane	91	70-130
Freon 11	89	70-130
Ethanol	88	70-130
Freon 113	94	70-130
1,1-Dichloroethene	87	70-130
Acetone	83	70-130
2-Propanol	83	70-130
Carbon Disulfide	76	70-130
3-Chloropropene	83	70-130
Methylene Chloride	86	70-130
Methyl tert-butyl ether	78	70-130
trans-1,2-Dichloroethene	88	70-130
Hexane	83	70-130
1,1-Dichloroethane	88	70-130
2-Butanone (Methyl Ethyl Ketone)	87	70-130
cis-1,2-Dichloroethene	90	70-130
Tetrahydrofuran	78	70-130
Chloroform	89	70-130
1,1,1-Trichloroethane	88	70-130
Cyclohexane	87	70-130
Carbon Tetrachloride	92	70-130
2,2,4-Trimethylpentane	84	70-130
Benzene	100	70-130
1,2-Dichloroethane	92	70-130
Heptane	96	70-130
Trichloroethene	101	70-130
1,2-Dichloropropane	100	70-130
1,4-Dioxane	95	70-130
Bromodichloromethane	101	70-130
cis-1,3-Dichloropropene	92	70-130
4-Methyl-2-pentanone	90	70-130
Toluene	100	70-130
trans-1,3-Dichloropropene	91	70-130
1,1,2-Trichloroethane	100	70-130
Tetrachloroethene	100	70-130
2-Hexanone	96	70-130

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Client Sample ID: LCSD

Lab ID#: 1709312-10AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**3092104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 9/21/17 08:51 AM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	102	70-130
1,2-Dibromoethane (EDB)	99	70-130
Chlorobenzene	97	70-130
Ethyl Benzene	98	70-130
m,p-Xylene	98	70-130
o-Xylene	98	70-130
Styrene	109	70-130
Bromoform	107	70-130
Cumene	99	70-130
1,1,2,2-Tetrachloroethane	99	70-130
Propylbenzene	100	70-130
4-Ethyltoluene	103	70-130
1,3,5-Trimethylbenzene	104	70-130
1,2,4-Trimethylbenzene	98	70-130
1,3-Dichlorobenzene	104	70-130
1,4-Dichlorobenzene	104	70-130
alpha-Chlorotoluene	103	70-130
1,2-Dichlorobenzene	104	70-130
1,2,4-Trichlorobenzene	108	70-130
Hexachlorobutadiene	108	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	84	70-130
4-Bromofluorobenzene	101	70-130

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Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager Kathryn Hartley

Collected by: (Print and Sign) Jeovani Huerta-Avila

Company Landau Associates Inc. Email Khartley@landauinc.com

Address 130 2nd Ave S. City Edmonds State WA Zip 98020

Phone (425) 778-0907 Fax N/A

Project Info: Contract (Invoice) to Pete Hudelson
P.O. #
Project #
Project Name Boeing Renton Buildings 10-13/10-16 Phase 2

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial (in Hg)	Final (in Hg)	Receipt	Final (psi)
01A	LAI-B6-SG	31799	9/11/17	1215	TO-15	-30 in Hg	-5 in Hg		
02A	LAI-B1-SG	37364	9/11/17	1330	TO-15	-30	-5		
03A	LAI-B2-SG	3034	9/11/17	1600	TO-15	-30	-5		
04A	LAI-B3-SG	1L2302	9/11/17	1700	TO-15	-30	-5		
05A	Ambient	1L1826	9/11/17	1710	TO-15	-30	-5		
06A	LAI-B4-SG	3049	9/13/17	940	TO-15	-30	-5		
07A	LAI-B5-SG	1L2906	9/13/17	1030	TO-15	-30	-5		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
	9/13/17 @ 1345		9/15/17 1530
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes: Invoice to Boeing
Pete Hudelson

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx		N/A	good	Yes No (None)	1709312

Form 1293 rev.11

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1/10/2018

Ms. Stephanie Renando

Landau Associates, Inc.

130 2nd Avenue South

Edmonds WA 98020

Project Name: Boeing Renton Buildings 10-13/10-16 Supp

Project #: 0025213.190

Workorder #: 1712556

Dear Ms. Stephanie Renando

The following report includes the data for the above referenced project for sample(s) received on 12/28/2017 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner

Project Manager

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WORK ORDER #: 1712556

Work Order Summary

CLIENT:	Ms. Stephanie Renando Landau Associates, Inc. 130 2nd Avenue South Edmonds, WA 98020	**BILL TO:**	Robert Large Eurofins Lancaster Laboratories Environmental, LLC 2425 New Holland Pike Lancaster, PA 17605-2425
PHONE:	800-552-5957	**P.O. #**	
FAX:	425-778-6409	**PROJECT #**	0025213.190 Boeing Renton Buildings
DATE RECEIVED:	12/28/2017		10-13/10-16 Supp
DATE COMPLETED:	01/10/2018	**CONTACT:**	Kelly Buettner

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	1013-IA1	Modified TO-15	5.3 "Hg	5 psi
01B	1013-IA1	Modified TO-15	5.3 "Hg	5 psi
02A	1013-IA2	Modified TO-15	5.5 "Hg	4.9 psi
02B	1013-IA2	Modified TO-15	5.5 "Hg	4.9 psi
03A	1016-IA1	Modified TO-15	3.9 "Hg	4.9 psi
03B	1016-IA1	Modified TO-15	3.9 "Hg	4.9 psi
04A	1016-IA2	Modified TO-15	6.1 "Hg	5.1 psi
04B	1016-IA2	Modified TO-15	6.1 "Hg	5.1 psi
05A	AA	Modified TO-15	0.7 psi	4.8 psi
05B	AA	Modified TO-15	0.7 psi	4.8 psi
06A	Lab Blank	Modified TO-15	NA	NA
06B	Lab Blank	Modified TO-15	NA	NA
07A	CCV	Modified TO-15	NA	NA
07B	CCV	Modified TO-15	NA	NA
08A	LCS	Modified TO-15	NA	NA
08AA	LCSD	Modified TO-15	NA	NA
08B	LCS	Modified TO-15	NA	NA
08BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 01/10/18

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-16-11, UT NELAP CA0093332016-7, VA NELAP - 8113, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2016, Expiration date: 10/17/2017.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15 Full Scan/SIM
Landau Associates, Inc.
Workorder# 1712556

Five 6 Liter Summa Canister (100% Certified) samples were received on December 29, 2017. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the Full Scan and SIM acquisition modes. The method involves concentrating up to 1.0 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	***TO-15***	***ATL Modifications***
ICAL %RSD acceptance criteria	</=30% RSD with 2 compounds allowed out to < 40% RSD	For Full Scan: 30% RSD with 4 compounds allowed out to < 40% RSD For SIM: Project specific; default criteria is </=30% RSD with 10% of compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	For Full Scan: </= 30% Difference with four allowed out up to </=40%.; flag and narrate outliers For SIM: Project specific; default criteria is </= 30% Difference with 10% of compounds allowed out up to </=40%.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There was a difference (greater than or equal to 5.0" Hg) between the measured canister receipt vacuum and that which was reported on the Chain of Custody (COC) for sample AA. A leak test indicated that the valve was functioning properly.

Despite the use of flow controllers for sample collection, the final canister vacuum for sample AA was measured at ambient pressure at the laboratory.

Analytical Notes

The results for each sample in this report were acquired from two separate data files originating from the same analytical run. The two data files have the same base file name and are differentiated with a "sim" extension on the SIM data file.

Definition of Data Qualifying Flags

Nine qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

CN - See case narrative explanation

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

Client Sample ID: 1013-IA1

Lab ID#: 1712556-01A

No Detections Were Found.

Client Sample ID: 1013-IA1

Lab ID#: 1712556-01B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.082	0.22	0.26	0.70

Client Sample ID: 1013-IA2

Lab ID#: 1712556-02A

No Detections Were Found.

Client Sample ID: 1013-IA2

Lab ID#: 1712556-02B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.082	0.20	0.26	0.64

Client Sample ID: 1016-IA1

Lab ID#: 1712556-03A

No Detections Were Found.

Client Sample ID: 1016-IA1

Lab ID#: 1712556-03B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.076	0.30	0.24	0.98

Client Sample ID: 1016-IA2

Lab ID#: 1712556-04A

No Detections Were Found.

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

Client Sample ID: 1016-IA2

Lab ID#: 1712556-04B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.084	0.18	0.27	0.59

Client Sample ID: AA

Lab ID#: 1712556-05A

No Detections Were Found.

Client Sample ID: AA

Lab ID#: 1712556-05B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.064	0.24	0.20	0.75

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Client Sample ID: 1013-IA1

Lab ID#: 1712556-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010211**	**Date of Collection: 12/22/17 5:50:00 PM**	
Dil. Factor:	**1.63**	**Date of Analysis: 1/2/18 05:02 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	91	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	110	70-130

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Client Sample ID: 1013-IA1

Lab ID#: 1712556-01B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010211sim**	**Date of Collection: 12/22/17 5:50:00 PM**	
Dil. Factor:	**1.63**	**Date of Analysis: 1/2/18 05:02 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.082	0.22	0.26	0.70

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: 1013-IA2

Lab ID#: 1712556-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010212**	**Date of Collection: 12/22/17 5:45:00 PM**	
Dil. Factor:	**1.63**	**Date of Analysis: 1/2/18 05:39 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	108	70-130

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Client Sample ID: 1013-IA2

Lab ID#: 1712556-02B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010212sim**	**Date of Collection: 12/22/17 5:45:00 PM**	
Dil. Factor:	**1.63**	**Date of Analysis: 1/2/18 05:39 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.082	0.20	0.26	0.64

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: 1016-IA1

Lab ID#: 1712556-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010213**	**Date of Collection: 12/22/17 6:05:00 PM**	
Dil. Factor:	**1.53**	**Date of Analysis: 1/2/18 06:15 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.15	Not Detected	0.34	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	90	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: 1016-IA1

Lab ID#: 1712556-03B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010213sim**	**Date of Collection: 12/22/17 6:05:00 PM**	
Dil. Factor:	**1.53**	**Date of Analysis: 1/2/18 06:15 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.076	0.30	0.24	0.98

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: 1016-IA2

Lab ID#: 1712556-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010214**	**Date of Collection: 12/22/17 6:00:00 PM**	
Dil. Factor:	**1.69**	**Date of Analysis: 1/2/18 06:55 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.17	Not Detected	0.37	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: 1016-IA2

Lab ID#: 1712556-04B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010214sim**	**Date of Collection: 12/22/17 6:00:00 PM**	
Dil. Factor:	**1.69**	**Date of Analysis: 1/2/18 06:55 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.084	0.18	0.27	0.59

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: AA

Lab ID#: 1712556-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010215**	**Date of Collection: 12/22/17 6:10:00 PM**	
Dil. Factor:	**1.27**	**Date of Analysis: 1/2/18 07:34 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.13	Not Detected	0.28	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	107	70-130

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Client Sample ID: AA

Lab ID#: 1712556-05B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010215sim**	**Date of Collection: 12/22/17 6:10:00 PM**	
Dil. Factor:	**1.27**	**Date of Analysis: 1/2/18 07:34 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.064	0.24	0.20	0.75

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1712556-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010207**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 1/2/18 01:01 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	110	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1712556-06B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010207sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 1/2/18 01:01 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.050	Not Detected	0.16	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: CCV

Lab ID#: 1712556-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010203**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 1/2/18 08:44 AM**	

Compound	%Recovery
1,3-Butadiene	90

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1712556-07B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010203sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 1/2/18 08:44 AM**	

Compound	%Recovery
Benzene	83

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	96	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1712556-08A

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010204**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 1/2/18 09:59 AM**	

Compound	%Recovery	Method Limits
1,3-Butadiene	85	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	98	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1712556-08AA

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010205**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 1/2/18 10:46 AM**	

Compound	%Recovery	Method Limits
1,3-Butadiene	86	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: LCS

Lab ID#: 1712556-08B

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010204sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 1/2/18 09:59 AM**	

Compound	%Recovery	Method Limits
Benzene	79	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: LCSD

Lab ID#: 1712556-08BB

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	**v010205sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 1/2/18 10:46 AM**	

Compound	%Recovery	Method Limits
Benzene	79	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	95	70-130

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Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager Kathryn Hartley
Collected by: (Print and Sign) Stephanie Rexanda
Company Landau Associates Inc. Email khartley@landauinc.com
Address 130 2nd Ave South City Edmonds State WA Zip 98020
Phone (425) 778-0907 Fax N/A

Project Info:
P.O. #
Project # 0025213.190
Project Name Boeing Renton Buildings 10-13/10-10 Supplemental Ph 2

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	1013-1A1	2301	12.22.17	1750	TO-15	-32	-8		
02A	1013-1A2	3408	12.22.17	1745	TO-15	-28	-7		
03A	1016-1A1	27420	12.22.17	1805	TO-15	-30	-8		
04A	1016-1A2	0424	12.22.17	~~0454~~ 1800	TO-15	-35	-8		
05A	AA	2755	12.22.17	~~2755~~ 1810	TO-15	-32	-7		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
[signature]	12/23/17 @1200	[signature] EMPA	12/28/17 1440
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:
Invoice to Boeing:
Pete Hudelson

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	fedex		N/A	good	Yes No (None)	1712556

Form 1293 rev.11

APPENDIX C

Comprehensive Data Tables

Table C-1
Comprehensive Soil Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date and Laboratory Sample ID							
			LAI-B1 LAI-B1-S(1-3)-20170911 9/11/2017	LAI-B1 LAI-B1-S(11-13)-20170911 9/11/2017	LAI-B2 LAI-B2-S(1-3)-20170911 9/11/2017	LAI-B2 LAI-B2-S(10-12)-20170911 9/11/2017	LAI-B3 LAI-B3-S(3.75-5) 9/11/2017	LAI-B4 LAI-B4-S(3.5-5)-20170913 9/13/2017	LAI-B5 LAI-B5-S(1-3)-20170913 9/13/2017	LAI-B5 LAI-B5-S(7-9)-20170913 9/13/2017
	Method A	Method B[a]	17I0116-04	17I0116-06	17I0116-08	17I0116-09	17I0116-10	17I0139-01	17I0139-03	17I0139-04
Metals (mg/kg; EPA 200.8/SW-846 7471B)										
Arsenic	20	0.67	**6.79**	**3.71**	**5.24**	**3.88**	**4.82 J**	**2.70**	**4.86**	**2.31**
Cadmium	N/A	0.69	0.11 U	0.13 U	**0.19**	**0.14**	**0.52**	0.12 U	0.12 U	0.12 U
Chromium, Total	2,000	120,000	**30.1**	**34.7**	**30.3**	**39.4**	**42.3 J**	**29.2**	**39.1**	**33.7**
Lead	250	3,000	**11.1**	**5.36**	**19.7**	**5.57**	**20.3**	**2.56**	**5.77**	**2.59**
Mercury	2	2.1	0.0240 U	**0.0469**	**0.0261**	**0.0568**	**0.0564**	0.02650 U	**0.09653**	**0.02770**
Petroleum Hydrocarbons (mg/kg; NWTPH-HCID)										
Gasoline Range Organics	100/30[b]	NA	11 U	**19**	11 U	14 U	12 U	12 U	12 U	12 U
Petroleum Hydrocarbons as Diesel	2000	NA	28 U	31 U	28 U	36 U	31 U	30 U	31 U	31 U
Petroleum Hydrocarbons as Motor Oil	2000	NA	55 U	62 U	56 U	72 U	62 U	60 U	61 U	62 U
Petroleum Hydrocarbons (mg/kg; NWTPH-Gx)										
Petroleum Hydrocarbons as Gasoline	100/30[b]	NA	--	**1,010**	--	--	--	--	--	--
PCBs (mg/kg; SW-846 8082A)										
Aroclor 1016	N/A	5.6	--	--	--	--	--	--	--	--
Aroclor 1221	NL	NL	--	--	--	--	--	--	--	--
Aroclor 1232	NL	NL	--	--	--	--	--	--	--	--
Aroclor 1242	NL	NL	--	--	--	--	--	--	--	--
Aroclor 1248	NL	NL	--	--	--	--	--	--	--	--
Aroclor 1254	N/A	0.5	--	--	--	--	--	--	--	--
Aroclor 1260	N/A	0.5	--	--	--	--	--	--	--	--
Aroclor 1262	NL	NL	--	--	--	--	--	--	--	--
Aroclor 1268	NL	NL	--	--	--	--	--	--	--	--
Total PCBs	N/A	0.5	--	--	--	--	--	--	--	--
Volatile Organic Compounds (mg/kg; SW-846 8260C)										
1,1,1,2-Tetrachloroethane	N/A	38	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
1,1,1-Trichloroethane	2.00	1.6	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
1,1,2,2-Tetrachloroethane	N/A	0.0012	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
1,1,2-Trichloroethane	N/A	0.028	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
1,1,2-Trichlorotrifluoroethane	N/A	2,400,000	0.00237 U	0.00247 U	0.00239 U	0.00314 U	0.00215 U	0.00126 U	0.00118 U	0.00135 U
1,1-Dichloroethane	N/A	0.042	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
1,1-Dichloroethene	N/A	0.050	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
1,1-Dichloropropene	NL	NL	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
1,2,3-Trichlorobenzene	NL	NL	0.00592 U	0.00618 U	0.00597 U	0.00786 U	0.00537 UJ	0.00315 U	0.00294 U	0.00337 U
1,2,3-Trichloropropane	N/A	0.033	0.00237 U	0.00247 U	0.00239 U	0.00314 U	0.00215 U	0.00126 U	0.00118 U	0.00135 U
1,2,4-Trichlorobenzene	N/A	0.56	0.00592 U	0.00618 U	0.00597 U	0.00786 U	0.00537 UJ	0.00315 U	0.00294 U	0.00337 U
1,2,4-Trimethylbenzene	N/A	NA	0.00118 U	**58.7**	0.00119 U	0.00157 U	**0.00124**	0.00063 U	0.00059 U	0.00067 U
1,2-Dibromo-3-chloropropane	N/A	1.3	0.00592 U	0.00618 U	0.00597 U	0.00786 U	0.00537 U	0.00315 U	0.00294 U	0.00337 U
1,2-Dichlorobenzene	N/A	7.0	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 UJ	0.00063 U	0.00059 U	0.00067 U
1,2-Dichloroethane	N/A	0.023	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U

Table C-1
Comprehensive Soil Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date and Laboratory Sample ID							
			LAI-B1 LAI-B1-S(1-3)-20170911 9/11/2017	LAI-B1 LAI-B1-S(11-13)-20170911 9/11/2017	LAI-B2 LAI-B2-S(1-3)-20170911 9/11/2017	LAI-B2 LAI-B2-S(10-12)-20170911 9/11/2017	LAI-B3 LAI-B3-S(3.75-5) 9/11/2017	LAI-B4 LAI-B4-S(3.5-5)-20170913 9/13/2017	LAI-B5 LAI-B5-S(1-3)-20170913 9/13/2017	LAI-B5 LAI-B5-S(7-9)-20170913 9/13/2017
	Method A	Method B[a]	17I0116-04	17I0116-06	17I0116-08	17I0116-09	17I0116-10	17I0139-01	17I0139-03	17I0139-04
1,2-Dichloropropane	N/A	0.026	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
1,3,5-Trimethylbenzene	N/A	800	0.00118 U	**5.57**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
1,3-Dichlorobenzene	N/A	NA	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 UJ	0.00063 U	0.00059 U	0.00067 U
1,3-Dichloropropane	NL	NL	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
1,4-Dichlorobenzene	N/A	1.2	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 UJ	0.00063 U	0.00059 U	0.00067 U
2,2-Dichloropropane	NL	NL	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
2-Butanone/MEK	N/A	48,000	0.00592 U	0.00618 U	0.00597 U	0.00786 U	0.00537 U	0.00315 U	0.00294 U	0.00337 U
2-Chloroethyl vinyl ether	NL	NL	0.00592 U	0.00618 U	0.00597 U	0.00786 U	0.00537 UJ	0.00315 U	0.00294 U	0.00337 U
2-Chlorotoluene	N/A	1,600	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
2-Hexanone	NL	NL	0.00592 U	0.00618 U	0.00597 U	0.00786 U	0.00537 U	0.00315 U	0.00294 U	0.00337 U
2-Pentanone	NL	NL	0.00592 U	0.00618 U	0.00597 U	0.00786 U	0.00537 U	0.00315 U	0.00294 U	0.00337 U
4-Chlorotoluene	NL	NL	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
4-Isopropyltoluene	NL	NL	0.00118 U	**5.37**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
4-Methyl-2-pentanone (MIBK)	N/A	6,400	0.00592 U	0.00618 U	0.00597 U	0.00786 U	0.00537 U	0.00315 U	0.00294 U	0.00337 U
Acetone	N/A	29	**0.0168**	0.00618 U	**0.0705**	**0.0631**	**0.0405**	**0.0102**	**0.0324**	**0.00964**
Acrolein	N/A	40	0.00592 U	0.00618 U	0.00597 U	0.00786 U	R	0.00315 U	0.00294 U	0.00337 U
Acrylonitrile	N/A	1.9	0.00592 U	0.00618 U	0.00597 U	0.00786 U	0.00537 U	0.00315 U	0.00294 U	0.00337 U
Benzene	0.0300	0.028	0.00118 U	**0.00351**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Bromobenzene	NL	NL	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Bromochloromethane	NL	NL	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Bromodichloromethane	N/A	0.040	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
BROMOETHANE	NL	NL	0.00237 U	0.00247 U	0.00239 U	0.00314 U	0.00215 U	0.00126 U	0.00118 U	0.00135 U
Bromoform	N/A	0.36	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Bromomethane	N/A	0.052	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 UJ	0.00063 U	0.00059 U	0.00067 U
Carbon Disulfide	N/A	5.7	0.00118 U	**0.00168 J**	**0.00160 J**	0.00157 U	0.00107 U	**0.00069 J**	0.00059 U	0.00067 U
Carbon Tetrachloride	N/A	0.046	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Chlorobenzene	N/A	0.87	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Chloroethane	N/A	NA	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Chloroform	N/A	0.075	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Chloromethane	N/A	NA	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
cis-1,2-Dichloroethene	N/A	0.080	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
cis-1,3-Dichloropropene	NL	NL	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 UJ	0.00063 U	0.00059 U	0.00067 U
Dibromochloromethane	N/A	0.028	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Dibromomethane	N/A	800	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Dichlorodifluoromethane	N/A	16,000	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Ethylbenzene	6.0	6.0	0.00118 U	**0.122**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Ethylene Dibromide	0.0050	0.50	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Hexachlorobutadiene	N/A	0.60	0.00592 U	0.00618 U	0.00597 U	0.00786 U	0.00537 UJ	0.00315 U	0.00294 U	0.00337 U
Isopropylbenzene	N/A	8,000	0.00118 U	**7.06**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
m,p-Xylene	N/A	17	0.00237 U	**0.0247**	0.00239 U	0.00314 U	0.00215 U	0.00126 U	0.00118 U	0.00135 U
Methyl Iodide	NL	NL	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 UJ	0.00063 U	0.00059 U	0.00067 U
Methylene Chloride	0.0200	0.022	0.00237 U	**0.00372**	0.00239 U	0.00314 U	0.00215 U	0.00126 U	0.00118 U	0.00135 U
Methyl-tert-butyl ether	0.10	0.10	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Naphthalene	5.00	4.5	0.00592 U	**13.5**	0.00597 U	0.00786 U	0.00537 UJ	0.00315 U	0.00294 U	0.00337 U

Table C-1
Comprehensive Soil Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date and Laboratory Sample ID							
			LAI-B1 LAI-B1-S(1-3)-20170911 9/11/2017	LAI-B1 LAI-B1-S(11-13)-20170911 9/11/2017	LAI-B2 LAI-B2-S(1-3)-20170911 9/11/2017	LAI-B2 LAI-B2-S(10-12)-20170911 9/11/2017	LAI-B3 LAI-B3-S(3.75-5) 9/11/2017	LAI-B4 LAI-B4-S(3.5-5)-20170913 9/13/2017	LAI-B5 LAI-B5-S(1-3)-20170913 9/13/2017	LAI-B5 LAI-B5-S(7-9)-20170913 9/13/2017
	Method A	Method B[a]	17I0116-04	17I0116-06	17I0116-08	17I0116-09	17I0116-10	17I0139-01	17I0139-03	17I0139-04
n-Butylbenzene	N/A	4,000	0.00118 U	**55.6**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
n-Propylbenzene	N/A	8,000	0.00118 U	**34.2 J**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
o-Xylene	N/A	14.7	0.00118 U	**0.00163**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
sec-Butylbenzene	N/A	8,000	0.00118 U	**9.47**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Styrene	N/A	2.2	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 UJ	0.00063 U	0.00059 U	0.00067 U
tert-Butylbenzene	N/A	8,000	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Tetrachloroethene	0.0500	0.053	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Toluene	7	4.7	0.00118 U	**0.00206**	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
trans-1,2-Dichloroethene	N/A	0.54	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
trans-1,3-Dichloropropene	NL	NL	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
trans-1,4-Dichloro-2-butene	NL	NL	0.00592 UJ	0.00618 UJ	0.00597 UJ	0.00786 UJ	0.00537 UJ	0.00315 UJ	0.00294 UJ	0.00337 UJ
Trichloroethene	0.0300	0.026	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Trichlorofluoromethane (CFC 11)	N/A	24,000	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Vinyl Acetate	N/A	33	0.00592 U	0.00618 U	0.00597 U	0.00786 U	R	0.00315 U	0.00294 U	0.00337 U
Vinyl Chloride	N/A	0.0018	0.00118 U	0.00124 U	0.00119 U	0.00157 U	0.00107 U	0.00063 U	0.00059 U	0.00067 U
Xylenes, Total	9	15	0.00237 U	**0.0263**	0.00239 U	0.00314 U	0.00215 U	0.00126 U	0.00118 U	0.00135 U
Semivolatile Organic Compounds (mg/kg; SW-846 8270D)										
1,2,4-Trichlorobenzene	N/A	0.56	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
1,2-Dichlorobenzene	N/A	7.0	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
1,3-Dichlorobenzene	N/A	NA	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
1,4-Dichlorobenzene	N/A	1.2	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
1-Methylnaphthalene	N/A	34	0.061 U	0.062 U	**1.37**	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
2,4,5-Trichlorophenol	N/A	29	0.302 U	0.303 U	0.307 U	0.323 U	0.304 U	0.324 U	0.301 U	0.305 U
2,4,6-Trichlorophenol	N/A	0.046	0.302 U	0.303 U	0.307 U	0.323 U	0.304 U	0.324 U	0.301 U	0.305 U
2,4-Dichlorophenol	N/A	0.17	0.302 U	0.303 U	0.307 U	0.323 U	0.304 U	0.324 U	0.301 U	0.305 U
2,4-Dimethylphenol	N/A	1.3	0.061 UJ	0.062 UJ	0.062 UJ	0.066 UJ	0.062 UJ	0.066 U	0.061 U	0.062 U
2,4-Dinitrophenol	N/A	0.13	0.614 U	0.616 U	0.624 U	0.657 U	0.617 U	0.657 U	0.61 U	0.619 U
2,4-Dinitrotoluene	N/A	0.0017	0.302 U	0.303 U	0.307 U	0.323 U	0.304 U	0.324 U	0.301 U	0.305 U
2,6-Dinitrotoluene	N/A	0.00031	0.302 U	0.303 U	0.307 U	0.323 U	0.304 U	0.324 U	0.301 U	0.305 U
2-Chloronaphthalene	N/A	6,400	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
2-Chlorophenol	N/A	0.47	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
2-Methylnaphthalene	N/A	320	0.061 U	0.062 U	**2.24**	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
2-Methylphenol	N/A	2.3	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
2-Nitroaniline	N/A	800	0.302 U	0.303 U	0.307 U	0.323 U	0.304 U	0.324 U	0.301 U	0.305 U
2-Nitrophenol	NL	NL	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
3,3'-Dichlorobenzidine	N/A	0.0036	0.302 U	0.303 U	0.307 U	0.323 U	0.304 UJ	0.324 U	0.301 U	0.305 U
3-Nitroaniline	NL	NL	0.302 U	0.303 U	0.307 U	0.323 U	0.304 U	0.324 U	0.301 U	0.305 U
4,6-Dinitro-2-methylphenol	NL	NL	0.614 U	0.616 U	0.624 U	0.657 U	0.617 U	0.657 U	0.61 U	0.619 U
4-Bromophenyl phenyl ether	NL	NL	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
4-Chloro-3-methylphenol	NL	NL	0.302 U	0.303 U	0.307 U	0.323 U	0.304 U	0.324 U	0.301 U	0.305 U
4-Chloroaniline	N/A	0.0012	0.302 U	0.303 U	0.307 U	0.323 U	0.304 U	0.324 U	0.301 U	0.305 U
4-Chlorophenyl phenyl ether	NL	NL	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
4-Methylphenol	N/A	8,000	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U

Table C-1
Comprehensive Soil Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date and Laboratory Sample ID							
			LAI-B1 LAI-B1-S(1-3)-20170911 9/11/2017	LAI-B1 LAI-B1-S(11-13)-20170911 9/11/2017	LAI-B2 LAI-B2-S(1-3)-20170911 9/11/2017	LAI-B2 LAI-B2-S(10-12)-20170911 9/11/2017	LAI-B3 LAI-B3-S(3.75-5) 9/11/2017	LAI-B4 LAI-B4-S(3.5-5)-20170913 9/13/2017	LAI-B5 LAI-B5-S(1-3)-20170913 9/13/2017	LAI-B5 LAI-B5-S(7-9)-20170913 9/13/2017
	Method A	Method B[a]	17I0116-04	17I0116-06	17I0116-08	17I0116-09	17I0116-10	17I0139-01	17I0139-03	17I0139-04
4-Nitroaniline	NL	NL	0.302 U	0.303 U	0.307 U	0.323 U	0.304 U	0.324 U	0.301 U	0.305 U
4-Nitrophenol	NL	NL	0.302 U	0.303 U	0.307 U	0.323 U	0.304 U	0.324 U	0.301 U	0.305 U
Acenaphthene	N/A	98	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Acenaphthylene	N/A	NA	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Anthracene	N/A	2,300	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Benzo(a)anthracene	N/A	0.86	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Benzo(a)pyrene	0.100	0.14	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Benzo(g,h,i)perylene	N/A	NA	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Benzoic Acid	N/A	260	0.614 U	0.616 U	0.624 U	0.657 U	0.617 U	0.657 U	0.61 U	0.619 U
Benzyl Alcohol	N/A	8,000	0.302 U	0.303 U	0.307 U	0.323 U	0.304 U	0.324 U	0.301 U	0.305 U
bis(2-Chloro-1-Methylethyl) Ether	N/A	14	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
bis(2-Chloroethoxy) Methane	NL	NL	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
bis(2-Chloroethyl) Ether	N/A	0.00022	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
bis(2-Ethylhexyl) Phthalate	N/A	13	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Butyl Benzyl Phthalate	N/A	13	0.061 U	0.062 U	0.062 U	**0.235**	0.062 U	0.066 U	0.061 U	0.062 U
Carbazole	N/A	NA	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Chrysene	N/A	95	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Dibenzo(a,h)anthracene	N/A	0.14	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Dibenzofuran	N/A	80	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Diethyl Phthalate	N/A	72	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Dimethyl Phthalate	N/A	NA	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Di-N-Butyl Phthalate	N/A	57	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Di-n-octyl Phthalate	N/A	800	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Fluoranthene	N/A	630	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Fluorene	N/A	101	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Hexachlorobenzene	N/A	0.63	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Hexachlorobutadiene	N/A	0.60	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Hexachlorocyclopentadiene	N/A	190	0.302 U	0.303 U	0.307 U	0.323 U	0.304 U	0.324 U	0.301 U	0.305 U
Hexachloroethane	N/A	0.044	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Indeno(1,2,3-cd)pyrene	N/A	1.4	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Isophorone	N/A	0.23	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Naphthalene	5.0	4.5	0.061 U	0.062 U	**0.879**	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Nitrobenzene	N/A	0.10	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
N-Nitrosodi-n-propylamine	N/A	0.000056	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
N-Nitrosodiphenylamine	N/A	0.53	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Pentachlorophenol	N/A	0.016	0.302 UJ	0.303 UJ	0.307 UJ	0.323 UJ	0.304 UJ	0.324 UJ	0.301 UJ	0.305 UJ
Phenanthrene	N/A	NA	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Phenol	N/A	11	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Pyrene	N/A	660	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U
Total Benzofluoranthenes	NL	NL	0.061 U	0.062 U	0.062 U	0.066 U	0.062 U	0.066 U	0.061 U	0.062 U

Table C-1
Comprehensive Soil Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date and Laboratory Sample ID						
			LAI-B6 LAI-B6-S(1-3)-20170911 9/11/2017	LAI-B6 LAI-B6-S(7-9)-20170911 9/11/2017	LAI-B7 LAI-B7-S(9-11)-201712 12/22/2017	LAI-B7 LAI-B7-S(13-15)-201712 12/22/2017	LAI-B8 LAI-B8-S(1-3)-201712 12/22/2017	LAI-B8 LAI-B8-S(5-7)-201712 12/22/2017	LAI-B9 LAI-B9-S(1-2)-201712 12/22/2017
	Method A	Method B[a]	17I0116-01	17I0116-02	17L0423-10	17L0423-12	17L0423-03	17L0423-04	17L0423-06
Metals (mg/kg; EPA 200.8/SW-846 7471B)									
Arsenic	20	0.67	**3.77**	**8.87**	--	--	--	--	--
Cadmium	N/A	0.69	**0.13**	**0.14**	--	--	--	--	--
Chromium, Total	2,000	120,000	**30.4**	**31.4**	--	--	--	--	--
Lead	250	3,000	**15.2**	**11.8**	--	--	--	--	--
Mercury	2	2.1	**0.0708**	0.0224 U	--	--	--	--	--
Petroleum Hydrocarbons (mg/kg; NWTPH-HCID)									
Gasoline Range Organics	100/30[b]	NA	11 U	11 U	--	--	--	--	--
Petroleum Hydrocarbons as Diesel	2000	NA	27 U	28 U	--	--	--	--	--
Petroleum Hydrocarbons as Motor Oil	2000	NA	55 U	56 U	--	--	--	--	--
Petroleum Hydrocarbons (mg/kg; NWTPH-Gx)									
Petroleum Hydrocarbons as Gasoline	100/30[b]	NA	--	--	7.4 U	9.06 U	--	--	--
PCBs (mg/kg; SW-846 8082A)									
Aroclor 1016	N/A	5.6	0.0180 U	0.0183 U	--	--	0.0188 U	0.0182 U	0.0191 U
Aroclor 1221	NL	NL	0.0180 U	0.0183 U	--	--	0.0188 U	0.0182 U	0.0191 U
Aroclor 1232	NL	NL	0.0180 U	0.0183 U	--	--	0.0188 U	0.0182 U	0.0191 U
Aroclor 1242	NL	NL	0.0180 U	0.0183 U	--	--	0.0188 U	0.0182 U	0.0191 U
Aroclor 1248	NL	NL	0.0180 U	0.0183 U	--	--	0.0188 U	0.0182 U	0.0191 U
Aroclor 1254	N/A	0.5	**6.25**	**0.122**	--	--	0.0188 U	0.0182 U	**0.0632**
Aroclor 1260	N/A	0.5	0.0180 U	**0.0323**	--	--	0.0188 U	0.0182 U	**0.0208**
Aroclor 1262	NL	NL	0.0180 U	0.0183 U	--	--	0.0188 U	0.0182 U	0.0191 U
Aroclor 1268	NL	NL	0.0180 U	0.0183 U	--	--	0.0188 U	0.0182 U	0.0191 U
Total PCBs	N/A	0.5	**6.25**	**0.1543**	--	--	ND	ND	**0.0840**
Volatile Organic Compounds (mg/kg; SW-846 8260C)									
1,1,1,2-Tetrachloroethane	N/A	38	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
1,1,1-Trichloroethane	2.00	1.6	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
1,1,2,2-Tetrachloroethane	N/A	0.0012	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
1,1,2-Trichloroethane	N/A	0.028	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
1,1,2-Trichlorotrifluoroethane	N/A	2,400,000	0.00220 U	0.00296 U	0.00227 U	0.00315 U	--	--	--
1,1-Dichloroethane	N/A	0.042	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
1,1-Dichloroethene	N/A	0.050	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
1,1-Dichloropropene	NL	NL	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
1,2,3-Trichlorobenzene	NL	NL	0.00550 U	0.00741 U	0.00567 U	0.00787 U	--	--	--
1,2,3-Trichloropropane	N/A	0.033	0.00220 U	0.00296 U	0.00227 U	0.00315 U	--	--	--
1,2,4-Trichlorobenzene	N/A	0.56	0.00550 U	0.00741 U	0.00567 U	0.00787 U	--	--	--
1,2,4-Trimethylbenzene	N/A	NA	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
1,2-Dibromo-3-chloropropane	N/A	1.3	0.00550 U	0.00741 U	0.00567 U	0.00787 U	--	--	--
1,2-Dichlorobenzene	N/A	7.0	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
1,2-Dichloroethane	N/A	0.023	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--

Table C-1
Comprehensive Soil Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date and Laboratory Sample ID						
			LAI-B6 LAI-B6-S(1-3)-20170911 9/11/2017	LAI-B6 LAI-B6-S(7-9)-20170911 9/11/2017	LAI-B7 LAI-B7-S(9-11)-201712 12/22/2017	LAI-B7 LAI-B7-S(13-15)-201712 12/22/2017	LAI-B8 LAI-B8-S(1-3)-201712 12/22/2017	LAI-B8 LAI-B8-S(5-7)-201712 12/22/2017	LAI-B9 LAI-B9-S(1-2)-201712 12/22/2017
	Method A	Method B[a]	17I0116-01	17I0116-02	17L0423-10	17L0423-12	17L0423-03	17L0423-04	17L0423-06
1,2-Dichloropropane	N/A	0.026	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
1,3,5-Trimethylbenzene	N/A	800	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
1,3-Dichlorobenzene	N/A	NA	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
1,3-Dichloropropane	NL	NL	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
1,4-Dichlorobenzene	N/A	1.2	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
2,2-Dichloropropane	NL	NL	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
2-Butanone/MEK	N/A	48,000	0.00550 U	0.00741 U	0.00567 U	0.00787 U	--	--	--
2-Chloroethyl vinyl ether	NL	NL	0.00550 U	0.00741 U	0.00567 U	0.00787 U	--	--	--
2-Chlorotoluene	N/A	1,600	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
2-Hexanone	NL	NL	0.00550 U	0.00741 U	0.00567 U	0.00787 U	--	--	--
2-Pentanone	NL	NL	0.00550 U	0.00741 U	0.00567 U	0.00787 U	--	--	--
4-Chlorotoluene	NL	NL	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
4-Isopropyltoluene	NL	NL	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
4-Methyl-2-pentanone (MIBK)	N/A	6,400	0.00550 U	0.00741 U	0.00567 U	0.00787 U	--	--	--
Acetone	N/A	29	**0.0253**	**0.0192**	**0.0377**	**0.0399**	--	--	--
Acrolein	N/A	40	0.00550 U	0.00741 U	0.00567 U	0.00787 U	--	--	--
Acrylonitrile	N/A	1.9	0.00550 U	0.00741 U	0.00567 U	0.00787 U	--	--	--
Benzene	0.0300	0.028	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Bromobenzene	NL	NL	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Bromochloromethane	NL	NL	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Bromodichloromethane	N/A	0.040	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
BROMOETHANE	NL	NL	0.00220 U	0.00296 U	0.00227 U	0.00315 U	--	--	--
Bromoform	N/A	0.36	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Bromomethane	N/A	0.052	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Carbon Disulfide	N/A	5.7	0.00110 U	0.00148 U	0.00113 U	**0.0171**	--	--	--
Carbon Tetrachloride	N/A	0.046	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Chlorobenzene	N/A	0.87	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Chloroethane	N/A	NA	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Chloroform	N/A	0.075	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Chloromethane	N/A	NA	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
cis-1,2-Dichloroethene	N/A	0.080	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
cis-1,3-Dichloropropene	NL	NL	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Dibromochloromethane	N/A	0.028	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Dibromomethane	N/A	800	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Dichlorodifluoromethane	N/A	16,000	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Ethylbenzene	6.0	6.0	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Ethylene Dibromide	0.0050	0.50	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Hexachlorobutadiene	N/A	0.60	0.00550 U	0.00741 U	0.00567 U	0.00787 U	--	--	--
Isopropylbenzene	N/A	8,000	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
m,p-Xylene	N/A	17	0.00220 U	0.00296 U	0.00227 U	0.00315 U	--	--	--
Methyl Iodide	NL	NL	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Methylene Chloride	0.0200	0.022	0.00220 U	0.00296 U	0.00227 U	0.00315 U	--	--	--
Methyl-tert-butyl ether	0.10	0.10	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Naphthalene	5.00	4.5	0.00550 U	0.00741 U	0.00567 U	0.00787 U	--	--	--

Table C-1
Comprehensive Soil Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date and Laboratory Sample ID						
			LAI-B6 LAI-B6-S(1-3)-20170911 9/11/2017	LAI-B6 LAI-B6-S(7-9)-20170911 9/11/2017	LAI-B7 LAI-B7-S(9-11)-201712 12/22/2017	LAI-B7 LAI-B7-S(13-15)-201712 12/22/2017	LAI-B8 LAI-B8-S(1-3)-201712 12/22/2017	LAI-B8 LAI-B8-S(5-7)-201712 12/22/2017	LAI-B9 LAI-B9-S(1-2)-201712 12/22/2017
	Method A	Method B[a]	17I0116-01	17I0116-02	17L0423-10	17L0423-12	17L0423-03	17L0423-04	17L0423-06
n-Butylbenzene	N/A	4,000	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
n-Propylbenzene	N/A	8,000	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
o-Xylene	N/A	14.7	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
sec-Butylbenzene	N/A	8,000	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Styrene	N/A	2.2	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
tert-Butylbenzene	N/A	8,000	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Tetrachloroethene	0.0500	0.053	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Toluene	7	4.7	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
trans-1,2-Dichloroethene	N/A	0.54	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
trans-1,3-Dichloropropene	NL	NL	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
trans-1,4-Dichloro-2-butene	NL	NL	0.00550 UJ	0.00741 UJ	0.00567 U	0.00787 U	--	--	--
Trichloroethene	0.0300	0.026	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Trichlorofluoromethane (CFC 11)	N/A	24,000	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Vinyl Acetate	N/A	33	0.00550 U	0.00741 U	0.00567 U	0.00787 U	--	--	--
Vinyl Chloride	N/A	0.0018	0.00110 U	0.00148 U	0.00113 U	0.00157 U	--	--	--
Xylenes, Total	9	15	0.00220 U	0.00296 U	0.00227 U	0.00315 U	--	--	--
Semivolatile Organic Compounds (mg/kg; SW-846 8270D)									
1,2,4-Trichlorobenzene	N/A	0.56	0.061 U	0.062 U	--	--	--	--	--
1,2-Dichlorobenzene	N/A	7.0	0.061 U	0.062 U	--	--	--	--	--
1,3-Dichlorobenzene	N/A	NA	0.061 U	0.062 U	--	--	--	--	--
1,4-Dichlorobenzene	N/A	1.2	0.061 U	0.062 U	--	--	--	--	--
1-Methylnaphthalene	N/A	34	0.061 U	0.062 U	--	--	--	--	--
2,4,5-Trichlorophenol	N/A	29	0.299 U	0.306 U	--	--	--	--	--
2,4,6-Trichlorophenol	N/A	0.046	0.299 U	0.306 U	--	--	--	--	--
2,4-Dichlorophenol	N/A	0.17	0.299 U	0.306 U	--	--	--	--	--
2,4-Dimethylphenol	N/A	1.3	0.061 UJ	0.062 UJ	--	--	--	--	--
2,4-Dinitrophenol	N/A	0.13	0.606 U	0.621 U	--	--	--	--	--
2,4-Dinitrotoluene	N/A	0.0017	0.299 U	0.306 U	--	--	--	--	--
2,6-Dinitrotoluene	N/A	0.00031	0.299 U	0.306 U	--	--	--	--	--
2-Chloronaphthalene	N/A	6,400	0.061 U	0.062 U	--	--	--	--	--
2-Chlorophenol	N/A	0.47	0.061 U	0.062 U	--	--	--	--	--
2-Methylnaphthalene	N/A	320	0.061 U	0.062 U	--	--	--	--	--
2-Methylphenol	N/A	2.3	0.061 U	0.062 U	--	--	--	--	--
2-Nitroaniline	N/A	800	0.299 U	0.306 U	--	--	--	--	--
2-Nitrophenol	NL	NL	0.061 U	0.062 U	--	--	--	--	--
3,3'-Dichlorobenzidine	N/A	0.0036	0.299 U	0.306 U	--	--	--	--	--
3-Nitroaniline	NL	NL	0.299 U	0.306 U	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NL	NL	0.606 U	0.621 U	--	--	--	--	--
4-Bromophenyl phenyl ether	NL	NL	0.061 U	0.062 U	--	--	--	--	--
4-Chloro-3-methylphenol	NL	NL	0.299 U	0.306 U	--	--	--	--	--
4-Chloroaniline	N/A	0.0012	0.299 U	0.306 U	--	--	--	--	--
4-Chlorophenyl phenyl ether	NL	NL	0.061 U	0.062 U	--	--	--	--	--
4-Methylphenol	N/A	8,000	0.061 U	0.062 U	--	--	--	--	--

Table C-1
Comprehensive Soil Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date and Laboratory Sample ID						
			LAI-B6 LAI-B6-S(1-3)-20170911 9/11/2017	LAI-B6 LAI-B6-S(7-9)-20170911 9/11/2017	LAI-B7 LAI-B7-S(9-11)-201712 12/22/2017	LAI-B7 LAI-B7-S(13-15)-201712 12/22/2017	LAI-B8 LAI-B8-S(1-3)-201712 12/22/2017	LAI-B8 LAI-B8-S(5-7)-201712 12/22/2017	LAI-B9 LAI-B9-S(1-2)-201712 12/22/2017
	Method A	Method B[a]	17I0116-01	17I0116-02	17L0423-10	17L0423-12	17L0423-03	17L0423-04	17L0423-06
4-Nitroaniline	NL	NL	0.299 U	0.306 U	--	--	--	--	--
4-Nitrophenol	NL	NL	0.299 U	0.306 U	--	--	--	--	--
Acenaphthene	N/A	98	0.061 U	0.062 U	--	--	--	--	--
Acenaphthylene	N/A	NA	0.061 U	0.062 U	--	--	--	--	--
Anthracene	N/A	2,300	0.061 U	0.062 U	--	--	--	--	--
Benzo(a)anthracene	N/A	0.86	0.061 U	0.062 U	--	--	--	--	--
Benzo(a)pyrene	0.100	0.14	0.061 U	0.062 U	--	--	--	--	--
Benzo(g,h,i)perylene	N/A	NA	0.061 U	0.062 U	--	--	--	--	--
Benzoic Acid	N/A	260	0.606 U	0.621 U	--	--	--	--	--
Benzyl Alcohol	N/A	8,000	0.299 U	0.306 U	--	--	--	--	--
bis(2-Chloro-1-Methylethyl) Ether	N/A	14	0.061 U	0.062 U	--	--	--	--	--
bis(2-Chloroethoxy) Methane	NL	NL	0.061 U	0.062 U	--	--	--	--	--
bis(2-Chloroethyl) Ether	N/A	0.00022	0.061 U	0.062 U	--	--	--	--	--
bis(2-Ethylhexyl) Phthalate	N/A	13	0.061 U	0.062 U	--	--	--	--	--
Butyl Benzyl Phthalate	N/A	13	0.061 U	0.062 U	--	--	--	--	--
Carbazole	N/A	NA	0.061 U	0.062 U	--	--	--	--	--
Chrysene	N/A	95	0.061 U	0.062 U	--	--	--	--	--
Dibenzo(a,h)anthracene	N/A	0.14	0.061 U	0.062 U	--	--	--	--	--
Dibenzofuran	N/A	80	0.061 U	0.062 U	--	--	--	--	--
Diethyl Phthalate	N/A	72	0.061 U	0.062 U	--	--	--	--	--
Dimethyl Phthalate	N/A	NA	0.061 U	0.062 U	--	--	--	--	--
Di-N-Butyl Phthalate	N/A	57	0.061 U	0.062 U	--	--	--	--	--
Di-n-octyl Phthalate	N/A	800	0.061 U	0.062 U	--	--	--	--	--
Fluoranthene	N/A	630	**0.069**	0.062 U	--	--	--	--	--
Fluorene	N/A	101	0.061 U	0.062 U	--	--	--	--	--
Hexachlorobenzene	N/A	0.63	0.061 U	0.062 U	--	--	--	--	--
Hexachlorobutadiene	N/A	0.60	0.061 U	0.062 U	--	--	--	--	--
Hexachlorocyclopentadiene	N/A	190	0.299 U	0.306 U	--	--	--	--	--
Hexachloroethane	N/A	0.044	0.061 U	0.062 U	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	N/A	1.4	0.061 U	0.062 U	--	--	--	--	--
Isophorone	N/A	0.23	0.061 U	0.062 U	--	--	--	--	--
Naphthalene	5.0	4.5	0.061 U	0.062 U	--	--	--	--	--
Nitrobenzene	N/A	0.10	0.061 U	0.062 U	--	--	--	--	--
N-Nitrosodi-n-propylamine	N/A	0.000056	0.061 U	0.062 U	--	--	--	--	--
N-Nitrosodiphenylamine	N/A	0.53	0.061 U	0.062 U	--	--	--	--	--
Pentachlorophenol	N/A	0.016	0.299 UJ	0.306 UJ	--	--	--	--	--
Phenanthrene	N/A	NA	0.061 U	0.062 U	--	--	--	--	--
Phenol	N/A	11	0.061 U	0.062 U	--	--	--	--	--
Pyrene	N/A	660	**0.064**	0.062 U	--	--	--	--	--
Total Benzofluoranthenes	NL	NL	**0.107**	0.062 U	--	--	--	--	--

Table C-1
Comprehensive Soil Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date and Laboratory Sample ID				
			LAI-B9 LAI-B9-S(5-7)-201712 12/22/2017	LAI-B9 LAI-B9-S(10-12)-201712 12/22/2017	LAI-B8 LAI-B8-S(13-15)-201712 12/22/2017	LAI-B10 LAI-B10-S(1-3)-201712 12/22/2017	LAI-B10 LAI-B10-S(5-7)-201712 12/22/2017
	Method A	Method B[a]	17L0423-07	17L0423-08	17L0423-11	17L0423-01	17L0423-02
Metals (mg/kg; EPA 200.8/SW-846 7471B)							
Arsenic	20	0.67	--	--	--	--	--
Cadmium	N/A	0.69	--	--	--	--	--
Chromium, Total	2,000	120,000	--	--	--	--	--
Lead	250	3,000	--	--	--	--	--
Mercury	2	2.1	--	--	--	--	--
Petroleum Hydrocarbons (mg/kg; NWTPH-HCID)							
Gasoline Range Organics	100/30[b]	NA	--	--	--	--	--
Petroleum Hydrocarbons as Diesel	2000	NA	--	--	--	--	--
Petroleum Hydrocarbons as Motor Oil	2000	NA	--	--	--	--	--
Petroleum Hydrocarbons (mg/kg; NWTPH-Gx)							
Petroleum Hydrocarbons as Gasoline	100/30[b]	NA	--	8.12 U	7.1 U	--	--
PCBs (mg/kg; SW-846 8082A)							
Aroclor 1016	N/A	5.6	0.0196 U	--	--	0.0183 U	0.0192 U
Aroclor 1221	NL	NL	0.0196 U	--	--	0.0183 U	0.0192 U
Aroclor 1232	NL	NL	0.0196 U	--	--	0.0183 U	0.0192 U
Aroclor 1242	NL	NL	0.0196 U	--	--	0.0183 U	0.0192 U
Aroclor 1248	NL	NL	0.0196 U	--	--	0.0183 U	0.0192 U
Aroclor 1254	N/A	0.5	0.0196 U	--	--	**0.0523**	0.0192 U
Aroclor 1260	N/A	0.5	0.0196 U	--	--	**0.0248**	0.0192 U
Aroclor 1262	NL	NL	0.0196 U	--	--	0.0183 U	0.0192 U
Aroclor 1268	NL	NL	0.0196 U	--	--	0.0183 U	0.0192 U
Total PCBs	N/A	0.5	ND	ND	ND	**0.0771**	ND
Volatile Organic Compounds (mg/kg; SW-846 8260C)							
1,1,1,2-Tetrachloroethane	N/A	38	--	0.00116 U	0.00136 U	--	--
1,1,1-Trichloroethane	2.00	1.6	--	0.00116 U	0.00136 U	--	--
1,1,2,2-Tetrachloroethane	N/A	0.0012	--	0.00116 U	0.00136 U	--	--
1,1,2-Trichloroethane	N/A	0.028	--	0.00116 U	0.00136 U	--	--
1,1,2-Trichlorotrifluoroethane	N/A	2,400,000	--	0.00232 U	0.00271 U	--	--
1,1-Dichloroethane	N/A	0.042	--	0.00116 U	0.00136 U	--	--
1,1-Dichloroethene	N/A	0.050	--	0.00116 U	0.00136 U	--	--
1,1-Dichloropropene	NL	NL	--	0.00116 U	0.00136 U	--	--
1,2,3-Trichlorobenzene	NL	NL	--	0.00581 U	0.00679 U	--	--
1,2,3-Trichloropropane	N/A	0.033	--	0.00232 U	0.00271 U	--	--
1,2,4-Trichlorobenzene	N/A	0.56	--	0.00581 U	0.00679 U	--	--
1,2,4-Trimethylbenzene	N/A	NA	--	0.00116 U	0.00136 U	--	--
1,2-Dibromo-3-chloropropane	N/A	1.3	--	0.00581 U	0.00679 U	--	--
1,2-Dichlorobenzene	N/A	7.0	--	0.00116 U	0.00136 U	--	--
1,2-Dichloroethane	N/A	0.023	--	0.00116 U	0.00136 U	--	--

Table C-1
Comprehensive Soil Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date and Laboratory Sample ID				
			LAI-B9 LAI-B9-S(5-7)-201712 12/22/2017	LAI-B9 LAI-B9-S(10-12)-201712 12/22/2017	LAI-B8 LAI-B8-S(13-15)-201712 12/22/2017	LAI-B10 LAI-B10-S(1-3)-201712 12/22/2017	LAI-B10 LAI-B10-S(5-7)-201712 12/22/2017
	Method A	Method B[a]	17L0423-07	17L0423-08	17L0423-11	17L0423-01	17L0423-02
1,2-Dichloropropane	N/A	0.026	--	0.00116 U	0.00136 U	--	--
1,3,5-Trimethylbenzene	N/A	800	--	0.00116 U	0.00136 U	--	--
1,3-Dichlorobenzene	N/A	NA	--	0.00116 U	0.00136 U	--	--
1,3-Dichloropropane	NL	NL	--	0.00116 U	0.00136 U	--	--
1,4-Dichlorobenzene	N/A	1.2	--	0.00116 U	0.00136 U	--	--
2,2-Dichloropropane	NL	NL	--	0.00116 U	0.00136 U	--	--
2-Butanone/MEK	N/A	48,000	--	0.00581 U	**0.0171**	--	--
2-Chloroethyl vinyl ether	NL	NL	--	0.00581 U	0.00679 U	--	--
2-Chlorotoluene	N/A	1,600	--	0.00116 U	0.00136 U	--	--
2-Hexanone	NL	NL	--	0.00581 U	0.00679 U	--	--
2-Pentanone	NL	NL	--	0.00581 U	0.00679 U	--	--
4-Chlorotoluene	NL	NL	--	0.00116 U	0.00136 U	--	--
4-Isopropyltoluene	NL	NL	--	0.00116 U	0.00136 U	--	--
4-Methyl-2-pentanone (MIBK)	N/A	6,400	--	0.00581 U	0.00679 U	--	--
Acetone	N/A	29	--	**0.0239**	**0.106**	--	--
Acrolein	N/A	40	--	0.00581 U	0.00679 U	--	--
Acrylonitrile	N/A	1.9	--	0.00581 U	0.00679 U	--	--
Benzene	0.0300	0.028	--	0.00116 U	0.00136 U	--	--
Bromobenzene	NL	NL	--	0.00116 U	0.00136 U	--	--
Bromochloromethane	NL	NL	--	0.00116 U	0.00136 U	--	--
Bromodichloromethane	N/A	0.040	--	0.00116 U	0.00136 U	--	--
BROMOETHANE	NL	NL	--	0.00232 U	0.00271 U	--	--
Bromoform	N/A	0.36	--	0.00116 U	0.00136 U	--	--
Bromomethane	N/A	0.052	--	0.00116 U	0.00136 U	--	--
Carbon Disulfide	N/A	5.7	--	0.00116 U	**0.00273**	--	--
Carbon Tetrachloride	N/A	0.046	--	0.00116 U	0.00136 U	--	--
Chlorobenzene	N/A	0.87	--	0.00116 U	0.00136 U	--	--
Chloroethane	N/A	NA	--	0.00116 U	0.00136 U	--	--
Chloroform	N/A	0.075	--	0.00116 U	0.00136 U	--	--
Chloromethane	N/A	NA	--	0.00116 U	0.00136 U	--	--
cis-1,2-Dichloroethene	N/A	0.080	--	0.00116 U	0.00136 U	--	--
cis-1,3-Dichloropropene	NL	NL	--	0.00116 U	0.00136 U	--	--
Dibromochloromethane	N/A	0.028	--	0.00116 U	0.00136 U	--	--
Dibromomethane	N/A	800	--	0.00116 U	0.00136 U	--	--
Dichlorodifluoromethane	N/A	16,000	--	0.00116 U	0.00136 U	--	--
Ethylbenzene	6.0	6.0	--	0.00116 U	0.00136 U	--	--
Ethylene Dibromide	0.0050	0.50	--	0.00116 U	0.00136 U	--	--
Hexachlorobutadiene	N/A	0.60	--	0.00581 U	0.00679 U	--	--
Isopropylbenzene	N/A	8,000	--	0.00116 U	0.00136 U	--	--
m,p-Xylene	N/A	17	--	0.00232 U	0.00271 U	--	--
Methyl Iodide	NL	NL	--	0.00116 U	0.00136 U	--	--
Methylene Chloride	0.0200	0.022	--	0.00232 U	0.00271 U	--	--
Methyl-tert-butyl ether	0.10	0.10	--	0.00116 U	0.00136 U	--	--
Naphthalene	5.00	4.5	--	0.00581 U	0.00679 U	--	--

Table C-1
Comprehensive Soil Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date and Laboratory Sample ID				
			LAI-B9 LAI-B9-S(5-7)-201712 12/22/2017	LAI-B9 LAI-B9-S(10-12)-201712 12/22/2017	LAI-B8 LAI-B8-S(13-15)-201712 12/22/2017	LAI-B10 LAI-B10-S(1-3)-201712 12/22/2017	LAI-B10 LAI-B10-S(5-7)-201712 12/22/2017
	Method A	Method B[a]	17L0423-07	17L0423-08	17L0423-11	17L0423-01	17L0423-02
n-Butylbenzene	N/A	4,000	--	0.00116 U	0.00136 U	--	--
n-Propylbenzene	N/A	8,000	--	0.00116 U	0.00136 U	--	--
o-Xylene	N/A	14.7	--	0.00116 U	0.00136 U	--	--
sec-Butylbenzene	N/A	8,000	--	0.00116 U	0.00136 U	--	--
Styrene	N/A	2.2	--	0.00116 U	0.00136 U	--	--
tert-Butylbenzene	N/A	8,000	--	0.00116 U	0.00136 U	--	--
Tetrachloroethene	0.0500	0.053	--	0.00116 U	0.00136 U	--	--
Toluene	7	4.7	--	0.00116 U	0.00136 U	--	--
trans-1,2-Dichloroethene	N/A	0.54	--	0.00116 U	0.00136 U	--	--
trans-1,3-Dichloropropene	NL	NL	--	0.00116 U	0.00136 U	--	--
trans-1,4-Dichloro-2-butene	NL	NL	--	0.00581 U	0.00679 U	--	--
Trichloroethene	0.0300	0.026	--	0.00116 U	0.00136 U	--	--
Trichlorofluoromethane (CFC 11)	N/A	24,000	--	0.00116 U	0.00136 U	--	--
Vinyl Acetate	N/A	33	--	0.00581 U	0.00679 U	--	--
Vinyl Chloride	N/A	0.0018	--	0.00116 U	0.00136 U	--	--
Xylenes, Total	9	15	--	0.00232 U	0.00271 U	--	--
Semivolatile Organic Compounds (mg/kg; SW-846 8270D)							
1,2,4-Trichlorobenzene	N/A	0.56	--	--	--	--	--
1,2-Dichlorobenzene	N/A	7.0	--	--	--	--	--
1,3-Dichlorobenzene	N/A	NA	--	--	--	--	--
1,4-Dichlorobenzene	N/A	1.2	--	--	--	--	--
1-Methylnaphthalene	N/A	34	--	--	--	--	--
2,4,5-Trichlorophenol	N/A	29	--	--	--	--	--
2,4,6-Trichlorophenol	N/A	0.046	--	--	--	--	--
2,4-Dichlorophenol	N/A	0.17	--	--	--	--	--
2,4-Dimethylphenol	N/A	1.3	--	--	--	--	--
2,4-Dinitrophenol	N/A	0.13	--	--	--	--	--
2,4-Dinitrotoluene	N/A	0.0017	--	--	--	--	--
2,6-Dinitrotoluene	N/A	0.00031	--	--	--	--	--
2-Chloronaphthalene	N/A	6,400	--	--	--	--	--
2-Chlorophenol	N/A	0.47	--	--	--	--	--
2-Methylnaphthalene	N/A	320	--	--	--	--	--
2-Methylphenol	N/A	2.3	--	--	--	--	--
2-Nitroaniline	N/A	800	--	--	--	--	--
2-Nitrophenol	NL	NL	--	--	--	--	--
3,3'-Dichlorobenzidine	N/A	0.0036	--	--	--	--	--
3-Nitroaniline	NL	NL	--	--	--	--	--
4,6-Dinitro-2-methylphenol	NL	NL	--	--	--	--	--
4-Bromophenyl phenyl ether	NL	NL	--	--	--	--	--
4-Chloro-3-methylphenol	NL	NL	--	--	--	--	--
4-Chloroaniline	N/A	0.0012	--	--	--	--	--
4-Chlorophenyl phenyl ether	NL	NL	--	--	--	--	--
4-Methylphenol	N/A	8,000	--	--	--	--	--

Table C-1
Comprehensive Soil Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date and Laboratory Sample ID				
			LAI-B9 LAI-B9-S(5-7)-201712 12/22/2017	LAI-B9 LAI-B9-S(10-12)-201712 12/22/2017	LAI-B8 LAI-B8-S(13-15)-201712 12/22/2017	LAI-B10 LAI-B10-S(1-3)-201712 12/22/2017	LAI-B10 LAI-B10-S(5-7)-201712 12/22/2017
	Method A	Method B[a]	17L0423-07	17L0423-08	17L0423-11	17L0423-01	17L0423-02
4-Nitroaniline	NL	NL	--	--	--	--	--
4-Nitrophenol	NL	NL	--	--	--	--	--
Acenaphthene	N/A	98	--	--	--	--	--
Acenaphthylene	N/A	NA	--	--	--	--	--
Anthracene	N/A	2,300	--	--	--	--	--
Benzo(a)anthracene	N/A	0.86	--	--	--	--	--
Benzo(a)pyrene	0.100	0.14	--	--	--	--	--
Benzo(g,h,i)perylene	N/A	NA	--	--	--	--	--
Benzoic Acid	N/A	260	--	--	--	--	--
Benzyl Alcohol	N/A	8,000	--	--	--	--	--
bis(2-Chloro-1-Methylethyl) Ether	N/A	14	--	--	--	--	--
bis(2-Chloroethoxy) Methane	NL	NL	--	--	--	--	--
bis(2-Chloroethyl) Ether	N/A	0.00022	--	--	--	--	--
bis(2-Ethylhexyl) Phthalate	N/A	13	--	--	--	--	--
Butyl Benzyl Phthalate	N/A	13	--	--	--	--	--
Carbazole	N/A	NA	--	--	--	--	--
Chrysene	N/A	95	--	--	--	--	--
Dibenzo(a,h)anthracene	N/A	0.14	--	--	--	--	--
Dibenzofuran	N/A	80	--	--	--	--	--
Diethyl Phthalate	N/A	72	--	--	--	--	--
Dimethyl Phthalate	N/A	NA	--	--	--	--	--
Di-N-Butyl Phthalate	N/A	57	--	--	--	--	--
Di-n-octyl Phthalate	N/A	800	--	--	--	--	--
Fluoranthene	N/A	630	--	--	--	--	--
Fluorene	N/A	101	--	--	--	--	--
Hexachlorobenzene	N/A	0.63	--	--	--	--	--
Hexachlorobutadiene	N/A	0.60	--	--	--	--	--
Hexachlorocyclopentadiene	N/A	190	--	--	--	--	--
Hexachloroethane	N/A	0.044	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	N/A	1.4	--	--	--	--	--
Isophorone	N/A	0.23	--	--	--	--	--
Naphthalene	5.0	4.5	--	--	--	--	--
Nitrobenzene	N/A	0.10	--	--	--	--	--
N-Nitrosodi-n-propylamine	N/A	0.000056	--	--	--	--	--
N-Nitrosodiphenylamine	N/A	0.53	--	--	--	--	--
Pentachlorophenol	N/A	0.016	--	--	--	--	--
Phenanthrene	N/A	NA	--	--	--	--	--
Phenol	N/A	11	--	--	--	--	--
Pyrene	N/A	660	--	--	--	--	--
Total Benzofluoranthenes	NL	NL	--	--	--	--	--

Table C-1
Comprehensive Soil Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Abbreviations and Acronyms:

EPA = US Environmental Protection Agency
ft = feet
ID = identification
mg/kg = milligrams per kilogram
MTCA = Washington State Model Toxics Control Act
-- = Not Analyzed
NA = Not Applicable
NL = Not Listed

Notes:

U = The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample
UJ = The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
Bold = detected compound
Blue Box = detected concentration is greater than MTCA Method B screening level.
Green Box = detected concentration is greater than MTCA Method A and MTCA Method B screening levels.

(a) For MTCA Method B screening levels, the most conservative value of either direct contact cancer, direct contact non-cancer, or protective of groundwater was used. Screening levels for metals would be adjusted up to natural background concentrations.
(b) MTCA Method A screening level is 100 mg/kg if benzene is not present and the total of ethylbenzene, toluene, and xylenes is less than 1% of the gasoline mixture; otherwise the screening level is 30 mg/kg.

Table C-2
Comprehensive Groundwater Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date, and Laboratory Sample ID								
			LAI-B2 LAI-B2-GW 9/11/2017	LAI-B4 LAI-B4-GW 9/13/2017	LAI-B6 LAI-B6-GW-20170911 9/11/2017	LAI-B6 LMW-2D-20170913 9/13/2017	LAI-B7 LAI-B7-GW-201712 12/22/2017	LAI-B8 LAI-B8-GW-201712 12/22/2017	LAI-B9 LAI-B9-GW-201712 12/22/2017	MW-2 MW-2-20170913 9/13/2017	MW-10 MW-10-20170913 9/13/2017
	Method A	Method B[a]	17I0116-07	17I0139-02	17I0116-03	17I0139-07	17L0423-13	17L0423-05	17L0423-09	17I0139-05	17I0139-06
Metals (µg/L; EPA 200.8/SW-846 7470A)											
Arsenic	5	0.06	**8.39 J**	**3.75**	**9.32**	**5.40**	--	--	--	**5.46**	**8.10**
Cadmium	5	5	0.100 U	0.100 U	0.100 U	0.100 U	--	--	--	0.100 U	0.100 U
Chromium, Total	50	100	0.500 U	0.500 U	**0.815**	0.500 U	--	--	--	**0.644**	**0.683**
Lead	15	15	0.100 U	0.100 U	0.100 U	0.100 U	--	--	--	0.100 U	0.100 U
Mercury	2	2	0.1 U	0.1 U	0.1 U	0.1 U	--	--	--	0.1 U	0.1 U
Petroleum Hydrocarbons (µg/L; NWTPH-HCID)											
Gasoline Range Organics	1,000/800[b]	NA	250 U	250 U	250 U	250 UJ	**603**	100 U	100 U	250 U	250 U
Petroleum Hydrocarbons as Diesel	500	NA	500 U	500 U	500 U	500 UJ				500 U	500 U
Petroleum Hydrocarbons as Motor Oil	500	NA	1000 U	1000 U	1000 U	1000 UJ				1000 U	1000 U
Volatile Organic Compounds (µg/L; SW-846 8260C)											
1,1,1,2-Tetrachloroethane	NA	1.68	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,1,1-Trichloroethane	200	200	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,1,2,2-Tetrachloroethane	NA	0.22	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,1,2-Trichloroethane	NA	0.77	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,1,2-Trichlorotrifluoroethane	NA	240,000	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,1-Dichloroethane	NA	7.7	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,1-Dichloroethene	NA	7	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,1-Dichloropropene	NL	NL	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,2,3-Trichlorobenzene	NL	NL	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2,3-Trichloropropane	NA	0.0015	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene	NA	1.5	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2,4-Trimethylbenzene	NA	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,2-Dibromo-3-chloropropane	NA	0.05	0.50 UJ	0.50 U	0.50 UJ	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene	NA	600	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,2-Dichloroethane	5	0.48	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,2-Dichloropropane	NA	1.2	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,3,5-Trimethylbenzene	NA	80	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,3-Dichlorobenzene	NA	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,3-Dichloropropane	NL	NL	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,4-Dichlorobenzene	NA	8.1	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2,2-Dichloropropane	NL	NL	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Butanone/MEK	NA	4,800	5.00 U	5.00 U	5.00 U	5.00 U	16.0 U	5.00 U	5.00 U	5.00 U	5.00 U
2-Chloroethyl vinyl ether	NL	NL	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
2-Chlorotoluene	NA	160	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
2-Hexanone	NL	NL	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
2-Pentanone	NL	NL	5.00 U	5.00 UJ	5.00 U	5.00 UJ	5.00 U	5.00 U	5.00 U	5.00 UJ	5.00 UJ
4-Chlorotoluene	NL	NL	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
4-Isopropyltoluene	NL	NL	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
4-Methyl-2-pentanone (MIBK)	NA	640	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U

Table C-2
Comprehensive Groundwater Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date, and Laboratory Sample ID								
			LAI-B2 LAI-B2-GW 9/11/2017	LAI-B4 LAI-B4-GW 9/13/2017	LAI-B6 LAI-B6-GW-20170911 9/11/2017	LAI-B6 LMW-2D-20170913 9/13/2017	LAI-B7 LAI-B7-GW-201712 12/22/2017	LAI-B8 LAI-B8-GW-201712 12/22/2017	LAI-B9 LAI-B9-GW-201712 12/22/2017	MW-2 MW-2-20170913 9/13/2017	MW-10 MW-10-20170913 9/13/2017
	Method A	Method B[a]	17I0116-07	17I0139-02	17I0116-03	17I0139-07	17L0423-13	17L0423-05	17L0423-09	17I0139-05	17I0139-06
Acetone	NA	7,200	**8.09 J**	5.00 UJ	**7.74 J**	5.00 UJ	5.00 U	5.00 U	5.00 U	**8.55 J**	5.00 UJ
Acrolein	NA	4	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
Acrylonitrile	NA	0.081	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Benzene	5	0.80	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Bromobenzene	NL	NL	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Bromochloromethane	NL	NL	0.20 U	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 UJ
Bromodichloromethane	NA	0.08	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Bromoethane	NL	NL	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Bromoform	NA	5.5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Bromomethane	NA	11.2	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Carbon Disulfide	NA	800	**0.27 J**	0.20 U	**0.67 J**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Carbon Tetrachloride	NA	0.63	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Chlorobenzene	NA	100	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Chloroethane	NA	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Chloroform	NA	1.4	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Chloromethane	NA	NA	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
cis-1,2-Dichloroethene	NA	16	0.20 U	0.20 UJ	0.20 U	0.20 UJ	0.20 U	0.20 U	0.20 U	0.20 UJ	0.20 UJ
cis-1,3-Dichloropropene	NL	NL	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibromochloromethane	NA	0.52	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dibromomethane	NA	80	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Dichlorodifluoromethane	NA	1,600	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Ethylbenzene	700	70	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Ethylene Dibromide	0.01	0.02	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Hexachlorobutadiene	NA	0.56	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Isopropylbenzene	NA	800	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
m,p-Xylene (see total)	NL	NL	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
Methyl Iodide	NL	NL	1.00 UJ	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Methylene Chloride	5	5	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Methyl-tert-butyl ether	20	24	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Naphthalene	160	160	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
n-Butylbenzene	NA	400	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
n-Propylbenzene	NA	800	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
o-Xylene	NA	1,600	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
sec-Butylbenzene	NA	800	0.20 U	0.20 U	0.20 U	0.20 U	**0.77**	0.20 U	0.20 U	0.20 U	0.20 U
Styrene	NA	100	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
tert-Butylbenzene	NA	800	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Tetrachloroethene	5	5	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Toluene	1,000	640	0.20 U	**0.62**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
trans-1,2-Dichloroethene	NA	100	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
trans-1,3-Dichloropropene	NL	NL	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
trans-1,4-Dichloro-2-butene	NL	NL	1.00 UJ	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Trichloroethene	5	0.54	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Trichlorofluoromethane (CFC 11)	NA	2,400	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

Table C-2
Comprehensive Groundwater Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date, and Laboratory Sample ID								
			LAI-B2 LAI-B2-GW 9/11/2017	LAI-B4 LAI-B4-GW 9/13/2017	LAI-B6 LAI-B6-GW-20170911 9/11/2017	LAI-B6 LMW-2D-20170913 9/13/2017	LAI-B7 LAI-B7-GW-201712 12/22/2017	LAI-B8 LAI-B8-GW-201712 12/22/2017	LAI-B9 LAI-B9-GW-201712 12/22/2017	MW-2 MW-2-20170913 9/13/2017	MW-10 MW-10-20170913 9/13/2017
	Method A	Method B[a]	17I0116-07	17I0139-02	17I0116-03	17I0139-07	17L0423-13	17L0423-05	17L0423-09	17I0139-05	17I0139-06
Vinyl Acetate	NA	8,000	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Vinyl Chloride	0.2	0.03	0.20 U	0.20 U	0.20 U	**0.34**	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Xylenes, Total	1,000	1,600	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U
Semivolatile Organic Compounds (µg/L; SW-846 8270D)											
1,2,4-Trichlorobenzene	NA	1.5	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
1,2-Dichlorobenzene	NA	600	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
1,3-Dichlorobenzene	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
1,4-Dichlorobenzene	NA	8.1	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
1-Methylnaphthalene	NA	1.5	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
2,4,5-Trichlorophenol	NA	800	5.0 U	5.0 U	5.0 U	5.0 U	--	--	--	5.0 U	5.0 U
2,4,6-Trichlorophenol	NA	4.0	3.0 U	3.0 U	3.0 U	3.0 U	--	--	--	3.0 U	3.0 U
2,4-Dichlorophenol	NA	24	3.0 U	3.0 U	3.0 U	3.0 U	--	--	--	3.0 U	3.0 U
2,4-Dimethylphenol	NA	160	3.0 U	3.0 U	3.0 U	3.0 U	--	--	--	3.0 U	3.0 U
2,4-Dinitrophenol	NA	32	20.0 U	20.0 U	20.0 U	20.0 U	--	--	--	20.0 U	20.0 U
2,4-Dinitrotoluene	NA	0.28	3.0 U	3.0 U	3.0 U	3.0 U	--	--	--	3.0 U	3.0 U
2,6-Dinitrotoluene	NA	0.06	3.0 U	3.0 U	3.0 U	3.0 U	--	--	--	3.0 U	3.0 U
2-Chloronaphthalene	NA	640	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
2-Chlorophenol	NA	40	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
2-Methylnaphthalene	NA	32	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
2-Methylphenol	NA	400	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
2-Nitroaniline	NA	160	3.0 U	3.0 U	3.0 U	3.0 U	--	--	--	3.0 U	3.0 U
2-Nitrophenol	NL	NL	3.0 U	3.0 U	3.0 U	3.0 U	--	--	--	3.0 U	3.0 U
3,3'-Dichlorobenzidine	NA	0.19	5.0 U	5.0 U	5.0 U	5.0 U	--	--	--	5.0 U	5.0 U
3-Nitroaniline	NL	NL	3.0 U	3.0 U	3.0 U	3.0 U	--	--	--	3.0 U	3.0 U
4,6-Dinitro-2-methylphenol	NL	NL	10.0 U	10.0 U	10.0 U	10.0 U	--	--	--	10.0 U	10.0 U
4-Bromophenyl phenyl ether	NL	NL	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
4-Chloro-3-methylphenol	NL	NL	3.0 U	3.0 U	3.0 U	3.0 U	--	--	--	3.0 U	3.0 U
4-Chloroaniline	NA	0.22	5.0 U	5.0 U	5.0 U	5.0 U	--	--	--	5.0 U	5.0 U
4-Chlorophenyl phenyl ether	NL	NL	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
4-Methylphenol	NA	800	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	2.0 U	2.0 U
4-Nitroaniline	NL	NL	3.0 U	3.0 U	3.0 U	3.0 U	--	--	--	3.0 U	3.0 U
4-Nitrophenol	NL	NL	10.0 U	10.0 U	10.0 U	10.0 U	--	--	--	10.0 U	10.0 U
Acenaphthene	NA	960	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Acenaphthylene	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Anthracene	NA	4,800	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Benzo(a)anthracene	NA	0.12	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Benzo(a)pyrene	0.1	0.01	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Benzo(g,h,i)perylene	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Benzoic Acid	NA	64,000	20.0 U	20.0 U	20.0 U	20.0 U	--	--	--	20.0 U	20.0 U
Benzyl Alcohol	NA	800	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	2.0 U	2.0 U
bis(2-Chloro-1-Methylethyl) Ether	NA	0.625	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
bis(2-Chloroethoxy) Methane	NL	NL	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U

Table C-2
Comprehensive Groundwater Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	Screening Levels		Sample Location, Sample ID, Sample Date, and Laboratory Sample ID								
			LAI-B2 LAI-B2-GW 9/11/2017	LAI-B4 LAI-B4-GW 9/13/2017	LAI-B6 LAI-B6-GW-20170911 9/11/2017	LAI-B6 LMW-2D-20170913 9/13/2017	LAI-B7 LAI-B7-GW-201712 12/22/2017	LAI-B8 LAI-B8-GW-201712 12/22/2017	LAI-B9 LAI-B9-GW-201712 12/22/2017	MW-2 MW-2-20170913 9/13/2017	MW-10 MW-10-20170913 9/13/2017
	Method A	Method B[a]	17I0116-07	17I0139-02	17I0116-03	17I0139-07	17L0423-13	17L0423-05	17L0423-09	17I0139-05	17I0139-06
bis(2-Chloroethyl) Ether	NA	0.040	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
bis(2-Ethylhexyl) Phthalate	NA	6	3.0 U	3.0 U	3.0 U	3.0 U	--	--	--	3.0 U	3.0 U
Butyl Benzyl Phthalate	NA	46	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Carbazole	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Chrysene	NA	12	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Dibenzo(a,h)anthracene	NA	0.012	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Dibenzofuran	NA	16	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Diethyl Phthalate	NA	12,800	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Dimethyl Phthalate	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Di-N-Butyl Phthalate	NA	1,600	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Di-n-octyl Phthalate	NA	160	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Fluoranthene	NA	640	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Fluorene	NA	640	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Hexachlorobenzene	NA	0.05	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Hexachlorobutadiene	NA	0.56	3.0 U	3.0 U	3.0 U	3.0 U	--	--	--	3.0 U	3.0 U
Hexachlorocyclopentadiene	NA	48	5.0 U	5.0 U	5.0 U	5.0 U	--	--	--	5.0 U	5.0 U
Hexachloroethane	NA	1.1	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	2.0 U	2.0 U
Indeno(1,2,3-cd)pyrene	NA	0.12	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Isophorone	NA	46	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Naphthalene	160	160	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Nitrobenzene	NA	16	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
N-Nitrosodi-n-propylamine	NA	0.013	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
N-Nitrosodiphenylamine	NA	18	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Pentachlorophenol	NA	0.22	10.0 U	10.0 U	10.0 U	10.0 U	--	--	--	10.0 U	10.0 U
Phenanthrene	NA	NA	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Phenol	NA	2,400	1.1	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Pyrene	NA	480	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Total Benzofluoranthenes	NL	NL	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	2.0 U	2.0 U

Abbreviations and Acronyms:

EPA = US Environmental Protection Agency
GW = groundwater
ID = identification
MTCA = Washington State Model Toxics Control Act
µg/L = micrograms per liter
NA = Not Applicable
NL = Not Listed
-- = Not Analyzed

Notes:

U = The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected in the sample; the reported sample reporting limit is an estimate.
Bold = detected compound
Blue Box = detected concentration is greater than MTCA Method B screening level.
Green Box = detected concentration is greater than MTCA Method B and MTCA Method A screening level.

(a) For MTCA Method B screening levels, the most conservative value of either cancer, non-cancer, or maximum contaminant level was used. Screening levels for metals would be adjusted up to natural background concentrations.
(b) MTCA Method A screening level is 1,000 µg/L if benzene is not present and the total of ethylbenzene, toluene, and xylenes is less than 1 percent of the gasoline mixture; otherwise the screening level is 800 µg/L.

Table C-3
Comprehensive Soil Gas Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	MTCA Method B Unrestricted Screening Level[a]	Modified MTCA Method B Commercial Screening Level[b]	Sample Location, Field Sample ID, Sample Date, and Laboratory Sample ID					
			LAI-B1 LAI-B1-SG-20170911 9/11/2017 1709312-02A	LAI-B2 LAI-B2-SG-20170911 9/11/2017 1709312-03A	LAI-B3 LAI-B3-SG-20170911 9/11/2017 1709312-04A	LAI-B4 LAI-B4-SG-20170913 9/13/2017 1709312-06A	LAI-B5 LAI-B5-SG-20170913 9/13/2017 1709312-07A	LAI-B6 LAI-B6-SG-20170911 9/11/2017 1709312-01A
Volatile Organic Compounds (µg/m^3; TO-15)								
1,1,1-Trichloroethane	76,000	NA	2.5 U	2.6 U	2.4 U	2.5 U	2.4 U	2.5 U
1,1,2,2-Tetrachloroethane	1.4	NA	3.2 U	3.2 U	3.1 U	3.1 U	3.0 U	3.1 U
1,1,2-Trichloroethane	3	NA	2.5 U	2.6 U	2.4 U	2.5 U	2.4 U	2.5 U
1,1,2-Trichlorotrifluoroethane	460,000	NA	3.6 U	3.6 U	3.4 U	3.5 U	3.4 U	3.5 U
1,1-Dichloroethane	52	NA	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U
1,1-Dichloroethene	3,000	NA	1.8 U	1.9 U	1.8 U	1.8 U	1.7 U	1.8 U
1,2,4-Trichlorobenzene	30	NA	14 U	14 U	13 U	14 U	13 U	14 U
1,2,4-Trimethylbenzene	107	NA	**13**	2.3 U	2.2 U	**29**	2.2 U	**54**
1,2-Dichlorobenzene	3,000	NA	2.8 U	2.8 U	2.7 U	2.8 U	2.6 U	2.7 U
1,2-Dichloroethane	3.2	NA	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U
1,2-Dichloropropane	8.3	NA	2.1 U	2.2 U	2.1 U	2.1 U	2.0 U	2.1 U
1,3,5-Trimethylbenzene	NL	NA	**9.7**	2.3 U	2.2 U	**8.9**	2.2 U	**20**
1,3-Butadiene	2.8	8.3	**100**	**140**	**73**	1.0 U	**6.4**	**13**
1,3-Dichlorobenzene	NL	NA	2.8 U	2.8 U	2.7 U	2.8 U	2.6 U	2.7 U
1,4-Dichlorobenzene	7.6	NA	2.8 U	2.8 U	2.7 U	2.8 U	2.6 U	2.7 U
1,4-Dioxane	17	NA	6.7 U	6.8 U	6.4 U	6.6 U	6.3 U	6.6 U
2,2,4-Trimethylpentane	NL	NA	**2,500**	2.2 U	2.1 U	2.1 U	2.0 U	2.1 U
2-Butanone/MEK	76,000	NA	**38**	5.6 U	5.3 U	**15**	5.2 U	5.4 U
2-Hexanone	NL	NA	7.6 U	7.7 U	7.3 U	7.5 U	7.2 U	7.5 U
4-Ethyltoluene	NL	NA	**11**	2.3 U	2.2 U	**13**	2.2 U	**43**
4-Methyl-2-pentanone (MIBK)	46,000	NA	1.9 U	1.9 U	1.8 U	1.9 U	1.8 U	1.9 U
Acetone	NL	NA	**190**	**94**	**45**	**120**	**38**	**68**
Allyl Chloride	14	NA	5.8 U	5.9 U	5.6 U	5.7 U	5.5 U	5.7 U
Benzene	11	32	**100**	**12**	**17**	1.5 U	**6.3**	**5.3**
Benzyl Chloride	1.7	NA	2.4 U	2.4 U	2.3 U	2.4 U	2.3 U	2.4 U
Bromodichloromethane	2.3	NA	3.1 U	3.2 U	3.0 U	3.1 U	2.9 U	3.0 U
Bromoform	76	NA	4.8 U	4.9 U	4.6 U	4.7 U	4.5 U	4.7 U
Bromomethane	76	NA	7.2 U	7.3 U	7.0 U	7.1 U	6.8 U	7.1 U
Carbon Disulfide	11,000	NA	**290**	**66**	5.6 U	5.7 U	5.5 U	**48**
Carbon Tetrachloride	14	NA	2.9 U	3.0 U	2.8 U	2.9 U	2.8 U	2.9 U
Chlorobenzene	760	NA	2.1 U	2.2 U	2.1 U	2.1 U	2.0 U	2.1 U
Chloroethane	150,000	NA	4.9 U	5.0 U	4.7 U	4.8 U	4.6 U	4.8 U
Chloroform	3.6	11	2.3 U	2.3 U	2.2 U	**6.0**	2.1 U	2.2 U
Chloromethane	1,400	NA	3.8 U	3.9 U	3.7 U	3.8 U	3.6 U	3.8 U
cis-1,2-Dichloroethene	NL	NA	1.8 U	1.9 U	1.8 U	1.8 U	1.7 U	1.8 U
cis-1,3-Dichloropropene	NL	NA	2.1 U	2.1 U	2.0 U	2.1 U	2.0 U	2.1 U
Cyclohexane	NL	NA	**370**	**13**	**3.9**	1.6 U	1.5 U	**12**
Dibromochloromethane	3.1	NA	4.0 U	4.0 U	3.8 U	3.9 U	3.7 U	3.9 U
Dichlorodifluoromethane	1,500	NA	2.3 U	**11**	2.2 U	2.3 U	2.2 U	**8.9**
Dichlorotetrafluoroethane	NL	NL	3.2 U	3.3 U	3.1 U	3.2 U	3.1 U	3.2 U
Ethanol	NL	NA	**12**	**11**	3.4 U	**48**	3.3 U	3.4 U
Ethylbenzene	15,000	NA	**11**	**6.4**	1.9 U	2.0 U	1.9 U	**5.5**
Ethylene Dibromide	0.14	NA	3.6 U	3.6 U	3.4 U	3.5 U	3.4 U	3.5 U

Table C-3
Comprehensive Soil Gas Analytical Results
Boeing Buildings 10-13 and 10-16
Renton, Washington

Analyte	MTCA Method B Unrestricted Screening Level[a]	Modified MTCA Method B Commercial Screening Level[b]	Sample Location, Field Sample ID, Sample Date, and Laboratory Sample ID					
			LAI-B1 LAI-B1-SG-20170911 9/11/2017 1709312-02A	LAI-B2 LAI-B2-SG-20170911 9/11/2017 1709312-03A	LAI-B3 LAI-B3-SG-20170911 9/11/2017 1709312-04A	LAI-B4 LAI-B4-SG-20170913 9/13/2017 1709312-06A	LAI-B5 LAI-B5-SG-20170913 9/13/2017 1709312-07A	LAI-B6 LAI-B6-SG-20170911 9/11/2017 1709312-01A
Hexachlorobutadiene	4	NA	20 U	20 U	19 U	20 U	19 U	19 U
Isopropanol	NL	NA	4.6 U	4.6 U	4.4 U	4.5 U	4.3 U	4.5 U
Isopropylbenzene	6,100	NA	2.3 U	2.3 U	2.2 U	2.2 U	2.2 U	**6.5**
m,p-Xylene	1,500	NA	**37**	**27**	1.9 U	**8.8**	**17**	**26**
Methylene Chloride	8,300	NA	6.4 U	6.6 U	6.2 U	6.4 U	6.1 U	6.3 U
Methyl-tert-butyl ether	320	NA	6.7 U	6.8 U	6.5 U	6.6 U	6.3 U	6.6 U
n-Heptane	NL	NA	**320**	**12**	**8.6**	1.9 U	1.8 U	**18**
n-Hexane	11,000	NA	**830**	**22**	**20**	**6.3**	**6.4**	**17**
n-Propylbenzene	15,000	NA	2.3 U	2.3 U	2.2 U	2.2 U	2.2 U	**11**
o-Xylene	1,500	NA	**19**	**13**	1.9 U	2.0 U	**5.3**	**12**
Styrene	15,000	NA	**8.8**	**15**	1.9 U	2.0 U	1.9 U	1.9 U
Tetrachloroethene	320	NA	3.1 U	**13**	**11**	3.1 U	3.0 U	3.1 U
Tetrahydrofuran	NL	NA	1.4 U	1.4 U	1.3 U	1.4 U	1.3 U	1.3 U
Toluene	76,000	NA	**160**	**16**	**16**	**7.5**	**8.2**	**14**
trans-1,2-Dichloroethene	NL	NA	1.8 U	1.9 U	1.8 U	1.8 U	1.7 U	1.8 U
trans-1,3-Dichloropropene	NL	NA	2.1 U	2.1 U	2.0 U	2.1 U	2.0 U	2.1 U
Trichloroethene	12	NA	2.5 U	2.5 U	2.4 U	2.5 U	2.4 U	2.4 U
Trichlorofluoromethane (CFC 11)	11,000	NA	**85**	**12**	2.5 U	2.6 U	2.5 U	**88**
Vinyl Chloride	9.3	29	1.2 U	1.2 U	1.1 U	1.2 U	1.1 U	1.2 U

Abbreviations and Acronyms:

ID = identification

$\mu g/m^3$ = micrograms per cubic meter

MTCA = Washington State Model Toxics Control Act

NA = Not Applicable

NL = Not Listed

Notes:

Bold = detected compound

Blue Box = detected concentration is greater than MTCA Method B Unrestricted screening level.

Green Box = detected concentration is greater than MTCA Method B and Modified MTCA Method B screening level.

U = The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

[a] For MTCA Method B cleanup levels, the most conservative value of either cancer or non-cancer was used.

[b] Modified MTCA Method B screening levels were calculated for a commercial exposure scenario using an exposure frequency of 0.33, which equates to 55 hours per week for 52 weeks per year.

APPENDIX D

Soil Gas to Indoor Air Modeling Results

Table D-1
Soil Gas to Indoor Air Modeling Results – Input Parameters
Boeing Buildings 10-13 and 10-16 – Renton, Washington

Model Input **Site Name/Run Number:** Renton 10-16

Note:
-Yellow highlighted cells indicate parameters that typically are changed or must be inputted by the user.
-Dotted outline cells indicate default values that may be changed with justification.
-Toxicity values are taken from Regional Screening Level tables. These tables are updated semi-annually and may not reflect the most current toxicity information.

Use English / Metric Converter

Source Characteristics:	Units	Symbol	Value	Default	Potential Span	CV	Flag	Comment
Source medium		Source	Exterior Soil Gas					
Soil gas concentration	(ug/m3)	Cmedium	100		NA			
Depth below grade to soil gas sample	(m)	Ls	1.52		Vary - 50	NA		
Average vadose zone temperature	(^{o}C)	Ts	13	25	3-30			
Calc: Source vapor concentration	(ug/m3)	Cs	100					
Calc: % of pure component saturated vapor concentration	(%)	%Sat	0.000%					

Chemical:	Units	Symbol	Value	Default	Potential Span	CV	Flag	Comment
Chemical Name		Chem	Benzene					
CAS No.		CAS	71-43-2					
Toxicity Factors								
Unit risk factor	$(ug/m^3)^{-1}$	IUR	7.80E-06	7.80E-06	NA	NA		
Mutagenic compound		Mut	No	NA	NA	NA		
Reference concentration	(mg/m^3)	RfC	3.00E-02	3.00E-02	NA	NA		

Chemical Properties:	Units	Symbol	Value	Default	Potential Span	CV	Flag	Comment
Pure component water solubility	(mg/L)	S	1.79E+03	1.79E+03	NA	NA		
Henry's Law Constant @ 25^{o}C	(atm-m^3/mol)	Hc	5.55E-03	5.55E-03	NA	NA		
Calc: Henry's Law Constant @ 25^{o}C	(dimensionless)	Hr	2.27E-01	2.27E-01				
Calc: Henry's Law Constant @ system temperature	(dimensionless)	Hs	1.33E-01	2.36E-01				
Diffusivity in air	(cm2/s)	Dair	8.95E-02	8.95E-02	NA	NA		
Diffusivity in water	(cm2/s)	Dwater	1.03E-05	1.03E-05	NA	NA		

Table D-1
Soil Gas to Indoor Air Modeling Results – Input Parameters
Boeing Buildings 10-13 and 10-16 – Renton, Washington

Building Characteristics:

Select Building Assumptions

- (●) Use ratio for Qsoil/Qbuilding (recommended if no site specific data available)
- ( ) Specify Qsoil and Qbuilding separately; calculate ratio

	Units	Symbol	Value	Default	Potential Span	CV	Flag	Comment
Building setting		Bldg_Setting	Commercial	Commercial				
Foundation type		Found_Type	Slab-on-grade	Slab-on-grade				
Depth below grade to base of foundation	(m)	Lb	0.10	0.20	0.1 - 2.44	NA	WARNING	Value is different from default value; please justify.
Foundation thickness	(m)	Lf	0.10	0.20	0.1 - 0.25	NA	WARNING	Value is different from default value; please justify.
Fraction of foundation area with cracks	(-)	eta	0.001	0.001	0.00019-0.0019	1.00		
Enclosed space floor area	(m2)	Abf	743.22	1500.00	80-1000	NA	WARNING	Value is different from default value; please justify.
Enclosed space mixing height	(m)	Hb	2.59	3.00	2.13 - 3.05	NA	WARNING	Value is different from default value; please justify.
Indoor air exchange rate	(1 / hr)	ach	3.00	1.50	.3-4.1	NA	WARNING	Value is different from default value; please justify.
Qsoil/Qbuilding	(-)	Qsoil_Qb	0.0030	0.0030	0.0001 - 0.05	1.24		
Calc: Building ventilation rate	(m3/hr)	Qb	5774.82	6750.00	NA	0.30		
Calc: Average vapor flow rate into building	(m3/hr)	Qsoil	17.32	20.25	NA	NA		

Table D-1
Soil Gas to Indoor Air Modeling Results – Input Parameters
Boeing Buildings 10-13 and 10-16 – Renton, Washington

Model Input **Site Name/Run Number:** Renton 10-16

Chemical Name: Benzene CAS No. 71-43-2

Depth below grade to soil gas sample: 1.52 meters

Vadose zone characteristics:	Units	Symbol	Value	Default	Potential Span	CV	Flag	Comment
Stratum A (Top of soil profile):								
Stratum A SCS soil type		SCS_A	Sand					
Stratum A thickness (from surface)	(m)	hSA	1.52					
Stratum A total porosity	(-)	nSA	0.375	0.375	NA	0.20		
Stratum A water-filled porosity	(-)	nwSA	0.054	0.054	0.053 - 0.055	0.25		
Stratum A bulk density	(g/cm^3)	rhoSA	1.660	1.660	NA	0.05		
Stratum B (Soil layer below Stratum A):								
Stratum B SCS soil type		SCS_B	Not Present					
Stratum B thickness	(m)	hSB	0.00					
Stratum B total porosity	(-)	nSB			NA	NA		
Stratum B water-filled porosity	(-)	nwSB			NA	NA		
Stratum B bulk density	(g/cm^3)	rhoSB			NA	NA		
Stratum C (Soil layer below Stratum B):								
Stratum C SCS soil type		SCS_C	Not Present					
Stratum C thickness	(m)	hSC	0.00					
Stratum C total porosity	(-)	nSC			NA	NA		
Stratum C water-filled porosity	(-)	nwSC			NA	NA		
Stratum C bulk density	(g/cm^3)	rhoSC			NA	NA		
Stratum containing soil gas sample								
Stratum A, B, or C		src_soil	Stratum A					
					NA	NA		
					NA			
					NA			

Exposure Parameters:	Units	Symbol	Value	Default	Potential Span	CV	Flag	Comment
Target risk for carcinogens	(-)	Target_CR	1.00E-06	1.00E-06	NA	NA		
Target hazard quotient for non-carcinogens	(-)	Target_HQ	1	1	NA	NA		
Exposure Scenario		Scenario	Commercial	Commercial				
Averaging time for carcinogens	(yrs)	ATc	70	70	NA	NA		
Averaging time for non-carcinogens	(yrs)	ATnc	25	25	NA	NA		
Exposure duration	(yrs)	ED	25	25	NA	NA		
Exposure frequency	(days/yr)	EF	250	250	NA	NA		
Exposure time	(hrs/24 hrs)	ET	8	8	NA	NA		
Mutagenic mode-of-action factor	(yrs)	MMOAF	72	72	NA	NA	NOTE	MMOAF not relevant for non-mutagenic compounds

Table D-2
Soil Gas to Indoor Air Modeling Results
Boeing Buildings 10-13 and 10-16 – Renton, Washington

Table of Inputs and Outputs for Multiple Chemicals

Note: Parameters other than the chemical concentration must be entered in the MODEL sheet and must be the same for all chemicals. Warnings and errors are displayed in only on the MODEL sheet.

Source Characteristics:	Units	Symbol	Benzene Value	Butadiene, 1,3- Value	Chloroform Value
Source medium		Source	Exterior Soil Gas	Exterior Soil Gas	Exterior Soil Gas
Soil gas concentration	(ug/m3)	Cmedium	100	140	6
Depth below grade to soil gas sample	(m)	Ls	1.52	1.52	1.52
Average vadose zone temperature	(^{o}C)	Ts	13	13	13
Calc: Source vapor concentration	(ug/m3)	Cs	100	140	6
Calc: % of pure component saturated vapor concentration	(%)	%Sat	0.000%	0.000%	0.000%
Chemical:	**Units**	**Symbol**	**Value**	**Value**	**Value**
Chemical Name		Chem	Benzene	Butadiene, 1,3-	Chloroform
CAS No.		CAS	71-43-2	106-99-0	67-66-3
Toxicity Factors					
Unit risk factor	$(ug/m^3)^{-1}$	IUR	7.80E-06	3.00E-05	2.30E-05
Mutagenic compound		Mut	No	No	No
Reference concentration	(ug/m^3)	RfC	3.00E-02	2.00E-03	9.80E-02
Chemical Properties:	**Units**	**Symbol**	**Value**	**Value**	**Value**
Pure component water solubility	(mg/L)	S	1.79E+03	7.35E+02	7.95E+03
Henry's Law Constant @ 25^{o}C	(atm-m^3/mol)	Hc	5.55E-03	7.36E-02	3.67E-03
Calc: Henry's Law Constant @ 25^{o}C	(dimensionless)	Hr	2.27E-01	3.01E+00	1.50E-01
Calc: Henry's Law Constant @ system temperature	(dimensionless)	Hs	1.33E-01	2.18E+00	9.18E-02
Diffusivity in air	(cm2/s)	Dair	8.95E-02	1.00E-01	7.69E-02
Diffusivity in water	(cm2/s)	Dwater	1.03E-05	1.03E-05	1.09E-05

Table D-2
Soil Gas to Indoor Air Modeling Results
Boeing Buildings 10-13 and 10-16 – Renton, Washington

Building Characteristics:	Units	Symbol	Benzene Value	Butadiene, 1,3- Value	Chloroform Value
Building setting		Bldg_Setting	Commercial	Commercial	Commercial
Foundation type		Found_Type	Slab-on-grade	Slab-on-grade	Slab-on-grade
Depth below grade to base of foundation	(m)	Lb	0.10	0.10	0.10
Foundation thickness	(m)	Lf	0.10	0.10	0.10
Fraction of foundation area with cracks	(-)	eta	0.001	0.001	0.001
Enclosed space floor area	(m2)	Ab	743.22	743.22	743.22
Enclosed space mixing height	(m)	Hb	2.59	2.59	2.59
Indoor air exchange rate	(1/hr)	ach	3.00	3.00	3.00
Qsoil/Qbuilding	(-)	Qsoil_Qb	0.0030	0.0030	0.0030
Calc: Building ventilation rate	(m3/hr)	Qb	5774.82	5774.82	5774.82
Calc: Average vapor flow rate into building	(m3/hr)	Qsoil	17.32	17.32	17.32

Vadose zone characteristics:	Units	Symbol	Value	Value	Value
Stratum A (Top of soil profile):					
Stratum A SCS soil type		SCS_A	Sand	Sand	Sand
Stratum A thickness (from surface)	(m)	hSA	1.52	1.52	1.52
Stratum A total porosity	(-)	nSA	0.375	0.375	0.375
Stratum A water-filled porosity	(-)	nwSA	0.054	0.054	0.054
Stratum A bulk density	(g/cm^3)	rhoSA	1.660	1.660	1.660
Stratum B (Soil layer below Stratum A):					
Stratum B SCS soil type		SCS_B	Not Present	Not Present	Not Present
Stratum B thickness	(m)	hSB	0.00	0.00	0.00
Stratum B total porosity	(-)	nSB			
Stratum B water-filled porosity	(-)	nwSB			
Stratum B bulk density	(g/cm^3)	rhoSB			
Stratum C (Soil layer below Stratum B):					
Stratum C SCS soil type		SCS_C	Not Present	Not Present	Not Present
Stratum C thickness	(m)	hSC	0.00	0.00	0.00
Stratum C total porosity	(-)	nSC			
Stratum C water-filled porosity	(-)	nwSC			
Stratum C bulk density	(g/cm^3)	rhoSC			

Table D-2
Soil Gas to Indoor Air Modeling Results
Boeing Buildings 10-13 and 10-16 – Renton, Washington

			Benzene	Butadiene, 1,3-	Chloroform
Stratum containing soil gas sample					
Stratum A, B, or C		src_soil	Stratum A	Stratum A	Stratum A
Exposure Parameters:	**Units**	**Symbol**	**Value**	**Value**	**Value**
Target risk for carcinogens	(-)	Target_CR	1.00E-06	1.00E-06	1.00E-06
Target hazard quotient for non-carcinogens	(-)	Target_HQ	1	1	1
Exposure Scenario		Scenario	Commercial	Commercial	Commercial
Averaging time for carcinogens	(yrs)	ATc	70	70	70
Averaging time for non-carcinogens	(yrs)	ATnc	25	25	25
Exposure duration	(yrs)	ED	25	25	25
Exposure frequency	(days/yr)	EF	250	250	250
Exposure time	(hrs/24 hrs)	ET	8	8	8
Mutagenic mode-of-action factor	(yrs)	MMOAF	72	72	72
Source to Indoor Air Attenuation Factor	**Units**	**Symbol**	**Value**	**Value**	**Value**
Soil gas to indoor air attenuation coefficient	**(-)**	**alpha**	**4.1E-04**	**4.6E-04**	**3.6E-04**
		Range	8.3E-05 - 4.7E-04	8.4E-05 - 5.3E-04	8.0E-05 - 4.1E-04
Predicted Indoor Air Concentration			**Value**	**Value**	**Value**
Indoor air concentration due to vapor intrusion	**(ug/m3)**	**Cia**	**4.1E-02**	**6.4E-02**	**2.2E-03**
		Range	8.3E-03 - 4.7E-02	1.2E-02 - 7.4E-02	4.8E-04 - 2.4E-03
	(ppbv)	**Cia**	**1.3E-02**	**2.9E-02**	**4.5E-04**
		Range	2.6E-03 - 1.5E-02	5.3E-03 - 3.4E-02	9.9E-05 - 5.0E-04
Predicted Vapor Concentration Beneath the Foundation			**Value**	**Value**	**Value**
Subslab vapor concentration	**(ug/m3)**	**Css**	**1.4E+01**	**2.1E+01**	**7.2E-01**
		Range	9.5E-01 - 8.3E+01	1.5E+00 - 1.2E+02	4.9E-02 - 4.8E+00
	(ppbv)	**Css**	**4.3E+00**	**9.6E+00**	**1.5E-01**
		Range	3.0E-01 - 2.6E+01	6.7E-01 - 5.3E+01	1.0E-02 - 9.9E-01
Diffusive Transport Upward Through Vadose Zone			**Value**	**Value**	**Value**
Effective diffusion coefficient through Stratum A	(cm2/sec)	DeffA	1.4E-02	1.6E-02	1.2E-02
Effective diffusion coefficient through Stratum B	(cm2/sec)	DeffB			
Effective diffusion coefficient through Stratum C	(cm2/sec)	DeffC			
Effective diffusion coefficient through unsaturated zone	(cm2/sec)	DeffT	1.4E-02	1.6E-02	1.2E-02

Table D-2
Soil Gas to Indoor Air Modeling Results
Boeing Buildings 10-13 and 10-16 – Renton, Washington

			Benzene	Butadiene, 1,3-	Chloroform
Critical Parameters			**Value**	**Value**	**Value**
α for diffusive transport from source to building with	(-)	A_Param	4.8E-04	5.4E-04	4.1E-04
Pe (Peclet Number) for transport through the foundation	(-)	B_Param	4.4E+02	3.9E+02	5.1E+02
α for convective transport from subslab to building	(-)	C_Param	3.0E-03	3.0E-03	3.0E-03
			4.4E+02	3.9E+02	
Interpretation					
			Advection is the dominant mechanism across the foundation. Diffusion through soil and advection through foundation both control intrusion.		
Critical Parameters					
			Hb, Ls, DeffT, ach, Qsoil_Qb	Hb, Ls, DeffT, ach, Qsoil_Qb	Hb, Ls, DeffT, ach, Qsoil_Qb
Non-Critical Parameters					
			Lf, DeffA, eta	Lf, DeffA, eta	Lf, DeffA, eta