Jorgensen Forge Outfall Site
Seattle, Washington

Source Control Action Completion Report

Prepared for
The Boeing Company

and

Jorgensen Forge Corporation

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List of Abbreviations/Acronyms

Acronym/Abbreviation	Definition
12-inch Pipe	12-inch Property Line Storm Pipe
24-inch Pipe	24-inch Property Line Storm Pipe
Anchor QEA, LLC	Anchor QEA
bgs	Below ground surface
Boeing	The Boeing Company
CDF	Controlled density fill
CMP	Corrugated metal pipe
Jorgensen	Jorgensen Forge Corporation
Jorgensen Forge Property	Jorgensen Forge Corporation Property
KCIA	King County International Airport
LDW	Lower Duwamish Waterway
MLLW	Mean Lower Low Water
Order	Administrative Order on Consent
OSC	On-Scene Coordinator
PCB	Polychlorinated biphenyl
Pipes	12-inch and 24-inch Property Line Storm Pipes
Plant 2	Boeing Plant 2 Facility
PVC	Polyvinyl chloride
QC	Quality control
Report	Completion Report
SDMH	Storm drain manhole
SVOC	Semivolatile organic compound
TPH-D	Diesel-range total petroleum hydrocarbons
USEPA	U. S. Environmental Protection Agency

Certification

Under penalty of law, I certify that to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of the report, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Steven Tochko, P.E.
Boeing Environment, Health and Safety
Senior Remediation Manager

20MAY11
Date

Wayne Desberg
Jorgensen Forge Corporation
Director of Engineering, Maintenance and Environmental

5/25/11
Date

1.0 Introduction

This Completion Report (Report) documents the cleanout and sealing of the 12-inch and 24-inch Property Line Storm Pipes (collectively, the Pipes) located on the Jorgensen Forge Corporation (Jorgensen) Property at 8531 East Marginal Way South in Seattle, Washington (Jorgensen Forge Property; Figure 1). The work described in this Report was addressed in the U.S. Environmental Protection Agency (USEPA) Action Memorandum (September 30, 2010) and performed under an Administrative Order on Consent (Order) entered into by the USEPA, The Boeing Company (Boeing), and Jorgensen in December 2010. Although located on Jorgensen Property, the Pipes also historically drained a number of adjacent properties, as detailed further in this Report. Previous investigations documented the presence of elevated concentrations of polychlorinated biphenyls (PCBs) and metals in solids within the Pipes. The work performed under the Order was a source control action to eliminate the potential for ongoing discharge of PCBs from the Pipes to the Lower Duwamish Waterway (LDW). Details of this work are presented in the USEPA-approved work plan (and amendments).

The USEPA's written acceptance of this Report closes out Boeing's and Jorgensen's responsibilities under the Order for this phase of the work and confirms that the cleanout and sealing of the clay portions of the Pipes[1] is complete.

1.1 SITE BACKGROUND

Following early settlement and the re-configuration of the LDW in the early 1900s, a "drainage ditch" existed near the current property line separating the Boeing Plant 2 Facility (Plant 2) property and the Jorgensen Forge Property. Historical aerial photographs suggest that this drainage ditch was first used for agricultural drainage up until the 1930s when it was used to drain a portion of the newly-constructed airport to the east.

Aerial photographs indicate that the drainage ditch was absent by the mid 1940s, likely replaced by the installation of the Pipes, concurrent with the development of the southern end of Plant 2 and the northern end of the Jorgensen Forge Property.

Figure 2 shows the location of the Pipes and associated manholes and laterals. The description and use of each pipe is as follows:

- An inactive 12-inch Property Line Storm Pipe (12-inch Pipe) composed of clay and corrugated metal pipe (CMP) that once drained stormwater from a portion of the south side of Plant 2.
- A 24-inch Property Line Storm Pipe (24-inch Pipe) composed of clay and CMP that once drained an additional portion of the south side of Plant 2, a portion of King County International Airport (KCIA), and a portion of the historic Bethlehem Steel Facility located on the Jorgensen Forge Property. Up until the time that work was performed under this Order, this pipe was an active storm drain for the City of Tukwila, its sole use to drain a limited amount of road runoff from East Marginal Way South located adjacent to the southern portion of Plant 2.

[1] The pipe's true construction is clay, not concrete. Additionally, the 12-inch Pipe has formerly been referred to as a 15-inch concrete pipe in prior reports and utility maps; however, its true inside diameter is 12 inches.

1.2 ORDER SCOPE OF WORK

Oversight of the source control action was transferred from the Washington State Department of Ecology to the USEPA Office of Emergency Response in late 2010. USEPA issued the Order to Jorgensen and Boeing to clean out solids contained within the Pipes and seal the concrete (clay) sections of the Pipes. The Order specified compliance with the following objectives specific to the clay sections:

- Eliminate stormwater discharges from the Pipes to the LDW.
- Remove the solids and associated contamination from the Pipes.
- Clean, close, and seal the Pipes.

The Order limited work activities to the clay portion of these Pipes that exist from the eastern Jorgensen Forge Property line downgradient to approximately 100 feet from the discharge location into the LDW. If necessary, any action on the remaining CMP sections of the Pipes is anticipated to be addressed under a subsequent administrative mechanism.

1.3 RESPONSIBILITIES

The primary personnel and responsibilities of the parties involved in the Order include:

- Mike Sibley, USEPA Office of Emergency Response, Federal On-Scene Coordinator (OSC).
- Eric Lindeman, Ecology and Environment, Inc., USEPA contractor providing field oversight services for the cleaning and sealing activities, including responsibility for field approval of adequacy of cleaning/sealing activities.
- Nick Garson, Boeing Project Coordinator responsible for leading execution of the Order.
- Floyd|Snider, environmental consultant managing the field work on behalf of Boeing. Responsible for document retention, work plan preparation, project management, overseeing subcontractor performance of field activities and preparation of this Report.
- Wayne Desberg, Jorgensen Project Coordinator responsible for facility access and coordination with Boeing.
- Anchor QEA, LLC (Anchor QEA), environmental consultant providing project oversight on behalf of Jorgensen. Responsible for review of documents submitted to USEPA, collection of split samples, and overseeing field activities on behalf of Jorgensen.

1.4 REPORT ORGANIZATION

The remainder of this report is organized into the following sections:

- **Section 2.0 Summary of Work Performed:** Describes the approved work plan and work plan modifications, sample locations and sampling procedures, and methods used for cleaning and sealing the Pipes and associated lateral connections.
- **Section 3.0 Summary of Analytical Results:** Summarizes analytical results for all work activities, including results of surface water sampling, soil and groundwater

sampling, solids and debris sampling, and decontamination and waste characterization sampling.

- **Section 4.0 Data Quality Review:** Summarizes the quality assurance review of the analytical data collected under the Order.
- **Section 5.0 Cost Summary:** Provides a summary of the costs of the project.
- **Section 6.0 References:** Lists resources cited in this document.

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2.0 Work Performed

2.1 APPROVED WORK PLAN

To accomplish the stated objectives of the Order, a work plan was developed and approved by USEPA prior to initiation of the work (Floyd|Snider 2010). The major elements of the work plan included the following:

- Tidal study surface water sampling to record how water levels in manholes vary with the tidal stages of the LDW.
- Geoprobe investigation to collect soil and reconnaissance groundwater samples near and around the CMP section of the Pipes.
- Pre-cleanout video survey of the Pipes.
- Seal the upstream end of the 24-inch Pipe on the eastern portion of the Jorgensen Property to eliminate continued City of Tukwila runoff from entering the pipe.
- Seal the Pipes at their transition to CMP to prevent tidal waters from entering the Pipes.
- Sample the solids within the Pipes, manholes, and associated accessible laterals.
- Remove accumulated solids and clean the interior of the Pipes and associated laterals and manholes by jet cleaning.
- Post-cleaning video survey to document the effectiveness of the cleaning.
- Seal the Pipes, manholes, and laterals.
- Manage and dispose of generated wastes.

2.2 APPROVED WORK PLAN MODIFICATIONS

Several modifications to the work plan were approved by USEPA to address new information. These modifications primarily referred to the laterals along the 24-inch Pipe. The modifications were proposed to Mike Sibley, USEPA OSC, on February 9, 2011 and approved of via email on February 10, 2011. The modifications are summarized in the following sections. Figure 2 shows the locations of the approved modifications.

2.2.1 Modification #1: Former Bethlehem Steel 10-inch Lateral

The work plan proposed that this lateral be cleaned along its entire length and then sealed; however, Jorgensen provided new information to Boeing/USEPA on January 4, 2011 in a report titled *Historical 6-inch and 12-inch[2] Lateral Pipes Investigation Report* by Anchor QEA. The Anchor QEA report documents that in May 2010 Jorgensen excavated down and broke into the lateral in two places, completed a video survey, and collected samples of the material inside the lateral pipe. The pipe was then sealed at the downstream break point with concrete and the excavation was backfilled with controlled density fill (CDF; Anchor QEA 2011). Given that the lateral was already sealed, the approved modification was to conduct a video survey to

[3] This lateral has formerly been referred to as a 12-inch pipe; however, the true inside diameter is 10 inches.

document the 2010 Anchor QEA seal and clean the lateral from its entry to the 24-inch Pipe to the new seal.

2.2.2 Modification #2: Jorgensen Office Side Sewer Lateral

The Jorgensen Office lateral is located in close proximity to the Jorgensen office building. The work plan originally proposed that this lateral be uncovered and cleaned. The modification proposed that no work be completed in this area based on the review of the pre-cleanout video survey. It appeared that this lateral had been sealed within inches of where it enters the 24-inch Pipe with a factory cap. Since the lateral was discovered to be adequately sealed, USEPA approved no further action for this lateral.

2.2.3 Modification #3: Jorgensen Visitor Parking Area 4-inch Lateral

A previously unknown lateral was discovered during the pre-cleanout video survey. This lateral was found at the top center of the 24-inch Pipe under one of the visitor parking spaces in the northeast corner of the Jorgensen Forge Property. The nature of this lateral was not known since it was not shown on any existing utility drawings. The approved modification to the work plan was to excavate to approximately 6 feet, or until reaching the lateral, and trace it back to its point of origin; following which the lateral would be sampled, cleaned, and sealed.

2.3 TIDAL SURVEY AND SURFACE WATER SAMPLING

Prior to the cleanout work, a tidal survey was performed by placing pressure transducers in each manhole in the 24-inch Pipe west of East Marginal Way South.

A single pressure transducer was left in place for approximately 2 weeks (prior to any pipe cleanout activities) within each of the 5 manholes along the 24-inch Pipe. The data collection was conducted over a period that includes a high tide of at least 12 feet Mean Lower Low Water (MLLW). In addition to transducer placement in the manholes, a single transducer was placed in a stilling well installed in the LDW to measure the elevation of the LDW over the same 2-week period. The stilling well was a 2-inch polyvinyl chloride (PVC) pipe mounted alongside a nearby wooden piling located just riverward and downstream of the Pipes' discharge location.

All transducers installed in the manholes were lowered via Kevlar line from the top side and positioned to rest horizontally on the bottom of the 24-inch Pipe. Accumulated solids were present in each manhole, so the transducer was placed on top of these solids. The Kevlar line was attached to the manhole lid to facilitate removal. The elevation of each manhole rim and floor (the resting surface of the transducer) were determined by a professional surveyor. The transducer data are included in Appendix A. Survey elevation data are shown on Figure 2.

In addition, surface water samples were collected from each manhole location and analyzed for conventional water quality parameters. Surface water samples were collected with disposable polyethylene tubing and a peristaltic pump at each manhole location where a transducer was placed. Surface water analytical results are summarized in Section 3.1 and presented in Table 1.

2.4 CMP GEOPROBE INVESTIGATION

This investigation was completed using a track-mounted Geoprobe to collect subsurface soil and reconnaissance groundwater samples. Most of the borings were advanced along three

primary transects closest to the CMP portion of the Pipes, as shown on Figure 3. Coordinates of the boring locations are provided in Table 2. Three other borings were located to the south of the three primary transects. Per the work plan, fewer Geoprobe locations were located to the south due to lack of observed fill in the more northern transects.

Three composite soil samples were collected from each boring at depths targeting the midway point between the ground surface and the top of the CMP sections (approximately 3 to 5 feet below ground surface [bgs]); a point close to the base of the CMP sections (approximately 8 to 10 feet bgs); and a point approximately 2 feet below the field-determined fill/native soil interface, which varied depending on thickness of fill. At Stations T2B4 and T3B4 poor recovery due to soil type prevented sample collection from the 8 to 10 feet bgs interval. In these locations, samples were collected from the next deeper interval with adequate recovery (18 to 20 feet bgs and 13 to15 feet bgs, respectively).

Soil cores and samples were described and classified according to the Unified Soil Classification System (USCS), photographed, and logged. The presence of fill debris, sheen, odor, and other indications of contamination were also noted. Boring logs and representative photographs are included in Appendices B and C, respectively. Soil analytical results are summarized in Section 3.2 and presented in Tables 3, 4, and 5.

Reconnaissance groundwater samples were also collected via Geoprobe using a temporary screen pushed into the upper 5 to 10 feet of the water table (approximately 15 to 20 feet bgs with the exception of location T3B4, which was collected at 24 feet bgs). Per the work plan, samples from the three southernmost borings were not analyzed due to the lack of observed fill in this area.

A work plan deviation occurred with regard to the field filtering procedure for reconnaissance groundwater samples. Instead of being field-filtered as specified in the work plan, the reconnaissance groundwater grab samples for PCB analysis were lab-filtered instead, using a 1 micron glass filter. USEPA was notified of the field change by email on January 14, 2011. Groundwater analytical results are summarized in Section 3.3 and presented in Table 6.

2.4.1 Observed Geological Conditions

Two major soil types were observed in the soil samples: fill material and underlying native soil. In addition, there were two types of fill material observed: a sandy gravel fill and a debris-rich fill that contained anthropogenic material such as glass, shell fragments, brick, and wood debris. The debris fill was encountered primarily in the borings (B3 and B4 series) of Transects 2 and 3 (Figure 3). Petroleum odor and/or sheen were also noted in some depth intervals of Borings T2B4 and T3B4 as well as in Borings T1B3, T2B1, and T3B1. Debris fill generally increased in depth towards the riverbank edge and the contact with native soils was observed up to 24 feet bgs in Borings T2B4 and T3B4. In the remaining borings, the contact with the underlying native soils (consisting of silt and fine sand) was encountered between 8 and 18 feet bgs.

2.5 PRE-CLEANING VIDEO INSPECTION

Prior to cleaning, a video inspection was conducted in the Pipes and accessible laterals by Bravo Environmental. Representative screenshot photos of the Pipes during the video inspections are provided in Appendix C. The inspection videos were recorded onto DVDs, copies of which are provided in Appendix D.

The pre-cleanout video inspection of the 24-inch Pipe was performed January 25 and 26, 2011 from the Public storm drain manhole (SDMH) to the CMP transition (Figure 2). The video inspection of the 12-inch Pipe was attempted January 26, 2011; however the camera was not able to traverse over the solids material in the pipe. A smaller camera was used February 18, 2011 to inspect the 12-inch Pipe from SDMH 15B to SDMH 15A. This effort was only partially successful due to standing water in the pipe. Therefore, pre-cleaning video was not obtained downgradient of SDMH 15A.

Other observations were noted as follows:

- As previously described, a factory cap seal was confirmed to be intact at the entry point of the lateral into the 24-inch Pipe near the Jorgensen office. No evidence of liquid or solid material was observed around the cap.
- The seal at the end of the 15-inch Boeing lateral entering SDMH 37-7 was observed approximately 100 feet upgradient on Plant 2 property at Boeing SDMH 37-10, consistent with previous documentation. A solid cement-like material was observed plugging the lateral at its termination point. A visual inspection of the seal was conducted from within SDMH 37-10 and the upgradient side of the seal was confirmed to be intact.
- The Jorgensen 10-inch Lateral to the 24-inch Pipe just upgradient of SDMH 24A was inspected on February 16, 2011 by a technician (using confined space protocol) entering SDMH 24A and hand-placing a small camera into the lateral. The video confirmed the presence of a piece of dimensional lumber lodged at the bend in the lateral before the lateral transitioned to a horizontal run. The location of the lumber had been previously reported to be approximately 40 feet upgradient from the connection with the 24-inch Pipe (Floyd|Snider and Weston Solutions 2005); however, the location recorded on the present video is approximately 20 feet from the 24-inch Pipe connection. The camera was not able to traverse past the lumber, so the lumber was dislodged by jetting and fell to the bottom of the 24-inch Pipe (refer to Section 2.6.2 for a detailed description of jetting activities). After the lumber was dislodged from the lateral, a camera was able to advance to the bend in the pipe where the lumber had been lodged. The camera was not able to travel beyond the bend, but the remaining section of the pipe up to the seal placed by Anchor QEA in 2010 was in view. The seal appeared to be intact and no evidence of recent liquid or solid material movement was observed around the seal. No other seals or penetrations into the lateral were observed. No video inspection was conducted upgradient from the seal.
- As previously described, a new lateral was discovered in the location of the Jorgensen northeast visitor parking area. The lateral is a 4-inch cast iron pipe that entered the top of the 24-inch Pipe. The lateral was observed to be plugged with soil. A video inspection of the 4-inch lateral was conducted again on February 14, 2011 after the upgradient portion of the pipe had been excavated from the parking area and jetted to remove soil that fell into the lateral upon excavation. The additional inspection revealed that the lateral rose up and made an immediate bend to the south several inches above its point of connection in the 24-inch Pipe and then went vertical terminating approximately 12 inches bgs.

2.6 MANHOLE AND LATERAL PIPE SAMPLING

2.6.1 Manholes along 12-inch and 24-inch Pipes

A discrete sample of the solids lying in the base of each manhole was collected prior to cleaning. The samples were collected on January 24, 2011. An extension pole with attached stainless steel scoop was used to collect each sample from the surface. The samples were homogenized in a stainless steel bowl prior to placement into sample jars. Each manhole is shown on Figure 4 and a description of each sample is provided in Table 7. The analytical data are discussed in Section 3.4 and presented in Figure 4 and Table 8. Photos are included in Appendix C.

2.6.2 Lumber from Jorgensen 10-inch Lateral

During the inspection of the Jorgensen 10-inch Lateral on February 16, 2011, the dimensional lumber was dislodged intact from the lateral, as described in Section 2.5. After it was dislodged, the lumber fell intact into a previously jetted section of the 24-inch Pipe. Later that day after being dislodged, the lumber was relocated by the video technician onto the top of the channelized section of the 24-inch Pipe within SDMH 24A (refer to Photo 24 in Appendix C). The video technician retrieved the lumber from SDMH 24A on February 18, 2011, 2 days after being dislodged. The damp lumber was placed into an unused plastic garbage bag, the top of the bag was folded over several times, but not sealed or otherwise secured, and the bagged lumber was placed on the outer frame of a solid waste bin to avoid contact with accumulated stormwater in the containment berm.

Because the dislodgement and recovery of the lumber was not expected, the ability to sample the lumber itself was unanticipated and not addressed in the work plan. Wood sampling was delayed several days to allow coordination between Boeing and Jorgensen. Prior to sampling, the contractor's cleaning technician placed the bagged lumber into the easternmost solid waste bin containing the wash water and solids prior to the morning of February 24, 2011. On February 25 2011, the cleaning technician retrieved the lumber from the corner of the solid waste bin, removed it from the original bag, and placed it in a new unused plastic bag. Following the removal from the bin, the damp lumber was sampled using a utility knife by scraping the surface to a depth of approximately ¼ inch. The damp scrapings were collected in a decontaminated stainless steel bowl, composited, and transferred directly into an 8-ounce glass jar. The lumber and sampling tools were discarded in the solid waste bin. The analytical data for the lumber sample (JF-PLSD-WD-12) are presented on Figure 5 and Table 9. Representative photographs of the lumber sampling are included in Appendix C.

2.6.3 Jorgensen Visitor Parking Area 4-inch Lateral

As described in Section 2.5, no solids were available for sampling within the Jorgensen Visitor Parking Area 4-inch Lateral so two alternative media samples were collected from the lateral on February 28, 2011. The first sample (JF-PLSD-WP-4L) was a wipe sample collected by using a lab-supplied hexane wipe. This was the only wipe sample taken of the pipe system. An estimated 2-inch-square area of the lateral wall from the top of the pipe to approximately 3 inches below the top of the lateral was wiped. The results of the wipe sample are presented in Table 9. The second sample was collected by lowering a small funnel approximately 4 feet into the lateral, scraping the inside walls of the lateral with a steel bar, and collecting the fallen scrapings captured by the funnel. The small amount of scrapings collected was less than the minimum sample volume; therefore, the sample (JF-PLSD-PS-4L) was not able to be analyzed.

2.7 UPSTREAM AND DOWNSTREAM SEALING

Prior to cleaning the Pipes, the downstream ends of the Pipes were sealed to prevent influx of tidal waters. In addition, the active, upstream end of the 24-inch Pipe was sealed off. These actions are described below.

2.7.1 Public Manhole

The upstream end of the 24-inch Pipe within the Public SDMH was sealed under permit from the City of Tukwila (Appendix E). Once sealed, the stormwater runoff from East Marginal Way South, which originally flowed down the pipe and discharged into the LDW, would back up within the next upgradient manhole and flow out of an overflow pipe located in the middle of East Marginal Way South and discharge to the south. The pipe was sealed by placing an inflatable buoy into the 24-inch Pipe as a backer and drilling several bolts into the walls of the pipe for concrete reinforcement. Quick-setting concrete was packed against the buoy and around the bolts until flush with the side of the manhole. A piece of plywood was wedged flush against the seal and wall of the manhole to prevent the concrete from sloughing out.

Representative photographs of the Public SDMH seal are included in Appendix C.

2.7.2 Seals Placed at CMP Transition

To prevent influx of tidal waters from entering the clay sections of the Pipes, seals were placed at the transition point between the CMP and clay sections of each pipe (Figure 2). This was done by excavating with a trench box atop the transition point. The excavated soil was stockpiled for backfill. Once the transition of each pipe was uncovered, a short section of clay pipe, approximately 3 feet long, was removed at the joint closest to the CMP. An inflatable buoy was placed into the open CMP stub and secured to an iron beam that was found lying perpendicular to the Pipes above the transition point. Several bolts were drilled into the stub for concrete reinforcement and quick-setting concrete was packed into the opening until flush with the stub.

On the open end of each clay pipe, a 12-inch PVC riser pipe was installed to facilitate the cleaning activities. To attach a riser to the 24-inch Pipe, a 90-degree elbow was first secured to the pipe with concrete, and for the 12-inch Pipe, an elbow was secured using a compression collar. A vertical standpipe approximately 10 feet long was fit to each elbow. When the downgradient seal and riser were in place, the excavation was backfilled with approximately 3 feet of CDF and the stockpiled excavated soil was replaced in similar sequence as it was removed (i.e., “first out, last in”).

At the conclusion of cleaning and sealing of the Pipes, the cleanout risers were sealed. This was done by excavating a small area around the cleanouts to approximately 3 feet bgs. The standpipe of each cleanout was cut to approximately 2 feet bgs. A small buoy was placed approximately 10 inches into each standpipe and quick-stetting concrete was packed to the top. The plastic caps were reinstalled onto each standpipe and the excavated material was backfilled and compacted to match the existing grade.

Representative photographs of the transition sealing are included in Appendix C.

2.8 PIPE AND LATERAL CLEANING

Once the upstream and downstream ends of the clay pipes were sealed, pipe cleaning commenced. Cleaning was completed by Bravo Environmental under supervision of Floyd|Snider. Cleaning began February 7, 2011 and was completed February 18, 2011. A water jetting process, using recycled wash waters, was used to accomplish the cleaning.

2.8.1 Wash Water

A temporary water treatment and storage area was constructed in the southwest corner of the Jorgensen Forge Property to treat wash water generated during the cleaning phase of the project by removing particulates so that it could be reused for cleaning purposes.

In general, water was treated by decanting the vacuum truck into a solid waste bin to allow initial filtering of solids. The water was then pumped from the bin, through tubing treated with chitosan flocculating agent, and into a 10,000-gallon Baker Tank to allow settling. The water was then pumped from the top of the settling tank, through a sand filter and into one of three 18,000-gallon Baker Tanks. Flocculation and sand filtering lowered the turbidity to 30 nephelometric turbidity units or less, allowing the water to be re-used for jet cleaning. The treated water was re-used as wash water for cleaning the Pipes, the Jorgensen Visitor Parking Area 4-inch Lateral, and the Jorgensen 10-inch Lateral, and eventually treated again multiple times to save use of potable water and to facilitate off-site disposal of the water following completion of the work plan activities.

Approximately 4,000 gallons of potable water initially drawn from a hydrant on the Jorgensen Forge Property was used for the initial cleaning of the most upgradient section of the 24-inch Pipe from SDMH 37-2 to Public SDMH II. After it was recovered by vacuum truck, it was processed through the treatment system and continually reused for jetting. A total of 21,000 gallons of water were used for jetting, resulting in an estimated savings of 17,000 gallons of potable water.

In total, 37,000 gallons of water was treated. The majority of this total, an estimated 32,000 gallons, originated from groundwater that infiltrated into the pipes that was removed as part of the pipe and laterals cleaning process. The remainder was recycled potable water, including 4,000 gallons originally drawn from the Jorgensen hydrant and an additional 1,000 gallons used for decontamination purposes.

A sample of water stored in each of the three Baker Tanks and a sample collected from the jetting truck tank itself during the cleaning process were characterized. The total PCB concentration of each sample is given below. Complete waste characterization analytical results of these samples are provided in the lab reports in Appendix F.

Wash Water Total PCBs Analytical Results
(µg/L)

Sample Location	Jetting Truck	Baker Tank (08)	Baker Tank (59)	Baker Tank (89)
Sample ID	JF-PLSD-RJW-4L	JF-PLSD-WC-B08	JF-PLSD-WC-B59	JF-PLSD-WC-B89
Sample Date	2/15/2011	2/25/2011	2/25/2011	2/25/2011
Total PCBs	3.5	5.5	3.2	2.1

2.8.2 12-inch and 24-inch Pipes

The Pipes were cleaned by a self-propelled jetting hose. To clean most sections of the Pipes, the jetting nozzle was deployed through a manhole downstream of the targeted section and allowed to self-propel upstream through the pipe. Then solids and wash water were moved downstream. For the final downstream section of each pipe, the jetting nozzle was directed downstream to the plug at the CMP transition and material was forced upstream to the nearest manhole.

Once the jetting nozzle was deployed into the targeted pipe section, the water pressure was increased to maximize washing and material moving power, and the hose was retrieved while simultaneously vacuuming the wash water and solids from a manhole into a 3,000-gallon vacuum truck. Typically two types of nozzles were used. First, a jetting nozzle with multiple jets positioned in a circular pattern within an oval steel cage, designed to spin while staying centered in the pipe, was deployed to remove solids from the top and side walls. Next, a nozzle with jets affixed to a heavy sled, designed to keep the nozzle close to the bottom of the Pipes, was deployed to plow the freed material down the section while scrubbing the bottom surface of the pipe. Both nozzles were passed several times through each section of the Pipes.

Once a section was complete, a temporary, inflatable plug was installed to isolate the section while the adjacent downstream section was cleaned. Each manhole interior was then cleaned by pressure washing from the surface and vacuuming before moving to the next manhole.

2.8.3 Jorgensen 10-inch Lateral

The Jorgensen 10-inch Lateral was cleaned by entering Manhole SDMH 24A and hand-placing the jetting nozzle into the lateral. The first jetting pass was able to free the lumber that had lodged in a bend in the pipe (refer to Section 2.6.2). The remaining solid material was washed from the lateral into the adjoining 24-inch Pipe and vacuumed from Manhole SDMH 24A. After the lateral was cleaned, the short segment of the 24-inch Pipe between the lateral and manhole was re-cleaned (Figure 2). A temporary plug was installed in the 24-inch Pipe downgradient from the lateral to isolate it while the manhole and the remaining downgradient sections of the 24-inch Pipe were cleaned.

2.8.4 Boeing 15-inch Lateral

The Boeing 15-inch Lateral into the 24-inch Pipe was cleaned by passing the jetting nozzle through the tee connection with SDMH 37-7 and feeding it into the lateral. The lateral was cleaned by several passes of the jet from the seal to the tee connection. Material was power washed and vacuumed from both the tee connection and the manhole.

2.8.5 Jorgensen Visitor Parking Area 4-inch Lateral

The Jorgensen Visitor Parking Area 4-inch Lateral was first exposed by hydrovacuuming, which used high pressure to loosen soil followed by vacuuming to remove the soil. Once exposed, the 4-inch lateral was found to extend vertically to an elevation just below the ground surface where it appeared to have been broken off (jagged edge on end of lateral). No cap or seal was present on the upgradient end. The 4-inch lateral was then cleaned by feeding the power washer nozzle into the top (upgradient) of the exposed lateral and flushed with recycled wash water (refer to Section 2.8.1). The amount of solid material flushed from the lateral is assumed to be very small and consisted of a small plug of soil where the pipe was broken off just under the surface and a

small amount of material, visible in the pre-cleaning video survey, at the connection point with the 24-inch Pipe. Because the 4-inch lateral was cleaned after the Public SDMH and SDMH 37-2 had been sealed, the 24-inch Pipe could not be accessed to remove the material or liquids accumulated; however, due to the limited quantity and the fact that the 24-inch Pipe was clean and sealed, the USEPA representative on-site approved leaving this minor amount of wash water behind.

2.9 POST-CLEANING VIDEO INSPECTION

After a section of the Pipes was cleaned, it was inspected by video camera in a similar fashion to the pre-cleaning inspection. Representative screenshot photos are provided in Appendix C. Copies of the post-cleaning inspection videos are provided on DVDs in Appendix D.

The video of each cleaned pipe segment or lateral was reviewed by the on-site USEPA contractor. If necessary, a pipe segment or lateral was re-jetted and re-videoed. Once clean, the pipe segment or lateral was isolated by installing either temporary inflatable plugs or by the permanent manhole seals prior to jetting an adjacent segment.

2.10 MANHOLE SEALING

Following cleaning of the pipes, the manholes were sealed in accordance with the work plan. Location of the seals is noted on Figure 2. The method used to seal each location is described below. Photographs are also provided in Appendix C.

- Manholes SDMH 24A, 24B, 37-2, and 37-7 in the 24-inch Pipe (Figure 2) were sealed by placing inflatable buoys in the pipe on both sides of the manhole and, at SDMH 37-7, into the opening to the adjoining tee connection with the Boeing 15-inch Lateral. The buoys were anchored to the ladder within the manhole and to each other to hold them in place. Each manhole was filled with CDF to the surface and the existing manhole cover was reinstalled.
- The Jorgensen Visitor Parking Area 4-inch Lateral was sealed by packing absorbent pads into the lateral to approximately 1.5 feet bgs and packing CDF in the remaining few inches of the lateral to approximately 6 inches bgs. The hole was then filled with hot patch asphalt to the existing parking lot level.
- Manhole SDMH 15B was sealed by placing a buoy on either side, tying them together, and filling the manhole with CDF. The remaining stub of the 12-inch Pipe angling onto the Boeing property is approximately 10 feet long and sealed. The seal was confirmed to be intact during the video inspection.
- Manhole SDMH 15A was sealed by placing inflatable buoys in the 12-inch Pipe on both sides of the manhole and securing them to each other. The manhole was filled with CDF to the surface and the existing manhole cover was reinstalled.
- The downstream end of the Public SDMH was sealed by an inflatable buoy placed into the 24-inch Pipe. The manhole was then filled to the surface with CDF. In the process, two additional small input lines that once drained to the manhole were also plugged. These lines had been previously decommissioned by the City of Tukwila. A flapper valve was removed from one of the lines and was allowed to fill with CDF. Absorbent pads were placed into the other line to plug it. The manhole cover was then reinstalled.

2.11 WATER AND SOLIDS COLLECTION TREATMENT AND DISPOSAL

The wastes generated over the course of the project were contained, temporarily stored, and treated and discharged (water) or disposed of (solids) in accordance with applicable regulations. Wastes were primarily handled on the Jorgensen Forge Property with a temporary water treatment and storage system and solid waste roll-off bins. Photographs of the waste handling system are provided in Appendix C.

2.11.1 Water

As described in Section 2.8, a temporary water treatment and storage area was constructed in the southwest corner of the Jorgensen Forge Property to treat water generated during the cleaning phase of the project. Waste waters included: wash waters from pipe jetting, infiltrated groundwater removed from the Pipes to facilitate cleaning, stormwater accumulated in containment berms, water removed from solid waste bins, and equipment decontamination water. Wash water and infiltrated groundwater accounted for the majority of the water volume.

Under approval from King County Industrial Waste (Rice 2011), the water was transported by tanker truck to the dedicated, permitted treatment system at North Boeing Field. The water was discharged to this treatment system where it was flocculated again, carbon filtered, and discharged to the sanitary sewer. Approximately 37,000 gallons of water were transported, treated, and discharged.

2.11.2 Solids

Solid waste collected during the pipe cleaning phase of work (including material removed from the pipes, disposable equipment and safety gear, disposable components of the water treatment system, decontamination waste, etc.) was stored in three roll-off bins on the Jorgensen Forge Property. The bins were dewatered and the removed water was processed through the on-site system described above. In addition to the bins, two 55-gallon drums of solid waste and soil cuttings from the CMP Geoprobe borings, and one drum of water and three drums of solid waste debris from decontaminating the camera equipment used during the pre-cleaning video survey were stored on Plant 2.

The solid waste was characterized by collecting samples of the waste (Appendix F) and by review of the recently collected CMP investigation soil and groundwater samples (Tables 5 through 8). A total of approximately 45 cubic yards of solids and debris were shipped to a licensed disposal facility in Arlington, Oregon in coordination with Oregon Department of Environmental Quality. Waste disposal documentation and copies of the waste manifests are provided in Appendix G.

2.11.3 Decontamination of Equipment

Non-disposable equipment used throughout the course of the project was decontaminated in accordance with the work plan. Fresh water, not recycled water, was used for decontamination. CAPSUR solvent was used to decontaminate equipment exposed to solids or liquids inside the pipes, including the camera equipment, jetting hose and reel, vacuum truck barrel, and the water treatment system tanks and sand filter. Fresh water flushing and wiping was used for other support equipment such as the camera van or for equipment that may have been damaged by solvent such as the water pumps. Decontamination was verified by use of a black light to ensure adequate coverage and subsequent removal of the CAPSUR or by collection of

wipe samples. Analytical results of the wipe samples are included in the laboratory reports provided in Appendix F.

A lined and bermed containment system was in place surrounding the perimeter of the flocculation tank to capture any potential spills or leaks prior to contacting the underlying soil. The containment system also captured stormwater from rainfall that occurred during the project. The accumulated stormwater was regularly pumped out into the treatment system. An approximately 1 foot by 1 foot "L"-shaped tear in the bermed containment system liner was noted on March 2, 2011. Field personnel identified that stormwater migrated through the tear into the underlying soils. The amount of stormwater released to the underlying soil was not determined. The tear was repaired on March 3, 2011, the day following identification of the tear. Water was sampled from within the containment area and contained 1 µg/L total PCBs. No further action was taken.

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3.0 Summary of Analytical Results

The following sections describe the analyses performed on the samples collected during the source control action. All analyses were performed by Analytical Resources, Inc. The laboratory analytical reports are included as Appendix F.

3.1 TIDAL SURVEY SURFACE WATER ANALYTICAL RESULTS

Surface water samples collected as part of the tidal survey were analyzed for the following parameters, as specified in the work plan:

- Alkalinity by USEPA 310.1-SM2320
- Anions by USEPA 300.0
- Cations by USEPA 6010B
- pH by USEPA 305.1-SM2310
- Salinity by USEPA 120.1

The analytical results are presented in Table 1.

3.2 CMP SUBSURFACE SOIL INVESTIGATION ANALYTICAL RESULTS

Soil samples collected from boring locations were analyzed for the following parameters as specified in the work plan:

- PCBs by USEPA Method 8082
- Diesel-range total petroleum hydrocarbons (TPH-D) by NWTPH-Dx
- Semivolatile organic compounds (SVOCs) by USEPA 8270D
- Metals (arsenic, cadmium, copper, lead, nickel, zinc) by USEPA 6010B

The Geoprobe soil analytical results are included in Tables 3, 4, and 5.

3.3 CMP GROUNDWATER INVESTIGATION ANALYTICAL RESULTS

Groundwater samples collected from boring locations were analyzed for the following parameters, as specified in the work plan:

- PCBs by USEPA Method 8082 (low-level)
- Volatile organic compounds by USEPA 8260C

The groundwater analytical results are presented in Table 6.

3.4 MANHOLE SOLIDS SAMPLING ANALYTICAL RESULTS

Solid samples collected from the manholes were analyzed for the following parameters, as specified in the work plan:

- PCBs by USEPA Method 8082

- TPH-D by NWTPH-Dx
- SVOCs by USEPA 8270D
- Metals (arsenic, cadmium, copper, lead, nickel, zinc) by USEPA 6010B

The data are presented in Table 8. Additionally, Figure 4 shows the results of the PCB analysis.

3.5 LATERAL LINE SAMPLING ANALYTICAL RESULTS

Samples collected from the lateral lines were analyzed for the following parameters.

- PCBs by USEPA Method 8082

The analytical results are presented in Table 9. Additionally, Figure 5 shows the results of the PCB analysis.

4.0 Data Quality Review

The sampling and analysis performed conformed to USEPA direction, approval, and guidance regarding sampling, quality assurance/quality control (QA/QC), data validation, and chain-of-custody procedures. The following paragraphs provide further detail on data quality.

4.1 FIELD QUALITY CONTROL SAMPLE COLLECTION

In accordance with the work plan, field quality control samples were collected at the frequency required including field rinsate blanks, trip blanks, and duplicate samples. The analytical results for each field quality control sample are reported in the tables discussed in Section 3.0.

4.2 DATA QUALITY REVIEW AND VALIDATION

Per the work plan, a data quality review and validation were performed on the analytical data. Two types of data quality review were performed. A basic "Level I" summary validation was performed on the surface water and solids samples (collected in the Pipes) and a more detailed "Level III" validation was performed on the soil and groundwater samples (collected during the Geoprobe investigation). The data quality review was performed by a qualified independent contractor in accordance with methodology identified in the work plan. Three summary memoranda were produced by the validation contractor describing the details of the data quality review. Each memorandum was reviewed and approved by Floyd|Snider's Quality Assurance Manager. Copies of the data validation memoranda are included in Appendix H.

Overall, the data were judged to be acceptable for use and met the data quality objectives of the work plan. Holding times were met, field and laboratory QC limits were met, except for minor exceptions, which are described in detail in the data validation memoranda in Appendix H. Method blanks, trip blanks, and rinsate samples were either free of contaminants or the concentrations were not high enough to result in qualification of or rejection of data. In certain instances, primarily related to slight exceedances of QC limits for relative percent difference and surrogate recoveries, the data validation contractor added data qualifiers to modify the usefulness of individual sample results. Typically, these resulted in the laboratory reported values being converted to an estimated value ("J" flagged). These added data qualifiers are reported on the analytical data tables discussed in Section 3.0.

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5.0 Cost Summary

5.1 COSTS

The following is a summary of the costs incurred as part of completion of the Order by Boeing and Jorgensen from December 2010 to April 2011. These costs are inclusive of subconsultant fees, media (Geoprobe, reconnaissance groundwater, property line storm pipe solids, 4-inch lateral wipe, and 12-inch lateral lumber) sampling and split sampling, tidal elevation survey, soil excavation and replacement, cleaning/sealing/video contractors, laboratory coordination, analytical fees, driller/utility clearance, solids disposal, database activities, financial assurances, and regular communications between Boeing and Jorgensen team members.

Approximate Boeing-incurred Costs $380,000

Approximate Jorgensen-incurred Costs $160,000

USEPA-incurred Costs Not available at the time of this report

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6.0 References

Anchor QEA, LLC (Anchor QEA). 2011. *Historical 6-inch and 12-inch Lateral Pipes Investigation Report.* 4 January.

Floyd|Snider. 2010. *Jorgensen Forge Outfall Site Source Control Action 15-inch and 24-inch Pipes Cleanout Work Plan*. Prepared for The Boeing Company. 17 December.

Floyd|Snider and Weston Solutions. 2005. *Phase 2 Transformer PCB Investigation Report.* Prepared for The Boeing Company. 3 August.

Rice, P. 2011. Email message "RE: Plant2/Jorgensen Steel Storm Line Cleaning Water" to Doris S. Turner, The Boeing Company. 17 March.

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Jorgensen Forge Outfall Site
Seattle, Washington

Source Control Action Completion Report

Tables

Table 1

CMP Investigation Surface Water Analytical Results—Detected Compounds[1]

	Location	Public-SDMH-II	Public-SDMH-II	SDMH 24A	SDMH 24B	SDMH 37-2	SDMH 37-7	LDW-Stilling Well
	Sample ID	JF-PLSD-SW-Public	JF-PLSD-SW-Public-D[2]	JF-PLSD-SW-24A	JF-PLSD-SW-24B	JF-PLSD-SW-37-2	JF-PLSD-SW-37-7	LDW-Stilling Well
	Sample Date	12/22/2010	12/22/2010	12/22/2010	12/22/2010	12/22/2010	12/22/2010	01/06/2011
Parameter	**Units**							
Conventionals								
Alkalinity	mg/L CaCO3	39.2	38.8	37.8	38.2	32.4	38.9	55.2
Bicarbonate	mg/L CaCO3	39.2	38.8	37.8	38.2	32.4	38.9	55.2
Carbonate	mg/L CaCO3	1 U	1 U	1 U	1 U	1 U	1	1 U
Hydroxide	mg/L CaCO3	1 U	1 U	1 U	1 U	1 U	1	1 U
Chloride	mg/L	519	529	311	477	441	490	2510
Sulfate	mg/L	64.9	67.8	40.4	60	54.5	62.5	363
Conductivity	umhos/cm	1700	1750	1130	1590	1490	1630	7400
Salinity	ppt	0.9	0.9	0.6	0.8	0.7	0.8	4
pH	std units	6.85	6.74	6.81	6.78	6.96	6.88	6.73
Metals								
Magnesium	mg/L	32.3	34.2	21.8	31.1	28.4	31.1	163
Organometallics								
Calcium	mg/L	19.6	20.9	15.4	18.2	17.2	18.1	62.5
Potassium	mg/L	11	11.7	7.5	10.4	9.6	10.6	53.4
Sodium	mg/L	272	291	176	256	233	259	1460

Notes:

1 Data qualifiers assigned independently by Informa LLC.

2 Duplicate sample.

Abbreviations:

CaCO3 Calcium carbonate

mg/L Milligram per liter

mS/cm Micromho per centimeter (siemen)

ppt parts per trillion

std units Standard units

Qualifier:

U Not detected

Table 2
CMP Investigation Geoprobe Boring Location Coordinates[1]

Location	Easting	Northing
T1B1	1,275,874.8	195,811.3
T1B2	1,275,856.4	195,811.2
T1B3	1,275,808.3	195,811.1
T1B4	1,275,763.2	195,819.1
T2B1	1,275,886.8	195,796.5
T2B2	1,275,856.3	195,797.9
T2B3	1,275,824.9	195,798.6
T2B4	1,275,795.3	195,799.5
T3B1	1,275,888.6	195,770.3
T3B2	1,275,859.1	195,771.6
T3B3	1,275,827.1	195,770.7
T3B4	1,275,805.8	195,771.2
T4B2	1,275,858.1	195,745.2
T4B3	1,275,828.2	195,755.6
T5B3	1,275,855.9	195,715.3

Note:

1 Locations presented in State Plane Coordinate System, Washington North Zone, Units of Survey Feet, relative to NAD83 Horizontal Datum.

Abbreviation:

CMP Corrugated metal pipe

Table 3
CMP Investigation Geoprobe Soil Analytical Results—Detected Compounds
Transect 1[1]

Location		T1B1	T1B1	T1B1	T1B2	T1B2	T1B2	T1B2	T1B3	T1B3	T1B3	T1B4	T1B4	T1B4
Sample ID		JF-T1B1-SO-03	JF-T1B1-SO-08	JF-T1B1-SO-13	JF-T1B2-SO-03	JF-T1B2-SO-03-D[2]	JF-T1B2-SO-08	JF-T1B2-SO-13	JF-T1B3-SO-03	JF-T1B3-SO-08	JF-T1B3-SO-18	JF-T1B4-SO-03	JF-T1B4-SO-12	JF-T1B4-SO-18
Sample Date		01/14/2011	01/14/2011	01/14/2011	01/14/2011	01/14/2011	01/14/2011	01/14/2011	01/14/2011	01/14/2011	01/14/2011	01/14/2011	01/14/2011	01/14/2011
Sample Depth (ft bgs)		3–5 ft	8–10 ft	13–15 ft	3–5 ft	3–5 ft	8–10 ft	13–15 ft	3–5 ft	8–10 ft	18–20 ft	3–5 ft	12–14 ft	18–20 ft
Parameter	**Units**													
Metals														
Arsenic	mg/kg	7	7 U	7 U	6 U	6 U	6 U	7 U	5 U	6	12	120 U	6 U	6 U
Cadmium	mg/kg	0.4	0.3 U	0.3	0.2 U	0.2 U	0.2 U	0.3 U	0.3	1.1	38.2	87	0.8	0.2 U
Copper	mg/kg	3830	21.2	16.9	17.5	14.5	17.6	18.2	45.7	70.5	257	55900	59.4	9.5
Lead	mg/kg	24	3 U	3 U	4	4	3	3 U	7	11	1330	2850	11	5
Nickel	mg/kg	25	11	14	15 J	9 J	13	13	20	25	53	2160	22	8
Zinc	mg/kg	68	25	245	28	28	29	26	53	126	2720	5270	83	57
Total Petroleum Hydrocarbons														
Diesel Range Hydrocarbons	mg/kg	6.7 J	6.6 U	6.7 U	6 U	5.6 U	6.4 U	6.6 U	5.2 U	11 J	91	130 J	15 J	6.4 U
Mineral Oil	mg/kg	22	13 U	13 U	12 U	11 U	13 U	13 U	10 U	57	150	470	40	13 U
Motor Oil	mg/kg	25	13 U	13 U	12 U	11 U	13 U	13 U	10 U	65	170	540	46	13 U
Polychlorinated Biphenyls[3]														
Aroclor 1242	µg/kg	55 U	4 U	3.9 U	4 U	3.9 U	3.9 U	3.9 U	3.9 U	41 U	310 U	7.2 UJ	5 U	5.1 U
Aroclor 1248	µg/kg	55 U	4 U	3.9 U	4 U	3.9 U	3.9 U	3.9 U	3.9 U	100 UY	1200 UY	25 UJ	50 UY	38 UY
Aroclor 1254	µg/kg	550 UY	4.2	5.6	5.1	4.9	7	3.9 U	30 UY	810 UY	3900	36 UJ	180	110
Aroclor 1260	µg/kg	1600	7.8	3.9 U	4 U	3.9 U	3.9 U	3.9 U	70	1800	4200	7.2 UJ	28	35
Aroclor 1262	µg/kg	55 U	4 U	3.9 U	4 U	3.9 U	3.9 U	3.9 U	3.9 U	41 U	310 U	280 J	5.1 U	5.1 U
Total PCBs	µg/kg	1600	12	5.6	5.1	4.9	7	3.9 U	70	1800	8100	280 J	208	145
Semivolatile Organic Compounds														
bis(2-Ethylhexyl)phthalate	µg/kg	61 U	61 U	63 U	59 U	59 U	63 U	60 U	65 U	62 U	1500	61 U	57 U	63 U
Di-n-Butylphthalate	µg/kg	61 U	61 U	63 U	59 U	59 U	63 U	60 U	65 U	62 U	1100	61 U	57 U	63 U

Notes:

1 Data qualifiers assigned independently by Informa LLC.
2 Duplicate sample.
3 Only results for Aroclors 1242 through 1262 are shown. Other aroclors were analyzed, but were not detected.

Abbreviations:

bgs Below ground surface
ft Feet
mg/kg Milligram per kilogram
µg/kg Microgram per kilogram

Qualifiers:

J Estimated value
U Not detected
UJ Not detected, estimated detection limit
UY Not detected, used for complex mixtures that overlap

Table 4
CMP Investigation Geoprobe Soil Analytical Results—Detected Compounds
Transect 2[1]

Location		T2B1	T2B1	T2B1	T2B2	T2B2	T2B2	T2B3	T2B3	T2B3	T2B4	T2B4	T2B4
Sample ID		JF-T2B1-SO-03	JF-T2B1-SO-08	JF-T2B1-SO-13	JF-T2B2-SO-03	JF-T2B2-SO-08	JF-T2B2-SO-13	JF-T2B3-SO-02	JF-T2B3-SO-08	JF-T2B3-SO-13	JF-T2B4-SO-03	JF-T2B4-SO-18	JF-T2B4-SO-23
Sample Date		01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011
Sample Depth (ft bgs)		3–5 ft	8–10 ft	13–15 ft	3–5 ft	8–10 ft	13–15 ft	2–4 ft	8–10 ft	13–15 ft	3–5 ft	18–20 ft	23–25 ft
Parameter	**Units**												
Metals													
Arsenic	mg/kg	6 U	6	7 U	19	7	6 U	8	8	7	8	14	180
Cadmium	mg/kg	0.4	0.2 U	0.4	0.3	0.3	0.3 U	0.4	0.3	0.3	0.8	29.4	2.1
Copper	mg/kg	17.4	20.9	20.5	44.5	25.7	17	37.8	43.3	30.6	48.2	688	209
Lead	mg/kg	8	6	3 U	36	46	5	22	31	30	87	886	300
Nickel	mg/kg	18	13	18	10	10	13	18	11	11	24	202	34
Zinc	mg/kg	42	36	35	67	79	695	119	59	60	225	5630	1520
Total Petroleum Hydrocarbons													
Diesel Range Hydrocarbons	mg/kg	20	6.2 U	16 J	21	270	6.5 U	7.8 J	8.2 J	110	42 J	2400	310
Mineral Oil	mg/kg	53	12 U	48	42	520	13 U	200	22	110	500	3900	1100
Motor Oil	mg/kg	58	12 U	52	46	570	13 U	220	25	120	550	4300	1200
Polychlorinated Biphenyls[2]													
Aroclor 1242	µg/kg	4 U	3.9 U	3.9 U	3.9 U	3.9 U	4 U	7.9 U	3.9 U	3.9 U	150 U	12000 U	3900 U
Aroclor 1248	µg/kg	4 U	3.9 U	3.9 U	3.9 U	3.9 U	4 U	7.9 U	3.9 U	3.9 U	440 UY	120000 UY	29000 UY
Aroclor 1254	µg/kg	4 U	3.9 U	3.9 U	3.9 U	3.9 U	4 U	34	3.9 U	3.9 U	1300	220000	61000
Aroclor 1260	µg/kg	4 U	3.9 U	3.9 U	3.9 U	4.9 UY	4 U	51	3.9 U	3.9 U	240	54000	11000
Aroclor 1262	µg/kg	9.8	3.9 U	3.9 U	4.5	3.9 U	4 U	7.9 U	6.7	4	150 U	12000 U	3900 U
Total PCBs	µg/kg	9.8	3.9 U	3.9 U	4.5	4.9 UY	4 U	85	6.7	4	1540	274000	72000
Low Molecular Weight Polycyclic Aromatic Hydrocarbons													
Naphthalene	µg/kg	66 U	62 U	62 U	61 U	63 U	65 U	64 U	60 U	65 U	63 U	130	780
Acenaphthene	µg/kg	66 U	62 U	62 U	61 U	63 U	65 U	64 U	60 U	65 U	63 U	120 U	94
Fluorene	µg/kg	66 U	62 U	62 U	73	63 J	65 U	64 U	60 U	65 U	63 U	120 U	62 U
Phenanthrene	µg/kg	66 U	62 U	62 U	630	84	65 U	64 U	60 U	65 U	63 U	120 U	130
Anthracene	µg/kg	66 U	62 U	62 U	120	63 U	65 U	64 U	60 U	65 U	63 U	120 U	62 U
2-Methylnaphthalene	µg/kg	66 U	62 U	62 U	61 U	63 U	65 U	64 U	60 U	65 U	63 U	120 U	150
High Molecular Weight Polycyclic Aromatic Hydrocarbons													
Fluoranthene	µg/kg	66 U	62 U	62 U	610 J	150 J	65 U	64 U	61 J	73 J	63 U	120 U	62 U
Pyrene	µg/kg	66 U	62 U	62 U	600	160	65 U	64 U	72	82	63 U	120 U	74
Benzo(a)anthracene	µg/kg	66 U	62 U	62 U	260	230	65 U	64 U	60 U	65 U	63 U	120 U	62 U
Chrysene	µg/kg	66 U	62 U	62 U	270	300	65 U	64 U	60 U	65 U	81 J	120 U	62 U
Total Benzofluoranthenes	µg/kg	66 U	62 U	62 U	380	600	65 U	64 U	81	67	63 U	120 U	62 U
Benzo(a)pyrene	µg/kg	66 U	62 U	62 U	260	730	65 U	64 U	60 U	65 U	63 U	120 U	62 U
Indeno(1,2,3-cd)pyrene	µg/kg	66 U	62 U	62 U	89	240	65 U	64 U	60 U	65 U	63 U	120 U	62 U
Dibenz(a,h)anthracene	µg/kg	66 U	62 U	62 U	61 U	420	65 U	64 U	60 U	65 U	63 U	120 U	62 U
Benzo(g,h,i)perylene	µg/kg	66 U	62 U	62 U	86	490	65 U	64 U	60 U	65 U	63 U	120 U	62 U
Semivolatile Organic Compounds													
1,2-Dichlorobenzene	µg/kg	66 U	62 U	62 U	61 U	63 U	65 U	64 U	60 U	65 U	63 U	270	62 U
1,4-Dichlorobenzene	µg/kg	66 U	62 U	62 U	61 U	63 U	65 U	64 U	60 U	65 U	63 U	150	62 U
1-Methylnaphthalene	µg/kg	66 U	62 U	62 U	61 U	63 U	65 U	64 U	60 U	65 U	63 U	120 U	74
2,4-Dinitrotoluene	µg/kg	330 U	310 U	310 U	300 U	310 J	330 U	320 U	300 U	320 U	310 U	610 U	310 U
4,6-Dinitro-2-Methylphenol	µg/kg	660 U	620 U	620 U	610 U	630 J	650 U	640 U	600 U	650 U	630 U	1200 U	620 U
4-Bromophenyl-phenylether	µg/kg	66 U	62 U	62 U	61 U	63 J	65 U	64 U	60 U	65 U	63 U	120 U	62 U
4-Chlorophenyl-phenylether	µg/kg	66 U	62 U	62 U	61 U	63 J	65 U	64 U	60 U	65 U	63 U	120 U	62 U
4-Nitrophenol	µg/kg	330 U	310 U	310 U	300 U	310 J	330 U	320 U	300 U	320 U	310 U	610 U	310 U
bis(2-Ethylhexyl)phthalate	µg/kg	66 U	62 U	62 U	61 U	63 U	65 U	64 U	60 U	65 U	63 U	16000	820
Di-n-Butylphthalate	µg/kg	66 U	62 U	62 U	61 U	63 U	65 U	64 U	60 U	65 U	65	2100	190
Hexachlorobenzene	µg/kg	66 U	62 U	62 U	61 U	63 J	65 U	64 U	60 U	65 U	63 U	120 U	62 U

Notes:

1 Data qualifiers assigned independently by Informa LLC.

2 Only results for Aroclors 1242 through 1262 are shown. Other aroclors were analyzed, but were not detected.

Abbreviations:

bgs Below ground surface
ft Feet
mg/kg Milligram per kilogram
µg/kg Microgram per kilogram

Qualifiers:

J Estimated value
U Not detected
UJ Not detected, estimated detection limit
UY Not detected, used for complex mixtures that overlap

Table 5
CMP Investigation Geoprobe Soil Analytical Results—Detected Compounds
Transect 3[1]

Location		T3B1	T3B1	T3B1	T3B2	T3B2	T3B2	T3B2	T3B3	T3B3	T3B3	T3B4	T3B4	T3B4
Sample ID		JF-T3B1-SO-03	JF-T3B1-SO-08	JF-T3B1-SO-13	JF-T3B2-SO-03	JF-T3B2-SO-08	JF-T3B2-SO-13	JF-T3B2-SO-13-D[2]	JF-T3B3-SO-03	JF-T3B3-SO-08	JF-T3B3-SO-13	JF-T3B4-SO-03	JF-T3B4-SO-13	JF-T3B4-SO-23
Sample Date		01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011
Sample Depth (ft bgs)		3–5 ft	8–10 ft	13–15 ft	3–5 ft	8–10 ft	13–15 ft	13–15 ft	3–5 ft	8–10 ft	13–15 ft	3–5 ft	13–15 ft	23–25 ft
Parameter	**Units**													
Metals														
Arsenic	mg/kg	6 U	6 U	7	5 U	6 U	6 U	6 U	6 U	20 U	6 U	10 U	7	6 U
Cadmium	mg/kg	0.2 U	0.2 U	0.3 U	0.2 U	0.3 U	0.3 U	0.2 U	2.1	6.5	0.5	6.9	0.2 U	0.2 U
Copper	mg/kg	15.4	14.7	29.2	16.3	22	24.9	25.1	62.6 J	354	38.8	111	51.8	10.5
Lead	mg/kg	2 U	2	3	7	3	3	3	27	208	24	259	7	2 U
Nickel	mg/kg	9	11	16	16	13	14	14	60	151	19	160	29	10
Zinc	mg/kg	26	34	37	42	31	37	39	116 J	6960	525	4720	142	29
Total Petroleum Hydrocarbons														
Diesel Range Hydrocarbons	mg/kg	6.5 U	6.1 U	220	9.3 J	6.6 U	6.8 U	6.7 U	9.4 J	46	7.7 J	42	59 J	7 U
Mineral Oil	mg/kg	13 U	12 U	540	33	13 U	14 U	14 U	36	190	28	350	2400	14 U
Motor Oil	mg/kg	13 U	12 U	600	36	13 U	14 U	14 U	40	200	31	380	2600	14 U
Polychlorinated Biphenyls[3]														
Aroclor 1242	µg/kg	3.9 U	3.9 U	8.5 U	3.8 U	3.9 U	6.6 U	8.4 U	8.5 UJ	20 UJ	8.8 U	13 U	3.8 U	3.9 U
Aroclor 1248	µg/kg	3.9 U	3.9 U	17 UY	3.8 U	3.9 U	17 UY	21 UY	8.5 UJ	79 UJ	8.8 U	170 UY	3.8 U	3.9 U
Aroclor 1254	µg/kg	3.9 U	3.9 U	37	3.8 U	3.9 U	34	54	13 UJ	270 J	22 UY	540	17 J	4.5 J
Aroclor 1260	µg/kg	3.9 U	3.9 U	8.5 U	3.8 U	3.9 U	6.6 U	8.4 U	8.5 UJ	400 J	54 J	290	11 J	3.9 U
Aroclor 1262	µg/kg	3.9 U	3.9 U	28	13 J	3.9 U	6.6 U	8.4 U	140 J	20 UJ	8.8 U	13 U	3.8 U	3.9 U
Total PCBs	µg/kg	3.9 U	3.9 U	65	13 J	3.9 U	34	54	140 J	670 J	54 J	830	28 J	4.5 J
Low Molecular Weight Polycyclic Aromatic Hydrocarbons														
Phenanthrene	µg/kg	64 U	60 U	67	60 U	66 U	62 U	61 U	64 U	91	62 U	63 U	180 U	63 U
High Molecular Weight Polycyclic Aromatic Hydrocarbons														
Benzo(a)anthracene	µg/kg	64 U	60 U	62 U	60 U	66 U	62 U	61 U	64 U	63 U	62 U	63 U	180 U	63 U
Total Benzofluoranthenes	µg/kg	64 U	60 U	62 U	60 U	66 U	62 U	61 U	64 U	63 U	62 U	66	180 U	63 U
Semivolatile Organic Compounds														
bis(2-Ethylhexyl)phthalate	µg/kg	64 U	60 U	62 U	60 U	66 U	62 U	61 U	64 U	63 U	62 U	590	180 U	63 U
Di-n-Butylphthalate	µg/kg	64 U	60 U	62 U	60 U	66 U	62 U	61 U	120	790	62 U	380	180 U	63 U

Notes:

1 Data qualifiers assigned independently by Informa LLC.
2 Duplicate sample.
3 Only results for Aroclors 1242 through 1262 are shown. Other aroclors were analyzed, but were not detected.

Abbreviations:

bgs Below ground surface
ft Feet
mg/kg Milligram per kilogram
µg/kg Microgram per kilogram

Qualifiers:

J Estimated value
U Not detected
UJ Not detected, estimated detection limit
UY Not detected, used for complex mixtures that overlap

Table 6

CMP Investigation Geoprobe Groundwater Analytical Results—Detected Compounds[1]

Location		T1B2	T1B3	T1B4	T2B2	T2B3	T2B3	T2B4	T3B2	T3B3	T3B4
Sample ID		JF-T1B2-GW-15	JF-T1B3-GW-20	JF-T1B4-GW-20	JF-T2B2-GW-15	JF-T2B3-GW-15	JF-T2B3-GW-15-D[2]	JF-T2B4-GW-20	JF-T3B2-GW-15	JF-T3B3-GW-15	JF-T3B4-GW-24
Sample Date		1/14/2011	01/14/2011	01/14/2011	01/13/2011	01/13/2011	01/13/2011	01/13/2011	01/14/2011	01/13/2011	01/13/2011
Sample Depth (ft bgs)		15	20	20	15	15	15	20	15	15	24
Parameter	**Units**										
Polychlorinated Biphenyls[3]											
Aroclor 1242	µg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.2 U	0.01 U	0.01 U	0.01 U
Aroclor 1248	µg/L	0.01 U	0.014 UY	0.031 UY	0.01 U	0.01 U	0.01 U	1.8	0.01 U	0.01 U	0.01 U
Aroclor 1254	µg/L	0.01 U	0.022	0.054	0.01 U	0.01 U	0.01 U	2.5	0.01 U	0.018	0.01 U
Aroclor 1260	µg/L	0.01 U	0.011	0.01 U	0.01 U	0.01 U	0.01 U	0.2 U	0.01 U	0.017	0.01 U
Aroclor 1262	µg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.2 U	0.01 U	0.014 UY	0.01 U
Total PCBs	µg/L	0.01 U	0.033	0.054	0.01 U	0.01 U	0.01 U	4.3	0.01 U	0.035	0.01 U
Volatile Organic Compounds											
1,1,1-Trichloroethane	µg/L	0.3	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroform	µg/L	0.5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,2-Dichloroethene	µg/L	14	1.5	3	2.3	1.3	1.3	0.4	2.9	0.2 U	0.2 U
Tetrachloroethene	µg/L	1.2	0.2 U	0.2 U	0.2 U	0.8	0.8	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.5	0.2	0.2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	130	3.1	5.2	0.5	4.4	4.5	1	6.4	0.6	0.2
Vinyl Chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.3	0.3	0.2 U	0.6	0.2 U	0.2 U

Notes:

1 Data qualifiers assigned independently by Informa LLC.
2 Duplicate sample.
3 Only results for Aroclors 1242 through 1262 are shown. Other aroclors were analyzed, but were not detected.

Abbreviations:

bgs Below ground surface
ft Feet
µg/L Microgram per liter

Qulaifiers:

U Not detected
UJ Not detected, estimated detection limit
UY Not detected, used for complex mixtures that overlap

Table 7
Solid Samples Collected from Manholes

Manhole	Associated Pipe	Sample ID	Description
15B	12-inch	JF-PLSD-PS-15B	Brown, coarse gravelly sand. 20% organic matter. No sheen or odor. Moist. (PID: 0.4 ppm)
15A	12-inch	JF-PLSD-PS-15A	Coarse, angular gravel with very few fines. Few twigs. (PID: 0.3 ppm)
Public	24-inch	JF-PLSD-PS-PUBLIC	Coarse black sand, 2% gravel, and fine sands and mud. Light petroleum sheen and odor. Few twigs, leaves, and minor plastic pieces. Very saturated—sample was collected through 3 to 4 inches of water. (PID: 0.0 ppm)
37-2	24-inch	JF-PLSD-PS-37-2	Medium coarse sand, 25% gravel, few 2-inch pieces of rock. Reddish brown oxidation streaking. Cohesive material noted in some scoops. Iridescent sheen. No anthropogenic material. Very wet with free water. (PID: 0.5 ppm)
37-7	24-inch	JF-PLSD-PS-37-7	Dark gray to reddish brown, primarily silt with sand and minor gravel. Few pine needles and roots. Easily homogenizable. Light sheen. No odor. (PID: 0.1 ppm)
24B	24-inch	JF-PLSD-PS-24B	Medium brown silty sand with few coarse gravels. Many small, less than ½-inch, brick fragments. Slight sheen. No odor. (PID: 0.5 ppm)
24A	24-inch	JF-PLSD-PS-24A	Very coarse gravel with very few fines. Some slag present—probably from ground surface. Few roots. No sheen or odor. Wet—sample collected through 1 to 2 inches of water. (PID: 0.4 ppm)

Abbreviations:

PID Photoionization detector
ppm parts per million

Table 8
CMP Investigation Manhole Solids Analytical Results—Detected Compounds[1]

	Location	Public-SDMH-II	SDMH 15A	SDMH 15B	SDMH 24A	SDMH 24B	SDMH 24B	SDMH 37-2	SDMH 37-7
	Sample ID	JF-PLSD-PS-PUBLIC	JF-PLSD-PS-15A	JF-PLSD-PS-15B	JF-PLSD-PS-24A	JF-PLSD-PS-24B	JF-PLSD-PS-24B-D[2]	JF-PLSD-PS-37-2	JF-PLSD-PS-37-7
	Sample Date	01/24/2011	01/24/2011	01/24/2011	01/24/2011	01/24/2011	01/24/2011	01/24/2011	01/24/2011
Parameters	**Units**								
Metals									
Arsenic	mg/kg	30	30	70	30 U	40	34	45	40
Cadmium	mg/kg	4	1 U	21	1 U	0.8	1.1	9.2	2.8
Copper	mg/kg	159	838	4060	333	190 J	265 J	332	271
Lead	mg/kg	358	180	1410	80	335 J	420 J	1000	839
Nickel	mg/kg	64	1590	837	648	136 J	174 J	154	97
Zinc	mg/kg	569	698	5490	789	367	441	822	749
Total Petroleum Hydrocarbons									
Diesel Range	mg/kg	540	32 J	800 J	16 J	1100 J	810 J	5100 J	1100 J
Mineral Oil	mg/kg	1500	77	1600	50	1200	1100	4900	2000
Motor Oil	mg/kg	1600	85	1800	56	1300	1200	5400	2200
Polychlorinated Biphenyls[3]									
Aroclor 1242	µg/kg	44000 U	1800 U	22000 U	1900 U	210000 U	84000 U	2000000 U	320000 U
Aroclor 1248	µg/kg	87000 UY	26000	160000 UY	19000 UY	740000 UY	840000 UY	6100000 UY	1100000 UY
Aroclor 1254	µg/kg	150000	36000	630000	39000	1600000	1700000	8800000	1900000
Aroclor 1260	µg/kg	44000 U	6000	120000	4800 UY	210000 U	210000 UY	2000000 U	320000 U
Aroclor 1262	µg/kg	44000 U	1800 U	22000 U	1900 U	210000 U	84000 U	2000000 U	320000 U
Total PCBs	µg/kg	150000	68000	750000	39000	1600000	1700000	8800000	1900000
Low Molecular Weight Polycyclic Aromatic Hydrocarbons									
Naphthalene	µg/kg	180 U	63 U	180 U	61 U	64 U	61 U	320 U	92
Acenaphthylene	ug/kg	180 U	63 U	460	61 U	64 U	61 U	320 U	62 U
Acenaphthene	µg/kg	180 U	63 U	180 U	61 U	64 U	61 U	380	110
Fluorene	µg/kg	180 U	63 U	180 U	61 U	64 U	61 U	570	210
Phenanthrene	µg/kg	1000	63 U	450	61 U	500	320	3500	1600
Anthracene	µg/kg	340	63 U	200	61 U	79	61 U	780	320
High Molecular Weight Polycyclic Aromatic Hydrocarbons									
Fluoranthene	µg/kg	6100	63 U	3000	61 U	880	560	5400	3100
Pyrene	µg/kg	14000	63 U	2500	61 U	770	500	5600	3100
Benzo(a)anthracene	µg/kg	5700	63 U	1900	61 U	410	220	2900	1600
Chrysene	µg/kg	7000	63 U	2000	61 U	460	320	3500	1800
Total	µg/kg	12000	63 U	4600	61 U	840	570	6700	4200
Benzo(a)pyrene	µg/kg	6500	63 U	1900	61 U	410	260	3400	1600
Indeno(1,2,3-cd)pyrene	µg/kg	1900	63 U	810	61 U	230	120	1200	710
Dibenz(a,h)anthracene	µg/kg	230 J	63 U	180 U	61 U	64 U	61 U	320 U	62 U
Benzo(g,h,i)perylene	µg/kg	2000 J	63 U	740 J	61 U	220 J	110 J	960 J	650 J
Semivolatile Organic Compounds									
Butylbenzylphthalate	µg/kg	180 U	10000	180 U	61 U	64 U	61 U	320 U	62 U
Carbazole	µg/kg	180 U	63 U	180 U	61 U	64 U	61 U	480	210
Di-n-Butylphthalate	µg/kg	580	9200	620	61 U	64 U	61 U	5200	62 U
Dibenzofuran	µg/kg	180 U	63 U	180 U	61 U	64 U	61 U	320 U	100
Dimethylphthalate	µg/kg	180 U	63 U	430	61 U	230	61 U	320 U	62 U

Notes:

1 Data qualifiers assigned independently by Informa LLC.
2 Duplicate sample.
3 Only results for Aroclors 1242 through 1262 are shown. Other aroclors were analyzed, but were not detected.

Abbreviations:

CMP Corrugated metal pipe
mg/kg Milligram per kilogram
µg/kg Microgram per kilogram

Qualifiers:

J Estimated value
U Not detected
UB Not detected at elevated reporting limit due to blank contamination
UJ Not detected, estimated detection limit
UY Not detected, used for complex mixtures that overlap

Table 9
Lateral Samples Analytical Results

Sample Location	Lumber from Jorgensen 10-inch Lateral		Wipe Sample from Jorgensen 4-inch Lateral	
Sample ID	**JF-PLSD-WD-12**		**JF-PLSD-WP-4L**	
Sample Date	**2/25/2011**		**2/28/2011**	
Parameter		**Units**		**Units**
Aroclor 1016	790 U	µg/kg	1 U	µg
Aroclor 1221	791 U	µg/kg	1 U	µg
Aroclor 1232	792 U	µg/kg	1 U	µg
Aroclor 1242	793 U	µg/kg	1 U	µg
Aroclor 1248	12000 UY	µg/kg	4 UY	µg
Aroclor 1254	34000	µg/kg	4.9	µg
Aroclor 1260	2000 Y	µg/kg	1 U	µg
Aroclor 1262	790 U	µg/kg	NA	µg
Total PCBs	34000	µg/kg	4.9	µg

Note:

1 Data qualifiers assigned independently by Informa LLC.

Abbreviations:

µg Microgram

µg/kg Microgram per kilogram

Qualifiers:

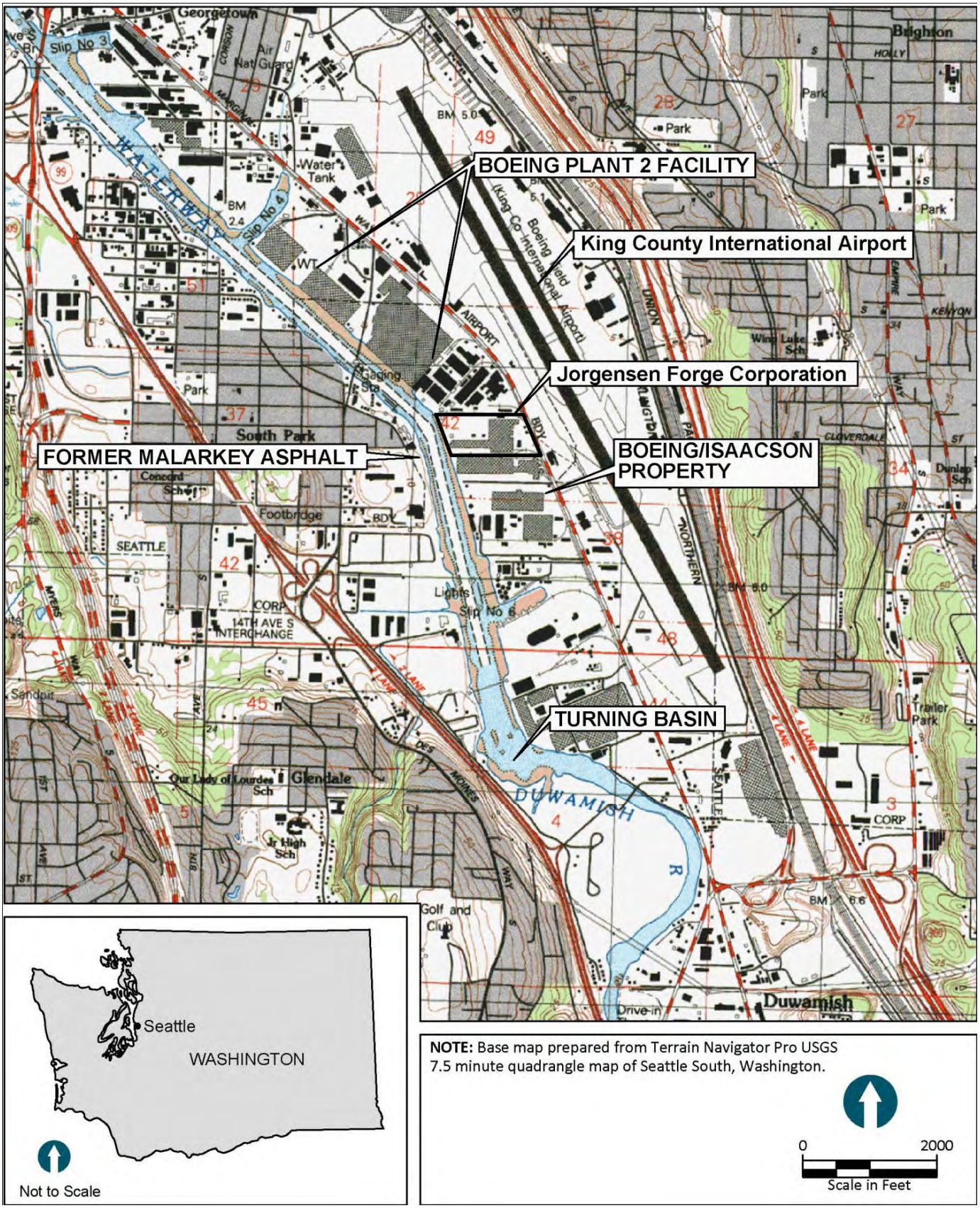
U Not detected

UY Not detected, used for complex mixtures that overlap

Jorgensen Forge Outfall Site
Seattle, Washington

Source Control Action Completion Report

Figures



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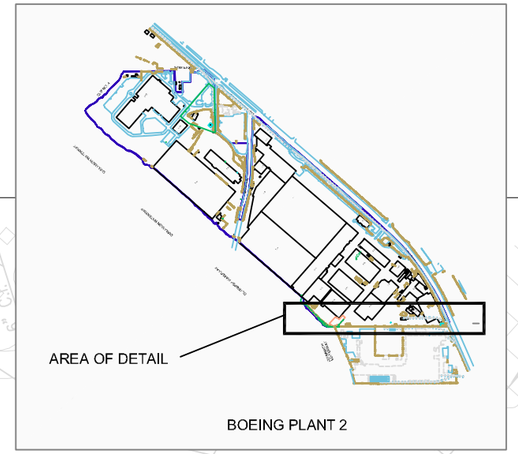
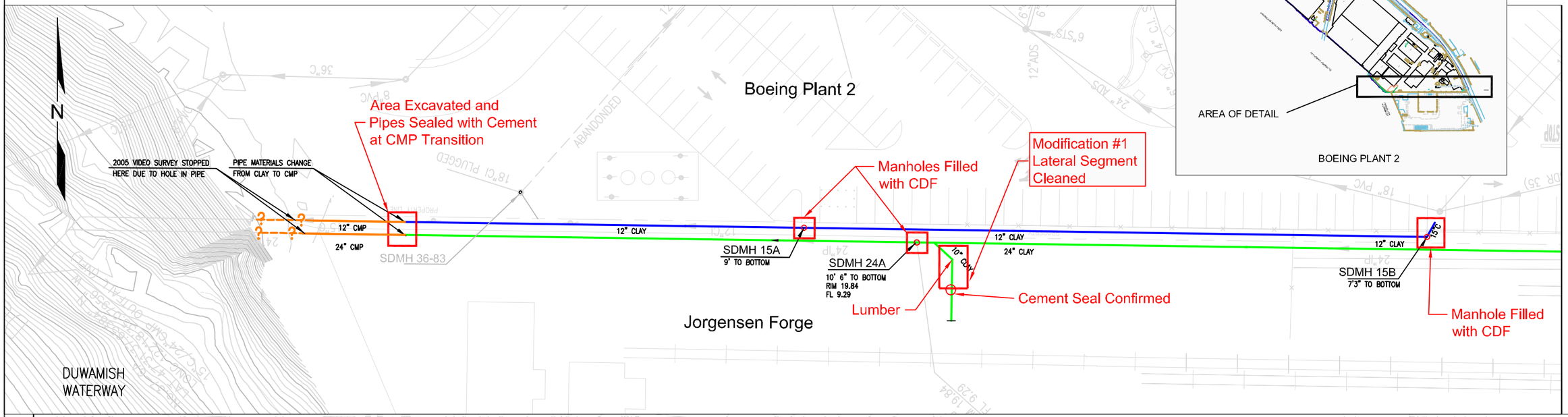
Jorgensen Forge Outfall Site
Seattle, Washington

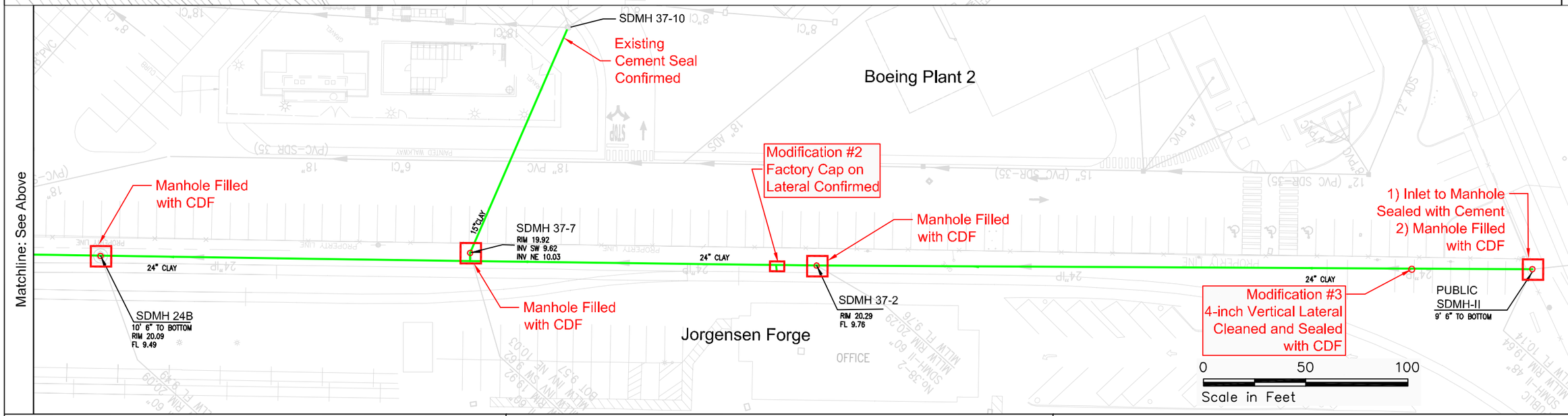
Figure 1
Site Vicinity Map

LEGEND

SDMH	Storm Drain Manhole	CDF	Controlled Density Fill
o	Existing Storm Drain Manhole Sealed Under Order	CMP	Corrugated Metal Pipe
12" Clay Property Line Storm Drain Cleaned Under Order		CMP Section (Not Addressed Under Order)	
24" Clay Property Line Storm Drain Cleaned Under Order		Note: Survey conducted by Duane Hartman and Associates, Inc. 2010.	







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Seattle, Washington

Figure 2
Site Plan and Approved Modifications to Work Plan

DWG NAME: G:\project\Clients\Floyd and Snider\boeing\Plant 2 CAD 2010\boeing2010_011.dwg
DATE: 5/26/2011 1:58 PM

Notes:
1. CMP = Corrugated metal pipe.
   · GPS locations were collected during field activities on January 14, 2011.
   · Orthoimagery provided by Bing Maps.

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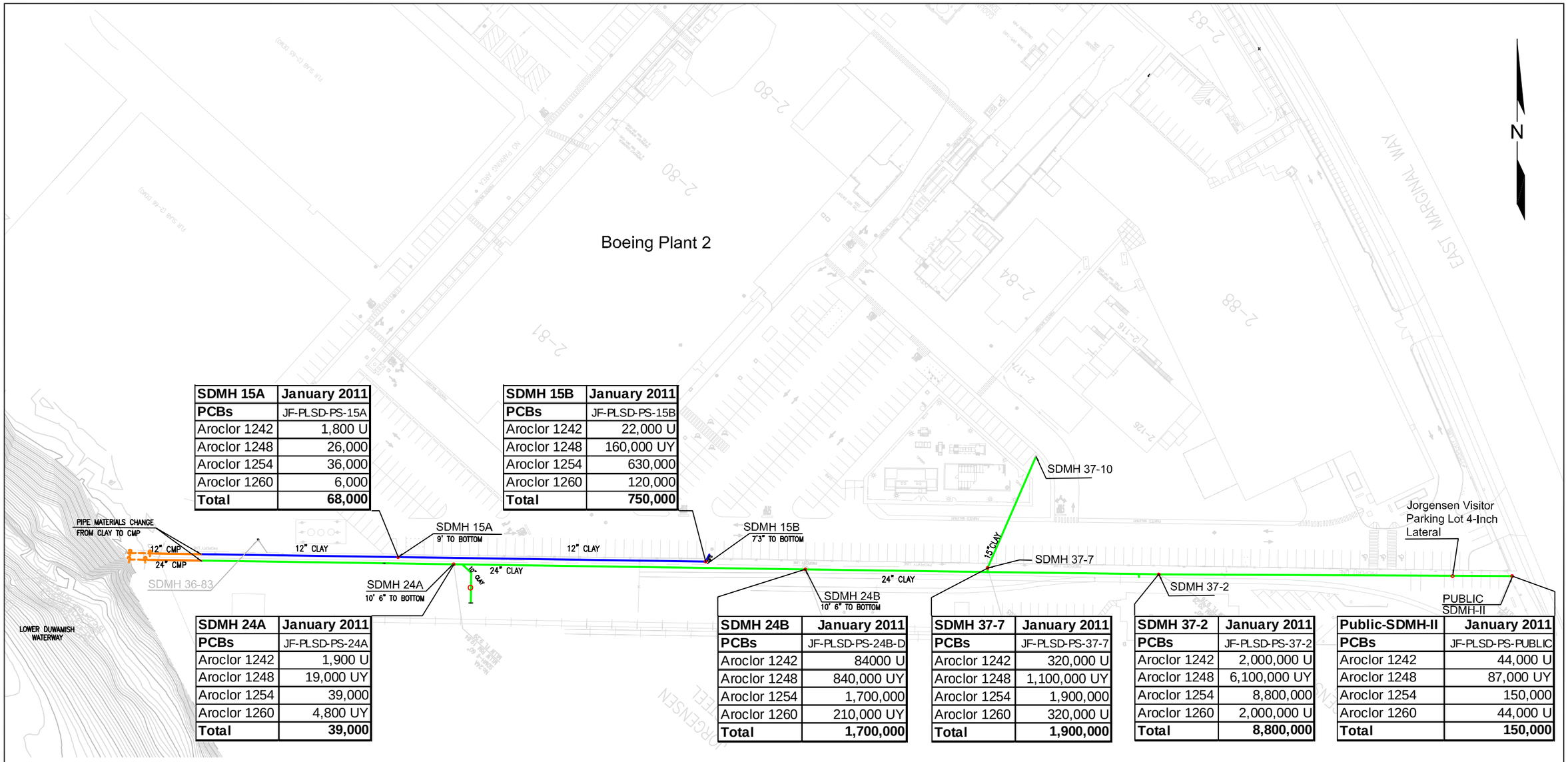
Seattle, Washington

Figure 3
Geoprobe Boring Locations

Path: F:\projects\Boeing Plant 2 NEW\GIS\MXD\JorgensenForge\January 15 2011 Field-Collected GPS Locations and CAD SD Layers from March 2011.mxd
Date: 5/26/2011



SDMH 15A	January 2011
PCBs	JF-PLSD-PS-15A
Aroclor 1242	1,800 U
Aroclor 1248	26,000
Aroclor 1254	36,000
Aroclor 1260	6,000
Total	**68,000**

SDMH 15B	January 2011
PCBs	JF-PLSD-PS-15B
Aroclor 1242	22,000 U
Aroclor 1248	160,000 UY
Aroclor 1254	630,000
Aroclor 1260	120,000
Total	**750,000**

SDMH 24A	January 2011
PCBs	JF-PLSD-PS-24A
Aroclor 1242	1,900 U
Aroclor 1248	19,000 UY
Aroclor 1254	39,000
Aroclor 1260	4,800 UY
Total	**39,000**

SDMH 24B	January 2011
PCBs	JF-PLSD-PS-24B-D
Aroclor 1242	84000 U
Aroclor 1248	840,000 UY
Aroclor 1254	1,700,000
Aroclor 1260	210,000 UY
Total	**1,700,000**

SDMH 37-7	January 2011
PCBs	JF-PLSD-PS-37-7
Aroclor 1242	320,000 U
Aroclor 1248	1,100,000 UY
Aroclor 1254	1,900,000
Aroclor 1260	320,000 U
Total	**1,900,000**

SDMH 37-2	January 2011
PCBs	JF-PLSD-PS-37-2
Aroclor 1242	2,000,000 U
Aroclor 1248	6,100,000 UY
Aroclor 1254	8,800,000
Aroclor 1260	2,000,000 U
Total	**8,800,000**

Public-SDMH-II	January 2011
PCBs	JF-PLSD-PS-PUBLIC
Aroclor 1242	44,000 U
Aroclor 1248	87,000 UY
Aroclor 1254	150,000
Aroclor 1260	44,000 U
Total	**150,000**

Abbreviations:

CMP Corrugated Metal Pipe
µg/kg Microgram per kilogram

Data Qualifiers:

U Not detected
UY Not detected, used for complex mixtures that overlap

Note: Data qualifiers assigned independently by Informa LLC.

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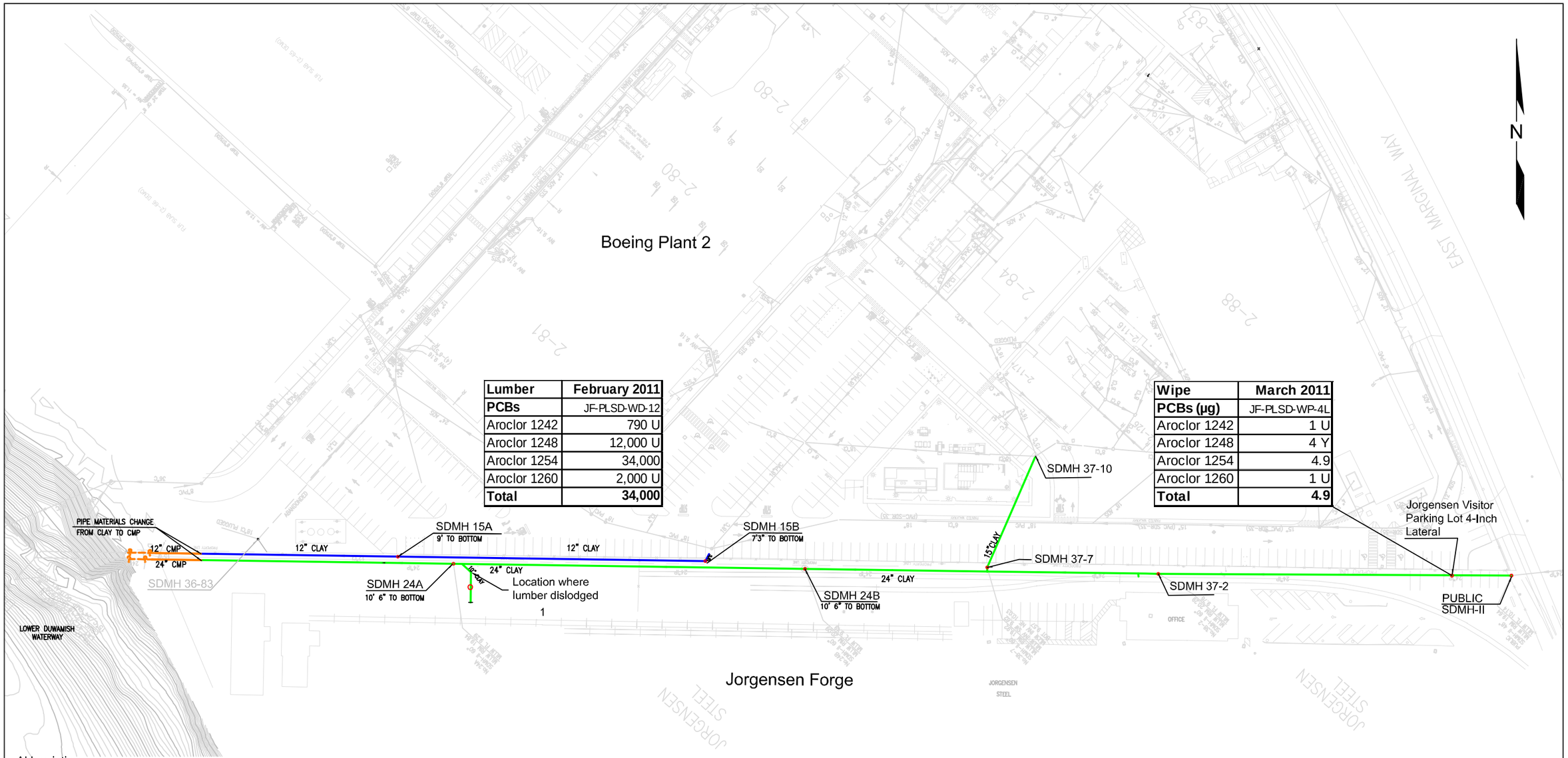
Source Control Action Completion Report
Jorgensen Forge Outfall Site
Seattle, Washington

Figure 4
Manhole Samples
PCB Analytical Results (µg/kg)

DWG NAME: G:\project\Clients\Floyd and Snider\boeing\Plant 2 CAD 2010\boeing2010_011.dwg
DATE: 5/26/2011 1:59 PM



Abbreviations:

CMP Corrugated Metal Pipe
µg/kg Microgram per kilogram

Data Qualifiers:

U Not detected
UY Not detected, used for complex mixtures that overlap

Note: Data qualifiers assigned independently by Informa LLC.

[1] As described in Section 2.6.2, lumber was dislodged from 10-inch lateral at shown location. Refer to Section 2.6.2 for details on how the lumber was sampled.

0 100 200
Scale in Feet

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Jorgensen Forge Outfall Site
Seattle, Washington

Figure 5
Lateral Samples
PCB Analytical Results (µg/kg)

DWG NAME: G:\project\Clients\Floyd and Snider\boeing\Plant 2 CAD 2010\boeing2010_011.dwg
DATE: 5/26/2011 2:01 PM

Jorgensen Forge Outfall Site
Seattle, Washington

Source Control Action Completion Report

Appendix A
Tidal Survey Transducer Data
(Excel files provided on DVD)

Jorgensen Forge Outfall Site
Seattle, Washington

Source Control Action Completion Report

Appendix B
Boring Logs

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Boring ID: T1B1

Drill Date: January 14, 2011
Logged By: Dean Brame
Drilled By: Cascade Drilling
Drill Type: Direct Push Geoprobe
Sample Method: direct push 2"x5' core
Boring Diameter: 2 inches
Boring Depth (ft bgs): 15 feet
Groundwater ATD (ft bgs): 9.5 ft

Coordinate System: State Plane, NAD83
Ground Surface Elevation: NA
Latitude/Northing: 195,811.3
Longitude/Easting: 1,275,874.8

Project: Jorgensen Forge PLO
Task: BP2-JFOS
Site Location: 8531 E Marginal Way S., Seattle, WA

Remarks: weather cool, raining

SAMPLE Type/Depth	DRIVEN / RECOVERED	DEPTH (FT BGS)	USCS SYMBOL	SOIL DESCRIPTION AND OBSERVATIONS
		0		Pothole of asphalt surface with crushed gravel base
T1B1 3-5 (PID: 2.6 ppm)		3	SP	Dark brown SAND, loose, moist (FILL). Black line from 4 to 4.1 ft bgs.
		5		
		6	SP	Brown fine grained SAND, dense, moist (Fill)
		7	ML	Reddish-brown, SILT, moist (FILL)
T1B1 8-10 (1.8 ppm)		8	SM	Brown very fine silty SAND, moist to wet, dark brown streaks throughout (FILL) Saturated at 9.5 ft bgs.
		11	SP	Dark gray fine SAND, saturated (NATIVE)
T1B1 13-15 (2.2 ppm)		13	SP	Dark gray very fine SAND, saturated, (NATIVE)
		15		

Notes:
FT BGS = Feet Below Ground Surface
= denotes start of water saturated soil
USCS = Unified Soil Classification System, modified from ASTM D2488

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Boring ID: T1B2

Drill Date: January 14, 2011
Logged By: Dean Brame
Drilled By: Cascade Drilling
Drill Type: Direct Push Geoprobe
Sample Method: direct push 2"x5' core
Boring Diameter: 2 inches
Boring Depth (ft bgs): 15 ft
Groundwater ATD (ft bgs): 8.5 ft

Coordinate System: State Plane, NAD83
Ground Surface Elevation: NA
Latitude/Northing: 195,811.2
Longitude/Easting: 1,275,856.4

Project: Jorgensen Forge PLO
Task: BP2-JFOS
Site Location: 8351 E. Marginal Way S., Seattle, WA

Remarks: weather rainy

SAMPLE Type/Depth	DRIVEN / RECOVERED	DEPTH (FT BGS)	USCS SYMBOL	SOIL DESCRIPTION AND OBSERVATIONS
		0		Pothole of asphalt surface with crushed gravel base
		2	SW	Dark brown coarse SAND, loose, moist, (FILL)
T1B2 3-5 (PID: 1.8 ppm)		4	SM	Dark brown silty SAND, dense, very moist, with orange streaking, (FILL)
		6		
		7	SP	Dark brown SAND, moist, some oxidation (FILL). Saturated at 8.5 ft bgs.
T1B2 8-10 (2.3 ppm)		9		Grayish-brown, very silty SAND, wet (FILL) from 9.8 - 10 ft bgs.
		10	SM	
		11	SP	Dark brown SAND, saturated, mottled (FILL?)
		12	SM	Gray silty SAND, loose, saturated, (NATIVE)
		13	SP	Dark gray very fine SAND, loose, saturated, mottled (NATIVE)
T1B2 13-15 (2.1 ppm)		14		
		15		

Notes:
FT BGS = Feet Below Ground Surface
= denotes start of water saturated soil
USCS = Unified Soil Classification System, modified from ASTM D2488

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Boring ID: T1B3

Drill Date: January 14, 2011
Logged By: Dean Brame
Drilled By: Cascade Drilling
Drill Type: Direct Push Geoprobe
Sample Method: direct push 2"x5' core
Boring Diameter: 2 inches
Boring Depth (ft bgs): 20 ft
Groundwater ATD (ft bgs): 8.5 ft

Coordinate System: State Plane, NAD83
Ground Surface Elevation: NA
Latitude/Northing: 195,811.1
Longitude/Easting: 1,275,808.3

Project: Jorgensen Forge PLO
Task: BP2-JFOS
Site Location: 8351 E. Marginal Way S., Seattle, WA

Remarks: weather rainy/cloudy

SAMPLE Type/Depth	DRIVEN / RECOVERED	DEPTH (FT BGS)	USCS SYMBOL	SOIL DESCRIPTION AND OBSERVATIONS
		0–1		Woody plant material, crushed gravel, some small pieces of asphalt
		2	GW	Coarse crushed GRAVEL with light brown SAND, loose, dry (FILL)
		3	SW	Dark brown gravelly SAND with trace silt, moist (FILL)
T1B3 3-5 (PID: 1.6 ppm)		4–5	SP	Dark brown coarse SAND, moist (FILL)
		6–7		
		7–8	SP	Dark brown, moist coarse SAND with rounded gravel, moist (FILL) 1" Dark brown to black stain at 7.5 ft. Mesh (geotextile?) at 8.5 ft bgs.
T1B3 8-10 (2.2 ppm)		9	GW	very coarse crushed GRAVEL with trace sand, moist (FILL)
		10	SM	Dark brown silty SAND, wet, with glass and metal debris (FILL)
		10–12	GW	Dark brown rounded GRAVEL with coarse sand, loose, very wet, with small pieces of glass from 10-12 ft. (FILL)
		14–15		
		16	GW	Dark brown sandy GRAVEL, loose, saturated (FILL)
		17	SP	Dark brown very fine Sand (FILL?)
		18	SM	Gray fine silty SAND, saturate, with mottles (NATIVE)
T1B3 18-20 (2.1		19–20		Moderate petroleum sheen and odor at 19.5 ft

Notes:
FT BGS = Feet Below Ground Surface
= denotes start of water saturated soil
USCS = Unified Soil Classification System, modified from ASTM D2488

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Boring ID: T1B4

Drill Date: January 14, 2011
Logged By: Dean Brame
Drilled By: Cascade Drilling
Drill Type: Direct Push Geoprobe
Sample Method: direct push 2"x5' core
Boring Diameter: 2 inches
Boring Depth (ft bgs): 20 ft
Groundwater ATD (ft bgs): 9 ft

Coordinate System: State Plane, NAD83
Ground Surface Elevation: NA
Latitude/Northing: 195,819.1
Longitude/Easting: 1,275,763.2

Project: Jorgensen Forge PLO
Task: BP2-JFOS
Site Location: 8351 E. Marginal Way S., Seattle, WA

Remarks: weather rainy/cloudy

SAMPLE Type/Depth	DRIVEN / RECOVERED	DEPTH (FT BGS)	USCS SYMBOL	SOIL DESCRIPTION AND OBSERVATIONS
		0		Woody plant material and some crushed gravel
		1	GW	Light gray crushed GRAVEL, dry, (FILL)
		2	SW	Very dark brown gravelly SAND, loose, dry (FILL). Very oxidized throughout. Few white and blue crytals.
		3		
		4		Very dark brown to black stain at 4 - 4.2 ft bgs.
T1B4 3-5 (PID: 3.4 ppm)		5		2" diameter blue crystal at 4.5ft bgs.
		6		
		7	SW	Very dark brown, gravelly sand, loose, dry (FILL)
		8	SP	Reddish brown fine grained SAND, moist (FILL)
		9	SP	Dark gray, medium grained SAND, wet with few small blue crystals (FILL)
		10		
		11		
		12	SP	Grayish-brown, medium grained SAND, very wet with some oxidation (FILL)
T1B4 12-14 (1.4 ppm)		13		
		14	SW	Reddish-brown fine SAND with minor small gravel, very wet (FILL)
		15	SP	Dark brown, fine SAND, very wet (FILL)
		16		
		17		
		18	GW	Reddish-brown fine sandy GRAVEL, loose, saturated. 1-1.5" pebbles (FILL)
T1B4 18.5-20 (2.1 ppm)		19	SP	Very dark gray fine SAND, saturated, minor mottling (NATIVE)
		20		

Notes:
FT BGS = Feet Below Ground Surface
= denotes start of water saturated soil
USCS = Unified Soil Classification System, modified from ASTM D2488

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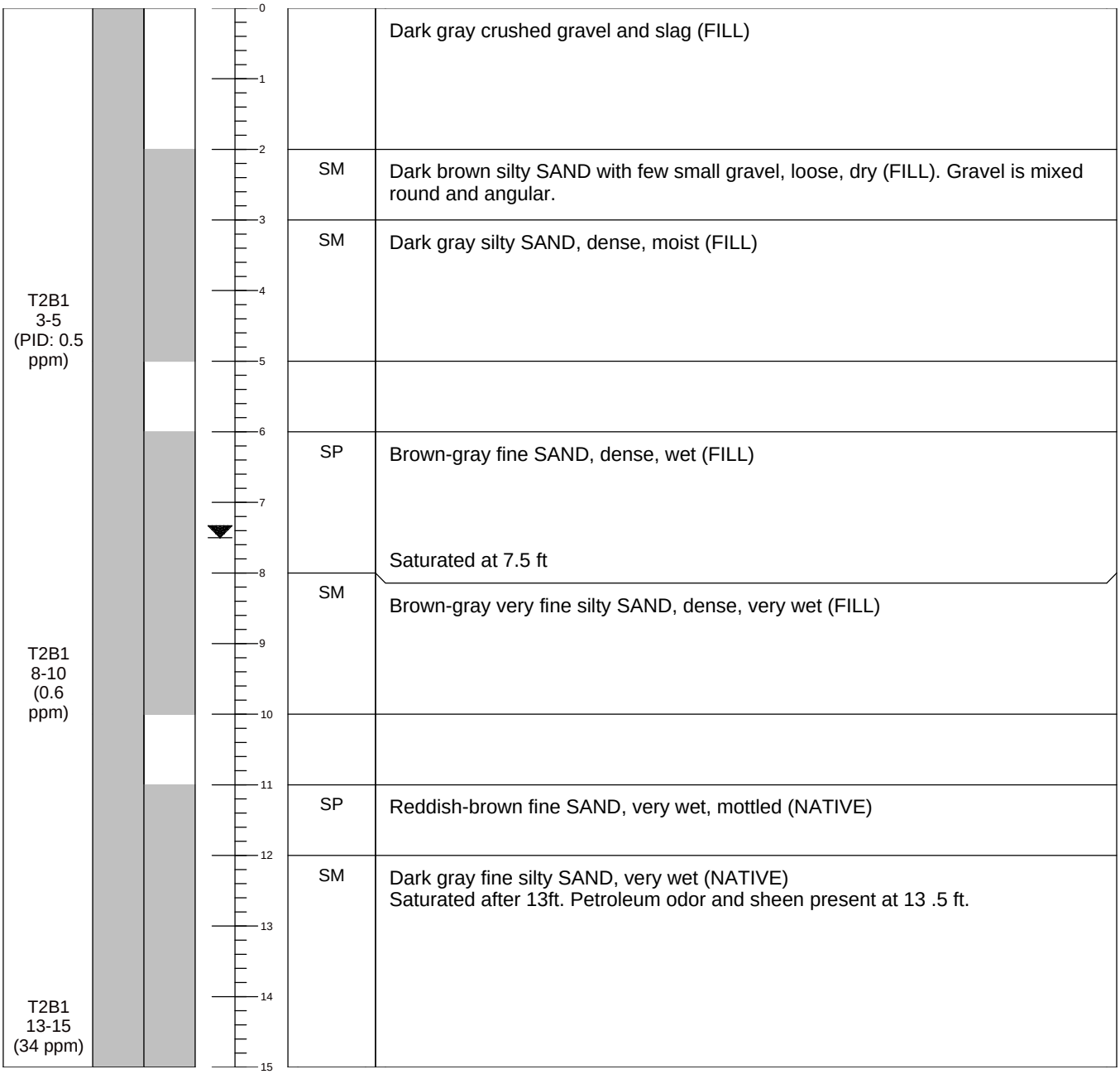
Boring ID: T2B1

Drill Date: January 13, 2011
Logged By: Lisa Meoli
Drilled By: Cascade Drilling
Drill Type: Direct Push Geoprobe
Sample Method: direct push 2"x5' core
Boring Diameter: 2 inches
Boring Depth (ft bgs): 15 ft
Groundwater ATD (ft bgs): 7.5 ft

Coordinate System: State Plane, NAD83
Ground Surface Elevation: NA
Latitude/Northing: 195,796.5
Longitude/Easting: 1,275,886.8

Project: Jorgensen Forge PLO
Task: BP2-JFOS
Site Location: 8351 E. Marginal Way S., Seattle, WA

Remarks: weather rainy



SAMPLE Type/Depth	DRIVEN / RECOVERED	DEPTH (FT BGS)	USCS SYMBOL	SOIL DESCRIPTION AND OBSERVATIONS
		0–2		Dark gray crushed gravel and slag (FILL)
		2–3	SM	Dark brown silty SAND with few small gravel, loose, dry (FILL). Gravel is mixed round and angular.
T2B1 3-5 (PID: 0.5 ppm)		3–5	SM	Dark gray silty SAND, dense, moist (FILL)
		5–6		
		6–8	SP	Brown-gray fine SAND, dense, wet (FILL) Saturated at 7.5 ft
T2B1 8-10 (0.6 ppm)		8–10	SM	Brown-gray very fine silty SAND, dense, very wet (FILL)
		10–11		
		11–12	SP	Reddish-brown fine SAND, very wet, mottled (NATIVE)
T2B1 13-15 (34 ppm)		12–15	SM	Dark gray fine silty SAND, very wet (NATIVE) Saturated after 13ft. Petroleum odor and sheen present at 13 .5 ft.

Notes:
FT BGS = Feet Below Ground Surface
= denotes start of water saturated soil
USCS = Unified Soil Classification System, modified from ASTM D2488

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Boring ID: T2B2

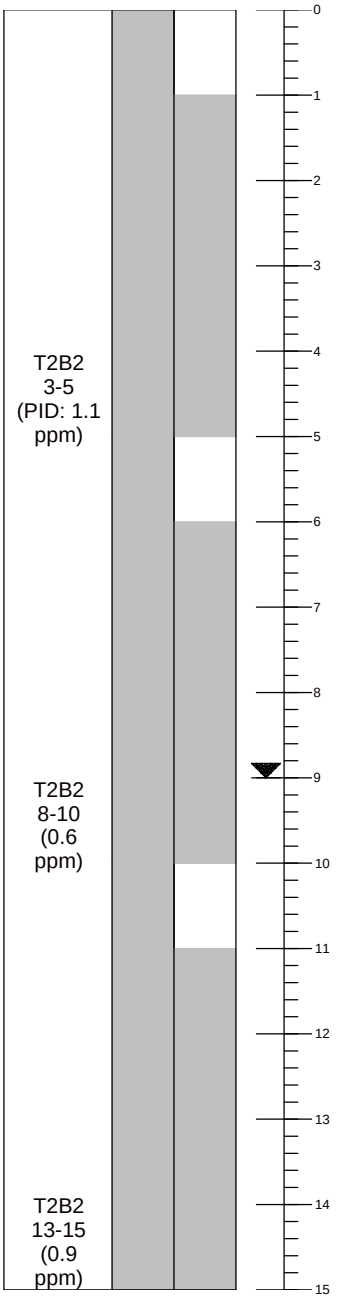
Drill Date: January 13, 2011
Logged By: Lisa Meoli
Drilled By: Cascade Drilling
Drill Type: Direct Push Geoprobe
Sample Method: direct push 2"x5' core
Boring Diameter: 2 inches
Boring Depth (ft bgs): 15 ft
Groundwater ATD (ft bgs): 9 ft

Coordinate System: State Plane, NAD83
Ground Surface Elevation: NA
Latitude/Northing: 195,797.9
Longitude/Easting: 1,275,856.3

Project: Jorgensen Forge PLO
Task: BP2-JFOS
Site Location: 8351 E. Marginal Way S., Seattle, WA

Remarks: weather rainy/cloudy

SAMPLE Type/Depth	DRIVEN / RECOVERED	DEPTH (FT BGS)	USCS SYMBOL	SOIL DESCRIPTION AND OBSERVATIONS
				Dark gray crushed gravel and slag (FILL)
			SW	Dark brown gravelly SAND, loose, dry (FILL). Some metallic slag-like material, whitish-yellow material (fire brick?) and red brick fragments.
T2B2 3-5 (PID: 1.1 ppm)			SM	Brown silty fine SAND, loose, dry (FILL). Few 0.5-1" gravels and small brick fragments.
			SP	Dark gray medium SAND, dense, moist, with pieces of glass (FILL)
T2B2 8-10 (0.6 ppm)			SP	Dark reddish-brown fine SAND, dense, wet (FILL). Red brick fragments at 7.5 ft. Lumber debri at 9.5 ft.
			SM	Brown silty SAND with few small gravel, wet (FILL)
T2B2 13-15 (0.9 ppm)			SM	Gray silty SAND,loose, saturated (NATIVE)



Notes:
FT BGS = Feet Below Ground Surface
= denotes start of water saturated soil
USCS = Unified Soil Classification System, modified from ASTM D2488

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Boring ID: T2B3

Drill Date: January 13, 2011
Logged By: Lisa Meoli
Drilled By: Cascade Drilling
Drill Type: Direct Push Geoprobe
Sample Method: direct push 2"x5' core
Boring Diameter: 2 inches
Boring Depth (ft bgs): 15 ft
Groundwater ATD (ft bgs): 12.5 ft

Coordinate System: State Plane, NAD83
Ground Surface Elevation: NA
Latitude/Northing: 195,798.6
Longitude/Easting: 1,275,824.9

Project: Jorgensen Forge PLO
Task: BP2-JFOS
Site Location: 8351 E. Marginal Way S., Seattle, WA

Remarks: weather rainy/cloudy

SAMPLE Type/Depth	DRIVEN / RECOVERED	DEPTH (FT BGS)	USCS SYMBOL	SOIL DESCRIPTION AND OBSERVATIONS
		0		Crushed gravel and woody plant material
T2B3 2-4 (PID: 0.8 ppm)		1–4	SM/SW	Brown silty fine SAND and gravelly fine SAND, loose, dry (FILL). Gravel is mixed round and angular.
		5		
		6–9	SM/SW	same as above Black tar-like material (possibly asphalt) at 8.5 ft bgs.
T2B3 8-10 (0.8 ppm)		10–11		
		12	SM	Reddish-brown silty SAND wth few rounded gravel, wet, some oxidation, glass and brick fragments (FILL)
T2B3 13-15 (1.4 ppm)		13–15	SP	Dark gray fine SAND, saturated, with glass shards, lumber debris, and brick fragments (FILL) Note: Unable to drill to native material due to refusal and poor recovery at 15 ft bgs.

Notes:
FT BGS = Feet Below Ground Surface
= denotes start of water saturated soil
USCS = Unified Soil Classification System, modified from ASTM D2488

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Boring ID: T2B4

Drill Date: January 13, 2011
Logged By: Lisa Meoli
Drilled By: Cascade Drilling
Drill Type: Direct Push Geoprobe
Sample Method: direct push 2"x5' core
Boring Diameter: 2 inches
Boring Depth (ft bgs): 25 ft
Groundwater ATD (ft bgs): 8.5 ft

Coordinate System: State Plane, NAD83
Ground Surface Elevation: NA
Latitude/Northing: 195,799.5
Longitude/Easting: 1,275,795.3

Project: Jorgensen Forge PLO
Task: BP2-JFOS
Site Location: 8351 E. Marginal Way S., Seattle, WA

Remarks: weather rainy

SAMPLE Type/Depth	DRIVEN / RECOVERED	DEPTH (FT BGS)	USCS SYMBOL	SOIL DESCRIPTION AND OBSERVATIONS
		0		Crushed gravel and woody plant material mixed with soil
T2B4 2-4 (PID: 0.9 ppm)		3	SM/SW	Dark brown silty SAND with gravel, moist (FILL). No petroleum sheen or odor.
		8	SW	Brown gravelly SAND, loose, wet (FILL). Gravel is small and mixed rounded and angular. Black, tar-like material at 9 ft. No petroleum sheen or oder present.
(1.3 ppm)		10		Reddish-brown medium SAND with rounded gravel, wet (FILL)
(1.0 ppm)		14	SP	
		16	SP	Reddish-brown medium SAND with rounded gravel, loose, saturated (FILL). Glass shards and brick fragments. Petroleum odor and sheen observed. 2-inch layer of broken glass and crushed rock at 18 ft bgs
T2B4 18-20 (37.4 ppm)		20		
		21	SP	Reddish-brown medium SAND with rounded gravel, loose, very wet (FILL). Few glass shards.
T2B4 23-25 (31.5		24	SP	Gray fine SAND with few small pebbles, wet (NATIVE)

Notes:
FT BGS = Feet Below Ground Surface
= denotes start of water saturated soil
USCS = Unified Soil Classification System, modified from ASTM D2488

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Boring ID: T3B1

Drill Date: January 13, 2011
Logged By: Lisa Meoli
Drilled By: Cascade Drilling
Drill Type: Direct Push Geoprobe
Sample Method: direct push 2"x5' core
Boring Diameter: 2 inches
Boring Depth (ft bgs): 15 ft
Groundwater ATD (ft bgs): 9.5 ft

Coordinate System: State Plane, NAD83
Ground Surface Elevation: NA
Latitude/Northing: 195,770.3
Longitude/Easting: 1,275,888.6

Project: Jorgensen Forge PLO
Task: BP2-JFOS
Site Location: 8351 E. Marginal Way S., Seattle, WA

Remarks: weather rainy

SAMPLE Type/Depth	DRIVEN / RECOVERED	DEPTH (FT BGS)	USCS SYMBOL	SOIL DESCRIPTION AND OBSERVATIONS
		0		Crushed gravel with few slag
		1	SW	Dark brown and black gravelly SAND with and red brick fragments, dry (FILL)
		2	SP	Reddish-brown fine SAND, loose, dry (FILL) Turns to gray color at 4.5 ft bgs.
T3B1 3-5 (PID: 1.1 ppm)		3		
		4		
		5		
		6	SP	Gray fine SAND, dense, moist (FILL)
		7	SP	Dark gray medium sand, loose, moist (FILL). Tree branch fragment at 7.5 ft.
		8	SP	Gray coarse SAND, loose, moist (FILL)
T3B1 8-10 (3.6 ppm)		9	ML	Gray and reddish brown SILT, very soft, saturated (NATIVE)
		10	SM	Gray silty fine SAND, dense, saturated (NATIVE)
		11		
		12		
		13		
T3B1 13-15 (176 ppm)		14	ML/SP	Lense of gray fine sandy SILT 14 - 14.3 ft with gray very fine SAND below (NATIVE). Petroleum odor and sheen observed.
		15		

Notes:
FT BGS = Feet Below Ground Surface
= denotes start of water saturated soil
USCS = Unified Soil Classification System, modified from ASTM D2488

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Boring ID: T3B2

Drill Date: January 13, 2011
Logged By: Lisa Meoli
Drilled By: Cascade Drilling
Drill Type: Direct Push Geoprobe
Sample Method: direct push 2"x5' core
Boring Diameter: 2 inches
Boring Depth (ft bgs): 15 ft
Groundwater ATD (ft bgs): 14 ft

Coordinate System: State Plane, NAD83
Ground Surface Elevation: NA
Latitude/Northing: 195,771.6
Longitude/Easting: 1,275,859.1

Project: Jorgensen Forge PLO
Task: BP2-JFOS
Site Location: 8351 E. Marginal Way S., Seattle, WA

Remarks: weather rainy, approx 50 degrees

SAMPLE Type/Depth	DRIVEN / RECOVERED	DEPTH (FT BGS)	USCS SYMBOL	SOIL DESCRIPTION AND OBSERVATIONS
		0		Crushed gravel
		1	SW	Dark brown gravelly SAND, loose, dry (FILL)
		2	SP	Brown very fine SAND with trace gravel, moist (FILL). No petroleum odor or sheen, no fill debris observed.
T3B2 3-5 (PID: 1.6 ppm)		3		
		4		
		5		
		6	SP	Brown fine SAND, moist (FILL). No gravel, no petroleum odor or sheen.
		7	SM	Light brown, silty SAND, stiff, dry (FILL?).
		8	SM	Light reddish-brown, fine silty SAND, moist (NATIVE).
T3B2 8-10 (1.9 ppm)		9	SP	Gray and red fine SAND, dense, moist (NATIVE).
		10		
		11	SM	Llight brown, silty SAND mottled with light reddish-brown, moist (NATIVE).
		12		
		13	ML	Reddish-gray fine sandy SILT, very soft, moist (NATIVE). No gravel or debris fill noted. No petroleum sheen or odor.
T3B2 13-15 (1.9 ppm)		14	ML	Gray, sandy SILT, stiff, wet (NATIVE). No gravel or debris fill observed. No petroleum sheen or odor.
		15		

Notes:
FT BGS = Feet Below Ground Surface
= denotes start of water saturated soil
USCS = Unified Soil Classification System, modified from ASTM D2488

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Boring ID: T3B3

Drill Date: January 13, 2011
Logged By: Lisa Meoli
Drilled By: Cascade Drilling
Drill Type: Direct Push Geoprobe
Sample Method: direct push 2"x5' core
Boring Diameter: 2 inches
Boring Depth (ft bgs): 15 ft
Groundwater ATD (ft bgs): 13 ft

Coordinate System: State Plane, NAD83
Ground Surface Elevation: NA
Latitude/Northing: 195,770.7
Longitude/Easting: 1,275,827.1

Project: Jorgensen Forge PLO
Task: BP2-JFOS
Site Location: 8351 E. Marginal Way S., Seattle, WA

Remarks: weather cloudy and rainy

SAMPLE Type/Depth	DRIVEN / RECOVERED	DEPTH (FT BGS)	USCS SYMBOL	SOIL DESCRIPTION AND OBSERVATIONS
		0–2		Crushed gravel and woody plant material.
T3B3 3-5 (PID: 1.3 ppm)		2–5	SP	Reddish-brown, fine SAND, moist with trace gravel and some asphalt pieces throughout, moist (FILL). No petroleum sheen or odor. No debris fill observed.
		5–8		
T3B3 8-10 (1.8 ppm)		8–10	SP	Reddish-brown fine SAND, moist (FILL). Minimal recovery Whitish-red brick fragments at 10 ft bgs.
		10–13		
T3B3 13-15 (2.2 ppm)		13–15	SM	Gray very fine silty SAND, wet (NATIVE).

Notes:
FT BGS = Feet Below Ground Surface
= denotes start of water saturated soil
USCS = Unified Soil Classification System, modified from ASTM D2488

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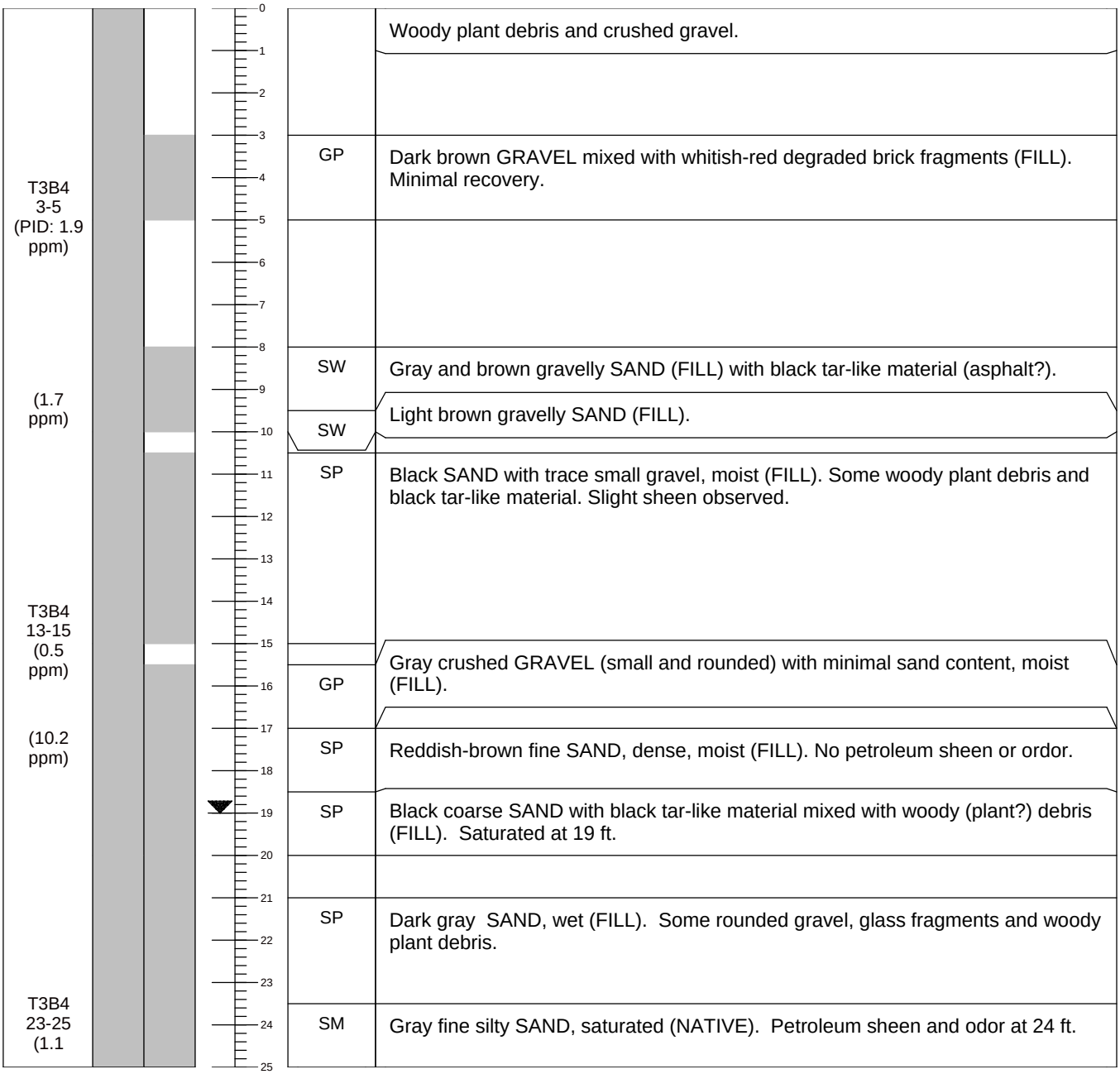
Boring ID: T3B4

Drill Date: January 13, 2011
Logged By: Lisa Meoli
Drilled By: Cascade Drilling
Drill Type: Direct Push Geoprobe
Sample Method: direct push 2"x5' core
Boring Diameter: 2 inches
Boring Depth (ft bgs): 25 ft
Groundwater ATD (ft bgs): 19 ft

Coordinate System: State Plane, NAD83
Ground Surface Elevation: NA
Latitude/Northing: 195,771.2
Longitude/Easting: 1,275,805.8

Project: Jorgensen Forge PLO
Task: BP2-JFOS
Site Location: 8351 E. Marginal Way S., Seattle, WA

Remarks: weather rainy



SAMPLE Type/Depth	DRIVEN / RECOVERED	DEPTH (FT BGS)	USCS SYMBOL	SOIL DESCRIPTION AND OBSERVATIONS
		0–3		Woody plant debris and crushed gravel.
		3–5	GP	Dark brown GRAVEL mixed with whitish-red degraded brick fragments (FILL). Minimal recovery.
		5–8		
		8–9	SW	Gray and brown gravelly SAND (FILL) with black tar-like material (asphalt?).
		9–10	SW	Light brown gravelly SAND (FILL).
		10–15	SP	Black SAND with trace small gravel, moist (FILL). Some woody plant debris and black tar-like material. Slight sheen observed.
		15–16	GP	Gray crushed GRAVEL (small and rounded) with minimal sand content, moist (FILL).
		16–17	SP	Reddish-brown fine SAND, dense, moist (FILL). No petroleum sheen or ordor.
		17–19	SP	Black coarse SAND with black tar-like material mixed with woody (plant?) debris (FILL). Saturated at 19 ft.
		19–21		
		21–24	SP	Dark gray SAND, wet (FILL). Some rounded gravel, glass fragments and woody plant debris.
		24–25	SM	Gray fine silty SAND, saturated (NATIVE). Petroleum sheen and odor at 24 ft.

Notes:
FT BGS = Feet Below Ground Surface
= denotes start of water saturated soil
USCS = Unified Soil Classification System, modified from ASTM D2488

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Boring ID: T4B2

Drill Date: January 14, 2011
Logged By: Lisa Meoli
Drilled By: Cascade Drilling
Drill Type: Direct Push Geoprobe
Sample Method: direct push 2"x5' core
Boring Diameter: 2 inches
Boring Depth (ft bgs): 15 ft
Groundwater ATD (ft bgs): 11.5 ft

Coordinate System: State Plane, NAD83
Ground Surface Elevation: NA
Latitude/Northing: 195,745.3
Longitude/Easting: 1,275,858.1

Project: Jorgensen Forge PLO
Task: BP2-JFOS
Site Location: 8351 E. Marginal Way S., Seattle, WA

Remarks: weather rainy

SAMPLE Type/Depth	DRIVEN / RECOVERED	DEPTH (FT BGS)	USCS SYMBOL	SOIL DESCRIPTION AND OBSERVATIONS
		0		Broken asphalt and crushed gravel
		1	SM	Dark brown silty SAND with gravel (FILL).
T4B2 3-5 (PID: 1.9 ppm)		4	SP	Brown fine SAND (FILL). No gravel or debris fill observed.
		5		
		6	SP	Light brown with orange, dense, dry SAND (FILL).
		7	SW	Dark brown coarse SAND (NATIVE).
		8	SP	Dark brown fine SAND (NATIVE).
T4B2 8-10 (1.5 ppm)		9	ML	Reddish-gray/brown SILT, dry (NATIVE). No gravel or debris
		10		
		11	SM	Reddish-brown fine silty SAND, moist (NATIVE).
		12		
		13	ML	Light gray sandy SILT, soft wet (NATIVE).
T4B2 13-15 (2.1 ppm)		14		
		15		

Notes:
FT BGS = Feet Below Ground Surface
= denotes start of water saturated soil
USCS = Unified Soil Classification System, modified from ASTM D2488

FLOYD | SNIDER
strategy • science • engineering

Boring ID: T4B3

Drill Date: January 14, 2011
Logged By: Lisa Meoli
Drilled By: Cascade Drilling
Drill Type: Direct Push Geoprobe
Sample Method: direct push 2"x5' core
Boring Diameter: 2 inches
Boring Depth (ft bgs): 15 ft
Groundwater ATD (ft bgs): 12 ft

Coordinate System: State Plane, NAD83
Ground Surface Elevation: NA
Latitude/Northing: 195,755.6
Longitude/Easting: 1,275,828.2

Project: Jorgensen Forge PLO
Task: BP2-JFOS
Site Location: 8351 E. Marginal Way S., Seattle, WA

Remarks: weather rainy

SAMPLE Type/Depth	DRIVEN / RECOVERED	DEPTH (FT BGS)	USCS SYMBOL	SOIL DESCRIPTION AND OBSERVATIONS
				Crushed gravel and vegetation
			SM	Dark brown silty SAND (topsoil) with some vegetation and trace gravel.
T4B3 3-5 (PID: 0.8 ppm)			SP	Brown fine SAND, dry (FILL).
			SW	Dark brown coarse SAND, dry (FILL).
T4B3 8-10 (2.2 ppm)			ML	Light reddish-brown SILT, very stiff with trace fine sand, dry, oxidized (FILL?)
			SM	Reddish brown very fine silty SAND, saturated.
T4B3 13-15 (2.8 ppm)			ML	Gray SILT, soft, wet (NATIVE).

Notes:
FT BGS = Feet Below Ground Surface
= denotes start of water saturated soil
USCS = Unified Soil Classification System, modified from ASTM D2488

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Boring ID: T5B3

Drill Date: January 14, 2011
Logged By: Dean Brame
Drilled By: Cascade Drilling
Drill Type: Direct Push Geoprobe
Sample Method: direct push 2"x5' core
Boring Diameter: 2 inches
Boring Depth (ft bgs): 15 ft
Groundwater ATD (ft bgs): 9 ft

Coordinate System: State Plane, NAD83
Ground Surface Elevation: NA
Latitude/Northing: 195,715.3
Longitude/Easting: 1,275,855.9

Project: Jorgensen Forge PLO
Task: BP2-JFOS
Site Location: 8351 E. Marginal Way S., Seattle, WA

Remarks: weather rainy

SAMPLE Type/Depth	DRIVEN / RECOVERED	DEPTH (FT BGS)	USCS SYMBOL	SOIL DESCRIPTION AND OBSERVATIONS
		0		Topsoil and crushed gravel
		2	SW	Dark brown gravelly SAND, dry (FILL). Pale orange brick fragments 2.5 - 4 ft bgs. Light gray concrete at 3.5 ft bgs.
T5B3 3-5 (PID: 2.8 ppm)		5		Dark brown coarse SAND, moist (FILL).
		8	SP	
T5B3 8-10 (3.3 ppm)		9	SM	Brown to gray fine silty SAND, wet (FILL).
		10	CL	Dark gray silty CLAY, medium plasticity, wet (FILL?).
		12	SM	Dark grayish-brown fine sandy SILT, very wet (NATIVE).
T5B3 13-15 (2.8 ppm)		14	SP	Brown coarse SAND with orange mottling, wet (NATEIVE).
		15		

Notes:
FT BGS = Feet Below Ground Surface
= denotes start of water saturated soil
USCS = Unified Soil Classification System, modified from ASTM D2488

Jorgensen Forge Outfall Site
Seattle, Washington

Source Control Action Completion Report

Appendix C
Video Survey Screenshots

Photo 1. Cores collected from 0–15 feet from Boring T1B1.

Photo 2. Cores collected from 0–15 feet Boring T1B2.

Photo 3. Cores collected from 0–20 feet from Boring T1B3.
Note poor recovery of some intervals.

Photo 4. Cores collected from 0–20 feet Boring T1B4.

Photo 5. Cores collected from Boring 0–15 from T2B2. Note prevalence of debris fill.

Photo 6. Sheen noted in 16–20 foot interval core collected from Boring T2B4.

Photo 7. View of the three cores collected from 0–15 feet at Boring T3B1.

Photo 8. View of cores collected from 0–15 feet at Boring T3B2.

Photo 9. View of three spilt cores collected from Boring T3B3 from 0–15 feet.

Photo 10. View of cores collected from Boring 5 to 25’ feet at Boring T3B4.

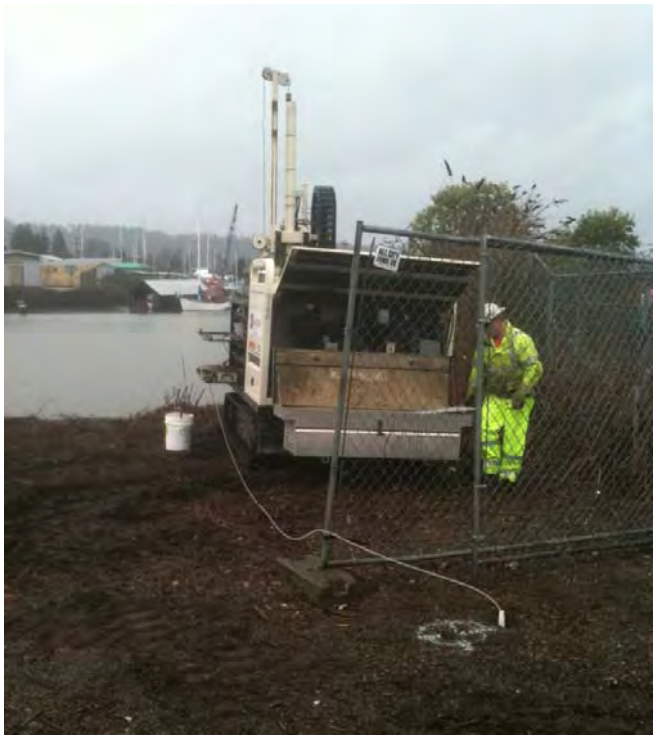

Photo 11. Looking northwest toward Boring T2B3 with temporary screen installed. Geoprobe rig is positioned at Boring T2B4.

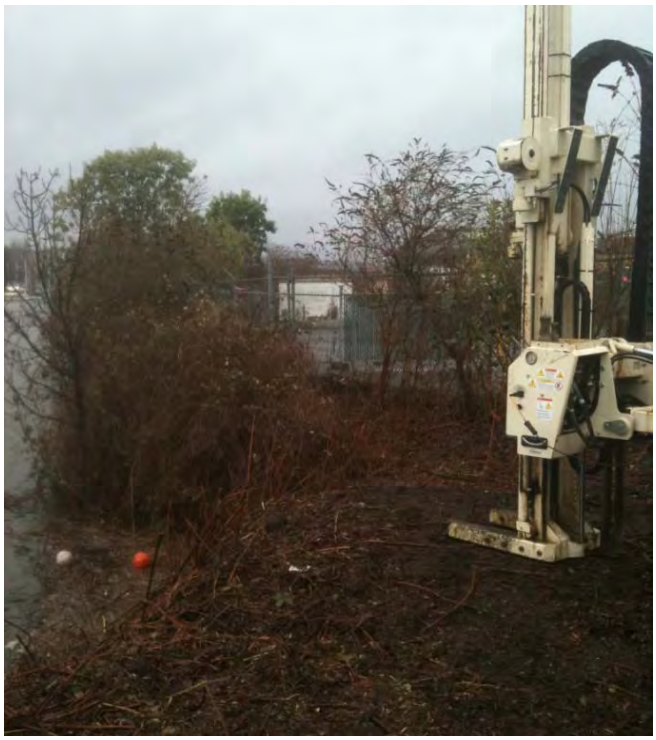

Photo 12. Looking north toward Geoprobe rig positioned at Boring T2B4.

Photo 13. Manhole solids sampling device.

Photo 14. Solids sample collected from public manhole.

Photo 15. Solids sample from SDMH 37-2.

Photo 16. Solids sample collected from SDMH 37-7.

Photo 17. Solids sample collected from SDMH 24B.

Photo 18. Solids sample collected from SDMH 24A.

Photo 19. Solids sample collected from SDMH 15B.

Photo 20. Solids sample collected from SDMH 15A.

Photo 21. View of lumber in Jorgensen 10-inch Lateral, during pre-cleaning inspection, from approximately 22 feet upgradient from connection with 24-inch Pipe.

Photo 22. View of upgradient seal within Jorgensen 10-inch Lateral looking upstream from first bend in pipe, approximately 25 feet upgradient from connection to 24-inch Pipe.

Photo 23. View of SDMH 24A and 24-inch Pipe from surface.
(Photo taken during pre-cleaning inspection.)

Photo 24. Lumber retrieved from SDMH 24A February 18, 2011.
(Source: Anchor QEA, LLC 2011)

Photo 25. Lumber retrieved from Jorgensen 10-inch Lateral in black garbage bag placed in easternmost solid waste bin by subcontractor. Photo dated February 23, 2011.
(Source: Anchor QEA, LLC 2011)

Photo 26. Lumber retrieved from Jorgensen 10-inch Lateral scraped for sampling.

Photo 27. Scrapings of lumber retrieved from Jorgensen 10-inch Lateral collected for sample.

Photo 28. View of Jorgensen Visitor Parking Area 4-inch Lateral from within 24-inch Pipe during pre-cleaning video inspection.

Photo 29. Hydro-excavation of Jorgensen Visitor Parking Area 4-inch Lateral. Arrow indicates broken top of lateral.

Photo 30. Close up of broken top of Jorgensen Visitor Parking Area 4-inch Lateral (arrow). White pipe is irrigation line.

Photo 31. Excavation of Jorgensen Visitor Parking Area 4-inch Lateral backfilled with CDF.

Photo 32. Camera used for pre-cleaning video inspection.

Photo 33. Camera positioned prior to entry for video inspection of Jorgensen 10-inch Lateral.

Photo 34. Camera equipment decontaminated using CAPSUR.

Photo 35. View of section of 12-inch Pipe removed at CMP transition and attachment of cleanout. East is to left.

Photo 36. Placement of seal in 12-inch Pipe at CMP transition. Photo taken looking west.

Photo 37. Placement of CDF in excavation at CMP transition of 12-inch Pipe.

Photo 38. Section of 24-inch Pipe removed at CMP transition.

Photo 39. Seal in 24-inch Pipe at CMP transition.

Photo 40. View of seal and cleanout placed in 24-inch Pipe at CMP transition and backfilling excavation with CDF.

Photo 41. Measurement of 12-inch Pipe at SDMH 15A.

Photo 42. Post-cleaning view of existing upgradient seal of 12-inch Pipe from approximately 3 feet upgradient from SDMH 15B.

Photo 43. Pre-cleaning view looking downstream from approximately 3 feet downgradient from SDMH 15A.

Photo 44. Post-cleaning view looking downstream from approximately 3 feet downgradient from SDMH 15A.

Photo 45. Pre-cleaning view of 24-inch Pipe looking upstream from approximately 100 feet upgradient of SDMH 37-2.

Photo 46. Post-cleaning view of 24-inch Pipe looking upstream from approximately 100 feet upgradient of SDMH 37-2.

Photo 47. Pre-cleaning view of 24-inch Pipe looking downstream from approximately 163 feet downgradient of SDMH 37.7.

Photo 48. Post-cleaning view of 24-inch Pipe looking upstream from approximately 2 feet upgradient of SDMH 24B.

Photo 49. View of factory cap on Jorgensen office lateral during pre-cleaning inspection from approximately 19 feet downgradient of SDMH 37-2.

Photo 50. Pre-cleaning view of 24-inch Pipe looking downstream from approximately 200 feet downgradient of SDMH 24B.

Photo 51. Post-cleaning view of 24-inch Pipe looking downstream from approximately 200 feet downgradient of SDMH 24B.

Photo 52. Pre-cleaning view of 24-inch Pipe looking downstream from approximately 150 feet downgradient of SDMH 24A.

Photo 53. Post-cleaning view of 24-inch Pipe looking downstream from approximately 150 feet downgradient of SDMH 24A.

Photo 54. Pre-cleaning view of Jorgensen 10-inch Lateral looking upstream from approximately 5 feet upgradient from connection to 24-inch Pipe.

Photo 55. Post-cleaning view of Jorgensen 10-inch Lateral looking upstream from approximately 5 feet upgradient from connection to 24-inch Pipe.

Photo 56. Pre-cleaning view of Boeing 15-inch Lateral looking upstream from approximately 10 feet from upgradient seal.

Photo 57. Post-cleaning view of Boeing 15-inch Lateral looking upstream from approximately 10 feet from upgradient seal.

Photo 58. Temporary plug used during cleaning.

Photo 59. Installation of buoys for manhole sealing.

Photo 60. Manhole sealed with CDF.

Photo 61. Cleanouts at CMP transition sealed.

Photo 62. Jorgensen Visitor Parking Area 4-inch Lateral sealed with CDF prior to asphalt patching.

Photo 63. Temporary storage of material excavated from CMP transition.

Photo 64. View looking northwest at solid waste bins and water treatment system on Jorgensen Forge Property.

Photo 65. View of water treatment components.

Jorgensen Forge Outfall Site
Seattle, Washington

Source Control Action Completion Report

Appendix D
Video Survey Inspection DVDs
(provided on DVD)

Jorgensen Forge Outfall Site
Seattle, Washington

Source Control Action Completion Report

Appendix E
City of Tukwila Permit

City of Tukwila

Department of Public Works
6300 Southcenter Boulevard, Suite #100
Tukwila, Washington 98188
Phone: 206-433-0179
Fax: 206-431-3665
Web site: *http://www.ci.tukwila.wa.us*

PUBLIC WORKS CONSTRUCTION PERMIT

Parcel No.: **0001600023**
Address: **8531 EAST MARGINAL WY S TUKW**
Location:

Permit Number: PW11-002
Issue Date: 02/02/2011
Permit Expires On: 08/01/2011

Project Name: JORGENSEN FORGE CORPORATION

Owner:
Name: **JORGENSEN FORGE CORP**
Address: C/O DOUG JAMES , 8531 E MARGINAL WAY S 98108

Contact Person:
Name: **AL SCHUMACHER BRAVO ENVIRONMENTAL** Phone: (425)424-9000
Address: 6437 SOUTH 144TH ST , TUKWILA WA 98168

Contractor:
Name: **BRAVO ENVIRONMENTAL NW INC** Phone: (425)424-9000
Address: 6705 NE 175TH ST , KENMORE WA 98028
Contractor License No: BRAVOEN911P9 Expiration Date: 11/04/2011

DESCRIPTION OF WORK:
PLUGGING AND SEALING 24" STORM DRAIN AT PUBLIC MANHOLE
AND EXCAVATING, JETTING, CUUTING AND PLUGGING EXISTING 15" AND 24" STORM DRAIN PIPES AT THE END,
FILLING MHs WITH CDF.
WORK TO BE DONE PER SEPTEMBER 30, 2010 US EPA REGION 10 OFFICE OF ENVIRONMENTAL CLEANUP ACTION
MEMORANDUM FOR THE JORGENSEN-FORGE OUTFALL SITE.

Value of Construction: $0.00 Fees Collected: $7,006.00

Public Works Activities:

Channelization / Striping:	N						
Curb Cut / Access / Sidewalk / CSS:	N						
Fire Loop Hydrant:	N	Number:	0		Size (Inches):	0	
Flood Control Zone:	N						
Hauling:	N	Start Time:			End Time:		
Land Altering:	N	Volumes:	Cut	0 c.y.	Fill	0 c.y.	
Landscape Irrigation:	N						
Moving Oversize Load:	N	Start Time:			End Time:		
Sanitary Side Sewer:	N	Number:	0				
Sewer Main Extension:	N	Private:	N		Public:	N	
Storm Drainage:	Y						
Street Use:	Y	Profit:	N		Non-Profit:	N	
Water Main Extension:	N	Private:	N		Public:	N	
Water Meter:	N						

Permit Center Authorized Signature: _____ Date: 02/02/11

I hereby certify that I have read and examined this permit and know the same to be true and correct. All provisions of law and ordinances governing this work will be complied with, whether specified herein or not.

The granting of this permit does not presume to give authority to violate or cancel the provisions of any other state or local laws regulating construction or the performance of work. I am authorized to sign and obtain this construction permit and agree to the conditions attached to this permit.

Signature: _____ Date: 2/02/11

Print Name: MIKE PORRIA

This permit shall become null and void if the work is not commenced within 180 days from the date of issuance, or if the work is suspended or abandoned for a period of 180 days from the last inspection.

PERMIT CONDITIONS

1: ***PUBLIC WORKS DEPARTMENT CONDITIONS***

2: The applicant shall call Public Works at 206 433-0179 minimum 24 hours in advance to schedule a pre-construction meeting with Public Works Project Inspector.
The applicant must notify the City Project Inspector at (206)433-0179 upon commencement and completion of work at least 24 hours in advance. All inspection requests for utility work must also be made 24 hours in advance.

3: Contractor shall notify Public Works Project Inspector at (206)433-0179 of commencement and completion of work at least 24 hours in advance.

4: Work affecting traffic flows shall be closely coordinated with the City Project Inspector. Traffic Control Plans shall be submitted to the Inspector for prior approval.

5: Permit is valid between the weekday hours of 7:00 a.m. and 3:30 p.m. only.

6: Flagging, signing and coning shall be in accordance with MUTCD for Traffic Control. Sweep or otherwise clean streets to the satisfaction of Public Works each night around your construction zone (No flushing allowed). Notify City Inspector before 12:00 Noon on Friday preceding any weekend work.

7: Any material spilled onto any street shall be cleaned up immediately.

8: Temporary erosion control measures shall be implemented as the first order of business to prevent sedimentation off-site or into existing drainage facilities.

9: The site shall have permanent erosion control measures in place as soon as possible after final grading has been completed and prior to the Final Inspection.

Jorgensen Forge Outfall Site
Seattle, Washington

Source Control Action Completion Report

Appendix F
Analytical Reports

Analytical Resources, Incorporated
Analytical Chemists and Consultants

December 30, 2010

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge PLO
ARI Job No: SC18 (revised 1/21/11)

Dear Tom:

Please find enclosed analytical results and Chain of Custody documentation (COC) for the project referenced above. Analytical Resources, Incorporated (ARI) accepted six water samples on December 22, 2010. The samples were received in good condition.

The samples were analyzed for total metals and general chemistry parameters, as requested on the COC.

No analytical complications were noted for these analyses. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206-695-6211

Enclosures

cc: eFile SC18

KB/kb

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: SC18	Turn-around Requested: STAT	Page: 1 of 1	
ARI Client Company: Floyd Snider	Phone: (206) 292-2078	Date: 12/22/10	Ice Present? Y
Client Contact: Tom Colligan		No. of Coolers: 1	Cooler Temps: 5.3
Client Project Name: Jorgensen Forge PLO Cleanout			
Client Project #: P2JO	Samplers: Lisa Meoli / Dean Browne		

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

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Alkalinity	Anions	Cations	pH	Salinity				Notes/Comments
JF-PLSD-SW-24A	12/22/10	8:05	SW	3	↓	↓	↓	↓	↓				
JF-PLSD-SW-24B		8:30	SW	3									
JF-PLSD-SW-37-7		8:50	SW	3									
JF-PLSD-SW-372		9:15	SW	3									
JF-PLSD-SW-Public		9:45	SW	3									
JF-PLSD-SW-Public D		9:45	SW	3									

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Lisa Meoli	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: Floyd | Snider	Company: ARI	Company:	Company:
	Date & Time: 12/22/10 11:00	Date & Time: 12/22/10 1100	Date & Time:	Date & Time:

SC18:00002

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: Floyd Snider
COC No(s): (NA)
Assigned ARI Job No: SC18

Project Name: Jorgenson Forge PLO Clearout
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) 5.3		
If cooler temperature is out of compliance fill out form 00070F	Temp Gun ID#: 90941619	

Cooler Accepted by: JM Date: 12/22/10 Time: 1100

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)	

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

Samples Logged by: JM Date: 12/22/10 Time: 1115

***** 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:

By: Date:

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm	
			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

PRESERVATION VERIFICATION 12/22/10
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **SC18**

PC: Sue D.
VTSR: 12/22/10

Inquiry Number: NONE
Analysis Requested: 12/22/10
Contact: Colligan, Tom
Client: Floyd/Snider
Logged by: JM
Sample Set Used: Yes-440
Validatable Package: No
Deliverables:

Project #: P2JO
Project: Jorgenson Forge PLO Cleanout
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
10-31771 **SC18A**	JF-PLSD-SW-24A						TOT															
10-31772 **SC18B**	JF-PLSD-SW-24B						TOT															
10-31773 **SC18C**	JF-PLSD-SW-37-7						TOT															
10-31774 **SC18D**	JF-PLSD-SW-37-2						TOT															
10-31775 **SC18E**	JF-PLSD-SW-Public						TOT															
10-31776 **SC18F**	JF-PLSD-SW-Public-D						TOT															

SC18 :0000h

Checked By JM Date 12/22/10

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: SC18MB
LIMS ID: 10-31771
Matrix: Stormwater
Data Release Authorized:
Reported: 12/27/10

QC Report No: SC18-Floyd/Snider
Project: Jorgenson Forge PLO Cleanout
P2JO
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	12/22/10	6010B	12/23/10	7440-70-2	Calcium	0.05	0.05	U
3010A	12/22/10	6010B	12/23/10	7439-95-4	Magnesium	0.05	0.05	U
3010A	12/22/10	6010B	12/23/10	7440-09-7	Potassium	0.5	0.5	U
3010A	12/22/10	6010B	12/23/10	7440-23-5	Sodium	0.5	0.5	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-SW-24A
SAMPLE

Lab Sample ID: SC18A
LIMS ID: 10-31771
Matrix: Stormwater
Data Release Authorized:
Reported: 12/27/10

QC Report No: SC18-Floyd/Snider
Project: Jorgenson Forge PLO Cleanout P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	12/22/10	6010B	12/23/10	**7440-70-2**	**Calcium**	0.05	**15.4**	
3010A	12/22/10	6010B	12/23/10	**7439-95-4**	**Magnesium**	0.05	**21.8**	
3010A	12/22/10	6010B	12/23/10	**7440-09-7**	**Potassium**	0.5	**7.5**	
3010A	12/22/10	6010B	12/23/10	**7440-23-5**	**Sodium**	0.5	**176**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-SW-24B
SAMPLE

Lab Sample ID: SC18B
LIMS ID: 10-31772
Matrix: Stormwater
Data Release Authorized:
Reported: 12/27/10

QC Report No: SC18-Floyd/Snider
Project: Jorgenson Forge PLO Cleanout P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	12/22/10	6010B	12/23/10	**7440-70-2**	**Calcium**	0.05	**18.2**	
3010A	12/22/10	6010B	12/23/10	**7439-95-4**	**Magnesium**	0.05	**31.1**	
3010A	12/22/10	6010B	12/23/10	**7440-09-7**	**Potassium**	0.5	**10.4**	
3010A	12/22/10	6010B	12/23/10	**7440-23-5**	**Sodium**	0.5	**256**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-SW-37-7
SAMPLE

Lab Sample ID: SC18C
LIMS ID: 10-31773
Matrix: Stormwater
Data Release Authorized:
Reported: 12/27/10

QC Report No: SC18-Floyd/Snider
Project: Jorgenson Forge PLO Cleanout P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	12/22/10	6010B	12/23/10	**7440-70-2**	**Calcium**	0.05	**18.1**	
3010A	12/22/10	6010B	12/23/10	**7439-95-4**	**Magnesium**	0.05	**31.1**	
3010A	12/22/10	6010B	12/23/10	**7440-09-7**	**Potassium**	0.5	**10.6**	
3010A	12/22/10	6010B	12/23/10	**7440-23-5**	**Sodium**	0.5	**259**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-SW-37-2
SAMPLE

Lab Sample ID: SC18D
LIMS ID: 10-31774
Matrix: Stormwater
Data Release Authorized:
Reported: 12/27/10

QC Report No: SC18-Floyd/Snider
Project: Jorgenson Forge PLO Cleanout P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	12/22/10	6010B	12/23/10	**7440-70-2**	**Calcium**	0.05	**17.2**	
3010A	12/22/10	6010B	12/23/10	**7439-95-4**	**Magnesium**	0.05	**28.4**	
3010A	12/22/10	6010B	12/23/10	**7440-09-7**	**Potassium**	0.5	**9.6**	
3010A	12/22/10	6010B	12/23/10	**7440-23-5**	**Sodium**	0.5	**233**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-SW-Public SAMPLE

Lab Sample ID: SC18E
LIMS ID: 10-31775
Matrix: Stormwater
Data Release Authorized:
Reported: 12/27/10

QC Report No: SC18-Floyd/Snider
Project: Jorgenson Forge PLO Cleanout P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	12/22/10	6010B	12/23/10	**7440-70-2**	**Calcium**	0.05	**19.6**	
3010A	12/22/10	6010B	12/23/10	**7439-95-4**	**Magnesium**	0.05	**32.3**	
3010A	12/22/10	6010B	12/23/10	**7440-09-7**	**Potassium**	0.5	**11.0**	
3010A	12/22/10	6010B	12/23/10	**7440-23-5**	**Sodium**	0.5	**272**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-SW-Public-D
SAMPLE

Lab Sample ID: SC18F
LIMS ID: 10-31776
Matrix: Stormwater
Data Release Authorized:
Reported: 12/27/10

QC Report No: SC18-Floyd/Snider
Project: Jorgenson Forge PLO Cleanout P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	12/22/10	6010B	12/23/10	**7440-70-2**	**Calcium**	0.05	**20.9**	
3010A	12/22/10	6010B	12/23/10	**7439-95-4**	**Magnesium**	0.05	**34.2**	
3010A	12/22/10	6010B	12/23/10	**7440-09-7**	**Potassium**	0.5	**11.7**	
3010A	12/22/10	6010B	12/23/10	**7440-23-5**	**Sodium**	0.5	**291**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: SC18LCS
LIMS ID: 10-31771
Matrix: Stormwater
Data Release Authorized:
Reported: 12/27/10

QC Report No: SC18-Floyd/Snider
Project: Jorgenson Forge PLO Cleanout P2JO
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Calcium	6010B	9.72	10.0	97.2%	
Magnesium	6010B	9.87	10.0	98.7%	
Potassium	6010B	10.1	10.0	101%	
Sodium	6010B	9.9	10.0	99.0%	

Reported in mg/L

N-Control limit not met
Control Limits: 80-120%

METHOD BLANK RESULTS-CONVENTIONALS
SC18-Floyd/Snider

ANALYTICAL RESOURCES INCORPORATED

Matrix: Stormwater
Data Release Authorized:
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Conductivity	EPA 120.1	12/23/10	umhos/cm	< 1.00 U	
Salinity	SM 2520.B	12/23/10	ppt	< 0.10 U	
Chloride	EPA 300.0	12/23/10	mg/L	< 0.1 U	
Sulfate	EPA 300.0	12/23/10	mg/L	< 0.1 U	

SC18:00013 R 3/3/11

SAMPLE RESULTS-CONVENTIONALS
SC18-Floyd/Snider

ANALYTICAL RESOURCES INCORPORATED

Matrix: Stormwater
Data Release Authorized:
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10

Client ID: JF-PLSD-SW-24A
ARI ID: 10-31771 SC18A

Analyte	Date Batch	Method	Units	RL	Sample
pH	12/22/10 122210#1	EPA 150.1	std units	0.01	6.81
Alkalinity	12/22/10 122210#1	SM 2320	mg/L CaCO3	1.0	37.8
Carbonate	12/22/10	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	12/22/10	SM 2320	mg/L CaCO3	1.0	37.8
Hydroxide	12/22/10	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Conductivity	12/23/10 122310#1	EPA 120.1	umhos/cm	1.00	1,130
Salinity	12/23/10 122310#1	SM 2520.B	ppt	0.10	0.60
Chloride	12/23/10 122310#1	EPA 300.0	mg/L	10.0	311
Sulfate	12/23/10 122310#1	EPA 300.0	mg/L	10.0	40.4

RL Analytical reporting limit
U Undetected at reported detection limit

SC18:00014

SAMPLE RESULTS-CONVENTIONALS
SC18-Floyd/Snider

ANALYTICAL RESOURCES INCORPORATED

Matrix: Stormwater
Data Release Authorized:
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10

Client ID: JF-PLSD-SW-24B
ARI ID: 10-31772 SC18B

Analyte	Date Batch	Method	Units	RL	Sample
pH	12/22/10 122210#1	EPA 150.1	std units	0.01	6.78
Alkalinity	12/22/10 122210#1	SM 2320	mg/L CaCO3	1.0	38.2
Carbonate	12/22/10	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	12/22/10	SM 2320	mg/L CaCO3	1.0	38.2
Hydroxide	12/22/10	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Conductivity	12/23/10 122310#1	EPA 120.1	umhos/cm	1.00	1,590
Salinity	12/23/10 122310#1	SM 2520.B	ppt	0.10	0.80
Chloride	12/23/10 122310#1	EPA 300.0	mg/L	10.0	477
Sulfate	12/23/10 122310#1	EPA 300.0	mg/L	10.0	60.0

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
SC18-Floyd/Snider

ANALYTICAL RESOURCES INCORPORATED

Matrix: Stormwater
Data Release Authorized: CJF
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10

Client ID: JF-PLSD-SW-37-7
ARI ID: 10-31773 SC18C

Analyte	Date Batch	Method	Units	RL	Sample
pH	12/22/10 122210#1	EPA 150.1	std units	0.01	6.88
Alkalinity	12/22/10 122210#1	SM 2320	mg/L CaCO3	1.0	38.9
Carbonate	12/22/10	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	12/22/10	SM 2320	mg/L CaCO3	1.0	38.9
Hydroxide	12/22/10	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Conductivity	12/23/10 122310#1	EPA 120.1	umhos/cm	1.00	1,630
Salinity	12/23/10 122310#1	SM 2520.B	ppt	0.10	0.80
Chloride	12/23/10 122310#1	EPA 300.0	mg/L	10.0	490
Sulfate	12/23/10 122310#1	EPA 300.0	mg/L	10.0	62.5

RL Analytical reporting limit
U Undetected at reported detection limit

SC18:00016R

SAMPLE RESULTS-CONVENTIONALS
SC18-Floyd/Snider

ANALYTICAL RESOURCES INCORPORATED

Matrix: Stormwater
Data Release Authorized:
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10

Client ID: JF-PLSD-SW-37-2
ARI ID: 10-31774 SC18D

Analyte	Date Batch	Method	Units	RL	Sample
pH	12/22/10 122210#1	EPA 150.1	std units	0.01	6.96
Alkalinity	12/22/10 122210#1	SM 2320	mg/L CaCO3	1.0	32.4
Carbonate	12/22/10	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	12/22/10	SM 2320	mg/L CaCO3	1.0	32.4
Hydroxide	12/22/10	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Conductivity	12/23/10 122310#1	EPA 120.1	umhos/cm	1.00	1,490
Salinity	12/23/10 122310#1	SM 2520.B	ppt	0.10	0.70
Chloride	12/23/10 122310#1	EPA 300.0	mg/L	10.0	441
Sulfate	12/23/10 122310#1	EPA 300.0	mg/L	10.0	54.5

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
SC18-Floyd/Snider

ANALYTICAL RESOURCES INCORPORATED

Matrix: Stormwater
Data Release Authorized:
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10

Client ID: JF-PLSD-SW-Public
ARI ID: 10-31775 SC18E

Analyte	Date Batch	Method	Units	RL	Sample
pH	12/22/10 122210#1	EPA 150.1	std units	0.01	6.85
Alkalinity	12/22/10 122210#1	SM 2320	mg/L CaCO3	1.0	39.2
Carbonate	12/22/10	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	12/22/10	SM 2320	mg/L CaCO3	1.0	39.2
Hydroxide	12/22/10	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Conductivity	12/23/10 122310#1	EPA 120.1	umhos/cm	1.00	1,700
Salinity	12/23/10 122310#1	SM 2520.B	ppt	0.10	0.90
Chloride	12/23/10 122310#1	EPA 300.0	mg/L	20.0	519
Sulfate	12/23/10 122310#1	EPA 300.0	mg/L	20.0	64.9

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
SC18-Floyd/Snider

ANALYTICAL RESOURCES INCORPORATED

Matrix: Stormwater
Data Release Authorized:
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10

Client ID: JF-PLSD-SW-Public-D
ARI ID: 10-31776 SC18F

Analyte	Date Batch	Method	Units	RL	Sample
pH	12/22/10 122210#1	EPA 150.1	std units	0.01	6.74
Alkalinity	12/22/10 122210#1	SM 2320	mg/L CaCO3	1.0	38.8
Carbonate	12/22/10	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	12/22/10	SM 2320	mg/L CaCO3	1.0	38.8
Hydroxide	12/22/10	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Conductivity	12/23/10 122310#1	EPA 120.1	umhos/cm	1.00	1,750
Salinity	12/23/10 122310#1	SM 2520.B	ppt	0.10	0.90
Chloride	12/23/10 122310#1	EPA 300.0	mg/L	20.0	529
Sulfate	12/23/10 122310#1	EPA 300.0	mg/L	20.0	67.8

RL Analytical reporting limit
U Undetected at reported detection limit

LAB CONTROL RESULTS-CONVENTIONALS
SC18-Floyd/Snider

ANALYTICAL RESOURCES INCORPORATED

Matrix: Stormwater
Data Release Authorized:
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
pH EPA 150.1	ICVL	12/22/10	std units	6.99	7.00	0.01
Salinity SM 2520.B	ICVL	12/23/10	ppt	43,400	47,600	91.2%

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

STANDARD REFERENCE RESULTS-CONVENTIONALS
SC18-Floyd/Snider

ANALYTICAL RESOURCES INCORPORATED

Matrix: Stormwater
Data Release Authorized:
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Alkalinity ERA #P114506	SM 2320	12/22/10	mg/L CaCO3	99.5	102	97.5%
Conductivity Ricca #3193	EPA 120.1	12/23/10	umhos/cm	984	1,000	98.4%
Chloride ERA #230109	EPA 300.0	12/23/10	mg/L	3.0	3.0	100.0%
Sulfate ERA #220109	EPA 300.0	12/23/10	mg/L	3.0	3.0	100.0%

REPLICATE RESULTS-CONVENTIONALS
SC18-Floyd/Snider

ANALYTICAL RESOURCES INCORPORATED

Matrix: Stormwater
Data Release Authorized:
Reported: 03/02/11

Project: Jorgenson Forge PLO Cleanout
Event: P2JO
Date Sampled: 12/22/10
Date Received: 12/22/10

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: SC18A Client ID: JF-PLSD-SW-24A						
pH	EPA 150.1	12/22/10	std units	6.81	6.79	0.02
Alkalinity	SM 2320	12/22/10	mg/L CaCO3	37.8	37.5	0.8%
Carbonate	SM 2320	12/22/10	mg/L CaCO3	< 1.0	< 1.0	NA
Bicarbonate	SM 2320	12/22/10	mg/L CaCO3	37.8	37.5	0.8%
Hydroxide	SM 2320	12/22/10	mg/L CaCO3	< 1.0	< 1.0	NA
Chloride	EPA 300.0	12/23/10	mg/L	311	317	1.9%
Sulfate	EPA 300.0	12/23/10	mg/L	40.4	42.1	4.1%
ARI ID: SC18B Client ID: JF-PLSD-SW-24B						
Conductivity	EPA 120.1	12/23/10	umhos/cm	1,590	1,600	0.6%
Salinity	SM 2520.B	12/23/10	ppt	0.80	0.80	0.0%

pH is evaluated as the Absolute Difference between the values rather than Relative Percent Difference

Analytical Resources, Incorporated
Analytical Chemists and Consultants

January 21, 2011

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge PLO
ARI Job No: SD56

Dear Tom:

Please find enclosed analytical results and the original and a revised copy of the Chain of Custody documentation (COC) for the project referenced above. Analytical Resources, Incorporated (ARI) accepted one water sample on January 6, 2011. The samples were received in good condition.

The samples were analyzed for total metals and general chemistry parameters, as requested.

No analytical complications were noted for these analyses. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206-695-6211

Enclosures

cc: eFile SD56

KB/kb

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: SD56	Turn-around Requested: Standard	Page: 1 of 1	
ARI Client Company: Floyd | Snider	Phone: 206-292-2078	Date: 1/6/11	Ice Present? Y
Client Contact: Lisa Meoli / Teri Floyd	teri.floyd@floydsnider.com; lisa.meoli@floydsnider.com	No. of Coolers: 1	Cooler Temps: 5.3
Client Project Name: Boeing Plant 2			
Client Project #: BP2-BOE CM11 Task 1.1	Samplers: Lisa Meoli		

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Alkalinity	Anions	Cations	pH	Salinity				Notes/Comments
LDW-Stilling Well	1/6/11	13:00	SW	3	✓	✓	✓	✓	✓				

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Lisa Meoli	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: Floyd | Snider	Company: ARI	Company:	Company:
	Date & Time: 1/6/11 1420	Date & Time: 1/6/11 1420	Date & Time:	Date & Time:

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

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

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

ARI Assigned Number:	Turn-around Requested: Standard	Page: 1 of 1	
ARI Client Company: Floyd Snider	Phone: [illegible]	Date: [illegible]	Ice Present? Y
Client Contact: Tom Colligan, Nick Garson (LW) 1/7/11 [illegible]		No. of Coolers: 1	Cooler Temps: 5.3
Client Project Name: 1/7/11 (LW) Jorgensen Forge PLO 1/7/11 (LW)			
Client Project #: 1/7/11 (LW)	Samplers: Lisa Meoli		

Sample ID 7KPL2JOR (LW)	Date	Time	Matrix	No. Containers	Alkalinity	Anions	Cations	pH	Salinity				Notes/Comments
LOW-Stilling Well	1/6/11	13:00	SW	3	✓	✓	✓	✓	✓				

Comments/Special Instructions	Relinquished by: (Signature) [illegible]	Received by (Signature) [illegible]	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: [illegible]	Printed Name: [illegible]	Printed Name:	Printed Name:
	Company: Floyd Snider	Company: ARI	Company:	Company:
	Date & Time: 1/6/11 14:20	Date & Time: 1/6/11 1420	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.

PRESERVATION VERIFICATION 01/06/11
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SD56

Inquiry Number: NONE
Analysis Requested: 01/06/11
Contact: Ernst, Will
Client: The Boeing Company
Logged by: AV
Sample Set Used: Yes-440
Validatable Package: No
Deliverables:

PC: Kelly
VTSR: 01/06/11

Project #: BP@2-BOE CMI11 Task 1.1
Project: Boeing Plant 2
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
11-298 **SD56A**	LDW-Stilling Well						TOT															

Checked By AV Date 1/6/11

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Boeing Project Name: Boeing Plant 2

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: SD56 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): 5.3 ___ ___ ___ ___

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941609

Cooler Accepted by: AV Date: 1/6/11 Time: 1420

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: empty bottles			
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)		_____

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

Samples Logged by: AV Date: 1/6/11 Time: 1435

***** 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:

By: Date:

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm	Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

SAMPLE RESULTS-CONVENTIONALS
SD56-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Stormwater
Data Release Authorized:
Reported: 01/21/11

Project: Jorgensen Forge PLO
Event: 7KPL2JOR
Date Sampled: 01/06/11
Date Received: 01/06/11

Client ID: LDW-Stilling Well
ARI ID: 11-298 SD56A

Analyte	Date Batch	Method	Units	RL	Sample
pH	01/06/11 010611#1	EPA 150.1	std units	0.01	6.73
Alkalinity	01/07/11 010711#1	SM 2320	mg/L CaCO3	1.0	55.2
Carbonate	01/07/11	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	01/07/11	SM 2320	mg/L CaCO3	1.0	55.2
Hydroxide	01/07/11	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Conductivity	01/11/11 011111#1	EPA 120.1	umhos/cm	1.00	7,400
Salinity	01/11/11 011111#1	SM 2520.B	ppt	0.10	4.00
Chloride	01/18/11 011811#1	EPA 300.0	mg/L	100	2,510
Sulfate	01/08/11 010811#1	EPA 300.0	mg/L	10.0	363

RL Analytical reporting limit
U Undetected at reported detection limit

METHOD BLANK RESULTS-CONVENTIONALS
SD56-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Stormwater
Data Release Authorized:
Reported: 01/21/11

Project: Jorgensen Forge PLO
Event: 7KPL2JOR
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Conductivity	EPA 120.1	01/11/11	umhos/cm	< 1.00 U	
Salinity	SM 2520.B	01/11/11	ppt	< 0.10 U	
Chloride	EPA 300.0	01/18/11	mg/L	< 0.1 U	
Sulfate	EPA 300.0	01/08/11	mg/L	< 0.1 U	

LAB CONTROL RESULTS-CONVENTIONALS
SD56-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Stormwater
Data Release Authorized:
Reported: 01/21/11

Project: Jorgensen Forge PLO
Event: 7KPL2JOR
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
pH EPA 150.1	ICVL	01/06/11	std units	7.02	7.00	0.02
Salinity SM 2520.B	ICVL	01/11/11	ppt	43,300	47,600	91.0%

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

STANDARD REFERENCE RESULTS-CONVENTIONALS
SD56-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Stormwater
Data Release Authorized:
Reported: 01/21/11

Project: Jorgensen Forge PLO
Event: 7KPL2JOR
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Alkalinity ERA #P114506	SM 2320	01/07/11	mg/L CaCO3	99.4	102	97.5%
Conductivity Ricca #3193	EPA 120.1	01/11/11	umhos/cm	993	1,000	99.3%
Chloride ERA #230109	EPA 300.0	01/18/11	mg/L	3.1	3.0	103.3%
Sulfate ERA #220109	EPA 300.0	01/08/11	mg/L	3.1	3.0	103.3%

REPLICATE RESULTS-CONVENTIONALS
SD56-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Stormwater
Data Release Authorized:
Reported: 01/21/11

Project: Jorgensen Forge PLO
Event: 7KPL2JOR
Date Sampled: 01/06/11
Date Received: 01/06/11

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: SD56A Client ID: LDW-Stilling Well						
pH	EPA 150.1	01/06/11	std units	6.73	6.74	0.01
Alkalinity	SM 2320	01/07/11	mg/L CaCO3	55.2	55.3	0.2%
Carbonate	SM 2320	01/07/11	mg/L CaCO3	< 1.0	< 1.0	NA
Bicarbonate	SM 2320	01/07/11	mg/L CaCO3	55.2	55.3	0.2%
Hydroxide	SM 2320	01/07/11	mg/L CaCO3	< 1.0	< 1.0	NA
Conductivity	EPA 120.1	01/11/11	umhos/cm	7,400	7,400	0.0%
Salinity	SM 2520.B	01/11/11	ppt	4.00	4.00	0.0%

pH is evaluated as the Absolute Difference between the values rather than Relative Percent Difference

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: LDW-Stilling Well
SAMPLE

Lab Sample ID: SD56A
LIMS ID: 11-298
Matrix: Stormwater
Data Release Authorized:
Reported: 01/14/11

QC Report No: SD56-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/06/11
Date Received: 01/06/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	01/07/11	6010B	01/10/11	7440-70-2	Calcium	0.05	62.5	
3010A	01/07/11	6010B	01/10/11	7439-95-4	Magnesium	0.05	163	
3010A	01/07/11	6010B	01/10/11	7440-09-7	Potassium	0.5	53.4	
3010A	01/07/11	6010B	01/10/11	7440-23-5	Sodium	0.5	1,460	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: METHOD BLANK

Lab Sample ID: SD56MB
LIMS ID: 11-298
Matrix: Stormwater
Data Release Authorized:
Reported: 01/14/11

QC Report No: SD56-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	01/07/11	6010B	01/10/11	7440-70-2	Calcium	0.05	0.05	U
3010A	01/07/11	6010B	01/10/11	7439-95-4	Magnesium	0.05	0.05	U
3010A	01/07/11	6010B	01/10/11	7440-09-7	Potassium	0.5	0.5	U
3010A	01/07/11	6010B	01/10/11	7440-23-5	Sodium	0.5	0.5	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: LAB CONTROL

Lab Sample ID: SD56LCS
LIMS ID: 11-298
Matrix: Stormwater
Data Release Authorized:
Reported: 01/14/11

QC Report No: SD56-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Calcium	6010B	10.1	10.0	101%	
Magnesium	6010B	10.4	10.0	104%	
Potassium	6010B	10.6	10.0	106%	
Sodium	6010B	10.7	10.0	107%	

Reported in mg/L

N-Control limit not met
Control Limits: 80-120%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

January 27, 2011

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge PLO
ARI Job No: SE66 (Level III Package Addendum March 22, 2011)
Revised on 4/7/11

Dear Tom:

Please find enclosed analytical results and the original Chain of Custody documentation (COC) for the project referenced above. Analytical Resources, Incorporated (ARI) accepted seven water samples, ten soil samples and a trip blank on January 13, 2011. The samples were received in good condition.

The samples were analyzed for Total Metals, SVOCs, VOCs, PCBs and NWTPH-Dx, as requested.

The SVOCs water 1/20/11 CCAL is out of control low for phenol, N-Nitroso-di-n-propylamine, 2,2-oxybis (1-Chloropropane) and 2,4-Dinitrophenol are out of control low and benzo (g,h,i) perylene and dibenzo (a,h) anthracene are out of control high. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The SVOCs water 1/20/11 LCS is out of control high for chrysene, Indeno (1,2,3-cd) pyrene and dibenzo (a,h) anthracene. The LCSD is in control and no action was taken.

The SVOCs 1/20/11 soil CCAL is out of control low for 2,4-Dinitrophenol and out of control high for 4-Nitrophenol, benzo(b)fluoranthene and fluoranthene. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The SVOCs 1/21/11 soil CCAL is out of control high for 4-Nitrophenol and fluoranthene. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The VOCs 1/17/11 CCAL is out of control low for 2-Chloroethylvinylether. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The VOCs 1/17/11 LCS and LCSD are out of control low for 2-Chloroethylvinylether and out of control high for methyl iodide. No action was taken.

Upon further review it was noted that the 1/21/11 NWTPH-Dx continuing calibrations #2 and #3 were out of control high for Mineral Oil. The samples contained a mixture of motor oil and mineral oil and were identified as motor oil. No corrective action was taken.

No other analytical complications were noted for these analyses. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Analytical Resources, Incorporated
Analytical Chemists and Consultants

January 27, 2011

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge PLO
ARI Job No: SE66

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The SVOCs water 1/20/11 LCS is out of control high for chrysene, Indeno (1,2,3-cd) pyrene and dibenzo (a,h) anthracene. The LCSD is in control and no action was taken.

The SVOCs 1/20/11 soil CCAL is out of control low for 2,4-Dinitrophenol and out of control high for 4-Nitrophenol and fluoranthene. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The VOCs 1/17/11 CCAL is out of control low for 2-Chloroethylvinylether. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The VOCs 1/17/11 LCS and LCSD are out of control low for 2-Chloroethylvinylether and out of control high for methyl iodide. No action was taken.

No other analytical complications were noted for these analyses. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206-695-6211
Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 5F66	Turn-around Requested: STANDARD	Page: 1 of 4	
ARI Client Company: F/S Boeing	Phone: 206-292-2078	Date: 1/13/11	Ice Present? Y
Client Contact: NICK GARSON and TOM COLLIGAN		No. of Coolers: 3	Cooler Temps: 4.3, 4.3, 5.4
Client Project Name: Jorgensen Forge PLO			
Client Project #: 7KPL2JOR	Samplers: DEAN BRAME / LISA MEOLI		

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

Sample ID	Date	Time	Matrix	No. Containers	PCBs	VOCs	Metals As, Cd, Cu, Pb Ni, Zn	TPH-D	SVOCs				Notes/Comments
JF-T2B2-GW-15	1/13/11	1020	GW	5	x	x							
JF-T2B3-GW-15		1125		5									
JF-T2B3-GW-15-D		1125		5									
JF-T2B4-GW-20		1325		5									
JF-T3B4-GW-24		1410		5									
JF-T3B3-GW-15		1455		5									
JF-T3B1-SO-13-R		1650		~~5~~ 8	x	x	x	x	x				

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: DEAN BRAME	Printed Name: C. OREIRO	Printed Name:	Printed Name:
	Company: F/S	Company: ARI	Company:	Company:
	Date & Time: 1/13/11 1755	Date & Time: 1/13/11 1755	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.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 5666	Turn-around Requested: STANDARD	Page: 2 of 4	
ARI Client Company: F|S	Phone: 206-292-2078	Date: 1/13/11	Ice Present? U
Client Contact: NICK GARSON and TOM COLLIGAN		No. of Coolers: 3	Cooler Temps: 4.3, 4.3, 5.4
Client Project Name: Jorgensen Forge PLO			
Client Project #: 7KPL2JOR	Samplers: DEAN BRAME / LISA MEOLI		

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

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Metals As, Cd, Cu, Pb Ni, Zn	SVOCs	TPH-D	PCBs					Notes/Comments
JF-T2B1-SO-03	1/13/11	0900	SO	2	x	x	x	x					
JF-T2B1-SO-08	"	0910	SO	"	"	"	"	"					
JF-T2B1-SO-13	"	0912	SO	"	"	"	"	"					
JF-T2B2-SO-03	"	0945	SO	"	"	"	"	"					
JF-T2B2-SO-08	"	0950	SO	"	"	"	"	"					
JF-T2B2-SO-13	"	0955	SO	"	"	"	"	"					
JF-T2B3-SO-02	"	1035	SO	"	"	"	"	"					
JF-T2B3-SO-08	"	1040	SO	"	"	"	"	"					
JF-T2B3-SO-13	"	1045	SO	"	"	"	"	"					
JF-T2B4-SO-03	"	1115	SO	"	"	"	"	"					

Comments/Special Instructions				
	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: DEAN BRAME	Printed Name: C. OREIRO	Printed Name:	Printed Name:
	Company: F|S	Company: ARI	Company:	Company:
	Date & Time: 1/13/11 1755	Date & Time: 1/13/11 1755	Date & Time:	Date & Time:

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Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Boeing
Project Name: Jorgensen Forge PLO
COC No(s): _____ (NA)
Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other: _____
Assigned ARI Job No: SE66
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): 5.9 (4.3) 4.3 ___ ___ ___
If cooler temperature is out of compliance fill out form 00070F
Temp Gun ID#: 90941le19

Cooler Accepted by: DW Date: 1/13/11 Time: 1755

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)		

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

Samples Logged by: MM Date: 1/14/11 Time: 1020

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

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
Jf-T3B3-GW-23	Jf-T3B3-GW-15		

Additional Notes, Discrepancies, & Resolutions:
COC reads 8 container provided for Jf-T3B1-SO-13-R but 9 containers received

By: MM Date: 1/14/11

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

Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: The Boeing Company	**ARI Job No.:** SE66
Client Project: Jorgenson Forge PLO	**Client Project No.:** 7KPL2JOR

Case Narrative

1. Seven samples were submitted for filtering on January 14, 2011.
2. The samples were filtered using all glass filtering equipment.
3. All equipment was decontaminated prior to use.
4. All of the water was filtered through a 1µm borosilicate glass, binder free filter. All of the filters were burned at 440 °C for 15 minutes prior to use.
5. The filtered sample was then placed into appropriate sample bottles for the requested analysis.
6. There were no other noted anomalies in the samples or methods on this project.

Approved by: _____ Date: 1/19/2011
Title: *Geotechnical Laboratory Technician*

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: JF-T2B2-GW-15**
 SAMPLE

Lab Sample ID: SE66A
LIMS ID: 11-764
Matrix: Water
Data Release Authorized:
Reported: 01/18/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/14/11 18:58

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	**cis-1,2-Dichloroethene**	**0.2**	**2.3**	
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	**Trichloroethene**	**0.2**	**0.5**	
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

Lab Sample ID: SE66A
LIMS ID: 11-764
Matrix: Water
Date Analyzed: 01/14/11 18:58

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	96.2%
d8-Toluene	97.0%
Bromofluorobenzene	89.8%
d4-1,2-Dichlorobenzene	99.2%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: JF-T2B3-GW-15**
 SAMPLE

Lab Sample ID: SE66B
LIMS ID: 11-765
Matrix: Water
Data Release Authorized:
Reported: 01/18/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/14/11 19:26

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	**Vinyl Chloride**	**0.2**	**0.3**	
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	**cis-1,2-Dichloroethene**	**0.2**	**1.3**	
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	**Trichloroethene**	**0.2**	**4.4**	
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	**Tetrachloroethene**	**0.2**	**0.8**	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: JF-T2B3-GW-15**
 SAMPLE

Lab Sample ID: SE66B
LIMS ID: 11-765
Matrix: Water
Date Analyzed: 01/14/11 19:26

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.1%
d8-Toluene	94.5%
Bromofluorobenzene	88.9%
d4-1,2-Dichlorobenzene	99.6%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: JF-T2B3-GW-15-D**

SAMPLE

Lab Sample ID: SE66C
LIMS ID: 11-766
Matrix: Water
Data Release Authorized:
Reported: 01/18/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/14/11 19:53

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	**Vinyl Chloride**	**0.2**	**0.3**	
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	**cis-1,2-Dichloroethene**	**0.2**	**1.3**	
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	**Trichloroethene**	**0.2**	**4.5**	
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	**Tetrachloroethene**	**0.2**	**0.8**	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

Lab Sample ID: SE66C
LIMS ID: 11-766
Matrix: Water
Date Analyzed: 01/14/11 19:53

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.9%
d8-Toluene	92.9%
Bromofluorobenzene	86.8%
d4-1,2-Dichlorobenzene	101%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: JF-T2B4-GW-20**
 SAMPLE

Lab Sample ID: SE66D
LIMS ID: 11-767
Matrix: Water
Data Release Authorized:
Reported: 01/18/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/14/11 20:21

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	**cis-1,2-Dichloroethene**	**0.2**	**0.4**	
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	**Trichloroethene**	**0.2**	**1.0**	
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

Lab Sample ID: SE66D
LIMS ID: 11-767
Matrix: Water
Date Analyzed: 01/14/11 20:21

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.1%
d8-Toluene	95.0%
Bromofluorobenzene	86.9%
d4-1,2-Dichlorobenzene	97.2%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: JF-T3B4-GW-24**
 SAMPLE

Lab Sample ID: SE66E
LIMS ID: 11-768
Matrix: Water
Data Release Authorized:
Reported: 01/18/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/14/11 20:48

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	**Trichloroethene**	**0.2**	**0.2**	
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

Lab Sample ID: SE66E
LIMS ID: 11-768
Matrix: Water
Date Analyzed: 01/14/11 20:48

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.9%
d8-Toluene	96.3%
Bromofluorobenzene	88.6%
d4-1,2-Dichlorobenzene	100%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: JF-T3B3-GW-15**

SAMPLE

Lab Sample ID: SE66F
LIMS ID: 11-769
Matrix: Water
Data Release Authorized:
Reported: 01/18/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/14/11 21:16

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	**Trichloroethene**	**0.2**	**0.6**	
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

Lab Sample ID: SE66F
LIMS ID: 11-769
Matrix: Water
Date Analyzed: 01/14/11 21:16

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%
d8-Toluene	95.4%
Bromofluorobenzene	87.8%
d4-1,2-Dichlorobenzene	100%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: JF-T3B1-SO-13-R**
Page 1 of 2 **SAMPLE**

Lab Sample ID: SE66G
LIMS ID: 11-770
Matrix: Water
Data Release Authorized:
Reported: 01/18/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/17/11 09:58

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

Lab Sample ID: SE66G
LIMS ID: 11-770
Matrix: Water
Date Analyzed: 01/17/11 09:58

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.3%
d8-Toluene	95.1%
Bromofluorobenzene	87.7%
d4-1,2-Dichlorobenzene	98.0%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: Trip Blank**
Page 1 of 2 **SAMPLE**

Lab Sample ID: SE66R
LIMS ID: 11-796
Matrix: Water
Data Release Authorized:
Reported: 01/18/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/17/11 10:25

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

Lab Sample ID: SE66R
LIMS ID: 11-796
Matrix: Water
Date Analyzed: 01/17/11 10:25

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.5%
d8-Toluene	95.4%
Bromofluorobenzene	86.8%
d4-1,2-Dichlorobenzene	99.4%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-011411**
METHOD BLANK

Lab Sample ID: MB-011411
LIMS ID: 11-764
Matrix: Water
Data Release Authorized:
Reported: 01/18/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO 7KPL2JOR
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/14/11 11:35

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

Lab Sample ID: MB-011411
LIMS ID: 11-764
Matrix: Water
Date Analyzed: 01/14/11 11:35

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	96.3%
d8-Toluene	96.4%
Bromofluorobenzene	90.3%
d4-1,2-Dichlorobenzene	98.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-011711**
 METHOD BLANK

Lab Sample ID: MB-011711
LIMS ID: 11-770
Matrix: Water
Data Release Authorized:
Reported: 01/18/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO 7KPL2JOR
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/17/11 09:05

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-011711**
 METHOD BLANK

Lab Sample ID: MB-011711
LIMS ID: 11-770
Matrix: Water
Date Analyzed: 01/17/11 09:05

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	96.0%
d8-Toluene	95.3%
Bromofluorobenzene	90.2%
d4-1,2-Dichlorobenzene	98.9%

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-011411	Method Blank	10	96.3%	96.4%	90.3%	98.0%	0
LCS-011411	Lab Control	10	95.3%	95.1%	93.0%	96.2%	0
LCSD-011411	Lab Control Dup	10	91.6%	94.9%	95.2%	95.5%	0
SE66A	JF-T2B2-GW-15	10	96.2%	97.0%	89.8%	99.2%	0
SE66B	JF-T2B3-GW-15	10	98.1%	94.5%	88.9%	99.6%	0
SE66C	JF-T2B3-GW-15-D	10	97.9%	92.9%	86.8%	101%	0
SE66D	JF-T2B4-GW-20	10	99.1%	95.0%	86.9%	97.2%	0
SE66E	JF-T3B4-GW-24	10	98.9%	96.3%	88.6%	100%	0
SE66F	JF-T3B3-GW-15	10	100%	95.4%	87.8%	100%	0
MB-011711	Method Blank	10	96.0%	95.3%	90.2%	98.9%	0
LCS-011711	Lab Control	10	94.9%	94.8%	94.8%	96.6%	0
LCSD-011711	Lab Control Dup	10	93.4%	94.5%	94.8%	96.1%	0
SE66G	JF-T3B1-SO-13-R	10	97.3%	95.1%	87.7%	98.0%	0
SE66R	Trip Blank	10	97.5%	95.4%	86.8%	99.4%	0

SW8260C	LCS/MB LIMITS	QC LIMITS
(DCE) = d4-1,2-Dichloroethane	80-120	80-120
(TOL) = d8-Toluene	80-120	80-120
(BFB) = Bromofluorobenzene	80-120	80-120
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120

Prep Method: SW5030B
Log Number Range: 11-764 to 11-796

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-011411**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-011411
LIMS ID: 11-764
Matrix: Water
Data Release Authorized:
Reported: 01/18/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 01/14/11 10:41
LCSD: 01/14/11 11:08

Sample Amount LCS: 10.0 mL
LCSD: 10.0 mL
Purge Volume LCS: 10.0 mL
LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	10.2	10.0	102%	9.9	10.0	99.0%	3.0%
Bromomethane	9.9	10.0	99.0%	10.4	10.0	104%	4.9%
Vinyl Chloride	10.8	10.0	108%	10.7	10.0	107%	0.9%
Chloroethane	10.4	10.0	104%	10.1	10.0	101%	2.9%
Methylene Chloride	10.1	10.0	101%	10.1	10.0	101%	0.0%
Acetone	49.6	50.0	99.2%	49.2	50.0	98.4%	0.8%
Carbon Disulfide	11.2	10.0	112%	10.9	10.0	109%	2.7%
1,1-Dichloroethene	10.3	10.0	103%	10.3	10.0	103%	0.0%
1,1-Dichloroethane	10.0	10.0	100%	9.7	10.0	97.0%	3.0%
trans-1,2-Dichloroethene	9.9	10.0	99.0%	9.9	10.0	99.0%	0.0%
cis-1,2-Dichloroethene	10.1	10.0	101%	9.9	10.0	99.0%	2.0%
Chloroform	9.9	10.0	99.0%	9.8	10.0	98.0%	1.0%
1,2-Dichloroethane	10.0	10.0	100%	9.8	10.0	98.0%	2.0%
2-Butanone	50.2	50.0	100%	48.8	50.0	97.6%	2.8%
1,1,1-Trichloroethane	10.0	10.0	100%	9.8	10.0	98.0%	2.0%
Carbon Tetrachloride	10.1	10.0	101%	10.3	10.0	103%	2.0%
Vinyl Acetate	9.6	10.0	96.0%	9.6	10.0	96.0%	0.0%
Bromodichloromethane	10.2	10.0	102%	10.3	10.0	103%	1.0%
1,2-Dichloropropane	9.9	10.0	99.0%	10.0	10.0	100%	1.0%
cis-1,3-Dichloropropene	10.3	10.0	103%	10.4	10.0	104%	1.0%
Trichloroethene	10.1	10.0	101%	10.1	10.0	101%	0.0%
Dibromochloromethane	10.3	10.0	103%	10.2	10.0	102%	1.0%
1,1,2-Trichloroethane	9.8	10.0	98.0%	9.9	10.0	99.0%	1.0%
Benzene	10.3	10.0	103%	10.3	10.0	103%	0.0%
trans-1,3-Dichloropropene	10.0	10.0	100%	10.0	10.0	100%	0.0%
2-Chloroethylvinylether	8.3	10.0	83.0%	8.2	10.0	82.0%	1.2%
Bromoform	10.6	10.0	106%	10.2	10.0	102%	3.8%
4-Methyl-2-Pentanone (MIBK)	51.1	50.0	102%	50.6	50.0	101%	1.0%
2-Hexanone	53.7	50.0	107%	54.3	50.0	109%	1.1%
Tetrachloroethene	10.2	10.0	102%	10.1	10.0	101%	1.0%
1,1,2,2-Tetrachloroethane	9.9	10.0	99.0%	9.6	10.0	96.0%	3.1%
Toluene	10.2	10.0	102%	10.2	10.0	102%	0.0%
Chlorobenzene	10.4	10.0	104%	10.4	10.0	104%	0.0%
Ethylbenzene	10.4	10.0	104%	10.4	10.0	104%	0.0%
Styrene	11.2	10.0	112%	11.2	10.0	112%	0.0%
Trichlorofluoromethane	9.5	10.0	95.0%	9.3	10.0	93.0%	2.1%
1,1,2-Trichloro-1,2,2-trifluoroetha	10.1	10.0	101%	10.1	10.0	101%	0.0%
m,p-Xylene	22.3	20.0	112%	22.1	20.0	110%	0.9%
o-Xylene	10.7	10.0	107%	10.7	10.0	107%	0.0%
1,2-Dichlorobenzene	10.3	10.0	103%	9.8	10.0	98.0%	5.0%
1,3-Dichlorobenzene	10.5	10.0	105%	10.1	10.0	101%	3.9%
1,4-Dichlorobenzene	10.4	10.0	104%	10.1	10.0	101%	2.9%
Acrolein	58.4	50.0	117%	60.0	50.0	120%	2.7%
Methyl Iodide	12.0	10.0	120%	12.0	10.0	120%	0.0%
Bromoethane	10.7	10.0	107%	11.1	10.0	111%	3.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-011411**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-011411 QC Report No: SE66-The Boeing Company
LIMS ID: 11-764 Project: Jorgensen Forge PLO
Matrix: Water 7KPL2JOR

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Acrylonitrile	8.7	10.0	87.0%	9.3	10.0	93.0%	6.7%
1,1-Dichloropropene	10.1	10.0	101%	10.2	10.0	102%	1.0%
Dibromomethane	9.8	10.0	98.0%	9.7	10.0	97.0%	1.0%
1,1,1,2-Tetrachloroethane	10.3	10.0	103%	10.3	10.0	103%	0.0%
1,2-Dibromo-3-chloropropane	9.4	10.0	94.0%	9.3	10.0	93.0%	1.1%
1,2,3-Trichloropropane	10.2	10.0	102%	10.0	10.0	100%	2.0%
trans-1,4-Dichloro-2-butene	9.3	10.0	93.0%	8.7	10.0	87.0%	6.7%
1,3,5-Trimethylbenzene	11.1	10.0	111%	10.6	10.0	106%	4.6%
1,2,4-Trimethylbenzene	11.1	10.0	111%	10.7	10.0	107%	3.7%
Hexachlorobutadiene	10.4	10.0	104%	9.8	10.0	98.0%	5.9%
Ethylene Dibromide	9.8	10.0	98.0%	9.9	10.0	99.0%	1.0%
Bromochloromethane	9.8	10.0	98.0%	9.5	10.0	95.0%	3.1%
2,2-Dichloropropane	9.9	10.0	99.0%	9.7	10.0	97.0%	2.0%
1,3-Dichloropropane	9.9	10.0	99.0%	9.8	10.0	98.0%	1.0%
Isopropylbenzene	11.3	10.0	113%	10.9	10.0	109%	3.6%
n-Propylbenzene	11.0	10.0	110%	10.5	10.0	105%	4.7%
Bromobenzene	10.4	10.0	104%	10.1	10.0	101%	2.9%
2-Chlorotoluene	10.8	10.0	108%	10.4	10.0	104%	3.8%
4-Chlorotoluene	10.9	10.0	109%	10.5	10.0	105%	3.7%
tert-Butylbenzene	11.1	10.0	111%	10.7	10.0	107%	3.7%
sec-Butylbenzene	9.4	10.0	94.0%	9.1	10.0	91.0%	3.2%
4-Isopropyltoluene	11.3	10.0	113%	10.9	10.0	109%	3.6%
n-Butylbenzene	10.9	10.0	109%	10.4	10.0	104%	4.7%
1,2,4-Trichlorobenzene	10.6	10.0	106%	10.2	10.0	102%	3.8%
Naphthalene	11.2	10.0	112%	10.6	10.0	106%	5.5%
1,2,3-Trichlorobenzene	11.2	10.0	112%	10.8	10.0	108%	3.6%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	95.3%	91.6%
d8-Toluene	95.1%	94.9%
Bromofluorobenzene	93.0%	95.2%
d4-1,2-Dichlorobenzene	96.2%	95.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-011711**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-011711
LIMS ID: 11-770
Matrix: Water
Data Release Authorized:
Reported: 01/18/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 01/17/11 08:10
LCSD: 01/17/11 08:38

Sample Amount LCS: 10.0 mL
LCSD: 10.0 mL
Purge Volume LCS: 10.0 mL
LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	9.9	10.0	99.0%	9.9	10.0	99.0%	0.0%
Bromomethane	10.9	10.0	109%	11.5	10.0	115%	5.4%
Vinyl Chloride	10.3	10.0	103%	10.6	10.0	106%	2.9%
Chloroethane	9.9	10.0	99.0%	10.1	10.0	101%	2.0%
Methylene Chloride	10.0	10.0	100%	10.1	10.0	101%	1.0%
Acetone	50.2	50.0	100%	48.0	50.0	96.0%	4.5%
Carbon Disulfide	10.8	10.0	108%	10.8	10.0	108%	0.0%
1,1-Dichloroethene	10.2	10.0	102%	10.4	10.0	104%	1.9%
1,1-Dichloroethane	9.6	10.0	96.0%	9.8	10.0	98.0%	2.1%
trans-1,2-Dichloroethene	9.7	10.0	97.0%	9.9	10.0	99.0%	2.0%
cis-1,2-Dichloroethene	9.7	10.0	97.0%	9.8	10.0	98.0%	1.0%
Chloroform	9.7	10.0	97.0%	9.8	10.0	98.0%	1.0%
1,2-Dichloroethane	10.1	10.0	101%	9.7	10.0	97.0%	4.0%
2-Butanone	47.8	50.0	95.6%	48.7	50.0	97.4%	1.9%
1,1,1-Trichloroethane	9.6	10.0	96.0%	9.9	10.0	99.0%	3.1%
Carbon Tetrachloride	10.1	10.0	101%	10.2	10.0	102%	1.0%
Vinyl Acetate	9.3	10.0	93.0%	9.6	10.0	96.0%	3.2%
Bromodichloromethane	10.1	10.0	101%	10.2	10.0	102%	1.0%
1,2-Dichloropropane	9.6	10.0	96.0%	9.8	10.0	98.0%	2.1%
cis-1,3-Dichloropropene	10.1	10.0	101%	10.2	10.0	102%	1.0%
Trichloroethene	9.8	10.0	98.0%	9.8	10.0	98.0%	0.0%
Dibromochloromethane	10.1	10.0	101%	10.2	10.0	102%	1.0%
1,1,2-Trichloroethane	9.9	10.0	99.0%	10.0	10.0	100%	1.0%
Benzene	10.2	10.0	102%	10.3	10.0	103%	1.0%
trans-1,3-Dichloropropene	10.0	10.0	100%	9.8	10.0	98.0%	2.0%
2-Chloroethylvinylether	7.6 Q	10.0	76.0%	7.2 Q	10.0	72.0%	5.4%
Bromoform	10.2	10.0	102%	10.0	10.0	100%	2.0%
4-Methyl-2-Pentanone (MIBK)	50.4	50.0	101%	50.9	50.0	102%	1.0%
2-Hexanone	53.3	50.0	107%	53.5	50.0	107%	0.4%
Tetrachloroethene	10.0	10.0	100%	10.1	10.0	101%	1.0%
1,1,2,2-Tetrachloroethane	9.4	10.0	94.0%	9.4	10.0	94.0%	0.0%
Toluene	10.0	10.0	100%	10.1	10.0	101%	1.0%
Chlorobenzene	10.1	10.0	101%	10.3	10.0	103%	2.0%
Ethylbenzene	10.2	10.0	102%	10.2	10.0	102%	0.0%
Styrene	11.0	10.0	110%	11.1	10.0	111%	0.9%
Trichlorofluoromethane	9.3	10.0	93.0%	9.4	10.0	94.0%	1.1%
1,1,2-Trichloro-1,2,2-trifluoroetha	9.8	10.0	98.0%	10.0	10.0	100%	2.0%
m,p-Xylene	21.7	20.0	108%	21.9	20.0	110%	0.9%
o-Xylene	10.6	10.0	106%	10.6	10.0	106%	0.0%
1,2-Dichlorobenzene	9.8	10.0	98.0%	9.8	10.0	98.0%	0.0%
1,3-Dichlorobenzene	9.9	10.0	99.0%	10.0	10.0	100%	1.0%
1,4-Dichlorobenzene	9.9	10.0	99.0%	10.0	10.0	100%	1.0%
Acrolein	60.0	50.0	120%	58.3	50.0	117%	2.9%
Methyl Iodide	12.3	10.0	123%	12.1	10.0	121%	1.6%
Bromoethane	10.8	10.0	108%	10.5	10.0	105%	2.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-011711**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-011711 QC Report No: SE66-The Boeing Company
LIMS ID: 11-770 Project: Jorgensen Forge PLO
Matrix: Water 7KPL2JOR

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Acrylonitrile	9.0	10.0	90.0%	9.3	10.0	93.0%	3.3%
1,1-Dichloropropene	9.8	10.0	98.0%	9.9	10.0	99.0%	1.0%
Dibromomethane	9.7	10.0	97.0%	9.5	10.0	95.0%	2.1%
1,1,1,2-Tetrachloroethane	10.0	10.0	100%	10.2	10.0	102%	2.0%
1,2-Dibromo-3-chloropropane	9.0	10.0	90.0%	8.7	10.0	87.0%	3.4%
1,2,3-Trichloropropane	9.6	10.0	96.0%	9.7	10.0	97.0%	1.0%
trans-1,4-Dichloro-2-butene	8.7	10.0	87.0%	8.5	10.0	85.0%	2.3%
1,3,5-Trimethylbenzene	10.3	10.0	103%	10.5	10.0	105%	1.9%
1,2,4-Trimethylbenzene	10.4	10.0	104%	10.6	10.0	106%	1.9%
Hexachlorobutadiene	9.9	10.0	99.0%	10.2	10.0	102%	3.0%
Ethylene Dibromide	10.0	10.0	100%	9.9	10.0	99.0%	1.0%
Bromochloromethane	9.3	10.0	93.0%	9.6	10.0	96.0%	3.2%
2,2-Dichloropropane	9.6	10.0	96.0%	9.7	10.0	97.0%	1.0%
1,3-Dichloropropane	9.6	10.0	96.0%	9.7	10.0	97.0%	1.0%
Isopropylbenzene	10.5	10.0	105%	10.7	10.0	107%	1.9%
n-Propylbenzene	10.2	10.0	102%	10.4	10.0	104%	1.9%
Bromobenzene	9.9	10.0	99.0%	10.0	10.0	100%	1.0%
2-Chlorotoluene	10.1	10.0	101%	10.1	10.0	101%	0.0%
4-Chlorotoluene	10.2	10.0	102%	10.4	10.0	104%	1.9%
tert-Butylbenzene	10.4	10.0	104%	10.5	10.0	105%	1.0%
sec-Butylbenzene	8.9	10.0	89.0%	9.0	10.0	90.0%	1.1%
4-Isopropyltoluene	10.6	10.0	106%	10.8	10.0	108%	1.9%
n-Butylbenzene	10.2	10.0	102%	10.4	10.0	104%	1.9%
1,2,4-Trichlorobenzene	10.0	10.0	100%	10.1	10.0	101%	1.0%
Naphthalene	10.3	10.0	103%	10.4	10.0	104%	1.0%
1,2,3-Trichlorobenzene	10.4	10.0	104%	10.6	10.0	106%	1.9%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	94.9%	93.4%
d8-Toluene	94.8%	94.5%
Bromofluorobenzene	94.8%	94.8%
d4-1,2-Dichlorobenzene	96.6%	96.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T2B1-SO-03
SAMPLE

Lab Sample ID: SE66H
LIMS ID: 11-771
Matrix: Soil
Data Release Authorized:
Reported: 01/24/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/21/11 00:04
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.52 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 16.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	66	< 66 U
111-44-4	Bis-(2-Chloroethyl) Ether	66	< 66 U
95-57-8	2-Chlorophenol	66	< 66 U
541-73-1	1,3-Dichlorobenzene	66	< 66 U
106-46-7	1,4-Dichlorobenzene	66	< 66 U
100-51-6	Benzyl Alcohol	330	< 330 U
95-50-1	1,2-Dichlorobenzene	66	< 66 U
95-48-7	2-Methylphenol	66	< 66 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	66	< 66 U
106-44-5	4-Methylphenol	66	< 66 U
621-64-7	N-Nitroso-Di-N-Propylamine	66	< 66 U
67-72-1	Hexachloroethane	66	< 66 U
98-95-3	Nitrobenzene	66	< 66 U
78-59-1	Isophorone	66	< 66 U
88-75-5	2-Nitrophenol	66	< 66 U
105-67-9	2,4-Dimethylphenol	66	< 66 U
65-85-0	Benzoic Acid	660	< 660 U
111-91-1	bis(2-Chloroethoxy) Methane	66	< 66 U
120-83-2	2,4-Dichlorophenol	330	< 330 U
120-82-1	1,2,4-Trichlorobenzene	66	< 66 U
91-20-3	Naphthalene	66	< 66 U
106-47-8	4-Chloroaniline	330	< 330 U
87-68-3	Hexachlorobutadiene	66	< 66 U
59-50-7	4-Chloro-3-methylphenol	330	< 330 U
91-57-6	2-Methylnaphthalene	66	< 66 U
77-47-4	Hexachlorocyclopentadiene	330	< 330 U
88-06-2	2,4,6-Trichlorophenol	330	< 330 U
95-95-4	2,4,5-Trichlorophenol	330	< 330 U
91-58-7	2-Chloronaphthalene	66	< 66 U
88-74-4	2-Nitroaniline	330	< 330 U
131-11-3	Dimethylphthalate	66	< 66 U
208-96-8	Acenaphthylene	66	< 66 U
99-09-2	3-Nitroaniline	330	< 330 U
83-32-9	Acenaphthene	66	< 66 U
51-28-5	2,4-Dinitrophenol	660	< 660 U
100-02-7	4-Nitrophenol	330	< 330 U
132-64-9	Dibenzofuran	66	< 66 U
606-20-2	2,6-Dinitrotoluene	330	< 330 U
121-14-2	2,4-Dinitrotoluene	330	< 330 U
84-66-2	Diethylphthalate	66	< 66 U
7005-72-3	4-Chlorophenyl-phenylether	66	< 66 U
86-73-7	Fluorene	66	< 66 U
100-01-6	4-Nitroaniline	330	< 330 U
534-52-1	4,6-Dinitro-2-Methylphenol	660	< 660 U

Lab Sample ID: SE66H
LIMS ID: 11-771
Matrix: Soil
Date Analyzed: 01/21/11 00:04

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	66	< 66 U
101-55-3	4-Bromophenyl-phenylether	66	< 66 U
118-74-1	Hexachlorobenzene	66	< 66 U
87-86-5	Pentachlorophenol	330	< 330 U
85-01-8	Phenanthrene	66	< 66 U
86-74-8	Carbazole	66	< 66 U
120-12-7	Anthracene	66	< 66 U
84-74-2	Di-n-Butylphthalate	66	< 66 U
206-44-0	Fluoranthene	66	< 66 U
129-00-0	Pyrene	66	< 66 U
85-68-7	Butylbenzylphthalate	66	< 66 U
91-94-1	3,3'-Dichlorobenzidine	330	< 330 U
56-55-3	Benzo(a)anthracene	66	< 66 U
117-81-7	bis(2-Ethylhexyl)phthalate	66	< 66 U
218-01-9	Chrysene	66	< 66 U
117-84-0	Di-n-Octyl phthalate	66	< 66 U
50-32-8	Benzo(a)pyrene	66	< 66 U
193-39-5	Indeno(1,2,3-cd)pyrene	66	< 66 U
53-70-3	Dibenz(a,h)anthracene	66	< 66 U
191-24-2	Benzo(g,h,i)perylene	66	< 66 U
90-12-0	1-Methylnaphthalene	66	< 66 U
TOTBFA	Total Benzofluoranthenes	66	< 66 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	59.2%	2-Fluorobiphenyl	72.0%
d14-p-Terphenyl	81.2%	d4-1,2-Dichlorobenzene	59.6%
d5-Phenol	63.5%	2-Fluorophenol	52.8%
2,4,6-Tribromophenol	81.1%	d4-2-Chlorophenol	61.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T2B1-SO-08
SAMPLE

Lab Sample ID: SE66I
LIMS ID: 11-772
Matrix: Soil
Data Release Authorized:
Reported: 01/24/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/21/11 00:38
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 8.06 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 19.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
111-44-4	Bis-(2-Chloroethyl) Ether	62	< 62 U
95-57-8	2-Chlorophenol	62	< 62 U
541-73-1	1,3-Dichlorobenzene	62	< 62 U
106-46-7	1,4-Dichlorobenzene	62	< 62 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
621-64-7	N-Nitroso-Di-N-Propylamine	62	< 62 U
67-72-1	Hexachloroethane	62	< 62 U
98-95-3	Nitrobenzene	62	< 62 U
78-59-1	Isophorone	62	< 62 U
88-75-5	2-Nitrophenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
65-85-0	Benzoic Acid	620	< 620 U
111-91-1	bis(2-Chloroethoxy) Methane	62	< 62 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	62	< 62 U
91-20-3	Naphthalene	62	< 62 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	62	< 62 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	62	< 62 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	62	< 62 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	62	< 62 U
51-28-5	2,4-Dinitrophenol	620	< 620 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	62	< 62 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	62	< 62 U
7005-72-3	4-Chlorophenyl-phenylether	62	< 62 U
86-73-7	Fluorene	62	< 62 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	620	< 620 U

Lab Sample ID: SE66I
LIMS ID: 11-772
Matrix: Soil
Date Analyzed: 01/21/11 00:38

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	62	< 62 U
101-55-3	4-Bromophenyl-phenylether	62	< 62 U
118-74-1	Hexachlorobenzene	62	< 62 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	Phenanthrene	62	< 62 U
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	Di-n-Butylphthalate	62	< 62 U
206-44-0	Fluoranthene	62	< 62 U
129-00-0	Pyrene	62	< 62 U
85-68-7	Butylbenzylphthalate	62	< 62 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	bis(2-Ethylhexyl)phthalate	62	< 62 U
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
90-12-0	1-Methylnaphthalene	62	< 62 U
TOTBFA	Total Benzofluoranthenes	62	< 62 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	67.2%	2-Fluorobiphenyl	75.2%
d14-p-Terphenyl	89.6%	d4-1,2-Dichlorobenzene	72.0%
d5-Phenol	72.0%	2-Fluorophenol	66.9%
2,4,6-Tribromophenol	89.3%	d4-2-Chlorophenol	72.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T2B1-SO-13
SAMPLE

Lab Sample ID: SE66J
LIMS ID: 11-773
Matrix: Soil
Data Release Authorized:
Reported: 01/24/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/21/11 01:11
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 8.08 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 27.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
111-44-4	Bis-(2-Chloroethyl) Ether	62	< 62 U
95-57-8	2-Chlorophenol	62	< 62 U
541-73-1	1,3-Dichlorobenzene	62	< 62 U
106-46-7	1,4-Dichlorobenzene	62	< 62 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
621-64-7	N-Nitroso-Di-N-Propylamine	62	< 62 U
67-72-1	Hexachloroethane	62	< 62 U
98-95-3	Nitrobenzene	62	< 62 U
78-59-1	Isophorone	62	< 62 U
88-75-5	2-Nitrophenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
65-85-0	Benzoic Acid	620	< 620 U
111-91-1	bis(2-Chloroethoxy) Methane	62	< 62 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	62	< 62 U
91-20-3	Naphthalene	62	< 62 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	62	< 62 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	62	< 62 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	62	< 62 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	62	< 62 U
51-28-5	2,4-Dinitrophenol	620	< 620 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	62	< 62 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	62	< 62 U
7005-72-3	4-Chlorophenyl-phenylether	62	< 62 U
86-73-7	Fluorene	62	< 62 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	620	< 620 U

Lab Sample ID: SE66J
LIMS ID: 11-773
Matrix: Soil
Date Analyzed: 01/21/11 01:11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	62	< 62 U
101-55-3	4-Bromophenyl-phenylether	62	< 62 U
118-74-1	Hexachlorobenzene	62	< 62 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	Phenanthrene	62	< 62 U
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	Di-n-Butylphthalate	62	< 62 U
206-44-0	Fluoranthene	62	< 62 U
129-00-0	Pyrene	62	< 62 U
85-68-7	Butylbenzylphthalate	62	< 62 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	bis(2-Ethylhexyl)phthalate	62	< 62 U
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
90-12-0	1-Methylnaphthalene	62	< 62 U
TOTBFA	Total Benzofluoranthenes	62	< 62 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.8%	2-Fluorobiphenyl	66.0%
d14-p-Terphenyl	76.8%	d4-1,2-Dichlorobenzene	62.8%
d5-Phenol	61.9%	2-Fluorophenol	57.1%
2,4,6-Tribromophenol	79.2%	d4-2-Chlorophenol	62.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T2B2-SO-03
SAMPLE

Lab Sample ID: SE66K
LIMS ID: 11-774
Matrix: Soil
Data Release Authorized:
Reported: 01/24/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO 7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/21/11 01:44
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 8.24 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 25.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	61	< 61 U
111-44-4	Bis-(2-Chloroethyl) Ether	61	< 61 U
95-57-8	2-Chlorophenol	61	< 61 U
541-73-1	1,3-Dichlorobenzene	61	< 61 U
106-46-7	1,4-Dichlorobenzene	61	< 61 U
100-51-6	Benzyl Alcohol	300	< 300 U
95-50-1	1,2-Dichlorobenzene	61	< 61 U
95-48-7	2-Methylphenol	61	< 61 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	61	< 61 U
106-44-5	4-Methylphenol	61	< 61 U
621-64-7	N-Nitroso-Di-N-Propylamine	61	< 61 U
67-72-1	Hexachloroethane	61	< 61 U
98-95-3	Nitrobenzene	61	< 61 U
78-59-1	Isophorone	61	< 61 U
88-75-5	2-Nitrophenol	61	< 61 U
105-67-9	2,4-Dimethylphenol	61	< 61 U
65-85-0	Benzoic Acid	610	< 610 U
111-91-1	bis(2-Chloroethoxy) Methane	61	< 61 U
120-83-2	2,4-Dichlorophenol	300	< 300 U
120-82-1	1,2,4-Trichlorobenzene	61	< 61 U
91-20-3	Naphthalene	61	< 61 U
106-47-8	4-Chloroaniline	300	< 300 U
87-68-3	Hexachlorobutadiene	61	< 61 U
59-50-7	4-Chloro-3-methylphenol	300	< 300 U
91-57-6	2-Methylnaphthalene	61	< 61 U
77-47-4	Hexachlorocyclopentadiene	300	< 300 U
88-06-2	2,4,6-Trichlorophenol	300	< 300 U
95-95-4	2,4,5-Trichlorophenol	300	< 300 U
91-58-7	2-Chloronaphthalene	61	< 61 U
88-74-4	2-Nitroaniline	300	< 300 U
131-11-3	Dimethylphthalate	61	< 61 U
208-96-8	Acenaphthylene	61	< 61 U
99-09-2	3-Nitroaniline	300	< 300 U
83-32-9	Acenaphthene	61	< 61 U
51-28-5	2,4-Dinitrophenol	610	< 610 U
100-02-7	4-Nitrophenol	300	< 300 U
132-64-9	Dibenzofuran	61	< 61 U
606-20-2	2,6-Dinitrotoluene	300	< 300 U
121-14-2	2,4-Dinitrotoluene	300	< 300 U
84-66-2	Diethylphthalate	61	< 61 U
7005-72-3	4-Chlorophenyl-phenylether	61	< 61 U
86-73-7	**Fluorene**	**61**	**73**
100-01-6	4-Nitroaniline	300	< 300 U
534-52-1	4,6-Dinitro-2-Methylphenol	610	< 610 U

Lab Sample ID: SE66K
LIMS ID: 11-774
Matrix: Soil
Date Analyzed: 01/21/11 01:44

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	61	< 61 U
101-55-3	4-Bromophenyl-phenylether	61	< 61 U
118-74-1	Hexachlorobenzene	61	< 61 U
87-86-5	Pentachlorophenol	300	< 300 U
85-01-8	**Phenanthrene**	**61**	**630**
86-74-8	Carbazole	61	< 61 U
120-12-7	**Anthracene**	**61**	**120**
84-74-2	Di-n-Butylphthalate	61	< 61 U
206-44-0	**Fluoranthene**	**61**	**610 Q**
129-00-0	**Pyrene**	**61**	**600**
85-68-7	Butylbenzylphthalate	61	< 61 U
91-94-1	3,3'-Dichlorobenzidine	300	< 300 U
56-55-3	**Benzo(a)anthracene**	**61**	**260**
117-81-7	bis(2-Ethylhexyl)phthalate	61	< 61 U
218-01-9	**Chrysene**	**61**	**270**
117-84-0	Di-n-Octyl phthalate	61	< 61 U
50-32-8	**Benzo(a)pyrene**	**61**	**260**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**61**	**89**
53-70-3	Dibenz(a,h)anthracene	61	< 61 U
191-24-2	**Benzo(g,h,i)perylene**	**61**	**86**
90-12-0	1-Methylnaphthalene	61	< 61 U
TOTBFA	**Total Benzofluoranthenes**	**61**	**380**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.4%	2-Fluorobiphenyl	70.0%
d14-p-Terphenyl	78.0%	d4-1,2-Dichlorobenzene	58.4%
d5-Phenol	61.3%	2-Fluorophenol	50.1%
2,4,6-Tribromophenol	81.1%	d4-2-Chlorophenol	61.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T2B2-SO-08
SAMPLE

Lab Sample ID: SE66L
LIMS ID: 11-775
Matrix: Soil
Data Release Authorized:
Reported: 01/24/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/21/11 16:28
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.98 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 28.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	63	< 63 U
111-44-4	Bis-(2-Chloroethyl) Ether	63	< 63 U
95-57-8	2-Chlorophenol	63	< 63 U
541-73-1	1,3-Dichlorobenzene	63	< 63 U
106-46-7	1,4-Dichlorobenzene	63	< 63 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	63	< 63 U
95-48-7	2-Methylphenol	63	< 63 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	63	< 63 U
106-44-5	4-Methylphenol	63	< 63 U
621-64-7	N-Nitroso-Di-N-Propylamine	63	< 63 U
67-72-1	Hexachloroethane	63	< 63 U
98-95-3	Nitrobenzene	63	< 63 U
78-59-1	Isophorone	63	< 63 U
88-75-5	2-Nitrophenol	63	< 63 U
105-67-9	2,4-Dimethylphenol	63	< 63 U
65-85-0	Benzoic Acid	630	< 630 U
111-91-1	bis(2-Chloroethoxy) Methane	63	< 63 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	63	< 63 U
91-20-3	Naphthalene	63	< 63 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	63	< 63 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	63	< 63 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	63	< 63 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	63	< 63 U
208-96-8	Acenaphthylene	63	< 63 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	63	< 63 U
51-28-5	2,4-Dinitrophenol	630	< 630 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	63	< 63 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	63	< 63 U
7005-72-3	4-Chlorophenyl-phenylether	63	< 63 U
86-73-7	Fluorene	63	< 63 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	630	< 630 U

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T2B2-SO-08
SAMPLE

Lab Sample ID: SE66L
LIMS ID: 11-775
Matrix: Soil
Date Analyzed: 01/21/11 16:28

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	63	< 63 U
101-55-3	4-Bromophenyl-phenylether	63	< 63 U
118-74-1	Hexachlorobenzene	63	< 63 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	**Phenanthrene**	**63**	**84**
86-74-8	Carbazole	63	< 63 U
120-12-7	Anthracene	63	< 63 U
84-74-2	Di-n-Butylphthalate	63	< 63 U
206-44-0	**Fluoranthene**	**63**	**150 Q**
129-00-0	**Pyrene**	**63**	**160**
85-68-7	Butylbenzylphthalate	63	< 63 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	**Benzo(a)anthracene**	**63**	**230**
117-81-7	bis(2-Ethylhexyl)phthalate	63	< 63 U
218-01-9	**Chrysene**	**63**	**300**
117-84-0	Di-n-Octyl phthalate	63	< 63 U
50-32-8	**Benzo(a)pyrene**	**63**	**730**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**63**	**240**
53-70-3	**Dibenz(a,h)anthracene**	**63**	**420**
191-24-2	**Benzo(g,h,i)perylene**	**63**	**490**
90-12-0	1-Methylnaphthalene	63	< 63 U
TOTBFA	**Total Benzofluoranthenes**	**63**	**600**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	56.8%	2-Fluorobiphenyl	67.6%
d14-p-Terphenyl	73.6%	d4-1,2-Dichlorobenzene	55.6%
d5-Phenol	59.2%	2-Fluorophenol	50.7%
2,4,6-Tribromophenol	77.9%	d4-2-Chlorophenol	58.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T2B2-SO-13
SAMPLE

Lab Sample ID: SE66M
LIMS ID: 11-776
Matrix: Soil
Data Release Authorized:
Reported: 01/24/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/21/11 02:51
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.67 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 23.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	65	< 65 U
111-44-4	Bis-(2-Chloroethyl) Ether	65	< 65 U
95-57-8	2-Chlorophenol	65	< 65 U
541-73-1	1,3-Dichlorobenzene	65	< 65 U
106-46-7	1,4-Dichlorobenzene	65	< 65 U
100-51-6	Benzyl Alcohol	330	< 330 U
95-50-1	1,2-Dichlorobenzene	65	< 65 U
95-48-7	2-Methylphenol	65	< 65 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	65	< 65 U
106-44-5	4-Methylphenol	65	< 65 U
621-64-7	N-Nitroso-Di-N-Propylamine	65	< 65 U
67-72-1	Hexachloroethane	65	< 65 U
98-95-3	Nitrobenzene	65	< 65 U
78-59-1	Isophorone	65	< 65 U
88-75-5	2-Nitrophenol	65	< 65 U
105-67-9	2,4-Dimethylphenol	65	< 65 U
65-85-0	Benzoic Acid	650	< 650 U
111-91-1	bis(2-Chloroethoxy) Methane	65	< 65 U
120-83-2	2,4-Dichlorophenol	330	< 330 U
120-82-1	1,2,4-Trichlorobenzene	65	< 65 U
91-20-3	Naphthalene	65	< 65 U
106-47-8	4-Chloroaniline	330	< 330 U
87-68-3	Hexachlorobutadiene	65	< 65 U
59-50-7	4-Chloro-3-methylphenol	330	< 330 U
91-57-6	2-Methylnaphthalene	65	< 65 U
77-47-4	Hexachlorocyclopentadiene	330	< 330 U
88-06-2	2,4,6-Trichlorophenol	330	< 330 U
95-95-4	2,4,5-Trichlorophenol	330	< 330 U
91-58-7	2-Chloronaphthalene	65	< 65 U
88-74-4	2-Nitroaniline	330	< 330 U
131-11-3	Dimethylphthalate	65	< 65 U
208-96-8	Acenaphthylene	65	< 65 U
99-09-2	3-Nitroaniline	330	< 330 U
83-32-9	Acenaphthene	65	< 65 U
51-28-5	2,4-Dinitrophenol	650	< 650 U
100-02-7	4-Nitrophenol	330	< 330 U
132-64-9	Dibenzofuran	65	< 65 U
606-20-2	2,6-Dinitrotoluene	330	< 330 U
121-14-2	2,4-Dinitrotoluene	330	< 330 U
84-66-2	Diethylphthalate	65	< 65 U
7005-72-3	4-Chlorophenyl-phenylether	65	< 65 U
86-73-7	Fluorene	65	< 65 U
100-01-6	4-Nitroaniline	330	< 330 U
534-52-1	4,6-Dinitro-2-Methylphenol	650	< 650 U

Lab Sample ID: SE66M
LIMS ID: 11-776
Matrix: Soil
Date Analyzed: 01/21/11 02:51

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	65	< 65 U
101-55-3	4-Bromophenyl-phenylether	65	< 65 U
118-74-1	Hexachlorobenzene	65	< 65 U
87-86-5	Pentachlorophenol	330	< 330 U
85-01-8	Phenanthrene	65	< 65 U
86-74-8	Carbazole	65	< 65 U
120-12-7	Anthracene	65	< 65 U
84-74-2	Di-n-Butylphthalate	65	< 65 U
206-44-0	Fluoranthene	65	< 65 U
129-00-0	Pyrene	65	< 65 U
85-68-7	Butylbenzylphthalate	65	< 65 U
91-94-1	3,3'-Dichlorobenzidine	330	< 330 U
56-55-3	Benzo(a)anthracene	65	< 65 U
117-81-7	bis(2-Ethylhexyl)phthalate	65	< 65 U
218-01-9	Chrysene	65	< 65 U
117-84-0	Di-n-Octyl phthalate	65	< 65 U
50-32-8	Benzo(a)pyrene	65	< 65 U
193-39-5	Indeno(1,2,3-cd)pyrene	65	< 65 U
53-70-3	Dibenz(a,h)anthracene	65	< 65 U
191-24-2	Benzo(g,h,i)perylene	65	< 65 U
90-12-0	1-Methylnaphthalene	65	< 65 U
TOTBFA	Total Benzofluoranthenes	65	< 65 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.4%	2-Fluorobiphenyl	66.8%
d14-p-Terphenyl	76.4%	d4-1,2-Dichlorobenzene	62.4%
d5-Phenol	63.2%	2-Fluorophenol	58.7%
2,4,6-Tribromophenol	78.4%	d4-2-Chlorophenol	63.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T2B3-SO-02
SAMPLE

Lab Sample ID: SE66N
LIMS ID: 11-777
Matrix: Soil
Data Release Authorized:
Reported: 01/24/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/21/11 12:34
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.88 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 13.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	64	< 64 U
111-44-4	Bis-(2-Chloroethyl) Ether	64	< 64 U
95-57-8	2-Chlorophenol	64	< 64 U
541-73-1	1,3-Dichlorobenzene	64	< 64 U
106-46-7	1,4-Dichlorobenzene	64	< 64 U
100-51-6	Benzyl Alcohol	320	< 320 U
95-50-1	1,2-Dichlorobenzene	64	< 64 U
95-48-7	2-Methylphenol	64	< 64 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	64	< 64 U
106-44-5	4-Methylphenol	64	< 64 U
621-64-7	N-Nitroso-Di-N-Propylamine	64	< 64 U
67-72-1	Hexachloroethane	64	< 64 U
98-95-3	Nitrobenzene	64	< 64 U
78-59-1	Isophorone	64	< 64 U
88-75-5	2-Nitrophenol	64	< 64 U
105-67-9	2,4-Dimethylphenol	64	< 64 U
65-85-0	Benzoic Acid	640	< 640 U
111-91-1	bis(2-Chloroethoxy) Methane	64	< 64 U
120-83-2	2,4-Dichlorophenol	320	< 320 U
120-82-1	1,2,4-Trichlorobenzene	64	< 64 U
91-20-3	Naphthalene	64	< 64 U
106-47-8	4-Chloroaniline	320	< 320 U
87-68-3	Hexachlorobutadiene	64	< 64 U
59-50-7	4-Chloro-3-methylphenol	320	< 320 U
91-57-6	2-Methylnaphthalene	64	< 64 U
77-47-4	Hexachlorocyclopentadiene	320	< 320 U
88-06-2	2,4,6-Trichlorophenol	320	< 320 U
95-95-4	2,4,5-Trichlorophenol	320	< 320 U
91-58-7	2-Chloronaphthalene	64	< 64 U
88-74-4	2-Nitroaniline	320	< 320 U
131-11-3	Dimethylphthalate	64	< 64 U
208-96-8	Acenaphthylene	64	< 64 U
99-09-2	3-Nitroaniline	320	< 320 U
83-32-9	Acenaphthene	64	< 64 U
51-28-5	2,4-Dinitrophenol	640	< 640 U
100-02-7	4-Nitrophenol	320	< 320 U
132-64-9	Dibenzofuran	64	< 64 U
606-20-2	2,6-Dinitrotoluene	320	< 320 U
121-14-2	2,4-Dinitrotoluene	320	< 320 U
84-66-2	Diethylphthalate	64	< 64 U
7005-72-3	4-Chlorophenyl-phenylether	64	< 64 U
86-73-7	Fluorene	64	< 64 U
100-01-6	4-Nitroaniline	320	< 320 U
534-52-1	4,6-Dinitro-2-Methylphenol	640	< 640 U

Sample ID: JF-T2B3-SO-02
SAMPLE

Lab Sample ID: SE66N
LIMS ID: 11-777
Matrix: Soil
Date Analyzed: 01/21/11 12:34

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	64	< 64 U
101-55-3	4-Bromophenyl-phenylether	64	< 64 U
118-74-1	Hexachlorobenzene	64	< 64 U
87-86-5	Pentachlorophenol	320	< 320 U
85-01-8	Phenanthrene	64	< 64 U
86-74-8	Carbazole	64	< 64 U
120-12-7	Anthracene	64	< 64 U
84-74-2	Di-n-Butylphthalate	64	< 64 U
206-44-0	Fluoranthene	64	< 64 U
129-00-0	Pyrene	64	< 64 U
85-68-7	Butylbenzylphthalate	64	< 64 U
91-94-1	3,3'-Dichlorobenzidine	320	< 320 U
56-55-3	Benzo(a)anthracene	64	< 64 U
117-81-7	bis(2-Ethylhexyl)phthalate	64	< 64 U
218-01-9	Chrysene	64	< 64 U
117-84-0	Di-n-Octyl phthalate	64	< 64 U
50-32-8	Benzo(a)pyrene	64	< 64 U
193-39-5	Indeno(1,2,3-cd)pyrene	64	< 64 U
53-70-3	Dibenz(a,h)anthracene	64	< 64 U
191-24-2	Benzo(g,h,i)perylene	64	< 64 U
90-12-0	1-Methylnaphthalene	64	< 64 U
TOTBFA	Total Benzofluoranthenes	64	< 64 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.4%	2-Fluorobiphenyl	72.8%
d14-p-Terphenyl	81.2%	d4-1,2-Dichlorobenzene	58.8%
d5-Phenol	63.5%	2-Fluorophenol	53.1%
2,4,6-Tribromophenol	81.1%	d4-2-Chlorophenol	62.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T2B3-SO-08
SAMPLE

Lab Sample ID: SE66O
LIMS ID: 11-778
Matrix: Soil
Data Release Authorized:
Reported: 01/24/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/21/11 13:07
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 8.31 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 25.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	60	< 60 U
111-44-4	Bis-(2-Chloroethyl) Ether	60	< 60 U
95-57-8	2-Chlorophenol	60	< 60 U
541-73-1	1,3-Dichlorobenzene	60	< 60 U
106-46-7	1,4-Dichlorobenzene	60	< 60 U
100-51-6	Benzyl Alcohol	300	< 300 U
95-50-1	1,2-Dichlorobenzene	60	< 60 U
95-48-7	2-Methylphenol	60	< 60 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	60	< 60 U
106-44-5	4-Methylphenol	60	< 60 U
621-64-7	N-Nitroso-Di-N-Propylamine	60	< 60 U
67-72-1	Hexachloroethane	60	< 60 U
98-95-3	Nitrobenzene	60	< 60 U
78-59-1	Isophorone	60	< 60 U
88-75-5	2-Nitrophenol	60	< 60 U
105-67-9	2,4-Dimethylphenol	60	< 60 U
65-85-0	Benzoic Acid	600	< 600 U
111-91-1	bis(2-Chloroethoxy) Methane	60	< 60 U
120-83-2	2,4-Dichlorophenol	300	< 300 U
120-82-1	1,2,4-Trichlorobenzene	60	< 60 U
91-20-3	Naphthalene	60	< 60 U
106-47-8	4-Chloroaniline	300	< 300 U
87-68-3	Hexachlorobutadiene	60	< 60 U
59-50-7	4-Chloro-3-methylphenol	300	< 300 U
91-57-6	2-Methylnaphthalene	60	< 60 U
77-47-4	Hexachlorocyclopentadiene	300	< 300 U
88-06-2	2,4,6-Trichlorophenol	300	< 300 U
95-95-4	2,4,5-Trichlorophenol	300	< 300 U
91-58-7	2-Chloronaphthalene	60	< 60 U
88-74-4	2-Nitroaniline	300	< 300 U
131-11-3	Dimethylphthalate	60	< 60 U
208-96-8	Acenaphthylene	60	< 60 U
99-09-2	3-Nitroaniline	300	< 300 U
83-32-9	Acenaphthene	60	< 60 U
51-28-5	2,4-Dinitrophenol	600	< 600 U
100-02-7	4-Nitrophenol	300	< 300 U
132-64-9	Dibenzofuran	60	< 60 U
606-20-2	2,6-Dinitrotoluene	300	< 300 U
121-14-2	2,4-Dinitrotoluene	300	< 300 U
84-66-2	Diethylphthalate	60	< 60 U
7005-72-3	4-Chlorophenyl-phenylether	60	< 60 U
86-73-7	Fluorene	60	< 60 U
100-01-6	4-Nitroaniline	300	< 300 U
534-52-1	4,6-Dinitro-2-Methylphenol	600	< 600 U

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T2B3-SO-08
SAMPLE

Lab Sample ID: SE66O
LIMS ID: 11-778
Matrix: Soil
Date Analyzed: 01/21/11 13:07

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	60	< 60 U
101-55-3	4-Bromophenyl-phenylether	60	< 60 U
118-74-1	Hexachlorobenzene	60	< 60 U
87-86-5	Pentachlorophenol	300	< 300 U
85-01-8	Phenanthrene	60	< 60 U
86-74-8	Carbazole	60	< 60 U
120-12-7	Anthracene	60	< 60 U
84-74-2	Di-n-Butylphthalate	60	< 60 U
206-44-0	**Fluoranthene**	**60**	**61 Q**
129-00-0	**Pyrene**	**60**	**72**
85-68-7	Butylbenzylphthalate	60	< 60 U
91-94-1	3,3'-Dichlorobenzidine	300	< 300 U
56-55-3	Benzo(a)anthracene	60	< 60 U
117-81-7	bis(2-Ethylhexyl)phthalate	60	< 60 U
218-01-9	Chrysene	60	< 60 U
117-84-0	Di-n-Octyl phthalate	60	< 60 U
50-32-8	Benzo(a)pyrene	60	< 60 U
193-39-5	Indeno(1,2,3-cd)pyrene	60	< 60 U
53-70-3	Dibenz(a,h)anthracene	60	< 60 U
191-24-2	Benzo(g,h,i)perylene	60	< 60 U
90-12-0	1-Methylnaphthalene	60	< 60 U
TOTBFA	**Total Benzofluoranthenes**	**60**	**81**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	59.2%	2-Fluorobiphenyl	66.4%
d14-p-Terphenyl	75.6%	d4-1,2-Dichlorobenzene	61.6%
d5-Phenol	62.1%	2-Fluorophenol	56.3%
2,4,6-Tribromophenol	80.3%	d4-2-Chlorophenol	62.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T2B3-SO-13
SAMPLE

Lab Sample ID: SE66P
LIMS ID: 11-779
Matrix: Soil
Data Release Authorized:
Reported: 01/24/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/21/11 13:40
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.71 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 23.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	65	< 65 U
111-44-4	Bis-(2-Chloroethyl) Ether	65	< 65 U
95-57-8	2-Chlorophenol	65	< 65 U
541-73-1	1,3-Dichlorobenzene	65	< 65 U
106-46-7	1,4-Dichlorobenzene	65	< 65 U
100-51-6	Benzyl Alcohol	320	< 320 U
95-50-1	1,2-Dichlorobenzene	65	< 65 U
95-48-7	2-Methylphenol	65	< 65 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	65	< 65 U
106-44-5	4-Methylphenol	65	< 65 U
621-64-7	N-Nitroso-Di-N-Propylamine	65	< 65 U
67-72-1	Hexachloroethane	65	< 65 U
98-95-3	Nitrobenzene	65	< 65 U
78-59-1	Isophorone	65	< 65 U
88-75-5	2-Nitrophenol	65	< 65 U
105-67-9	2,4-Dimethylphenol	65	< 65 U
65-85-0	Benzoic Acid	650	< 650 U
111-91-1	bis(2-Chloroethoxy) Methane	65	< 65 U
120-83-2	2,4-Dichlorophenol	320	< 320 U
120-82-1	1,2,4-Trichlorobenzene	65	< 65 U
91-20-3	Naphthalene	65	< 65 U
106-47-8	4-Chloroaniline	320	< 320 U
87-68-3	Hexachlorobutadiene	65	< 65 U
59-50-7	4-Chloro-3-methylphenol	320	< 320 U
91-57-6	2-Methylnaphthalene	65	< 65 U
77-47-4	Hexachlorocyclopentadiene	320	< 320 U
88-06-2	2,4,6-Trichlorophenol	320	< 320 U
95-95-4	2,4,5-Trichlorophenol	320	< 320 U
91-58-7	2-Chloronaphthalene	65	< 65 U
88-74-4	2-Nitroaniline	320	< 320 U
131-11-3	Dimethylphthalate	65	< 65 U
208-96-8	Acenaphthylene	65	< 65 U
99-09-2	3-Nitroaniline	320	< 320 U
83-32-9	Acenaphthene	65	< 65 U
51-28-5	2,4-Dinitrophenol	650	< 650 U
100-02-7	4-Nitrophenol	320	< 320 U
132-64-9	Dibenzofuran	65	< 65 U
606-20-2	2,6-Dinitrotoluene	320	< 320 U
121-14-2	2,4-Dinitrotoluene	320	< 320 U
84-66-2	Diethylphthalate	65	< 65 U
7005-72-3	4-Chlorophenyl-phenylether	65	< 65 U
86-73-7	Fluorene	65	< 65 U
100-01-6	4-Nitroaniline	320	< 320 U
534-52-1	4,6-Dinitro-2-Methylphenol	650	< 650 U

Lab Sample ID: SE66P
LIMS ID: 11-779
Matrix: Soil
Date Analyzed: 01/21/11 13:40

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	65	< 65 U
101-55-3	4-Bromophenyl-phenylether	65	< 65 U
118-74-1	Hexachlorobenzene	65	< 65 U
87-86-5	Pentachlorophenol	320	< 320 U
85-01-8	Phenanthrene	65	< 65 U
86-74-8	Carbazole	65	< 65 U
120-12-7	Anthracene	65	< 65 U
84-74-2	Di-n-Butylphthalate	65	< 65 U
206-44-0	**Fluoranthene**	**65**	**73 Q**
129-00-0	**Pyrene**	**65**	**82**
85-68-7	Butylbenzylphthalate	65	< 65 U
91-94-1	3,3'-Dichlorobenzidine	320	< 320 U
56-55-3	Benzo(a)anthracene	65	< 65 U
117-81-7	bis(2-Ethylhexyl)phthalate	65	< 65 U
218-01-9	Chrysene	65	< 65 U
117-84-0	Di-n-Octyl phthalate	65	< 65 U
50-32-8	Benzo(a)pyrene	65	< 65 U
193-39-5	Indeno(1,2,3-cd)pyrene	65	< 65 U
53-70-3	Dibenz(a,h)anthracene	65	< 65 U
191-24-2	Benzo(g,h,i)perylene	65	< 65 U
90-12-0	1-Methylnaphthalene	65	< 65 U
TOTBFA	**Total Benzofluoranthenes**	**65**	**67**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	54.4%	2-Fluorobiphenyl	66.8%
d14-p-Terphenyl	75.6%	d4-1,2-Dichlorobenzene	55.6%
d5-Phenol	58.1%	2-Fluorophenol	51.5%
2,4,6-Tribromophenol	79.7%	d4-2-Chlorophenol	57.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T2B4-SO-03
SAMPLE

Lab Sample ID: SE66Q
LIMS ID: 11-780
Matrix: Soil
Data Release Authorized:
Reported: 01/24/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/21/11 17:04
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.95 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 12.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	63	< 63 U
111-44-4	Bis-(2-Chloroethyl) Ether	63	< 63 U
95-57-8	2-Chlorophenol	63	< 63 U
541-73-1	1,3-Dichlorobenzene	63	< 63 U
106-46-7	1,4-Dichlorobenzene	63	< 63 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	63	< 63 U
95-48-7	2-Methylphenol	63	< 63 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	63	< 63 U
106-44-5	4-Methylphenol	63	< 63 U
621-64-7	N-Nitroso-Di-N-Propylamine	63	< 63 U
67-72-1	Hexachloroethane	63	< 63 U
98-95-3	Nitrobenzene	63	< 63 U
78-59-1	Isophorone	63	< 63 U
88-75-5	2-Nitrophenol	63	< 63 U
105-67-9	2,4-Dimethylphenol	63	< 63 U
65-85-0	Benzoic Acid	630	< 630 U
111-91-1	bis(2-Chloroethoxy) Methane	63	< 63 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	63	< 63 U
91-20-3	Naphthalene	63	< 63 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	63	< 63 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	63	< 63 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	63	< 63 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	63	< 63 U
208-96-8	Acenaphthylene	63	< 63 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	63	< 63 U
51-28-5	2,4-Dinitrophenol	630	< 630 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	63	< 63 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	63	< 63 U
7005-72-3	4-Chlorophenyl-phenylether	63	< 63 U
86-73-7	Fluorene	63	< 63 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	630	< 630 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T2B4-SO-03
SAMPLE

Lab Sample ID: SE66Q
LIMS ID: 11-780
Matrix: Soil
Date Analyzed: 01/21/11 17:04

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	63	< 63 U
101-55-3	4-Bromophenyl-phenylether	63	< 63 U
118-74-1	Hexachlorobenzene	63	< 63 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	Phenanthrene	63	< 63 U
86-74-8	Carbazole	63	< 63 U
120-12-7	Anthracene	63	< 63 U
84-74-2	**Di-n-Butylphthalate**	**63**	**65**
206-44-0	Fluoranthene	63	< 63 U
129-00-0	Pyrene	63	< 63 U
85-68-7	Butylbenzylphthalate	63	< 63 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	Benzo(a)anthracene	63	< 63 U
117-81-7	bis(2-Ethylhexyl)phthalate	63	< 63 U
218-01-9	**Chrysene**	**63**	**81 M**
117-84-0	Di-n-Octyl phthalate	63	< 63 U
50-32-8	Benzo(a)pyrene	63	< 63 U
193-39-5	Indeno(1,2,3-cd)pyrene	63	< 63 U
53-70-3	Dibenz(a,h)anthracene	63	< 63 U
191-24-2	Benzo(g,h,i)perylene	63	< 63 U
90-12-0	1-Methylnaphthalene	63	< 63 U
TOTBFA	Total Benzofluoranthenes	63	< 63 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.6%	2-Fluorobiphenyl	79.6%
d14-p-Terphenyl	88.0%	d4-1,2-Dichlorobenzene	64.4%
d5-Phenol	75.5%	2-Fluorophenol	65.6%
2,4,6-Tribromophenol	89.3%	d4-2-Chlorophenol	74.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: MB-011711
METHOD BLANK

Lab Sample ID: MB-011711
LIMS ID: 11-771
Matrix: Soil
Data Release Authorized:
Reported: 01/24/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 01/17/11
Date Analyzed: 01/20/11 21:51
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.50 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	67	< 67 U
111-44-4	Bis-(2-Chloroethyl) Ether	67	< 67 U
95-57-8	2-Chlorophenol	67	< 67 U
541-73-1	1,3-Dichlorobenzene	67	< 67 U
106-46-7	1,4-Dichlorobenzene	67	< 67 U
100-51-6	Benzyl Alcohol	330	< 330 U
95-50-1	1,2-Dichlorobenzene	67	< 67 U
95-48-7	2-Methylphenol	67	< 67 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	67	< 67 U
106-44-5	4-Methylphenol	67	< 67 U
621-64-7	N-Nitroso-Di-N-Propylamine	67	< 67 U
67-72-1	Hexachloroethane	67	< 67 U
98-95-3	Nitrobenzene	67	< 67 U
78-59-1	Isophorone	67	< 67 U
88-75-5	2-Nitrophenol	67	< 67 U
105-67-9	2,4-Dimethylphenol	67	< 67 U
65-85-0	Benzoic Acid	670	< 670 U
111-91-1	bis(2-Chloroethoxy) Methane	67	< 67 U
120-83-2	2,4-Dichlorophenol	330	< 330 U
120-82-1	1,2,4-Trichlorobenzene	67	< 67 U
91-20-3	Naphthalene	67	< 67 U
106-47-8	4-Chloroaniline	330	< 330 U
87-68-3	Hexachlorobutadiene	67	< 67 U
59-50-7	4-Chloro-3-methylphenol	330	< 330 U
91-57-6	2-Methylnaphthalene	67	< 67 U
77-47-4	Hexachlorocyclopentadiene	330	< 330 U
88-06-2	2,4,6-Trichlorophenol	330	< 330 U
95-95-4	2,4,5-Trichlorophenol	330	< 330 U
91-58-7	2-Chloronaphthalene	67	< 67 U
88-74-4	2-Nitroaniline	330	< 330 U
131-11-3	Dimethylphthalate	67	< 67 U
208-96-8	Acenaphthylene	67	< 67 U
99-09-2	3-Nitroaniline	330	< 330 U
83-32-9	Acenaphthene	67	< 67 U
51-28-5	2,4-Dinitrophenol	670	< 670 U
100-02-7	4-Nitrophenol	330	< 330 U
132-64-9	Dibenzofuran	67	< 67 U
606-20-2	2,6-Dinitrotoluene	330	< 330 U
121-14-2	2,4-Dinitrotoluene	330	< 330 U
84-66-2	Diethylphthalate	67	< 67 U
7005-72-3	4-Chlorophenyl-phenylether	67	< 67 U
86-73-7	Fluorene	67	< 67 U
100-01-6	4-Nitroaniline	330	< 330 U
534-52-1	4,6-Dinitro-2-Methylphenol	670	< 670 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: MB-011711
METHOD BLANK

Lab Sample ID: MB-011711
LIMS ID: 11-771
Matrix: Soil
Date Analyzed: 01/20/11 21:51

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	67	< 67 U
101-55-3	4-Bromophenyl-phenylether	67	< 67 U
118-74-1	Hexachlorobenzene	67	< 67 U
87-86-5	Pentachlorophenol	330	< 330 U
85-01-8	Phenanthrene	67	< 67 U
86-74-8	Carbazole	67	< 67 U
120-12-7	Anthracene	67	< 67 U
84-74-2	Di-n-Butylphthalate	67	< 67 U
206-44-0	Fluoranthene	67	< 67 U
129-00-0	Pyrene	67	< 67 U
85-68-7	Butylbenzylphthalate	67	< 67 U
91-94-1	3,3'-Dichlorobenzidine	330	< 330 U
56-55-3	Benzo(a)anthracene	67	< 67 U
117-81-7	bis(2-Ethylhexyl)phthalate	67	< 67 U
218-01-9	Chrysene	67	< 67 U
117-84-0	Di-n-Octyl phthalate	67	< 67 U
50-32-8	Benzo(a)pyrene	67	< 67 U
193-39-5	Indeno(1,2,3-cd)pyrene	67	< 67 U
53-70-3	Dibenz(a,h)anthracene	67	< 67 U
191-24-2	Benzo(g,h,i)perylene	67	< 67 U
90-12-0	1-Methylnaphthalene	67	< 67 U
TOTBFA	Total Benzofluoranthenes	67	< 67 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.4%	2-Fluorobiphenyl	69.2%
d14-p-Terphenyl	84.8%	d4-1,2-Dichlorobenzene	65.6%
d5-Phenol	68.3%	2-Fluorophenol	62.7%
2,4,6-Tribromophenol	74.9%	d4-2-Chlorophenol	66.7%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-011711	62.4%	69.2%	84.8%	65.6%	68.3%	62.7%	74.9%	66.7%	0
LCS-011711	70.8%	76.0%	93.6%	72.8%	73.3%	68.8%	96.5%	74.1%	0
LCSD-011711	69.2%	72.8%	91.6%	68.8%	71.7%	66.1%	93.6%	71.7%	0
JF-T2B1-SO-03	59.2%	72.0%	81.2%	59.6%	63.5%	52.8%	81.1%	61.6%	0
JF-T2B1-SO-08	67.2%	75.2%	89.6%	72.0%	72.0%	66.9%	89.3%	72.5%	0
JF-T2B1-SO-13	58.8%	66.0%	76.8%	62.8%	61.9%	57.1%	79.2%	62.9%	0
JF-T2B2-SO-03	58.4%	70.0%	78.0%	58.4%	61.3%	50.1%	81.1%	61.1%	0
JF-T2B2-SO-08	56.8%	67.6%	73.6%	55.6%	59.2%	50.7%	77.9%	58.7%	0
JF-T2B2-SO-13	58.4%	66.8%	76.4%	62.4%	63.2%	58.7%	78.4%	63.5%	0
JF-T2B3-SO-02	58.4%	72.8%	81.2%	58.8%	63.5%	53.1%	81.1%	62.9%	0
JF-T2B3-SO-08	59.2%	66.4%	75.6%	61.6%	62.1%	56.3%	80.3%	62.7%	0
JF-T2B3-SO-13	54.4%	66.8%	75.6%	55.6%	58.1%	51.5%	79.7%	57.6%	0
JF-T2B4-SO-03	63.6%	79.6%	88.0%	64.4%	75.5%	65.6%	89.3%	74.1%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(46-102)	(32-106)
(FBP) = 2-Fluorobiphenyl	(51-105)	(39-107)
(TPH) = d14-p-Terphenyl	(55-124)	(31-130)
(DCB) = d4-1,2-Dichlorobenzene	(48-104)	(38-102)
(PHL) = d5-Phenol	(44-110)	(27-112)
(2FP) = 2-Fluorophenol	(38-112)	(22-108)
(TBP) = 2,4,6-Tribromophenol	(54-120)	(31-131)
(2CP) = d4-2-Chlorophenol	(50-103)	(36-104)

Prep Method: SW3546
Log Number Range: 11-771 to 11-780

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-011711
LCS/LCSD

Lab Sample ID: LCS-011711
LIMS ID: 11-771
Matrix: Soil
Data Release Authorized:
Reported: 01/24/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted LCS/LCSD: 01/17/11

Date Analyzed LCS: 01/20/11 22:24
LCSD: 01/20/11 22:58
Instrument/Analyst LCS: NT4/JZ
LCSD: NT4/JZ
GPC Cleanup: Yes

Sample Amount LCS: 7.50 g
LCSD: 7.50 g
Final Extract Volume LCS: 0.5 mL
LCSD: 0.5 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	1220	1670	73.1%	1200	1670	71.9%	1.7%
Bis-(2-Chloroethyl) Ether	1140	1670	68.3%	1120	1670	67.1%	1.8%
2-Chlorophenol	1260	1670	75.4%	1240	1670	74.3%	1.6%
1,3-Dichlorobenzene	1160	1670	69.5%	1120	1670	67.1%	3.5%
1,4-Dichlorobenzene	1170	1670	70.1%	1130	1670	67.7%	3.5%
Benzyl Alcohol	2300	3330	69.1%	2260	3330	67.9%	1.8%
1,2-Dichlorobenzene	1170	1670	70.1%	1130	1670	67.7%	3.5%
2-Methylphenol	1110	1670	66.5%	1080	1670	64.7%	2.7%
2,2'-Oxybis(1-Chloropropane)	1070	1670	64.1%	1040	1670	62.3%	2.8%
4-Methylphenol	2270	3330	68.2%	2210	3330	66.4%	2.7%
N-Nitroso-Di-N-Propylamine	1250	1670	74.9%	1220	1670	73.1%	2.4%
Hexachloroethane	1110	1670	66.5%	1050	1670	62.9%	5.6%
Nitrobenzene	1200	1670	71.9%	1180	1670	70.7%	1.7%
Isophorone	1380	1670	82.6%	1350	1670	80.8%	2.2%
2-Nitrophenol	1350	1670	80.8%	1340	1670	80.2%	0.7%
2,4-Dimethylphenol	1140	1670	68.3%	1150	1670	68.9%	0.9%
Benzoic Acid	4070	5000	81.4%	3890	5000	77.8%	4.5%
bis(2-Chloroethoxy) Methane	1160	1670	69.5%	1130	1670	67.7%	2.6%
2,4-Dichlorophenol	1400	1670	83.8%	1370	1670	82.0%	2.2%
1,2,4-Trichlorobenzene	1240	1670	74.3%	1210	1670	72.5%	2.4%
Naphthalene	1320	1670	79.0%	1280	1670	76.6%	3.1%
4-Chloroaniline	3490	4000	87.2%	3530	4000	88.2%	1.1%
Hexachlorobutadiene	1290	1670	77.2%	1260	1670	75.4%	2.4%
4-Chloro-3-methylphenol	1470	1670	88.0%	1420	1670	85.0%	3.5%
2-Methylnaphthalene	1220	1670	73.1%	1200	1670	71.9%	1.7%
Hexachlorocyclopentadiene	3010	5000	60.2%	3150	5000	63.0%	4.5%
2,4,6-Trichlorophenol	1440	1670	86.2%	1390	1670	83.2%	3.5%
2,4,5-Trichlorophenol	1330	1670	79.6%	1300	1670	77.8%	2.3%
2-Chloronaphthalene	1300	1670	77.8%	1270	1670	76.0%	2.3%
2-Nitroaniline	1330	1670	79.6%	1300	1670	77.8%	2.3%
Dimethylphthalate	1390	1670	83.2%	1390	1670	83.2%	0.0%
Acenaphthylene	1390	1670	83.2%	1360	1670	81.4%	2.2%
3-Nitroaniline	4070	4270	95.3%	4160	4270	97.4%	2.2%
Acenaphthene	1360	1670	81.4%	1340	1670	80.2%	1.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCSD-011711
LCS/LCSD

Lab Sample ID: LCS-011711
LIMS ID: 11-771
Matrix: Soil
Date Analyzed LCS: 01/20/11 22:24
LCSD: 01/20/11 22:58

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

Analyte	LCS		Spike Added-LCS	LCS Recovery	LCSD		Spike Added-LCSD	LCSD Recovery	RPD
2,4-Dinitrophenol	3540	Q	5000	70.8%	3650	Q	5000	73.0%	3.1%
4-Nitrophenol	1940	Q	1670	116%	1960	Q	1670	117%	1.0%
Dibenzofuran	1350		1670	80.8%	1320		1670	79.0%	2.2%
2,6-Dinitrotoluene	1410		1670	84.4%	1410		1670	84.4%	0.0%
2,4-Dinitrotoluene	1520		1670	91.0%	1530		1670	91.6%	0.7%
Diethylphthalate	1400		1670	83.8%	1400		1670	83.8%	0.0%
4-Chlorophenyl-phenylether	1380		1670	82.6%	1360		1670	81.4%	1.5%
Fluorene	1460		1670	87.4%	1450		1670	86.8%	0.7%
4-Nitroaniline	1450		1670	86.8%	1480		1670	88.6%	2.0%
4,6-Dinitro-2-Methylphenol	4390		5000	87.8%	4590		5000	91.8%	4.5%
N-Nitrosodiphenylamine	1290		1670	77.2%	1340		1670	80.2%	3.8%
4-Bromophenyl-phenylether	1320		1670	79.0%	1320		1670	79.0%	0.0%
Hexachlorobenzene	1320		1670	79.0%	1330		1670	79.6%	0.8%
Pentachlorophenol	1530		1670	91.6%	1520		1670	91.0%	0.7%
Phenanthrene	1480		1670	88.6%	1490		1670	89.2%	0.7%
Carbazole	1410		1670	84.4%	1420		1670	85.0%	0.7%
Anthracene	1460		1670	87.4%	1470		1670	88.0%	0.7%
Di-n-Butylphthalate	1420		1670	85.0%	1430		1670	85.6%	0.7%
Fluoranthene	1590	Q	1670	95.2%	1580	Q	1670	94.6%	0.6%
Pyrene	1620		1670	97.0%	1600		1670	95.8%	1.2%
Butylbenzylphthalate	1450		1670	86.8%	1460		1670	87.4%	0.7%
3,3'-Dichlorobenzidine	4190		4270	98.1%	4300		4270	101%	2.6%
Benzo(a)anthracene	1620		1670	97.0%	1640		1670	98.2%	1.2%
bis(2-Ethylhexyl)phthalate	1360		1670	81.4%	1390		1670	83.2%	2.2%
Chrysene	1650		1670	98.8%	1640		1670	98.2%	0.6%
Di-n-Octyl phthalate	1210		1670	72.5%	1210		1670	72.5%	0.0%
Benzo(a)pyrene	1470		1670	88.0%	1480		1670	88.6%	0.7%
Indeno(1,2,3-cd)pyrene	1240		1670	74.3%	1250		1670	74.9%	0.8%
Dibenz(a,h)anthracene	1320		1670	79.0%	1320		1670	79.0%	0.0%
Benzo(g,h,i)perylene	1030		1670	61.7%	1040		1670	62.3%	1.0%
1-Methylnaphthalene	1300		1670	77.8%	1260		1670	75.4%	3.1%
Total Benzofluoranthenes	3230		3330	97.0%	3230		3330	97.0%	0.0%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	70.8%	69.2%
2-Fluorobiphenyl	76.0%	72.8%
d14-p-Terphenyl	93.6%	91.6%
d4-1,2-Dichlorobenzene	72.8%	68.8%
d5-Phenol	73.3%	71.7%
2-Fluorophenol	68.8%	66.1%
2,4,6-Tribromophenol	96.5%	93.6%
d4-2-Chlorophenol	74.1%	71.7%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T3B1-SO-13-R
SAMPLE

Lab Sample ID: SE66G
LIMS ID: 11-770
Matrix: Water
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/20/11 19:30
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**1.0**	**1.2 Q**
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	5.0	< 5.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	**Diethylphthalate**	**1.0**	**13**

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T3B1-SO-13-R
SAMPLE

Lab Sample ID: SE66G
LIMS ID: 11-770
Matrix: Water
Date Analyzed: 01/20/11 19:30

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	**Di-n-Butylphthalate**	**1.0**	**1.7**
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	69.6%	2-Fluorobiphenyl	77.2%
d14-p-Terphenyl	81.2%	d4-1,2-Dichlorobenzene	65.2%
d5-Phenol	67.7%	2-Fluorophenol	72.3%
2,4,6-Tribromophenol	76.0%	d4-2-Chlorophenol	72.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: MB-011711
METHOD BLANK

Lab Sample ID: MB-011711
LIMS ID: 11-770
Matrix: Water
Data Release Authorized: MW
Reported: 01/25/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 01/17/11
Date Analyzed: 01/20/11 16:46
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	5.0	< 5.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: MB-011711
METHOD BLANK

Lab Sample ID: MB-011711
LIMS ID: 11-770
Matrix: Water
Date Analyzed: 01/20/11 16:46

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	79.2%	2-Fluorobiphenyl	84.8%
d14-p-Terphenyl	84.4%	d4-1,2-Dichlorobenzene	73.6%
d5-Phenol	74.7%	2-Fluorophenol	82.1%
2,4,6-Tribromophenol	80.8%	d4-2-Chlorophenol	82.1%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-011711	79.2%	84.8%	84.4%	73.6%	74.7%	82.1%	80.8%	82.1%	0
LCS-011711	77.6%	90.0%	89.2%	65.6%	76.5%	75.5%	90.4%	79.2%	0
LCSD-011711	74.4%	87.6%	86.8%	63.2%	70.9%	71.7%	89.1%	74.7%	0
JF-T3B1-SO-13-R	69.6%	77.2%	81.2%	65.2%	67.7%	72.3%	76.0%	72.3%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(46-100)	(39-100)
(FBP) = 2-Fluorobiphenyl	(49-100)	(42-100)
(TPH) = d14-p-Terphenyl	(53-119)	(26-114)
(DCB) = d4-1,2-Dichlorobenzene	(38-100)	(32-100)
(PHL) = d5-Phenol	(50-100)	(41-100)
(2FP) = 2-Fluorophenol	(46-100)	(38-100)
(TBP) = 2,4,6-Tribromophenol	(52-123)	(48-118)
(2CP) = d4-2-Chlorophenol	(53-100)	(44-100)

Prep Method: SW3520C
Log Number Range: 11-770 to 11-770

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-011711
LCS/LCSD

Lab Sample ID: LCS-011711
LIMS ID: 11-770
Matrix: Water
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted LCS/LCSD: 01/17/11

Date Analyzed LCS: 01/20/11 17:19
LCSD: 01/20/11 17:51
Instrument/Analyst LCS: NT6/JZ
LCSD: NT6/JZ
GPC Cleanup: NO

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	17.9 Q	25.0	71.6%	17.3 Q	25.0	69.2%	3.4%
Bis-(2-Chloroethyl) Ether	17.9	25.0	71.6%	17.5	25.0	70.0%	2.3%
2-Chlorophenol	19.7	25.0	78.8%	19.3	25.0	77.2%	2.1%
1,3-Dichlorobenzene	13.8	25.0	55.2%	13.1	25.0	52.4%	5.2%
1,4-Dichlorobenzene	14.2	25.0	56.8%	13.4	25.0	53.6%	5.8%
Benzyl Alcohol	33.8	50.0	67.6%	32.7	50.0	65.4%	3.3%
1,2-Dichlorobenzene	14.9	25.0	59.6%	14.1	25.0	56.4%	5.5%
2-Methylphenol	16.5	25.0	66.0%	16.4	25.0	65.6%	0.6%
2,2'-Oxybis(1-Chloropropane)	15.5 Q	25.0	62.0%	15.1 Q	25.0	60.4%	2.6%
4-Methylphenol	33.4	50.0	66.8%	32.7	50.0	65.4%	2.1%
N-Nitroso-Di-N-Propylamine	16.4 Q	25.0	65.6%	16.3 Q	25.0	65.2%	0.6%
Hexachloroethane	12.8	25.0	51.2%	11.5	25.0	46.0%	10.7%
Nitrobenzene	19.1	25.0	76.4%	18.6	25.0	74.4%	2.7%
Isophorone	21.2	25.0	84.8%	20.9	25.0	83.6%	1.4%
2-Nitrophenol	22.3	25.0	89.2%	22.0	25.0	88.0%	1.4%
2,4-Dimethylphenol	19.1	25.0	76.4%	19.3	25.0	77.2%	1.0%
Benzoic Acid	59.6	75.0	79.5%	62.0	75.0	82.7%	3.9%
bis(2-Chloroethoxy) Methane	18.8	25.0	75.2%	17.9	25.0	71.6%	4.9%
2,4-Dichlorophenol	22.0	25.0	88.0%	21.8	25.0	87.2%	0.9%
1,2,4-Trichlorobenzene	16.4	25.0	65.6%	15.6	25.0	62.4%	5.0%
Naphthalene	19.8	25.0	79.2%	19.3	25.0	77.2%	2.6%
4-Chloroaniline	57.8	60.0	96.3%	55.8	60.0	93.0%	3.5%
Hexachlorobutadiene	14.2	25.0	56.8%	12.9	25.0	51.6%	9.6%
4-Chloro-3-methylphenol	21.4	25.0	85.6%	21.0	25.0	84.0%	1.9%
2-Methylnaphthalene	17.5	25.0	70.0%	16.9	25.0	67.6%	3.5%
Hexachlorocyclopentadiene	31.4	75.0	41.9%	30.7	75.0	40.9%	2.3%
2,4,6-Trichlorophenol	24.2	25.0	96.8%	24.3	25.0	97.2%	0.4%
2,4,5-Trichlorophenol	21.9	25.0	87.6%	21.7	25.0	86.8%	0.9%
2-Chloronaphthalene	21.4	25.0	85.6%	20.7	25.0	82.8%	3.3%
2-Nitroaniline	20.3	25.0	81.2%	20.2	25.0	80.8%	0.5%
Dimethylphthalate	22.6	25.0	90.4%	22.8	25.0	91.2%	0.9%
Acenaphthylene	23.0	25.0	92.0%	22.7	25.0	90.8%	1.3%
3-Nitroaniline	68.7	64.0	107%	69.0	64.0	108%	0.4%
Acenaphthene	22.4	25.0	89.6%	21.9	25.0	87.6%	2.3%
2,4-Dinitrophenol	66.9 Q	75.0	89.2%	70.4 Q	75.0	93.9%	5.1%
4-Nitrophenol	24.6	25.0	98.4%	25.5	25.0	102%	3.6%
Dibenzofuran	21.3	25.0	85.2%	20.8	25.0	83.2%	2.4%
2,6-Dinitrotoluene	23.0	25.0	92.0%	22.9	25.0	91.6%	0.4%
2,4-Dinitrotoluene	22.8	25.0	91.2%	22.5	25.0	90.0%	1.3%
Diethylphthalate	21.8	25.0	87.2%	21.8	25.0	87.2%	0.0%
4-Chlorophenyl-phenylether	21.1	25.0	84.4%	20.1	25.0	80.4%	4.9%
Fluorene	23.4	25.0	93.6%	22.5	25.0	90.0%	3.9%
4-Nitroaniline	22.4	25.0	89.6%	22.2	25.0	88.8%	0.9%
4,6-Dinitro-2-Methylphenol	72.5	75.0	96.7%	76.7	75.0	102%	5.6%
N-Nitrosodiphenylamine	21.4	25.0	85.6%	20.9	25.0	83.6%	2.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-011711
LCS/LCSD

Lab Sample ID: LCS-011711
LIMS ID: 11-770
Matrix: Water
Date Analyzed LCS: 01/20/11 17:19
LCSD: 01/20/11 17:51

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
4-Bromophenyl-phenylether	22.1	25.0	88.4%	20.6	25.0	82.4%	7.0%
Hexachlorobenzene	21.4	25.0	85.6%	20.6	25.0	82.4%	3.8%
Pentachlorophenol	26.8	25.0	107%	26.9	25.0	108%	0.4%
Phenanthrene	24.9	25.0	99.6%	24.2	25.0	96.8%	2.9%
Carbazole	23.4	25.0	93.6%	23.0	25.0	92.0%	1.7%
Anthracene	24.4	25.0	97.6%	23.4	25.0	93.6%	4.2%
Di-n-Butylphthalate	23.9	25.0	95.6%	23.0	25.0	92.0%	3.8%
Fluoranthene	25.7	25.0	103%	24.8	25.0	99.2%	3.6%
Pyrene	24.2	25.0	96.8%	23.2	25.0	92.8%	4.2%
Butylbenzylphthalate	23.3	25.0	93.2%	22.1	25.0	88.4%	5.3%
3,3'-Dichlorobenzidine	61.3	64.0	95.8%	15.2	64.0	23.8%	121%
Benzo(a)anthracene	26.1	25.0	104%	25.3	25.0	101%	3.1%
bis(2-Ethylhexyl)phthalate	22.8	25.0	91.2%	22.5	25.0	90.0%	1.3%
Chrysene	26.7	25.0	107%	25.8	25.0	103%	3.4%
Di-n-Octyl phthalate	23.0	25.0	92.0%	22.4	25.0	89.6%	2.6%
Benzo(a)pyrene	23.3	25.0	93.2%	22.3	25.0	89.2%	4.4%
Indeno(1,2,3-cd)pyrene	30.5	25.0	122%	29.1	25.0	116%	4.7%
Dibenz(a,h)anthracene	30.8 Q	25.0	123%	29.4 Q	25.0	118%	4.7%
Benzo(g,h,i)perylene	30.7 Q	25.0	123%	28.7 Q	25.0	115%	6.7%
1-Methylnaphthalene	18.8	25.0	75.2%	18.2	25.0	72.8%	3.2%
Total Benzofluoranthenes	48.7	50.0	97.4%	46.6	50.0	93.2%	4.4%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	77.6%	74.4%
2-Fluorobiphenyl	90.0%	87.6%
d14-p-Terphenyl	89.2%	86.8%
d4-1,2-Dichlorobenzene	65.6%	63.2%
d5-Phenol	76.5%	70.9%
2-Fluorophenol	75.5%	71.7%
2,4,6-Tribromophenol	90.4%	89.1%
d4-2-Chlorophenol	79.2%	74.7%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: JF-T2B2-GW-15
SAMPLE

Lab Sample ID: SE66A
LIMS ID: 11-764
Matrix: Water
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 18:16
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.010	< 0.010 U
11100-14-4	Aroclor 1268	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	65.0%
Tetrachlorometaxylene	70.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-T2B3-GW-15
SAMPLE

Lab Sample ID: SE66B
LIMS ID: 11-765
Matrix: Water
Data Release Authorized: MW
Reported: 01/26/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 18:40
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.010	< 0.010 U
11100-14-4	Aroclor 1268	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	70.2%
Tetrachlorometaxylene	64.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: JF-T2B3-GW-15-D
SAMPLE

Lab Sample ID: SE66C
LIMS ID: 11-766
Matrix: Water
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 19:03
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.010	< 0.010 U
11100-14-4	Aroclor 1268	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	66.0%
Tetrachlorometaxylene	61.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-T2B4-GW-20
SAMPLE

Lab Sample ID: SE66D
LIMS ID: 11-767
Matrix: Water
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/26/11 00:51
Instrument/Analyst: ECD5/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 20.0
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.20	< 0.20 U
53469-21-9	Aroclor 1242	0.20	< 0.20 U
12672-29-6	**Aroclor 1248**	**0.20**	**1.8**
11097-69-1	**Aroclor 1254**	**0.20**	**2.5**
11096-82-5	Aroclor 1260	0.20	< 0.20 U
11104-28-2	Aroclor 1221	0.20	< 0.20 U
11141-16-5	Aroclor 1232	0.20	< 0.20 U
37324-23-5	Aroclor 1262	0.20	< 0.20 U
11100-14-4	Aroclor 1268	0.20	< 0.20 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	94.0%
Tetrachlorometaxylene	83.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-T3B4-GW-24
SAMPLE

Lab Sample ID: SE66E
LIMS ID: 11-768
Matrix: Water
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 19:51
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.010	< 0.010 U
11100-14-4	Aroclor 1268	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	56.0%
Tetrachlorometaxylene	59.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-T3B3-GW-15
SAMPLE

Lab Sample ID: SE66F
LIMS ID: 11-769
Matrix: Water
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 20:15
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	**Aroclor 1254**	**0.010**	**0.018**
11096-82-5	**Aroclor 1260**	**0.010**	**0.017**
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.014	< 0.014 Y
11100-14-4	Aroclor 1268	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	70.2%
Tetrachlorometaxylene	61.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-T3B1-SO-13-R
SAMPLE

Lab Sample ID: SE66G
LIMS ID: 11-770
Matrix: Water
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 20:38
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.021	< 0.021 Y
11097-69-1	**Aroclor 1254**	**0.010**	**0.057**
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.010	< 0.010 U
11100-14-4	Aroclor 1268	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	55.0%
Tetrachlorometaxylene	61.8%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-011811	72.2%	32-108	59.0%	31-100	0
LCS-011811	77.8%	32-108	62.8%	31-100	0
LCSD-011811	70.5%	32-108	58.0%	31-100	0
JF-T2B2-GW-15	65.0%	19-111	70.2%	21-100	0
JF-T2B3-GW-15	70.2%	19-111	64.8%	21-100	0
JF-T2B3-GW-15-D	66.0%	19-111	61.0%	21-100	0
JF-T2B4-GW-20	94.0%	19-111	83.0%	21-100	0
JF-T3B4-GW-24	56.0%	19-111	59.5%	21-100	0
JF-T3B3-GW-15	70.2%	19-111	61.0%	21-100	0
JF-T3B1-SO-13-R	55.0%	19-111	61.8%	21-100	0

Prep Method: SW3510C
Log Number Range: 11-764 to 11-770

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: MB-011811
METHOD BLANK

Lab Sample ID: MB-011811
LIMS ID: 11-764
Matrix: Water
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 17:05
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.010	< 0.010 U
11100-14-4	Aroclor 1268	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	72.2%
Tetrachlorometaxylene	59.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: LCS-011811
LCS/LCSD

Lab Sample ID: LCS-011811
LIMS ID: 11-764
Matrix: Water
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 01/18/11
Date Analyzed LCS: 01/22/11 17:29
LCSD: 01/22/11 17:52
Instrument/Analyst LCS: ECD7/AAR
LCSD: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount LCS: 1000 mL
LCSD: 1000 mL
Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	0.041	0.050	82.0%	0.039	0.050	78.0%	5.0%
Aroclor 1260	0.042	0.050	84.0%	0.040	0.050	80.0%	4.9%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	77.8%	70.5%
Tetrachlorometaxylene	62.8%	58.0%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T2B1-SO-03
SAMPLE

Lab Sample ID: SE66H
LIMS ID: 11-771
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/21/11 20:27
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.1 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 16.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	4.0	< 4.0 U
53469-21-9	Aroclor 1242	4.0	< 4.0 U
12672-29-6	Aroclor 1248	4.0	< 4.0 U
11097-69-1	Aroclor 1254	4.0	< 4.0 U
11096-82-5	Aroclor 1260	4.0	< 4.0 U
11104-28-2	Aroclor 1221	4.0	< 4.0 U
11141-16-5	Aroclor 1232	4.0	< 4.0 U
37324-23-5	**Aroclor 1262**	**4.0**	**9.8**
11100-14-4	Aroclor 1268	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	99.1%
Tetrachlorometaxylene	72.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T2B1-SO-08
SAMPLE

Lab Sample ID: SE66I
LIMS ID: 11-772
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/22/11 15:55
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 19.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	Aroclor 1254	3.9	< 3.9 U
11096-82-5	Aroclor 1260	3.9	< 3.9 U
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	110%
Tetrachlorometaxylene	72.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T2B1-SO-13
SAMPLE

Lab Sample ID: SE66J
LIMS ID: 11-773
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/22/11 16:14
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 27.1%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	Aroclor 1254	3.9	< 3.9 U
11096-82-5	Aroclor 1260	3.9	< 3.9 U
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	96.4%
Tetrachlorometaxylene	71.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T2B2-SO-03
SAMPLE

Lab Sample ID: SE66K
LIMS ID: 11-774
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/21/11 21:24
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 25.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	Aroclor 1254	3.9	< 3.9 U
11096-82-5	Aroclor 1260	3.9	< 3.9 U
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	**Aroclor 1262**	**3.9**	**4.5**
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	92.5%
Tetrachlorometaxylene	73.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: JF-T2B2-SO-08
SAMPLE

Lab Sample ID: SE66L
LIMS ID: 11-775
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/22/11 16:33
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 28.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	Aroclor 1254	3.9	< 3.9 U
11096-82-5	Aroclor 1260	4.9	< 4.9 Y
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	93.9%
Tetrachlorometaxylene	72.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: JF-T2B2-SO-13
SAMPLE

Lab Sample ID: SE66M
LIMS ID: 11-776
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/21/11 22:02
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.1 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 23.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	4.0	< 4.0 U
53469-21-9	Aroclor 1242	4.0	< 4.0 U
12672-29-6	Aroclor 1248	4.0	< 4.0 U
11097-69-1	Aroclor 1254	4.0	< 4.0 U
11096-82-5	Aroclor 1260	4.0	< 4.0 U
11104-28-2	Aroclor 1221	4.0	< 4.0 U
11141-16-5	Aroclor 1232	4.0	< 4.0 U
37324-23-5	Aroclor 1262	4.0	< 4.0 U
11100-14-4	Aroclor 1268	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	98.6%
Tetrachlorometaxylene	79.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T2B3-SO-02
SAMPLE

Lab Sample ID: SE66N
LIMS ID: 11-777
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/21/11 22:20
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 13.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	7.9	< 7.9 U
53469-21-9	Aroclor 1242	7.9	< 7.9 U
12672-29-6	Aroclor 1248	7.9	< 7.9 U
11097-69-1	**Aroclor 1254**	**7.9**	**34**
11096-82-5	**Aroclor 1260**	**7.9**	**51**
11104-28-2	Aroclor 1221	7.9	< 7.9 U
11141-16-5	Aroclor 1232	7.9	< 7.9 U
37324-23-5	Aroclor 1262	7.9	< 7.9 U
11100-14-4	Aroclor 1268	7.9	< 7.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	99.2%
Tetrachlorometaxylene	83.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T2B3-SO-08
SAMPLE

Lab Sample ID: SE66O
LIMS ID: 11-778
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/22/11 16:52
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 25.1%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	Aroclor 1254	3.9	< 3.9 U
11096-82-5	Aroclor 1260	3.9	< 3.9 U
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	**Aroclor 1262**	**3.9**	**6.7**
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	100%
Tetrachlorometaxylene	75.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T2B3-SO-13
SAMPLE

Lab Sample ID: SE66P
LIMS ID: 11-779
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/22/11 17:10
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 23.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	Aroclor 1254	3.9	< 3.9 U
11096-82-5	Aroclor 1260	3.9	< 3.9 U
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	**Aroclor 1262**	**3.9**	**4.0**
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	94.5%
Tetrachlorometaxylene	66.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T2B4-SO-03
SAMPLE

Lab Sample ID: SE66Q
LIMS ID: 11-780
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/22/11 17:29
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 6.75 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 50.0
Silica Gel: Yes

Percent Moisture: 12.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	150	< 150 U
53469-21-9	Aroclor 1242	150	< 150 U
12672-29-6	Aroclor 1248	440	< 440 Y
11097-69-1	**Aroclor 1254**	**150**	**1,300**
11096-82-5	**Aroclor 1260**	**150**	**240**
11104-28-2	Aroclor 1221	150	< 150 U
11141-16-5	Aroclor 1232	150	< 150 U
37324-23-5	Aroclor 1262	150	< 150 U
11100-14-4	Aroclor 1268	150	< 150 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: MB-011711
METHOD BLANK

Lab Sample ID: MB-011711
LIMS ID: 11-771
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 01/17/11
Date Analyzed: 01/21/11 19:31
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.0 g
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	4.0	< 4.0 U
53469-21-9	Aroclor 1242	4.0	< 4.0 U
12672-29-6	Aroclor 1248	4.0	< 4.0 U
11097-69-1	Aroclor 1254	4.0	< 4.0 U
11096-82-5	Aroclor 1260	4.0	< 4.0 U
11104-28-2	Aroclor 1221	4.0	< 4.0 U
11141-16-5	Aroclor 1232	4.0	< 4.0 U
37324-23-5	Aroclor 1262	4.0	< 4.0 U
11100-14-4	Aroclor 1268	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	105%
Tetrachlorometaxylene	65.9%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-011711	105%	40-109	65.9%	35-100	0
LCS-011711	104%	40-109	68.2%	35-100	0
LCSD-011711	105%	40-109	68.9%	35-100	0
JF-T2B1-SO-03	99.1%	34-141	72.1%	38-102	0
JF-T2B1-SO-08	110%	34-141	72.9%	38-102	0
JF-T2B1-SO-13	96.4%	34-141	71.5%	38-102	0
JF-T2B2-SO-03	92.5%	34-141	73.2%	38-102	0
JF-T2B2-SO-08	93.9%	34-141	72.0%	38-102	0
JF-T2B2-SO-13	98.6%	34-141	79.0%	38-102	0
JF-T2B3-SO-02	99.2%	34-141	83.6%	38-102	0
JF-T2B3-SO-08	100%	34-141	75.0%	38-102	0
JF-T2B3-SO-13	94.5%	34-141	66.1%	38-102	0
JF-T2B4-SO-03	D	34-141	D	38-102	0

Low Level PSDDA Control Limits
Prep Method: SW3550C
Log Number Range: 11-771 to 11-780

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: LCS-011711
LCS/LCSD

Lab Sample ID: LCS-011711
LIMS ID: 11-771
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 01/17/11

Date Analyzed LCS: 01/21/11 19:50
LCSD: 01/21/11 20:09
Instrument/Analyst LCS: ECD5/JGR
LCSD: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount LCS: 25.0 g-dry-wt
LCSD: 25.0 g-dry-wt
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 5.00
LCSD: 5.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	15.8	20.0	79.0%	16.0	20.0	80.0%	1.3%
Aroclor 1260	18.0	20.0	90.0%	18.5	20.0	92.5%	2.7%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	104%	105%
Tetrachlorometaxylene	68.2%	68.9%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID-Silica and Acid Cleaned
Page 1 of 2
Matrix: Soil

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

Data Release Authorized: VB
Reported: 01/22/11

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-011411	Method Blank	01/14/11	01/21/11	1.00	Diesel	5.0	< 5.0 U
11-771	HC ID: ---		FID3B	1.0	Motor Oil	10	< 10 U
					Mineral Oil	10	< 10 U
					o-Terphenyl		98.6%
SE66H	JF-T2B1-SO-03	01/14/11	01/21/11	1.00	**Diesel**	**6.0**	**20**
11-771	HC ID: **DIESEL/MOTOR OIL**		FID3B	1.0	**Motor Oil**	**12**	**58**
					Mineral Oil	**12**	**53**
					o-Terphenyl		96.3%
SE66I	JF-T2B1-SO-08	01/14/11	01/21/11	1.00	Diesel	6.2	< 6.2 U
11-772	HC ID: ---		FID3B	1.0	Motor Oil	12	< 12 U
					Mineral Oil	12	< 12 U
					o-Terphenyl		93.0%
SE66J	JF-T2B1-SO-13	01/14/11	01/21/11	1.00	**Diesel**	**6.8**	**16**
11-773	HC ID: **DRO/MOTOR OIL**		FID3B	1.0	**Motor Oil**	**14**	**52**
					Mineral Oil	**14**	**48**
					o-Terphenyl		92.2%
SE66K	JF-T2B2-SO-03	01/14/11	01/21/11	1.00	**Diesel**	**6.7**	**21**
11-774	HC ID: **DIESEL/MOTOR OIL**		FID3B	1.0	**Motor Oil**	**13**	**46**
					Mineral Oil	**13**	**42**
					o-Terphenyl		90.2%
SE66L	JF-T2B2-SO-08	01/14/11	01/21/11	1.00	**Diesel**	**34**	**270**
11-775	HC ID: **DIESEL/MOTOR OIL**		FID3B	5.0	**Motor Oil**	**69**	**570**
					Mineral Oil	**69**	**520**
					o-Terphenyl		82.6%
SE66M	JF-T2B2-SO-13	01/14/11	01/21/11	1.00	Diesel	6.5	< 6.5 U
11-776	HC ID: ---		FID3B	1.0	Motor Oil	13	< 13 U
					Mineral Oil	13	< 13 U
					o-Terphenyl		93.5%
SE66N	JF-T2B3-SO-02	01/14/11	01/21/11	1.00	**Diesel**	**5.8**	**7.8**
11-777	HC ID: **DRO/MOTOR OIL**		FID3B	1.0	**Motor Oil**	**12**	**220**
					Mineral Oil	**12**	**200**
					o-Terphenyl		92.9%
SE66O	JF-T2B3-SO-08	01/14/11	01/21/11	1.00	**Diesel**	**6.6**	**8.2**
11-778	HC ID: **DRO/MOTOR OIL**		FID3B	1.0	**Motor Oil**	**13**	**25**
					Mineral Oil	**13**	**22**
					o-Terphenyl		92.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID-Silica and Acid Cleaned

Matrix: Soil

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

Data Release Authorized: VTB
Reported: 01/22/11

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
SE66P	JF-T2B3-SO-13	01/14/11	01/21/11	1.00	**Diesel**	**6.5**	**110**
11-779	HC ID: **DIESEL/MOTOR OIL**		FID3B	1.0	**Motor Oil**	**13**	**120**
					Mineral Oil	**13**	**110**
					o-Terphenyl		79.6%
SE66Q	JF-T2B4-SO-03	01/14/11	01/21/11	1.00	**Diesel**	**5.6**	**42**
11-780	HC ID: **DRO/MOTOR OIL**		FID3B	1.0	**Motor Oil**	**11**	**550**
					Mineral Oil	**11**	**500**
					o-Terphenyl		91.7%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
Mineral Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

ANALYTICAL RESOURCES INCORPORATED

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

Client ID	OTER	TOT OUT
MB-011411	98.6%	0
LCS-011411	93.0%	0
LCSD-011411	98.6%	0
JF-T2B1-SO-03	96.3%	0
JF-T2B1-SO-08	93.0%	0
JF-T2B1-SO-13	92.2%	0
JF-T2B2-SO-03	90.2%	0
JF-T2B2-SO-08	82.6%	0
JF-T2B2-SO-13	93.5%	0
JF-T2B3-SO-02	92.9%	0
JF-T2B3-SO-08	92.2%	0
JF-T2B3-SO-13	79.6%	0
JF-T2B4-SO-03	91.7%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(59-134)	(43-137)

Prep Method: SW3546
Log Number Range: 11-771 to 11-780

FORM-II TPHD

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: LCS-011411**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-011411
LIMS ID: 11-771
Matrix: Soil
Data Release Authorized: VB
Reported: 01/22/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted LCS/LCSD: 01/14/11

Date Analyzed LCS: 01/21/11 10:31
LCSD: 01/21/11 10:56
Instrument/Analyst LCS: FID/MS
LCSD: FID/MS

Sample Amount LCS: 10.0 g
LCSD: 10.0 g
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.0
LCSD: 1.0

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	131	150	87.3%	130	150	86.7%	0.8%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	93.0%	98.6%

Results reported in mg/kg
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 01/13/11

ARI Job: SE66
Project: Jorgensen Forge PLO
7KPL2JOR

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
11-771-011411MB1	Method Blank	10.0 g	1.00 mL	-	01/14/11
11-771-011411LCS1	Lab Control	10.0 g	1.00 mL	-	01/14/11
11-771-011411LCSD1	Lab Control Dup	10.0 g	1.00 mL	-	01/14/11
11-771-SE66H	JF-T2B1-SO-03	8.37 g	1.00 mL	D	01/14/11
11-772-SE66I	JF-T2B1-SO-08	8.06 g	1.00 mL	D	01/14/11
11-773-SE66J	JF-T2B1-SO-13	7.33 g	1.00 mL	D	01/14/11
11-774-SE66K	JF-T2B2-SO-03	7.49 g	1.00 mL	D	01/14/11
11-775-SE66L	JF-T2B2-SO-08	7.26 g	1.00 mL	D	01/14/11
11-776-SE66M	JF-T2B2-SO-13	7.72 g	1.00 mL	D	01/14/11
11-777-SE66N	JF-T2B3-SO-02	8.70 g	1.00 mL	D	01/14/11
11-778-SE66O	JF-T2B3-SO-08	7.53 g	1.00 mL	D	01/14/11
11-779-SE66P	JF-T2B3-SO-13	7.69 g	1.00 mL	D	01/14/11
11-780-SE66Q	JF-T2B4-SO-03	8.85 g	1.00 mL	D	01/14/11

Basis: D=Dry Weight W=As Received

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID-Silica and Acid Cleaned
Page 1 of 1
Matrix: Water

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

Data Release Authorized: VJ
Reported: 01/22/11

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-011711	Method Blank	01/17/11	01/21/11	1.00	Diesel	0.10	< 0.10 U
11-770	HC ID: ---		FID3B	1.0	Motor Oil	0.20	< 0.20 U
					Mineral Oil	0.20	< 0.20 U
					o-Terphenyl		86.5%
SE66G	JF-T3B1-SO-13-R	01/17/11	01/21/11	1.00	Diesel	0.10	< 0.10 U
11-770	HC ID: ---		FID3B	1.0	Motor Oil	0.20	< 0.20 U
					Mineral Oil	0.20	< 0.20 U
					o-Terphenyl		88.0%

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
Mineral Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

ANALYTICAL RESOURCES INCORPORATED

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

Client ID	OTER	TOT OUT
MB-011711	86.5%	0
LCS-011711	94.0%	0
LCSD-011711	92.0%	0
JF-T3B1-SO-13-R	88.0%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(53-123)	(49-118)

Prep Method: SW3510C
Log Number Range: 11-770 to 11-770

FORM-II TPHD

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: LCS-011711**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-011711
LIMS ID: 11-770
Matrix: Water
Data Release Authorized: VJ
Reported: 01/22/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted LCS/LCSD: 01/17/11

Date Analyzed LCS: 01/21/11 17:57
LCSD: 01/21/11 18:22
Instrument/Analyst LCS: FID/JGR
LCSD: FID/JGR

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	2.43	3.00	81.0%	2.31	3.00	77.0%	5.1%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	94.0%	92.0%

Results reported in mg/L
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: SE66
Matrix: Water
Project: Jorgensen Forge PLO
Date Received: 01/13/11
7KPL2JOR

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
11-770-011711MB1	Method Blank	500 mL	1.00 mL	01/17/11
11-770-011711LCS1	Lab Control	500 mL	1.00 mL	01/17/11
11-770-011711LCSD1	Lab Control Dup	500 mL	1.00 mL	01/17/11
11-770-SE66G	JF-T3B1-SO-13-R	500 mL	1.00 mL	01/17/11

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T2B1-SO-03
SAMPLE

Lab Sample ID: SE66H
LIMS ID: 11-771
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 81.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	7440-38-2	Arsenic	6	6	U
3050B	01/17/11	6010B	01/19/11	**7440-43-9**	**Cadmium**	0.2	**0.4**	
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.2	**17.4**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	2	**8**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**18**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**42**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T2B1-SO-08
SAMPLE

Lab Sample ID: SE66I
LIMS ID: 11-772
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 80.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	**7440-38-2**	**Arsenic**	6	**6**	
3050B	01/17/11	6010B	01/19/11	7440-43-9	Cadmium	0.2	0.2	U
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.2	**20.9**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	2	**6**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**13**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**36**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: JF-T2B1-SO-13
SAMPLE

Lab Sample ID: SE66J
LIMS ID: 11-773
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 72.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	7440-38-2	Arsenic	7	7	U
3050B	01/17/11	6010B	01/19/11	**7440-43-9**	**Cadmium**	0.3	**0.4**	
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.3	**20.5**	
3050B	01/17/11	6010B	01/19/11	7439-92-1	Lead	3	3	U
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**18**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**35**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T2B2-SO-03
SAMPLE

Lab Sample ID: SE66K
LIMS ID: 11-774
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 74.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	**7440-38-2**	**Arsenic**	7	**19**	
3050B	01/17/11	6010B	01/19/11	**7440-43-9**	**Cadmium**	0.3	**0.3**	
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.3	**44.5**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	3	**36**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**10**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**67**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T2B2-SO-08
SAMPLE

Lab Sample ID: SE66L
LIMS ID: 11-775
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 73.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	**7440-38-2**	**Arsenic**	6	**7**	
3050B	01/17/11	6010B	01/19/11	**7440-43-9**	**Cadmium**	0.3	**0.3**	
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.3	**25.7**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	3	**46**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**10**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**79**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T2B2-SO-13
SAMPLE

Lab Sample ID: SE66M
LIMS ID: 11-776
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 76.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	7440-38-2	Arsenic	6	6	U
3050B	01/17/11	6010B	01/19/11	7440-43-9	Cadmium	0.3	0.3	U
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.3	**17.0**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	3	**5**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**13**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**695**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T2B3-SO-02
SAMPLE

Lab Sample ID: SE66N
LIMS ID: 11-777
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 83.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	**7440-38-2**	**Arsenic**	6	**8**	
3050B	01/17/11	6010B	01/19/11	**7440-43-9**	**Cadmium**	0.2	**0.4**	
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.2	**37.8**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	2	**22**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**18**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**119**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T2B3-SO-08
SAMPLE

Lab Sample ID: SE660
LIMS ID: 11-778
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 74.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	**7440-38-2**	**Arsenic**	6	**8**	
3050B	01/17/11	6010B	01/19/11	**7440-43-9**	**Cadmium**	0.2	**0.3**	
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.2	**43.3**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	2	**31**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**11**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**59**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T2B3-SO-13
SAMPLE

Lab Sample ID: SE66P
LIMS ID: 11-779
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 76.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	**7440-38-2**	**Arsenic**	6	**7**	
3050B	01/17/11	6010B	01/19/11	**7440-43-9**	**Cadmium**	0.2	**0.3**	
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.2	**30.6**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	2	**30**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**11**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**60**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T2B4-SO-03
SAMPLE

Lab Sample ID: SE66Q
LIMS ID: 11-780
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 87.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	**7440-38-2**	**Arsenic**	5	**8**	
3050B	01/17/11	6010B	01/19/11	**7440-43-9**	**Cadmium**	0.2	**0.8**	
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.2	**48.2**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	2	**87**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**24**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**225**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: SE66MB
LIMS ID: 11-771
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	7440-38-2	Arsenic	5	5	U
3050B	01/17/11	6010B	01/19/11	7440-43-9	Cadmium	0.2	0.2	U
3050B	01/17/11	6010B	01/19/11	7440-50-8	Copper	0.2	0.2	U
3050B	01/17/11	6010B	01/19/11	7439-92-1	Lead	2	2	U
3050B	01/17/11	6010B	01/19/11	7440-02-0	Nickel	1	1	U
3050B	01/17/11	6010B	01/19/11	7440-66-6	Zinc	1	1	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: SE66LCS
LIMS ID: 11-771
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010B	203	200	102%	
Cadmium	6010B	51.7	50.0	103%	
Copper	6010B	52.0	50.0	104%	
Lead	6010B	199	200	99.5%	
Nickel	6010B	50	50	100%	
Zinc	6010B	51	50	102%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: JF-T3B1-SO-13-R
SAMPLE

Lab Sample ID: SE66G
LIMS ID: 11-770
Matrix: Water
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	01/14/11	6010B	01/19/11	7440-38-2	Arsenic	0.05	0.05	U
3010A	01/14/11	6010B	01/19/11	7440-43-9	Cadmium	0.002	0.002	U
3010A	01/14/11	6010B	01/19/11	7440-50-8	Copper	0.002	0.002	U
3010A	01/14/11	6010B	01/19/11	7439-92-1	Lead	0.02	0.02	U
3010A	01/14/11	6010B	01/19/11	7440-02-0	Nickel	0.01	0.01	U
3010A	01/14/11	6010B	01/19/11	7440-66-6	Zinc	0.01	0.01	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: SE66MB
LIMS ID: 11-770
Matrix: Water
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	01/14/11	6010B	01/19/11	7440-38-2	Arsenic	0.05	0.05	U
3010A	01/14/11	6010B	01/19/11	7440-43-9	Cadmium	0.002	0.002	U
3010A	01/14/11	6010B	01/19/11	7440-50-8	Copper	0.002	0.002	U
3010A	01/14/11	6010B	01/19/11	7439-92-1	Lead	0.02	0.02	U
3010A	01/14/11	6010B	01/19/11	7440-02-0	Nickel	0.01	0.01	U
3010A	01/14/11	6010B	01/19/11	7440-66-6	Zinc	0.01	0.01	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: SE66LCS
LIMS ID: 11-770
Matrix: Water
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE66-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010B	2.04	2.00	102%	
Cadmium	6010B	0.512	0.500	102%	
Copper	6010B	0.516	0.500	103%	
Lead	6010B	1.99	2.00	99.5%	
Nickel	6010B	0.51	0.50	102%	
Zinc	6010B	0.51	0.50	102%	

Reported in mg/L

N-Control limit not met
Control Limits: 80-120%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

January 26, 2011

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge PLO
ARI Job No: SE67

Dear Tom:

Please find enclosed analytical results and the original Chain of Custody documentation (COC) for the project referenced above. Analytical Resources, Incorporated (ARI) accepted fifteen soil samples on January 13, 2011. The samples were received in good condition.

The samples were analyzed for Total Metals, SVOCs, PCBs and NWTPH-Dx, as requested.

The SVOCs 1/21/11 CCAL is out of control low for 2,2-oxybis (1-Chloropropane) and 2,4-Dinitrophenol are out of control low. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The SVOCs 1/24/11 CCAL is out of control low for Benzidine and 2,4-Dinitrophenol and out of control high for Indeno (1,2,3-cd)pyrene, Dibenzo (a,h)anthracene and Benzo(g,h,i) perylene. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The SVOCs sample JF-T3B4-SO-13 was analyzed at a dilution due to matrix effects.

The PCB surrogate DCBP is out of control high for the 1/18/11 LCS. The spike recoveries are in control and no action was taken.

The PCB surrogate TCMX is out of control high for sample JF-T3B3-SO-08. No action was taken.

The PCBs matrix spike and matrix spike duplicate for sample JF-T3B3-SO-03 are out of control high for aroclor 1260 due to matrix effects.

The total metals matrix spike is out of control high for zinc with RPDs for copper and zinc outside of the +/- 20% control limits for sample JF-T3B3-SO-03.

No other analytical complications were noted for these analyses. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206-695-6211
Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 567	Turn-around Requested: STANDARD	Page: 3 of 4	
ARI Client Company: FIS	Phone: 206-292-2078	Date: 1/13/11	Ice Present?
Client Contact: NICK GARSON and TOM COLLIGAN		No. of Coolers:	Cooler Temps:
Client Project Name: Jorgensen Forge PLO			
Client Project #: 7KPL2JOR	Samplers: DEAN BRAME / LISA MEOLI		

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

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: METALS As, Cd, Cu, Pb Ni, Zn	SVOCs	TPH-D	PCBs					Notes/Comments
JF-T3B2-SO-08	1/13/11	1535	SO	2	x	x	x	x					
JF-T3B2-SO-13		1550											
JF-T3B2-SO-13-D		1550											
JF-T3B1-SO-03		1620											
JF-T3B1-SO-08		1625											
JF-T3B1-SO-13		1630											

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: DEAN BRAME	Printed Name: C. OREIRO	Printed Name:	Printed Name:
	Company: FIS	Company: ARI	Company:	Company:
	Date & Time: 1/13/11 1755	Date & Time: 1/13/11 1755	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.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 5767	Turn-around Requested: STANDARD	Page: 4 of 4	
ARI Client Company: FIS	Phone: 206-292-2078	Date: 1/13/11	Ice Present?
Client Contact: NICK GARSON and TOM COLLIGAN		No. of Coolers:	Cooler Temps:
Client Project Name: Jorgensen Forge PLO			
Client Project #: 7KPL2JOR	Samplers: DEAN BRAME / LISA MEOLI		

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

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: METALS As, Cd, Cu, Pb, Ni, Zn	SVOCs	TPH-D	PCBs					Notes/Comments
JF-T2B4-SO-18	1/13/11	1120	SO	2	x	x	x	x					
JF-T2B4-SO-23	1/13/11	1125	SO										
~~JF-T2~~													
JF-T3B4-SO-03	1/13/11	1350	SO										
JF-T3B4-SO-13		1405											
JF-T3B4-SO-23		1420											
JF-T3B3-SO-03		1445											MS/MSD
JF-T3B3-SO-08		1455											1/13/11
JF-T3B3-SO-13		1510											
JF-T3B2-SO-03		1525											

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: 4/13/ DEAN BRAME	Printed Name: C. OREIRO	Printed Name:	Printed Name:
	Company: FIS	Company: ARI	Company:	Company:
	Date & Time: 1/13/11 1755	Date & Time: 1/13/11 1755	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: Boeing
Project Name: Jorgensen Forge PLO
COC No(s): _____ (NA)
Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other: _____
Assigned ARI Job No: ST67
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): 5.9 (4.3) 4.3 ___ ___ ___

If cooler temperature is out of compliance fill out form 00070F — Temp Gun ID#: 90941619

Cooler Accepted by: DO Date: 1/13/11 Time: 1755

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)		

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

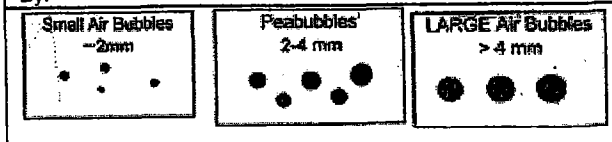
Samples Logged by: MM Date: 1/14/11 Time: 1021

***** 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:

By: Date:



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T3B2-SO-08
SAMPLE

Lab Sample ID: SE67A
LIMS ID: 11-781
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO 7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/21/11 17:42
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 7.62 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 24.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	66	< 66 U
111-44-4	Bis-(2-Chloroethyl) Ether	66	< 66 U
95-57-8	2-Chlorophenol	66	< 66 U
541-73-1	1,3-Dichlorobenzene	66	< 66 U
106-46-7	1,4-Dichlorobenzene	66	< 66 U
100-51-6	Benzyl Alcohol	330	< 330 U
95-50-1	1,2-Dichlorobenzene	66	< 66 U
95-48-7	2-Methylphenol	66	< 66 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	66	< 66 U
106-44-5	4-Methylphenol	66	< 66 U
621-64-7	N-Nitroso-Di-N-Propylamine	66	< 66 U
67-72-1	Hexachloroethane	66	< 66 U
98-95-3	Nitrobenzene	66	< 66 U
78-59-1	Isophorone	66	< 66 U
88-75-5	2-Nitrophenol	66	< 66 U
105-67-9	2,4-Dimethylphenol	66	< 66 U
65-85-0	Benzoic Acid	660	< 660 U
111-91-1	bis(2-Chloroethoxy) Methane	66	< 66 U
120-83-2	2,4-Dichlorophenol	330	< 330 U
120-82-1	1,2,4-Trichlorobenzene	66	< 66 U
91-20-3	Naphthalene	66	< 66 U
106-47-8	4-Chloroaniline	330	< 330 U
87-68-3	Hexachlorobutadiene	66	< 66 U
59-50-7	4-Chloro-3-methylphenol	330	< 330 U
91-57-6	2-Methylnaphthalene	66	< 66 U
77-47-4	Hexachlorocyclopentadiene	330	< 330 U
88-06-2	2,4,6-Trichlorophenol	330	< 330 U
95-95-4	2,4,5-Trichlorophenol	330	< 330 U
91-58-7	2-Chloronaphthalene	66	< 66 U
88-74-4	2-Nitroaniline	330	< 330 U
131-11-3	Dimethylphthalate	66	< 66 U
208-96-8	Acenaphthylene	66	< 66 U
99-09-2	3-Nitroaniline	330	< 330 U
83-32-9	Acenaphthene	66	< 66 U
51-28-5	2,4-Dinitrophenol	660	< 660 U
100-02-7	4-Nitrophenol	330	< 330 U
132-64-9	Dibenzofuran	66	< 66 U
606-20-2	2,6-Dinitrotoluene	330	< 330 U
121-14-2	2,4-Dinitrotoluene	330	< 330 U
84-66-2	Diethylphthalate	66	< 66 U
7005-72-3	4-Chlorophenyl-phenylether	66	< 66 U
86-73-7	Fluorene	66	< 66 U
100-01-6	4-Nitroaniline	330	< 330 U
534-52-1	4,6-Dinitro-2-Methylphenol	660	< 660 U

Lab Sample ID: SE67A
LIMS ID: 11-781
Matrix: Soil
Date Analyzed: 01/21/11 17:42

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	66	< 66 U
101-55-3	4-Bromophenyl-phenylether	66	< 66 U
118-74-1	Hexachlorobenzene	66	< 66 U
87-86-5	Pentachlorophenol	330	< 330 U
85-01-8	Phenanthrene	66	< 66 U
86-74-8	Carbazole	66	< 66 U
120-12-7	Anthracene	66	< 66 U
84-74-2	Di-n-Butylphthalate	66	< 66 U
206-44-0	Fluoranthene	66	< 66 U
129-00-0	Pyrene	66	< 66 U
85-68-7	Butylbenzylphthalate	66	< 66 U
91-94-1	3,3'-Dichlorobenzidine	330	< 330 U
56-55-3	Benzo(a)anthracene	66	< 66 U
117-81-7	bis(2-Ethylhexyl)phthalate	66	< 66 U
218-01-9	Chrysene	66	< 66 U
117-84-0	Di-n-Octyl phthalate	66	< 66 U
50-32-8	Benzo(a)pyrene	66	< 66 U
193-39-5	Indeno(1,2,3-cd)pyrene	66	< 66 U
53-70-3	Dibenz(a,h)anthracene	66	< 66 U
191-24-2	Benzo(g,h,i)perylene	66	< 66 U
90-12-0	1-Methylnaphthalene	66	< 66 U
TOTBFA	Total Benzofluoranthenes	66	< 66 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.4%	2-Fluorobiphenyl	65.6%
d14-p-Terphenyl	86.0%	d4-1,2-Dichlorobenzene	61.2%
d5-Phenol	63.7%	2-Fluorophenol	58.9%
2,4,6-Tribromophenol	56.5%	d4-2-Chlorophenol	63.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T3B2-SO-13
SAMPLE

Lab Sample ID: SE67B
LIMS ID: 11-782
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/21/11 18:15
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 8.08 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 26.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
111-44-4	Bis-(2-Chloroethyl) Ether	62	< 62 U
95-57-8	2-Chlorophenol	62	< 62 U
541-73-1	1,3-Dichlorobenzene	62	< 62 U
106-46-7	1,4-Dichlorobenzene	62	< 62 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
621-64-7	N-Nitroso-Di-N-Propylamine	62	< 62 U
67-72-1	Hexachloroethane	62	< 62 U
98-95-3	Nitrobenzene	62	< 62 U
78-59-1	Isophorone	62	< 62 U
88-75-5	2-Nitrophenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
65-85-0	Benzoic Acid	620	< 620 U
111-91-1	bis(2-Chloroethoxy) Methane	62	< 62 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	62	< 62 U
91-20-3	Naphthalene	62	< 62 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	62	< 62 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	62	< 62 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	62	< 62 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	62	< 62 U
51-28-5	2,4-Dinitrophenol	620	< 620 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	62	< 62 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	62	< 62 U
7005-72-3	4-Chlorophenyl-phenylether	62	< 62 U
86-73-7	Fluorene	62	< 62 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	620	< 620 U

Lab Sample ID: SE67B
LIMS ID: 11-782
Matrix: Soil
Date Analyzed: 01/21/11 18:15

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	62	< 62 U
101-55-3	4-Bromophenyl-phenylether	62	< 62 U
118-74-1	Hexachlorobenzene	62	< 62 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	Phenanthrene	62	< 62 U
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	Di-n-Butylphthalate	62	< 62 U
206-44-0	Fluoranthene	62	< 62 U
129-00-0	Pyrene	62	< 62 U
85-68-7	Butylbenzylphthalate	62	< 62 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	bis(2-Ethylhexyl)phthalate	62	< 62 U
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
90-12-0	1-Methylnaphthalene	62	< 62 U
TOTBFA	Total Benzofluoranthenes	62	< 62 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.8%	2-Fluorobiphenyl	68.4%
d14-p-Terphenyl	79.6%	d4-1,2-Dichlorobenzene	64.8%
d5-Phenol	66.9%	2-Fluorophenol	64.3%
2,4,6-Tribromophenol	57.1%	d4-2-Chlorophenol	68.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T3B2-SO-13-D
SAMPLE

Lab Sample ID: SE67C
LIMS ID: 11-783
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/21/11 18:47
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 8.18 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 26.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	61	< 61 U
111-44-4	Bis-(2-Chloroethyl) Ether	61	< 61 U
95-57-8	2-Chlorophenol	61	< 61 U
541-73-1	1,3-Dichlorobenzene	61	< 61 U
106-46-7	1,4-Dichlorobenzene	61	< 61 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	61	< 61 U
95-48-7	2-Methylphenol	61	< 61 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	61	< 61 U
106-44-5	4-Methylphenol	61	< 61 U
621-64-7	N-Nitroso-Di-N-Propylamine	61	< 61 U
67-72-1	Hexachloroethane	61	< 61 U
98-95-3	Nitrobenzene	61	< 61 U
78-59-1	Isophorone	61	< 61 U
88-75-5	2-Nitrophenol	61	< 61 U
105-67-9	2,4-Dimethylphenol	61	< 61 U
65-85-0	Benzoic Acid	610	< 610 U
111-91-1	bis(2-Chloroethoxy) Methane	61	< 61 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	61	< 61 U
91-20-3	Naphthalene	61	< 61 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	61	< 61 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	61	< 61 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	61	< 61 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	61	< 61 U
208-96-8	Acenaphthylene	61	< 61 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	61	< 61 U
51-28-5	2,4-Dinitrophenol	610	< 610 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	61	< 61 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	61	< 61 U
7005-72-3	4-Chlorophenyl-phenylether	61	< 61 U
86-73-7	Fluorene	61	< 61 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	610	< 610 U

Lab Sample ID: SE67C
LIMS ID: 11-783
Matrix: Soil
Date Analyzed: 01/21/11 18:47

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	61	< 61 U
101-55-3	4-Bromophenyl-phenylether	61	< 61 U
118-74-1	Hexachlorobenzene	61	< 61 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	Phenanthrene	61	< 61 U
86-74-8	Carbazole	61	< 61 U
120-12-7	Anthracene	61	< 61 U
84-74-2	Di-n-Butylphthalate	61	< 61 U
206-44-0	Fluoranthene	61	< 61 U
129-00-0	Pyrene	61	< 61 U
85-68-7	Butylbenzylphthalate	61	< 61 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	Benzo(a)anthracene	61	< 61 U
117-81-7	bis(2-Ethylhexyl)phthalate	61	< 61 U
218-01-9	Chrysene	61	< 61 U
117-84-0	Di-n-Octyl phthalate	61	< 61 U
50-32-8	Benzo(a)pyrene	61	< 61 U
193-39-5	Indeno(1,2,3-cd)pyrene	61	< 61 U
53-70-3	Dibenz(a,h)anthracene	61	< 61 U
191-24-2	Benzo(g,h,i)perylene	61	< 61 U
90-12-0	1-Methylnaphthalene	61	< 61 U
TOTBFA	Total Benzofluoranthenes	61	< 61 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.0%	2-Fluorobiphenyl	70.8%
d14-p-Terphenyl	81.6%	d4-1,2-Dichlorobenzene	67.2%
d5-Phenol	69.9%	2-Fluorophenol	66.7%
2,4,6-Tribromophenol	57.3%	d4-2-Chlorophenol	70.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T3B1-SO-03
SAMPLE

Lab Sample ID: SE67D
LIMS ID: 11-784
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/21/11 19:20
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 7.77 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 23.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	64	< 64 U
111-44-4	Bis-(2-Chloroethyl) Ether	64	< 64 U
95-57-8	2-Chlorophenol	64	< 64 U
541-73-1	1,3-Dichlorobenzene	64	< 64 U
106-46-7	1,4-Dichlorobenzene	64	< 64 U
100-51-6	Benzyl Alcohol	320	< 320 U
95-50-1	1,2-Dichlorobenzene	64	< 64 U
95-48-7	2-Methylphenol	64	< 64 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	64	< 64 U
106-44-5	4-Methylphenol	64	< 64 U
621-64-7	N-Nitroso-Di-N-Propylamine	64	< 64 U
67-72-1	Hexachloroethane	64	< 64 U
98-95-3	Nitrobenzene	64	< 64 U
78-59-1	Isophorone	64	< 64 U
88-75-5	2-Nitrophenol	64	< 64 U
105-67-9	2,4-Dimethylphenol	64	< 64 U
65-85-0	Benzoic Acid	640	< 640 U
111-91-1	bis(2-Chloroethoxy) Methane	64	< 64 U
120-83-2	2,4-Dichlorophenol	320	< 320 U
120-82-1	1,2,4-Trichlorobenzene	64	< 64 U
91-20-3	Naphthalene	64	< 64 U
106-47-8	4-Chloroaniline	320	< 320 U
87-68-3	Hexachlorobutadiene	64	< 64 U
59-50-7	4-Chloro-3-methylphenol	320	< 320 U
91-57-6	2-Methylnaphthalene	64	< 64 U
77-47-4	Hexachlorocyclopentadiene	320	< 320 U
88-06-2	2,4,6-Trichlorophenol	320	< 320 U
95-95-4	2,4,5-Trichlorophenol	320	< 320 U
91-58-7	2-Chloronaphthalene	64	< 64 U
88-74-4	2-Nitroaniline	320	< 320 U
131-11-3	Dimethylphthalate	64	< 64 U
208-96-8	Acenaphthylene	64	< 64 U
99-09-2	3-Nitroaniline	320	< 320 U
83-32-9	Acenaphthene	64	< 64 U
51-28-5	2,4-Dinitrophenol	640	< 640 U
100-02-7	4-Nitrophenol	320	< 320 U
132-64-9	Dibenzofuran	64	< 64 U
606-20-2	2,6-Dinitrotoluene	320	< 320 U
121-14-2	2,4-Dinitrotoluene	320	< 320 U
84-66-2	Diethylphthalate	64	< 64 U
7005-72-3	4-Chlorophenyl-phenylether	64	< 64 U
86-73-7	Fluorene	64	< 64 U
100-01-6	4-Nitroaniline	320	< 320 U
534-52-1	4,6-Dinitro-2-Methylphenol	640	< 640 U

Lab Sample ID: SE67D
LIMS ID: 11-784
Matrix: Soil
Date Analyzed: 01/21/11 19:20

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	64	< 64 U
101-55-3	4-Bromophenyl-phenylether	64	< 64 U
118-74-1	Hexachlorobenzene	64	< 64 U
87-86-5	Pentachlorophenol	320	< 320 U
85-01-8	Phenanthrene	64	< 64 U
86-74-8	Carbazole	64	< 64 U
120-12-7	Anthracene	64	< 64 U
84-74-2	Di-n-Butylphthalate	64	< 64 U
206-44-0	Fluoranthene	64	< 64 U
129-00-0	Pyrene	64	< 64 U
85-68-7	Butylbenzylphthalate	64	< 64 U
91-94-1	3,3'-Dichlorobenzidine	320	< 320 U
56-55-3	Benzo(a)anthracene	64	< 64 U
117-81-7	bis(2-Ethylhexyl)phthalate	64	< 64 U
218-01-9	Chrysene	64	< 64 U
117-84-0	Di-n-Octyl phthalate	64	< 64 U
50-32-8	Benzo(a)pyrene	64	< 64 U
193-39-5	Indeno(1,2,3-cd)pyrene	64	< 64 U
53-70-3	Dibenz(a,h)anthracene	64	< 64 U
191-24-2	Benzo(g,h,i)perylene	64	< 64 U
90-12-0	1-Methylnaphthalene	64	< 64 U
TOTBFA	Total Benzofluoranthenes	64	< 64 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	67.6%	2-Fluorobiphenyl	73.6%
d14-p-Terphenyl	86.4%	d4-1,2-Dichlorobenzene	69.6%
d5-Phenol	71.5%	2-Fluorophenol	68.3%
2,4,6-Tribromophenol	62.4%	d4-2-Chlorophenol	72.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T3B1-SO-08
SAMPLE

Lab Sample ID: SE67E
LIMS ID: 11-785
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/21/11 19:53
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 8.31 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 18.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	60	< 60 U
111-44-4	Bis-(2-Chloroethyl) Ether	60	< 60 U
95-57-8	2-Chlorophenol	60	< 60 U
541-73-1	1,3-Dichlorobenzene	60	< 60 U
106-46-7	1,4-Dichlorobenzene	60	< 60 U
100-51-6	Benzyl Alcohol	300	< 300 U
95-50-1	1,2-Dichlorobenzene	60	< 60 U
95-48-7	2-Methylphenol	60	< 60 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	60	< 60 U
106-44-5	4-Methylphenol	60	< 60 U
621-64-7	N-Nitroso-Di-N-Propylamine	60	< 60 U
67-72-1	Hexachloroethane	60	< 60 U
98-95-3	Nitrobenzene	60	< 60 U
78-59-1	Isophorone	60	< 60 U
88-75-5	2-Nitrophenol	60	< 60 U
105-67-9	2,4-Dimethylphenol	60	< 60 U
65-85-0	Benzoic Acid	600	< 600 U
111-91-1	bis(2-Chloroethoxy) Methane	60	< 60 U
120-83-2	2,4-Dichlorophenol	300	< 300 U
120-82-1	1,2,4-Trichlorobenzene	60	< 60 U
91-20-3	Naphthalene	60	< 60 U
106-47-8	4-Chloroaniline	300	< 300 U
87-68-3	Hexachlorobutadiene	60	< 60 U
59-50-7	4-Chloro-3-methylphenol	300	< 300 U
91-57-6	2-Methylnaphthalene	60	< 60 U
77-47-4	Hexachlorocyclopentadiene	300	< 300 U
88-06-2	2,4,6-Trichlorophenol	300	< 300 U
95-95-4	2,4,5-Trichlorophenol	300	< 300 U
91-58-7	2-Chloronaphthalene	60	< 60 U
88-74-4	2-Nitroaniline	300	< 300 U
131-11-3	Dimethylphthalate	60	< 60 U
208-96-8	Acenaphthylene	60	< 60 U
99-09-2	3-Nitroaniline	300	< 300 U
83-32-9	Acenaphthene	60	< 60 U
51-28-5	2,4-Dinitrophenol	600	< 600 U
100-02-7	4-Nitrophenol	300	< 300 U
132-64-9	Dibenzofuran	60	< 60 U
606-20-2	2,6-Dinitrotoluene	300	< 300 U
121-14-2	2,4-Dinitrotoluene	300	< 300 U
84-66-2	Diethylphthalate	60	< 60 U
7005-72-3	4-Chlorophenyl-phenylether	60	< 60 U
86-73-7	Fluorene	60	< 60 U
100-01-6	4-Nitroaniline	300	< 300 U
534-52-1	4,6-Dinitro-2-Methylphenol	600	< 600 U

Lab Sample ID: SE67E
LIMS ID: 11-785
Matrix: Soil
Date Analyzed: 01/21/11 19:53

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	60	< 60 U
101-55-3	4-Bromophenyl-phenylether	60	< 60 U
118-74-1	Hexachlorobenzene	60	< 60 U
87-86-5	Pentachlorophenol	300	< 300 U
85-01-8	Phenanthrene	60	< 60 U
86-74-8	Carbazole	60	< 60 U
120-12-7	Anthracene	60	< 60 U
84-74-2	Di-n-Butylphthalate	60	< 60 U
206-44-0	Fluoranthene	60	< 60 U
129-00-0	Pyrene	60	< 60 U
85-68-7	Butylbenzylphthalate	60	< 60 U
91-94-1	3,3'-Dichlorobenzidine	300	< 300 U
56-55-3	Benzo(a)anthracene	60	< 60 U
117-81-7	bis(2-Ethylhexyl)phthalate	60	< 60 U
218-01-9	Chrysene	60	< 60 U
117-84-0	Di-n-Octyl phthalate	60	< 60 U
50-32-8	Benzo(a)pyrene	60	< 60 U
193-39-5	Indeno(1,2,3-cd)pyrene	60	< 60 U
53-70-3	Dibenz(a,h)anthracene	60	< 60 U
191-24-2	Benzo(g,h,i)perylene	60	< 60 U
90-12-0	1-Methylnaphthalene	60	< 60 U
TOTBFA	Total Benzofluoranthenes	60	< 60 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.0%	2-Fluorobiphenyl	68.8%
d14-p-Terphenyl	89.6%	d4-1,2-Dichlorobenzene	63.6%
d5-Phenol	67.5%	2-Fluorophenol	62.4%
2,4,6-Tribromophenol	61.3%	d4-2-Chlorophenol	66.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T3B1-SO-13
SAMPLE

Lab Sample ID: SE67F
LIMS ID: 11-786
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/21/11 20:26
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 8.10 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 26.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
111-44-4	Bis-(2-Chloroethyl) Ether	62	< 62 U
95-57-8	2-Chlorophenol	62	< 62 U
541-73-1	1,3-Dichlorobenzene	62	< 62 U
106-46-7	1,4-Dichlorobenzene	62	< 62 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
621-64-7	N-Nitroso-Di-N-Propylamine	62	< 62 U
67-72-1	Hexachloroethane	62	< 62 U
98-95-3	Nitrobenzene	62	< 62 U
78-59-1	Isophorone	62	< 62 U
88-75-5	2-Nitrophenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
65-85-0	Benzoic Acid	620	< 620 U
111-91-1	bis(2-Chloroethoxy) Methane	62	< 62 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	62	< 62 U
91-20-3	Naphthalene	62	< 62 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	62	< 62 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	62	< 62 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	62	< 62 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	62	< 62 U
51-28-5	2,4-Dinitrophenol	620	< 620 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	62	< 62 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	62	< 62 U
7005-72-3	4-Chlorophenyl-phenylether	62	< 62 U
86-73-7	Fluorene	62	< 62 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	620	< 620 U

Lab Sample ID: SE67F
LIMS ID: 11-786
Matrix: Soil
Date Analyzed: 01/21/11 20:26

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	62	< 62 U
101-55-3	4-Bromophenyl-phenylether	62	< 62 U
118-74-1	Hexachlorobenzene	62	< 62 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	**Phenanthrene**	**62**	**67**
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	Di-n-Butylphthalate	62	< 62 U
206-44-0	Fluoranthene	62	< 62 U
129-00-0	Pyrene	62	< 62 U
85-68-7	Butylbenzylphthalate	62	< 62 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	bis(2-Ethylhexyl)phthalate	62	< 62 U
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
90-12-0	1-Methylnaphthalene	62	< 62 U
TOTBFA	Total Benzofluoranthenes	62	< 62 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	73.2%	2-Fluorobiphenyl	73.6%
d14-p-Terphenyl	77.6%	d4-1,2-Dichlorobenzene	66.0%
d5-Phenol	69.1%	2-Fluorophenol	65.3%
2,4,6-Tribromophenol	73.1%	d4-2-Chlorophenol	69.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T2B4-SO-18
SAMPLE

Lab Sample ID: SE67G
LIMS ID: 11-787
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/21/11 20:59
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 4.12 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 31.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	120	< 120 U
111-44-4	Bis-(2-Chloroethyl) Ether	120	< 120 U
95-57-8	2-Chlorophenol	120	< 120 U
541-73-1	1,3-Dichlorobenzene	120	< 120 U
106-46-7	**1,4-Dichlorobenzene**	**120**	**150**
100-51-6	Benzyl Alcohol	610	< 610 U
95-50-1	**1,2-Dichlorobenzene**	**120**	**270**
95-48-7	2-Methylphenol	120	< 120 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	120	< 120 U
106-44-5	4-Methylphenol	120	< 120 U
621-64-7	N-Nitroso-Di-N-Propylamine	120	< 120 U
67-72-1	Hexachloroethane	120	< 120 U
98-95-3	Nitrobenzene	120	< 120 U
78-59-1	Isophorone	120	< 120 U
88-75-5	2-Nitrophenol	120	< 120 U
105-67-9	2,4-Dimethylphenol	120	< 120 U
65-85-0	Benzoic Acid	1,200	< 1,200 U
111-91-1	bis(2-Chloroethoxy) Methane	120	< 120 U
120-83-2	2,4-Dichlorophenol	610	< 610 U
120-82-1	1,2,4-Trichlorobenzene	120	< 120 U
91-20-3	**Naphthalene**	**120**	**130**
106-47-8	4-Chloroaniline	610	< 610 U
87-68-3	Hexachlorobutadiene	120	< 120 U
59-50-7	4-Chloro-3-methylphenol	610	< 610 U
91-57-6	2-Methylnaphthalene	120	< 120 U
77-47-4	Hexachlorocyclopentadiene	610	< 610 U
88-06-2	2,4,6-Trichlorophenol	610	< 610 U
95-95-4	2,4,5-Trichlorophenol	610	< 610 U
91-58-7	2-Chloronaphthalene	120	< 120 U
88-74-4	2-Nitroaniline	610	< 610 U
131-11-3	Dimethylphthalate	120	< 120 U
208-96-8	Acenaphthylene	120	< 120 U
99-09-2	3-Nitroaniline	610	< 610 U
83-32-9	Acenaphthene	120	< 120 U
51-28-5	2,4-Dinitrophenol	1,200	< 1,200 U
100-02-7	4-Nitrophenol	610	< 610 U
132-64-9	Dibenzofuran	120	< 120 U
606-20-2	2,6-Dinitrotoluene	610	< 610 U
121-14-2	2,4-Dinitrotoluene	610	< 610 U
84-66-2	Diethylphthalate	120	< 120 U
7005-72-3	4-Chlorophenyl-phenylether	120	< 120 U
86-73-7	Fluorene	120	< 120 U
100-01-6	4-Nitroaniline	610	< 610 U
534-52-1	4,6-Dinitro-2-Methylphenol	1,200	< 1,200 U

Lab Sample ID: SE67G
LIMS ID: 11-787
Matrix: Soil
Date Analyzed: 01/21/11 20:59

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	120	< 120 U
101-55-3	4-Bromophenyl-phenylether	120	< 120 U
118-74-1	Hexachlorobenzene	120	< 120 U
87-86-5	Pentachlorophenol	610	< 610 U
85-01-8	Phenanthrene	120	< 120 U
86-74-8	Carbazole	120	< 120 U
120-12-7	Anthracene	120	< 120 U
84-74-2	Di-n-Butylphthalate	120	< 120 U
206-44-0	Fluoranthene	120	< 120 U
129-00-0	Pyrene	120	< 120 U
85-68-7	Butylbenzylphthalate	120	< 120 U
91-94-1	3,3'-Dichlorobenzidine	610	< 610 U
56-55-3	Benzo(a)anthracene	120	< 120 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**120**	**16,000 ES**
218-01-9	Chrysene	120	< 120 U
117-84-0	Di-n-Octyl phthalate	120	< 120 U
50-32-8	Benzo(a)pyrene	120	< 120 U
193-39-5	Indeno(1,2,3-cd)pyrene	120	< 120 U
53-70-3	Dibenz(a,h)anthracene	120	< 120 U
191-24-2	Benzo(g,h,i)perylene	120	< 120 U
90-12-0	1-Methylnaphthalene	120	< 120 U
TOTBFA	Total Benzofluoranthenes	120	< 120 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	70.4%	2-Fluorobiphenyl	84.8%
d14-p-Terphenyl	90.0%	d4-1,2-Dichlorobenzene	66.8%
d5-Phenol	70.1%	2-Fluorophenol	58.9%
2,4,6-Tribromophenol	90.1%	d4-2-Chlorophenol	68.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T2B4-SO-18
DILUTION

Lab Sample ID: SE67G
LIMS ID: 11-787
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/24/11 23:52
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 4.12 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 5.00
Percent Moisture: 31.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	610	< 610 U
111-44-4	Bis-(2-Chloroethyl) Ether	610	< 610 U
95-57-8	2-Chlorophenol	610	< 610 U
541-73-1	1,3-Dichlorobenzene	610	< 610 U
106-46-7	1,4-Dichlorobenzene	610	< 610 U
100-51-6	Benzyl Alcohol	3,000	< 3,000 U
95-50-1	1,2-Dichlorobenzene	610	< 610 U
95-48-7	2-Methylphenol	610	< 610 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	610	< 610 U
106-44-5	4-Methylphenol	610	< 610 U
621-64-7	N-Nitroso-Di-N-Propylamine	610	< 610 U
67-72-1	Hexachloroethane	610	< 610 U
98-95-3	Nitrobenzene	610	< 610 U
78-59-1	Isophorone	610	< 610 U
88-75-5	2-Nitrophenol	610	< 610 U
105-67-9	2,4-Dimethylphenol	610	< 610 U
65-85-0	Benzoic Acid	6,100	< 6,100 U
111-91-1	bis(2-Chloroethoxy) Methane	610	< 610 U
120-83-2	2,4-Dichlorophenol	3,000	< 3,000 U
120-82-1	1,2,4-Trichlorobenzene	610	< 610 U
91-20-3	Naphthalene	610	< 610 U
106-47-8	4-Chloroaniline	3,000	< 3,000 U
87-68-3	Hexachlorobutadiene	610	< 610 U
59-50-7	4-Chloro-3-methylphenol	3,000	< 3,000 U
91-57-6	2-Methylnaphthalene	610	< 610 U
77-47-4	Hexachlorocyclopentadiene	3,000	< 3,000 U
88-06-2	2,4,6-Trichlorophenol	3,000	< 3,000 U
95-95-4	2,4,5-Trichlorophenol	3,000	< 3,000 U
91-58-7	2-Chloronaphthalene	610	< 610 U
88-74-4	2-Nitroaniline	3,000	< 3,000 U
131-11-3	Dimethylphthalate	610	< 610 U
208-96-8	Acenaphthylene	610	< 610 U
99-09-2	3-Nitroaniline	3,000	< 3,000 U
83-32-9	Acenaphthene	610	< 610 U
51-28-5	2,4-Dinitrophenol	6,100	< 6,100 U
100-02-7	4-Nitrophenol	3,000	< 3,000 U
132-64-9	Dibenzofuran	610	< 610 U
606-20-2	2,6-Dinitrotoluene	3,000	< 3,000 U
121-14-2	2,4-Dinitrotoluene	3,000	< 3,000 U
84-66-2	Diethylphthalate	610	< 610 U
7005-72-3	4-Chlorophenyl-phenylether	610	< 610 U
86-73-7	Fluorene	610	< 610 U
100-01-6	4-Nitroaniline	3,000	< 3,000 U
534-52-1	4,6-Dinitro-2-Methylphenol	6,100	< 6,100 U

Lab Sample ID: SE67G
LIMS ID: 11-787
Matrix: Soil
Date Analyzed: 01/24/11 23:52

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	610	< 610 U
101-55-3	4-Bromophenyl-phenylether	610	< 610 U
118-74-1	Hexachlorobenzene	610	< 610 U
87-86-5	Pentachlorophenol	3,000	< 3,000 U
85-01-8	Phenanthrene	610	< 610 U
86-74-8	Carbazole	610	< 610 U
120-12-7	Anthracene	610	< 610 U
84-74-2	**Di-n-Butylphthalate**	**610**	**2,100**
206-44-0	Fluoranthene	610	< 610 U
129-00-0	Pyrene	610	< 610 U
85-68-7	Butylbenzylphthalate	610	< 610 U
91-94-1	3,3'-Dichlorobenzidine	3,000	< 3,000 U
56-55-3	Benzo(a)anthracene	610	< 610 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**610**	**16,000**
218-01-9	Chrysene	610	< 610 U
117-84-0	Di-n-Octyl phthalate	610	< 610 U
50-32-8	Benzo(a)pyrene	610	< 610 U
193-39-5	Indeno(1,2,3-cd)pyrene	610	< 610 U
53-70-3	Dibenz(a,h)anthracene	610	< 610 U
191-24-2	Benzo(g,h,i)perylene	610	< 610 U
90-12-0	1-Methylnaphthalene	610	< 610 U
TOTBFA	Total Benzofluoranthenes	610	< 610 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.8%	2-Fluorobiphenyl	84.2%
d14-p-Terphenyl	81.4%	d4-1,2-Dichlorobenzene	68.4%
d5-Phenol	67.9%	2-Fluorophenol	54.7%
2,4,6-Tribromophenol	69.9%	d4-2-Chlorophenol	67.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: JF-T2B4-SO-23**
Page 1 of 2 **SAMPLE**

Lab Sample ID: SE67H
LIMS ID: 11-788
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/25/11 00:25
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 8.07 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 20.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
111-44-4	Bis-(2-Chloroethyl) Ether	62	< 62 U
95-57-8	2-Chlorophenol	62	< 62 U
541-73-1	1,3-Dichlorobenzene	62	< 62 U
106-46-7	1,4-Dichlorobenzene	62	< 62 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
621-64-7	N-Nitroso-Di-N-Propylamine	62	< 62 U
67-72-1	Hexachloroethane	62	< 62 U
98-95-3	Nitrobenzene	62	< 62 U
78-59-1	Isophorone	62	< 62 U
88-75-5	2-Nitrophenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
65-85-0	Benzoic Acid	620	< 620 U
111-91-1	bis(2-Chloroethoxy) Methane	62	< 62 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	62	< 62 U
91-20-3	**Naphthalene**	**62**	**780**
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	62	< 62 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	**2-Methylnaphthalene**	**62**	**150**
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	62	< 62 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	**Acenaphthene**	**62**	**94**
51-28-5	2,4-Dinitrophenol	620	< 620 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	62	< 62 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	62	< 62 U
7005-72-3	4-Chlorophenyl-phenylether	62	< 62 U
86-73-7	Fluorene	62	< 62 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	620	< 620 U

Lab Sample ID: SE67H
LIMS ID: 11-788
Matrix: Soil
Date Analyzed: 01/25/11 00:25

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	62	< 62 U
101-55-3	4-Bromophenyl-phenylether	62	< 62 U
118-74-1	Hexachlorobenzene	62	< 62 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	**Phenanthrene**	**62**	**130**
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	**Di-n-Butylphthalate**	**62**	**190**
206-44-0	Fluoranthene	62	< 62 U
129-00-0	**Pyrene**	**62**	**74**
85-68-7	Butylbenzylphthalate	62	< 62 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**62**	**820**
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
90-12-0	**1-Methylnaphthalene**	**62**	**74**
TOTBFA	Total Benzofluoranthenes	62	< 62 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.2%	2-Fluorobiphenyl	78.4%
d14-p-Terphenyl	82.8%	d4-1,2-Dichlorobenzene	62.0%
d5-Phenol	70.9%	2-Fluorophenol	58.7%
2,4,6-Tribromophenol	91.2%	d4-2-Chlorophenol	68.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T3B4-SO-03
SAMPLE

Lab Sample ID: SE67I
LIMS ID: 11-789
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/21/11 22:04
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 7.91 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 21.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	63	< 63 U
111-44-4	Bis-(2-Chloroethyl) Ether	63	< 63 U
95-57-8	2-Chlorophenol	63	< 63 U
541-73-1	1,3-Dichlorobenzene	63	< 63 U
106-46-7	1,4-Dichlorobenzene	63	< 63 U
100-51-6	Benzyl Alcohol	320	< 320 U
95-50-1	1,2-Dichlorobenzene	63	< 63 U
95-48-7	2-Methylphenol	63	< 63 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	63	< 63 U
106-44-5	4-Methylphenol	63	< 63 U
621-64-7	N-Nitroso-Di-N-Propylamine	63	< 63 U
67-72-1	Hexachloroethane	63	< 63 U
98-95-3	Nitrobenzene	63	< 63 U
78-59-1	Isophorone	63	< 63 U
88-75-5	2-Nitrophenol	63	< 63 U
105-67-9	2,4-Dimethylphenol	63	< 63 U
65-85-0	Benzoic Acid	630	< 630 U
111-91-1	bis(2-Chloroethoxy) Methane	63	< 63 U
120-83-2	2,4-Dichlorophenol	320	< 320 U
120-82-1	1,2,4-Trichlorobenzene	63	< 63 U
91-20-3	Naphthalene	63	< 63 U
106-47-8	4-Chloroaniline	320	< 320 U
87-68-3	Hexachlorobutadiene	63	< 63 U
59-50-7	4-Chloro-3-methylphenol	320	< 320 U
91-57-6	2-Methylnaphthalene	63	< 63 U
77-47-4	Hexachlorocyclopentadiene	320	< 320 U
88-06-2	2,4,6-Trichlorophenol	320	< 320 U
95-95-4	2,4,5-Trichlorophenol	320	< 320 U
91-58-7	2-Chloronaphthalene	63	< 63 U
88-74-4	2-Nitroaniline	320	< 320 U
131-11-3	Dimethylphthalate	63	< 63 U
208-96-8	Acenaphthylene	63	< 63 U
99-09-2	3-Nitroaniline	320	< 320 U
83-32-9	Acenaphthene	63	< 63 U
51-28-5	2,4-Dinitrophenol	630	< 630 U
100-02-7	4-Nitrophenol	320	< 320 U
132-64-9	Dibenzofuran	63	< 63 U
606-20-2	2,6-Dinitrotoluene	320	< 320 U
121-14-2	2,4-Dinitrotoluene	320	< 320 U
84-66-2	Diethylphthalate	63	< 63 U
7005-72-3	4-Chlorophenyl-phenylether	63	< 63 U
86-73-7	Fluorene	63	< 63 U
100-01-6	4-Nitroaniline	320	< 320 U
534-52-1	4,6-Dinitro-2-Methylphenol	630	< 630 U

Lab Sample ID: SE67I
LIMS ID: 11-789
Matrix: Soil
Date Analyzed: 01/21/11 22:04

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	63	< 63 U
101-55-3	4-Bromophenyl-phenylether	63	< 63 U
118-74-1	Hexachlorobenzene	63	< 63 U
87-86-5	Pentachlorophenol	320	< 320 U
85-01-8	Phenanthrene	63	< 63 U
86-74-8	Carbazole	63	< 63 U
120-12-7	Anthracene	63	< 63 U
84-74-2	**Di-n-Butylphthalate**	**63**	**380**
206-44-0	Fluoranthene	63	< 63 U
129-00-0	Pyrene	63	< 63 U
85-68-7	Butylbenzylphthalate	63	< 63 U
91-94-1	3,3'-Dichlorobenzidine	320	< 320 U
56-55-3	Benzo(a)anthracene	63	< 63 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**63**	**590**
218-01-9	**Chrysene**	**63**	**88**
117-84-0	Di-n-Octyl phthalate	63	< 63 U
50-32-8	Benzo(a)pyrene	63	< 63 U
193-39-5	Indeno(1,2,3-cd)pyrene	63	< 63 U
53-70-3	Dibenz(a,h)anthracene	63	< 63 U
191-24-2	Benzo(g,h,i)perylene	63	< 63 U
90-12-0	1-Methylnaphthalene	63	< 63 U
TOTBFA	**Total Benzofluoranthenes**	**63**	**66**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.0%	2-Fluorobiphenyl	78.8%
d14-p-Terphenyl	74.4%	d4-1,2-Dichlorobenzene	64.8%
d5-Phenol	70.7%	2-Fluorophenol	64.3%
2,4,6-Tribromophenol	80.8%	d4-2-Chlorophenol	70.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T3B4-SO-13
SAMPLE

Lab Sample ID: SE67J
LIMS ID: 11-790
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO 7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/21/11 22:37
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 8.25 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 9.2%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	180	< 180 U
111-44-4	Bis-(2-Chloroethyl) Ether	180	< 180 U
95-57-8	2-Chlorophenol	180	< 180 U
541-73-1	1,3-Dichlorobenzene	180	< 180 U
106-46-7	1,4-Dichlorobenzene	180	< 180 U
100-51-6	Benzyl Alcohol	910	< 910 U
95-50-1	1,2-Dichlorobenzene	180	< 180 U
95-48-7	2-Methylphenol	180	< 180 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	180	< 180 U
106-44-5	4-Methylphenol	180	< 180 U
621-64-7	N-Nitroso-Di-N-Propylamine	180	< 180 U
67-72-1	Hexachloroethane	180	< 180 U
98-95-3	Nitrobenzene	180	< 180 U
78-59-1	Isophorone	180	< 180 U
88-75-5	2-Nitrophenol	180	< 180 U
105-67-9	2,4-Dimethylphenol	180	< 180 U
65-85-0	Benzoic Acid	1,800	< 1,800 U
111-91-1	bis(2-Chloroethoxy) Methane	180	< 180 U
120-83-2	2,4-Dichlorophenol	910	< 910 U
120-82-1	1,2,4-Trichlorobenzene	180	< 180 U
91-20-3	Naphthalene	180	< 180 U
106-47-8	4-Chloroaniline	910	< 910 U
87-68-3	Hexachlorobutadiene	180	< 180 U
59-50-7	4-Chloro-3-methylphenol	910	< 910 U
91-57-6	2-Methylnaphthalene	180	< 180 U
77-47-4	Hexachlorocyclopentadiene	910	< 910 U
88-06-2	2,4,6-Trichlorophenol	910	< 910 U
95-95-4	2,4,5-Trichlorophenol	910	< 910 U
91-58-7	2-Chloronaphthalene	180	< 180 U
88-74-4	2-Nitroaniline	910	< 910 U
131-11-3	Dimethylphthalate	180	< 180 U
208-96-8	Acenaphthylene	180	< 180 U
99-09-2	3-Nitroaniline	910	< 910 U
83-32-9	Acenaphthene	180	< 180 U
51-28-5	2,4-Dinitrophenol	1,800	< 1,800 U
100-02-7	4-Nitrophenol	910	< 910 U
132-64-9	Dibenzofuran	180	< 180 U
606-20-2	2,6-Dinitrotoluene	910	< 910 U
121-14-2	2,4-Dinitrotoluene	910	< 910 U
84-66-2	Diethylphthalate	180	< 180 U
7005-72-3	4-Chlorophenyl-phenylether	180	< 180 U
86-73-7	Fluorene	180	< 180 U
100-01-6	4-Nitroaniline	910	< 910 U
534-52-1	4,6-Dinitro-2-Methylphenol	1,800	< 1,800 U

Lab Sample ID: SE67J
LIMS ID: 11-790
Matrix: Soil
Date Analyzed: 01/21/11 22:37

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	180	< 180 U
101-55-3	4-Bromophenyl-phenylether	180	< 180 U
118-74-1	Hexachlorobenzene	180	< 180 U
87-86-5	Pentachlorophenol	910	< 910 U
85-01-8	Phenanthrene	180	< 180 U
86-74-8	Carbazole	180	< 180 U
120-12-7	Anthracene	180	< 180 U
84-74-2	Di-n-Butylphthalate	180	< 180 U
206-44-0	Fluoranthene	180	< 180 U
129-00-0	Pyrene	180	< 180 U
85-68-7	Butylbenzylphthalate	180	< 180 U
91-94-1	3,3'-Dichlorobenzidine	910	< 910 U
56-55-3	Benzo(a)anthracene	180	< 180 U
117-81-7	bis(2-Ethylhexyl)phthalate	180	< 180 U
218-01-9	Chrysene	180	< 180 U
117-84-0	Di-n-Octyl phthalate	180	< 180 U
50-32-8	Benzo(a)pyrene	180	< 180 U
193-39-5	Indeno(1,2,3-cd)pyrene	180	< 180 U
53-70-3	Dibenz(a,h)anthracene	180	< 180 U
191-24-2	Benzo(g,h,i)perylene	180	< 180 U
90-12-0	1-Methylnaphthalene	180	< 180 U
TOTBFA	Total Benzofluoranthenes	180	< 180 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	69.2%	2-Fluorobiphenyl	79.1%
d14-p-Terphenyl	73.8%	d4-1,2-Dichlorobenzene	68.5%
d5-Phenol	73.8%	2-Fluorophenol	69.1%
2,4,6-Tribromophenol	72.3%	d4-2-Chlorophenol	74.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T3B4-SO-23
SAMPLE

Lab Sample ID: SE67K
LIMS ID: 11-791
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/21/11 23:10
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 7.91 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 28.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	63	< 63 U
111-44-4	Bis-(2-Chloroethyl) Ether	63	< 63 U
95-57-8	2-Chlorophenol	63	< 63 U
541-73-1	1,3-Dichlorobenzene	63	< 63 U
106-46-7	1,4-Dichlorobenzene	63	< 63 U
100-51-6	Benzyl Alcohol	320	< 320 U
95-50-1	1,2-Dichlorobenzene	63	< 63 U
95-48-7	2-Methylphenol	63	< 63 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	63	< 63 U
106-44-5	4-Methylphenol	63	< 63 U
621-64-7	N-Nitroso-Di-N-Propylamine	63	< 63 U
67-72-1	Hexachloroethane	63	< 63 U
98-95-3	Nitrobenzene	63	< 63 U
78-59-1	Isophorone	63	< 63 U
88-75-5	2-Nitrophenol	63	< 63 U
105-67-9	2,4-Dimethylphenol	63	< 63 U
65-85-0	Benzoic Acid	630	< 630 U
111-91-1	bis(2-Chloroethoxy) Methane	63	< 63 U
120-83-2	2,4-Dichlorophenol	320	< 320 U
120-82-1	1,2,4-Trichlorobenzene	63	< 63 U
91-20-3	Naphthalene	63	< 63 U
106-47-8	4-Chloroaniline	320	< 320 U
87-68-3	Hexachlorobutadiene	63	< 63 U
59-50-7	4-Chloro-3-methylphenol	320	< 320 U
91-57-6	2-Methylnaphthalene	63	< 63 U
77-47-4	Hexachlorocyclopentadiene	320	< 320 U
88-06-2	2,4,6-Trichlorophenol	320	< 320 U
95-95-4	2,4,5-Trichlorophenol	320	< 320 U
91-58-7	2-Chloronaphthalene	63	< 63 U
88-74-4	2-Nitroaniline	320	< 320 U
131-11-3	Dimethylphthalate	63	< 63 U
208-96-8	Acenaphthylene	63	< 63 U
99-09-2	3-Nitroaniline	320	< 320 U
83-32-9	Acenaphthene	63	< 63 U
51-28-5	2,4-Dinitrophenol	630	< 630 U
100-02-7	4-Nitrophenol	320	< 320 U
132-64-9	Dibenzofuran	63	< 63 U
606-20-2	2,6-Dinitrotoluene	320	< 320 U
121-14-2	2,4-Dinitrotoluene	320	< 320 U
84-66-2	Diethylphthalate	63	< 63 U
7005-72-3	4-Chlorophenyl-phenylether	63	< 63 U
86-73-7	Fluorene	63	< 63 U
100-01-6	4-Nitroaniline	320	< 320 U
534-52-1	4,6-Dinitro-2-Methylphenol	630	< 630 U

Lab Sample ID: SE67K
LIMS ID: 11-791
Matrix: Soil
Date Analyzed: 01/21/11 23:10

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	63	< 63 U
101-55-3	4-Bromophenyl-phenylether	63	< 63 U
118-74-1	Hexachlorobenzene	63	< 63 U
87-86-5	Pentachlorophenol	320	< 320 U
85-01-8	Phenanthrene	63	< 63 U
86-74-8	Carbazole	63	< 63 U
120-12-7	Anthracene	63	< 63 U
84-74-2	Di-n-Butylphthalate	63	< 63 U
206-44-0	Fluoranthene	63	< 63 U
129-00-0	Pyrene	63	< 63 U
85-68-7	Butylbenzylphthalate	63	< 63 U
91-94-1	3,3'-Dichlorobenzidine	320	< 320 U
56-55-3	Benzo(a)anthracene	63	< 63 U
117-81-7	bis(2-Ethylhexyl)phthalate	63	< 63 U
218-01-9	Chrysene	63	< 63 U
117-84-0	Di-n-Octyl phthalate	63	< 63 U
50-32-8	Benzo(a)pyrene	63	< 63 U
193-39-5	Indeno(1,2,3-cd)pyrene	63	< 63 U
53-70-3	Dibenz(a,h)anthracene	63	< 63 U
191-24-2	Benzo(g,h,i)perylene	63	< 63 U
90-12-0	1-Methylnaphthalene	63	< 63 U
TOTBFA	Total Benzofluoranthenes	63	< 63 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	70.0%	2-Fluorobiphenyl	80.0%
d14-p-Terphenyl	77.2%	d4-1,2-Dichlorobenzene	72.8%
d5-Phenol	72.5%	2-Fluorophenol	66.4%
2,4,6-Tribromophenol	76.8%	d4-2-Chlorophenol	73.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: JF-T3B3-SO-03**
 SAMPLE

Lab Sample ID: SE67L
LIMS ID: 11-792
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/21/11 23:43
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 7.82 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 14.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	64	< 64 U
111-44-4	Bis-(2-Chloroethyl) Ether	64	< 64 U
95-57-8	2-Chlorophenol	64	< 64 U
541-73-1	1,3-Dichlorobenzene	64	< 64 U
106-46-7	1,4-Dichlorobenzene	64	< 64 U
100-51-6	Benzyl Alcohol	320	< 320 U
95-50-1	1,2-Dichlorobenzene	64	< 64 U
95-48-7	2-Methylphenol	64	< 64 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	64	< 64 U
106-44-5	4-Methylphenol	64	< 64 U
621-64-7	N-Nitroso-Di-N-Propylamine	64	< 64 U
67-72-1	Hexachloroethane	64	< 64 U
98-95-3	Nitrobenzene	64	< 64 U
78-59-1	Isophorone	64	< 64 U
88-75-5	2-Nitrophenol	64	< 64 U
105-67-9	2,4-Dimethylphenol	64	< 64 U
65-85-0	Benzoic Acid	640	< 640 U
111-91-1	bis(2-Chloroethoxy) Methane	64	< 64 U
120-83-2	2,4-Dichlorophenol	320	< 320 U
120-82-1	1,2,4-Trichlorobenzene	64	< 64 U
91-20-3	Naphthalene	64	< 64 U
106-47-8	4-Chloroaniline	320	< 320 U
87-68-3	Hexachlorobutadiene	64	< 64 U
59-50-7	4-Chloro-3-methylphenol	320	< 320 U
91-57-6	2-Methylnaphthalene	64	< 64 U
77-47-4	Hexachlorocyclopentadiene	320	< 320 U
88-06-2	2,4,6-Trichlorophenol	320	< 320 U
95-95-4	2,4,5-Trichlorophenol	320	< 320 U
91-58-7	2-Chloronaphthalene	64	< 64 U
88-74-4	2-Nitroaniline	320	< 320 U
131-11-3	Dimethylphthalate	64	< 64 U
208-96-8	Acenaphthylene	64	< 64 U
99-09-2	3-Nitroaniline	320	< 320 U
83-32-9	Acenaphthene	64	< 64 U
51-28-5	2,4-Dinitrophenol	640	< 640 U
100-02-7	4-Nitrophenol	320	< 320 U
132-64-9	Dibenzofuran	64	< 64 U
606-20-2	2,6-Dinitrotoluene	320	< 320 U
121-14-2	2,4-Dinitrotoluene	320	< 320 U
84-66-2	Diethylphthalate	64	< 64 U
7005-72-3	4-Chlorophenyl-phenylether	64	< 64 U
86-73-7	Fluorene	64	< 64 U
100-01-6	4-Nitroaniline	320	< 320 U
534-52-1	4,6-Dinitro-2-Methylphenol	640	< 640 U

Lab Sample ID: SE67L
LIMS ID: 11-792
Matrix: Soil
Date Analyzed: 01/21/11 23:43

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	64	< 64 U
101-55-3	4-Bromophenyl-phenylether	64	< 64 U
118-74-1	Hexachlorobenzene	64	< 64 U
87-86-5	Pentachlorophenol	320	< 320 U
85-01-8	Phenanthrene	64	< 64 U
86-74-8	Carbazole	64	< 64 U
120-12-7	Anthracene	64	< 64 U
84-74-2	**Di-n-Butylphthalate**	**64**	**120**
206-44-0	Fluoranthene	64	< 64 U
129-00-0	Pyrene	64	< 64 U
85-68-7	Butylbenzylphthalate	64	< 64 U
91-94-1	3,3'-Dichlorobenzidine	320	< 320 U
56-55-3	Benzo(a)anthracene	64	< 64 U
117-81-7	bis(2-Ethylhexyl)phthalate	64	< 64 U
218-01-9	Chrysene	64	< 64 U
117-84-0	Di-n-Octyl phthalate	64	< 64 U
50-32-8	Benzo(a)pyrene	64	< 64 U
193-39-5	Indeno(1,2,3-cd)pyrene	64	< 64 U
53-70-3	Dibenz(a,h)anthracene	64	< 64 U
191-24-2	Benzo(g,h,i)perylene	64	< 64 U
90-12-0	1-Methylnaphthalene	64	< 64 U
TOTBFA	Total Benzofluoranthenes	64	< 64 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.0%	2-Fluorobiphenyl	79.6%
d14-p-Terphenyl	76.0%	d4-1,2-Dichlorobenzene	68.4%
d5-Phenol	69.1%	2-Fluorophenol	59.2%
2,4,6-Tribromophenol	76.0%	d4-2-Chlorophenol	69.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: JF-T3B3-SO-03**
 MATRIX SPIKE

Lab Sample ID: SE67L
LIMS ID: 11-792
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO 7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 00:15
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 7.77 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 14.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	64	---
111-44-4	Bis-(2-Chloroethyl) Ether	64	---
95-57-8	2-Chlorophenol	64	---
541-73-1	1,3-Dichlorobenzene	64	---
106-46-7	1,4-Dichlorobenzene	64	---
100-51-6	Benzyl Alcohol	320	---
95-50-1	1,2-Dichlorobenzene	64	---
95-48-7	2-Methylphenol	64	---
108-60-1	2,2'-Oxybis(1-Chloropropane)	64	---
106-44-5	4-Methylphenol	64	---
621-64-7	N-Nitroso-Di-N-Propylamine	64	---
67-72-1	Hexachloroethane	64	---
98-95-3	Nitrobenzene	64	---
78-59-1	Isophorone	64	---
88-75-5	2-Nitrophenol	64	---
105-67-9	2,4-Dimethylphenol	64	---
65-85-0	Benzoic Acid	640	---
111-91-1	bis(2-Chloroethoxy) Methane	64	---
120-83-2	2,4-Dichlorophenol	320	---
120-82-1	1,2,4-Trichlorobenzene	64	---
91-20-3	Naphthalene	64	---
106-47-8	4-Chloroaniline	320	---
87-68-3	Hexachlorobutadiene	64	---
59-50-7	4-Chloro-3-methylphenol	320	---
91-57-6	2-Methylnaphthalene	64	---
77-47-4	Hexachlorocyclopentadiene	320	---
88-06-2	2,4,6-Trichlorophenol	320	---
95-95-4	2,4,5-Trichlorophenol	320	---
91-58-7	2-Chloronaphthalene	64	---
88-74-4	2-Nitroaniline	320	---
131-11-3	Dimethylphthalate	64	---
208-96-8	Acenaphthylene	64	---
99-09-2	3-Nitroaniline	320	---
83-32-9	Acenaphthene	64	---
51-28-5	2,4-Dinitrophenol	640	---
100-02-7	4-Nitrophenol	320	---
132-64-9	Dibenzofuran	64	---
606-20-2	2,6-Dinitrotoluene	320	---
121-14-2	2,4-Dinitrotoluene	320	---
84-66-2	Diethylphthalate	64	---
7005-72-3	4-Chlorophenyl-phenylether	64	---
86-73-7	Fluorene	64	---
100-01-6	4-Nitroaniline	320	---
534-52-1	4,6-Dinitro-2-Methylphenol	640	---

Lab Sample ID: SE67L
LIMS ID: 11-792
Matrix: Soil
Date Analyzed: 01/22/11 00:15

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	64	---
101-55-3	4-Bromophenyl-phenylether	64	---
118-74-1	Hexachlorobenzene	64	---
87-86-5	Pentachlorophenol	320	---
85-01-8	Phenanthrene	64	---
86-74-8	Carbazole	64	---
120-12-7	Anthracene	64	---
84-74-2	Di-n-Butylphthalate	64	---
206-44-0	Fluoranthene	64	---
129-00-0	Pyrene	64	---
85-68-7	Butylbenzylphthalate	64	---
91-94-1	3,3'-Dichlorobenzidine	320	---
56-55-3	Benzo(a)anthracene	64	---
117-81-7	bis(2-Ethylhexyl)phthalate	64	---
218-01-9	Chrysene	64	---
117-84-0	Di-n-Octyl phthalate	64	---
50-32-8	Benzo(a)pyrene	64	---
193-39-5	Indeno(1,2,3-cd)pyrene	64	---
53-70-3	Dibenz(a,h)anthracene	64	---
191-24-2	Benzo(g,h,i)perylene	64	---
90-12-0	1-Methylnaphthalene	64	---
TOTBFA	Total Benzofluoranthenes	64	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.8%	2-Fluorobiphenyl	80.4%
d14-p-Terphenyl	74.4%	d4-1,2-Dichlorobenzene	70.0%
d5-Phenol	73.3%	2-Fluorophenol	68.8%
2,4,6-Tribromophenol	87.7%	d4-2-Chlorophenol	73.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T3B3-SO-03
MATRIX SPIKE DUPLICATE

Lab Sample ID: SE67L
LIMS ID: 11-792
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 00:48
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 7.80 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 14.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	64	---
111-44-4	Bis-(2-Chloroethyl) Ether	64	---
95-57-8	2-Chlorophenol	64	---
541-73-1	1,3-Dichlorobenzene	64	---
106-46-7	1,4-Dichlorobenzene	64	---
100-51-6	Benzyl Alcohol	320	---
95-50-1	1,2-Dichlorobenzene	64	---
95-48-7	2-Methylphenol	64	---
108-60-1	2,2'-Oxybis(1-Chloropropane)	64	---
106-44-5	4-Methylphenol	64	---
621-64-7	N-Nitroso-Di-N-Propylamine	64	---
67-72-1	Hexachloroethane	64	---
98-95-3	Nitrobenzene	64	---
78-59-1	Isophorone	64	---
88-75-5	2-Nitrophenol	64	---
105-67-9	2,4-Dimethylphenol	64	---
65-85-0	Benzoic Acid	640	---
111-91-1	bis(2-Chloroethoxy) Methane	64	---
120-83-2	2,4-Dichlorophenol	320	---
120-82-1	1,2,4-Trichlorobenzene	64	---
91-20-3	Naphthalene	64	---
106-47-8	4-Chloroaniline	320	---
87-68-3	Hexachlorobutadiene	64	---
59-50-7	4-Chloro-3-methylphenol	320	---
91-57-6	2-Methylnaphthalene	64	---
77-47-4	Hexachlorocyclopentadiene	320	---
88-06-2	2,4,6-Trichlorophenol	320	---
95-95-4	2,4,5-Trichlorophenol	320	---
91-58-7	2-Chloronaphthalene	64	---
88-74-4	2-Nitroaniline	320	---
131-11-3	Dimethylphthalate	64	---
208-96-8	Acenaphthylene	64	---
99-09-2	3-Nitroaniline	320	---
83-32-9	Acenaphthene	64	---
51-28-5	2,4-Dinitrophenol	640	---
100-02-7	4-Nitrophenol	320	---
132-64-9	Dibenzofuran	64	---
606-20-2	2,6-Dinitrotoluene	320	---
121-14-2	2,4-Dinitrotoluene	320	---
84-66-2	Diethylphthalate	64	---
7005-72-3	4-Chlorophenyl-phenylether	64	---
86-73-7	Fluorene	64	---
100-01-6	4-Nitroaniline	320	---
534-52-1	4,6-Dinitro-2-Methylphenol	640	---

Lab Sample ID: SE67L
LIMS ID: 11-792
Matrix: Soil
Date Analyzed: 01/22/11 00:48

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	64	---
101-55-3	4-Bromophenyl-phenylether	64	---
118-74-1	Hexachlorobenzene	64	---
87-86-5	Pentachlorophenol	320	---
85-01-8	Phenanthrene	64	---
86-74-8	Carbazole	64	---
120-12-7	Anthracene	64	---
84-74-2	Di-n-Butylphthalate	64	---
206-44-0	Fluoranthene	64	---
129-00-0	Pyrene	64	---
85-68-7	Butylbenzylphthalate	64	---
91-94-1	3,3'-Dichlorobenzidine	320	---
56-55-3	Benzo(a)anthracene	64	---
117-81-7	bis(2-Ethylhexyl)phthalate	64	---
218-01-9	Chrysene	64	---
117-84-0	Di-n-Octyl phthalate	64	---
50-32-8	Benzo(a)pyrene	64	---
193-39-5	Indeno(1,2,3-cd)pyrene	64	---
53-70-3	Dibenz(a,h)anthracene	64	---
191-24-2	Benzo(g,h,i)perylene	64	---
90-12-0	1-Methylnaphthalene	64	---
TOTBFA	Total Benzofluoranthenes	64	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.0%	2-Fluorobiphenyl	75.2%
d14-p-Terphenyl	71.2%	d4-1,2-Dichlorobenzene	65.2%
d5-Phenol	68.8%	2-Fluorophenol	64.8%
2,4,6-Tribromophenol	84.0%	d4-2-Chlorophenol	69.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T3B3-SO-08
SAMPLE

Lab Sample ID: SE67M
LIMS ID: 11-793
Matrix: Soil
Data Release Authorized: JB
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO 7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 01:21
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 7.96 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 20.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	63	< 63 U
111-44-4	Bis-(2-Chloroethyl) Ether	63	< 63 U
95-57-8	2-Chlorophenol	63	< 63 U
541-73-1	1,3-Dichlorobenzene	63	< 63 U
106-46-7	1,4-Dichlorobenzene	63	< 63 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	63	< 63 U
95-48-7	2-Methylphenol	63	< 63 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	63	< 63 U
106-44-5	4-Methylphenol	63	< 63 U
621-64-7	N-Nitroso-Di-N-Propylamine	63	< 63 U
67-72-1	Hexachloroethane	63	< 63 U
98-95-3	Nitrobenzene	63	< 63 U
78-59-1	Isophorone	63	< 63 U
88-75-5	2-Nitrophenol	63	< 63 U
105-67-9	2,4-Dimethylphenol	63	< 63 U
65-85-0	Benzoic Acid	630	< 630 U
111-91-1	bis(2-Chloroethoxy) Methane	63	< 63 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	63	< 63 U
91-20-3	Naphthalene	63	< 63 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	63	< 63 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	63	< 63 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	63	< 63 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	63	< 63 U
208-96-8	Acenaphthylene	63	< 63 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	63	< 63 U
51-28-5	2,4-Dinitrophenol	630	< 630 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	63	< 63 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	63	< 63 U
7005-72-3	4-Chlorophenyl-phenylether	63	< 63 U
86-73-7	Fluorene	63	< 63 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	630	< 630 U

Lab Sample ID: SE67M
LIMS ID: 11-793
Matrix: Soil
Date Analyzed: 01/22/11 01:21

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	63	< 63 U
101-55-3	4-Bromophenyl-phenylether	63	< 63 U
118-74-1	Hexachlorobenzene	63	< 63 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	**Phenanthrene**	**63**	**91**
86-74-8	Carbazole	63	< 63 U
120-12-7	Anthracene	63	< 63 U
84-74-2	**Di-n-Butylphthalate**	**63**	**790**
206-44-0	Fluoranthene	63	< 63 U
129-00-0	Pyrene	63	< 63 U
85-68-7	Butylbenzylphthalate	63	< 63 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	Benzo(a)anthracene	63	< 63 U
117-81-7	bis(2-Ethylhexyl)phthalate	63	< 63 U
218-01-9	Chrysene	63	< 63 U
117-84-0	Di-n-Octyl phthalate	63	< 63 U
50-32-8	Benzo(a)pyrene	63	< 63 U
193-39-5	Indeno(1,2,3-cd)pyrene	63	< 63 U
53-70-3	Dibenz(a,h)anthracene	63	< 63 U
191-24-2	Benzo(g,h,i)perylene	63	< 63 U
90-12-0	1-Methylnaphthalene	63	< 63 U
TOTBFA	Total Benzofluoranthenes	63	< 63 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	59.6%	2-Fluorobiphenyl	74.4%
d14-p-Terphenyl	69.2%	d4-1,2-Dichlorobenzene	61.2%
d5-Phenol	64.3%	2-Fluorophenol	58.4%
2,4,6-Tribromophenol	76.0%	d4-2-Chlorophenol	64.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T3B3-SO-13
SAMPLE

Lab Sample ID: SE67N
LIMS ID: 11-794
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 01:54
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 8.12 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 27.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
111-44-4	Bis-(2-Chloroethyl) Ether	62	< 62 U
95-57-8	2-Chlorophenol	62	< 62 U
541-73-1	1,3-Dichlorobenzene	62	< 62 U
106-46-7	1,4-Dichlorobenzene	62	< 62 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
621-64-7	N-Nitroso-Di-N-Propylamine	62	< 62 U
67-72-1	Hexachloroethane	62	< 62 U
98-95-3	Nitrobenzene	62	< 62 U
78-59-1	Isophorone	62	< 62 U
88-75-5	2-Nitrophenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
65-85-0	Benzoic Acid	620	< 620 U
111-91-1	bis(2-Chloroethoxy) Methane	62	< 62 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	62	< 62 U
91-20-3	Naphthalene	62	< 62 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	62	< 62 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	62	< 62 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	62	< 62 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	62	< 62 U
51-28-5	2,4-Dinitrophenol	620	< 620 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	62	< 62 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	62	< 62 U
7005-72-3	4-Chlorophenyl-phenylether	62	< 62 U
86-73-7	Fluorene	62	< 62 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	620	< 620 U

Lab Sample ID: SE67N
LIMS ID: 11-794
Matrix: Soil
Date Analyzed: 01/22/11 01:54

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	62	< 62 U
101-55-3	4-Bromophenyl-phenylether	62	< 62 U
118-74-1	Hexachlorobenzene	62	< 62 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	Phenanthrene	62	< 62 U
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	Di-n-Butylphthalate	62	< 62 U
206-44-0	Fluoranthene	62	< 62 U
129-00-0	Pyrene	62	< 62 U
85-68-7	Butylbenzylphthalate	62	< 62 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	bis(2-Ethylhexyl)phthalate	62	< 62 U
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
90-12-0	1-Methylnaphthalene	62	< 62 U
TOTBFA	Total Benzofluoranthenes	62	< 62 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	56.0%	2-Fluorobiphenyl	67.2%
d14-p-Terphenyl	68.0%	d4-1,2-Dichlorobenzene	57.2%
d5-Phenol	58.7%	2-Fluorophenol	54.7%
2,4,6-Tribromophenol	68.5%	d4-2-Chlorophenol	59.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T3B2-SO-03
SAMPLE

Lab Sample ID: SE670
LIMS ID: 11-795
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 02:26
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 8.31 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 8.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	60	< 60 U
111-44-4	Bis-(2-Chloroethyl) Ether	60	< 60 U
95-57-8	2-Chlorophenol	60	< 60 U
541-73-1	1,3-Dichlorobenzene	60	< 60 U
106-46-7	1,4-Dichlorobenzene	60	< 60 U
100-51-6	Benzyl Alcohol	300	< 300 U
95-50-1	1,2-Dichlorobenzene	60	< 60 U
95-48-7	2-Methylphenol	60	< 60 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	60	< 60 U
106-44-5	4-Methylphenol	60	< 60 U
621-64-7	N-Nitroso-Di-N-Propylamine	60	< 60 U
67-72-1	Hexachloroethane	60	< 60 U
98-95-3	Nitrobenzene	60	< 60 U
78-59-1	Isophorone	60	< 60 U
88-75-5	2-Nitrophenol	60	< 60 U
105-67-9	2,4-Dimethylphenol	60	< 60 U
65-85-0	Benzoic Acid	600	< 600 U
111-91-1	bis(2-Chloroethoxy) Methane	60	< 60 U
120-83-2	2,4-Dichlorophenol	300	< 300 U
120-82-1	1,2,4-Trichlorobenzene	60	< 60 U
91-20-3	Naphthalene	60	< 60 U
106-47-8	4-Chloroaniline	300	< 300 U
87-68-3	Hexachlorobutadiene	60	< 60 U
59-50-7	4-Chloro-3-methylphenol	300	< 300 U
91-57-6	2-Methylnaphthalene	60	< 60 U
77-47-4	Hexachlorocyclopentadiene	300	< 300 U
88-06-2	2,4,6-Trichlorophenol	300	< 300 U
95-95-4	2,4,5-Trichlorophenol	300	< 300 U
91-58-7	2-Chloronaphthalene	60	< 60 U
88-74-4	2-Nitroaniline	300	< 300 U
131-11-3	Dimethylphthalate	60	< 60 U
208-96-8	Acenaphthylene	60	< 60 U
99-09-2	3-Nitroaniline	300	< 300 U
83-32-9	Acenaphthene	60	< 60 U
51-28-5	2,4-Dinitrophenol	600	< 600 U
100-02-7	4-Nitrophenol	300	< 300 U
132-64-9	Dibenzofuran	60	< 60 U
606-20-2	2,6-Dinitrotoluene	300	< 300 U
121-14-2	2,4-Dinitrotoluene	300	< 300 U
84-66-2	Diethylphthalate	60	< 60 U
7005-72-3	4-Chlorophenyl-phenylether	60	< 60 U
86-73-7	Fluorene	60	< 60 U
100-01-6	4-Nitroaniline	300	< 300 U
534-52-1	4,6-Dinitro-2-Methylphenol	600	< 600 U

Lab Sample ID: SE67O
LIMS ID: 11-795
Matrix: Soil
Date Analyzed: 01/22/11 02:26

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	60	< 60 U
101-55-3	4-Bromophenyl-phenylether	60	< 60 U
118-74-1	Hexachlorobenzene	60	< 60 U
87-86-5	Pentachlorophenol	300	< 300 U
85-01-8	Phenanthrene	60	< 60 U
86-74-8	Carbazole	60	< 60 U
120-12-7	Anthracene	60	< 60 U
84-74-2	Di-n-Butylphthalate	60	< 60 U
206-44-0	Fluoranthene	60	< 60 U
129-00-0	Pyrene	60	< 60 U
85-68-7	Butylbenzylphthalate	60	< 60 U
91-94-1	3,3'-Dichlorobenzidine	300	< 300 U
56-55-3	Benzo(a)anthracene	60	< 60 U
117-81-7	bis(2-Ethylhexyl)phthalate	60	< 60 U
218-01-9	Chrysene	60	< 60 U
117-84-0	Di-n-Octyl phthalate	60	< 60 U
50-32-8	Benzo(a)pyrene	60	< 60 U
193-39-5	Indeno(1,2,3-cd)pyrene	60	< 60 U
53-70-3	Dibenz(a,h)anthracene	60	< 60 U
191-24-2	Benzo(g,h,i)perylene	60	< 60 U
90-12-0	1-Methylnaphthalene	60	< 60 U
TOTBFA	Total Benzofluoranthenes	60	< 60 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	59.2%	2-Fluorobiphenyl	70.4%
d14-p-Terphenyl	70.8%	d4-1,2-Dichlorobenzene	62.0%
d5-Phenol	58.4%	2-Fluorophenol	49.6%
2,4,6-Tribromophenol	62.7%	d4-2-Chlorophenol	60.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: MB-011811
METHOD BLANK

Lab Sample ID: MB-011811
LIMS ID: 11-792
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO 7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 01/18/11
Date Analyzed: 01/21/11 15:31
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 7.50 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	67	< 67 U
111-44-4	Bis-(2-Chloroethyl) Ether	67	< 67 U
95-57-8	2-Chlorophenol	67	< 67 U
541-73-1	1,3-Dichlorobenzene	67	< 67 U
106-46-7	1,4-Dichlorobenzene	67	< 67 U
100-51-6	Benzyl Alcohol	330	< 330 U
95-50-1	1,2-Dichlorobenzene	67	< 67 U
95-48-7	2-Methylphenol	67	< 67 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	67	< 67 U
106-44-5	4-Methylphenol	67	< 67 U
621-64-7	N-Nitroso-Di-N-Propylamine	67	< 67 U
67-72-1	Hexachloroethane	67	< 67 U
98-95-3	Nitrobenzene	67	< 67 U
78-59-1	Isophorone	67	< 67 U
88-75-5	2-Nitrophenol	67	< 67 U
105-67-9	2,4-Dimethylphenol	67	< 67 U
65-85-0	Benzoic Acid	670	< 670 U
111-91-1	bis(2-Chloroethoxy) Methane	67	< 67 U
120-83-2	2,4-Dichlorophenol	330	< 330 U
120-82-1	1,2,4-Trichlorobenzene	67	< 67 U
91-20-3	Naphthalene	67	< 67 U
106-47-8	4-Chloroaniline	330	< 330 U
87-68-3	Hexachlorobutadiene	67	< 67 U
59-50-7	4-Chloro-3-methylphenol	330	< 330 U
91-57-6	2-Methylnaphthalene	67	< 67 U
77-47-4	Hexachlorocyclopentadiene	330	< 330 U
88-06-2	2,4,6-Trichlorophenol	330	< 330 U
95-95-4	2,4,5-Trichlorophenol	330	< 330 U
91-58-7	2-Chloronaphthalene	67	< 67 U
88-74-4	2-Nitroaniline	330	< 330 U
131-11-3	Dimethylphthalate	67	< 67 U
208-96-8	Acenaphthylene	67	< 67 U
99-09-2	3-Nitroaniline	330	< 330 U
83-32-9	Acenaphthene	67	< 67 U
51-28-5	2,4-Dinitrophenol	670	< 670 U
100-02-7	4-Nitrophenol	330	< 330 U
132-64-9	Dibenzofuran	67	< 67 U
606-20-2	2,6-Dinitrotoluene	330	< 330 U
121-14-2	2,4-Dinitrotoluene	330	< 330 U
84-66-2	Diethylphthalate	67	< 67 U
7005-72-3	4-Chlorophenyl-phenylether	67	< 67 U
86-73-7	Fluorene	67	< 67 U
100-01-6	4-Nitroaniline	330	< 330 U
534-52-1	4,6-Dinitro-2-Methylphenol	670	< 670 U

Lab Sample ID: MB-011811
LIMS ID: 11-792
Matrix: Soil
Date Analyzed: 01/21/11 15:31

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	67	< 67 U
101-55-3	4-Bromophenyl-phenylether	67	< 67 U
118-74-1	Hexachlorobenzene	67	< 67 U
87-86-5	Pentachlorophenol	330	< 330 U
85-01-8	Phenanthrene	67	< 67 U
86-74-8	Carbazole	67	< 67 U
120-12-7	Anthracene	67	< 67 U
84-74-2	Di-n-Butylphthalate	67	< 67 U
206-44-0	Fluoranthene	67	< 67 U
129-00-0	Pyrene	67	< 67 U
85-68-7	Butylbenzylphthalate	67	< 67 U
91-94-1	3,3'-Dichlorobenzidine	330	< 330 U
56-55-3	Benzo(a)anthracene	67	< 67 U
117-81-7	bis(2-Ethylhexyl)phthalate	67	< 67 U
218-01-9	Chrysene	67	< 67 U
117-84-0	Di-n-Octyl phthalate	67	< 67 U
50-32-8	Benzo(a)pyrene	67	< 67 U
193-39-5	Indeno(1,2,3-cd)pyrene	67	< 67 U
53-70-3	Dibenz(a,h)anthracene	67	< 67 U
191-24-2	Benzo(g,h,i)perylene	67	< 67 U
90-12-0	1-Methylnaphthalene	67	< 67 U
TOTBFA	Total Benzofluoranthenes	67	< 67 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	70.4%	2-Fluorobiphenyl	77.6%
d14-p-Terphenyl	97.2%	d4-1,2-Dichlorobenzene	74.4%
d5-Phenol	77.1%	2-Fluorophenol	72.3%
2,4,6-Tribromophenol	71.2%	d4-2-Chlorophenol	76.8%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
JF-T3B2-SO-08	58.4%	65.6%	86.0%	61.2%	63.7%	58.9%	56.5%	63.5%	0
JF-T3B2-SO-13	62.8%	68.4%	79.6%	64.8%	66.9%	64.3%	57.1%	68.5%	0
JF-T3B2-SO-13-D	64.0%	70.8%	81.6%	67.2%	69.9%	66.7%	57.3%	70.7%	0
JF-T3B1-SO-03	67.6%	73.6%	86.4%	69.6%	71.5%	68.3%	62.4%	72.3%	0
JF-T3B1-SO-08	62.0%	68.8%	89.6%	63.6%	67.5%	62.4%	61.3%	66.7%	0
JF-T3B1-SO-13	73.2%	73.6%	77.6%	66.0%	69.1%	65.3%	73.1%	69.3%	0
JF-T2B4-SO-18	70.4%	84.8%	90.0%	66.8%	70.1%	58.9%	90.1%	68.5%	0
JF-T2B4-SO-18 DL	65.8%	84.2%	81.4%	68.4%	67.9%	54.7%	69.9%	67.1%	0
JF-T2B4-SO-23	65.2%	78.4%	82.8%	62.0%	70.9%	58.7%	91.2%	68.8%	0
JF-T3B4-SO-03	66.0%	78.8%	74.4%	64.8%	70.7%	64.3%	80.8%	70.9%	0
JF-T3B4-SO-13	69.2%	79.1%	73.8%	68.5%	73.8%	69.1%	72.3%	74.5%	0
JF-T3B4-SO-23	70.0%	80.0%	77.2%	72.8%	72.5%	66.4%	76.8%	73.9%	0
MB-011811	70.4%	77.6%	97.2%	74.4%	77.1%	72.3%	71.2%	76.8%	0
LCS-011811	72.0%	81.6%	100%	72.4%	76.8%	73.9%	79.2%	77.6%	0
LCSD-011811	72.0%	82.0%	97.6%	72.4%	77.6%	73.3%	82.9%	77.3%	0
JF-T3B3-SO-03	66.0%	79.6%	76.0%	68.4%	69.1%	59.2%	76.0%	69.3%	0
JF-T3B3-SO-03 MS	68.8%	80.4%	74.4%	70.0%	73.3%	68.8%	87.7%	73.3%	0
JF-T3B3-SO-03 MSD	64.0%	75.2%	71.2%	65.2%	68.8%	64.8%	84.0%	69.6%	0
JF-T3B3-SO-08	59.6%	74.4%	69.2%	61.2%	64.3%	58.4%	76.0%	64.3%	0
JF-T3B3-SO-13	56.0%	67.2%	68.0%	57.2%	58.7%	54.7%	68.5%	59.2%	0
JF-T3B2-SO-03	59.2%	70.4%	70.8%	62.0%	58.4%	49.6%	62.7%	60.3%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(46-102)	(32-106)
(FBP) = 2-Fluorobiphenyl	(51-105)	(39-107)
(TPH) = d14-p-Terphenyl	(55-124)	(31-130)
(DCB) = d4-1,2-Dichlorobenzene	(48-104)	(38-102)
(PHL) = d5-Phenol	(44-110)	(27-112)
(2FP) = 2-Fluorophenol	(38-112)	(22-108)
(TBP) = 2,4,6-Tribromophenol	(54-120)	(31-131)
(2CP) = d4-2-Chlorophenol	(50-103)	(36-104)

Prep Method: SW3546
Log Number Range: 11-781 to 11-795

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-011811
LCS/LCSD

Lab Sample ID: LCS-011811
LIMS ID: 11-792
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted LCS/LCSD: 01/18/11

Date Analyzed LCS: 01/21/11 16:03
LCSD: 01/21/11 16:36
Instrument/Analyst LCS: NT6/JZ
LCSD: NT6/JZ
GPC Cleanup: Yes

Sample Amount LCS: 7.50 g
LCSD: 7.50 g
Final Extract Volume LCS: 0.5 mL
LCSD: 0.5 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	1190	1670	71.3%	1240	1670	74.3%	4.1%
Bis-(2-Chloroethyl) Ether	1170	1670	70.1%	1210	1670	72.5%	3.4%
2-Chlorophenol	1300	1670	77.8%	1350	1670	80.8%	3.8%
1,3-Dichlorobenzene	1150	1670	68.9%	1210	1670	72.5%	5.1%
1,4-Dichlorobenzene	1160	1670	69.5%	1210	1670	72.5%	4.2%
Benzyl Alcohol	2200	3330	66.1%	2320	3330	69.7%	5.3%
1,2-Dichlorobenzene	1180	1670	70.7%	1240	1670	74.3%	5.0%
2-Methylphenol	1100	1670	65.9%	1150	1670	68.9%	4.4%
2,2'-Oxybis(1-Chloropropane)	985 Q	1670	59.0%	1030 Q	1670	61.7%	4.5%
4-Methylphenol	2210	3330	66.4%	2320	3330	69.7%	4.9%
N-Nitroso-Di-N-Propylamine	1060	1670	63.5%	1130	1670	67.7%	6.4%
Hexachloroethane	1170	1670	70.1%	1220	1670	73.1%	4.2%
Nitrobenzene	1170	1670	70.1%	1220	1670	73.1%	4.2%
Isophorone	1280	1670	76.6%	1360	1670	81.4%	6.1%
2-Nitrophenol	1400	1670	83.8%	1460	1670	87.4%	4.2%
2,4-Dimethylphenol	1090	1670	65.3%	1150	1670	68.9%	5.4%
Benzoic Acid	3480	5000	69.6%	4030	5000	80.6%	14.6%
bis(2-Chloroethoxy) Methane	1140	1670	68.3%	1210	1670	72.5%	6.0%
2,4-Dichlorophenol	1390	1670	83.2%	1460	1670	87.4%	4.9%
1,2,4-Trichlorobenzene	1230	1670	73.7%	1280	1670	76.6%	4.0%
Naphthalene	1320	1670	79.0%	1380	1670	82.6%	4.4%
4-Chloroaniline	3440	4000	86.0%	3720	4000	93.0%	7.8%
Hexachlorobutadiene	1220	1670	73.1%	1270	1670	76.0%	4.0%
4-Chloro-3-methylphenol	1300	1670	77.8%	1400	1670	83.8%	7.4%
2-Methylnaphthalene	1160	1670	69.5%	1220	1670	73.1%	5.0%
Hexachlorocyclopentadiene	3510	5000	70.2%	3840	5000	76.8%	9.0%
2,4,6-Trichlorophenol	1430	1670	85.6%	1510	1670	90.4%	5.4%
2,4,5-Trichlorophenol	1280	1670	76.6%	1370	1670	82.0%	6.8%
2-Chloronaphthalene	1330	1670	79.6%	1400	1670	83.8%	5.1%
2-Nitroaniline	1170	1670	70.1%	1250	1670	74.9%	6.6%
Dimethylphthalate	1300	1670	77.8%	1400	1670	83.8%	7.4%
Acenaphthylene	1410	1670	84.4%	1480	1670	88.6%	4.8%
3-Nitroaniline	3710	4270	86.9%	4150	4270	97.2%	11.2%
Acenaphthene	1350	1670	80.8%	1430	1670	85.6%	5.8%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: LCSD-011811**
Page 2 of 2 **LCS/LCSD**

Lab Sample ID: LCS-011811 QC Report No: SE67-The Boeing Company
LIMS ID: 11-792 Project: Jorgensen Forge PLO
Matrix: Soil 7KPL2JOR
Date Analyzed LCS: 01/21/11 16:03
LCSD: 01/21/11 16:36

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
2,4-Dinitrophenol	3240 Q	5000	64.8%	4140 Q	5000	82.8%	24.4%
4-Nitrophenol	1450	1670	86.8%	1620	1670	97.0%	11.1%
Dibenzofuran	1270	1670	76.0%	1340	1670	80.2%	5.4%
2,6-Dinitrotoluene	1330	1670	79.6%	1430	1670	85.6%	7.2%
2,4-Dinitrotoluene	1320	1670	79.0%	1410	1670	84.4%	6.6%
Diethylphthalate	1260	1670	75.4%	1340	1670	80.2%	6.2%
4-Chlorophenyl-phenylether	1240	1670	74.3%	1330	1670	79.6%	7.0%
Fluorene	1380	1670	82.6%	1460	1670	87.4%	5.6%
4-Nitroaniline	1160	1670	69.5%	1370	1670	82.0%	16.6%
4,6-Dinitro-2-Methylphenol	4250	5000	85.0%	4940	5000	98.8%	15.0%
N-Nitrosodiphenylamine	1310	1670	78.4%	1400	1670	83.8%	6.6%
4-Bromophenyl-phenylether	1280	1670	76.6%	1370	1670	82.0%	6.8%
Hexachlorobenzene	1250	1670	74.9%	1340	1670	80.2%	6.9%
Pentachlorophenol	1490	1670	89.2%	1630	1670	97.6%	9.0%
Phenanthrene	1440	1670	86.2%	1540	1670	92.2%	6.7%
Carbazole	1230	1670	73.7%	1380	1670	82.6%	11.5%
Anthracene	1400	1670	83.8%	1490	1670	89.2%	6.2%
Di-n-Butylphthalate	1330	1670	79.6%	1450	1670	86.8%	8.6%
Fluoranthene	1390	1670	83.2%	1520	1670	91.0%	8.9%
Pyrene	1770	1670	106%	1780	1670	107%	0.6%
Butylbenzylphthalate	1570	1670	94.0%	1660	1670	99.4%	5.6%
3,3'-Dichlorobenzidine	3400	4270	79.6%	3890	4270	91.1%	13.4%
Benzo(a)anthracene	1540	1670	92.2%	1620	1670	97.0%	5.1%
bis(2-Ethylhexyl)phthalate	1390	1670	83.2%	1410	1670	84.4%	1.4%
Chrysene	1550	1670	92.8%	1640	1670	98.2%	5.6%
Di-n-Octyl phthalate	1190	1670	71.3%	1210	1670	72.5%	1.7%
Benzo(a)pyrene	1380	1670	82.6%	1480	1670	88.6%	7.0%
Indeno(1,2,3-cd)pyrene	1770	1670	106%	1910	1670	114%	7.6%
Dibenz(a,h)anthracene	1740	1670	104%	1920	1670	115%	9.8%
Benzo(g,h,i)perylene	1840	1670	110%	2000	1670	120%	8.3%
1-Methylnaphthalene	1220	1670	73.1%	1290	1670	77.2%	5.6%
Total Benzofluoranthenes	2960	3330	88.9%	3190	3330	95.8%	7.5%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	72.0%	72.0%
2-Fluorobiphenyl	81.6%	82.0%
d14-p-Terphenyl	100%	97.6%
d4-1,2-Dichlorobenzene	72.4%	72.4%
d5-Phenol	76.8%	77.6%
2-Fluorophenol	73.9%	73.3%
2,4,6-Tribromophenol	79.2%	82.9%
d4-2-Chlorophenol	77.6%	77.3%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T3B3-SO-03
MS/MSD

Lab Sample ID: SE67L
LIMS ID: 11-792
Matrix: Soil
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted MS/MSD: 01/18/11

Date Analyzed MS: 01/22/11 00:15
MSD: 01/22/11 00:48
Instrument/Analyst MS: NT6/JZ
MSD: NT6/JZ
GPC Cleanup: Yes

Sample Amount MS: 7.77 g-dry-wt
MSD: 7.80 g-dry-wt
Final Extract Volume MS: 0.5 mL
MSD: 0.5 mL
Dilution Factor MS: 1.00
MSD: 1.00
Percent Moisture: 14.0 %

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Phenol	< 63.9 U	1080	1610	67.1%	1070	1600	66.9%	0.9%
Bis-(2-Chloroethyl) Ether	< 63.9 U	1090	1610	67.7%	1080	1600	67.5%	0.9%
2-Chlorophenol	< 63.9 U	1200	1610	74.5%	1170	1600	73.1%	2.5%
1,3-Dichlorobenzene	< 63.9 U	1060	1610	65.8%	1040	1600	65.0%	1.9%
1,4-Dichlorobenzene	< 63.9 U	1070	1610	66.5%	1050	1600	65.6%	1.9%
Benzyl Alcohol	< 320 U	2040	3220	63.4%	2000	3210	62.3%	2.0%
1,2-Dichlorobenzene	< 63.9 U	1090	1610	67.7%	1060	1600	66.2%	2.8%
2-Methylphenol	< 63.9 U	983	1610	61.1%	958	1600	59.9%	2.6%
2,2'-Oxybis(1-Chloropropane	< 63.9 U	963 Q	1610	59.8%	948 Q	1600	59.2%	1.6%
4-Methylphenol	< 63.9 U	2000	3220	62.1%	1990	3210	62.0%	0.5%
N-Nitroso-Di-N-Propylamine	< 63.9 U	989	1610	61.4%	971	1600	60.7%	1.8%
Hexachloroethane	< 63.9 U	1020	1610	63.4%	1010	1600	63.1%	1.0%
Nitrobenzene	< 63.9 U	1080	1610	67.1%	1080	1600	67.5%	0.0%
Isophorone	< 63.9 U	1180	1610	73.3%	1160	1600	72.5%	1.7%
2-Nitrophenol	< 63.9 U	1250	1610	77.6%	1260	1600	78.8%	0.8%
2,4-Dimethylphenol	< 63.9 U	702	1610	43.6%	676	1600	42.2%	3.8%
Benzoic Acid	< 639 U	1690	4830	35.0%	1690	4810	35.1%	0.0%
bis(2-Chloroethoxy) Methane	< 63.9 U	1070	1610	66.5%	1060	1600	66.2%	0.9%
2,4-Dichlorophenol	< 320 U	1330	1610	82.6%	1320	1600	82.5%	0.8%
1,2,4-Trichlorobenzene	< 63.9 U	1160	1610	72.0%	1160	1600	72.5%	0.0%
Naphthalene	< 63.9 U	1240	1610	77.0%	1230	1600	76.9%	0.8%
4-Chloroaniline	< 320 U	2850	3860	73.8%	2890	3850	75.1%	1.4%
Hexachlorobutadiene	< 63.9 U	1150	1610	71.4%	1140	1600	71.2%	0.9%
4-Chloro-3-methylphenol	< 320 U	1220	1610	75.8%	1240	1600	77.5%	1.6%
2-Methylnaphthalene	< 63.9 U	1120	1610	69.6%	1120	1600	70.0%	0.0%
Hexachlorocyclopentadiene	< 320 U	2220	4830	46.0%	2170	4810	45.1%	2.3%
2,4,6-Trichlorophenol	< 320 U	1380	1610	85.7%	1370	1600	85.6%	0.7%
2,4,5-Trichlorophenol	< 320 U	1250	1610	77.6%	1260	1600	78.8%	0.8%
2-Chloronaphthalene	< 63.9 U	1270	1610	78.9%	1250	1600	78.1%	1.6%
2-Nitroaniline	< 320 U	1130	1610	70.2%	1130	1600	70.6%	0.0%
Dimethylphthalate	< 63.9 U	1220	1610	75.8%	1210	1600	75.6%	0.8%
Acenaphthylene	< 63.9 U	1320	1610	82.0%	1290	1600	80.6%	2.3%
3-Nitroaniline	< 320 U	3330	4120	80.8%	3380	4100	82.4%	1.5%
Acenaphthene	< 63.9 U	1290	1610	80.1%	1280	1600	80.0%	0.8%
2,4-Dinitrophenol	< 639 U	858 Q	4830	17.8%	1120 Q	4810	23.3%	26.5%
4-Nitrophenol	< 320 U	1280	1610	79.5%	1310	1600	81.9%	2.3%
Dibenzofuran	< 63.9 U	1210	1610	75.2%	1210	1600	75.6%	0.0%
2,6-Dinitrotoluene	< 320 U	1240	1610	77.0%	1240	1600	77.5%	0.0%
2,4-Dinitrotoluene	< 320 U	1220	1610	75.8%	1230	1600	76.9%	0.8%
Diethylphthalate	< 63.9 U	1190	1610	73.9%	1190	1600	74.4%	0.0%
4-Chlorophenyl-phenylether	< 63.9 U	1210	1610	75.2%	1200	1600	75.0%	0.8%
Fluorene	< 63.9 U	1330	1610	82.6%	1320	1600	82.5%	0.8%
4-Nitroaniline	< 320 U	1140	1610	70.8%	1140	1600	71.2%	0.0%
4,6-Dinitro-2-Methylphenol	< 639 U	1590	4830	32.9%	1920	4810	39.9%	18.8%
N-Nitrosodiphenylamine	< 63.9 U	1200	1610	74.5%	1220	1600	76.2%	1.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: JF-T3B3-SO-03**
 MS/MSD

Lab Sample ID: SE67L
LIMS ID: 11-792
Matrix: Soil
Date Analyzed MS: 01/22/11 00:15
MSD: 01/22/11 00:48

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
4-Bromophenyl-phenylether	< 63.9 U	1230	1610	76.4%	1240	1600	77.5%	0.8%
Hexachlorobenzene	< 63.9 U	1280	1610	79.5%	1280	1600	80.0%	0.0%
Pentachlorophenol	< 320 U	1430	1610	88.8%	1450	1600	90.6%	1.4%
Phenanthrene	< 63.9 U	1400	1610	87.0%	1400	1600	87.5%	0.0%
Carbazole	< 63.9 U	1310	1610	81.4%	1310	1600	81.9%	0.0%
Anthracene	< 63.9 U	1300	1610	80.7%	1320	1600	82.5%	1.5%
Di-n-Butylphthalate	120	1390	1610	78.9%	1420	1600	81.2%	2.1%
Fluoranthene	< 63.9 U	1480	1610	91.9%	1490	1600	93.1%	0.7%
Pyrene	< 63.9 U	1250	1610	77.6%	1280	1600	80.0%	2.4%
Butylbenzylphthalate	< 63.9 U	1190	1610	73.9%	1190	1600	74.4%	0.0%
3,3'-Dichlorobenzidine	< 320 U	2510	4120	60.9%	2640	4100	64.4%	5.0%
Benzo(a)anthracene	< 63.9 U	1400	1610	87.0%	1410	1600	88.1%	0.7%
bis(2-Ethylhexyl)phthalate	< 63.9 U	1150	1610	71.4%	1180	1600	73.8%	2.6%
Chrysene	< 63.9 U	1400	1610	87.0%	1400	1600	87.5%	0.0%
Di-n-Octyl phthalate	< 63.9 U	1060	1610	65.8%	1090	1600	68.1%	2.8%
Benzo(a)pyrene	< 63.9 U	1290	1610	80.1%	1320	1600	82.5%	2.3%
Indeno(1,2,3-cd)pyrene	< 63.9 U	1320	1610	82.0%	1360	1600	85.0%	3.0%
Dibenz(a,h)anthracene	< 63.9 U	1400	1610	87.0%	1430	1600	89.4%	2.1%
Benzo(g,h,i)perylene	< 63.9 U	1170	1610	72.7%	1200	1600	75.0%	2.5%
1-Methylnaphthalene	< 63.9 U	1170	1610	72.7%	1160	1600	72.5%	0.9%
Total Benzofluoranthenes	< 63.9 U	2850	3220	88.5%	2900	3210	90.3%	1.7%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T3B2-SO-08
SAMPLE

Lab Sample ID: SE67A
LIMS ID: 11-781
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 20:00
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 24.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	Aroclor 1254	3.9	< 3.9 U
11096-82-5	Aroclor 1260	3.9	< 3.9 U
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	105%
Tetrachlorometaxylene	69.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T3B2-SO-13
SAMPLE

Lab Sample ID: SE67B
LIMS ID: 11-782
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 20:18
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 15.1 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 26.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	6.6	< 6.6 U
53469-21-9	Aroclor 1242	6.6	< 6.6 U
12672-29-6	Aroclor 1248	17	< 17 Y
11097-69-1	**Aroclor 1254**	**6.6**	**34**
11096-82-5	Aroclor 1260	6.6	< 6.6 U
11104-28-2	Aroclor 1221	6.6	< 6.6 U
11141-16-5	Aroclor 1232	6.6	< 6.6 U
37324-23-5	Aroclor 1262	6.6	< 6.6 U
11100-14-4	Aroclor 1268	6.6	< 6.6 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	111%
Tetrachlorometaxylene	76.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T3B2-SO-13-D
SAMPLE

Lab Sample ID: SE67C
LIMS ID: 11-783
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 20:37
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 11.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 26.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	8.4	< 8.4 U
53469-21-9	Aroclor 1242	8.4	< 8.4 U
12672-29-6	Aroclor 1248	21	< 21 Y
11097-69-1	**Aroclor 1254**	**8.4**	**54**
11096-82-5	Aroclor 1260	8.4	< 8.4 U
11104-28-2	Aroclor 1221	8.4	< 8.4 U
11141-16-5	Aroclor 1232	8.4	< 8.4 U
37324-23-5	Aroclor 1262	8.4	< 8.4 U
11100-14-4	Aroclor 1268	8.4	< 8.4 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	116%
Tetrachlorometaxylene	82.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T3B1-SO-03
SAMPLE

Lab Sample ID: SE67D
LIMS ID: 11-784
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 20:56
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 23.1%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	Aroclor 1254	3.9	< 3.9 U
11096-82-5	Aroclor 1260	3.9	< 3.9 U
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	110%
Tetrachlorometaxylene	79.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
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Sample ID: JF-T3B1-SO-08
SAMPLE

Lab Sample ID: SE67E
LIMS ID: 11-785
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 21:15
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 18.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	Aroclor 1254	3.9	< 3.9 U
11096-82-5	Aroclor 1260	3.9	< 3.9 U
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	110%
Tetrachlorometaxylene	77.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T3B1-SO-13
SAMPLE

Lab Sample ID: SE67F
LIMS ID: 11-786
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 21:34
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 11.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 26.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	8.5	< 8.5 U
53469-21-9	Aroclor 1242	8.5	< 8.5 U
12672-29-6	Aroclor 1248	17	< 17 Y
11097-69-1	**Aroclor 1254**	**8.5**	**37**
11096-82-5	Aroclor 1260	8.5	< 8.5 U
11104-28-2	Aroclor 1221	8.5	< 8.5 U
11141-16-5	Aroclor 1232	8.5	< 8.5 U
37324-23-5	**Aroclor 1262**	**8.5**	**28**
11100-14-4	Aroclor 1268	8.5	< 8.5 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	97.2%
Tetrachlorometaxylene	59.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: JF-T2B4-SO-18
SAMPLE

Lab Sample ID: SE67G
LIMS ID: 11-787
Matrix: Soil
Data Release Authorized:
Reported: 01/24/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/21/11 06:21
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 0.69 g-dry-wt
Final Extract Volume: 40 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 31.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	12,000	< 12,000 U
53469-21-9	Aroclor 1242	12,000	< 12,000 U
12672-29-6	Aroclor 1248	120,000	< 120,000 Y
11097-69-1	**Aroclor 1254**	**12,000**	**220,000**
11096-82-5	**Aroclor 1260**	**12,000**	**54,000**
11104-28-2	Aroclor 1221	12,000	< 12,000 U
11141-16-5	Aroclor 1232	12,000	< 12,000 U
37324-23-5	Aroclor 1262	12,000	< 12,000 U
11100-14-4	Aroclor 1268	12,000	< 12,000 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	132%
Tetrachlorometaxylene	88.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T2B4-SO-23
SAMPLE

Lab Sample ID: SE67H
LIMS ID: 11-788
Matrix: Soil
Data Release Authorized:
Reported: 01/24/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/21/11 06:40
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 2.06 g-dry-wt
Final Extract Volume: 40 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 20.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3,900	< 3,900 U
53469-21-9	Aroclor 1242	3,900	< 3,900 U
12672-29-6	Aroclor 1248	29,000	< 29,000 Y
11097-69-1	**Aroclor 1254**	**3,900**	**61,000**
11096-82-5	**Aroclor 1260**	**3,900**	**11,000**
11104-28-2	Aroclor 1221	3,900	< 3,900 U
11141-16-5	Aroclor 1232	3,900	< 3,900 U
37324-23-5	Aroclor 1262	3,900	< 3,900 U
11100-14-4	Aroclor 1268	3,900	< 3,900 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	106%
Tetrachlorometaxylene	85.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T3B4-SO-03
SAMPLE

Lab Sample ID: SE67I
LIMS ID: 11-789
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 21:52
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 7.46 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 21.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	13	< 13 U
53469-21-9	Aroclor 1242	13	< 13 U
12672-29-6	Aroclor 1248	170	< 170 Y
11097-69-1	**Aroclor 1254**	**13**	**540**
11096-82-5	**Aroclor 1260**	**13**	**290**
11104-28-2	Aroclor 1221	13	< 13 U
11141-16-5	Aroclor 1232	13	< 13 U
37324-23-5	Aroclor 1262	13	< 13 U
11100-14-4	Aroclor 1268	13	< 13 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	123%
Tetrachlorometaxylene	92.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T3B4-SO-13
SAMPLE

Lab Sample ID: SE67J
LIMS ID: 11-790
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 22:49
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 9.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.8	< 3.8 U
53469-21-9	Aroclor 1242	3.8	< 3.8 U
12672-29-6	Aroclor 1248	3.8	< 3.8 U
11097-69-1	**Aroclor 1254**	**3.8**	**16**
11096-82-5	**Aroclor 1260**	**3.8**	**11**
11104-28-2	Aroclor 1221	3.8	< 3.8 U
11141-16-5	Aroclor 1232	3.8	< 3.8 U
37324-23-5	Aroclor 1262	3.8	< 3.8 U
11100-14-4	Aroclor 1268	3.8	< 3.8 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	105%
Tetrachlorometaxylene	83.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T3B4-SO-13
DILUTION

Lab Sample ID: SE67J
LIMS ID: 11-790
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/25/11 15:46
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 9.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	7.7	< 7.7 U
53469-21-9	Aroclor 1242	7.7	< 7.7 U
12672-29-6	Aroclor 1248	7.7	< 7.7 U
11097-69-1	**Aroclor 1254**	**7.7**	**17**
11096-82-5	**Aroclor 1260**	**7.7**	**10**
11104-28-2	Aroclor 1221	7.7	< 7.7 U
11141-16-5	Aroclor 1232	7.7	< 7.7 U
37324-23-5	Aroclor 1262	7.7	< 7.7 U
11100-14-4	Aroclor 1268	7.7	< 7.7 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	103%
Tetrachlorometaxylene	85.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
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Sample ID: JF-T3B4-SO-23
SAMPLE

Lab Sample ID: SE67K
LIMS ID: 11-791
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 23:08
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 28.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	**Aroclor 1254**	**3.9**	**4.5**
11096-82-5	Aroclor 1260	3.9	< 3.9 U
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	95.4%
Tetrachlorometaxylene	72.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T3B4-SO-23
DILUTION

Lab Sample ID: SE67K
LIMS ID: 11-791
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/25/11 16:05
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 10.0
Silica Gel: Yes

Percent Moisture: 28.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	7.8	< 7.8 U
53469-21-9	Aroclor 1242	7.8	< 7.8 U
12672-29-6	Aroclor 1248	7.8	< 7.8 U
11097-69-1	Aroclor 1254	7.8	< 7.8 U
11096-82-5	Aroclor 1260	7.8	< 7.8 U
11104-28-2	Aroclor 1221	7.8	< 7.8 U
11141-16-5	Aroclor 1232	7.8	< 7.8 U
37324-23-5	Aroclor 1262	7.8	< 7.8 U
11100-14-4	Aroclor 1268	7.8	< 7.8 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	100%
Tetrachlorometaxylene	82.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T3B3-SO-03
SAMPLE

Lab Sample ID: SE67L
LIMS ID: 11-792
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 23:26
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 11.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 14.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	8.5	< 8.5 U
53469-21-9	Aroclor 1242	8.5	< 8.5 U
12672-29-6	Aroclor 1248	8.5	< 8.5 U
11097-69-1	Aroclor 1254	13	< 13 Y
11096-82-5	Aroclor 1260	8.5	< 8.5 U
11104-28-2	Aroclor 1221	8.5	< 8.5 U
11141-16-5	Aroclor 1232	8.5	< 8.5 U
37324-23-5	**Aroclor 1262**	**8.5**	**140**
11100-14-4	Aroclor 1268	8.5	< 8.5 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	NR
Tetrachlorometaxylene	83.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T3B3-SO-03
MATRIX SPIKE

Lab Sample ID: SE67L
LIMS ID: 11-792
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 23:45
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 11.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 14.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	8.7	---
53469-21-9	Aroclor 1242	8.7	< 8.7 U
12672-29-6	Aroclor 1248	8.7	< 8.7 U
11097-69-1	Aroclor 1254	8.7	< 8.7 U
11096-82-5	Aroclor 1260	8.7	---
11104-28-2	Aroclor 1221	8.7	< 8.7 U
11141-16-5	Aroclor 1232	8.7	< 8.7 U
37324-23-5	**Aroclor 1262**	**8.7**	**170**
11100-14-4	Aroclor 1268	8.7	< 8.7 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	NR
Tetrachlorometaxylene	90.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T3B3-SO-03
MATRIX SPIKE DUP

Lab Sample ID: SE67L
LIMS ID: 11-792
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/23/11 00:04
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 11.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 14.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	8.5	---
53469-21-9	Aroclor 1242	8.5	< 8.5 U
12672-29-6	Aroclor 1248	8.5	< 8.5 U
11097-69-1	Aroclor 1254	8.5	< 8.5 U
11096-82-5	Aroclor 1260	8.5	---
11104-28-2	Aroclor 1221	8.5	< 8.5 U
11141-16-5	Aroclor 1232	8.5	< 8.5 U
37324-23-5	**Aroclor 1262**	**8.5**	**170**
11100-14-4	Aroclor 1268	8.5	< 8.5 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	NR
Tetrachlorometaxylene	89.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T3B3-SO-08
SAMPLE

Lab Sample ID: SE67M
LIMS ID: 11-793
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/25/11 12:19
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 25.0
Silica Gel: Yes

Percent Moisture: 20.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	20	< 20 U
53469-21-9	Aroclor 1242	20	< 20 U
12672-29-6	Aroclor 1248	79	< 79 Y
11097-69-1	**Aroclor 1254**	**20**	**270**
11096-82-5	**Aroclor 1260**	**20**	**400**
11104-28-2	Aroclor 1221	20	< 20 U
11141-16-5	Aroclor 1232	20	< 20 U
37324-23-5	Aroclor 1262	20	< 20 U
11100-14-4	Aroclor 1268	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobipheny1	NR
Tetrachlorometaxylene	104%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T3B3-SO-13
SAMPLE

Lab Sample ID: SE67N
LIMS ID: 11-794
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/23/11 00:41
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 11.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 27.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	8.8	< 8.8 U
53469-21-9	Aroclor 1242	8.8	< 8.8 U
12672-29-6	Aroclor 1248	8.8	< 8.8 U
11097-69-1	Aroclor 1254	22	< 22 Y
11096-82-5	**Aroclor 1260**	**8.8**	**54**
11104-28-2	Aroclor 1221	8.8	< 8.8 U
11141-16-5	Aroclor 1232	8.8	< 8.8 U
37324-23-5	Aroclor 1262	8.8	< 8.8 U
11100-14-4	Aroclor 1268	8.8	< 8.8 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	107%
Tetrachlorometaxylene	84.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T3B2-SO-03
SAMPLE

Lab Sample ID: SE67O
LIMS ID: 11-795
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/18/11
Date Analyzed: 01/23/11 01:00
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 26.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 8.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.8	< 3.8 U
53469-21-9	Aroclor 1242	3.8	< 3.8 U
12672-29-6	Aroclor 1248	3.8	< 3.8 U
11097-69-1	Aroclor 1254	3.8	< 3.8 U
11096-82-5	Aroclor 1260	3.8	< 3.8 U
11104-28-2	Aroclor 1221	3.8	< 3.8 U
11141-16-5	Aroclor 1232	3.8	< 3.8 U
37324-23-5	**Aroclor 1262**	**3.8**	**13**
11100-14-4	Aroclor 1268	3.8	< 3.8 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	106%
Tetrachlorometaxylene	84.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: MB-011811
METHOD BLANK

Lab Sample ID: MB-011811
LIMS ID: 11-792
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 19:03
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.0 g
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	4.0	< 4.0 U
53469-21-9	Aroclor 1242	4.0	< 4.0 U
12672-29-6	Aroclor 1248	4.0	< 4.0 U
11097-69-1	Aroclor 1254	4.0	< 4.0 U
11096-82-5	Aroclor 1260	4.0	< 4.0 U
11104-28-2	Aroclor 1221	4.0	< 4.0 U
11141-16-5	Aroclor 1232	4.0	< 4.0 U
37324-23-5	Aroclor 1262	4.0	< 4.0 U
11100-14-4	Aroclor 1268	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	102%
Tetrachlorometaxylene	61.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: MB-011811
METHOD BLANK

Lab Sample ID: MB-011811
LIMS ID: 11-787
Matrix: Soil
Data Release Authorized:
Reported: 01/24/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 01/18/11
Date Analyzed: 01/21/11 05:25
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 5.00 g
Final Extract Volume: 40 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	800	< 800 U
53469-21-9	Aroclor 1242	800	< 800 U
12672-29-6	Aroclor 1248	800	< 800 U
11097-69-1	Aroclor 1254	800	< 800 U
11096-82-5	Aroclor 1260	800	< 800 U
11104-28-2	Aroclor 1221	800	< 800 U
11141-16-5	Aroclor 1232	800	< 800 U
37324-23-5	Aroclor 1262	800	< 800 U
11100-14-4	Aroclor 1268	800	< 800 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	97.8%
Tetrachlorometaxylene	81.8%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
JF-T3B2-SO-08	105%	34-141	69.4%	38-102	0
JF-T3B2-SO-13	111%	34-141	76.1%	38-102	0
JF-T3B2-SO-13-D	116%	34-141	82.8%	38-102	0
JF-T3B1-SO-03	110%	34-141	79.1%	38-102	0
JF-T3B1-SO-08	110%	34-141	77.8%	38-102	0
JF-T3B1-SO-13	97.2%	34-141	59.1%	38-102	0
MB-011811	97.8%	51-127	81.8%	49-110	0
LCS-011811	96.4%	51-127	84.4%	49-110	0
LCSD-011811	93.0%	51-127	80.4%	49-110	0
JF-T2B4-SO-18	132%	22-168	88.5%	28-106	0
JF-T2B4-SO-23	106%	22-168	85.2%	28-106	0
JF-T3B4-SO-03	123%	34-141	92.6%	38-102	0
JF-T3B4-SO-13	105%	34-141	83.5%	38-102	0
JF-T3B4-SO-13 DL	103%	34-141	85.8%	38-102	0
JF-T3B4-SO-23	95.4%	34-141	72.8%	38-102	0
JF-T3B4-SO-23 DL	100%	34-141	82.2%	38-102	0
MB-011811	102%	40-109	61.6%	35-100	0
LCS-011811	110%*	40-109	69.9%	35-100	1
LCSD-011811	109%	40-109	74.8%	35-100	0
JF-T3B3-SO-03	NR	34-141	83.5%	38-102	0
JF-T3B3-SO-03 MS	NR	34-141	90.1%	38-102	0
JF-T3B3-SO-03 MSD	NR	34-141	89.5%	38-102	0
JF-T3B3-SO-08	NR	34-141	104%*	38-102	1
JF-T3B3-SO-13	107%	34-141	84.4%	38-102	0
JF-T3B2-SO-03	106%	34-141	84.1%	38-102	0

Low Level PSDDA Control Limits
Prep Method: SW3550C
Log Number Range: 11-781 to 11-795

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: LCS-011811
LCS/LCSD

Lab Sample ID: LCS-011811
LIMS ID: 11-792
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 01/18/11

Date Analyzed LCS: 01/22/11 19:22
LCSD: 01/22/11 19:41
Instrument/Analyst LCS: ECD5/JGR
LCSD: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount LCS: 25.0 g-dry-wt
LCSD: 25.0 g-dry-wt
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 5.00
LCSD: 5.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	16.3	20.0	81.5%	17.1	20.0	85.5%	4.8%
Aroclor 1260	19.8	20.0	99.0%	20.1	20.0	100%	1.5%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	110%	109%
Tetrachlorometaxylene	69.9%	74.8%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: LCS-011811
LCS/LCSD

Lab Sample ID: LCS-011811
LIMS ID: 11-787
Matrix: Soil
Data Release Authorized:
Reported: 01/24/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 01/18/11

Date Analyzed LCS: 01/21/11 05:44
LCSD: 01/21/11 06:02
Instrument/Analyst LCS: ECD5/JGR
LCSD: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount LCS: 5.00 g-dry-wt
LCSD: 5.00 g-dry-wt
Final Extract Volume LCS: 40 mL
LCSD: 40 mL
Dilution Factor LCS: 5.00
LCSD: 5.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	3650	4000	91.2%	3470	4000	86.8%	5.1%
Aroclor 1260	4400	4000	110%	4260	4000	106%	3.2%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	96.4%	93.0%
Tetrachlorometaxylene	84.4%	80.4%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T3B3-SO-03
MS/MSD

Lab Sample ID: SE67L
LIMS ID: 11-792
Matrix: Soil
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted MS/MSD: 01/18/11

Date Analyzed MS: 01/22/11 23:45
MSD: 01/23/11 00:04
Instrument/Analyst MS: ECD5/JGR
MSD: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount MS: 11.5 g-dry-wt
MSD: 11.7 g-dry-wt
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 5.00
MSD: 5.00
Silica Gel: Yes

Percent Moisture: 14.0%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Aroclor 1016	< 8.5 U	39.6	43.6	90.8%	41.2	42.7	96.5%	4.0%
Aroclor 1260	< 8.5 U	226	43.6	518%	226	42.7	529%	0.0%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID-Silica and Acid Cleaned
Page 1 of 2
Matrix: Soil

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

Data Release Authorized: VB
Reported: 01/22/11

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
SE67A	JF-T3B2-SO-08	01/17/11	01/20/11	1.00	Diesel	6.6	< 6.6 U
11-781	HC ID: ---		FID3B	1.0	Motor Oil	13	< 13 U
					Mineral Oil	13	< 13 U
					o-Terphenyl		91.0%
SE67B	JF-T3B2-SO-13	01/17/11	01/20/11	1.00	Diesel	6.8	< 6.8 U
11-782	HC ID: ---		FID3B	1.0	Motor Oil	14	< 14 U
					Mineral Oil	14	< 14 U
					o-Terphenyl		88.6%
SE67C	JF-T3B2-SO-13-D	01/17/11	01/20/11	1.00	Diesel	6.7	< 6.7 U
11-783	HC ID: ---		FID3B	1.0	Motor Oil	14	< 14 U
					Mineral Oil	14	< 14 U
					o-Terphenyl		97.8%
SE67D	JF-T3B1-SO-03	01/17/11	01/21/11	1.00	Diesel	6.5	< 6.5 U
11-784	HC ID: ---		FID3B	1.0	Motor Oil	13	< 13 U
					Mineral Oil	13	< 13 U
					o-Terphenyl		99.8%
SE67E	JF-T3B1-SO-08	01/17/11	01/21/11	1.00	Diesel	6.1	< 6.1 U
11-785	HC ID: ---		FID3B	1.0	Motor Oil	12	< 12 U
					Mineral Oil	12	< 12 U
					o-Terphenyl		99.2%
SE67F	JF-T3B1-SO-13	01/17/11	01/21/11	1.00	**Diesel**	**34**	**220**
11-786	HC ID: **DIESEL/MOTOR OIL**		FID3B	5.0	**Motor Oil**	**68**	**600**
					Mineral Oil	**68**	**540**
					o-Terphenyl		94.1%
SE67G	JF-T2B4-SO-18	01/17/11	01/21/11	1.00	**Diesel**	**360**	**2400**
11-787	HC ID: **DIESEL/MOTOR OIL**		FID3B	50	**Motor Oil**	**720**	**4300**
					Mineral Oil	**720**	**3900**
					o-Terphenyl		D
SE67H	JF-T2B4-SO-23	01/17/11	01/21/11	1.00	**Diesel**	**62**	**310**
11-788	HC ID: **DIESEL/MOTOR OIL**		FID3B	10	**Motor Oil**	**120**	**1200**
					Mineral Oil	**120**	**1100**
					o-Terphenyl		102%
SE67I	JF-T3B4-SO-03	01/17/11	01/21/11	1.00	**Diesel**	**6.3**	**42**
11-789	HC ID: **DIESEL/MOTOR OIL**		FID3B	1.0	**Motor Oil**	**13**	**380**
					Mineral Oil	**13**	**350**
					o-Terphenyl		91.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID-Silica and Acid Cleaned

Matrix: Soil

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

Data Release Authorized: VJB
Reported: 01/22/11

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
SE67J	JF-T3B4-SO-13	01/17/11	01/21/11	1.00	**Diesel**	**54**	**59**
11-790	HC ID: **DRO/MOTOR OIL**		FID3B	10	**Motor Oil**	**110**	**2600**
					Mineral Oil	**110**	**2400**
					o-Terphenyl		92.2%
SE67K	JF-T3B4-SO-23	01/17/11	01/21/11	1.00	Diesel	7.0	< 7.0 U
11-791	HC ID: ---		FID3B	1.0	Motor Oil	14	< 14 U
					Mineral Oil	14	< 14 U
					o-Terphenyl		104%
MB-011711	Method Blank	01/17/11	01/20/11	1.00	Diesel	5.0	< 5.0 U
11-792	HC ID: ---		FID3B	1.0	Motor Oil	10	< 10 U
					Mineral Oil	10	< 10 U
					o-Terphenyl		104%
SE67L	JF-T3B3-SO-03	01/17/11	01/21/11	1.00	**Diesel**	**5.8**	**9.4**
11-792	HC ID: **DRO/MOTOR OIL**		FID3B	1.0	**Motor Oil**	**12**	**40**
					Mineral Oil	**12**	**36**
					o-Terphenyl		91.7%
SE67M	JF-T3B3-SO-08	01/17/11	01/21/11	1.00	**Diesel**	**6.2**	**46**
11-793	HC ID: **DIESEL/MOTOR OIL**		FID3B	1.0	**Motor Oil**	**12**	**200**
					Mineral Oil	**12**	**190**
					o-Terphenyl		97.7%
SE67N	JF-T3B3-SO-13	01/17/11	01/21/11	1.00	**Diesel**	**6.8**	**7.7**
11-794	HC ID: **DRO/MOTOR OIL**		FID3B	1.0	**Motor Oil**	**14**	**31**
					Mineral Oil	**14**	**28**
					o-Terphenyl		96.4%
SE67O	JF-T3B2-SO-03	01/17/11	01/21/11	1.00	**Diesel**	**5.4**	**9.3**
11-795	HC ID: **DRO/MOTOR OIL**		FID3B	1.0	**Motor Oil**	**11**	**36**
					Mineral Oil	**11**	**33**
					o-Terphenyl		97.3%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
Mineral Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

ANALYTICAL RESOURCES INCORPORATED

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR

Client ID	OTER	TOT OUT
JF-T3B2-SO-08	91.0%	0
JF-T3B2-SO-13	88.6%	0
JF-T3B2-SO-13-D	97.8%	0
JF-T3B1-SO-03	99.8%	0
JF-T3B1-SO-08	99.2%	0
JF-T3B1-SO-13	94.1%	0
JF-T2B4-SO-18	D	0
JF-T2B4-SO-23	102%	0
JF-T3B4-SO-03	91.0%	0
JF-T3B4-SO-13	92.2%	0
JF-T3B4-SO-23	104%	0
MB-011711	104%	0
LCS-011711	98.2%	0
LCSD-011711	106%	0
JF-T3B3-SO-03	91.7%	0
JF-T3B3-SO-03 MS	86.0%	0
JF-T3B3-SO-08	97.7%	0
JF-T3B3-SO-13	96.4%	0
JF-T3B2-SO-03	97.3%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(59-134)	(43-137)

Prep Method: SW3546
Log Number Range: 11-781 to 11-795

FORM-II TPHD

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: LCS-011711**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-011711
LIMS ID: 11-792
Matrix: Soil
Data Release Authorized: VTS
Reported: 01/22/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted LCS/LCSD: 01/17/11

Date Analyzed LCS: 01/20/11 21:47
LCSD: 01/20/11 22:12
Instrument/Analyst LCS: FID/MS
LCSD: FID/MS

Sample Amount LCS: 10.0 g
LCSD: 10.0 g
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.0
LCSD: 1.0

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	135	150	90.0%	134	150	89.3%	0.7%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	98.2%	106%

Results reported in mg/kg
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: JF-T3B3-SO-03**
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: SE67L
LIMS ID: 11-792
Matrix: Soil
Data Release Authorized: VD
Reported: 01/22/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Date Extracted: 01/17/11
Date Analyzed: 01/21/11 05:11
Instrument/Analyst: FID/MS

Sample Amount: 8.69 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.0
Percent Moisture: 14.0%

Range	Sample	Matrix Spike	Spike Added	Recovery
Diesel	9.4	149	173	80.7%

Results reported in mg/kg

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 01/13/11

ARI Job: SE67
Project: Jorgensen Forge PLO 7KPL2JOR

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
11-781-SE67A	JF-T3B2-SO-08	7.60 g	1.00 mL	D	01/17/11
11-782-SE67B	JF-T3B2-SO-13	7.38 g	1.00 mL	D	01/17/11
11-783-SE67C	JF-T3B2-SO-13-D	7.43 g	1.00 mL	D	01/17/11
11-784-SE67D	JF-T3B1-SO-03	7.70 g	1.00 mL	D	01/17/11
11-785-SE67E	JF-T3B1-SO-08	8.23 g	1.00 mL	D	01/17/11
11-786-SE67F	JF-T3B1-SO-13	7.38 g	1.00 mL	D	01/17/11
11-787-SE67G	JF-T2B4-SO-18	6.90 g	1.00 mL	D	01/17/11
11-788-SE67H	JF-T2B4-SO-23	8.10 g	1.00 mL	D	01/17/11
11-789-SE67I	JF-T3B4-SO-03	7.92 g	1.00 mL	D	01/17/11
11-790-SE67J	JF-T3B4-SO-13	9.17 g	1.00 mL	D	01/17/11
11-791-SE67K	JF-T3B4-SO-23	7.19 g	1.00 mL	D	01/17/11
11-792-011711MB1	Method Blank	10.0 g	1.00 mL	-	01/17/11
11-792-011711LCS1	Lab Control	10.0 g	1.00 mL	-	01/17/11
11-792-011711LCSD1	Lab Control Dup	10.0 g	1.00 mL	-	01/17/11
11-792-SE67L	JF-T3B3-SO-03	8.70 g	1.00 mL	D	01/17/11
11-792-SE67LMS	JF-T3B3-SO-03	8.69 g	1.00 mL	D	01/17/11
11-793-SE67M	JF-T3B3-SO-08	8.00 g	1.00 mL	D	01/17/11
11-794-SE67N	JF-T3B3-SO-13	7.37 g	1.00 mL	D	01/17/11
11-795-SE67O	JF-T3B2-SO-03	9.18 g	1.00 mL	D	01/17/11

Basis: D=Dry Weight W=As Received

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: JF-T3B2-SO-08
SAMPLE

Lab Sample ID: SE67A
LIMS ID: 11-781
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 74.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	7440-38-2	Arsenic	6	6	U
3050B	01/17/11	6010B	01/19/11	7440-43-9	Cadmium	0.3	0.3	U
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.3	**22.0**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	3	**3**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**13**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**31**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T3B2-SO-13
SAMPLE

Lab Sample ID: SE67B
LIMS ID: 11-782
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 73.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	7440-38-2	Arsenic	6	6	U
3050B	01/17/11	6010B	01/19/11	7440-43-9	Cadmium	0.3	0.3	U
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.3	**24.9**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	3	**3**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**14**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**37**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T3B2-SO-13-D
SAMPLE

Lab Sample ID: SE67C
LIMS ID: 11-783
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 73.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	7440-38-2	Arsenic	6	6	U
3050B	01/17/11	6010B	01/19/11	7440-43-9	Cadmium	0.2	0.2	U
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.2	**25.1**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	2	**3**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**14**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**39**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T3B1-SO-03
SAMPLE

Lab Sample ID: SE67D
LIMS ID: 11-784
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 77.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	7440-38-2	Arsenic	6	6	U
3050B	01/17/11	6010B	01/19/11	7440-43-9	Cadmium	0.2	0.2	U
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.2	**15.4**	
3050B	01/17/11	6010B	01/19/11	7439-92-1	Lead	2	2	U
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**9**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**26**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: JF-T3B1-SO-08
SAMPLE

Lab Sample ID: SE67E
LIMS ID: 11-785
Matrix: Soil
Data Release Authorized
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 83.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	7440-38-2	Arsenic	6	6	U
3050B	01/17/11	6010B	01/19/11	7440-43-9	Cadmium	0.2	0.2	U
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.2	**14.7**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	2	**2**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**11**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**34**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T3B1-SO-13
SAMPLE

Lab Sample ID: SE67F
LIMS ID: 11-786
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 72.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	**7440-38-2**	**Arsenic**	7	**7**	
3050B	01/17/11	6010B	01/19/11	7440-43-9	Cadmium	0.3	0.3	U
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.3	**29.2**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	3	**3**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**16**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**37**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T2B4-SO-18
SAMPLE

Lab Sample ID: SE67G
LIMS ID: 11-787
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 64.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	**7440-38-2**	**Arsenic**	7	**14**	
3050B	01/17/11	6010B	01/19/11	**7440-43-9**	**Cadmium**	0.3	**29.4**	
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.3	**688**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	3	**886**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**202**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**5,630**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: JF-T2B4-SO-23
SAMPLE

Lab Sample ID: SE67H
LIMS ID: 11-788
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 79.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	**7440-38-2**	**Arsenic**	20	**180**	
3050B	01/17/11	6010B	01/19/11	**7440-43-9**	**Cadmium**	0.6	**2.1**	
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.6	**209**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	6	**300**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	3	**34**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	3	**1,520**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T3B4-SO-13
SAMPLE

Lab Sample ID: SE67J
LIMS ID: 11-790
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 88.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	**7440-38-2**	**Arsenic**	6	**7**	
3050B	01/17/11	6010B	01/19/11	7440-43-9	Cadmium	0.2	0.2	U
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.2	**51.8**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	2	**7**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**29**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**142**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: JF-T3B4-SO-23
SAMPLE

Lab Sample ID: SE67K
LIMS ID: 11-791
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 79.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	7440-38-2	Arsenic	6	6	U
3050B	01/17/11	6010B	01/19/11	7440-43-9	Cadmium	0.2	0.2	U
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.2	**10.5**	
3050B	01/17/11	6010B	01/19/11	7439-92-1	Lead	2	2	U
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**10**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**29**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T3B4-SO-03
SAMPLE

Lab Sample ID: SE67I
LIMS ID: 11-789
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 81.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	7440-38-2	Arsenic	10	10	U
3050B	01/17/11	6010B	01/19/11	**7440-43-9**	**Cadmium**	0.6	**6.9**	
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.6	**111**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	6	**259**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	3	**160**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	3	**4,720**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T3B3-SO-03
SAMPLE

Lab Sample ID: SE67L
LIMS ID: 11-792
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 86.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	7440-38-2	Arsenic	6	6	U
3050B	01/17/11	6010B	01/19/11	**7440-43-9**	**Cadmium**	0.2	**2.1**	
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.2	**62.6**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	2	**27**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**60**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**116**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: JF-T3B3-SO-03
DUPLICATE

Lab Sample ID: SE67L
LIMS ID: 11-792
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010B	6 U	6 U	0.0%	+/- 6	L
Cadmium	6010B	2.1	2.2	4.7%	+/- 20%	
Copper	6010B	62.6	50.1	22.2%	+/- 20%	*
Lead	6010B	27	29	7.1%	+/- 20%	
Nickel	6010B	60	58	3.4%	+/- 20%	
Zinc	6010B	116	151	26.2%	+/- 20%	*

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: JF-T3B3-SO-03
MATRIX SPIKE

Lab Sample ID: SE67L
LIMS ID: 11-792
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010B	6 U	226	227	99.6%	
Cadmium	6010B	2.1	61.0	56.7	104%	
Copper	6010B	62.6	110	56.7	83.6%	
Lead	6010B	27	253	227	99.6%	
Nickel	6010B	60	116	56.7	98.8%	
Zinc	6010B	116	196	56.7	141%	N

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: JF-T3B3-SO-08
SAMPLE

Lab Sample ID: SE67M
LIMS ID: 11-793
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 80.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	7440-38-2	Arsenic	20	20	U
3050B	01/17/11	6010B	01/19/11	**7440-43-9**	**Cadmium**	0.6	**6.5**	
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.6	**354**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	6	**208**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	3	**151**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	3	**6,960**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T3B3-SO-13
SAMPLE

Lab Sample ID: SE67N
LIMS ID: 11-794
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 74.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	7440-38-2	Arsenic	6	6	U
3050B	01/17/11	6010B	01/19/11	**7440-43-9**	**Cadmium**	0.3	**0.5**	
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.3	**38.8**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	3	**24**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**19**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**525**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T3B2-SO-03
SAMPLE

Lab Sample ID: SE67O
LIMS ID: 11-795
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: 01/13/11
Date Received: 01/13/11

Percent Total Solids: 91.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	7440-38-2	Arsenic	5	5	U
3050B	01/17/11	6010B	01/19/11	7440-43-9	Cadmium	0.2	0.2	U
3050B	01/17/11	6010B	01/19/11	**7440-50-8**	**Copper**	0.2	**16.3**	
3050B	01/17/11	6010B	01/19/11	**7439-92-1**	**Lead**	2	**7**	
3050B	01/17/11	6010B	01/19/11	**7440-02-0**	**Nickel**	1	**16**	
3050B	01/17/11	6010B	01/19/11	**7440-66-6**	**Zinc**	1	**42**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: SE67MB
LIMS ID: 11-793
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/17/11	6010B	01/19/11	7440-38-2	Arsenic	5	5	U
3050B	01/17/11	6010B	01/19/11	7440-43-9	Cadmium	0.2	0.2	U
3050B	01/17/11	6010B	01/19/11	7440-50-8	Copper	0.2	0.2	U
3050B	01/17/11	6010B	01/19/11	7439-92-1	Lead	2	2	U
3050B	01/17/11	6010B	01/19/11	7440-02-0	Nickel	1	1	U
3050B	01/17/11	6010B	01/19/11	7440-66-6	Zinc	1	1	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: SE67LCS
LIMS ID: 11-793
Matrix: Soil
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE67-The Boeing Company
Project: Jorgensen Forge PLO
7KPL2JOR
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010B	186	200	93.0%	
Cadmium	6010B	47.5	50.0	95.0%	
Copper	6010B	48.3	50.0	96.6%	
Lead	6010B	186	200	93.0%	
Nickel	6010B	45	50	90.0%	
Zinc	6010B	46	50	92.0%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

January 31, 2011

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge PLO
ARI Job No: SE82

Dear Tom:

Please find enclosed analytical results and the original Chain of Custody documentation (COC) for the project referenced above. Analytical Resources, Incorporated (ARI) accepted five water samples, twenty two soil samples and a trip blank on January 14, 2011. The samples were received in good condition. Select samples were placed on hold pending further instructions.

The samples were analyzed for Total Metals, SVOCs, VOCs, PCBs and NWTPH-Dx, as requested.

The soil PCBs LCSD surrogate DCBP is out of control high. The LCSD spike recoveries are in control and no action was taken.

The soil PCBs surrogate TCMX is out of control high for sample JF-T1B4-SO-03 due to matrix effects. No action was taken.

The SVOCs water 1/20/11 CCAL is out of control low for phenol, N-Nitroso-di-n-propylamine, 2,2-oxybis (1-Chloropropane) and 2,4-Dinitrophenol and benzo (g,h,i) perylene and dibenzo (a,h) anthracene are out of control high. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The SVOCs water 1/20/11 LCS is out of control high for chrysene, Indeno (1,2,3-cd) pyrene and dibenzo (a,h) anthracene. The LCSD is in control and no action was taken.

The SVOCs 1/24/11 soil CCAL is out of control low for 2,4-Dinitrophenol and out of control high for Indeno(1,2,3-cd) pyrene, dibenzo (a,h) anthracene and benzo (g,h,i) perylene . All associated samples that contain analyte have been flagged with a "Q" qualifier.

The SVOCs 1/25/11 soil CCAL is out of control low for 4,6-Dinitro-2-methylphenol and 2,4-Dinitrophenol and out of control high for Indeno(1,2,3-cd) pyrene, dibenzo (a,h) anthracene and benzo (g,h,i) perylene . All associated samples that contain analyte have been flagged with a "Q" qualifier.

The SVOCs 1/26/11 soil CCAL is out of control low for 4-Nitroaniline and out of control high for 2,4-Dinitrophenol, Indeno(1,2,3-cd) pyrene, dibenzo (a,h) anthracene and benzo (g,h,i) perylene . All associated samples that contain analyte have been flagged with a "Q" qualifier.

The soil SVOCs surrogate TBP is out of control low for sample JF-T1B3-SO-08. No action was taken.

The total metals sample duplicate RPD for sample JF-T1B2-SO-03 is outside of the +/- 20% control limit for nickel. No action was taken.

The VOCs 1/17/11 CCAL is out of control low for 2-Chloroethylvinylether. All associated samples that contain analyte have been flagged with a "Q" qualifier.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

The VOCs 1/18/11 CCAL is out of control low for 2-Chloroethylvinylether and out of control high for acrolein and methyl iodide. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The VOCs 1/17/11 LCS and LCSD are out of control low for 2-Chloroethylvinylether and out of control high for methyl iodide. No action was taken.

The VOCs 1/18/11 LCS is out of control high for methyl iodide. No action was taken.

No other analytical complications were noted for these analyses. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206-695-6211
Enclosures

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 3682	Turn-around Requested: Standard TAT	Page: 1 / of 3	
ARI Client Company: Floyd | Snider	Phone: 206·292·2078	Date: 1/14/2011	Ice Present? Y
Client Contact: NICK GARSON / TOM COLLIGAN		No. of Coolers: 2	Cooler Temps: 4.1, 4.3
Client Project Name: Jorgensen Forge			
Client Project #: 7KPL2 JOR	Samplers: Lisa Meoli / Dean Brame		

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

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: METALS As, Cd, Cu, Pb, Ni, Zn	SVOCs	TPH-D	PCBs					Notes/Comments
JF-T4B3-SO-03	01/14/11	0830	SOIL	2	✓	✓	✓	✓					ARCHIVE
JF-T4B3-SO-08		0835											
JF-T4 B3-SO-13		0840											
JF-T4 B2-SO-03		0910											
JF-T4B2-SO-08		0915											
JF-T4B2-SO-13		0920											
JF-T5B3-SO-03		1045											
JF-T5B3-SO-08		1050											
JF-T5B3-SO-13		1055											
JF-T1B2-SO-03		1310											

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Lisa Meoli	Printed Name: DEAN BRAME	Printed Name: DEAN BRAME	Printed Name: A. Volgardsen
	Company: Floyd Snider	Company: F|S	Company: F|S	Company: ARI
	Date & Time: 1/14/2011 1600	Date & Time: 1/14/11 1705	Date & Time: 1/14/11 1710	Date & Time: 1/14/11 1720

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:	Turn-around Requested: STANDARD	Page: 2 of 3	
ARI Client Company: FLOYD | SNIDER	Phone: 206-292-2078	Date: 1/14/2011	Ice Present? Y
Client Contact: NICK GARSON / TOM COLLIGAN		No. of Coolers: 2	Cooler Temps: 4.1, 4.3
Client Project Name: JORGENSEN FORGE			
Client Project #: 7KPL2JOR	Samplers: LISA MEOLI / DEAN BRAME		

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

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Metals As, Cd, Cu, Pb Ni, Zn	SVOCs	TPH-D	PCBs					Notes/Comments
JF-TIB1-SO-03	1/14/11	1600	Soil	2	x	x	x	x					
JF-TIB1-SO-08		1605											
JF-TIB1-SO-13		1610											
JF-TIB4-SO-03		1515											
JF-TIB4-SO-12		1525											
JF-TIB4-SO-18		1530											
JF-TIB2-SO-03		1410											
JF-TIB2-SO-08		1420											
JF-TIB2-SO-18		1430											
JF-TIB2-SO-03-D		1315											

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: DEAN BRAME	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: F/S	Company: ARI	Company:	Company:
	Date & Time: 1/14/11 1705	Date & Time: 1/14/11 1720	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.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 3 of 3	
ARI Client Company: Floyd Snider	Phone: 206 292 2078	Date: 1/14/11	Ice Present? Y
Client Contact: NICK GARSON / TOM COLLIGAN		No. of Coolers: 2	Cooler Temps: 4.1, 4.3
Client Project Name: JORGENSEN FORGE			
Client Project #: 7K PL2 JOR	Samplers: LISA MEOLI / DEAN BRAME		

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

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Metals As, Cd, Cu, Pb Ni, Zn	SVOC	TPH-D	PCB	Low Level PCB	VOCs			Notes/Comments
JF-T1B2-SO-08	1/14/11	1320	SOIL	2	x	x	x	x					
JF-T1B2-SO-13		1330	SOIL	2	x	x	x	x					
JF-T1B2-GW-15		1310	GW	5					x	x			
JF-T1B3-GW-20		1415	GW	5					x	x			
JF-T1B4-GW-20		1500	GW	5					x	x			
JF-T1B1-SO-13-R		1700	WATER	10	x	x	x	x	x	x			
JF-T3B2-GW-15		1025	GW	5					x	x			

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: DEAN BRAME	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: F/S	Company: ARI	Company:	Company:
	Date & Time: 1/14/11 1705	Date & Time: 1/14/11 1720	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 Temperature Compliance Form

Cooler#: 1 (BOX)	Temperature(°C): 19.3	
Sample ID	**Bottle Count**	**Bottle Type**
JF-TIB1-SO-13-R	10	3 1-LAg, 3 500ml Ag, 1 500HDPE, 3 VIa

Cooler#:	Temperature(°C):	
Sample ID	**Bottle Count**	**Bottle Type**

Cooler#:	Temperature(°C):	
Sample ID	**Bottle Count**	**Bottle Type**

Cooler#:	Temperature(°C):	
Sample ID	**Bottle Count**	**Bottle Type**

Completed by: AV Date: 1/14/11 Time: 1724

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Boeing Project Name: Jorgenson Forge

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: SE82 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)..... 4.1 4.3 19.3 ___ ___ ___

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: AV Date: 1/14/11 Time: 1720

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	1/5/11	

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

Samples Logged by: AV Date: 1/14/11 Time: 1740

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

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
JF-TIB1-13-R	JF-TIB1-SO-13-R		
JF-TIB2-GW	JF-TIB2-GW-15		

Additional Notes, Discrepancies, & Resolutions:

19.3 = box w/ Rinsate Blank

Trip Blank = 5m in 1of2

By: AV Date: 1/14/11

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

Small → "sm"	
Peabubbles → "pb"	
Large → "lg"	
Headspace → "hs"	

PRESERVATION VERIFICATION 01/14/11
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **SE82**

Inquiry Number: NONE
Analysis Requested: 01/17/11
Contact: Garson, Nick
Client: The Boeing Company
Logged by: AV
Sample Set Used: Yes-490
Validatable Package: No
Deliverables:

PC: Kelly
VTSR: 01/14/11

Project #: 7KPL2JDR
Project: Jorgenson Forge
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
11-874 **SE82AA**	JF-T1B1-SO-13-R						TOT															

Checked By AV Date 1/14/11

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: The Boeing Company	**ARI Job No.:** SE82
Client Project: Jorgenson Forge	**Client Project No.:** 7KPL2JDR

Case Narrative

1. Five samples were submitted for filtering on January 17, 2011.
2. The samples were filtered using all glass filtering equipment.
3. All equipment was decontaminated prior to use.
4. All of the water was filtered through a 1µm borosilicate glass, binder free filter. All of the filters were burned at 440 °C for 15 minutes prior to use.
5. The filtered sample was then placed into appropriate sample bottles for the requested analysis.
6. There were no other noted anomalies in the samples or methods on this project.

Approved by: _____ Date: 1/19/2011
Title: *Geotechnical Laboratory Technician*

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T1B2-SO-03
SAMPLE

Lab Sample ID: SE82J
LIMS ID: 11-857
Matrix: Soil
Data Release Authorized: MW
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/19/11
Date Analyzed: 01/26/11 09:53
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 18.7%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	4.0	< 4.0 U
53469-21-9	Aroclor 1242	4.0	< 4.0 U
12672-29-6	Aroclor 1248	4.0	< 4.0 U
11097-69-1	**Aroclor 1254**	**4.0**	**5.1**
11096-82-5	Aroclor 1260	4.0	< 4.0 U
11104-28-2	Aroclor 1221	4.0	< 4.0 U
11141-16-5	Aroclor 1232	4.0	< 4.0 U
37324-23-5	Aroclor 1262	4.0	< 4.0 U
11100-14-4	Aroclor 1268	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	105%
Tetrachlorometaxylene	78.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: JF-T1B1-SO-03
SAMPLE

Lab Sample ID: SE82K
LIMS ID: 11-858
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/19/11
Date Analyzed: 01/26/11 10:11
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 7.25 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 20.0
Silica Gel: Yes

Percent Moisture: 20.1%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	55	< 55 U
53469-21-9	Aroclor 1242	55	< 55 U
12672-29-6	Aroclor 1248	55	< 55 U
11097-69-1	Aroclor 1254	550	< 550 Y
11096-82-5	**Aroclor 1260**	**55**	**1,600**
11104-28-2	Aroclor 1221	55	< 55 U
11141-16-5	Aroclor 1232	55	< 55 U
37324-23-5	Aroclor 1262	55	< 55 U
11100-14-4	Aroclor 1268	55	< 55 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	117%
Tetrachlorometaxylene	88.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T1B1-SO-08
SAMPLE

Lab Sample ID: SE82L
LIMS ID: 11-859
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/19/11
Date Analyzed: 01/26/11 10:30
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 25.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	4.0	< 4.0 U
53469-21-9	Aroclor 1242	4.0	< 4.0 U
12672-29-6	Aroclor 1248	4.0	< 4.0 U
11097-69-1	**Aroclor 1254**	**4.0**	**4.2**
11096-82-5	**Aroclor 1260**	**4.0**	**7.8**
11104-28-2	Aroclor 1221	4.0	< 4.0 U
11141-16-5	Aroclor 1232	4.0	< 4.0 U
37324-23-5	Aroclor 1262	4.0	< 4.0 U
11100-14-4	Aroclor 1268	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	96.6%
Tetrachlorometaxylene	71.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: JF-T1B1-SO-13
SAMPLE

Lab Sample ID: SE82M
LIMS ID: 11-860
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/19/11
Date Analyzed: 01/26/11 10:49
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 28.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	**Aroclor 1254**	**3.9**	**5.6**
11096-82-5	Aroclor 1260	3.9	< 3.9 U
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	5.8	< 5.8 Y
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	103%
Tetrachlorometaxylene	88.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: JF-T1B4-SO-03
SAMPLE

Lab Sample ID: SE82N
LIMS ID: 11-861
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/19/11
Date Analyzed: 01/26/11 11:08
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.8 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 19.8%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	7.2	< 7.2 U
53469-21-9	Aroclor 1242	7.2	< 7.2 U
12672-29-6	Aroclor 1248	25	< 25 Y
11097-69-1	Aroclor 1254	36	< 36 Y
11096-82-5	Aroclor 1260	7.2	< 7.2 U
11104-28-2	Aroclor 1221	7.2	< 7.2 U
11141-16-5	Aroclor 1232	7.2	< 7.2 U
37324-23-5	**Aroclor 1262**	**7.2**	**280**
11100-14-4	Aroclor 1268	7.2	< 7.2 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	NR
Tetrachlorometaxylene	117%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: JF-T1B4-SO-12
SAMPLE

Lab Sample ID: SE820
LIMS ID: 11-862
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/19/11
Date Analyzed: 01/26/11 11:27
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 19.9 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 17.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	5.0	< 5.0 U
53469-21-9	Aroclor 1242	5.0	< 5.0 U
12672-29-6	Aroclor 1248	50	< 50 Y
11097-69-1	**Aroclor 1254**	**5.0**	**180**
11096-82-5	**Aroclor 1260**	**5.0**	**28**
11104-28-2	Aroclor 1221	5.0	< 5.0 U
11141-16-5	Aroclor 1232	5.0	< 5.0 U
37324-23-5	Aroclor 1262	5.0	< 5.0 U
11100-14-4	Aroclor 1268	5.0	< 5.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	95.6%
Tetrachlorometaxylene	86.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: JF-T1B4-SO-18
SAMPLE

Lab Sample ID: SE82P
LIMS ID: 11-863
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/19/11
Date Analyzed: 01/26/11 11:45
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 19.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 21.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	5.1	< 5.1 U
53469-21-9	Aroclor 1242	5.1	< 5.1 U
12672-29-6	Aroclor 1248	38	< 38 Y
11097-69-1	**Aroclor 1254**	**5.1**	**110**
11096-82-5	**Aroclor 1260**	**5.1**	**35**
11104-28-2	Aroclor 1221	5.1	< 5.1 U
11141-16-5	Aroclor 1232	5.1	< 5.1 U
37324-23-5	Aroclor 1262	5.1	< 5.1 U
11100-14-4	Aroclor 1268	5.1	< 5.1 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	99.9%
Tetrachlorometaxylene	93.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T1B3-SO-03
SAMPLE

Lab Sample ID: SE82Q
LIMS ID: 11-864
Matrix: Soil
Data Release Authorized: MW
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/19/11
Date Analyzed: 01/26/11 12:04
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.4 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 6.1%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	Aroclor 1254	30	< 30 Y
11096-82-5	**Aroclor 1260**	**3.9**	**70**
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	101%
Tetrachlorometaxylene	84.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T1B3-SO-08
SAMPLE

Lab Sample ID: SE82R
LIMS ID: 11-865
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/19/11
Date Analyzed: 01/26/11 12:23
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 9.86 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 20.0
Silica Gel: Yes

Percent Moisture: 11.1%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	41	< 41 U
53469-21-9	Aroclor 1242	41	< 41 U
12672-29-6	Aroclor 1248	100	< 100 Y
11097-69-1	Aroclor 1254	810	< 810 Y
11096-82-5	**Aroclor 1260**	**41**	**1,800**
11104-28-2	Aroclor 1221	41	< 41 U
11141-16-5	Aroclor 1232	41	< 41 U
37324-23-5	Aroclor 1262	41	< 41 U
11100-14-4	Aroclor 1268	41	< 41 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	125%
Tetrachlorometaxylene	100%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T1B3-SO-18
SAMPLE

Lab Sample ID: SE82S
LIMS ID: 11-866
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/19/11
Date Analyzed: 01/26/11 12:42
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 1.30 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 20.0
Silica Gel: Yes

Percent Moisture: 38.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	310	< 310 U
53469-21-9	Aroclor 1242	310	< 310 U
12672-29-6	Aroclor 1248	1,200	< 1,200 Y
11097-69-1	**Aroclor 1254**	**310**	**3,900**
11096-82-5	**Aroclor 1260**	**310**	**4,200**
11104-28-2	Aroclor 1221	310	< 310 U
11141-16-5	Aroclor 1232	310	< 310 U
37324-23-5	Aroclor 1262	310	< 310 U
11100-14-4	Aroclor 1268	310	< 310 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	111%
Tetrachlorometaxylene	86.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T1B2-SO-03-D
SAMPLE

Lab Sample ID: SE82T
LIMS ID: 11-867
Matrix: Soil
Data Release Authorized: MW
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/19/11
Date Analyzed: 01/26/11 13:01
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.7 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 17.3%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	**Aroclor 1254**	**3.9**	**4.9**
11096-82-5	Aroclor 1260	3.9	< 3.9 U
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	103%
Tetrachlorometaxylene	81.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: JF-T1B2-SO-08
SAMPLE

Lab Sample ID: SE82U
LIMS ID: 11-868
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/19/11
Date Analyzed: 01/26/11 13:19
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.5 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 23.1%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	**Aroclor 1254**	**3.9**	**7.0**
11096-82-5	Aroclor 1260	3.9	< 3.9 U
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	103%
Tetrachlorometaxylene	79.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-T1B2-SO-13
SAMPLE

Lab Sample ID: SE82V
LIMS ID: 11-869
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/19/11
Date Analyzed: 01/26/11 13:38
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.6 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 27.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	3.9	< 3.9 U
53469-21-9	Aroclor 1242	3.9	< 3.9 U
12672-29-6	Aroclor 1248	3.9	< 3.9 U
11097-69-1	Aroclor 1254	3.9	< 3.9 U
11096-82-5	Aroclor 1260	3.9	< 3.9 U
11104-28-2	Aroclor 1221	3.9	< 3.9 U
11141-16-5	Aroclor 1232	3.9	< 3.9 U
37324-23-5	Aroclor 1262	3.9	< 3.9 U
11100-14-4	Aroclor 1268	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	97.9%
Tetrachlorometaxylene	79.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD **Sample ID: MB-011911**
Page 1 of 1 **METHOD BLANK**

Lab Sample ID: MB-011911
LIMS ID: 11-857
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: NA
Date Received: NA

Date Extracted: 01/19/11
Date Analyzed: 01/26/11 08:56
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 25.0 g
Final Extract Volume: 1.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	4.0	< 4.0 U
53469-21-9	Aroclor 1242	4.0	< 4.0 U
12672-29-6	Aroclor 1248	4.0	< 4.0 U
11097-69-1	Aroclor 1254	4.0	< 4.0 U
11096-82-5	Aroclor 1260	4.0	< 4.0 U
11104-28-2	Aroclor 1221	4.0	< 4.0 U
11141-16-5	Aroclor 1232	4.0	< 4.0 U
37324-23-5	Aroclor 1262	4.0	< 4.0 U
11100-14-4	Aroclor 1268	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	105%
Tetrachlorometaxylene	73.8%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-011911	105%	40-109	73.8%	35-100	0
LCS-011911	107%	40-109	77.9%	35-100	0
LCSD-011911	110%*	40-109	80.6%	35-100	1
JF-T1B2-SO-03	105%	34-141	78.1%	38-102	0
JF-T1B1-SO-03	117%	34-141	88.0%	38-102	0
JF-T1B1-SO-08	96.6%	34-141	71.9%	38-102	0
JF-T1B1-SO-13	103%	34-141	88.0%	38-102	0
JF-T1B4-SO-03	NR	34-141	117%*	38-102	1
JF-T1B4-SO-12	95.6%	34-141	86.8%	38-102	0
JF-T1B4-SO-18	99.9%	34-141	93.6%	38-102	0
JF-T1B3-SO-03	101%	34-141	84.0%	38-102	0
JF-T1B3-SO-08	125%	34-141	100%	38-102	0
JF-T1B3-SO-18	111%	34-141	86.0%	38-102	0
JF-T1B2-SO-03-D	103%	34-141	81.4%	38-102	0
JF-T1B2-SO-08	103%	34-141	79.1%	38-102	0
JF-T1B2-SO-13	97.9%	34-141	79.5%	38-102	0

Low Level PSDDA Control Limits
Prep Method: SW3550C
Log Number Range: 11-857 to 11-869

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD **Sample ID: LCS-011911**
Page 1 of 1 LCS/LCSD

Lab Sample ID: LCS-011911 QC Report No: SE82-The Boeing Company
LIMS ID: 11-857 Project: Jorgenson Forge
Matrix: Soil 7KPL2JDR
Data Release Authorized: Date Sampled: NA
Reported: 01/27/11 Date Received: NA

Date Extracted LCS/LCSD: 01/19/11 Sample Amount LCS: 25.0 g-dry-wt
LCSD: 25.0 g-dry-wt
Date Analyzed LCS: 01/26/11 09:15 Final Extract Volume LCS: 1.0 mL
LCSD: 01/26/11 09:34 LCSD: 1.0 mL
Instrument/Analyst LCS: ECD5/JGR Dilution Factor LCS: 5.00
LCSD: ECD5/JGR LCSD: 5.00
GPC Cleanup: No Silica Gel: Yes
Sulfur Cleanup: Yes
Acid Cleanup: Yes Percent Moisture: NA
Florisil Cleanup: No

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	17.4	20.0	87.0%	18.1	20.0	90.5%	3.9%
Aroclor 1260	18.8	20.0	94.0%	19.7	20.0	98.5%	4.7%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	107%	110%
Tetrachlorometaxylene	77.9%	80.6%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-T1B2-GW-15
SAMPLE

Lab Sample ID: SE82W
LIMS ID: 11-870
Matrix: Water
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 21:50
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.010	< 0.010 U
11100-14-4	Aroclor 1268	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	73.0%
Tetrachlorometaxylene	55.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-T1B3-GW-20
SAMPLE

Lab Sample ID: SE82X
LIMS ID: 11-871
Matrix: Water
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 22:13
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.014	< 0.014 Y
11097-69-1	**Aroclor 1254**	**0.010**	**0.022**
11096-82-5	**Aroclor 1260**	**0.010**	**0.011**
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.010	< 0.010 U
11100-14-4	Aroclor 1268	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	69.5%
Tetrachlorometaxylene	56.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-T1B4-GW-20
SAMPLE

Lab Sample ID: SE82Y
LIMS ID: 11-872
Matrix: Water
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 22:37
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.031	< 0.031 Y
11097-69-1	**Aroclor 1254**	**0.010**	**0.054**
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.010	< 0.010 U
11100-14-4	Aroclor 1268	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	65.8%
Tetrachlorometaxylene	52.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-T3B2-GW-15
SAMPLE

Lab Sample ID: SE82Z
LIMS ID: 11-873
Matrix: Water
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 23:01
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.010	< 0.010 U
11100-14-4	Aroclor 1268	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	64.0%
Tetrachlorometaxylene	55.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-T1B1-SO-13-R
SAMPLE

Lab Sample ID: SE82AA
LIMS ID: 11-874
Matrix: Water
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 23:25
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.010	< 0.010 U
11100-14-4	Aroclor 1268	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	62.5%
Tetrachlorometaxylene	59.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: MB-011811
METHOD BLANK

Lab Sample ID: MB-011811
LIMS ID: 11-870
Matrix: Water
Data Release Authorized:
Reported: 01/26/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: NA
Date Received: NA

Date Extracted: 01/18/11
Date Analyzed: 01/22/11 17:05
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.010	< 0.010 U
11100-14-4	Aroclor 1268	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	72.2%
Tetrachlorometaxylene	59.0%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-011811	72.2%	32-108	59.0%	31-100	0
LCS-011811	77.8%	32-108	62.8%	31-100	0
LCSD-011811	70.5%	32-108	58.0%	31-100	0
JF-T1B2-GW-15	73.0%	19-111	55.8%	21-100	0
JF-T1B3-GW-20	69.5%	19-111	56.2%	21-100	0
JF-T1B4-GW-20	65.8%	19-111	52.2%	21-100	0
JF-T3B2-GW-15	64.0%	19-111	55.5%	21-100	0
JF-T1B1-SO-13-R	62.5%	19-111	59.8%	21-100	0

Prep Method: SW3510C
Log Number Range: 11-870 to 11-874

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: LCS-011811
LCS/LCSD

Lab Sample ID: LCS-011811
LIMS ID: 11-870
Matrix: Water
Data Release Authorized: MW
Reported: 01/26/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 01/18/11
Date Analyzed LCS: 01/22/11 17:29
LCSD: 01/22/11 17:52
Instrument/Analyst LCS: ECD7/AAR
LCSD: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount LCS: 1000 mL
LCSD: 1000 mL
Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	0.041	0.050	82.0%	0.039	0.050	78.0%	5.0%
Aroclor 1260	0.042	0.050	84.0%	0.040	0.050	80.0%	4.9%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	77.8%	70.5%
Tetrachlorometaxylene	62.8%	58.0%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: JF-T1B2-GW-15**
 SAMPLE

Lab Sample ID: SE82W
LIMS ID: 11-870
Matrix: Water
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/17/11 14:36

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	**trans-1,2-Dichloroethene**	**0.2**	**0.5**	
156-59-2	**cis-1,2-Dichloroethene**	**0.2**	**14**	
67-66-3	**Chloroform**	**0.2**	**0.5**	
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	**1,1,1-Trichloroethane**	**0.2**	**0.3**	
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	**Trichloroethene**	**0.2**	**100**	**E**
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	**Tetrachloroethene**	**0.2**	**1.2**	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

Lab Sample ID: SE82W
LIMS ID: 11-870
Matrix: Water
Date Analyzed: 01/17/11 14:36

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	95.5%
d8-Toluene	91.1%
Bromofluorobenzene	88.7%
d4-1,2-Dichlorobenzene	97.5%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: JF-T1B2-GW-15**
 DILUTION

Lab Sample ID: SE82W
LIMS ID: 11-870
Matrix: Water
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/18/11 12:03

Sample Amount: 2.00 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	2.5	< 2.5	U
74-83-9	Bromomethane	5.0	< 5.0	U
75-01-4	Vinyl Chloride	1.0	< 1.0	U
75-00-3	Chloroethane	1.0	< 1.0	U
75-09-2	Methylene Chloride	2.5	< 2.5	U
67-64-1	Acetone	25	< 25	U
75-15-0	Carbon Disulfide	1.0	< 1.0	U
75-35-4	1,1-Dichloroethene	1.0	< 1.0	U
75-34-3	1,1-Dichloroethane	1.0	< 1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	< 1.0	U
156-59-2	**cis-1,2-Dichloroethene**	**1.0**	**14**	
67-66-3	Chloroform	1.0	< 1.0	U
107-06-2	1,2-Dichloroethane	1.0	< 1.0	U
78-93-3	2-Butanone	25	< 25	U
71-55-6	1,1,1-Trichloroethane	1.0	< 1.0	U
56-23-5	Carbon Tetrachloride	1.0	< 1.0	U
108-05-4	Vinyl Acetate	5.0	< 5.0	U
75-27-4	Bromodichloromethane	1.0	< 1.0	U
78-87-5	1,2-Dichloropropane	1.0	< 1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	< 1.0	U
79-01-6	**Trichloroethene**	**1.0**	**130**	
124-48-1	Dibromochloromethane	1.0	< 1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	< 1.0	U
71-43-2	Benzene	1.0	< 1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	< 1.0	U
110-75-8	2-Chloroethylvinylether	5.0	< 5.0	U
75-25-2	Bromoform	1.0	< 1.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	25	< 25	U
591-78-6	2-Hexanone	25	< 25	U
127-18-4	**Tetrachloroethene**	**1.0**	**1.2**	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	< 1.0	U
108-88-3	Toluene	1.0	< 1.0	U
108-90-7	Chlorobenzene	1.0	< 1.0	U
100-41-4	Ethylbenzene	1.0	< 1.0	U
100-42-5	Styrene	1.0	< 1.0	U
75-69-4	Trichlorofluoromethane	1.0	< 1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	1.0	< 1.0	U
179601-23-1	m,p-Xylene	2.0	< 2.0	U
95-47-6	o-Xylene	1.0	< 1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0	U
107-02-8	Acrolein	25	< 25	U

Lab Sample ID: SE82W
LIMS ID: 11-870
Matrix: Water
Date Analyzed: 01/18/11 12:03

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	5.0	< 5.0	U
74-96-4	Bromoethane	1.0	< 1.0	U
107-13-1	Acrylonitrile	5.0	< 5.0	U
563-58-6	1,1-Dichloropropene	1.0	< 1.0	U
74-95-3	Dibromomethane	1.0	< 1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	< 1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	< 2.5	U
96-18-4	1,2,3-Trichloropropane	2.5	< 2.5	U
110-57-6	trans-1,4-Dichloro-2-butene	5.0	< 5.0	U
108-67-8	1,3,5-Trimethylbenzene	1.0	< 1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	< 1.0	U
87-68-3	Hexachlorobutadiene	2.5	< 2.5	U
106-93-4	Ethylene Dibromide	1.0	< 1.0	U
74-97-5	Bromochloromethane	1.0	< 1.0	U
594-20-7	2,2-Dichloropropane	1.0	< 1.0	U
142-28-9	1,3-Dichloropropane	1.0	< 1.0	U
98-82-8	Isopropylbenzene	1.0	< 1.0	U
103-65-1	n-Propylbenzene	1.0	< 1.0	U
108-86-1	Bromobenzene	1.0	< 1.0	U
95-49-8	2-Chlorotoluene	1.0	< 1.0	U
106-43-4	4-Chlorotoluene	1.0	< 1.0	U
98-06-6	tert-Butylbenzene	1.0	< 1.0	U
135-98-8	sec-Butylbenzene	1.0	< 1.0	U
99-87-6	4-Isopropyltoluene	1.0	< 1.0	U
104-51-8	n-Butylbenzene	1.0	< 1.0	U
120-82-1	1,2,4-Trichlorobenzene	2.5	< 2.5	U
91-20-3	Naphthalene	2.5	< 2.5	U
87-61-6	1,2,3-Trichlorobenzene	2.5	< 2.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	94.8%
d8-Toluene	91.1%
Bromofluorobenzene	89.9%
d4-1,2-Dichlorobenzene	98.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: JF-T1B3-GW-20**
Page 1 of 2 **SAMPLE**

Lab Sample ID: SE82X
LIMS ID: 11-871
Matrix: Water
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/18/11 12:30

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	**trans-1,2-Dichloroethene**	**0.2**	**0.2**	
156-59-2	**cis-1,2-Dichloroethene**	**0.2**	**1.5**	
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	**Trichloroethene**	**0.2**	**3.1**	
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

Lab Sample ID: SE82X
LIMS ID: 11-871
Matrix: Water
Date Analyzed: 01/18/11 12:30

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.8%
d8-Toluene	93.9%
Bromofluorobenzene	89.2%
d4-1,2-Dichlorobenzene	98.8%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: JF-T1B4-GW-20**
 SAMPLE

Lab Sample ID: SE82Y
LIMS ID: 11-872
Matrix: Water
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/17/11 15:31

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	**trans-1,2-Dichloroethene**	**0.2**	**0.2**	
156-59-2	**cis-1,2-Dichloroethene**	**0.2**	**3.0**	
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	**Trichloroethene**	**0.2**	**5.2**	
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

Lab Sample ID: SE82Y
LIMS ID: 11-872
Matrix: Water
Date Analyzed: 01/17/11 15:31

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%
d8-Toluene	93.4%
Bromofluorobenzene	87.4%
d4-1,2-Dichlorobenzene	99.7%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: JF-T3B2-GW-15**
 SAMPLE

Lab Sample ID: SE82Z
LIMS ID: 11-873
Matrix: Water
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/17/11 15:58

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	**Vinyl Chloride**	**0.2**	**0.6**	
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	**cis-1,2-Dichloroethene**	**0.2**	**2.9**	
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	**Trichloroethene**	**0.2**	**6.4**	
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

Lab Sample ID: SE82Z
LIMS ID: 11-873
Matrix: Water
Date Analyzed: 01/17/11 15:58

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.7%
d8-Toluene	90.4%
Bromofluorobenzene	87.0%
d4-1,2-Dichlorobenzene	103%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: JF-T1B1-SO-13-R**
 SAMPLE

Lab Sample ID: SE82AA
LIMS ID: 11-874
Matrix: Water
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/17/11 16:25

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	**Methylene Chloride**	**0.5**	**0.8**	
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
67-66-3	**Chloroform**	**0.2**	**0.2**	
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

Lab Sample ID: SE82AA
LIMS ID: 11-874
Matrix: Water
Date Analyzed: 01/17/11 16:25

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.9%
d8-Toluene	95.3%
Bromofluorobenzene	88.4%
d4-1,2-Dichlorobenzene	98.1%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: Trip Blanks**
Page 1 of 2 **SAMPLE**

Lab Sample ID: SE82AB
LIMS ID: 11-875
Matrix: Water
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/17/11 16:52

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

Lab Sample ID: SE82AB
LIMS ID: 11-875
Matrix: Water
Date Analyzed: 01/17/11 16:52

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.5%
d8-Toluene	96.1%
Bromofluorobenzene	87.7%
d4-1,2-Dichlorobenzene	98.8%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-011711**
 METHOD BLANK

Lab Sample ID: MB-011711
LIMS ID: 11-873
Matrix: Water
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/17/11 09:05

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-011711**
 METHOD BLANK

Lab Sample ID: MB-011711 QC Report No: SE82-The Boeing Company
LIMS ID: 11-873 Project: Jorgenson Forge
Matrix: Water 7KPL2JDR
Date Analyzed: 01/17/11 09:05

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	96.0%
d8-Toluene	95.3%
Bromofluorobenzene	90.2%
d4-1,2-Dichlorobenzene	98.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-011811**
 METHOD BLANK

Lab Sample ID: MB-011811
LIMS ID: 11-870
Matrix: Water
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 01/18/11 10:53

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	0.5	< 0.5	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.2	< 0.2	U
75-00-3	Chloroethane	0.2	< 0.2	U
75-09-2	Methylene Chloride	0.5	< 0.5	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.2	< 0.2	U
75-35-4	1,1-Dichloroethene	0.2	< 0.2	U
75-34-3	1,1-Dichloroethane	0.2	< 0.2	U
156-60-5	trans-1,2-Dichloroethene	0.2	< 0.2	U
156-59-2	cis-1,2-Dichloroethene	0.2	< 0.2	U
67-66-3	Chloroform	0.2	< 0.2	U
107-06-2	1,2-Dichloroethane	0.2	< 0.2	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.2	< 0.2	U
56-23-5	Carbon Tetrachloride	0.2	< 0.2	U
108-05-4	Vinyl Acetate	1.0	< 1.0	U
75-27-4	Bromodichloromethane	0.2	< 0.2	U
78-87-5	1,2-Dichloropropane	0.2	< 0.2	U
10061-01-5	cis-1,3-Dichloropropene	0.2	< 0.2	U
79-01-6	Trichloroethene	0.2	< 0.2	U
124-48-1	Dibromochloromethane	0.2	< 0.2	U
79-00-5	1,1,2-Trichloroethane	0.2	< 0.2	U
71-43-2	Benzene	0.2	< 0.2	U
10061-02-6	trans-1,3-Dichloropropene	0.2	< 0.2	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.2	< 0.2	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.2	< 0.2	U
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	< 0.2	U
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	< 0.2	U
100-42-5	Styrene	0.2	< 0.2	U
75-69-4	Trichlorofluoromethane	0.2	< 0.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.2	< 0.2	U
179601-23-1	m,p-Xylene	0.4	< 0.4	U
95-47-6	o-Xylene	0.2	< 0.2	U
95-50-1	1,2-Dichlorobenzene	0.2	< 0.2	U
541-73-1	1,3-Dichlorobenzene	0.2	< 0.2	U
106-46-7	1,4-Dichlorobenzene	0.2	< 0.2	U
107-02-8	Acrolein	5.0	< 5.0	U

Lab Sample ID: MB-011811
LIMS ID: 11-870
Matrix: Water
Date Analyzed: 01/18/11 10:53

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	0.2	< 0.2	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.2	< 0.2	U
74-95-3	Dibromomethane	0.2	< 0.2	U
630-20-6	1,1,1,2-Tetrachloroethane	0.2	< 0.2	U
96-12-8	1,2-Dibromo-3-chloropropane	0.5	< 0.5	U
96-18-4	1,2,3-Trichloropropane	0.5	< 0.5	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.2	< 0.2	U
95-63-6	1,2,4-Trimethylbenzene	0.2	< 0.2	U
87-68-3	Hexachlorobutadiene	0.5	< 0.5	U
106-93-4	Ethylene Dibromide	0.2	< 0.2	U
74-97-5	Bromochloromethane	0.2	< 0.2	U
594-20-7	2,2-Dichloropropane	0.2	< 0.2	U
142-28-9	1,3-Dichloropropane	0.2	< 0.2	U
98-82-8	Isopropylbenzene	0.2	< 0.2	U
103-65-1	n-Propylbenzene	0.2	< 0.2	U
108-86-1	Bromobenzene	0.2	< 0.2	U
95-49-8	2-Chlorotoluene	0.2	< 0.2	U
106-43-4	4-Chlorotoluene	0.2	< 0.2	U
98-06-6	tert-Butylbenzene	0.2	< 0.2	U
135-98-8	sec-Butylbenzene	0.2	< 0.2	U
99-87-6	4-Isopropyltoluene	0.2	< 0.2	U
104-51-8	n-Butylbenzene	0.2	< 0.2	U
120-82-1	1,2,4-Trichlorobenzene	0.5	< 0.5	U
91-20-3	Naphthalene	0.5	< 0.5	U
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	96.7%
d8-Toluene	94.3%
Bromofluorobenzene	90.0%
d4-1,2-Dichlorobenzene	99.3%

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-011811	Method Blank	10	96.7%	94.3%	90.0%	99.3%	0
LCS-011811	Lab Control	10	93.6%	94.9%	94.0%	96.6%	0
LCSD-011811	Lab Control Dup	10	93.8%	93.1%	94.7%	96.8%	0
SE82W	JF-T1B2-GW-15	10	95.5%	91.1%	88.7%	97.5%	0
SE82WDL	JF-T1B2-GW-15	10	94.8%	91.1%	89.9%	98.2%	0
SE82X	JF-T1B3-GW-20	10	97.8%	93.9%	89.2%	98.8%	0
SE82Y	JF-T1B4-GW-20	10	100%	93.4%	87.4%	99.7%	0
MB-011711	Method Blank	10	96.0%	95.3%	90.2%	98.9%	0
LCS-011711	Lab Control	10	94.9%	94.8%	94.8%	96.6%	0
LCSD-011711	Lab Control Dup	10	93.4%	94.5%	94.8%	96.1%	0
SE82Z	JF-T3B2-GW-15	10	98.7%	90.4%	87.0%	103%	0
SE82AA	JF-T1B1-SO-13-R	10	98.9%	95.3%	88.4%	98.1%	0
SE82AB	Trip Blanks	10	99.5%	96.1%	87.7%	98.8%	0

	LCS/MB LIMITS	QC LIMITS
SW8260C		
(DCE) = d4-1,2-Dichloroethane	80-120	80-120
(TOL) = d8-Toluene	80-120	80-120
(BFB) = Bromofluorobenzene	80-120	80-120
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120

Prep Method: SW5030B
Log Number Range: 11-870 to 11-875

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-011711**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-011711
LIMS ID: 11-873
Matrix: Water
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 01/17/11 08:10
LCSD: 01/17/11 08:38

Sample Amount LCS: 10.0 mL
LCSD: 10.0 mL
Purge Volume LCS: 10.0 mL
LCSD: 10.0 mL

Analyte	LCS		Spike Added-LCS	LCS Recovery	LCSD		Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	9.9		10.0	99.0%	9.9		10.0	99.0%	0.0%
Bromomethane	10.9		10.0	109%	11.5		10.0	115%	5.4%
Vinyl Chloride	10.3		10.0	103%	10.6		10.0	106%	2.9%
Chloroethane	9.9		10.0	99.0%	10.1		10.0	101%	2.0%
Methylene Chloride	10.0		10.0	100%	10.1		10.0	101%	1.0%
Acetone	50.2		50.0	100%	48.0		50.0	96.0%	4.5%
Carbon Disulfide	10.8		10.0	108%	10.8		10.0	108%	0.0%
1,1-Dichloroethene	10.2		10.0	102%	10.4		10.0	104%	1.9%
1,1-Dichloroethane	9.6		10.0	96.0%	9.8		10.0	98.0%	2.1%
trans-1,2-Dichloroethene	9.7		10.0	97.0%	9.9		10.0	99.0%	2.0%
cis-1,2-Dichloroethene	9.7		10.0	97.0%	9.8		10.0	98.0%	1.0%
Chloroform	9.7		10.0	97.0%	9.8		10.0	98.0%	1.0%
1,2-Dichloroethane	10.1		10.0	101%	9.7		10.0	97.0%	4.0%
2-Butanone	47.8		50.0	95.6%	48.7		50.0	97.4%	1.9%
1,1,1-Trichloroethane	9.6		10.0	96.0%	9.9		10.0	99.0%	3.1%
Carbon Tetrachloride	10.1		10.0	101%	10.2		10.0	102%	1.0%
Vinyl Acetate	9.3		10.0	93.0%	9.6		10.0	96.0%	3.2%
Bromodichloromethane	10.1		10.0	101%	10.2		10.0	102%	1.0%
1,2-Dichloropropane	9.6		10.0	96.0%	9.8		10.0	98.0%	2.1%
cis-1,3-Dichloropropene	10.1		10.0	101%	10.2		10.0	102%	1.0%
Trichloroethene	9.8		10.0	98.0%	9.8		10.0	98.0%	0.0%
Dibromochloromethane	10.1		10.0	101%	10.2		10.0	102%	1.0%
1,1,2-Trichloroethane	9.9		10.0	99.0%	10.0		10.0	100%	1.0%
Benzene	10.2		10.0	102%	10.3		10.0	103%	1.0%
trans-1,3-Dichloropropene	10.0		10.0	100%	9.8		10.0	98.0%	2.0%
2-Chloroethylvinylether	7.6	Q	10.0	76.0%	7.2	Q	10.0	72.0%	5.4%
Bromoform	10.2		10.0	102%	10.0		10.0	100%	2.0%
4-Methyl-2-Pentanone (MIBK)	50.4		50.0	101%	50.9		50.0	102%	1.0%
2-Hexanone	53.3		50.0	107%	53.5		50.0	107%	0.4%
Tetrachloroethene	10.0		10.0	100%	10.1		10.0	101%	1.0%
1,1,2,2-Tetrachloroethane	9.4		10.0	94.0%	9.4		10.0	94.0%	0.0%
Toluene	10.0		10.0	100%	10.1		10.0	101%	1.0%
Chlorobenzene	10.1		10.0	101%	10.3		10.0	103%	2.0%
Ethylbenzene	10.2		10.0	102%	10.2		10.0	102%	0.0%
Styrene	11.0		10.0	110%	11.1		10.0	111%	0.9%
Trichlorofluoromethane	9.3		10.0	93.0%	9.4		10.0	94.0%	1.1%
1,1,2-Trichloro-1,2,2-trifluoroetha	9.8		10.0	98.0%	10.0		10.0	100%	2.0%
m,p-Xylene	21.7		20.0	108%	21.9		20.0	110%	0.9%
o-Xylene	10.6		10.0	106%	10.6		10.0	106%	0.0%
1,2-Dichlorobenzene	9.8		10.0	98.0%	9.8		10.0	98.0%	0.0%
1,3-Dichlorobenzene	9.9		10.0	99.0%	10.0		10.0	100%	1.0%
1,4-Dichlorobenzene	9.9		10.0	99.0%	10.0		10.0	100%	1.0%
Acrolein	60.0		50.0	120%	58.3		50.0	117%	2.9%
Methyl Iodide	12.3		10.0	123%	12.1		10.0	121%	1.6%
Bromoethane	10.8		10.0	108%	10.5		10.0	105%	2.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-011711**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-011711 QC Report No: SE82-The Boeing Company
LIMS ID: 11-873 Project: Jorgenson Forge
Matrix: Water 7KPL2JDR

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Acrylonitrile	9.0	10.0	90.0%	9.3	10.0	93.0%	3.3%
1,1-Dichloropropene	9.8	10.0	98.0%	9.9	10.0	99.0%	1.0%
Dibromomethane	9.7	10.0	97.0%	9.5	10.0	95.0%	2.1%
1,1,1,2-Tetrachloroethane	10.0	10.0	100%	10.2	10.0	102%	2.0%
1,2-Dibromo-3-chloropropane	9.0	10.0	90.0%	8.7	10.0	87.0%	3.4%
1,2,3-Trichloropropane	9.6	10.0	96.0%	9.7	10.0	97.0%	1.0%
trans-1,4-Dichloro-2-butene	8.7	10.0	87.0%	8.5	10.0	85.0%	2.3%
1,3,5-Trimethylbenzene	10.3	10.0	103%	10.5	10.0	105%	1.9%
1,2,4-Trimethylbenzene	10.4	10.0	104%	10.6	10.0	106%	1.9%
Hexachlorobutadiene	9.9	10.0	99.0%	10.2	10.0	102%	3.0%
Ethylene Dibromide	10.0	10.0	100%	9.9	10.0	99.0%	1.0%
Bromochloromethane	9.3	10.0	93.0%	9.6	10.0	96.0%	3.2%
2,2-Dichloropropane	9.6	10.0	96.0%	9.7	10.0	97.0%	1.0%
1,3-Dichloropropane	9.6	10.0	96.0%	9.7	10.0	97.0%	1.0%
Isopropylbenzene	10.5	10.0	105%	10.7	10.0	107%	1.9%
n-Propylbenzene	10.2	10.0	102%	10.4	10.0	104%	1.9%
Bromobenzene	9.9	10.0	99.0%	10.0	10.0	100%	1.0%
2-Chlorotoluene	10.1	10.0	101%	10.1	10.0	101%	0.0%
4-Chlorotoluene	10.2	10.0	102%	10.4	10.0	104%	1.9%
tert-Butylbenzene	10.4	10.0	104%	10.5	10.0	105%	1.0%
sec-Butylbenzene	8.9	10.0	89.0%	9.0	10.0	90.0%	1.1%
4-Isopropyltoluene	10.6	10.0	106%	10.8	10.0	108%	1.9%
n-Butylbenzene	10.2	10.0	102%	10.4	10.0	104%	1.9%
1,2,4-Trichlorobenzene	10.0	10.0	100%	10.1	10.0	101%	1.0%
Naphthalene	10.3	10.0	103%	10.4	10.0	104%	1.0%
1,2,3-Trichlorobenzene	10.4	10.0	104%	10.6	10.0	106%	1.9%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	94.9%	93.4%
d8-Toluene	94.8%	94.5%
Bromofluorobenzene	94.8%	94.8%
d4-1,2-Dichlorobenzene	96.6%	96.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-011811**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-011811
LIMS ID: 11-870
Matrix: Water
Data Release Authorized:
Reported: 01/19/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 01/18/11 10:26
LCSD: 01/18/11 11:23

Sample Amount LCS: 10.0 mL
LCSD: 10.0 mL
Purge Volume LCS: 10.0 mL
LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	9.4	10.0	94.0%	8.9	10.0	89.0%	5.5%
Bromomethane	11.4	10.0	114%	11.0	10.0	110%	3.6%
Vinyl Chloride	10.1	10.0	101%	9.6	10.0	96.0%	5.1%
Chloroethane	9.8	10.0	98.0%	9.1	10.0	91.0%	7.4%
Methylene Chloride	9.8	10.0	98.0%	9.7	10.0	97.0%	1.0%
Acetone	47.1	50.0	94.2%	47.3	50.0	94.6%	0.4%
Carbon Disulfide	10.7	10.0	107%	10.3	10.0	103%	3.8%
1,1-Dichloroethene	9.9	10.0	99.0%	10.1	10.0	101%	2.0%
1,1-Dichloroethane	9.6	10.0	96.0%	9.5	10.0	95.0%	1.0%
trans-1,2-Dichloroethene	9.6	10.0	96.0%	9.5	10.0	95.0%	1.0%
cis-1,2-Dichloroethene	9.7	10.0	97.0%	9.7	10.0	97.0%	0.0%
Chloroform	9.5	10.0	95.0%	9.5	10.0	95.0%	0.0%
1,2-Dichloroethane	9.7	10.0	97.0%	9.6	10.0	96.0%	1.0%
2-Butanone	46.7	50.0	93.4%	47.4	50.0	94.8%	1.5%
1,1,1-Trichloroethane	9.7	10.0	97.0%	9.6	10.0	96.0%	1.0%
Carbon Tetrachloride	9.9	10.0	99.0%	9.8	10.0	98.0%	1.0%
Vinyl Acetate	9.1	10.0	91.0%	9.0	10.0	90.0%	1.1%
Bromodichloromethane	10.0	10.0	100%	9.8	10.0	98.0%	2.0%
1,2-Dichloropropane	9.5	10.0	95.0%	9.2	10.0	92.0%	3.2%
cis-1,3-Dichloropropene	10.1	10.0	101%	9.9	10.0	99.0%	2.0%
Trichloroethene	9.8	10.0	98.0%	9.7	10.0	97.0%	1.0%
Dibromochloromethane	10.1	10.0	101%	10.1	10.0	101%	0.0%
1,1,2-Trichloroethane	9.8	10.0	98.0%	9.7	10.0	97.0%	1.0%
Benzene	10.1	10.0	101%	9.9	10.0	99.0%	2.0%
trans-1,3-Dichloropropene	9.7	10.0	97.0%	9.7	10.0	97.0%	0.0%
2-Chloroethylvinylether	8.1 Q	10.0	81.0%	8.0 Q	10.0	80.0%	1.2%
Bromoform	10.2	10.0	102%	9.8	10.0	98.0%	4.0%
4-Methyl-2-Pentanone (MIBK)	49.4	50.0	98.8%	49.3	50.0	98.6%	0.2%
2-Hexanone	52.6	50.0	105%	52.4	50.0	105%	0.4%
Tetrachloroethene	9.9	10.0	99.0%	10.0	10.0	100%	1.0%
1,1,2,2-Tetrachloroethane	9.6	10.0	96.0%	9.1	10.0	91.0%	5.3%
Toluene	10.0	10.0	100%	9.7	10.0	97.0%	3.0%
Chlorobenzene	10.2	10.0	102%	10.0	10.0	100%	2.0%
Ethylbenzene	10.1	10.0	101%	10.2	10.0	102%	1.0%
Styrene	11.0	10.0	110%	10.6	10.0	106%	3.7%
Trichlorofluoromethane	9.2	10.0	92.0%	10.3	10.0	103%	11.3%
1,1,2-Trichloro-1,2,2-trifluoroetha	9.6	10.0	96.0%	9.8	10.0	98.0%	2.1%
m,p-Xylene	21.8	20.0	109%	21.6	20.0	108%	0.9%
o-Xylene	10.5	10.0	105%	10.4	10.0	104%	1.0%
1,2-Dichlorobenzene	10.0	10.0	100%	9.5	10.0	95.0%	5.1%
1,3-Dichlorobenzene	10.1	10.0	101%	9.7	10.0	97.0%	4.0%
1,4-Dichlorobenzene	10.0	10.0	100%	9.7	10.0	97.0%	3.0%
Acrolein	60.8 Q	50.0	122%	58.5 Q	50.0	117%	3.9%
Methyl Iodide	12.4 Q	10.0	124%	11.7 Q	10.0	117%	5.8%
Bromoethane	10.9	10.0	109%	10.4	10.0	104%	4.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-011811**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-011811 QC Report No: SE82-The Boeing Company
LIMS ID: 11-870 Project: Jorgenson Forge
Matrix: Water 7KPL2JDR

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Acrylonitrile	8.2	10.0	82.0%	8.7	10.0	87.0%	5.9%
1,1-Dichloropropene	9.8	10.0	98.0%	9.6	10.0	96.0%	2.1%
Dibromomethane	9.7	10.0	97.0%	9.4	10.0	94.0%	3.1%
1,1,1,2-Tetrachloroethane	10.0	10.0	100%	10.0	10.0	100%	0.0%
1,2-Dibromo-3-chloropropane	9.1	10.0	91.0%	8.4	10.0	84.0%	8.0%
1,2,3-Trichloropropane	9.9	10.0	99.0%	9.3	10.0	93.0%	6.2%
trans-1,4-Dichloro-2-butene	8.6	10.0	86.0%	8.6	10.0	86.0%	0.0%
1,3,5-Trimethylbenzene	10.6	10.0	106%	10.1	10.0	101%	4.8%
1,2,4-Trimethylbenzene	10.6	10.0	106%	10.2	10.0	102%	3.8%
Hexachlorobutadiene	9.7	10.0	97.0%	9.4	10.0	94.0%	3.1%
Ethylene Dibromide	9.9	10.0	99.0%	9.8	10.0	98.0%	1.0%
Bromochloromethane	9.6	10.0	96.0%	9.3	10.0	93.0%	3.2%
2,2-Dichloropropane	9.5	10.0	95.0%	9.6	10.0	96.0%	1.0%
1,3-Dichloropropane	9.7	10.0	97.0%	9.7	10.0	97.0%	0.0%
Isopropylbenzene	10.7	10.0	107%	10.3	10.0	103%	3.8%
n-Propylbenzene	10.4	10.0	104%	10.1	10.0	101%	2.9%
Bromobenzene	10.0	10.0	100%	9.5	10.0	95.0%	5.1%
2-Chlorotoluene	10.3	10.0	103%	9.8	10.0	98.0%	5.0%
4-Chlorotoluene	10.3	10.0	103%	10.0	10.0	100%	3.0%
tert-Butylbenzene	10.5	10.0	105%	10.2	10.0	102%	2.9%
sec-Butylbenzene	9.0	10.0	90.0%	8.6	10.0	86.0%	4.5%
4-Isopropyltoluene	10.7	10.0	107%	10.4	10.0	104%	2.8%
n-Butylbenzene	10.1	10.0	101%	10.1	10.0	101%	0.0%
1,2,4-Trichlorobenzene	10.0	10.0	100%	9.9	10.0	99.0%	1.0%
Naphthalene	10.4	10.0	104%	10.0	10.0	100%	3.9%
1,2,3-Trichlorobenzene	10.4	10.0	104%	10.2	10.0	102%	1.9%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	93.6%	93.8%
d8-Toluene	94.9%	93.1%
Bromofluorobenzene	94.0%	94.7%
d4-1,2-Dichlorobenzene	96.6%	96.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: JF-T1B1-SO-13-R**
Page 1 of 2 **SAMPLE**

Lab Sample ID: SE82AA
LIMS ID: 11-874
Matrix: Water
Data Release Authorized:
Reported: 01/25/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/17/11
Date Analyzed: 01/20/11 20:02
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	5.0	< 5.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B1-SO-13-R
SAMPLE

Lab Sample ID: SE82AA
LIMS ID: 11-874
Matrix: Water
Date Analyzed: 01/20/11 20:02

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	80.0%	2-Fluorobiphenyl	86.0%
d14-p-Terphenyl	86.0%	d4-1,2-Dichlorobenzene	75.2%
d5-Phenol	76.5%	2-Fluorophenol	81.6%
2,4,6-Tribromophenol	80.8%	d4-2-Chlorophenol	82.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: MB-011711
METHOD BLANK

Lab Sample ID: MB-011711
LIMS ID: 11-874
Matrix: Water
Data Release Authorized: MW
Reported: 01/25/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: NA
Date Received: NA

Date Extracted: 01/17/11
Date Analyzed: 01/20/11 16:46
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	5.0	< 5.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	1.0	< 1.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	1.0	< 1.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	1.0	< 1.0 U
65-85-0	Benzoic Acid	10	< 10 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	1.0	< 1.0 U
59-50-7	4-Chloro-3-methylphenol	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	5.0	< 5.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	5.0	< 5.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	10	< 10 U
100-02-7	4-Nitrophenol	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	5.0	< 5.0 U
121-14-2	2,4-Dinitrotoluene	5.0	< 5.0 U
84-66-2	Diethylphthalate	1.0	< 1.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: MB-011711
METHOD BLANK

Lab Sample ID: MB-011711
LIMS ID: 11-874
Matrix: Water
Date Analyzed: 01/20/11 16:46

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	5.0	< 5.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	5.0	< 5.0 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	1.0	< 1.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	1.0	< 1.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	79.2%	2-Fluorobiphenyl	84.8%
d14-p-Terphenyl	84.4%	d4-1,2-Dichlorobenzene	73.6%
d5-Phenol	74.7%	2-Fluorophenol	82.1%
2,4,6-Tribromophenol	80.8%	d4-2-Chlorophenol	82.1%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-011711	79.2%	84.8%	84.4%	73.6%	74.7%	82.1%	80.8%	82.1%	0
LCS-011711	77.6%	90.0%	89.2%	65.6%	76.5%	75.5%	90.4%	79.2%	0
LCSD-011711	74.4%	87.6%	86.8%	63.2%	70.9%	71.7%	89.1%	74.7%	0
JF-T1B1-SO-13-R	80.0%	86.0%	86.0%	75.2%	76.5%	81.6%	80.8%	82.4%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(46-100)	(39-100)
(FBP) = 2-Fluorobiphenyl	(49-100)	(42-100)
(TPH) = d14-p-Terphenyl	(53-119)	(26-114)
(DCB) = d4-1,2-Dichlorobenzene	(38-100)	(32-100)
(PHL) = d5-Phenol	(50-100)	(41-100)
(2FP) = 2-Fluorophenol	(46-100)	(38-100)
(TBP) = 2,4,6-Tribromophenol	(52-123)	(48-118)
(2CP) = d4-2-Chlorophenol	(53-100)	(44-100)

Prep Method: SW3520C
Log Number Range: 11-874 to 11-874

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-011711
LCS/LCSD

Lab Sample ID: LCS-011711
LIMS ID: 11-874
Matrix: Water
Data Release Authorized: MW
Reported: 01/25/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted LCS/LCSD: 01/17/11

Date Analyzed LCS: 01/20/11 17:19
LCSD: 01/20/11 17:51
Instrument/Analyst LCS: NT6/JZ
LCSD: NT6/JZ
GPC Cleanup: NO

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	17.9 Q	25.0	71.6%	17.3 Q	25.0	69.2%	3.4%
Bis-(2-Chloroethyl) Ether	17.9	25.0	71.6%	17.5	25.0	70.0%	2.3%
2-Chlorophenol	19.7	25.0	78.8%	19.3	25.0	77.2%	2.1%
1,3-Dichlorobenzene	13.8	25.0	55.2%	13.1	25.0	52.4%	5.2%
1,4-Dichlorobenzene	14.2	25.0	56.8%	13.4	25.0	53.6%	5.8%
Benzyl Alcohol	33.8	50.0	67.6%	32.7	50.0	65.4%	3.3%
1,2-Dichlorobenzene	14.9	25.0	59.6%	14.1	25.0	56.4%	5.5%
2-Methylphenol	16.5	25.0	66.0%	16.4	25.0	65.6%	0.6%
2,2'-Oxybis(1-Chloropropane)	15.5 Q	25.0	62.0%	15.1 Q	25.0	60.4%	2.6%
4-Methylphenol	33.4	50.0	66.8%	32.7	50.0	65.4%	2.1%
N-Nitroso-Di-N-Propylamine	16.4 Q	25.0	65.6%	16.3 Q	25.0	65.2%	0.6%
Hexachloroethane	12.8	25.0	51.2%	11.5	25.0	46.0%	10.7%
Nitrobenzene	19.1	25.0	76.4%	18.6	25.0	74.4%	2.7%
Isophorone	21.2	25.0	84.8%	20.9	25.0	83.6%	1.4%
2-Nitrophenol	22.3	25.0	89.2%	22.0	25.0	88.0%	1.4%
2,4-Dimethylphenol	19.1	25.0	76.4%	19.3	25.0	77.2%	1.0%
Benzoic Acid	59.6	75.0	79.5%	62.0	75.0	82.7%	3.9%
bis(2-Chloroethoxy) Methane	18.8	25.0	75.2%	17.9	25.0	71.6%	4.9%
2,4-Dichlorophenol	22.0	25.0	88.0%	21.8	25.0	87.2%	0.9%
1,2,4-Trichlorobenzene	16.4	25.0	65.6%	15.6	25.0	62.4%	5.0%
Naphthalene	19.8	25.0	79.2%	19.3	25.0	77.2%	2.6%
4-Chloroaniline	57.8	60.0	96.3%	55.8	60.0	93.0%	3.5%
Hexachlorobutadiene	14.2	25.0	56.8%	12.9	25.0	51.6%	9.6%
4-Chloro-3-methylphenol	21.4	25.0	85.6%	21.0	25.0	84.0%	1.9%
2-Methylnaphthalene	17.5	25.0	70.0%	16.9	25.0	67.6%	3.5%
Hexachlorocyclopentadiene	31.4	75.0	41.9%	30.7	75.0	40.9%	2.3%
2,4,6-Trichlorophenol	24.2	25.0	96.8%	24.3	25.0	97.2%	0.4%
2,4,5-Trichlorophenol	21.9	25.0	87.6%	21.7	25.0	86.8%	0.9%
2-Chloronaphthalene	21.4	25.0	85.6%	20.7	25.0	82.8%	3.3%
2-Nitroaniline	20.3	25.0	81.2%	20.2	25.0	80.8%	0.5%
Dimethylphthalate	22.6	25.0	90.4%	22.8	25.0	91.2%	0.9%
Acenaphthylene	23.0	25.0	92.0%	22.7	25.0	90.8%	1.3%
3-Nitroaniline	68.7	64.0	107%	69.0	64.0	108%	0.4%
Acenaphthene	22.4	25.0	89.6%	21.9	25.0	87.6%	2.3%
2,4-Dinitrophenol	66.9 Q	75.0	89.2%	70.4 Q	75.0	93.9%	5.1%
4-Nitrophenol	24.6	25.0	98.4%	25.5	25.0	102%	3.6%
Dibenzofuran	21.3	25.0	85.2%	20.8	25.0	83.2%	2.4%
2,6-Dinitrotoluene	23.0	25.0	92.0%	22.9	25.0	91.6%	0.4%
2,4-Dinitrotoluene	22.8	25.0	91.2%	22.5	25.0	90.0%	1.3%
Diethylphthalate	21.8	25.0	87.2%	21.8	25.0	87.2%	0.0%
4-Chlorophenyl-phenylether	21.1	25.0	84.4%	20.1	25.0	80.4%	4.9%
Fluorene	23.4	25.0	93.6%	22.5	25.0	90.0%	3.9%
4-Nitroaniline	22.4	25.0	89.6%	22.2	25.0	88.8%	0.9%
4,6-Dinitro-2-Methylphenol	72.5	75.0	96.7%	76.7	75.0	102%	5.6%
N-Nitrosodiphenylamine	21.4	25.0	85.6%	20.9	25.0	83.6%	2.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-011711
LCS/LCSD

Lab Sample ID: LCS-011711
LIMS ID: 11-874
Matrix: Water
Date Analyzed LCS: 01/20/11 17:19
LCSD: 01/20/11 17:51

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
4-Bromophenyl-phenylether	22.1	25.0	88.4%	20.6	25.0	82.4%	7.0%
Hexachlorobenzene	21.4	25.0	85.6%	20.6	25.0	82.4%	3.8%
Pentachlorophenol	26.8	25.0	107%	26.9	25.0	108%	0.4%
Phenanthrene	24.9	25.0	99.6%	24.2	25.0	96.8%	2.9%
Carbazole	23.4	25.0	93.6%	23.0	25.0	92.0%	1.7%
Anthracene	24.4	25.0	97.6%	23.4	25.0	93.6%	4.2%
Di-n-Butylphthalate	23.9	25.0	95.6%	23.0	25.0	92.0%	3.8%
Fluoranthene	25.7	25.0	103%	24.8	25.0	99.2%	3.6%
Pyrene	24.2	25.0	96.8%	23.2	25.0	92.8%	4.2%
Butylbenzylphthalate	23.3	25.0	93.2%	22.1	25.0	88.4%	5.3%
3,3'-Dichlorobenzidine	61.3	64.0	95.8%	15.2	64.0	23.8%	121%
Benzo(a)anthracene	26.1	25.0	104%	25.3	25.0	101%	3.1%
bis(2-Ethylhexyl)phthalate	22.8	25.0	91.2%	22.5	25.0	90.0%	1.3%
Chrysene	26.7	25.0	107%	25.8	25.0	103%	3.4%
Di-n-Octyl phthalate	23.0	25.0	92.0%	22.4	25.0	89.6%	2.6%
Benzo(a)pyrene	23.3	25.0	93.2%	22.3	25.0	89.2%	4.4%
Indeno(1,2,3-cd)pyrene	30.5	25.0	122%	29.1	25.0	116%	4.7%
Dibenz(a,h)anthracene	30.8 Q	25.0	123%	29.4 Q	25.0	118%	4.7%
Benzo(g,h,i)perylene	30.7 Q	25.0	123%	28.7 Q	25.0	115%	6.7%
1-Methylnaphthalene	18.8	25.0	75.2%	18.2	25.0	72.8%	3.2%
Total Benzofluoranthenes	48.7	50.0	97.4%	46.6	50.0	93.2%	4.4%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	77.6%	74.4%
2-Fluorobiphenyl	90.0%	87.6%
d14-p-Terphenyl	89.2%	86.8%
d4-1,2-Dichlorobenzene	65.6%	63.2%
d5-Phenol	76.5%	70.9%
2-Fluorophenol	75.5%	71.7%
2,4,6-Tribromophenol	90.4%	89.1%
d4-2-Chlorophenol	79.2%	74.7%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B2-SO-03
SAMPLE

Lab Sample ID: SE82J
LIMS ID: 11-857
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/25/11 00:58
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 8.45 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 18.7%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
111-44-4	Bis-(2-Chloroethyl) Ether	59	< 59 U
95-57-8	2-Chlorophenol	59	< 59 U
541-73-1	1,3-Dichlorobenzene	59	< 59 U
106-46-7	1,4-Dichlorobenzene	59	< 59 U
100-51-6	Benzyl Alcohol	300	< 300 U
95-50-1	1,2-Dichlorobenzene	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
621-64-7	N-Nitroso-Di-N-Propylamine	59	< 59 U
67-72-1	Hexachloroethane	59	< 59 U
98-95-3	Nitrobenzene	59	< 59 U
78-59-1	Isophorone	59	< 59 U
88-75-5	2-Nitrophenol	59	< 59 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
65-85-0	Benzoic Acid	590	< 590 U
111-91-1	bis(2-Chloroethoxy) Methane	59	< 59 U
120-83-2	2,4-Dichlorophenol	300	< 300 U
120-82-1	1,2,4-Trichlorobenzene	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
106-47-8	4-Chloroaniline	300	< 300 U
87-68-3	Hexachlorobutadiene	59	< 59 U
59-50-7	4-Chloro-3-methylphenol	300	< 300 U
91-57-6	2-Methylnaphthalene	59	< 59 U
77-47-4	Hexachlorocyclopentadiene	300	< 300 U
88-06-2	2,4,6-Trichlorophenol	300	< 300 U
95-95-4	2,4,5-Trichlorophenol	300	< 300 U
91-58-7	2-Chloronaphthalene	59	< 59 U
88-74-4	2-Nitroaniline	300	< 300 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
99-09-2	3-Nitroaniline	300	< 300 U
83-32-9	Acenaphthene	59	< 59 U
51-28-5	2,4-Dinitrophenol	590	< 590 U
100-02-7	4-Nitrophenol	300	< 300 U
132-64-9	Dibenzofuran	59	< 59 U
606-20-2	2,6-Dinitrotoluene	300	< 300 U
121-14-2	2,4-Dinitrotoluene	300	< 300 U
84-66-2	Diethylphthalate	59	< 59 U
7005-72-3	4-Chlorophenyl-phenylether	59	< 59 U
86-73-7	Fluorene	59	< 59 U
100-01-6	4-Nitroaniline	300	< 300 U
534-52-1	4,6-Dinitro-2-Methylphenol	590	< 590 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B2-SO-03
SAMPLE

Lab Sample ID: SE82J
LIMS ID: 11-857
Matrix: Soil
Date Analyzed: 01/25/11 00:58

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	59	< 59 U
101-55-3	4-Bromophenyl-phenylether	59	< 59 U
118-74-1	Hexachlorobenzene	59	< 59 U
87-86-5	Pentachlorophenol	300	< 300 U
85-01-8	Phenanthrene	59	< 59 U
86-74-8	Carbazole	59	< 59 U
120-12-7	Anthracene	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	Fluoranthene	59	< 59 U
129-00-0	Pyrene	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
91-94-1	3,3'-Dichlorobenzidine	300	< 300 U
56-55-3	Benzo(a)anthracene	59	< 59 U
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
218-01-9	Chrysene	59	< 59 U
117-84-0	Di-n-Octyl phthalate	59	< 59 U
50-32-8	Benzo(a)pyrene	59	< 59 U
193-39-5	Indeno(1,2,3-cd)pyrene	59	< 59 U
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	Benzo(g,h,i)perylene	59	< 59 U
90-12-0	1-Methylnaphthalene	59	< 59 U
TOTBFA	Total Benzofluoranthenes	59	< 59 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.6%	2-Fluorobiphenyl	70.0%
d14-p-Terphenyl	70.4%	d4-1,2-Dichlorobenzene	67.2%
d5-Phenol	68.8%	2-Fluorophenol	65.9%
2,4,6-Tribromophenol	73.9%	d4-2-Chlorophenol	69.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: JF-T1B1-SO-03**
 SAMPLE

Lab Sample ID: SE82K
LIMS ID: 11-858
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/25/11 01:31
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 8.14 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 20.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	61	< 61 U
111-44-4	Bis-(2-Chloroethyl) Ether	61	< 61 U
95-57-8	2-Chlorophenol	61	< 61 U
541-73-1	1,3-Dichlorobenzene	61	< 61 U
106-46-7	1,4-Dichlorobenzene	61	< 61 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	61	< 61 U
95-48-7	2-Methylphenol	61	< 61 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	61	< 61 U
106-44-5	4-Methylphenol	61	< 61 U
621-64-7	N-Nitroso-Di-N-Propylamine	61	< 61 U
67-72-1	Hexachloroethane	61	< 61 U
98-95-3	Nitrobenzene	61	< 61 U
78-59-1	Isophorone	61	< 61 U
88-75-5	2-Nitrophenol	61	< 61 U
105-67-9	2,4-Dimethylphenol	61	< 61 U
65-85-0	Benzoic Acid	610	< 610 U
111-91-1	bis(2-Chloroethoxy) Methane	61	< 61 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	61	< 61 U
91-20-3	Naphthalene	61	< 61 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	61	< 61 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	61	< 61 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	61	< 61 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	61	< 61 U
208-96-8	Acenaphthylene	61	< 61 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	61	< 61 U
51-28-5	2,4-Dinitrophenol	610	< 610 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	61	< 61 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	61	< 61 U
7005-72-3	4-Chlorophenyl-phenylether	61	< 61 U
86-73-7	Fluorene	61	< 61 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	610	< 610 U

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: JF-T1B1-SO-03**
 SAMPLE

Lab Sample ID: SE82K
LIMS ID: 11-858
Matrix: Soil
Date Analyzed: 01/25/11 01:31

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	61	< 61 U
101-55-3	4-Bromophenyl-phenylether	61	< 61 U
118-74-1	Hexachlorobenzene	61	< 61 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	Phenanthrene	61	< 61 U
86-74-8	Carbazole	61	< 61 U
120-12-7	Anthracene	61	< 61 U
84-74-2	Di-n-Butylphthalate	61	< 61 U
206-44-0	Fluoranthene	61	< 61 U
129-00-0	Pyrene	61	< 61 U
85-68-7	Butylbenzylphthalate	61	< 61 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	Benzo(a)anthracene	61	< 61 U
117-81-7	bis(2-Ethylhexyl)phthalate	61	< 61 U
218-01-9	Chrysene	61	< 61 U
117-84-0	Di-n-Octyl phthalate	61	< 61 U
50-32-8	Benzo(a)pyrene	61	< 61 U
193-39-5	Indeno(1,2,3-cd)pyrene	61	< 61 U
53-70-3	Dibenz(a,h)anthracene	61	< 61 U
191-24-2	Benzo(g,h,i)perylene	61	< 61 U
90-12-0	1-Methylnaphthalene	61	< 61 U
TOTBFA	Total Benzofluoranthenes	61	< 61 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	54.4%	2-Fluorobiphenyl	63.2%
d14-p-Terphenyl	65.2%	d4-1,2-Dichlorobenzene	59.2%
d5-Phenol	55.7%	2-Fluorophenol	46.9%
2,4,6-Tribromophenol	52.5%	d4-2-Chlorophenol	57.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B1-SO-08
SAMPLE

Lab Sample ID: SE82L
LIMS ID: 11-859
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/25/11 02:04
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 8.19 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 25.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	61	< 61 U
111-44-4	Bis-(2-Chloroethyl) Ether	61	< 61 U
95-57-8	2-Chlorophenol	61	< 61 U
541-73-1	1,3-Dichlorobenzene	61	< 61 U
106-46-7	1,4-Dichlorobenzene	61	< 61 U
100-51-6	Benzyl Alcohol	300	< 300 U
95-50-1	1,2-Dichlorobenzene	61	< 61 U
95-48-7	2-Methylphenol	61	< 61 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	61	< 61 U
106-44-5	4-Methylphenol	61	< 61 U
621-64-7	N-Nitroso-Di-N-Propylamine	61	< 61 U
67-72-1	Hexachloroethane	61	< 61 U
98-95-3	Nitrobenzene	61	< 61 U
78-59-1	Isophorone	61	< 61 U
88-75-5	2-Nitrophenol	61	< 61 U
105-67-9	2,4-Dimethylphenol	61	< 61 U
65-85-0	Benzoic Acid	610	< 610 U
111-91-1	bis(2-Chloroethoxy) Methane	61	< 61 U
120-83-2	2,4-Dichlorophenol	300	< 300 U
120-82-1	1,2,4-Trichlorobenzene	61	< 61 U
91-20-3	Naphthalene	61	< 61 U
106-47-8	4-Chloroaniline	300	< 300 U
87-68-3	Hexachlorobutadiene	61	< 61 U
59-50-7	4-Chloro-3-methylphenol	300	< 300 U
91-57-6	2-Methylnaphthalene	61	< 61 U
77-47-4	Hexachlorocyclopentadiene	300	< 300 U
88-06-2	2,4,6-Trichlorophenol	300	< 300 U
95-95-4	2,4,5-Trichlorophenol	300	< 300 U
91-58-7	2-Chloronaphthalene	61	< 61 U
88-74-4	2-Nitroaniline	300	< 300 U
131-11-3	Dimethylphthalate	61	< 61 U
208-96-8	Acenaphthylene	61	< 61 U
99-09-2	3-Nitroaniline	300	< 300 U
83-32-9	Acenaphthene	61	< 61 U
51-28-5	2,4-Dinitrophenol	610	< 610 U
100-02-7	4-Nitrophenol	300	< 300 U
132-64-9	Dibenzofuran	61	< 61 U
606-20-2	2,6-Dinitrotoluene	300	< 300 U
121-14-2	2,4-Dinitrotoluene	300	< 300 U
84-66-2	Diethylphthalate	61	< 61 U
7005-72-3	4-Chlorophenyl-phenylether	61	< 61 U
86-73-7	Fluorene	61	< 61 U
100-01-6	4-Nitroaniline	300	< 300 U
534-52-1	4,6-Dinitro-2-Methylphenol	610	< 610 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: JF-T1B1-SO-08**
Page 2 of 2 **SAMPLE**

Lab Sample ID: SE82L QC Report No: SE82-The Boeing Company
LIMS ID: 11-859 Project: Jorgenson Forge
Matrix: Soil 7KPL2JDR
Date Analyzed: 01/25/11 02:04

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	61	< 61 U
101-55-3	4-Bromophenyl-phenylether	61	< 61 U
118-74-1	Hexachlorobenzene	61	< 61 U
87-86-5	Pentachlorophenol	300	< 300 U
85-01-8	Phenanthrene	61	< 61 U
86-74-8	Carbazole	61	< 61 U
120-12-7	Anthracene	61	< 61 U
84-74-2	Di-n-Butylphthalate	61	< 61 U
206-44-0	Fluoranthene	61	< 61 U
129-00-0	Pyrene	61	< 61 U
85-68-7	Butylbenzylphthalate	61	< 61 U
91-94-1	3,3'-Dichlorobenzidine	300	< 300 U
56-55-3	Benzo(a)anthracene	61	< 61 U
117-81-7	bis(2-Ethylhexyl)phthalate	61	< 61 U
218-01-9	Chrysene	61	< 61 U
117-84-0	Di-n-Octyl phthalate	61	< 61 U
50-32-8	Benzo(a)pyrene	61	< 61 U
193-39-5	Indeno(1,2,3-cd)pyrene	61	< 61 U
53-70-3	Dibenz(a,h)anthracene	61	< 61 U
191-24-2	Benzo(g,h,i)perylene	61	< 61 U
90-12-0	1-Methylnaphthalene	61	< 61 U
TOTBFA	Total Benzofluoranthenes	61	< 61 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.2%	2-Fluorobiphenyl	68.0%
d14-p-Terphenyl	68.4%	d4-1,2-Dichlorobenzene	66.0%
d5-Phenol	66.1%	2-Fluorophenol	62.4%
2,4,6-Tribromophenol	66.9%	d4-2-Chlorophenol	67.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B1-SO-13
SAMPLE

Lab Sample ID: SE82M
LIMS ID: 11-860
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/25/11 02:37
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 7.98 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 28.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	63	< 63 U
111-44-4	Bis-(2-Chloroethyl) Ether	63	< 63 U
95-57-8	2-Chlorophenol	63	< 63 U
541-73-1	1,3-Dichlorobenzene	63	< 63 U
106-46-7	1,4-Dichlorobenzene	63	< 63 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	63	< 63 U
95-48-7	2-Methylphenol	63	< 63 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	63	< 63 U
106-44-5	4-Methylphenol	63	< 63 U
621-64-7	N-Nitroso-Di-N-Propylamine	63	< 63 U
67-72-1	Hexachloroethane	63	< 63 U
98-95-3	Nitrobenzene	63	< 63 U
78-59-1	Isophorone	63	< 63 U
88-75-5	2-Nitrophenol	63	< 63 U
105-67-9	2,4-Dimethylphenol	63	< 63 U
65-85-0	Benzoic Acid	630	< 630 U
111-91-1	bis(2-Chloroethoxy) Methane	63	< 63 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	63	< 63 U
91-20-3	Naphthalene	63	< 63 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	63	< 63 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	63	< 63 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	63	< 63 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	63	< 63 U
208-96-8	Acenaphthylene	63	< 63 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	63	< 63 U
51-28-5	2,4-Dinitrophenol	630	< 630 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	63	< 63 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	63	< 63 U
7005-72-3	4-Chlorophenyl-phenylether	63	< 63 U
86-73-7	Fluorene	63	< 63 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	630	< 630 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B1-SO-13
SAMPLE

Lab Sample ID: SE82M
LIMS ID: 11-860
Matrix: Soil
Date Analyzed: 01/25/11 02:37

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	63	< 63 U
101-55-3	4-Bromophenyl-phenylether	63	< 63 U
118-74-1	Hexachlorobenzene	63	< 63 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	Phenanthrene	63	< 63 U
86-74-8	Carbazole	63	< 63 U
120-12-7	Anthracene	63	< 63 U
84-74-2	Di-n-Butylphthalate	63	< 63 U
206-44-0	Fluoranthene	63	< 63 U
129-00-0	Pyrene	63	< 63 U
85-68-7	Butylbenzylphthalate	63	< 63 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	Benzo(a)anthracene	63	< 63 U
117-81-7	bis(2-Ethylhexyl)phthalate	63	< 63 U
218-01-9	Chrysene	63	< 63 U
117-84-0	Di-n-Octyl phthalate	63	< 63 U
50-32-8	Benzo(a)pyrene	63	< 63 U
193-39-5	Indeno(1,2,3-cd)pyrene	63	< 63 U
53-70-3	Dibenz(a,h)anthracene	63	< 63 U
191-24-2	Benzo(g,h,i)perylene	63	< 63 U
90-12-0	1-Methylnaphthalene	63	< 63 U
TOTBFA	Total Benzofluoranthenes	63	< 63 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.2%	2-Fluorobiphenyl	69.6%
d14-p-Terphenyl	74.0%	d4-1,2-Dichlorobenzene	64.4%
d5-Phenol	65.3%	2-Fluorophenol	62.9%
2,4,6-Tribromophenol	70.7%	d4-2-Chlorophenol	66.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B4-SO-03
SAMPLE

Lab Sample ID: SE82N
LIMS ID: 11-861
Matrix: Soil
Data Release Authorized: MW
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/25/11 03:10
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 8.15 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 19.8%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	61	< 61 U
111-44-4	Bis-(2-Chloroethyl) Ether	61	< 61 U
95-57-8	2-Chlorophenol	61	< 61 U
541-73-1	1,3-Dichlorobenzene	61	< 61 U
106-46-7	1,4-Dichlorobenzene	61	< 61 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	61	< 61 U
95-48-7	2-Methylphenol	61	< 61 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	61	< 61 U
106-44-5	4-Methylphenol	61	< 61 U
621-64-7	N-Nitroso-Di-N-Propylamine	61	< 61 U
67-72-1	Hexachloroethane	61	< 61 U
98-95-3	Nitrobenzene	61	< 61 U
78-59-1	Isophorone	61	< 61 U
88-75-5	2-Nitrophenol	61	< 61 U
105-67-9	2,4-Dimethylphenol	61	< 61 U
65-85-0	Benzoic Acid	610	< 610 U
111-91-1	bis(2-Chloroethoxy) Methane	61	< 61 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	61	< 61 U
91-20-3	Naphthalene	61	< 61 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	61	< 61 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	61	< 61 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	61	< 61 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	61	< 61 U
208-96-8	Acenaphthylene	61	< 61 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	61	< 61 U
51-28-5	2,4-Dinitrophenol	610	< 610 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	61	< 61 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	61	< 61 U
7005-72-3	4-Chlorophenyl-phenylether	61	< 61 U
86-73-7	Fluorene	61	< 61 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	610	< 610 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B4-SO-03
SAMPLE

Lab Sample ID: SE82N
LIMS ID: 11-861
Matrix: Soil
Date Analyzed: 01/25/11 03:10

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	61	< 61 U
101-55-3	4-Bromophenyl-phenylether	61	< 61 U
118-74-1	Hexachlorobenzene	61	< 61 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	Phenanthrene	61	< 61 U
86-74-8	Carbazole	61	< 61 U
120-12-7	Anthracene	61	< 61 U
84-74-2	Di-n-Butylphthalate	61	< 61 U
206-44-0	Fluoranthene	61	< 61 U
129-00-0	Pyrene	61	< 61 U
85-68-7	Butylbenzylphthalate	61	< 61 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	Benzo(a)anthracene	61	< 61 U
117-81-7	bis(2-Ethylhexyl)phthalate	61	< 61 U
218-01-9	Chrysene	61	< 61 U
117-84-0	Di-n-Octyl phthalate	61	< 61 U
50-32-8	Benzo(a)pyrene	61	< 61 U
193-39-5	Indeno(1,2,3-cd)pyrene	61	< 61 U
53-70-3	Dibenz(a,h)anthracene	61	< 61 U
191-24-2	Benzo(g,h,i)perylene	61	< 61 U
90-12-0	1-Methylnaphthalene	61	< 61 U
TOTBFA	Total Benzofluoranthenes	61	< 61 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	59.6%	2-Fluorobiphenyl	74.4%
d14-p-Terphenyl	72.8%	d4-1,2-Dichlorobenzene	59.2%
d5-Phenol	53.9%	2-Fluorophenol	35.5%
2,4,6-Tribromophenol	45.6%	d4-2-Chlorophenol	54.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B4-SO-12
SAMPLE

Lab Sample ID: SE820
LIMS ID: 11-862
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/25/11 03:43
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 8.73 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 17.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	57	< 57 U
111-44-4	Bis-(2-Chloroethyl) Ether	57	< 57 U
95-57-8	2-Chlorophenol	57	< 57 U
541-73-1	1,3-Dichlorobenzene	57	< 57 U
106-46-7	1,4-Dichlorobenzene	57	< 57 U
100-51-6	Benzyl Alcohol	290	< 290 U
95-50-1	1,2-Dichlorobenzene	57	< 57 U
95-48-7	2-Methylphenol	57	< 57 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	57	< 57 U
106-44-5	4-Methylphenol	57	< 57 U
621-64-7	N-Nitroso-Di-N-Propylamine	57	< 57 U
67-72-1	Hexachloroethane	57	< 57 U
98-95-3	Nitrobenzene	57	< 57 U
78-59-1	Isophorone	57	< 57 U
88-75-5	2-Nitrophenol	57	< 57 U
105-67-9	2,4-Dimethylphenol	57	< 57 U
65-85-0	Benzoic Acid	570	< 570 U
111-91-1	bis(2-Chloroethoxy) Methane	57	< 57 U
120-83-2	2,4-Dichlorophenol	290	< 290 U
120-82-1	1,2,4-Trichlorobenzene	57	< 57 U
91-20-3	Naphthalene	57	< 57 U
106-47-8	4-Chloroaniline	290	< 290 U
87-68-3	Hexachlorobutadiene	57	< 57 U
59-50-7	4-Chloro-3-methylphenol	290	< 290 U
91-57-6	2-Methylnaphthalene	57	< 57 U
77-47-4	Hexachlorocyclopentadiene	290	< 290 U
88-06-2	2,4,6-Trichlorophenol	290	< 290 U
95-95-4	2,4,5-Trichlorophenol	290	< 290 U
91-58-7	2-Chloronaphthalene	57	< 57 U
88-74-4	2-Nitroaniline	290	< 290 U
131-11-3	Dimethylphthalate	57	< 57 U
208-96-8	Acenaphthylene	57	< 57 U
99-09-2	3-Nitroaniline	290	< 290 U
83-32-9	Acenaphthene	57	< 57 U
51-28-5	2,4-Dinitrophenol	570	< 570 U
100-02-7	4-Nitrophenol	290	< 290 U
132-64-9	Dibenzofuran	57	< 57 U
606-20-2	2,6-Dinitrotoluene	290	< 290 U
121-14-2	2,4-Dinitrotoluene	290	< 290 U
84-66-2	Diethylphthalate	57	< 57 U
7005-72-3	4-Chlorophenyl-phenylether	57	< 57 U
86-73-7	Fluorene	57	< 57 U
100-01-6	4-Nitroaniline	290	< 290 U
534-52-1	4,6-Dinitro-2-Methylphenol	570	< 570 U

Sample ID: JF-T1B4-SO-12
SAMPLE

Lab Sample ID: SE820
LIMS ID: 11-862
Matrix: Soil
Date Analyzed: 01/25/11 03:43

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	57	< 57 U
101-55-3	4-Bromophenyl-phenylether	57	< 57 U
118-74-1	Hexachlorobenzene	57	< 57 U
87-86-5	Pentachlorophenol	290	< 290 U
85-01-8	Phenanthrene	57	< 57 U
86-74-8	Carbazole	57	< 57 U
120-12-7	Anthracene	57	< 57 U
84-74-2	Di-n-Butylphthalate	57	< 57 U
206-44-0	Fluoranthene	57	< 57 U
129-00-0	Pyrene	57	< 57 U
85-68-7	Butylbenzylphthalate	57	< 57 U
91-94-1	3,3'-Dichlorobenzidine	290	< 290 U
56-55-3	Benzo(a)anthracene	57	< 57 U
117-81-7	bis(2-Ethylhexyl)phthalate	57	< 57 U
218-01-9	Chrysene	57	< 57 U
117-84-0	Di-n-Octyl phthalate	57	< 57 U
50-32-8	Benzo(a)pyrene	57	< 57 U
193-39-5	Indeno(1,2,3-cd)pyrene	57	< 57 U
53-70-3	Dibenz(a,h)anthracene	57	< 57 U
191-24-2	Benzo(g,h,i)perylene	57	< 57 U
90-12-0	1-Methylnaphthalene	57	< 57 U
TOTBFA	Total Benzofluoranthenes	57	< 57 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.0%	2-Fluorobiphenyl	77.2%
d14-p-Terphenyl	74.8%	d4-1,2-Dichlorobenzene	66.0%
d5-Phenol	61.6%	2-Fluorophenol	46.7%
2,4,6-Tribromophenol	61.3%	d4-2-Chlorophenol	62.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B4-SO-18
SAMPLE

Lab Sample ID: SE82P
LIMS ID: 11-863
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/25/11 04:16
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 7.98 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 21.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	63	< 63 U
111-44-4	Bis-(2-Chloroethyl) Ether	63	< 63 U
95-57-8	2-Chlorophenol	63	< 63 U
541-73-1	1,3-Dichlorobenzene	63	< 63 U
106-46-7	1,4-Dichlorobenzene	63	< 63 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	63	< 63 U
95-48-7	2-Methylphenol	63	< 63 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	63	< 63 U
106-44-5	4-Methylphenol	63	< 63 U
621-64-7	N-Nitroso-Di-N-Propylamine	63	< 63 U
67-72-1	Hexachloroethane	63	< 63 U
98-95-3	Nitrobenzene	63	< 63 U
78-59-1	Isophorone	63	< 63 U
88-75-5	2-Nitrophenol	63	< 63 U
105-67-9	2,4-Dimethylphenol	63	< 63 U
65-85-0	Benzoic Acid	630	< 630 U
111-91-1	bis(2-Chloroethoxy) Methane	63	< 63 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	63	< 63 U
91-20-3	Naphthalene	63	< 63 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	63	< 63 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	63	< 63 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	63	< 63 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	63	< 63 U
208-96-8	Acenaphthylene	63	< 63 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	63	< 63 U
51-28-5	2,4-Dinitrophenol	630	< 630 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	63	< 63 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	63	< 63 U
7005-72-3	4-Chlorophenyl-phenylether	63	< 63 U
86-73-7	Fluorene	63	< 63 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	630	< 630 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: JF-T1B4-SO-18**
Page 2 of 2 **SAMPLE**

Lab Sample ID: SE82P QC Report No: SE82-The Boeing Company
LIMS ID: 11-863 Project: Jorgenson Forge
Matrix: Soil 7KPL2JDR
Date Analyzed: 01/25/11 04:16

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	63	< 63 U
101-55-3	4-Bromophenyl-phenylether	63	< 63 U
118-74-1	Hexachlorobenzene	63	< 63 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	Phenanthrene	63	< 63 U
86-74-8	Carbazole	63	< 63 U
120-12-7	Anthracene	63	< 63 U
84-74-2	Di-n-Butylphthalate	63	< 63 U
206-44-0	Fluoranthene	63	< 63 U
129-00-0	Pyrene	63	< 63 U
85-68-7	Butylbenzylphthalate	63	< 63 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	Benzo(a)anthracene	63	< 63 U
117-81-7	bis(2-Ethylhexyl)phthalate	63	< 63 U
218-01-9	Chrysene	63	< 63 U
117-84-0	Di-n-Octyl phthalate	63	< 63 U
50-32-8	Benzo(a)pyrene	63	< 63 U
193-39-5	Indeno(1,2,3-cd)pyrene	63	< 63 U
53-70-3	Dibenz(a,h)anthracene	63	< 63 U
191-24-2	Benzo(g,h,i)perylene	63	< 63 U
90-12-0	1-Methylnaphthalene	63	< 63 U
TOTBFA	Total Benzofluoranthenes	63	< 63 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.2%	2-Fluorobiphenyl	76.0%
d14-p-Terphenyl	82.8%	d4-1,2-Dichlorobenzene	68.0%
d5-Phenol	61.3%	2-Fluorophenol	46.9%
2,4,6-Tribromophenol	59.2%	d4-2-Chlorophenol	62.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B3-SO-03
SAMPLE

Lab Sample ID: SE82Q
LIMS ID: 11-864
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/25/11 04:49
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 7.67 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 6.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	65	< 65 U
111-44-4	Bis-(2-Chloroethyl) Ether	65	< 65 U
95-57-8	2-Chlorophenol	65	< 65 U
541-73-1	1,3-Dichlorobenzene	65	< 65 U
106-46-7	1,4-Dichlorobenzene	65	< 65 U
100-51-6	Benzyl Alcohol	330	< 330 U
95-50-1	1,2-Dichlorobenzene	65	< 65 U
95-48-7	2-Methylphenol	65	< 65 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	65	< 65 U
106-44-5	4-Methylphenol	65	< 65 U
621-64-7	N-Nitroso-Di-N-Propylamine	65	< 65 U
67-72-1	Hexachloroethane	65	< 65 U
98-95-3	Nitrobenzene	65	< 65 U
78-59-1	Isophorone	65	< 65 U
88-75-5	2-Nitrophenol	65	< 65 U
105-67-9	2,4-Dimethylphenol	65	< 65 U
65-85-0	Benzoic Acid	650	< 650 U
111-91-1	bis(2-Chloroethoxy) Methane	65	< 65 U
120-83-2	2,4-Dichlorophenol	330	< 330 U
120-82-1	1,2,4-Trichlorobenzene	65	< 65 U
91-20-3	Naphthalene	65	< 65 U
106-47-8	4-Chloroaniline	330	< 330 U
87-68-3	Hexachlorobutadiene	65	< 65 U
59-50-7	4-Chloro-3-methylphenol	330	< 330 U
91-57-6	2-Methylnaphthalene	65	< 65 U
77-47-4	Hexachlorocyclopentadiene	330	< 330 U
88-06-2	2,4,6-Trichlorophenol	330	< 330 U
95-95-4	2,4,5-Trichlorophenol	330	< 330 U
91-58-7	2-Chloronaphthalene	65	< 65 U
88-74-4	2-Nitroaniline	330	< 330 U
131-11-3	Dimethylphthalate	65	< 65 U
208-96-8	Acenaphthylene	65	< 65 U
99-09-2	3-Nitroaniline	330	< 330 U
83-32-9	Acenaphthene	65	< 65 U
51-28-5	2,4-Dinitrophenol	650	< 650 U
100-02-7	4-Nitrophenol	330	< 330 U
132-64-9	Dibenzofuran	65	< 65 U
606-20-2	2,6-Dinitrotoluene	330	< 330 U
121-14-2	2,4-Dinitrotoluene	330	< 330 U
84-66-2	Diethylphthalate	65	< 65 U
7005-72-3	4-Chlorophenyl-phenylether	65	< 65 U
86-73-7	Fluorene	65	< 65 U
100-01-6	4-Nitroaniline	330	< 330 U
534-52-1	4,6-Dinitro-2-Methylphenol	650	< 650 U

Sample ID: JF-T1B3-SO-03
SAMPLE

Lab Sample ID: SE82Q
LIMS ID: 11-864
Matrix: Soil
Date Analyzed: 01/25/11 04:49

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	65	< 65 U
101-55-3	4-Bromophenyl-phenylether	65	< 65 U
118-74-1	Hexachlorobenzene	65	< 65 U
87-86-5	Pentachlorophenol	330	< 330 U
85-01-8	Phenanthrene	65	< 65 U
86-74-8	Carbazole	65	< 65 U
120-12-7	Anthracene	65	< 65 U
84-74-2	Di-n-Butylphthalate	65	< 65 U
206-44-0	Fluoranthene	65	< 65 U
129-00-0	Pyrene	65	< 65 U
85-68-7	Butylbenzylphthalate	65	< 65 U
91-94-1	3,3'-Dichlorobenzidine	330	< 330 U
56-55-3	Benzo(a)anthracene	65	< 65 U
117-81-7	bis(2-Ethylhexyl)phthalate	65	< 65 U
218-01-9	Chrysene	65	< 65 U
117-84-0	Di-n-Octyl phthalate	65	< 65 U
50-32-8	Benzo(a)pyrene	65	< 65 U
193-39-5	Indeno(1,2,3-cd)pyrene	65	< 65 U
53-70-3	Dibenz(a,h)anthracene	65	< 65 U
191-24-2	Benzo(g,h,i)perylene	65	< 65 U
90-12-0	1-Methylnaphthalene	65	< 65 U
TOTBFA	Total Benzofluoranthenes	65	< 65 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	56.4%	2-Fluorobiphenyl	66.0%
d14-p-Terphenyl	78.4%	d4-1,2-Dichlorobenzene	59.2%
d5-Phenol	61.9%	2-Fluorophenol	54.9%
2,4,6-Tribromophenol	72.3%	d4-2-Chlorophenol	61.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: JF-T1B3-SO-08**
Page 1 of 2 **SAMPLE**

Lab Sample ID: SE82R
LIMS ID: 11-865
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/26/11 16:31
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 8.00 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 11.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
111-44-4	Bis-(2-Chloroethyl) Ether	62	< 62 U
95-57-8	2-Chlorophenol	62	< 62 U
541-73-1	1,3-Dichlorobenzene	62	< 62 U
106-46-7	1,4-Dichlorobenzene	62	< 62 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
621-64-7	N-Nitroso-Di-N-Propylamine	62	< 62 U
67-72-1	Hexachloroethane	62	< 62 U
98-95-3	Nitrobenzene	62	< 62 U
78-59-1	Isophorone	62	< 62 U
88-75-5	2-Nitrophenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
65-85-0	Benzoic Acid	620	< 620 U
111-91-1	bis(2-Chloroethoxy) Methane	62	< 62 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	62	< 62 U
91-20-3	Naphthalene	62	< 62 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	62	< 62 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	62	< 62 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	62	< 62 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	62	< 62 U
51-28-5	2,4-Dinitrophenol	620	< 620 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	62	< 62 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	62	< 62 U
7005-72-3	4-Chlorophenyl-phenylether	62	< 62 U
86-73-7	Fluorene	62	< 62 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	620	< 620 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B3-SO-08
SAMPLE

Lab Sample ID: SE82R
LIMS ID: 11-865
Matrix: Soil
Date Analyzed: 01/26/11 16:31

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	62	< 62 U
101-55-3	4-Bromophenyl-phenylether	62	< 62 U
118-74-1	Hexachlorobenzene	62	< 62 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	Phenanthrene	62	< 62 U
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	Di-n-Butylphthalate	62	< 62 U
206-44-0	Fluoranthene	62	< 62 U
129-00-0	Pyrene	62	< 62 U
85-68-7	Butylbenzylphthalate	62	< 62 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	bis(2-Ethylhexyl)phthalate	62	< 62 U
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
90-12-0	1-Methylnaphthalene	62	< 62 U
TOTBFA	Total Benzofluoranthenes	62	< 62 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.8%	2-Fluorobiphenyl	76.8%
d14-p-Terphenyl	75.2%	d4-1,2-Dichlorobenzene	62.8%
d5-Phenol	45.1%	2-Fluorophenol	23.2%
2,4,6-Tribromophenol	28.8%	d4-2-Chlorophenol	47.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B3-SO-18
SAMPLE

Lab Sample ID: SE82S
LIMS ID: 11-866
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/25/11 05:54
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 8.00 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 38.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	62	< 62 U
111-44-4	Bis-(2-Chloroethyl) Ether	62	< 62 U
95-57-8	2-Chlorophenol	62	< 62 U
541-73-1	1,3-Dichlorobenzene	62	< 62 U
106-46-7	1,4-Dichlorobenzene	62	< 62 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
621-64-7	N-Nitroso-Di-N-Propylamine	62	< 62 U
67-72-1	Hexachloroethane	62	< 62 U
98-95-3	Nitrobenzene	62	< 62 U
78-59-1	Isophorone	62	< 62 U
88-75-5	2-Nitrophenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
65-85-0	Benzoic Acid	620	< 620 U
111-91-1	bis(2-Chloroethoxy) Methane	62	< 62 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	62	< 62 U
91-20-3	Naphthalene	62	< 62 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	62	< 62 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	62	< 62 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	62	< 62 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	62	< 62 U
51-28-5	2,4-Dinitrophenol	620	< 620 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	62	< 62 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	62	< 62 U
7005-72-3	4-Chlorophenyl-phenylether	62	< 62 U
86-73-7	Fluorene	62	< 62 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	620	< 620 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B3-SO-18
SAMPLE

Lab Sample ID: SE82S
LIMS ID: 11-866
Matrix: Soil
Date Analyzed: 01/25/11 05:54

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	62	< 62 U
101-55-3	4-Bromophenyl-phenylether	62	< 62 U
118-74-1	Hexachlorobenzene	62	< 62 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	Phenanthrene	62	< 62 U
86-74-8	Carbazole	62	< 62 U
120-12-7	Anthracene	62	< 62 U
84-74-2	**Di-n-Butylphthalate**	**62**	1,100
206-44-0	Fluoranthene	62	< 62 U
129-00-0	Pyrene	62	< 62 U
85-68-7	Butylbenzylphthalate	62	< 62 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	Benzo(a)anthracene	62	< 62 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**62**	1,500
218-01-9	Chrysene	62	< 62 U
117-84-0	Di-n-Octyl phthalate	62	< 62 U
50-32-8	Benzo(a)pyrene	62	< 62 U
193-39-5	Indeno(1,2,3-cd)pyrene	62	< 62 U
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	Benzo(g,h,i)perylene	62	< 62 U
90-12-0	1-Methylnaphthalene	62	< 62 U
TOTBFA	Total Benzofluoranthenes	62	< 62 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.4%	2-Fluorobiphenyl	70.4%
d14-p-Terphenyl	70.4%	d4-1,2-Dichlorobenzene	61.2%
d5-Phenol	60.5%	2-Fluorophenol	56.0%
2,4,6-Tribromophenol	70.4%	d4-2-Chlorophenol	61.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B2-SO-03-D
SAMPLE

Lab Sample ID: SE82T
LIMS ID: 11-867
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/25/11 06:27
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 8.53 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 17.3%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	59	< 59 U
111-44-4	Bis-(2-Chloroethyl) Ether	59	< 59 U
95-57-8	2-Chlorophenol	59	< 59 U
541-73-1	1,3-Dichlorobenzene	59	< 59 U
106-46-7	1,4-Dichlorobenzene	59	< 59 U
100-51-6	Benzyl Alcohol	290	< 290 U
95-50-1	1,2-Dichlorobenzene	59	< 59 U
95-48-7	2-Methylphenol	59	< 59 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	59	< 59 U
106-44-5	4-Methylphenol	59	< 59 U
621-64-7	N-Nitroso-Di-N-Propylamine	59	< 59 U
67-72-1	Hexachloroethane	59	< 59 U
98-95-3	Nitrobenzene	59	< 59 U
78-59-1	Isophorone	59	< 59 U
88-75-5	2-Nitrophenol	59	< 59 U
105-67-9	2,4-Dimethylphenol	59	< 59 U
65-85-0	Benzoic Acid	590	< 590 U
111-91-1	bis(2-Chloroethoxy) Methane	59	< 59 U
120-83-2	2,4-Dichlorophenol	290	< 290 U
120-82-1	1,2,4-Trichlorobenzene	59	< 59 U
91-20-3	Naphthalene	59	< 59 U
106-47-8	4-Chloroaniline	290	< 290 U
87-68-3	Hexachlorobutadiene	59	< 59 U
59-50-7	4-Chloro-3-methylphenol	290	< 290 U
91-57-6	2-Methylnaphthalene	59	< 59 U
77-47-4	Hexachlorocyclopentadiene	290	< 290 U
88-06-2	2,4,6-Trichlorophenol	290	< 290 U
95-95-4	2,4,5-Trichlorophenol	290	< 290 U
91-58-7	2-Chloronaphthalene	59	< 59 U
88-74-4	2-Nitroaniline	290	< 290 U
131-11-3	Dimethylphthalate	59	< 59 U
208-96-8	Acenaphthylene	59	< 59 U
99-09-2	3-Nitroaniline	290	< 290 U
83-32-9	Acenaphthene	59	< 59 U
51-28-5	2,4-Dinitrophenol	590	< 590 U
100-02-7	4-Nitrophenol	290	< 290 U
132-64-9	Dibenzofuran	59	< 59 U
606-20-2	2,6-Dinitrotoluene	290	< 290 U
121-14-2	2,4-Dinitrotoluene	290	< 290 U
84-66-2	Diethylphthalate	59	< 59 U
7005-72-3	4-Chlorophenyl-phenylether	59	< 59 U
86-73-7	Fluorene	59	< 59 U
100-01-6	4-Nitroaniline	290	< 290 U
534-52-1	4,6-Dinitro-2-Methylphenol	590	< 590 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B2-SO-03-D
SAMPLE

Lab Sample ID: SE82T
LIMS ID: 11-867
Matrix: Soil
Date Analyzed: 01/25/11 06:27

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	59	< 59 U
101-55-3	4-Bromophenyl-phenylether	59	< 59 U
118-74-1	Hexachlorobenzene	59	< 59 U
87-86-5	Pentachlorophenol	290	< 290 U
85-01-8	Phenanthrene	59	< 59 U
86-74-8	Carbazole	59	< 59 U
120-12-7	Anthracene	59	< 59 U
84-74-2	Di-n-Butylphthalate	59	< 59 U
206-44-0	Fluoranthene	59	< 59 U
129-00-0	Pyrene	59	< 59 U
85-68-7	Butylbenzylphthalate	59	< 59 U
91-94-1	3,3'-Dichlorobenzidine	290	< 290 U
56-55-3	Benzo(a)anthracene	59	< 59 U
117-81-7	bis(2-Ethylhexyl)phthalate	59	< 59 U
218-01-9	Chrysene	59	< 59 U
117-84-0	Di-n-Octyl phthalate	59	< 59 U
50-32-8	Benzo(a)pyrene	59	< 59 U
193-39-5	Indeno(1,2,3-cd)pyrene	59	< 59 U
53-70-3	Dibenz(a,h)anthracene	59	< 59 U
191-24-2	Benzo(g,h,i)perylene	59	< 59 U
90-12-0	1-Methylnaphthalene	59	< 59 U
TOTBFA	Total Benzofluoranthenes	59	< 59 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.8%	2-Fluorobiphenyl	68.8%
d14-p-Terphenyl	75.6%	d4-1,2-Dichlorobenzene	64.4%
d5-Phenol	66.1%	2-Fluorophenol	62.4%
2,4,6-Tribromophenol	71.2%	d4-2-Chlorophenol	66.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B2-SO-08
SAMPLE

Lab Sample ID: SE82U
LIMS ID: 11-868
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/25/11 15:20
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 7.89 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 23.1%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	63	< 63 U
111-44-4	Bis-(2-Chloroethyl) Ether	63	< 63 U
95-57-8	2-Chlorophenol	63	< 63 U
541-73-1	1,3-Dichlorobenzene	63	< 63 U
106-46-7	1,4-Dichlorobenzene	63	< 63 U
100-51-6	Benzyl Alcohol	320	< 320 U
95-50-1	1,2-Dichlorobenzene	63	< 63 U
95-48-7	2-Methylphenol	63	< 63 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	63	< 63 U
106-44-5	4-Methylphenol	63	< 63 U
621-64-7	N-Nitroso-Di-N-Propylamine	63	< 63 U
67-72-1	Hexachloroethane	63	< 63 U
98-95-3	Nitrobenzene	63	< 63 U
78-59-1	Isophorone	63	< 63 U
88-75-5	2-Nitrophenol	63	< 63 U
105-67-9	2,4-Dimethylphenol	63	< 63 U
65-85-0	Benzoic Acid	630	< 630 U
111-91-1	bis(2-Chloroethoxy) Methane	63	< 63 U
120-83-2	2,4-Dichlorophenol	320	< 320 U
120-82-1	1,2,4-Trichlorobenzene	63	< 63 U
91-20-3	Naphthalene	63	< 63 U
106-47-8	4-Chloroaniline	320	< 320 U
87-68-3	Hexachlorobutadiene	63	< 63 U
59-50-7	4-Chloro-3-methylphenol	320	< 320 U
91-57-6	2-Methylnaphthalene	63	< 63 U
77-47-4	Hexachlorocyclopentadiene	320	< 320 U
88-06-2	2,4,6-Trichlorophenol	320	< 320 U
95-95-4	2,4,5-Trichlorophenol	320	< 320 U
91-58-7	2-Chloronaphthalene	63	< 63 U
88-74-4	2-Nitroaniline	320	< 320 U
131-11-3	Dimethylphthalate	63	< 63 U
208-96-8	Acenaphthylene	63	< 63 U
99-09-2	3-Nitroaniline	320	< 320 U
83-32-9	Acenaphthene	63	< 63 U
51-28-5	2,4-Dinitrophenol	630	< 630 U
100-02-7	4-Nitrophenol	320	< 320 U
132-64-9	Dibenzofuran	63	< 63 U
606-20-2	2,6-Dinitrotoluene	320	< 320 U
121-14-2	2,4-Dinitrotoluene	320	< 320 U
84-66-2	Diethylphthalate	63	< 63 U
7005-72-3	4-Chlorophenyl-phenylether	63	< 63 U
86-73-7	Fluorene	63	< 63 U
100-01-6	4-Nitroaniline	320	< 320 U
534-52-1	4,6-Dinitro-2-Methylphenol	630	< 630 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B2-SO-08
SAMPLE

Lab Sample ID: SE82U
LIMS ID: 11-868
Matrix: Soil
Date Analyzed: 01/25/11 15:20

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	63	< 63 U
101-55-3	4-Bromophenyl-phenylether	63	< 63 U
118-74-1	Hexachlorobenzene	63	< 63 U
87-86-5	Pentachlorophenol	320	< 320 U
85-01-8	Phenanthrene	63	< 63 U
86-74-8	Carbazole	63	< 63 U
120-12-7	Anthracene	63	< 63 U
84-74-2	Di-n-Butylphthalate	63	< 63 U
206-44-0	Fluoranthene	63	< 63 U
129-00-0	Pyrene	63	< 63 U
85-68-7	Butylbenzylphthalate	63	< 63 U
91-94-1	3,3'-Dichlorobenzidine	320	< 320 U
56-55-3	Benzo(a)anthracene	63	< 63 U
117-81-7	bis(2-Ethylhexyl)phthalate	63	< 63 U
218-01-9	Chrysene	63	< 63 U
117-84-0	Di-n-Octyl phthalate	63	< 63 U
50-32-8	Benzo(a)pyrene	63	< 63 U
193-39-5	Indeno(1,2,3-cd)pyrene	63	< 63 U
53-70-3	Dibenz(a,h)anthracene	63	< 63 U
191-24-2	Benzo(g,h,i)perylene	63	< 63 U
90-12-0	1-Methylnaphthalene	63	< 63 U
TOTBFA	Total Benzofluoranthenes	63	< 63 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.4%	2-Fluorobiphenyl	66.4%
d14-p-Terphenyl	75.6%	d4-1,2-Dichlorobenzene	63.2%
d5-Phenol	63.7%	2-Fluorophenol	62.1%
2,4,6-Tribromophenol	59.2%	d4-2-Chlorophenol	65.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B2-SO-13
SAMPLE

Lab Sample ID: SE82V
LIMS ID: 11-869
Matrix: Soil
Data Release Authorized:
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted: 01/18/11
Date Analyzed: 01/25/11 15:53
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 8.31 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 27.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	60	< 60 U
111-44-4	Bis-(2-Chloroethyl) Ether	60	< 60 U
95-57-8	2-Chlorophenol	60	< 60 U
541-73-1	1,3-Dichlorobenzene	60	< 60 U
106-46-7	1,4-Dichlorobenzene	60	< 60 U
100-51-6	Benzyl Alcohol	300	< 300 U
95-50-1	1,2-Dichlorobenzene	60	< 60 U
95-48-7	2-Methylphenol	60	< 60 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	60	< 60 U
106-44-5	4-Methylphenol	60	< 60 U
621-64-7	N-Nitroso-Di-N-Propylamine	60	< 60 U
67-72-1	Hexachloroethane	60	< 60 U
98-95-3	Nitrobenzene	60	< 60 U
78-59-1	Isophorone	60	< 60 U
88-75-5	2-Nitrophenol	60	< 60 U
105-67-9	2,4-Dimethylphenol	60	< 60 U
65-85-0	Benzoic Acid	600	< 600 U
111-91-1	bis(2-Chloroethoxy) Methane	60	< 60 U
120-83-2	2,4-Dichlorophenol	300	< 300 U
120-82-1	1,2,4-Trichlorobenzene	60	< 60 U
91-20-3	Naphthalene	60	< 60 U
106-47-8	4-Chloroaniline	300	< 300 U
87-68-3	Hexachlorobutadiene	60	< 60 U
59-50-7	4-Chloro-3-methylphenol	300	< 300 U
91-57-6	2-Methylnaphthalene	60	< 60 U
77-47-4	Hexachlorocyclopentadiene	300	< 300 U
88-06-2	2,4,6-Trichlorophenol	300	< 300 U
95-95-4	2,4,5-Trichlorophenol	300	< 300 U
91-58-7	2-Chloronaphthalene	60	< 60 U
88-74-4	2-Nitroaniline	300	< 300 U
131-11-3	Dimethylphthalate	60	< 60 U
208-96-8	Acenaphthylene	60	< 60 U
99-09-2	3-Nitroaniline	300	< 300 U
83-32-9	Acenaphthene	60	< 60 U
51-28-5	2,4-Dinitrophenol	600	< 600 U
100-02-7	4-Nitrophenol	300	< 300 U
132-64-9	Dibenzofuran	60	< 60 U
606-20-2	2,6-Dinitrotoluene	300	< 300 U
121-14-2	2,4-Dinitrotoluene	300	< 300 U
84-66-2	Diethylphthalate	60	< 60 U
7005-72-3	4-Chlorophenyl-phenylether	60	< 60 U
86-73-7	Fluorene	60	< 60 U
100-01-6	4-Nitroaniline	300	< 300 U
534-52-1	4,6-Dinitro-2-Methylphenol	600	< 600 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-T1B2-SO-13
SAMPLE

Lab Sample ID: SE82V
LIMS ID: 11-869
Matrix: Soil
Date Analyzed: 01/25/11 15:53

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	60	< 60 U
101-55-3	4-Bromophenyl-phenylether	60	< 60 U
118-74-1	Hexachlorobenzene	60	< 60 U
87-86-5	Pentachlorophenol	300	< 300 U
85-01-8	Phenanthrene	60	< 60 U
86-74-8	Carbazole	60	< 60 U
120-12-7	Anthracene	60	< 60 U
84-74-2	Di-n-Butylphthalate	60	< 60 U
206-44-0	Fluoranthene	60	< 60 U
129-00-0	Pyrene	60	< 60 U
85-68-7	Butylbenzylphthalate	60	< 60 U
91-94-1	3,3'-Dichlorobenzidine	300	< 300 U
56-55-3	Benzo(a)anthracene	60	< 60 U
117-81-7	bis(2-Ethylhexyl)phthalate	60	< 60 U
218-01-9	Chrysene	60	< 60 U
117-84-0	Di-n-Octyl phthalate	60	< 60 U
50-32-8	Benzo(a)pyrene	60	< 60 U
193-39-5	Indeno(1,2,3-cd)pyrene	60	< 60 U
53-70-3	Dibenz(a,h)anthracene	60	< 60 U
191-24-2	Benzo(g,h,i)perylene	60	< 60 U
90-12-0	1-Methylnaphthalene	60	< 60 U
TOTBFA	Total Benzofluoranthenes	60	< 60 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	56.8%	2-Fluorobiphenyl	64.0%
d14-p-Terphenyl	73.6%	d4-1,2-Dichlorobenzene	61.6%
d5-Phenol	59.7%	2-Fluorophenol	58.7%
2,4,6-Tribromophenol	54.1%	d4-2-Chlorophenol	61.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: MB-011811
METHOD BLANK

Lab Sample ID: MB-011811
LIMS ID: 11-857
Matrix: Soil
Data Release Authorized: MW
Reported: 01/27/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: NA
Date Received: NA

Date Extracted: 01/18/11
Date Analyzed: 01/24/11 20:36
Instrument/Analyst: NT6/JZ
GPC Cleanup: Yes

Sample Amount: 7.50 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	67	< 67 U
111-44-4	Bis-(2-Chloroethyl) Ether	67	< 67 U
95-57-8	2-Chlorophenol	67	< 67 U
541-73-1	1,3-Dichlorobenzene	67	< 67 U
106-46-7	1,4-Dichlorobenzene	67	< 67 U
100-51-6	Benzyl Alcohol	330	< 330 U
95-50-1	1,2-Dichlorobenzene	67	< 67 U
95-48-7	2-Methylphenol	67	< 67 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	67	< 67 U
106-44-5	4-Methylphenol	67	< 67 U
621-64-7	N-Nitroso-Di-N-Propylamine	67	< 67 U
67-72-1	Hexachloroethane	67	< 67 U
98-95-3	Nitrobenzene	67	< 67 U
78-59-1	Isophorone	67	< 67 U
88-75-5	2-Nitrophenol	67	< 67 U
105-67-9	2,4-Dimethylphenol	67	< 67 U
65-85-0	Benzoic Acid	670	< 670 U
111-91-1	bis(2-Chloroethoxy) Methane	67	< 67 U
120-83-2	2,4-Dichlorophenol	330	< 330 U
120-82-1	1,2,4-Trichlorobenzene	67	< 67 U
91-20-3	Naphthalene	67	< 67 U
106-47-8	4-Chloroaniline	330	< 330 U
87-68-3	Hexachlorobutadiene	67	< 67 U
59-50-7	4-Chloro-3-methylphenol	330	< 330 U
91-57-6	2-Methylnaphthalene	67	< 67 U
77-47-4	Hexachlorocyclopentadiene	330	< 330 U
88-06-2	2,4,6-Trichlorophenol	330	< 330 U
95-95-4	2,4,5-Trichlorophenol	330	< 330 U
91-58-7	2-Chloronaphthalene	67	< 67 U
88-74-4	2-Nitroaniline	330	< 330 U
131-11-3	Dimethylphthalate	67	< 67 U
208-96-8	Acenaphthylene	67	< 67 U
99-09-2	3-Nitroaniline	330	< 330 U
83-32-9	Acenaphthene	67	< 67 U
51-28-5	2,4-Dinitrophenol	670	< 670 U
100-02-7	4-Nitrophenol	330	< 330 U
132-64-9	Dibenzofuran	67	< 67 U
606-20-2	2,6-Dinitrotoluene	330	< 330 U
121-14-2	2,4-Dinitrotoluene	330	< 330 U
84-66-2	Diethylphthalate	67	< 67 U
7005-72-3	4-Chlorophenyl-phenylether	67	< 67 U
86-73-7	Fluorene	67	< 67 U
100-01-6	4-Nitroaniline	330	< 330 U
534-52-1	4,6-Dinitro-2-Methylphenol	670	< 670 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: MB-011811
METHOD BLANK

Lab Sample ID: MB-011811
LIMS ID: 11-857
Matrix: Soil
Date Analyzed: 01/24/11 20:36

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	67	< 67 U
101-55-3	4-Bromophenyl-phenylether	67	< 67 U
118-74-1	Hexachlorobenzene	67	< 67 U
87-86-5	Pentachlorophenol	330	< 330 U
85-01-8	Phenanthrene	67	< 67 U
86-74-8	Carbazole	67	< 67 U
120-12-7	Anthracene	67	< 67 U
84-74-2	Di-n-Butylphthalate	67	< 67 U
206-44-0	Fluoranthene	67	< 67 U
129-00-0	Pyrene	67	< 67 U
85-68-7	Butylbenzylphthalate	67	< 67 U
91-94-1	3,3'-Dichlorobenzidine	330	< 330 U
56-55-3	Benzo(a)anthracene	67	< 67 U
117-81-7	bis(2-Ethylhexyl)phthalate	67	< 67 U
218-01-9	Chrysene	67	< 67 U
117-84-0	Di-n-Octyl phthalate	67	< 67 U
50-32-8	Benzo(a)pyrene	67	< 67 U
193-39-5	Indeno(1,2,3-cd)pyrene	67	< 67 U
53-70-3	Dibenz(a,h)anthracene	67	< 67 U
191-24-2	Benzo(g,h,i)perylene	67	< 67 U
90-12-0	1-Methylnaphthalene	67	< 67 U
TOTBFA	Total Benzofluoranthenes	67	< 67 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	69.6%	2-Fluorobiphenyl	76.8%
d14-p-Terphenyl	94.8%	d4-1,2-Dichlorobenzene	73.2%
d5-Phenol	77.6%	2-Fluorophenol	71.7%
2,4,6-Tribromophenol	72.5%	d4-2-Chlorophenol	77.3%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-011811	69.6%	76.8%	94.8%	73.2%	77.6%	71.7%	72.5%	77.3%	0
LCS-011811	65.6%	77.6%	94.0%	65.2%	71.7%	66.9%	82.9%	70.9%	0
LCSD-011811	66.0%	78.8%	92.8%	65.2%	72.3%	68.3%	84.5%	70.9%	0
JF-T1B2-SO-03	63.6%	70.0%	70.4%	67.2%	68.8%	65.9%	73.9%	69.9%	0
JF-T1B1-SO-03	54.4%	63.2%	65.2%	59.2%	55.7%	46.9%	52.5%	57.1%	0
JF-T1B1-SO-08	61.2%	68.0%	68.4%	66.0%	66.1%	62.4%	66.9%	67.5%	0
JF-T1B1-SO-13	61.2%	69.6%	74.0%	64.4%	65.3%	62.9%	70.7%	66.9%	0
JF-T1B4-SO-03	59.6%	74.4%	72.8%	59.2%	53.9%	35.5%	45.6%	54.9%	0
JF-T1B4-SO-12	64.0%	77.2%	74.8%	66.0%	61.6%	46.7%	61.3%	62.7%	0
JF-T1B4-SO-18	65.2%	76.0%	82.8%	68.0%	61.3%	46.9%	59.2%	62.9%	0
JF-T1B3-SO-03	56.4%	66.0%	78.4%	59.2%	61.9%	54.9%	72.3%	61.6%	0
JF-T1B3-SO-08	60.8%	76.8%	75.2%	62.8%	45.1%	23.2%	28.8%*	47.7%	1
JF-T1B3-SO-18	58.4%	70.4%	70.4%	61.2%	60.5%	56.0%	70.4%	61.9%	0
JF-T1B2-SO-03-D	60.8%	68.8%	75.6%	64.4%	66.1%	62.4%	71.2%	66.7%	0
JF-T1B2-SO-08	60.4%	66.4%	75.6%	63.2%	63.7%	62.1%	59.2%	65.6%	0
JF-T1B2-SO-13	56.8%	64.0%	73.6%	61.6%	59.7%	58.7%	54.1%	61.6%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(46-102)	(32-106)
(FBP) = 2-Fluorobiphenyl	(51-105)	(39-107)
(TPH) = d14-p-Terphenyl	(55-124)	(31-130)
(DCB) = d4-1,2-Dichlorobenzene	(48-104)	(38-102)
(PHL) = d5-Phenol	(44-110)	(27-112)
(2FP) = 2-Fluorophenol	(38-112)	(22-108)
(TBP) = 2,4,6-Tribromophenol	(54-120)	(31-131)
(2CP) = d4-2-Chlorophenol	(50-103)	(36-104)

Prep Method: SW3546
Log Number Range: 11-857 to 11-869

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: LCS-011811**
Page 1 of 2 LCS/LCSD

Lab Sample ID: LCS-011811 QC Report No: SE82-The Boeing Company
LIMS ID: 11-857 Project: Jorgenson Forge
Matrix: Soil 7KPL2JDR
Data Release Authorized: Date Sampled: 01/14/11
Reported: 01/27/11 Date Received: 01/14/11

Date Extracted LCS/LCSD: 01/18/11 Sample Amount LCS: 7.50 g
LCSD: 7.50 g
Date Analyzed LCS: 01/24/11 21:08 Final Extract Volume LCS: 0.5 mL
LCSD: 01/24/11 21:41 LCSD: 0.5 mL
Instrument/Analyst LCS: NT6/JZ Dilution Factor LCS: 1.00
LCSD: NT6/JZ LCSD: 1.00
GPC Cleanup: Yes Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	1090	1670	65.3%	1120	1670	67.1%	2.7%
Bis-(2-Chloroethyl) Ether	1060	1670	63.5%	1110	1670	66.5%	4.6%
2-Chlorophenol	1180	1670	70.7%	1220	1670	73.1%	3.3%
1,3-Dichlorobenzene	1020	1670	61.1%	1080	1670	64.7%	5.7%
1,4-Dichlorobenzene	1040	1670	62.3%	1080	1670	64.7%	3.8%
Benzyl Alcohol	2020	3330	60.7%	2100	3330	63.1%	3.9%
1,2-Dichlorobenzene	1050	1670	62.9%	1090	1670	65.3%	3.7%
2-Methylphenol	1010	1670	60.5%	1060	1670	63.5%	4.8%
2,2'-Oxybis(1-Chloropropane)	900	1670	53.9%	935	1670	56.0%	3.8%
4-Methylphenol	2100	3330	63.1%	2170	3330	65.2%	3.3%
N-Nitroso-Di-N-Propylamine	1030	1670	61.7%	1060	1670	63.5%	2.9%
Hexachloroethane	1040	1670	62.3%	1070	1670	64.1%	2.8%
Nitrobenzene	1070	1670	64.1%	1100	1670	65.9%	2.8%
Isophorone	1240	1670	74.3%	1280	1670	76.6%	3.2%
2-Nitrophenol	1300	1670	77.8%	1360	1670	81.4%	4.5%
2,4-Dimethylphenol	1020	1670	61.1%	1130	1670	67.7%	10.2%
Benzoic Acid	3310	5000	66.2%	3610	5000	72.2%	8.7%
bis(2-Chloroethoxy) Methane	1070	1670	64.1%	1120	1670	67.1%	4.6%
2,4-Dichlorophenol	1300	1670	77.8%	1370	1670	82.0%	5.2%
1,2,4-Trichlorobenzene	1120	1670	67.1%	1160	1670	69.5%	3.5%
Naphthalene	1210	1670	72.5%	1260	1670	75.4%	4.0%
4-Chloroaniline	3340	4000	83.5%	3450	4000	86.2%	3.2%
Hexachlorobutadiene	1100	1670	65.9%	1150	1670	68.9%	4.4%
4-Chloro-3-methylphenol	1290	1670	77.2%	1340	1670	80.2%	3.8%
2-Methylnaphthalene	1090	1670	65.3%	1150	1670	68.9%	5.4%
Hexachlorocyclopentadiene	3360	5000	67.2%	3560	5000	71.2%	5.8%
2,4,6-Trichlorophenol	1440	1670	86.2%	1460	1670	87.4%	1.4%
2,4,5-Trichlorophenol	1310	1670	78.4%	1320	1670	79.0%	0.8%
2-Chloronaphthalene	1280	1670	76.6%	1330	1670	79.6%	3.8%
2-Nitroaniline	1180	1670	70.7%	1200	1670	71.9%	1.7%
Dimethylphthalate	1340	1670	80.2%	1360	1670	81.4%	1.5%
Acenaphthylene	1380	1670	82.6%	1430	1670	85.6%	3.6%
3-Nitroaniline	3930	4270	92.0%	4040	4270	94.6%	2.8%
Acenaphthene	1310	1670	78.4%	1370	1670	82.0%	4.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCSD-011811
LCS/LCSD

Lab Sample ID: LCS-011811
LIMS ID: 11-857
Matrix: Soil
Date Analyzed LCS: 01/24/11 21:08
LCSD: 01/24/11 21:41

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
2,4-Dinitrophenol	3010 Q	5000	60.2%	3490 Q	5000	69.8%	14.8%
4-Nitrophenol	1480	1670	88.6%	1520	1670	91.0%	2.7%
Dibenzofuran	1250	1670	74.9%	1300	1670	77.8%	3.9%
2,6-Dinitrotoluene	1360	1670	81.4%	1380	1670	82.6%	1.5%
2,4-Dinitrotoluene	1360	1670	81.4%	1370	1670	82.0%	0.7%
Diethylphthalate	1290	1670	77.2%	1310	1670	78.4%	1.5%
4-Chlorophenyl-phenylether	1270	1670	76.0%	1310	1670	78.4%	3.1%
Fluorene	1350	1670	80.8%	1390	1670	83.2%	2.9%
4-Nitroaniline	1360	1670	81.4%	1410	1670	84.4%	3.6%
4,6-Dinitro-2-Methylphenol	4220	5000	84.4%	4550	5000	91.0%	7.5%
N-Nitrosodiphenylamine	1310	1670	78.4%	1350	1670	80.8%	3.0%
4-Bromophenyl-phenylether	1280	1670	76.6%	1330	1670	79.6%	3.8%
Hexachlorobenzene	1250	1670	74.9%	1330	1670	79.6%	6.2%
Pentachlorophenol	1480	1670	88.6%	1560	1670	93.4%	5.3%
Phenanthrene	1420	1670	85.0%	1480	1670	88.6%	4.1%
Carbazole	1280	1670	76.6%	1310	1670	78.4%	2.3%
Anthracene	1390	1670	83.2%	1440	1670	86.2%	3.5%
Di-n-Butylphthalate	1330	1670	79.6%	1380	1670	82.6%	3.7%
Fluoranthene	1390	1670	83.2%	1450	1670	86.8%	4.2%
Pyrene	1660	1670	99.4%	1660	1670	99.4%	0.0%
Butylbenzylphthalate	1500	1670	89.8%	1520	1670	91.0%	1.3%
3,3'-Dichlorobenzidine	4030	4270	94.4%	4190	4270	98.1%	3.9%
Benzo(a)anthracene	1540	1670	92.2%	1560	1670	93.4%	1.3%
bis(2-Ethylhexyl)phthalate	1330	1670	79.6%	1340	1670	80.2%	0.7%
Chrysene	1580	1670	94.6%	1590	1670	95.2%	0.6%
Di-n-Octyl phthalate	1190	1670	71.3%	1160	1670	69.5%	2.6%
Benzo(a)pyrene	1390	1670	83.2%	1420	1670	85.0%	2.1%
Indeno(1,2,3-cd)pyrene	1800 Q	1670	108%	1840 Q	1670	110%	2.2%
Dibenz(a,h)anthracene	1790 Q	1670	107%	1850 Q	1670	111%	3.3%
Benzo(g,h,i)perylene	1820 Q	1670	109%	1820 Q	1670	109%	0.0%
1-Methylnaphthalene	1150	1670	68.9%	1190	1670	71.3%	3.4%
Total Benzofluoranthenes	2890	3330	86.8%	2940	3330	88.3%	1.7%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	65.6%	66.0%
2-Fluorobiphenyl	77.6%	78.8%
d14-p-Terphenyl	94.0%	92.8%
d4-1,2-Dichlorobenzene	65.2%	65.2%
d5-Phenol	71.7%	72.3%
2-Fluorophenol	66.9%	68.3%
2,4,6-Tribromophenol	82.9%	84.5%
d4-2-Chlorophenol	70.9%	70.9%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID-Silica and Acid Cleaned
Page 1 of 2
Matrix: Soil

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

Data Release Authorized: VTB
Reported: 01/22/11

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-011711	Method Blank	01/17/11	01/20/11	1.00	Diesel	5.0	< 5.0 U
11-857	HC ID: ---		FID4B	1.0	Motor Oil	10	< 10 U
					Mineral Oil	10	< 10 U
					o-Terphenyl		97.4%
SE82J	JF-T1B2-SO-03	01/17/11	01/21/11	1.00	Diesel	6.0	< 6.0 U
11-857	HC ID: ---		FID4B	1.0	Motor Oil	12	< 12 U
					Mineral Oil	12	< 12 U
					o-Terphenyl		87.2%
SE82K	JF-T1B1-SO-03	01/17/11	01/21/11	1.00	**Diesel**	**6.0**	**6.7**
11-858	HC ID: **DRO/MOTOR OIL**		FID4B	1.0	**Motor Oil**	**12**	**25**
					Mineral Oil	**12**	**22**
					o-Terphenyl		78.1%
SE82L	JF-T1B1-SO-08	01/17/11	01/21/11	1.00	Diesel	6.6	< 6.6 U
11-859	HC ID: ---		FID4B	1.0	Motor Oil	13	< 13 U
					Mineral Oil	13	< 13 U
					o-Terphenyl		62.7%
SE82M	JF-T1B1-SO-13	01/17/11	01/21/11	1.00	Diesel	6.7	< 6.7 U
11-860	HC ID: ---		FID4B	1.0	Motor Oil	13	< 13 U
					Mineral Oil	13	< 13 U
					o-Terphenyl		90.9%
SE82N	JF-T1B4-SO-03	01/17/11	01/21/11	1.00	**Diesel**	**6.1**	**130**
11-861	HC ID: **DRO/MOTOR OIL**		FID4B	1.0	**Motor Oil**	**12**	**540**
					Mineral Oil	**12**	**470**
					o-Terphenyl		78.2%
SE82O	JF-T1B4-SO-12	01/17/11	01/21/11	1.00	**Diesel**	**6.0**	**15**
11-862	HC ID: **DRO/MOTOR OIL**		FID4B	1.0	**Motor Oil**	**12**	**46**
					Mineral Oil	**12**	**40**
					o-Terphenyl		91.3%
SE82P	JF-T1B4-SO-18	01/17/11	01/21/11	1.00	Diesel	6.4	< 6.4 U
11-863	HC ID: ---		FID4B	1.0	Motor Oil	13	< 13 U
					Mineral Oil	13	< 13 U
					o-Terphenyl		91.8%
SE82Q	JF-T1B3-SO-03	01/17/11	01/21/11	1.00	Diesel	5.2	< 5.2 U
11-864	HC ID: ---		FID4B	1.0	Motor Oil	10	< 10 U
					Mineral Oil	10	< 10 U
					o-Terphenyl		97.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID-Silica and Acid Cleaned
Page 2 of 2
Matrix: Soil

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

Data Release Authorized: VJ
Reported: 01/22/11

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
SE82R	JF-T1B3-SO-08	01/17/11	01/21/11	1.00	**Diesel**	**5.6**	**11**
11-865	HC ID: **DRO/MOTOR OIL**		FID4B	1.0	**Motor Oil**	**11**	**65**
					Mineral Oil	**11**	**57**
					o-Terphenyl		89.7%
SE82S	JF-T1B3-SO-18	01/17/11	01/21/11	1.00	**Diesel**	**8.1**	**91**
11-866	HC ID: **DIESEL/MOTOR OIL**		FID4B	1.0	**Motor Oil**	**16**	**170**
					Mineral Oil	**16**	**150**
					o-Terphenyl		87.1%
SE82T	JF-T1B2-SO-03-D	01/17/11	01/21/11	1.00	Diesel	5.6	< 5.6 U
11-867	HC ID: ---		FID4B	1.0	Motor Oil	11	< 11 U
					Mineral Oil	11	< 11 U
					o-Terphenyl		83.4%
SE82U	JF-T1B2-SO-08	01/17/11	01/21/11	1.00	Diesel	6.4	< 6.4 U
11-868	HC ID: ---		FID4B	1.0	Motor Oil	13	< 13 U
					Mineral Oil	13	< 13 U
					o-Terphenyl		75.6%
SE82V	JF-T1B2-SO-13	01/17/11	01/21/11	1.00	Diesel	6.6	< 6.6 U
11-869	HC ID: ---		FID4B	1.0	Motor Oil	13	< 13 U
					Mineral Oil	13	< 13 U
					o-Terphenyl		89.1%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
Mineral Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

ANALYTICAL RESOURCES INCORPORATED

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

Client ID	OTER	TOT OUT
MB-011711	97.4%	0
LCS-011711	105%	0
LCSD-011711	100%	0
JF-T1B2-SO-03	87.2%	0
JF-T1B1-SO-03	78.1%	0
JF-T1B1-SO-08	62.7%	0
JF-T1B1-SO-13	90.9%	0
JF-T1B4-SO-03	78.2%	0
JF-T1B4-SO-12	91.3%	0
JF-T1B4-SO-18	91.8%	0
JF-T1B3-SO-03	97.1%	0
JF-T1B3-SO-08	89.7%	0
JF-T1B3-SO-18	87.1%	0
JF-T1B2-SO-03-D	83.4%	0
JF-T1B2-SO-08	75.6%	0
JF-T1B2-SO-13	89.1%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(59-134)	(43-137)

Prep Method: SW3546
Log Number Range: 11-857 to 11-869

FORM-II TPHD

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: LCS-011711**
 LCS/LCSD

Lab Sample ID: LCS-011711
LIMS ID: 11-857
Matrix: Soil
Data Release Authorized: VJS
Reported: 01/22/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted LCS/LCSD: 01/17/11

Date Analyzed LCS: 01/21/11 00:23
LCSD: 01/21/11 00:46
Instrument/Analyst LCS: FID/MS
LCSD: FID/MS

Sample Amount LCS: 10.0 g
LCSD: 10.0 g
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.0
LCSD: 1.0

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	138	150	92.0%	133	150	88.7%	3.7%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	105%	100%

Results reported in mg/kg
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Soil
Date Received: 01/14/11

ARI Job: SE82
Project: Jorgenson Forge
7KPL2JDR

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
11-857-011711MB1	Method Blank	10.0 g	1.00 mL	-	01/17/11
11-857-011711LCS1	Lab Control	10.0 g	1.00 mL	-	01/17/11
11-857-011711LCSD1	Lab Control Dup	10.0 g	1.00 mL	-	01/17/11
11-857-SE82J	JF-T1B2-SO-03	8.30 g	1.00 mL	D	01/17/11
11-858-SE82K	JF-T1B1-SO-03	8.31 g	1.00 mL	D	01/17/11
11-859-SE82L	JF-T1B1-SO-08	7.54 g	1.00 mL	D	01/17/11
11-860-SE82M	JF-T1B1-SO-13	7.50 g	1.00 mL	D	01/17/11
11-861-SE82N	JF-T1B4-SO-03	8.20 g	1.00 mL	D	01/17/11
11-862-SE82O	JF-T1B4-SO-12	8.38 g	1.00 mL	D	01/17/11
11-863-SE82P	JF-T1B4-SO-18	7.88 g	1.00 mL	D	01/17/11
11-864-SE82Q	JF-T1B3-SO-03	9.56 g	1.00 mL	D	01/17/11
11-865-SE82R	JF-T1B3-SO-08	8.96 g	1.00 mL	D	01/17/11
11-866-SE82S	JF-T1B3-SO-18	6.17 g	1.00 mL	D	01/17/11
11-867-SE82T	JF-T1B2-SO-03-D	8.87 g	1.00 mL	D	01/17/11
11-868-SE82U	JF-T1B2-SO-08	7.86 g	1.00 mL	D	01/17/11
11-869-SE82V	JF-T1B2-SO-13	7.53 g	1.00 mL	D	01/17/11

Basis: D=Dry Weight W=As Received

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID-Silica and Acid Cleaned
Page 1 of 1
Matrix: Water

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

Data Release Authorized: VJS
Reported: 01/22/11

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-011711	Method Blank	01/17/11	01/21/11	1.00	Diesel	0.10	< 0.10 U
11-874	HC ID: ---		FID3B	1.0	Motor Oil	0.20	< 0.20 U
					Mineral Oil	0.20	< 0.20 U
					o-Terphenyl		86.5%
SE82AA	JF-T1B1-SO-13-R	01/17/11	01/21/11	1.00	Diesel	0.10	< 0.10 U
11-874	HC ID: ---		FID3B	1.0	Motor Oil	0.20	< 0.20 U
					Mineral Oil	0.20	< 0.20 U
					o-Terphenyl		87.5%

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
Mineral Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

ANALYTICAL RESOURCES INCORPORATED

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR

Client ID	OTER	TOT OUT
MB-011711	86.5%	0
LCS-011711	94.0%	0
LCSD-011711	92.0%	0
JF-T1B1-SO-13-R	87.5%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(53-123)	(49-118)

Prep Method: SW3510C
Log Number Range: 11-874 to 11-874

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: LCS-011711**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-011711
LIMS ID: 11-874
Matrix: Water
Data Release Authorized: VTS
Reported: 01/22/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Date Extracted LCS/LCSD: 01/17/11

Date Analyzed LCS: 01/21/11 17:57
LCSD: 01/21/11 18:22
Instrument/Analyst LCS: FID/JGR
LCSD: FID/JGR

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	2.43	3.00	81.0%	2.31	3.00	77.0%	5.1%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	94.0%	92.0%

Results reported in mg/L
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: SE82
Matrix: Water Project: Jorgenson Forge
Date Received: 01/14/11 7KPL2JDR

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
11-874-011711MB1	Method Blank	500 mL	1.00 mL	01/17/11
11-874-011711LCS1	Lab Control	500 mL	1.00 mL	01/17/11
11-874-011711LCSD1	Lab Control Dup	500 mL	1.00 mL	01/17/11
11-874-SE82AA	JF-T1B1-SO-13-R	500 mL	1.00 mL	01/17/11

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: JF-T1B2-SO-03
SAMPLE

Lab Sample ID: SE82J
LIMS ID: 11-857
Matrix: Soil
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Percent Total Solids: 82.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/19/11	6010B	01/20/11	7440-38-2	Arsenic	6	6	U
3050B	01/19/11	6010B	01/20/11	7440-43-9	Cadmium	0.2	0.2	U
3050B	01/19/11	6010B	01/20/11	**7440-50-8**	**Copper**	0.2	**17.5**	
3050B	01/19/11	6010B	01/20/11	**7439-92-1**	**Lead**	2	**4**	
3050B	01/19/11	6010B	01/20/11	**7440-02-0**	**Nickel**	1	**15**	
3050B	01/19/11	6010B	01/20/11	**7440-66-6**	**Zinc**	1	**28**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T1B2-SO-03
DUPLICATE

Lab Sample ID: SE82J
LIMS ID: 11-857
Matrix: Soil
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010B	6 U	6 U	0.0%	+/- 6	L
Cadmium	6010B	0.2 U	0.2 U	0.0%	+/- 0.2	L
Copper	6010B	17.5	16.8	4.1%	+/- 20%	
Lead	6010B	4	4	0.0%	+/- 2	L
Nickel	6010B	15	10	40.0%	+/- 20%	*
Zinc	6010B	28	28	0.0%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T1B2-SO-03
MATRIX SPIKE

Lab Sample ID: SE82J
LIMS ID: 11-857
Matrix: Soil
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010B	6 U	216	225	96.0%	
Cadmium	6010B	0.2 U	56.4	56.1	101%	
Copper	6010B	17.5	70.6	56.1	94.7%	
Lead	6010B	4	215	225	93.8%	
Nickel	6010B	15	65	56.1	89.1%	
Zinc	6010B	28	83	56.1	98.0%	

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T1B1-SO-03
SAMPLE

Lab Sample ID: SE82K
LIMS ID: 11-858
Matrix: Soil
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Percent Total Solids: 81.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/19/11	6010B	01/20/11	**7440-38-2**	**Arsenic**	6	**7**	
3050B	01/19/11	6010B	01/20/11	**7440-43-9**	**Cadmium**	0.2	**0.4**	
3050B	01/19/11	6010B	01/20/11	**7440-50-8**	**Copper**	0.2	**3,830**	
3050B	01/19/11	6010B	01/20/11	**7439-92-1**	**Lead**	2	**24**	
3050B	01/19/11	6010B	01/20/11	**7440-02-0**	**Nickel**	1	**25**	
3050B	01/19/11	6010B	01/20/11	**7440-66-6**	**Zinc**	1	**68**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T1B1-SO-08
SAMPLE

Lab Sample ID: SE82L
LIMS ID: 11-859
Matrix: Soil
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Percent Total Solids: 74.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/19/11	6010B	01/20/11	7440-38-2	Arsenic	7	7	U
3050B	01/19/11	6010B	01/20/11	7440-43-9	Cadmium	0.3	0.3	U
3050B	01/19/11	6010B	01/20/11	**7440-50-8**	**Copper**	0.3	**21.2**	
3050B	01/19/11	6010B	01/20/11	7439-92-1	Lead	3	3	U
3050B	01/19/11	6010B	01/20/11	**7440-02-0**	**Nickel**	1	**11**	
3050B	01/19/11	6010B	01/20/11	**7440-66-6**	**Zinc**	1	**25**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T1B1-SO-13
SAMPLE

Lab Sample ID: SE82M
LIMS ID: 11-860
Matrix: Soil
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Percent Total Solids: 72.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/19/11	6010B	01/20/11	7440-38-2	Arsenic	7	7	U
3050B	01/19/11	6010B	01/20/11	**7440-43-9**	**Cadmium**	0.3	**0.3**	
3050B	01/19/11	6010B	01/20/11	**7440-50-8**	**Copper**	0.3	**16.9**	
3050B	01/19/11	6010B	01/20/11	7439-92-1	Lead	3	3	U
3050B	01/19/11	6010B	01/20/11	**7440-02-0**	**Nickel**	1	**14**	
3050B	01/19/11	6010B	01/20/11	**7440-66-6**	**Zinc**	1	**245**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: JF-T1B4-SO-03
SAMPLE

Lab Sample ID: SE82N
LIMS ID: 11-861
Matrix: Soil
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Percent Total Solids: 78.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/19/11	6010B	01/20/11	7440-38-2	Arsenic	120	120	U
3050B	01/19/11	6010B	01/20/11	**7440-43-9**	**Cadmium**	5	**87**	
3050B	01/19/11	6010B	01/20/11	**7440-50-8**	**Copper**	5	**55,900**	
3050B	01/19/11	6010B	01/20/11	**7439-92-1**	**Lead**	50	**2,850**	
3050B	01/19/11	6010B	01/20/11	**7440-02-0**	**Nickel**	20	**2,160**	
3050B	01/19/11	6010B	01/20/11	**7440-66-6**	**Zinc**	20	**5,270**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
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Sample ID: JF-T1B4-SO-12
SAMPLE

Lab Sample ID: SE820
LIMS ID: 11-862
Matrix: Soil
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Percent Total Solids: 83.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/19/11	6010B	01/20/11	7440-38-2	Arsenic	6	6	U
3050B	01/19/11	6010B	01/20/11	**7440-43-9**	**Cadmium**	0.2	**0.8**	
3050B	01/19/11	6010B	01/20/11	**7440-50-8**	**Copper**	0.2	**59.4**	
3050B	01/19/11	6010B	01/20/11	**7439-92-1**	**Lead**	2	**11**	
3050B	01/19/11	6010B	01/20/11	**7440-02-0**	**Nickel**	1	**22**	
3050B	01/19/11	6010B	01/20/11	**7440-66-6**	**Zinc**	1	**83**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T1B4-SO-18
SAMPLE

Lab Sample ID: SE82P
LIMS ID: 11-863
Matrix: Soil
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Percent Total Solids: 79.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/19/11	6010B	01/20/11	7440-38-2	Arsenic	6	6	U
3050B	01/19/11	6010B	01/20/11	7440-43-9	Cadmium	0.2	0.2	U
3050B	01/19/11	6010B	01/20/11	**7440-50-8**	**Copper**	0.2	**9.5**	
3050B	01/19/11	6010B	01/20/11	**7439-92-1**	**Lead**	2	**5**	
3050B	01/19/11	6010B	01/20/11	**7440-02-0**	**Nickel**	1	**8**	
3050B	01/19/11	6010B	01/20/11	**7440-66-6**	**Zinc**	1	**57**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T1B3-SO-03
SAMPLE

Lab Sample ID: SE82Q
LIMS ID: 11-864
Matrix: Soil
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Percent Total Solids: 93.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/19/11	6010B	01/20/11	7440-38-2	Arsenic	5	5	U
3050B	01/19/11	6010B	01/20/11	**7440-43-9**	**Cadmium**	0.2	**0.3**	
3050B	01/19/11	6010B	01/20/11	**7440-50-8**	**Copper**	0.2	**45.7**	
3050B	01/19/11	6010B	01/20/11	**7439-92-1**	**Lead**	2	**7**	
3050B	01/19/11	6010B	01/20/11	**7440-02-0**	**Nickel**	1	**20**	
3050B	01/19/11	6010B	01/20/11	**7440-66-6**	**Zinc**	1	**53**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: JF-T1B3-SO-08
SAMPLE

Lab Sample ID: SE82R
LIMS ID: 11-865
Matrix: Soil
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Percent Total Solids: 89.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/19/11	6010B	01/20/11	**7440-38-2**	**Arsenic**	5	**6**	
3050B	01/19/11	6010B	01/20/11	**7440-43-9**	**Cadmium**	0.2	**1.1**	
3050B	01/19/11	6010B	01/20/11	**7440-50-8**	**Copper**	0.2	**70.5**	
3050B	01/19/11	6010B	01/20/11	**7439-92-1**	**Lead**	2	**11**	
3050B	01/19/11	6010B	01/20/11	**7440-02-0**	**Nickel**	1	**25**	
3050B	01/19/11	6010B	01/20/11	**7440-66-6**	**Zinc**	1	**126**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T1B3-SO-18
SAMPLE

Lab Sample ID: SE82S
LIMS ID: 11-866
Matrix: Soil
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Percent Total Solids: 56.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/19/11	6010B	01/20/11	**7440-38-2**	**Arsenic**	9	**12**	
3050B	01/19/11	6010B	01/20/11	**7440-43-9**	**Cadmium**	0.3	**38.2**	
3050B	01/19/11	6010B	01/20/11	**7440-50-8**	**Copper**	0.3	**257**	
3050B	01/19/11	6010B	01/20/11	**7439-92-1**	**Lead**	3	**1,330**	
3050B	01/19/11	6010B	01/20/11	**7440-02-0**	**Nickel**	2	**53**	
3050B	01/19/11	6010B	01/20/11	**7440-66-6**	**Zinc**	2	**2,720**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T1B2-SO-03-D
SAMPLE

Lab Sample ID: SE82T
LIMS ID: 11-867
Matrix: Soil
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Percent Total Solids: 82.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/19/11	6010B	01/20/11	7440-38-2	Arsenic	6	6	U
3050B	01/19/11	6010B	01/20/11	7440-43-9	Cadmium	0.2	0.2	U
3050B	01/19/11	6010B	01/20/11	**7440-50-8**	**Copper**	0.2	**14.5**	
3050B	01/19/11	6010B	01/20/11	**7439-92-1**	**Lead**	2	**4**	
3050B	01/19/11	6010B	01/20/11	**7440-02-0**	**Nickel**	1	**9**	
3050B	01/19/11	6010B	01/20/11	**7440-66-6**	**Zinc**	1	**28**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T1B2-SO-08
SAMPLE

Lab Sample ID: SE82U
LIMS ID: 11-868
Matrix: Soil
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Percent Total Solids: 78.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/19/11	6010B	01/20/11	7440-38-2	Arsenic	6	6	U
3050B	01/19/11	6010B	01/20/11	7440-43-9	Cadmium	0.2	0.2	U
3050B	01/19/11	6010B	01/20/11	**7440-50-8**	**Copper**	0.2	**17.6**	
3050B	01/19/11	6010B	01/20/11	**7439-92-1**	**Lead**	2	**3**	
3050B	01/19/11	6010B	01/20/11	**7440-02-0**	**Nickel**	1	**13**	
3050B	01/19/11	6010B	01/20/11	**7440-66-6**	**Zinc**	1	**29**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-T1B2-SO-13
SAMPLE

Lab Sample ID: SE82V
LIMS ID: 11-869
Matrix: Soil
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Percent Total Solids: 70.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/19/11	6010B	01/20/11	7440-38-2	Arsenic	7	7	U
3050B	01/19/11	6010B	01/20/11	7440-43-9	Cadmium	0.3	0.3	U
3050B	01/19/11	6010B	01/20/11	**7440-50-8**	**Copper**	0.3	**18.2**	
3050B	01/19/11	6010B	01/20/11	7439-92-1	Lead	3	3	U
3050B	01/19/11	6010B	01/20/11	**7440-02-0**	**Nickel**	1	**13**	
3050B	01/19/11	6010B	01/20/11	**7440-66-6**	**Zinc**	1	**26**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: SE82MB
LIMS ID: 11-858
Matrix: Soil
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/19/11	6010B	01/20/11	7440-38-2	Arsenic	5	5	U
3050B	01/19/11	6010B	01/20/11	7440-43-9	Cadmium	0.2	0.2	U
3050B	01/19/11	6010B	01/20/11	7440-50-8	Copper	0.2	0.2	U
3050B	01/19/11	6010B	01/20/11	7439-92-1	Lead	2	2	U
3050B	01/19/11	6010B	01/20/11	7440-02-0	Nickel	1	1	U
3050B	01/19/11	6010B	01/20/11	7440-66-6	Zinc	1	1	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: LAB CONTROL

Lab Sample ID: SE82LCS
LIMS ID: 11-858
Matrix: Soil
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010B	189	200	94.5%	
Cadmium	6010B	48.8	50.0	97.6%	
Copper	6010B	48.9	50.0	97.8%	
Lead	6010B	186	200	93.0%	
Nickel	6010B	48	50	96.0%	
Zinc	6010B	48	50	96.0%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: JF-T1B1-SO-13-R
SAMPLE

Lab Sample ID: SE82AA
LIMS ID: 11-874
Matrix: Water
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: 01/14/11
Date Received: 01/14/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	01/18/11	6010B	01/20/11	7440-38-2	Arsenic	0.05	0.05	U
3010A	01/18/11	6010B	01/20/11	7440-43-9	Cadmium	0.002	0.002	U
3010A	01/18/11	6010B	01/20/11	7440-50-8	Copper	0.002	0.002	U
3010A	01/18/11	6010B	01/20/11	7439-92-1	Lead	0.02	0.02	U
3010A	01/18/11	6010B	01/20/11	7440-02-0	Nickel	0.01	0.01	U
3010A	01/18/11	6010B	01/20/11	7440-66-6	Zinc	0.01	0.01	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: SE82MB
LIMS ID: 11-874
Matrix: Water
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	01/18/11	6010B	01/20/11	7440-38-2	Arsenic	0.05	0.05	U
3010A	01/18/11	6010B	01/20/11	7440-43-9	Cadmium	0.002	0.002	U
3010A	01/18/11	6010B	01/20/11	7440-50-8	Copper	0.002	0.002	U
3010A	01/18/11	6010B	01/20/11	7439-92-1	Lead	0.02	0.02	U
3010A	01/18/11	6010B	01/20/11	7440-02-0	Nickel	0.01	0.01	U
3010A	01/18/11	6010B	01/20/11	7440-66-6	Zinc	0.01	0.01	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: SE82LCS
LIMS ID: 11-874
Matrix: Water
Data Release Authorized:
Reported: 01/21/11

QC Report No: SE82-The Boeing Company
Project: Jorgenson Forge
7KPL2JDR
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010B	1.97	2.00	98.5%	
Cadmium	6010B	0.509	0.500	102%	
Copper	6010B	0.503	0.500	101%	
Lead	6010B	1.94	2.00	97.0%	
Nickel	6010B	0.50	0.50	100%	
Zinc	6010B	0.50	0.50	100%	

Reported in mg/L

N-Control limit not met
Control Limits: 80-120%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

February 11, 2011

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge PLO
ARI Job No: SG07

Dear Tom:

Please find enclosed analytical results and the original Chain of Custody documentation (COC) for the project referenced above. Analytical Resources, Incorporated (ARI) accepted ten soil samples and one water sample on January 24, 2011. The samples were received in good condition. Select samples were placed on hold pending further instructions.

The samples were analyzed for Total Metals, TCLP Metals, SVOCs, PCBs and NWTPH-Dx, as requested.

The PCBs surrogate TCMX is out of control high for sample JF-PLSD-PS-15A. No action was taken.

The PCBs matrix spike and matrix spike duplicate were not recovered for sample JF-PLSD-PS-37-7-M due to the high concentration of analyte in the original sample and/or calculated negative recovery. No action was taken.

The NWTPH-Dx matrix spike and matrix spike duplicate were not recovered for sample JF-PLSD-PS-37-7-M due to the high concentration of analyte in the original sample and/or calculated negative recovery. No further was taken.

The total metals matrix spike for sample JF-PLSD-PS-37-7-M is out of control low for copper. No action was taken.

The TCLP method blank contained barium due to filtering. No action was taken.

The SVOCs 2/2/11 method blank contained bis (2-Ethylhexyl) phthalate. All associated samples that contain analyte have been flagged with a "B" qualifier.

The SVOCs sample JF-PLSD-PS-15B had low surrogate recoveries for 2FP, TBP and 2CP. The sample was re-extracted and re-analyzed with all surrogate recoveries in control. Both sets of data have been included for your review.

Several sample surrogates for SVOCs were out of control both high and/or low. Samples that had two or more surrogates out of control were re-analyzed at a dilution. Both sets of data have been included for your review.

The SVOCs 2/4/11 and 2/8/11 CCALs are out of control high for Indeno(1,2,3-cd) pyrene, dibenzo (a,h) anthracene and benzo (g,h,i) perylene . All associated samples that contain analyte have been flagged with a "Q" qualifier.

The SVOCs 2/7/11 CCAL is are out of control high for 4-Nitrophenol, dibenzo (a,h) anthracene and benzo (g,h,i) perylene . All associated samples that contain analyte have been flagged with a "Q" qualifier.

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Analytical Resources, Incorporated
Analytical Chemists and Consultants

The SVOCs 2/10/11 CCAL is out of control high for 4-Nitroaniline and 4-Nitrophenol. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The SVOCs internal standard Perylene-d12 was out of control low for sample JF-PLSD-PS-37-7-M and its associated QC. The sample was re-analyzed at a dilution with all internal standard recoveries in control. Both sets of data have been included for your review.

The SVOCs matrix spike and/or matrix spike duplicate for sample JF-PLSD-PS-37-7-M is out of control low for several compounds. No action was taken.

No other analytical complications were noted for these analyses. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206-695-6211
Enclosures

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 5	Turn-around Requested: Standard
ARI Client Company: FLOYD | SNIDER Boeing	Phone: 206-292-2078
Client Contact: NICK GARSON / TOM COLLIGAN	
Client Project Name: JORGENSEN FORGE	
Client Project #: 7KPL2JOR	Samplers: DEAN BRAME / TOM COLLIGAN

Page: 1 of 2

Date: 1/24/11 | Ice Present? Y

No. of Coolers: 1 | Cooler Temps: 6.6

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

Sample ID	Date	Time	Matrix	No. Containers	PCBs	SVOCs	TPH-D	Metals As, Cd, Cu, Pb Ni, Zn					Notes/Comments
JF-PLSD-PS-15A	1/24/11	1310	SOIL	3	x	x	x	x					
JF-PLSD-PS-15B	↓	1455	↓	↓	↓	↓	↓	↓					
JF-PLSD-PS-24A	↓	1340	↓	↓	↓	↓	↓	↓					
JF-PLSD-PS-24B	↓	1415	↓	↓	↓	↓	↓	↓					
JF-PLSD-PS-37-7	↓	1230	↓	↓	↓	↓	↓	↓					
JF-PLSD-PS-37-2	↓	1200	↓	↓	↓	↓	↓	↓					
JF-PLSD-PS-PUBLIC	↓	1110	↓	↓	↓	↓	↓	↓					
JF-PLSD-PS-~~15B-R~~ -24B-D	↓	1420	↓	↓	↓	↓	↓	↓					
JF-PLSD-PS-37-7-M	↓	1235	↓	↓	↓	↓	↓	↓					MS/MSD
JF-PLSD-PS-15B-R	↓	1515	WATER	2	x								

Comments/Special Instructions

Relinquished by:	Received by:	Relinquished by:	Received by:
(Signature) [signature]	(Signature) [signature]	(Signature)	(Signature)
Printed Name: DEAN BRAME	Printed Name: Taylor Streeter	Printed Name:	Printed Name:
Company: FLOYD | SNIDER	Company: ARI	Company:	Company:
Date & Time: 1/24/11 1606	Date & Time: 1/24/11 1606	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.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard	Page: 2 of 2	
ARI Client Company: FLOYD | SNIDER | BOEING	Phone: 206-292-2078	Date: 1/24/11	Ice Present?
Client Contact: NICK GARSON / TOM COLLIGAN		No. of Coolers:	Cooler Temps: 6.6
Client Project Name: JORGENSEN FORGE			
Client Project #: 7KPL2 JOR	Samplers: DEAN BRAME/TOM COLLIGAN		

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

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: PCBs	SVOCs	TPH-D	Metals As, Cd, Cu, Pb, Ni, Zn	TCLP-RCRA				Notes/Comments
JF-PLSD-PS-TCLP	1/24/11	1450	SOIL	1					X				

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: DEAN BRAME	Printed Name: Tayler Streeter	Printed Name:	Printed Name:
	Company: FLOYD SNIDER	Company: ARI	Company:	Company:
	Date & Time: 1/24/11 1606	Date & Time: 1/24/11 1606	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: ~~Floyd Snider~~ Boeing Project Name: Jorgensen Forge

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: SG07 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)..... 6.6 ___ ___ ___ ___

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: TS Date: 1-24-11 Time: 16:06

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)		_____

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

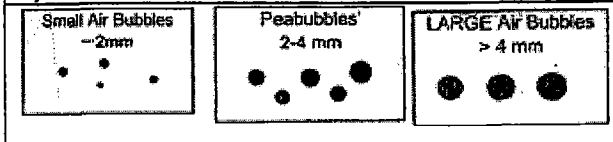
Samples Logged by: MM Date: 1/25/11 Time: 0900.

***** 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:

By: Date:



Small → "sm"	
Peabubbles → "pb"	
Large → "lg"	
Headspace → "hs"	

SG07 : 00005

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Temperature Compliance Form

Cooler#: 1	Temperature(°C): 6.6	
Sample ID	**Bottle Count**	**Bottle Type**
All samples were out of temp compliance		

Cooler#:	Temperature(°C):	
Sample ID	**Bottle Count**	**Bottle Type**

Cooler#:	Temperature(°C):	
Sample ID	**Bottle Count**	**Bottle Type**

Cooler#:	Temperature(°C):	
Sample ID	**Bottle Count**	**Bottle Type**

Completed by: TS Date: 1-27-11 Time: ~~16:06~~ 16:06

SGGT : 00005

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-PLSD-PS-15A
SAMPLE

Lab Sample ID: SG07A
LIMS ID: 11-1522
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 01/31/11
Date Analyzed: 02/03/11 16:58
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 4.48 g-dry-wt
Final Extract Volume: 40 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 11.9%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1,800	< 1,800 U
53469-21-9	Aroclor 1242	1,800	< 1,800 U
12672-29-6	**Aroclor 1248**	**1,800**	**26,000**
11097-69-1	**Aroclor 1254**	**1,800**	**36,000**
11096-82-5	**Aroclor 1260**	**1,800**	**6,000**
11104-28-2	Aroclor 1221	1,800	< 1,800 U
11141-16-5	Aroclor 1232	1,800	< 1,800 U
37324-23-5	Aroclor 1262	1,800	< 1,800 U
11100-14-4	Aroclor 1268	1,800	< 1,800 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	132%
Tetrachlorometaxylene	124%

SG07 : 00007

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-PLSD-PS-15B
SAMPLE

Lab Sample ID: SG07B
LIMS ID: 11-1523
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 01/31/11
Date Analyzed: 02/03/11 17:17
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 1.82 g-dry-wt
Final Extract Volume: 40 mL
Dilution Factor: 50.0
Silica Gel: No

Percent Moisture: 27.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	22,000	< 22,000 U
53469-21-9	Aroclor 1242	22,000	< 22,000 U
12672-29-6	Aroclor 1248	160,000	< 160,000 Y
11097-69-1	**Aroclor 1254**	**22,000**	**630,000**
11096-82-5	**Aroclor 1260**	**22,000**	**120,000**
11104-28-2	Aroclor 1221	22,000	< 22,000 U
11141-16-5	Aroclor 1232	22,000	< 22,000 U
37324-23-5	Aroclor 1262	22,000	< 22,000 U
11100-14-4	Aroclor 1268	22,000	< 22,000 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

SG07 : 00006

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-PLSD-PS-24A
SAMPLE

Lab Sample ID: SG07C
LIMS ID: 11-1524
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 01/31/11
Date Analyzed: 02/03/11 17:36
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 4.20 g-dry-wt
Final Extract Volume: 40 mL
Dilution Factor: 10.0
Silica Gel: No

Percent Moisture: 16.5%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1,900	< 1,900 U
53469-21-9	Aroclor 1242	1,900	< 1,900 U
12672-29-6	Aroclor 1248	19,000	< 19,000 Y
11097-69-1	**Aroclor 1254**	**1,900**	**39,000**
11096-82-5	Aroclor 1260	4,800	< 4,800 Y
11104-28-2	Aroclor 1221	1,900	< 1,900 U
11141-16-5	Aroclor 1232	1,900	< 1,900 U
37324-23-5	Aroclor 1262	1,900	< 1,900 U
11100-14-4	Aroclor 1268	1,900	< 1,900 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	119%
Tetrachlorometaxylene	102%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-PLSD-PS-24B
SAMPLE

Lab Sample ID: SG07D
LIMS ID: 11-1525
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 01/31/11
Date Analyzed: 02/03/11 17:55
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 0.76 g-dry-wt
Final Extract Volume: 40 mL
Dilution Factor: 200
Silica Gel: No

Percent Moisture: 29.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	210,000	< 210,000 U
53469-21-9	Aroclor 1242	210,000	< 210,000 U
12672-29-6	Aroclor 1248	740,000	< 740,000 Y
11097-69-1	**Aroclor 1254**	**210,000**	**1,600,000**
11096-82-5	Aroclor 1260	210,000	< 210,000 U
11104-28-2	Aroclor 1221	210,000	< 210,000 U
11141-16-5	Aroclor 1232	210,000	< 210,000 U
37324-23-5	Aroclor 1262	210,000	< 210,000 U
11100-14-4	Aroclor 1268	210,000	< 210,000 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

SG07 : 00016

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
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Sample ID: JF-PLSD-PS-37-7
SAMPLE

Lab Sample ID: SG07E
LIMS ID: 11-1526
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 01/31/11
Date Analyzed: 02/03/11 18:13
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 0.51 g-dry-wt
Final Extract Volume: 40 mL
Dilution Factor: 200
Silica Gel: No

Percent Moisture: 51.2%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	320,000	< 320,000 U
53469-21-9	Aroclor 1242	320,000	< 320,000 U
12672-29-6	Aroclor 1248	1,100,000	< 1,100,000 Y
11097-69-1	**Aroclor 1254**	**320,000**	**1,900,000**
11096-82-5	Aroclor 1260	320,000	< 320,000 U
11104-28-2	Aroclor 1221	320,000	< 320,000 U
11141-16-5	Aroclor 1232	320,000	< 320,000 U
37324-23-5	Aroclor 1262	320,000	< 320,000 U
11100-14-4	Aroclor 1268	320,000	< 320,000 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

FORM I

SG07:00011

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
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Sample ID: JF-PLSD-PS-37-2
SAMPLE

Lab Sample ID: SG07F
LIMS ID: 11-1527
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 01/31/11
Date Analyzed: 02/03/11 18:32
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 0.78 g-dry-wt
Final Extract Volume: 40 mL
Dilution Factor: 2000
Silica Gel: No

Percent Moisture: 26.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	2,000,000	< 2,000,000 U
53469-21-9	Aroclor 1242	2,000,000	< 2,000,000 U
12672-29-6	Aroclor 1248	6,100,000	< 6,100,000 Y
11097-69-1	**Aroclor 1254**	**2,000,000**	**8,800,000**
11096-82-5	Aroclor 1260	2,000,000	< 2,000,000 U
11104-28-2	Aroclor 1221	2,000,000	< 2,000,000 U
11141-16-5	Aroclor 1232	2,000,000	< 2,000,000 U
37324-23-5	Aroclor 1262	2,000,000	< 2,000,000 U
11100-14-4	Aroclor 1268	2,000,000	< 2,000,000 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

FORM I

SG07:00012

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
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Sample ID: JF-PLSD-PS-PUBLIC SAMPLE

Lab Sample ID: SG07G
LIMS ID: 11-1528
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge 7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 01/31/11
Date Analyzed: 02/03/11 19:29
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 1.83 g-dry-wt
Final Extract Volume: 40 mL
Dilution Factor: 100
Silica Gel: No

Percent Moisture: 27.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	44,000	< 44,000 U
53469-21-9	Aroclor 1242	44,000	< 44,000 U
12672-29-6	Aroclor 1248	87,000	< 87,000 Y
11097-69-1	**Aroclor 1254**	**44,000**	**150,000**
11096-82-5	Aroclor 1260	44,000	< 44,000 U
11104-28-2	Aroclor 1221	44,000	< 44,000 U
11141-16-5	Aroclor 1232	44,000	< 44,000 U
37324-23-5	Aroclor 1262	44,000	< 44,000 U
11100-14-4	Aroclor 1268	44,000	< 44,000 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

FORM I

SG07:00013

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
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Sample ID: JF-PLSD-PS-24B-D
SAMPLE

Lab Sample ID: SG07H
LIMS ID: 11-1529
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 01/31/11
Date Analyzed: 02/03/11 19:47
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 1.89 g-dry-wt
Final Extract Volume: 40 mL
Dilution Factor: 200
Silica Gel: No

Percent Moisture: 24.6%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	84,000	< 84,000 U
53469-21-9	Aroclor 1242	84,000	< 84,000 U
12672-29-6	Aroclor 1248	840,000	< 840,000 Y
11097-69-1	**Aroclor 1254**	**84,000**	**1,700,000**
11096-82-5	Aroclor 1260	210,000	< 210,000 Y
11104-28-2	Aroclor 1221	84,000	< 84,000 U
11141-16-5	Aroclor 1232	84,000	< 84,000 U
37324-23-5	Aroclor 1262	84,000	< 84,000 U
11100-14-4	Aroclor 1268	84,000	< 84,000 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

SG07:00014

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
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Sample ID: JF-PLSD-PS-37-7-M
SAMPLE

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 01/31/11
Date Analyzed: 02/03/11 20:06
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 0.56 g-dry-wt
Final Extract Volume: 40 mL
Dilution Factor: 200
Silica Gel: No

Percent Moisture: 45.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	280,000	< 280,000 U
53469-21-9	Aroclor 1242	280,000	< 280,000 U
12672-29-6	Aroclor 1248	1,100,000	< 1,100,000 Y
11097-69-1	**Aroclor 1254**	**280,000**	**2,300,000**
11096-82-5	Aroclor 1260	280,000	< 280,000 U
11104-28-2	Aroclor 1221	280,000	< 280,000 U
11141-16-5	Aroclor 1232	280,000	< 280,000 U
37324-23-5	Aroclor 1262	280,000	< 280,000 U
11100-14-4	Aroclor 1268	280,000	< 280,000 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

SG07:00015

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-PLSD-PS-37-7-M
MATRIX SPIKE

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 01/31/11
Date Analyzed: 02/03/11 20:25
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 0.58 g-dry-wt
Final Extract Volume: 40 mL
Dilution Factor: 200
Silica Gel: No

Percent Moisture: 45.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	280,000	---
53469-21-9	Aroclor 1242	280,000	< 280,000 U
12672-29-6	Aroclor 1248	1,400,000	< 1,400,000 Y
11097-69-1	**Aroclor 1254**	**280,000**	**2,300,000**
11096-82-5	Aroclor 1260	280,000	---
11104-28-2	Aroclor 1221	280,000	< 280,000 U
11141-16-5	Aroclor 1232	280,000	< 280,000 U
37324-23-5	Aroclor 1262	280,000	< 280,000 U
11100-14-4	Aroclor 1268	280,000	< 280,000 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

SG07:00016

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: JF-PLSD-PS-37-7-M
MATRIX SPIKE DUP

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 01/31/11
Date Analyzed: 02/03/11 20:44
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 0.58 g-dry-wt
Final Extract Volume: 40 mL
Dilution Factor: 200
Silica Gel: No

Percent Moisture: 45.4%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	280,000	---
53469-21-9	Aroclor 1242	280,000	< 280,000 U
12672-29-6	Aroclor 1248	970,000	< 970,000 Y
11097-69-1	**Aroclor 1254**	**280,000**	**1,600,000**
11096-82-5	Aroclor 1260	280,000	---
11104-28-2	Aroclor 1221	280,000	< 280,000 U
11141-16-5	Aroclor 1232	280,000	< 280,000 U
37324-23-5	Aroclor 1262	280,000	< 280,000 U
11100-14-4	Aroclor 1268	280,000	< 280,000 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	D
Tetrachlorometaxylene	D

FORM I

SG07:00017

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
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Sample ID: MB-013111
METHOD BLANK

Lab Sample ID: MB-013111
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 01/31/11
Date Analyzed: 02/03/11 16:02
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 5.00 g
Final Extract Volume: 40 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: NA

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	800	< 800 U
53469-21-9	Aroclor 1242	800	< 800 U
12672-29-6	Aroclor 1248	800	< 800 U
11097-69-1	Aroclor 1254	800	< 800 U
11096-82-5	Aroclor 1260	800	< 800 U
11104-28-2	Aroclor 1221	800	< 800 U
11141-16-5	Aroclor 1232	800	< 800 U
37324-23-5	Aroclor 1262	800	< 800 U
11100-14-4	Aroclor 1268	800	< 800 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	101%
Tetrachlorometaxylene	91.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
JF-PLSD-PS-15A	132%	22-168	124%*	28-106	1
JF-PLSD-PS-15B	D	22-168	D	28-106	0
JF-PLSD-PS-24A	119%	22-168	102%	28-106	0
JF-PLSD-PS-24B	D	22-168	D	28-106	0
JF-PLSD-PS-37-7	D	22-168	D	28-106	0
JF-PLSD-PS-37-2	D	22-168	D	28-106	0
JF-PLSD-PS-PUBLIC	D	22-168	D	28-106	0
JF-PLSD-PS-24B-D	D	22-168	D	28-106	0
MB-013111	101%	51-127	91.8%	49-110	0
LCS-013111	98.9%	51-127	90.2%	49-110	0
LCSD-013111	103%	51-127	94.1%	49-110	0
JF-PLSD-PS-37-7-M	D	22-168	D	28-106	0
JF-PLSD-PS-37-7-M MS	D	22-168	D	28-106	0
JF-PLSD-PS-37-7-M MSD	D	22-168	D	28-106	0

Medium Level Control Limits
Prep Method: SW3580A
Log Number Range: 11-1522 to 11-1530

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
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Sample ID: JF-PLSD-PS-37-7-M
MS/MSD

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted MS/MSD: 01/31/11

Date Analyzed MS: 02/03/11 20:25
MSD: 02/03/11 20:44
Instrument/Analyst MS: ECD5/JGR
MSD: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount MS: 0.58 g-dry-wt
MSD: 0.58 g-dry-wt
Final Extract Volume MS: 40 mL
MSD: 40 mL
Dilution Factor MS: 200
MSD: 200
Silica Gel: No

Percent Moisture: 45.4%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Aroclor 1016	< 285000 U	< 276000 U	34500	NA	< 276000 U	34500	NA	NA
Aroclor 1260	< 285000 U	< 276000 U	34500	NA	< 276000 U	34500	NA	NA

Results reported in µg/kg (ppb)
NA-No recovery due to high concentration of analyte in original sample and/or calculated negative recovery.
RPD calculated using sample concentrations per SW846.

SG07 : 00026

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: LCS-013111
LCS/LCSD

Lab Sample ID: LCS-013111
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 01/31/11

Date Analyzed LCS: 02/03/11 16:21
LCSD: 02/03/11 16:39
Instrument/Analyst LCS: ECD5/JGR
LCSD: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount LCS: 5.00 g-dry-wt
LCSD: 5.00 g-dry-wt
Final Extract Volume LCS: 40 mL
LCSD: 40 mL
Dilution Factor LCS: 5.00
LCSD: 5.00
Silica Gel: No

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	4040	4000	101%	4240	4000	106%	4.8%
Aroclor 1260	4140	4000	104%	4310	4000	108%	4.0%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	98.9%	103%
Tetrachlorometaxylene	90.2%	94.1%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

SG07 : 00021

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-PLSD-PS-15B-R
SAMPLE

Lab Sample ID: SG07K
LIMS ID: 11-1532
Matrix: Water
Data Release Authorized: MW
Reported: 02/08/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 01/28/11
Date Analyzed: 02/04/11 02:59
Instrument/Analyst: ECD5/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.079	< 0.079 Y
11097-69-1	**Aroclor 1254**	**0.010**	**0.19**
11096-82-5	Aroclor 1260	0.026	< 0.026 Y
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.010	< 0.010 U
11100-14-4	Aroclor 1268	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	72.2%
Tetrachlorometaxylene	58.2%

SG07: 00022

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: MB-012811
METHOD BLANK

Lab Sample ID: MB-012811
LIMS ID: 11-1532
Matrix: Water
Data Release Authorized:
Reported: 02/08/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 01/28/11
Date Analyzed: 02/04/11 01:06
Instrument/Analyst: ECD5/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.010	< 0.010 U
11100-14-4	Aroclor 1268	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	71.5%
Tetrachlorometaxylene	46.5%

SG07:00023

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-012811	71.5%	32-108	46.5%	31-100	0
LCS-012811	75.5%	32-108	57.0%	31-100	0
LCSD-012811	62.5%	32-108	48.2%	31-100	0
JF-PLSD-PS-15B-R	72.2%	19-111	58.2%	21-100	0

Prep Method: SW3510C
Log Number Range: 11-1532 to 11-1532

FORM-II SW8082

SG07 : 00024

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: LCS-012811
LCS/LCSD

Lab Sample ID: LCS-012811
LIMS ID: 11-1532
Matrix: Water
Data Release Authorized:
Reported: 02/08/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 01/28/11

Date Analyzed LCS: 02/04/11 01:25
LCSD: 02/04/11 01:44
Instrument/Analyst LCS: ECD5/AAR
LCSD: ECD5/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount LCS: 1000 mL
LCSD: 1000 mL
Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	0.036	0.050	72.0%	0.033	0.050	66.0%	8.7%
Aroclor 1260	0.040	0.050	80.0%	0.035	0.050	70.0%	13.3%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	75.5%	62.5%
Tetrachlorometaxylene	57.0%	48.2%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

SG07 : 00025

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID-Silica and Acid Cleaned
Page 1 of 2
Matrix: Soil

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

Data Release Authorized:
Reported: 02/02/11

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
SG07A	JF-PLSD-PS-15A	01/26/11	01/27/11	1.00	**Diesel**	**5.7**	**32**
11-1522	HC ID: **DRO/MOTOR OIL**		FID3B	1.0	**Motor Oil**	**11**	**85**
					Mineral Oil	**11**	**77**
					o-Terphenyl		92.4%
SG07B	JF-PLSD-PS-15B	01/26/11	01/28/11	1.00	**Diesel**	**34**	**800**
11-1523	HC ID: **DRO/MOTOR OIL**		FID3B	5.0	**Motor Oil**	**69**	**1800**
					Mineral Oil	**69**	**1600**
					o-Terphenyl		94.7%
SG07C	JF-PLSD-PS-24A	01/26/11	01/28/11	1.00	**Diesel**	**5.9**	**16**
11-1524	HC ID: **DRO/MOTOR OIL**		FID3B	1.0	**Motor Oil**	**12**	**56**
					Mineral Oil	**12**	**50**
					o-Terphenyl		101%
SG07D	JF-PLSD-PS-24B	01/26/11	01/28/11	1.00	**Diesel**	**35**	**1100**
11-1525	HC ID: **DRO/MOTOR OIL**		FID3B	5.0	**Motor Oil**	**70**	**1300**
					Mineral Oil	**70**	**1200**
					o-Terphenyl		103%
SG07E	JF-PLSD-PS-37-7	01/26/11	01/28/11	1.00	**Diesel**	**51**	**1100**
11-1526	HC ID: **DRO/MOTOR OIL**		FID3B	5.0	**Motor Oil**	**100**	**2200**
					Mineral Oil	**100**	**2000**
					o-Terphenyl		102%
SG07F	JF-PLSD-PS-37-2	01/26/11	01/28/11	1.00	**Diesel**	**340**	**5100**
11-1527	HC ID: **DRO/MOTOR OIL**		FID3B	50	**Motor Oil**	**670**	**5400**
					Mineral Oil	**670**	**4900**
					o-Terphenyl		D
SG07G	JF-PLSD-PS-PUBLIC	01/26/11	01/28/11	1.00	**Diesel**	**34**	**540**
11-1528	HC ID: **DIESEL/MOTOR OIL**		FID3B	5.0	**Motor Oil**	**68**	**1600**
					Mineral Oil	**68**	**1500**
					o-Terphenyl		92.6%
SG07H	JF-PLSD-PS-24B-D	01/26/11	01/28/11	1.00	**Diesel**	**33**	**810**
11-1529	HC ID: **DRO/MOTOR OIL**		FID3B	5.0	**Motor Oil**	**66**	**1200**
					Mineral Oil	**66**	**1100**
					o-Terphenyl		111%
MB-012611	Method Blank	01/26/11	01/27/11	1.00	Diesel	5.0	< 5.0 U
11-1530	HC ID: ---		FID3B	1.0	Motor Oil	10	< 10 U
					Mineral Oil	10	< 10 U
					o-Terphenyl		102%
SG07I	JF-PLSD-PS-37-7-M	01/26/11	01/28/11	1.00	**Diesel**	**46**	**1100**
11-1530	HC ID: **DRO/MOTOR OIL**		FID3B	5.0	**Motor Oil**	**91**	**2000**
					Mineral Oil	**91**	**1900**
					o-Terphenyl		112%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID-Silica and Acid Cleaned
Page 2 of 2
Matrix: Soil

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

Data Release Authorized:
Reported: 03/02/11

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
Mineral Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

SG07:00027R
3/2/11

ANALYTICAL RESOURCES INCORPORATED

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

Client ID	OTER	TOT OUT
JF-PLSD-PS-15A	92.4%	0
JF-PLSD-PS-15B	94.7%	0
JF-PLSD-PS-24A	101%	0
JF-PLSD-PS-24B	103%	0
JF-PLSD-PS-37-7	102%	0
JF-PLSD-PS-37-2	D	0
JF-PLSD-PS-PUBLIC	92.6%	0
JF-PLSD-PS-24B-D	111%	0
MB-012611	102%	0
LCS-012611	89.1%	0
LCSD-012611	95.4%	0
JF-PLSD-PS-37-7-M	112%	0
JF-PLSD-PS-37-7-M MS	109%	0
JF-PLSD-PS-37-7-M MSD	105%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terpheny1	(59-134)	(43-137)

Prep Method: SW3546
Log Number Range: 11-1522 to 11-1530

FORM-II TPHD

SG07 : 00025

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: JF-PLSD-PS-37-7-M**
Page 1 of 1 **MS/MSD**

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/02/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted MS/MSD: 01/26/11

Date Analyzed MS: 01/29/11 00:11
MSD: 01/29/11 00:33
Instrument/Analyst MS: FID/MS
MSD: FID/MS

Sample Amount MS: 5.47 g-dry-wt
MSD: 5.49 g-dry-wt
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 5.0
MSD: 5.0
Percent Moisture: 45.4%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	1110	1500	274	NA	1120	273	NA	29.0%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	109%	105%

Results reported in mg/kg
NA-No recovery due to high concentration of analyte in original sample and/or calculated negative recovery.
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: LCS-012611**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-012611
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/02/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted LCS/LCSD: 01/26/11
Date Analyzed LCS: 01/27/11 22:46
LCSD: 01/27/11 23:08
Instrument/Analyst LCS: FID/MS
LCSD: FID/MS

Sample Amount LCS: 10.0 g
LCSD: 10.0 g
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.0
LCSD: 1.0

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	132	150	88.0%	131	150	87.3%	0.8%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	89.1%	95.4%

Results reported in mg/kg
RPD calculated using sample concentrations per SW846.

SG07:00030

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: SG07
Matrix: Soil Project: Jorgensen Forge
Date Received: 01/24/11 7KPL2JOR

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
11-1522-SG07A	JF-PLSD-PS-15A	8.82 g	1.00 mL	D	01/26/11
11-1523-SG07B	JF-PLSD-PS-15B	7.27 g	1.00 mL	D	01/26/11
11-1524-SG07C	JF-PLSD-PS-24A	8.42 g	1.00 mL	D	01/26/11
11-1525-SG07D	JF-PLSD-PS-24B	7.11 g	1.00 mL	D	01/26/11
11-1526-SG07E	JF-PLSD-PS-37-7	4.89 g	1.00 mL	D	01/26/11
11-1527-SG07F	JF-PLSD-PS-37-2	7.42 g	1.00 mL	D	01/26/11
11-1528-SG07G	JF-PLSD-PS-PUBLIC	7.33 g	1.00 mL	D	01/26/11
11-1529-SG07H	JF-PLSD-PS-24B-D	7.62 g	1.00 mL	D	01/26/11
11-1530-012611MB1	Method Blank	10.0 g	1.00 mL	-	01/26/11
11-1530-012611LCS1	Lab Control	10.0 g	1.00 mL	-	01/26/11
11-1530-012611LCSD1	Lab Control Dup	10.0 g	1.00 mL	-	01/26/11
11-1530-SG07I	JF-PLSD-PS-37-7-M	5.48 g	1.00 mL	D	01/26/11
11-1530-SG07IMS	JF-PLSD-PS-37-7-M	5.47 g	1.00 mL	D	01/26/11
11-1530-SG07IMSD	JF-PLSD-PS-37-7-M	5.49 g	1.00 mL	D	01/26/11

Basis: D=Dry Weight W=As Received

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-15A
SAMPLE

Lab Sample ID: SG07A
LIMS ID: 11-1522
Matrix: Soil
Data Release Authorized:
Reported: 02/09/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 02/02/11
Date Analyzed: 02/07/11 12:58
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.97 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 11.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	63	< 63 U
111-44-4	Bis-(2-Chloroethyl) Ether	63	< 63 U
95-57-8	2-Chlorophenol	63	< 63 U
541-73-1	1,3-Dichlorobenzene	63	< 63 U
106-46-7	1,4-Dichlorobenzene	63	< 63 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	63	< 63 U
95-48-7	2-Methylphenol	63	< 63 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	63	< 63 U
106-44-5	4-Methylphenol	63	< 63 U
621-64-7	N-Nitroso-Di-N-Propylamine	63	< 63 U
67-72-1	Hexachloroethane	63	< 63 U
98-95-3	Nitrobenzene	63	< 63 U
78-59-1	Isophorone	63	< 63 U
88-75-5	2-Nitrophenol	63	< 63 U
105-67-9	2,4-Dimethylphenol	63	< 63 U
65-85-0	Benzoic Acid	630	< 630 U
111-91-1	bis(2-Chloroethoxy) Methane	63	< 63 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	63	< 63 U
91-20-3	Naphthalene	63	< 63 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	63	< 63 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	63	< 63 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	63	< 63 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	63	< 63 U
208-96-8	Acenaphthylene	63	< 63 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	63	< 63 U
51-28-5	2,4-Dinitrophenol	630	< 630 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	63	< 63 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	63	< 63 U
7005-72-3	4-Chlorophenyl-phenylether	63	< 63 U
86-73-7	Fluorene	63	< 63 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	630	< 630 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-15A
SAMPLE

Lab Sample ID: SG07A
LIMS ID: 11-1522
Matrix: Soil
Date Analyzed: 02/07/11 12:58

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	63	< 63 U
101-55-3	4-Bromophenyl-phenylether	63	< 63 U
118-74-1	Hexachlorobenzene	63	< 63 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	Phenanthrene	63	< 63 U
86-74-8	Carbazole	63	< 63 U
120-12-7	Anthracene	63	< 63 U
84-74-2	**Di-n-Butylphthalate**	**63**	**4,900**
206-44-0	Fluoranthene	63	< 63 U
129-00-0	Pyrene	63	< 63 U
85-68-7	**Butylbenzylphthalate**	**63**	**7,200 ES**
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	Benzo(a)anthracene	63	< 63 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**63**	**12,000 ESB**
218-01-9	Chrysene	63	< 63 U
117-84-0	Di-n-Octyl phthalate	63	< 63 U
50-32-8	Benzo(a)pyrene	63	< 63 U
193-39-5	Indeno(1,2,3-cd)pyrene	63	< 63 U
53-70-3	Dibenz(a,h)anthracene	63	< 63 U
191-24-2	Benzo(g,h,i)perylene	63	< 63 U
90-12-0	1-Methylnaphthalene	63	< 63 U
TOTBFA	Total Benzofluoranthenes	63	< 63 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	66.8%	2-Fluorobiphenyl	70.4%
d14-p-Terphenyl	76.4%	d4-1,2-Dichlorobenzene	62.8%
d5-Phenol	52.8%	2-Fluorophenol	36.3%
2,4,6-Tribromophenol	41.1%	d4-2-Chlorophenol	53.9%

SG07:00033

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-15A
DILUTION

Lab Sample ID: SG07A
LIMS ID: 11-1522
Matrix: Soil
Data Release Authorized:
Reported: 02/09/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 02/02/11
Date Analyzed: 02/08/11 12:48
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.97 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: 11.9%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	630	< 630 U
111-44-4	Bis-(2-Chloroethyl) Ether	630	< 630 U
95-57-8	2-Chlorophenol	630	< 630 U
541-73-1	1,3-Dichlorobenzene	630	< 630 U
106-46-7	1,4-Dichlorobenzene	630	< 630 U
100-51-6	Benzyl Alcohol	3,100	< 3,100 U
95-50-1	1,2-Dichlorobenzene	630	< 630 U
95-48-7	2-Methylphenol	630	< 630 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	630	< 630 U
106-44-5	4-Methylphenol	630	< 630 U
621-64-7	N-Nitroso-Di-N-Propylamine	630	< 630 U
67-72-1	Hexachloroethane	630	< 630 U
98-95-3	Nitrobenzene	630	< 630 U
78-59-1	Isophorone	630	< 630 U
88-75-5	2-Nitrophenol	630	< 630 U
105-67-9	2,4-Dimethylphenol	630	< 630 U
65-85-0	Benzoic Acid	6,300	< 6,300 U
111-91-1	bis(2-Chloroethoxy) Methane	630	< 630 U
120-83-2	2,4-Dichlorophenol	3,100	< 3,100 U
120-82-1	1,2,4-Trichlorobenzene	630	< 630 U
91-20-3	Naphthalene	630	< 630 U
106-47-8	4-Chloroaniline	3,100	< 3,100 U
87-68-3	Hexachlorobutadiene	630	< 630 U
59-50-7	4-Chloro-3-methylphenol	3,100	< 3,100 U
91-57-6	2-Methylnaphthalene	630	< 630 U
77-47-4	Hexachlorocyclopentadiene	3,100	< 3,100 U
88-06-2	2,4,6-Trichlorophenol	3,100	< 3,100 U
95-95-4	2,4,5-Trichlorophenol	3,100	< 3,100 U
91-58-7	2-Chloronaphthalene	630	< 630 U
88-74-4	2-Nitroaniline	3,100	< 3,100 U
131-11-3	Dimethylphthalate	630	< 630 U
208-96-8	Acenaphthylene	630	< 630 U
99-09-2	3-Nitroaniline	3,100	< 3,100 U
83-32-9	Acenaphthene	630	< 630 U
51-28-5	2,4-Dinitrophenol	6,300	< 6,300 U
100-02-7	4-Nitrophenol	3,100	< 3,100 U
132-64-9	Dibenzofuran	630	< 630 U
606-20-2	2,6-Dinitrotoluene	3,100	< 3,100 U
121-14-2	2,4-Dinitrotoluene	3,100	< 3,100 U
84-66-2	Diethylphthalate	630	< 630 U
7005-72-3	4-Chlorophenyl-phenylether	630	< 630 U
86-73-7	Fluorene	630	< 630 U
100-01-6	4-Nitroaniline	3,100	< 3,100 U
534-52-1	4,6-Dinitro-2-Methylphenol	6,300	< 6,300 U

SG07 : 000034

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: JF-PLSD-PS-15A**
Page 2 of 2 **DILUTION**

Lab Sample ID: SG07A
LIMS ID: 11-1522
Matrix: Soil
Date Analyzed: 02/08/11 12:48

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	630	< 630 U
101-55-3	4-Bromophenyl-phenylether	630	< 630 U
118-74-1	Hexachlorobenzene	630	< 630 U
87-86-5	Pentachlorophenol	3,100	< 3,100 U
85-01-8	Phenanthrene	630	< 630 U
86-74-8	Carbazole	630	< 630 U
120-12-7	Anthracene	630	< 630 U
84-74-2	**Di-n-Butylphthalate**	**630**	**9,200**
206-44-0	Fluoranthene	630	< 630 U
129-00-0	Pyrene	630	< 630 U
85-68-7	**Butylbenzylphthalate**	**630**	**10,000**
91-94-1	3,3'-Dichlorobenzidine	3,100	< 3,100 U
56-55-3	Benzo(a)anthracene	630	< 630 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**630**	**34,000 B**
218-01-9	Chrysene	630	< 630 U
117-84-0	Di-n-Octyl phthalate	630	< 630 U
50-32-8	Benzo(a)pyrene	630	< 630 U
193-39-5	Indeno(1,2,3-cd)pyrene	630	< 630 U
53-70-3	Dibenz(a,h)anthracene	630	< 630 U
191-24-2	Benzo(g,h,i)perylene	630	< 630 U
90-12-0	1-Methylnaphthalene	630	< 630 U
TOTBFA	Total Benzofluoranthenes	630	< 630 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.0%	2-Fluorobiphenyl	69.2%
d14-p-Terphenyl	90.4%	d4-1,2-Dichlorobenzene	65.2%
d5-Phenol	55.2%	2-Fluorophenol	38.4%
2,4,6-Tribromophenol	46.4%	d4-2-Chlorophenol	55.5%

SG07 : 00035

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-15B
SAMPLE

Lab Sample ID: SG07B
LIMS ID: 11-1523
Matrix: Soil
Data Release Authorized:
Reported: 02/09/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 02/02/11
Date Analyzed: 02/07/11 19:34
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 8.42 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 27.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	180	< 180 U
111-44-4	Bis-(2-Chloroethyl) Ether	180	< 180 U
95-57-8	2-Chlorophenol	180	< 180 U
541-73-1	1,3-Dichlorobenzene	180	< 180 U
106-46-7	1,4-Dichlorobenzene	180	< 180 U
100-51-6	Benzyl Alcohol	890	< 890 U
95-50-1	1,2-Dichlorobenzene	180	< 180 U
95-48-7	2-Methylphenol	180	< 180 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	180	< 180 U
106-44-5	4-Methylphenol	180	< 180 U
621-64-7	N-Nitroso-Di-N-Propylamine	180	< 180 U
67-72-1	Hexachloroethane	180	< 180 U
98-95-3	Nitrobenzene	180	< 180 U
78-59-1	Isophorone	180	< 180 U
88-75-5	2-Nitrophenol	180	< 180 U
105-67-9	2,4-Dimethylphenol	180	< 180 U
65-85-0	Benzoic Acid	1,800	< 1,800 U
111-91-1	bis(2-Chloroethoxy) Methane	180	< 180 U
120-83-2	2,4-Dichlorophenol	890	< 890 U
120-82-1	1,2,4-Trichlorobenzene	180	< 180 U
91-20-3	Naphthalene	180	< 180 U
106-47-8	4-Chloroaniline	890	< 890 U
87-68-3	Hexachlorobutadiene	180	< 180 U
59-50-7	4-Chloro-3-methylphenol	890	< 890 U
91-57-6	2-Methylnaphthalene	180	< 180 U
77-47-4	Hexachlorocyclopentadiene	890	< 890 U
88-06-2	2,4,6-Trichlorophenol	890	< 890 U
95-95-4	2,4,5-Trichlorophenol	890	< 890 U
91-58-7	2-Chloronaphthalene	180	< 180 U
88-74-4	2-Nitroaniline	890	< 890 U
131-11-3	**Dimethylphthalate**	**180**	**430**
208-96-8	**Acenaphthylene**	**180**	**460**
99-09-2	3-Nitroaniline	890	< 890 U
83-32-9	Acenaphthene	180	< 180 U
51-28-5	2,4-Dinitrophenol	1,800	< 1,800 U
100-02-7	4-Nitrophenol	890	< 890 U
132-64-9	Dibenzofuran	180	< 180 U
606-20-2	2,6-Dinitrotoluene	890	< 890 U
121-14-2	2,4-Dinitrotoluene	890	< 890 U
84-66-2	Diethylphthalate	180	< 180 U
7005-72-3	4-Chlorophenyl-phenylether	180	< 180 U
86-73-7	Fluorene	180	< 180 U
100-01-6	4-Nitroaniline	890	< 890 U
534-52-1	4,6-Dinitro-2-Methylphenol	1,800	< 1,800 U

SG07 : 00035

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-15B
SAMPLE

Lab Sample ID: SG07B
LIMS ID: 11-1523
Matrix: Soil
Date Analyzed: 02/07/11 19:34

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	180	< 180 U
101-55-3	4-Bromophenyl-phenylether	180	< 180 U
118-74-1	Hexachlorobenzene	180	< 180 U
87-86-5	Pentachlorophenol	890	< 890 U
85-01-8	**Phenanthrene**	**180**	**450**
86-74-8	Carbazole	180	< 180 U
120-12-7	**Anthracene**	**180**	**200**
84-74-2	**Di-n-Butylphthalate**	**180**	**620**
206-44-0	**Fluoranthene**	**180**	**3,000**
129-00-0	**Pyrene**	**180**	**2,500**
85-68-7	Butylbenzylphthalate	180	< 180 U
91-94-1	3,3'-Dichlorobenzidine	890	< 890 U
56-55-3	**Benzo(a)anthracene**	**180**	**1,900**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**180**	**830 B**
218-01-9	**Chrysene**	**180**	**2,000**
117-84-0	Di-n-Octyl phthalate	180	< 180 U
50-32-8	**Benzo(a)pyrene**	**180**	**1,900**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**180**	**810**
53-70-3	Dibenz(a,h)anthracene	180	< 180 U
191-24-2	**Benzo(g,h,i)perylene**	**180**	**740 Q**
90-12-0	1-Methylnaphthalene	180	< 180 U
TOTBFA	**Total Benzofluoranthenes**	**180**	**4,600**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	59.9%	2-Fluorobiphenyl	66.0%
d14-p-Terphenyl	69.2%	d4-1,2-Dichlorobenzene	58.4%
d5-Phenol	33.4%	2-Fluorophenol	9.1%
2,4,6-Tribromophenol	7.4%	d4-2-Chlorophenol	30.2%

SG07:00037

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-15B
REEXTRACT

Lab Sample ID: SG07B
LIMS ID: 11-1523
Matrix: Soil
Data Release Authorized:
Reported: 02/10/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 02/08/11
Date Analyzed: 02/10/11 14:26
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.99 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 27.6%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**63**	**76**
111-44-4	Bis-(2-Chloroethyl) Ether	63	< 63 U
95-57-8	2-Chlorophenol	63	< 63 U
541-73-1	1,3-Dichlorobenzene	63	< 63 U
106-46-7	1,4-Dichlorobenzene	63	< 63 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	63	< 63 U
95-48-7	2-Methylphenol	63	< 63 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	63	< 63 U
106-44-5	4-Methylphenol	63	< 63 U
621-64-7	N-Nitroso-Di-N-Propylamine	63	< 63 U
67-72-1	Hexachloroethane	63	< 63 U
98-95-3	Nitrobenzene	63	< 63 U
78-59-1	Isophorone	63	< 63 U
88-75-5	2-Nitrophenol	63	< 63 U
105-67-9	2,4-Dimethylphenol	63	< 63 U
65-85-0	Benzoic Acid	630	< 630 U
111-91-1	bis(2-Chloroethoxy) Methane	63	< 63 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	63	< 63 U
91-20-3	Naphthalene	63	< 63 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	63	< 63 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	63	< 63 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	63	< 63 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	63	< 63 U
208-96-8	Acenaphthylene	63	< 63 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	63	< 63 U
51-28-5	2,4-Dinitrophenol	630	< 630 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	63	< 63 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	63	< 63 U
7005-72-3	4-Chlorophenyl-phenylether	63	< 63 U
86-73-7	Fluorene	63	< 63 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	630	< 630 U

SG07:00038

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-15B
REEXTRACT

Lab Sample ID: SG07B
LIMS ID: 11-1523
Matrix: Soil
Date Analyzed: 02/10/11 14:26

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	63	< 63 U
101-55-3	4-Bromophenyl-phenylether	63	< 63 U
118-74-1	Hexachlorobenzene	63	< 63 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	**Phenanthrene**	**63**	**140**
86-74-8	Carbazole	63	< 63 U
120-12-7	Anthracene	63	< 63 U
84-74-2	**Di-n-Butylphthalate**	**63**	**1,100**
206-44-0	**Fluoranthene**	**63**	**120**
129-00-0	**Pyrene**	**63**	**130**
85-68-7	Butylbenzylphthalate	63	< 63 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	Benzo(a)anthracene	63	< 63 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**63**	**850**
218-01-9	**Chrysene**	**63**	**93**
117-84-0	Di-n-Octyl phthalate	63	< 63 U
50-32-8	Benzo(a)pyrene	63	< 63 U
193-39-5	**Indeno(1,2,3-cd)pyrene**	**63**	**70**
53-70-3	Dibenz(a,h)anthracene	63	< 63 U
191-24-2	**Benzo(g,h,i)perylene**	**63**	**100**
90-12-0	1-Methylnaphthalene	63	< 63 U
TOTBFA	**Total Benzofluoranthenes**	**63**	**150**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.4%	2-Fluorobiphenyl	64.8%
d14-p-Terphenyl	69.2%	d4-1,2-Dichlorobenzene	60.4%
d5-Phenol	62.9%	2-Fluorophenol	52.0%
2,4,6-Tribromophenol	56.8%	d4-2-Chlorophenol	60.0%

SG07 : 00039

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-24A
SAMPLE

Lab Sample ID: SG07C
LIMS ID: 11-1524
Matrix: Soil
Data Release Authorized:
Reported: 02/09/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 02/02/11
Date Analyzed: 02/07/11 14:04
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 8.22 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 16.5%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	61	< 61 U
111-44-4	Bis-(2-Chloroethyl) Ether	61	< 61 U
95-57-8	2-Chlorophenol	61	< 61 U
541-73-1	1,3-Dichlorobenzene	61	< 61 U
106-46-7	1,4-Dichlorobenzene	61	< 61 U
100-51-6	Benzyl Alcohol	300	< 300 U
95-50-1	1,2-Dichlorobenzene	61	< 61 U
95-48-7	2-Methylphenol	61	< 61 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	61	< 61 U
106-44-5	4-Methylphenol	61	< 61 U
621-64-7	N-Nitroso-Di-N-Propylamine	61	< 61 U
67-72-1	Hexachloroethane	61	< 61 U
98-95-3	Nitrobenzene	61	< 61 U
78-59-1	Isophorone	61	< 61 U
88-75-5	2-Nitrophenol	61	< 61 U
105-67-9	2,4-Dimethylphenol	61	< 61 U
65-85-0	Benzoic Acid	610	< 610 U
111-91-1	bis(2-Chloroethoxy) Methane	61	< 61 U
120-83-2	2,4-Dichlorophenol	300	< 300 U
120-82-1	1,2,4-Trichlorobenzene	61	< 61 U
91-20-3	Naphthalene	61	< 61 U
106-47-8	4-Chloroaniline	300	< 300 U
87-68-3	Hexachlorobutadiene	61	< 61 U
59-50-7	4-Chloro-3-methylphenol	300	< 300 U
91-57-6	2-Methylnaphthalene	61	< 61 U
77-47-4	Hexachlorocyclopentadiene	300	< 300 U
88-06-2	2,4,6-Trichlorophenol	300	< 300 U
95-95-4	2,4,5-Trichlorophenol	300	< 300 U
91-58-7	2-Chloronaphthalene	61	< 61 U
88-74-4	2-Nitroaniline	300	< 300 U
131-11-3	Dimethylphthalate	61	< 61 U
208-96-8	Acenaphthylene	61	< 61 U
99-09-2	3-Nitroaniline	300	< 300 U
83-32-9	Acenaphthene	61	< 61 U
51-28-5	2,4-Dinitrophenol	610	< 610 U
100-02-7	4-Nitrophenol	300	< 300 U
132-64-9	Dibenzofuran	61	< 61 U
606-20-2	2,6-Dinitrotoluene	300	< 300 U
121-14-2	2,4-Dinitrotoluene	300	< 300 U
84-66-2	Diethylphthalate	61	< 61 U
7005-72-3	4-Chlorophenyl-phenylether	61	< 61 U
86-73-7	Fluorene	61	< 61 U
100-01-6	4-Nitroaniline	300	< 300 U
534-52-1	4,6-Dinitro-2-Methylphenol	610	< 610 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-24A
SAMPLE

Lab Sample ID: SG07C
LIMS ID: 11-1524
Matrix: Soil
Date Analyzed: 02/07/11 14:04

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	61	< 61 U
101-55-3	4-Bromophenyl-phenylether	61	< 61 U
118-74-1	Hexachlorobenzene	61	< 61 U
87-86-5	Pentachlorophenol	300	< 300 U
85-01-8	Phenanthrene	61	< 61 U
86-74-8	Carbazole	61	< 61 U
120-12-7	Anthracene	61	< 61 U
84-74-2	Di-n-Butylphthalate	61	< 61 U
206-44-0	Fluoranthene	61	< 61 U
129-00-0	Pyrene	61	< 61 U
85-68-7	Butylbenzylphthalate	61	< 61 U
91-94-1	3,3'-Dichlorobenzidine	300	< 300 U
56-55-3	Benzo(a)anthracene	61	< 61 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**61**	**80 B**
218-01-9	Chrysene	61	< 61 U
117-84-0	Di-n-Octyl phthalate	61	< 61 U
50-32-8	Benzo(a)pyrene	61	< 61 U
193-39-5	Indeno(1,2,3-cd)pyrene	61	< 61 U
53-70-3	Dibenz(a,h)anthracene	61	< 61 U
191-24-2	Benzo(g,h,i)perylene	61	< 61 U
90-12-0	1-Methylnaphthalene	61	< 61 U
TOTBFA	Total Benzofluoranthenes	61	< 61 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	70.0%	2-Fluorobiphenyl	70.0%
d14-p-Terphenyl	77.6%	d4-1,2-Dichlorobenzene	65.6%
d5-Phenol	46.7%	2-Fluorophenol	22.9%
2,4,6-Tribromophenol	21.4%	d4-2-Chlorophenol	45.6%

SG07:00041

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-24B
SAMPLE

Lab Sample ID: SG07D
LIMS ID: 11-1525
Matrix: Soil
Data Release Authorized:
Reported: 02/09/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 02/02/11
Date Analyzed: 02/07/11 14:37
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.87 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 29.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	64	< 64 U
111-44-4	Bis-(2-Chloroethyl) Ether	64	< 64 U
95-57-8	2-Chlorophenol	64	< 64 U
541-73-1	1,3-Dichlorobenzene	64	< 64 U
106-46-7	1,4-Dichlorobenzene	64	< 64 U
100-51-6	Benzyl Alcohol	320	< 320 U
95-50-1	1,2-Dichlorobenzene	64	< 64 U
95-48-7	2-Methylphenol	64	< 64 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	64	< 64 U
106-44-5	4-Methylphenol	64	< 64 U
621-64-7	N-Nitroso-Di-N-Propylamine	64	< 64 U
67-72-1	Hexachloroethane	64	< 64 U
98-95-3	Nitrobenzene	64	< 64 U
78-59-1	Isophorone	64	< 64 U
88-75-5	2-Nitrophenol	64	< 64 U
105-67-9	2,4-Dimethylphenol	64	< 64 U
65-85-0	Benzoic Acid	640	< 640 U
111-91-1	bis(2-Chloroethoxy) Methane	64	< 64 U
120-83-2	2,4-Dichlorophenol	320	< 320 U
120-82-1	1,2,4-Trichlorobenzene	64	< 64 U
91-20-3	Naphthalene	64	< 64 U
106-47-8	4-Chloroaniline	320	< 320 U
87-68-3	Hexachlorobutadiene	64	< 64 U
59-50-7	4-Chloro-3-methylphenol	320	< 320 U
91-57-6	2-Methylnaphthalene	64	< 64 U
77-47-4	Hexachlorocyclopentadiene	320	< 320 U
88-06-2	2,4,6-Trichlorophenol	320	< 320 U
95-95-4	2,4,5-Trichlorophenol	320	< 320 U
91-58-7	2-Chloronaphthalene	64	< 64 U
88-74-4	2-Nitroaniline	320	< 320 U
131-11-3	**Dimethylphthalate**	**64**	**230**
208-96-8	Acenaphthylene	64	< 64 U
99-09-2	3-Nitroaniline	320	< 320 U
83-32-9	Acenaphthene	64	< 64 U
51-28-5	2,4-Dinitrophenol	640	< 640 U
100-02-7	4-Nitrophenol	320	< 320 U
132-64-9	Dibenzofuran	64	< 64 U
606-20-2	2,6-Dinitrotoluene	320	< 320 U
121-14-2	2,4-Dinitrotoluene	320	< 320 U
84-66-2	Diethylphthalate	64	< 64 U
7005-72-3	4-Chlorophenyl-phenylether	64	< 64 U
86-73-7	Fluorene	64	< 64 U
100-01-6	4-Nitroaniline	320	< 320 U
534-52-1	4,6-Dinitro-2-Methylphenol	640	< 640 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-24B
SAMPLE

Lab Sample ID: SG07D
LIMS ID: 11-1525
Matrix: Soil
Date Analyzed: 02/07/11 14:37

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	64	< 64 U
101-55-3	4-Bromophenyl-phenylether	64	< 64 U
118-74-1	Hexachlorobenzene	64	< 64 U
87-86-5	Pentachlorophenol	320	< 320 U
85-01-8	**Phenanthrene**	**64**	**450**
86-74-8	Carbazole	64	< 64 U
120-12-7	**Anthracene**	**64**	**79**
84-74-2	Di-n-Butylphthalate	64	< 64 U
206-44-0	**Fluoranthene**	**64**	**830**
129-00-0	**Pyrene**	**64**	**730**
85-68-7	Butylbenzylphthalate	64	< 64 U
91-94-1	3,3'-Dichlorobenzidine	320	< 320 U
56-55-3	**Benzo(a)anthracene**	**64**	**340**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**64**	**280 B**
218-01-9	**Chrysene**	**64**	**420**
117-84-0	Di-n-Octyl phthalate	64	< 64 U
50-32-8	**Benzo(a)pyrene**	**64**	**380**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**64**	**230**
53-70-3	Dibenz(a,h)anthracene	64	< 64 U
191-24-2	**Benzo(g,h,i)perylene**	**64**	**220 Q**
90-12-0	1-Methylnaphthalene	64	< 64 U
TOTBFA	**Total Benzofluoranthenes**	**64**	**810**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.2%	2-Fluorobiphenyl	66.8%
d14-p-Terphenyl	71.6%	d4-1,2-Dichlorobenzene	55.6%
d5-Phenol	32.5%	2-Fluorophenol	10.6%
2,4,6-Tribromophenol	12.1%	d4-2-Chlorophenol	31.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-24B
DILUTION

Lab Sample ID: SG07D
LIMS ID: 11-1525
Matrix: Soil
Data Release Authorized:
Reported: 02/09/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 02/02/11
Date Analyzed: 02/07/11 20:07
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.87 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 29.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	190	< 190 U
111-44-4	Bis-(2-Chloroethyl) Ether	190	< 190 U
95-57-8	2-Chlorophenol	190	< 190 U
541-73-1	1,3-Dichlorobenzene	190	< 190 U
106-46-7	1,4-Dichlorobenzene	190	< 190 U
100-51-6	Benzyl Alcohol	950	< 950 U
95-50-1	1,2-Dichlorobenzene	190	< 190 U
95-48-7	2-Methylphenol	190	< 190 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	190	< 190 U
106-44-5	4-Methylphenol	190	< 190 U
621-64-7	N-Nitroso-Di-N-Propylamine	190	< 190 U
67-72-1	Hexachloroethane	190	< 190 U
98-95-3	Nitrobenzene	190	< 190 U
78-59-1	Isophorone	190	< 190 U
88-75-5	2-Nitrophenol	190	< 190 U
105-67-9	2,4-Dimethylphenol	190	< 190 U
65-85-0	Benzoic Acid	1,900	< 1,900 U
111-91-1	bis(2-Chloroethoxy) Methane	190	< 190 U
120-83-2	2,4-Dichlorophenol	950	< 950 U
120-82-1	1,2,4-Trichlorobenzene	190	< 190 U
91-20-3	Naphthalene	190	< 190 U
106-47-8	4-Chloroaniline	950	< 950 U
87-68-3	Hexachlorobutadiene	190	< 190 U
59-50-7	4-Chloro-3-methylphenol	950	< 950 U
91-57-6	2-Methylnaphthalene	190	< 190 U
77-47-4	Hexachlorocyclopentadiene	950	< 950 U
88-06-2	2,4,6-Trichlorophenol	950	< 950 U
95-95-4	2,4,5-Trichlorophenol	950	< 950 U
91-58-7	2-Chloronaphthalene	190	< 190 U
88-74-4	2-Nitroaniline	950	< 950 U
131-11-3	**Dimethylphthalate**	**190**	**230**
208-96-8	Acenaphthylene	190	< 190 U
99-09-2	3-Nitroaniline	950	< 950 U
83-32-9	Acenaphthene	190	< 190 U
51-28-5	2,4-Dinitrophenol	1,900	< 1,900 U
100-02-7	4-Nitrophenol	950	< 950 U
132-64-9	Dibenzofuran	190	< 190 U
606-20-2	2,6-Dinitrotoluene	950	< 950 U
121-14-2	2,4-Dinitrotoluene	950	< 950 U
84-66-2	Diethylphthalate	190	< 190 U
7005-72-3	4-Chlorophenyl-phenylether	190	< 190 U
86-73-7	Fluorene	190	< 190 U
100-01-6	4-Nitroaniline	950	< 950 U
534-52-1	4,6-Dinitro-2-Methylphenol	1,900	< 1,900 U

SG07:00044

Sample ID: JF-PLSD-PS-24B
DILUTION

Lab Sample ID: SG07D
LIMS ID: 11-1525
Matrix: Soil
Date Analyzed: 02/07/11 20:07

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	190	< 190 U
101-55-3	4-Bromophenyl-phenylether	190	< 190 U
118-74-1	Hexachlorobenzene	190	< 190 U
87-86-5	Pentachlorophenol	950	< 950 U
85-01-8	**Phenanthrene**	**190**	**500**
86-74-8	Carbazole	190	< 190 U
120-12-7	Anthracene	190	< 190 U
84-74-2	Di-n-Butylphthalate	190	< 190 U
206-44-0	**Fluoranthene**	**190**	**880**
129-00-0	**Pyrene**	**190**	**770**
85-68-7	Butylbenzylphthalate	190	< 190 U
91-94-1	3,3'-Dichlorobenzidine	950	< 950 U
56-55-3	**Benzo(a)anthracene**	**190**	**410**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**190**	**290 B**
218-01-9	**Chrysene**	**190**	**460**
117-84-0	Di-n-Octyl phthalate	190	< 190 U
50-32-8	**Benzo(a)pyrene**	**190**	**410**
193-39-5	Indeno(1,2,3-cd)pyrene	190	< 190 U
53-70-3	Dibenz(a,h)anthracene	190	< 190 U
191-24-2	Benzo(g,h,i)perylene	190	< 190 U
90-12-0	1-Methylnaphthalene	190	< 190 U
TOTBFA	**Total Benzofluoranthenes**	**190**	**840**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	59.8%	2-Fluorobiphenyl	70.1%
d14-p-Terphenyl	72.7%	d4-1,2-Dichlorobenzene	62.2%
d5-Phenol	47.8%	2-Fluorophenol	22.4%
2,4,6-Tribromophenol	16.6%	d4-2-Chlorophenol	44.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-37-7
SAMPLE

Lab Sample ID: SG07E
LIMS ID: 11-1526
Matrix: Soil
Data Release Authorized:
Reported: 02/09/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 02/02/11
Date Analyzed: 02/07/11 15:10
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 8.11 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 51.2%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**62**	**72**
111-44-4	Bis-(2-Chloroethyl) Ether	62	< 62 U
95-57-8	2-Chlorophenol	62	< 62 U
541-73-1	1,3-Dichlorobenzene	62	< 62 U
106-46-7	1,4-Dichlorobenzene	62	< 62 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	62	< 62 U
95-48-7	2-Methylphenol	62	< 62 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	62	< 62 U
106-44-5	4-Methylphenol	62	< 62 U
621-64-7	N-Nitroso-Di-N-Propylamine	62	< 62 U
67-72-1	Hexachloroethane	62	< 62 U
98-95-3	Nitrobenzene	62	< 62 U
78-59-1	Isophorone	62	< 62 U
88-75-5	2-Nitrophenol	62	< 62 U
105-67-9	2,4-Dimethylphenol	62	< 62 U
65-85-0	Benzoic Acid	620	< 620 U
111-91-1	bis(2-Chloroethoxy) Methane	62	< 62 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	62	< 62 U
91-20-3	**Naphthalene**	**62**	**92**
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	62	< 62 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	62	< 62 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	62	< 62 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	62	< 62 U
208-96-8	Acenaphthylene	62	< 62 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	**Acenaphthene**	**62**	**110**
51-28-5	2,4-Dinitrophenol	620	< 620 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	**Dibenzofuran**	**62**	**100**
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	62	< 62 U
7005-72-3	4-Chlorophenyl-phenylether	62	< 62 U
86-73-7	**Fluorene**	**62**	**210**
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	620	< 620 U

SG07:00048

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-37-7
SAMPLE

Lab Sample ID: SG07E
LIMS ID: 11-1526
Matrix: Soil
Date Analyzed: 02/07/11 15:10

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	62	< 62 U
101-55-3	4-Bromophenyl-phenylether	62	< 62 U
118-74-1	Hexachlorobenzene	62	< 62 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	**Phenanthrene**	**62**	**1,600**
86-74-8	**Carbazole**	**62**	**210**
120-12-7	**Anthracene**	**62**	**320**
84-74-2	Di-n-Butylphthalate	62	< 62 U
206-44-0	**Fluoranthene**	**62**	**3,100**
129-00-0	**Pyrene**	**62**	**3,100**
85-68-7	Butylbenzylphthalate	62	< 62 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	**Benzo(a)anthracene**	**62**	**1,600**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**62**	**810 B**
218-01-9	**Chrysene**	**62**	**1,800**
117-84-0	Di-n-Octyl phthalate	62	< 62 U
50-32-8	**Benzo(a)pyrene**	**62**	**1,600**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**62**	**710**
53-70-3	Dibenz(a,h)anthracene	62	< 62 U
191-24-2	**Benzo(g,h,i)perylene**	**62**	**650 Q**
90-12-0	1-Methylnaphthalene	62	< 62 U
TOTBFA	**Total Benzofluoranthenes**	**62**	**4,200**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.0%	2-Fluorobiphenyl	68.0%
d14-p-Terphenyl	74.0%	d4-1,2-Dichlorobenzene	53.6%
d5-Phenol	49.9%	2-Fluorophenol	35.5%
2,4,6-Tribromophenol	48.3%	d4-2-Chlorophenol	48.8%

SG07:00047

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-37-2
SAMPLE

Lab Sample ID: SG07F
LIMS ID: 11-1527
Matrix: Soil
Data Release Authorized:
Reported: 02/09/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 02/02/11
Date Analyzed: 02/07/11 20:40
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 4.74 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 26.0%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	320	< 320 U
111-44-4	Bis-(2-Chloroethyl) Ether	320	< 320 U
95-57-8	2-Chlorophenol	320	< 320 U
541-73-1	1,3-Dichlorobenzene	320	< 320 U
106-46-7	1,4-Dichlorobenzene	320	< 320 U
100-51-6	Benzyl Alcohol	1,600	< 1,600 U
95-50-1	1,2-Dichlorobenzene	320	< 320 U
95-48-7	2-Methylphenol	320	< 320 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	320	< 320 U
106-44-5	4-Methylphenol	320	< 320 U
621-64-7	N-Nitroso-Di-N-Propylamine	320	< 320 U
67-72-1	Hexachloroethane	320	< 320 U
98-95-3	Nitrobenzene	320	< 320 U
78-59-1	Isophorone	320	< 320 U
88-75-5	2-Nitrophenol	320	< 320 U
105-67-9	2,4-Dimethylphenol	320	< 320 U
65-85-0	Benzoic Acid	3,200	< 3,200 U
111-91-1	bis(2-Chloroethoxy) Methane	320	< 320 U
120-83-2	2,4-Dichlorophenol	1,600	< 1,600 U
120-82-1	1,2,4-Trichlorobenzene	320	< 320 U
91-20-3	Naphthalene	320	< 320 U
106-47-8	4-Chloroaniline	1,600	< 1,600 U
87-68-3	Hexachlorobutadiene	320	< 320 U
59-50-7	4-Chloro-3-methylphenol	1,600	< 1,600 U
91-57-6	2-Methylnaphthalene	320	< 320 U
77-47-4	Hexachlorocyclopentadiene	1,600	< 1,600 U
88-06-2	2,4,6-Trichlorophenol	1,600	< 1,600 U
95-95-4	2,4,5-Trichlorophenol	1,600	< 1,600 U
91-58-7	2-Chloronaphthalene	320	< 320 U
88-74-4	2-Nitroaniline	1,600	< 1,600 U
131-11-3	Dimethylphthalate	320	< 320 U
208-96-8	Acenaphthylene	320	< 320 U
99-09-2	3-Nitroaniline	1,600	< 1,600 U
83-32-9	**Acenaphthene**	**320**	**380**
51-28-5	2,4-Dinitrophenol	3,200	< 3,200 U
100-02-7	4-Nitrophenol	1,600	< 1,600 U
132-64-9	Dibenzofuran	320	< 320 U
606-20-2	2,6-Dinitrotoluene	1,600	< 1,600 U
121-14-2	2,4-Dinitrotoluene	1,600	< 1,600 U
84-66-2	Diethylphthalate	320	< 320 U
7005-72-3	4-Chlorophenyl-phenylether	320	< 320 U
86-73-7	**Fluorene**	**320**	**570**
100-01-6	4-Nitroaniline	1,600	< 1,600 U
534-52-1	4,6-Dinitro-2-Methylphenol	3,200	< 3,200 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-37-2
SAMPLE

Lab Sample ID: SG07F
LIMS ID: 11-1527
Matrix: Soil
Date Analyzed: 02/07/11 20:40

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

CAS Number	Analyte	RL	Result	
86-30-6	N-Nitrosodiphenylamine	320	< 320	U
101-55-3	4-Bromophenyl-phenylether	320	< 320	U
118-74-1	Hexachlorobenzene	320	< 320	U
87-86-5	Pentachlorophenol	1,600	< 1,600	U
85-01-8	**Phenanthrene**	**320**	**3,500**	
86-74-8	**Carbazole**	**320**	**480**	
120-12-7	**Anthracene**	**320**	**780**	
84-74-2	**Di-n-Butylphthalate**	**320**	**5,200**	
206-44-0	**Fluoranthene**	**320**	**5,400**	
129-00-0	**Pyrene**	**320**	**5,600**	
85-68-7	Butylbenzylphthalate	320	< 320	U
91-94-1	3,3'-Dichlorobenzidine	1,600	< 1,600	U
56-55-3	**Benzo(a)anthracene**	**320**	**2,900**	
117-81-7	**bis(2-Ethylhexyl)phthalate**	**320**	**5,400**	**B**
218-01-9	**Chrysene**	**320**	**3,500**	
117-84-0	Di-n-Octyl phthalate	320	< 320	U
50-32-8	**Benzo(a)pyrene**	**320**	**3,400**	
193-39-5	**Indeno(1,2,3-cd)pyrene**	**320**	**1,200**	
53-70-3	Dibenz(a,h)anthracene	320	< 320	U
191-24-2	**Benzo(g,h,i)perylene**	**320**	**960**	**Q**
90-12-0	1-Methylnaphthalene	320	< 320	U
TOTBFA	**Total Benzofluoranthenes**	**320**	**6,700**	

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	78.0%	2-Fluorobiphenyl	84.5%
d14-p-Terphenyl	88.2%	d4-1,2-Dichlorobenzene	68.8%
d5-Phenol	74.2%	2-Fluorophenol	57.0%
2,4,6-Tribromophenol	80.8%	d4-2-Chlorophenol	72.9%

SG07:00045

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-PUBLIC
SAMPLE

Lab Sample ID: SG07G
LIMS ID: 11-1528
Matrix: Soil
Data Release Authorized:
Reported: 02/09/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 02/02/11
Date Analyzed: 02/07/11 16:16
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 8.16 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 27.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	180	< 180 U
111-44-4	Bis-(2-Chloroethyl) Ether	180	< 180 U
95-57-8	2-Chlorophenol	180	< 180 U
541-73-1	1,3-Dichlorobenzene	180	< 180 U
106-46-7	1,4-Dichlorobenzene	180	< 180 U
100-51-6	Benzyl Alcohol	920	< 920 U
95-50-1	1,2-Dichlorobenzene	180	< 180 U
95-48-7	2-Methylphenol	180	< 180 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	180	< 180 U
106-44-5	4-Methylphenol	180	< 180 U
621-64-7	N-Nitroso-Di-N-Propylamine	180	< 180 U
67-72-1	Hexachloroethane	180	< 180 U
98-95-3	Nitrobenzene	180	< 180 U
78-59-1	Isophorone	180	< 180 U
88-75-5	2-Nitrophenol	180	< 180 U
105-67-9	2,4-Dimethylphenol	180	< 180 U
65-85-0	Benzoic Acid	1,800	< 1,800 U
111-91-1	bis(2-Chloroethoxy) Methane	180	< 180 U
120-83-2	2,4-Dichlorophenol	920	< 920 U
120-82-1	1,2,4-Trichlorobenzene	180	< 180 U
91-20-3	Naphthalene	180	< 180 U
106-47-8	4-Chloroaniline	920	< 920 U
87-68-3	Hexachlorobutadiene	180	< 180 U
59-50-7	4-Chloro-3-methylphenol	920	< 920 U
91-57-6	2-Methylnaphthalene	180	< 180 U
77-47-4	Hexachlorocyclopentadiene	920	< 920 U
88-06-2	2,4,6-Trichlorophenol	920	< 920 U
95-95-4	2,4,5-Trichlorophenol	920	< 920 U
91-58-7	2-Chloronaphthalene	180	< 180 U
88-74-4	2-Nitroaniline	920	< 920 U
131-11-3	Dimethylphthalate	180	< 180 U
208-96-8	Acenaphthylene	180	< 180 U
99-09-2	3-Nitroaniline	920	< 920 U
83-32-9	Acenaphthene	180	< 180 U
51-28-5	2,4-Dinitrophenol	1,800	< 1,800 U
100-02-7	4-Nitrophenol	920	< 920 U
132-64-9	Dibenzofuran	180	< 180 U
606-20-2	2,6-Dinitrotoluene	920	< 920 U
121-14-2	2,4-Dinitrotoluene	920	< 920 U
84-66-2	Diethylphthalate	180	< 180 U
7005-72-3	4-Chlorophenyl-phenylether	180	< 180 U
86-73-7	Fluorene	180	< 180 U
100-01-6	4-Nitroaniline	920	< 920 U
534-52-1	4,6-Dinitro-2-Methylphenol	1,800	< 1,800 U

SG07 : 00050

Lab Sample ID: SG07G
LIMS ID: 11-1528
Matrix: Soil
Date Analyzed: 02/07/11 16:16

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	180	< 180 U
101-55-3	4-Bromophenyl-phenylether	180	< 180 U
118-74-1	Hexachlorobenzene	180	< 180 U
87-86-5	Pentachlorophenol	920	< 920 U
85-01-8	**Phenanthrene**	**180**	**1,000**
86-74-8	Carbazole	180	< 180 U
120-12-7	**Anthracene**	**180**	**340**
84-74-2	**Di-n-Butylphthalate**	**180**	**580**
206-44-0	**Fluoranthene**	**180**	**6,100**
129-00-0	**Pyrene**	**180**	**14,000**
85-68-7	Butylbenzylphthalate	180	< 180 U
91-94-1	3,3'-Dichlorobenzidine	920	< 920 U
56-55-3	**Benzo(a)anthracene**	**180**	**5,700**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**180**	**1,500 B**
218-01-9	**Chrysene**	**180**	**7,000**
117-84-0	Di-n-Octyl phthalate	180	< 180 U
50-32-8	**Benzo(a)pyrene**	**180**	**6,500**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**180**	**1,900**
53-70-3	**Dibenz(a,h)anthracene**	**180**	**230 Q**
191-24-2	**Benzo(g,h,i)perylene**	**180**	**2,000 Q**
90-12-0	1-Methylnaphthalene	180	< 180 U
TOTBFA	**Total Benzofluoranthenes**	**180**	**12,000**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	77.4%	2-Fluorobiphenyl	88.2%
d14-p-Terphenyl	136%	d4-1,2-Dichlorobenzene	71.5%
d5-Phenol	74.7%	2-Fluorophenol	51.7%
2,4,6-Tribromophenol	76.3%	d4-2-Chlorophenol	71.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-24B-D
SAMPLE

Lab Sample ID: SG07H
LIMS ID: 11-1529
Matrix: Soil
Data Release Authorized:
Reported: 02/09/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 02/02/11
Date Analyzed: 02/07/11 16:49
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 8.17 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 24.6%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	61	< 61 U
111-44-4	Bis-(2-Chloroethyl) Ether	61	< 61 U
95-57-8	2-Chlorophenol	61	< 61 U
541-73-1	1,3-Dichlorobenzene	61	< 61 U
106-46-7	1,4-Dichlorobenzene	61	< 61 U
100-51-6	Benzyl Alcohol	310	< 310 U
95-50-1	1,2-Dichlorobenzene	61	< 61 U
95-48-7	2-Methylphenol	61	< 61 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	61	< 61 U
106-44-5	4-Methylphenol	61	< 61 U
621-64-7	N-Nitroso-Di-N-Propylamine	61	< 61 U
67-72-1	Hexachloroethane	61	< 61 U
98-95-3	Nitrobenzene	61	< 61 U
78-59-1	Isophorone	61	< 61 U
88-75-5	2-Nitrophenol	61	< 61 U
105-67-9	2,4-Dimethylphenol	61	< 61 U
65-85-0	Benzoic Acid	610	< 610 U
111-91-1	bis(2-Chloroethoxy) Methane	61	< 61 U
120-83-2	2,4-Dichlorophenol	310	< 310 U
120-82-1	1,2,4-Trichlorobenzene	61	< 61 U
91-20-3	Naphthalene	61	< 61 U
106-47-8	4-Chloroaniline	310	< 310 U
87-68-3	Hexachlorobutadiene	61	< 61 U
59-50-7	4-Chloro-3-methylphenol	310	< 310 U
91-57-6	2-Methylnaphthalene	61	< 61 U
77-47-4	Hexachlorocyclopentadiene	310	< 310 U
88-06-2	2,4,6-Trichlorophenol	310	< 310 U
95-95-4	2,4,5-Trichlorophenol	310	< 310 U
91-58-7	2-Chloronaphthalene	61	< 61 U
88-74-4	2-Nitroaniline	310	< 310 U
131-11-3	Dimethylphthalate	61	< 61 U
208-96-8	Acenaphthylene	61	< 61 U
99-09-2	3-Nitroaniline	310	< 310 U
83-32-9	Acenaphthene	61	< 61 U
51-28-5	2,4-Dinitrophenol	610	< 610 U
100-02-7	4-Nitrophenol	310	< 310 U
132-64-9	Dibenzofuran	61	< 61 U
606-20-2	2,6-Dinitrotoluene	310	< 310 U
121-14-2	2,4-Dinitrotoluene	310	< 310 U
84-66-2	Diethylphthalate	61	< 61 U
7005-72-3	4-Chlorophenyl-phenylether	61	< 61 U
86-73-7	Fluorene	61	< 61 U
100-01-6	4-Nitroaniline	310	< 310 U
534-52-1	4,6-Dinitro-2-Methylphenol	610	< 610 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-24B-D
SAMPLE

Lab Sample ID: SG07H
LIMS ID: 11-1529
Matrix: Soil
Date Analyzed: 02/07/11 16:49

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	61	< 61 U
101-55-3	4-Bromophenyl-phenylether	61	< 61 U
118-74-1	Hexachlorobenzene	61	< 61 U
87-86-5	Pentachlorophenol	310	< 310 U
85-01-8	**Phenanthrene**	**61**	**320**
86-74-8	Carbazole	61	< 61 U
120-12-7	Anthracene	61	< 61 U
84-74-2	Di-n-Butylphthalate	61	< 61 U
206-44-0	**Fluoranthene**	**61**	**560**
129-00-0	**Pyrene**	**61**	**500**
85-68-7	Butylbenzylphthalate	61	< 61 U
91-94-1	3,3'-Dichlorobenzidine	310	< 310 U
56-55-3	**Benzo(a)anthracene**	**61**	**220**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**61**	**660 B**
218-01-9	**Chrysene**	**61**	**320**
117-84-0	Di-n-Octyl phthalate	61	< 61 U
50-32-8	**Benzo(a)pyrene**	**61**	**260**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**61**	**120**
53-70-3	Dibenz(a,h)anthracene	61	< 61 U
191-24-2	**Benzo(g,h,i)perylene**	**61**	**110 Q**
90-12-0	1-Methylnaphthalene	61	< 61 U
TOTBFA	**Total Benzofluoranthenes**	**61**	**570**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	69.6%	2-Fluorobiphenyl	73.6%
d14-p-Terphenyl	74.0%	d4-1,2-Dichlorobenzene	64.0%
d5-Phenol	46.4%	2-Fluorophenol	22.4%
2,4,6-Tribromophenol	24.7%	d4-2-Chlorophenol	44.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-37-7-M
SAMPLE

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/14/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 02/02/11
Date Analyzed: 02/07/11 17:22
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.69 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 45.4%

CAS Number	Analyte	RL	Result
108-95-2	**Phenol**	**65**	**95**
111-44-4	Bis-(2-Chloroethyl) Ether	65	< 65 U
95-57-8	2-Chlorophenol	65	< 65 U
541-73-1	1,3-Dichlorobenzene	65	< 65 U
106-46-7	1,4-Dichlorobenzene	65	< 65 U
100-51-6	Benzyl Alcohol	320	< 320 U
95-50-1	1,2-Dichlorobenzene	65	< 65 U
95-48-7	2-Methylphenol	65	< 65 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	65	< 65 U
106-44-5	4-Methylphenol	65	< 65 U
621-64-7	N-Nitroso-Di-N-Propylamine	65	< 65 U
67-72-1	Hexachloroethane	65	< 65 U
98-95-3	Nitrobenzene	65	< 65 U
78-59-1	Isophorone	65	< 65 U
88-75-5	2-Nitrophenol	65	< 65 U
105-67-9	2,4-Dimethylphenol	65	< 65 U
65-85-0	Benzoic Acid	650	< 650 U
111-91-1	bis(2-Chloroethoxy) Methane	65	< 65 U
120-83-2	2,4-Dichlorophenol	320	< 320 U
120-82-1	1,2,4-Trichlorobenzene	65	< 65 U
91-20-3	**Naphthalene**	**65**	**160**
106-47-8	4-Chloroaniline	320	< 320 U
87-68-3	Hexachlorobutadiene	65	< 65 U
59-50-7	4-Chloro-3-methylphenol	320	< 320 U
91-57-6	**2-Methylnaphthalene**	**65**	**170**
77-47-4	Hexachlorocyclopentadiene	320	< 320 U
88-06-2	2,4,6-Trichlorophenol	320	< 320 U
95-95-4	2,4,5-Trichlorophenol	320	< 320 U
91-58-7	2-Chloronaphthalene	65	< 65 U
88-74-4	2-Nitroaniline	320	< 320 U
131-11-3	Dimethylphthalate	65	< 65 U
208-96-8	Acenaphthylene	65	< 65 U
99-09-2	3-Nitroaniline	320	< 320 U
83-32-9	**Acenaphthene**	**65**	**1,000**
51-28-5	2,4-Dinitrophenol	650	< 650 U
100-02-7	4-Nitrophenol	320	< 320 U
132-64-9	**Dibenzofuran**	**65**	**450**
606-20-2	2,6-Dinitrotoluene	320	< 320 U
121-14-2	2,4-Dinitrotoluene	320	< 320 U
84-66-2	Diethylphthalate	65	< 65 U
7005-72-3	4-Chlorophenyl-phenylether	65	< 65 U
86-73-7	**Fluorene**	**65**	**750**
100-01-6	4-Nitroaniline	320	< 320 U
534-52-1	4,6-Dinitro-2-Methylphenol	650	< 650 U

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Date Analyzed: 02/07/11 17:22

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	65	< 65 U
101-55-3	4-Bromophenyl-phenylether	65	< 65 U
118-74-1	Hexachlorobenzene	65	< 65 U
87-86-5	Pentachlorophenol	320	< 320 U
85-01-8	**Phenanthrene**	**65**	**3,200**
86-74-8	**Carbazole**	**65**	**490**
120-12-7	**Anthracene**	**65**	**740**
84-74-2	**Di-n-Butylphthalate**	**65**	**510**
206-44-0	**Fluoranthene**	**65**	**4,500**
129-00-0	**Pyrene**	**65**	**4,800**
85-68-7	**Butylbenzylphthalate**	**65**	**270**
91-94-1	3,3'-Dichlorobenzidine	320	< 320 U
56-55-3	**Benzo(a)anthracene**	**65**	**2,100**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**65**	**960 B**
218-01-9	**Chrysene**	**65**	**2,600**
117-84-0	Di-n-Octyl phthalate	65	< 65 U
50-32-8	**Benzo(a)pyrene**	**65**	**2,400**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**65**	**910**
53-70-3	**Dibenz(a,h)anthracene**	**65**	**120 Q**
191-24-2	**Benzo(g,h,i)perylene**	**65**	**940 Q**
90-12-0	**1-Methylnaphthalene**	**65**	**150**
TOTBFA	**Total Benzofluoranthenes**	**65**	**6,400**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	61.2%	2-Fluorobiphenyl	62.8%
d14-p-Terphenyl	80.8%	d4-1,2-Dichlorobenzene	54.0%
d5-Phenol	59.2%	2-Fluorophenol	53.1%
2,4,6-Tribromophenol	66.9%	d4-2-Chlorophenol	57.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-37-7-M
DILUTION

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/09/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 02/02/11
Date Analyzed: 02/07/11 21:13
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.69 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 3.00
Percent Moisture: 45.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	200	< 200 U
111-44-4	Bis-(2-Chloroethyl) Ether	200	< 200 U
95-57-8	2-Chlorophenol	200	< 200 U
541-73-1	1,3-Dichlorobenzene	200	< 200 U
106-46-7	1,4-Dichlorobenzene	200	< 200 U
100-51-6	Benzyl Alcohol	980	< 980 U
95-50-1	1,2-Dichlorobenzene	200	< 200 U
95-48-7	2-Methylphenol	200	< 200 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	200	< 200 U
106-44-5	4-Methylphenol	200	< 200 U
621-64-7	N-Nitroso-Di-N-Propylamine	200	< 200 U
67-72-1	Hexachloroethane	200	< 200 U
98-95-3	Nitrobenzene	200	< 200 U
78-59-1	Isophorone	200	< 200 U
88-75-5	2-Nitrophenol	200	< 200 U
105-67-9	2,4-Dimethylphenol	200	< 200 U
65-85-0	Benzoic Acid	2,000	< 2,000 U
111-91-1	bis(2-Chloroethoxy) Methane	200	< 200 U
120-83-2	2,4-Dichlorophenol	980	< 980 U
120-82-1	1,2,4-Trichlorobenzene	200	< 200 U
91-20-3	Naphthalene	200	< 200 U
106-47-8	4-Chloroaniline	980	< 980 U
87-68-3	Hexachlorobutadiene	200	< 200 U
59-50-7	4-Chloro-3-methylphenol	980	< 980 U
91-57-6	2-Methylnaphthalene	200	< 200 U
77-47-4	Hexachlorocyclopentadiene	980	< 980 U
88-06-2	2,4,6-Trichlorophenol	980	< 980 U
95-95-4	2,4,5-Trichlorophenol	980	< 980 U
91-58-7	2-Chloronaphthalene	200	< 200 U
88-74-4	2-Nitroaniline	980	< 980 U
131-11-3	Dimethylphthalate	200	< 200 U
208-96-8	Acenaphthylene	200	< 200 U
99-09-2	3-Nitroaniline	980	< 980 U
83-32-9	**Acenaphthene**	**200**	**1,000**
51-28-5	2,4-Dinitrophenol	2,000	< 2,000 U
100-02-7	4-Nitrophenol	980	< 980 U
132-64-9	**Dibenzofuran**	**200**	**410**
606-20-2	2,6-Dinitrotoluene	980	< 980 U
121-14-2	2,4-Dinitrotoluene	980	< 980 U
84-66-2	Diethylphthalate	200	< 200 U
7005-72-3	4-Chlorophenyl-phenylether	200	< 200 U
86-73-7	**Fluorene**	**200**	**710**
100-01-6	4-Nitroaniline	980	< 980 U
534-52-1	4,6-Dinitro-2-Methylphenol	2,000	< 2,000 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: JF-PLSD-PS-37-7-M**
Page 2 of 2 **DILUTION**

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Date Analyzed: 02/07/11 21:13

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	200	< 200 U
101-55-3	4-Bromophenyl-phenylether	200	< 200 U
118-74-1	Hexachlorobenzene	200	< 200 U
87-86-5	Pentachlorophenol	980	< 980 U
85-01-8	**Phenanthrene**	**200**	**4,100**
86-74-8	**Carbazole**	**200**	**540**
120-12-7	**Anthracene**	**200**	**760**
84-74-2	**Di-n-Butylphthalate**	**200**	**450**
206-44-0	**Fluoranthene**	**200**	**5,600**
129-00-0	**Pyrene**	**200**	**4,500**
85-68-7	**Butylbenzylphthalate**	**200**	**250**
91-94-1	3,3'-Dichlorobenzidine	980	< 980 U
56-55-3	**Benzo(a)anthracene**	**200**	**2,100**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**200**	**790 B**
218-01-9	**Chrysene**	**200**	**2,400**
117-84-0	Di-n-Octyl phthalate	200	< 200 U
50-32-8	**Benzo(a)pyrene**	**200**	**2,200**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**200**	**780**
53-70-3	Dibenz(a,h)anthracene	200	< 200 U
191-24-2	**Benzo(g,h,i)perylene**	**200**	**740 Q**
90-12-0	1-Methylnaphthalene	200	< 200 U
TOTBFA	**Total Benzofluoranthenes**	**200**	**4,800**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	56.4%	2-Fluorobiphenyl	62.0%
d14-p-Terphenyl	66.2%	d4-1,2-Dichlorobenzene	52.1%
d5-Phenol	57.4%	2-Fluorophenol	48.7%
2,4,6-Tribromophenol	60.7%	d4-2-Chlorophenol	53.5%

SG07 : 00057

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-37-7-M
MATRIX SPIKE

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/09/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 02/02/11
Date Analyzed: 02/07/11 17:56
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.81 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 45.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	64	---
111-44-4	Bis-(2-Chloroethyl) Ether	64	---
95-57-8	2-Chlorophenol	64	---
541-73-1	1,3-Dichlorobenzene	64	---
106-46-7	1,4-Dichlorobenzene	64	---
100-51-6	Benzyl Alcohol	320	---
95-50-1	1,2-Dichlorobenzene	64	---
95-48-7	2-Methylphenol	64	---
108-60-1	2,2'-Oxybis(1-Chloropropane)	64	---
106-44-5	4-Methylphenol	64	---
621-64-7	N-Nitroso-Di-N-Propylamine	64	---
67-72-1	Hexachloroethane	64	---
98-95-3	Nitrobenzene	64	---
78-59-1	Isophorone	64	---
88-75-5	2-Nitrophenol	64	---
105-67-9	2,4-Dimethylphenol	64	---
65-85-0	Benzoic Acid	640	---
111-91-1	bis(2-Chloroethoxy) Methane	64	---
120-83-2	2,4-Dichlorophenol	320	---
120-82-1	1,2,4-Trichlorobenzene	64	---
91-20-3	Naphthalene	64	---
106-47-8	4-Chloroaniline	320	---
87-68-3	Hexachlorobutadiene	64	---
59-50-7	4-Chloro-3-methylphenol	320	---
91-57-6	2-Methylnaphthalene	64	---
77-47-4	Hexachlorocyclopentadiene	320	---
88-06-2	2,4,6-Trichlorophenol	320	---
95-95-4	2,4,5-Trichlorophenol	320	---
91-58-7	2-Chloronaphthalene	64	---
88-74-4	2-Nitroaniline	320	---
131-11-3	Dimethylphthalate	64	---
208-96-8	Acenaphthylene	64	---
99-09-2	3-Nitroaniline	320	---
83-32-9	Acenaphthene	64	---
51-28-5	2,4-Dinitrophenol	640	---
100-02-7	4-Nitrophenol	320	---
132-64-9	Dibenzofuran	64	---
606-20-2	2,6-Dinitrotoluene	320	---
121-14-2	2,4-Dinitrotoluene	320	---
84-66-2	Diethylphthalate	64	---
7005-72-3	4-Chlorophenyl-phenylether	64	---
86-73-7	Fluorene	64	---
100-01-6	4-Nitroaniline	320	---
534-52-1	4,6-Dinitro-2-Methylphenol	640	---

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-37-7-M
MATRIX SPIKE

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Date Analyzed: 02/07/11 17:56

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	64	---
101-55-3	4-Bromophenyl-phenylether	64	---
118-74-1	Hexachlorobenzene	64	---
87-86-5	Pentachlorophenol	320	---
85-01-8	Phenanthrene	64	---
86-74-8	Carbazole	64	---
120-12-7	Anthracene	64	---
84-74-2	Di-n-Butylphthalate	64	---
206-44-0	Fluoranthene	64	---
129-00-0	Pyrene	64	---
85-68-7	Butylbenzylphthalate	64	---
91-94-1	3,3'-Dichlorobenzidine	320	---
56-55-3	Benzo(a)anthracene	64	---
117-81-7	bis(2-Ethylhexyl)phthalate	64	---
218-01-9	Chrysene	64	---
117-84-0	Di-n-Octyl phthalate	64	---
50-32-8	Benzo(a)pyrene	64	---
193-39-5	Indeno(1,2,3-cd)pyrene	64	---
53-70-3	Dibenz(a,h)anthracene	64	---
191-24-2	Benzo(g,h,i)perylene	64	---
90-12-0	1-Methylnaphthalene	64	---
TOTBFA	Total Benzofluoranthenes	64	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.6%	2-Fluorobiphenyl	67.6%
d14-p-Terphenyl	89.6%	d4-1,2-Dichlorobenzene	60.8%
d5-Phenol	64.3%	2-Fluorophenol	56.3%
2,4,6-Tribromophenol	71.2%	d4-2-Chlorophenol	62.9%

SG07:00059

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-37-7-M
MATRIX SPIKE DUPLICATE

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/09/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted: 02/02/11
Date Analyzed: 02/07/11 18:28
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.70 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: 45.4%

CAS Number	Analyte	RL	Result
108-95-2	Phenol	65	---
111-44-4	Bis-(2-Chloroethyl) Ether	65	---
95-57-8	2-Chlorophenol	65	---
541-73-1	1,3-Dichlorobenzene	65	---
106-46-7	1,4-Dichlorobenzene	65	---
100-51-6	Benzyl Alcohol	320	---
95-50-1	1,2-Dichlorobenzene	65	---
95-48-7	2-Methylphenol	65	---
108-60-1	2,2'-Oxybis(1-Chloropropane)	65	---
106-44-5	4-Methylphenol	65	---
621-64-7	N-Nitroso-Di-N-Propylamine	65	---
67-72-1	Hexachloroethane	65	---
98-95-3	Nitrobenzene	65	---
78-59-1	Isophorone	65	---
88-75-5	2-Nitrophenol	65	---
105-67-9	2,4-Dimethylphenol	65	---
65-85-0	Benzoic Acid	650	---
111-91-1	bis(2-Chloroethoxy) Methane	65	---
120-83-2	2,4-Dichlorophenol	320	---
120-82-1	1,2,4-Trichlorobenzene	65	---
91-20-3	Naphthalene	65	---
106-47-8	4-Chloroaniline	320	---
87-68-3	Hexachlorobutadiene	65	---
59-50-7	4-Chloro-3-methylphenol	320	---
91-57-6	2-Methylnaphthalene	65	---
77-47-4	Hexachlorocyclopentadiene	320	---
88-06-2	2,4,6-Trichlorophenol	320	---
95-95-4	2,4,5-Trichlorophenol	320	---
91-58-7	2-Chloronaphthalene	65	---
88-74-4	2-Nitroaniline	320	---
131-11-3	Dimethylphthalate	65	---
208-96-8	Acenaphthylene	65	---
99-09-2	3-Nitroaniline	320	---
83-32-9	Acenaphthene	65	---
51-28-5	2,4-Dinitrophenol	650	---
100-02-7	4-Nitrophenol	320	---
132-64-9	Dibenzofuran	65	---
606-20-2	2,6-Dinitrotoluene	320	---
121-14-2	2,4-Dinitrotoluene	320	---
84-66-2	Diethylphthalate	65	---
7005-72-3	4-Chlorophenyl-phenylether	65	---
86-73-7	Fluorene	65	---
100-01-6	4-Nitroaniline	320	---
534-52-1	4,6-Dinitro-2-Methylphenol	650	---

SG07 : 00050

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-37-7-M
MATRIX SPIKE DUPLICATE

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Date Analyzed: 02/07/11 18:28

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	65	---
101-55-3	4-Bromophenyl-phenylether	65	---
118-74-1	Hexachlorobenzene	65	---
87-86-5	Pentachlorophenol	320	---
85-01-8	Phenanthrene	65	---
86-74-8	Carbazole	65	---
120-12-7	Anthracene	65	---
84-74-2	Di-n-Butylphthalate	65	---
206-44-0	Fluoranthene	65	---
129-00-0	Pyrene	65	---
85-68-7	Butylbenzylphthalate	65	---
91-94-1	3,3'-Dichlorobenzidine	320	---
56-55-3	Benzo(a)anthracene	65	---
117-81-7	bis(2-Ethylhexyl)phthalate	65	---
218-01-9	Chrysene	65	---
117-84-0	Di-n-Octyl phthalate	65	---
50-32-8	Benzo(a)pyrene	65	---
193-39-5	Indeno(1,2,3-cd)pyrene	65	---
53-70-3	Dibenz(a,h)anthracene	65	---
191-24-2	Benzo(g,h,i)perylene	65	---
90-12-0	1-Methylnaphthalene	65	---
TOTBFA	Total Benzofluoranthenes	65	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.6%	2-Fluorobiphenyl	69.6%
d14-p-Terphenyl	85.2%	d4-1,2-Dichlorobenzene	58.8%
d5-Phenol	60.8%	2-Fluorophenol	54.1%
2,4,6-Tribromophenol	71.2%	d4-2-Chlorophenol	58.4%

5607:00061

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: MB-020211
METHOD BLANK

Lab Sample ID: MB-020211
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/09/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 02/02/11
Date Analyzed: 02/04/11 15:45
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.50 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	67	< 67 U
111-44-4	Bis-(2-Chloroethyl) Ether	67	< 67 U
95-57-8	2-Chlorophenol	67	< 67 U
541-73-1	1,3-Dichlorobenzene	67	< 67 U
106-46-7	1,4-Dichlorobenzene	67	< 67 U
100-51-6	Benzyl Alcohol	330	< 330 U
95-50-1	1,2-Dichlorobenzene	67	< 67 U
95-48-7	2-Methylphenol	67	< 67 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	67	< 67 U
106-44-5	4-Methylphenol	67	< 67 U
621-64-7	N-Nitroso-Di-N-Propylamine	67	< 67 U
67-72-1	Hexachloroethane	67	< 67 U
98-95-3	Nitrobenzene	67	< 67 U
78-59-1	Isophorone	67	< 67 U
88-75-5	2-Nitrophenol	67	< 67 U
105-67-9	2,4-Dimethylphenol	67	< 67 U
65-85-0	Benzoic Acid	670	< 670 U
111-91-1	bis(2-Chloroethoxy) Methane	67	< 67 U
120-83-2	2,4-Dichlorophenol	330	< 330 U
120-82-1	1,2,4-Trichlorobenzene	67	< 67 U
91-20-3	Naphthalene	67	< 67 U
106-47-8	4-Chloroaniline	330	< 330 U
87-68-3	Hexachlorobutadiene	67	< 67 U
59-50-7	4-Chloro-3-methylphenol	330	< 330 U
91-57-6	2-Methylnaphthalene	67	< 67 U
77-47-4	Hexachlorocyclopentadiene	330	< 330 U
88-06-2	2,4,6-Trichlorophenol	330	< 330 U
95-95-4	2,4,5-Trichlorophenol	330	< 330 U
91-58-7	2-Chloronaphthalene	67	< 67 U
88-74-4	2-Nitroaniline	330	< 330 U
131-11-3	Dimethylphthalate	67	< 67 U
208-96-8	Acenaphthylene	67	< 67 U
99-09-2	3-Nitroaniline	330	< 330 U
83-32-9	Acenaphthene	67	< 67 U
51-28-5	2,4-Dinitrophenol	670	< 670 U
100-02-7	4-Nitrophenol	330	< 330 U
132-64-9	Dibenzofuran	67	< 67 U
606-20-2	2,6-Dinitrotoluene	330	< 330 U
121-14-2	2,4-Dinitrotoluene	330	< 330 U
84-66-2	Diethylphthalate	67	< 67 U
7005-72-3	4-Chlorophenyl-phenylether	67	< 67 U
86-73-7	Fluorene	67	< 67 U
100-01-6	4-Nitroaniline	330	< 330 U
534-52-1	4,6-Dinitro-2-Methylphenol	670	< 670 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-020211**
 METHOD BLANK

Lab Sample ID: MB-020211 QC Report No: SG07-The Boeing Company
LIMS ID: 11-1530 Project: Jorgensen Forge
Matrix: Soil 7KPL2JOR
Date Analyzed: 02/04/11 15:45

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	67	< 67 U
101-55-3	4-Bromophenyl-phenylether	67	< 67 U
118-74-1	Hexachlorobenzene	67	< 67 U
87-86-5	Pentachlorophenol	330	< 330 U
85-01-8	Phenanthrene	67	< 67 U
86-74-8	Carbazole	67	< 67 U
120-12-7	Anthracene	67	< 67 U
84-74-2	Di-n-Butylphthalate	67	< 67 U
206-44-0	Fluoranthene	67	< 67 U
129-00-0	Pyrene	67	< 67 U
85-68-7	Butylbenzylphthalate	67	< 67 U
91-94-1	3,3'-Dichlorobenzidine	330	< 330 U
56-55-3	Benzo(a)anthracene	67	< 67 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**67**	**93**
218-01-9	Chrysene	67	< 67 U
117-84-0	Di-n-Octyl phthalate	67	< 67 U
50-32-8	Benzo(a)pyrene	67	< 67 U
193-39-5	Indeno(1,2,3-cd)pyrene	67	< 67 U
53-70-3	Dibenz(a,h)anthracene	67	< 67 U
191-24-2	Benzo(g,h,i)perylene	67	< 67 U
90-12-0	1-Methylnaphthalene	67	< 67 U
TOTBFA	Total Benzofluoranthenes	67	< 67 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	70.8%	2-Fluorobiphenyl	65.2%
d14-p-Terphenyl	80.0%	d4-1,2-Dichlorobenzene	67.6%
d5-Phenol	69.9%	2-Fluorophenol	65.6%
2,4,6-Tribromophenol	62.7%	d4-2-Chlorophenol	70.4%

SG07:00053

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: MB-020811
METHOD BLANK

Lab Sample ID: MB-020811
LIMS ID: 11-1523
Matrix: Soil
Data Release Authorized:
Reported: 02/10/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 02/08/11
Date Analyzed: 02/10/11 12:46
Instrument/Analyst: NT4/JZ
GPC Cleanup: Yes

Sample Amount: 7.50 g-dry-wt
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	RL	Result
108-95-2	Phenol	67	< 67 U
111-44-4	Bis-(2-Chloroethyl) Ether	67	< 67 U
95-57-8	2-Chlorophenol	67	< 67 U
541-73-1	1,3-Dichlorobenzene	67	< 67 U
106-46-7	1,4-Dichlorobenzene	67	< 67 U
100-51-6	Benzyl Alcohol	330	< 330 U
95-50-1	1,2-Dichlorobenzene	67	< 67 U
95-48-7	2-Methylphenol	67	< 67 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	67	< 67 U
106-44-5	4-Methylphenol	67	< 67 U
621-64-7	N-Nitroso-Di-N-Propylamine	67	< 67 U
67-72-1	Hexachloroethane	67	< 67 U
98-95-3	Nitrobenzene	67	< 67 U
78-59-1	Isophorone	67	< 67 U
88-75-5	2-Nitrophenol	67	< 67 U
105-67-9	2,4-Dimethylphenol	67	< 67 U
65-85-0	Benzoic Acid	670	< 670 U
111-91-1	bis(2-Chloroethoxy) Methane	67	< 67 U
120-83-2	2,4-Dichlorophenol	330	< 330 U
120-82-1	1,2,4-Trichlorobenzene	67	< 67 U
91-20-3	Naphthalene	67	< 67 U
106-47-8	4-Chloroaniline	330	< 330 U
87-68-3	Hexachlorobutadiene	67	< 67 U
59-50-7	4-Chloro-3-methylphenol	330	< 330 U
91-57-6	2-Methylnaphthalene	67	< 67 U
77-47-4	Hexachlorocyclopentadiene	330	< 330 U
88-06-2	2,4,6-Trichlorophenol	330	< 330 U
95-95-4	2,4,5-Trichlorophenol	330	< 330 U
91-58-7	2-Chloronaphthalene	67	< 67 U
88-74-4	2-Nitroaniline	330	< 330 U
131-11-3	Dimethylphthalate	67	< 67 U
208-96-8	Acenaphthylene	67	< 67 U
99-09-2	3-Nitroaniline	330	< 330 U
83-32-9	Acenaphthene	67	< 67 U
51-28-5	2,4-Dinitrophenol	670	< 670 U
100-02-7	4-Nitrophenol	330	< 330 U
132-64-9	Dibenzofuran	67	< 67 U
606-20-2	2,6-Dinitrotoluene	330	< 330 U
121-14-2	2,4-Dinitrotoluene	330	< 330 U
84-66-2	Diethylphthalate	67	< 67 U
7005-72-3	4-Chlorophenyl-phenylether	67	< 67 U
86-73-7	Fluorene	67	< 67 U
100-01-6	4-Nitroaniline	330	< 330 U
534-52-1	4,6-Dinitro-2-Methylphenol	670	< 670 U

SG07 : 00064

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: MB-020811
METHOD BLANK

Lab Sample ID: MB-020811
LIMS ID: 11-1523
Matrix: Soil
Date Analyzed: 02/10/11 12:46

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

CAS Number	Analyte	RL	Result
86-30-6	N-Nitrosodiphenylamine	67	< 67 U
101-55-3	4-Bromophenyl-phenylether	67	< 67 U
118-74-1	Hexachlorobenzene	67	< 67 U
87-86-5	Pentachlorophenol	330	< 330 U
85-01-8	Phenanthrene	67	< 67 U
86-74-8	Carbazole	67	< 67 U
120-12-7	Anthracene	67	< 67 U
84-74-2	Di-n-Butylphthalate	67	< 67 U
206-44-0	Fluoranthene	67	< 67 U
129-00-0	Pyrene	67	< 67 U
85-68-7	Butylbenzylphthalate	67	< 67 U
91-94-1	3,3'-Dichlorobenzidine	330	< 330 U
56-55-3	Benzo(a)anthracene	67	< 67 U
117-81-7	bis(2-Ethylhexyl)phthalate	67	< 67 U
218-01-9	Chrysene	67	< 67 U
117-84-0	Di-n-Octyl phthalate	67	< 67 U
50-32-8	Benzo(a)pyrene	67	< 67 U
193-39-5	Indeno(1,2,3-cd)pyrene	67	< 67 U
53-70-3	Dibenz(a,h)anthracene	67	< 67 U
191-24-2	Benzo(g,h,i)perylene	67	< 67 U
90-12-0	1-Methylnaphthalene	67	< 67 U
TOTBFA	Total Benzofluoranthenes	67	< 67 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	81.2%	2-Fluorobiphenyl	70.4%
d14-p-Terphenyl	87.2%	d4-1,2-Dichlorobenzene	73.2%
d5-Phenol	74.7%	2-Fluorophenol	68.0%
2,4,6-Tribromophenol	78.4%	d4-2-Chlorophenol	72.5%

SG07:00065

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
JF-PLSD-PS-15A	66.8%	70.4%	76.4%	62.8%	52.8%	36.3%	41.1%	53.9%	0
JF-PLSD-PS-15A DL	68.0%	69.2%	90.4%	65.2%	55.2%	38.4%	46.4%	55.5%	0
MB-020811	81.2%	70.4%	87.2%	73.2%	74.7%	68.0%	78.4%	72.5%	0
LCS-020811	78.8%	71.6%	92.0%	71.2%	76.0%	65.1%	81.6%	69.9%	0
LCSD-020811	79.6%	69.2%	88.8%	69.6%	70.4%	66.9%	78.1%	70.9%	0
JF-PLSD-PS-15B	59.9%	66.0%	69.2%	58.4%	33.4%	9.1%*	7.4%*	30.2%*	3
JF-PLSD-PS-15B RE	60.4%	64.8%	69.2%	60.4%	62.9%	52.0%	56.8%	60.0%	0
JF-PLSD-PS-24A	70.0%	70.0%	77.6%	65.6%	46.7%	22.9%	21.4%*	45.6%	1
JF-PLSD-PS-24B	63.2%	66.8%	71.6%	55.6%	32.5%	10.6%*	12.1%*	31.7%*	3
JF-PLSD-PS-24B DL	59.8%	70.1%	72.7%	62.2%	47.8%	22.4%	16.6%*	44.2%	1
JF-PLSD-PS-37-7	64.0%	68.0%	74.0%	53.6%	49.9%	35.5%	48.3%	48.8%	0
JF-PLSD-PS-37-2	78.0%	84.5%	88.2%	68.8%	74.2%	57.0%	80.8%	72.9%	0
JF-PLSD-PS-PUBLIC	77.4%	88.2%	136%*	71.5%	74.7%	51.7%	76.3%	71.0%	1
JF-PLSD-PS-24B-D	69.6%	73.6%	74.0%	64.0%	46.4%	22.4%	24.7%*	44.8%	1
MB-020211	70.8%	65.2%	80.0%	67.6%	69.9%	65.6%	62.7%	70.4%	0
LCS-020211	69.6%	66.8%	81.6%	64.4%	67.2%	61.6%	69.9%	66.7%	0
LCSD-020211	71.2%	68.8%	79.2%	60.8%	66.7%	59.7%	72.3%	62.7%	0
JF-PLSD-PS-37-7-M	61.2%	62.8%	80.8%	54.0%	59.2%	53.1%	66.9%	57.6%	0
JF-PLSD-PS-37-7-M DL	56.4%	62.0%	66.2%	52.1%	57.4%	48.7%	60.7%	53.5%	0
JF-PLSD-PS-37-7-M MS	63.6%	67.6%	89.6%	60.8%	64.3%	56.3%	71.2%	62.9%	0
JF-PLSD-PS-37-7-M MSD	63.6%	69.6%	85.2%	58.8%	60.8%	54.1%	71.2%	58.4%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(46-102)	(32-106)
(FBP) = 2-Fluorobiphenyl	(51-105)	(39-107)
(TPH) = d14-p-Terphenyl	(55-124)	(31-130)
(DCB) = d4-1,2-Dichlorobenzene	(48-104)	(38-102)
(PHL) = d5-Phenol	(44-110)	(27-112)
(2FP) = 2-Fluorophenol	(38-112)	(22-108)
(TBP) = 2,4,6-Tribromophenol	(54-120)	(31-131)
(2CP) = d4-2-Chlorophenol	(50-103)	(36-104)

Prep Method: SW3546
Log Number Range: 11-1522 to 11-1530

SG07:00066

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Page 1 of 2

Sample ID: LCS-020211
LCS/LCSD

Lab Sample ID: LCS-020211
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/09/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted LCS/LCSD: 02/02/11

Date Analyzed LCS: 02/04/11 16:18
LCSD: 02/04/11 17:24
Instrument/Analyst LCS: NT4/JZ
LCSD: NT4/JZ
GPC Cleanup: Yes

Sample Amount LCS: 7.50 g
LCSD: 7.50 g
Final Extract Volume LCS: 0.5 mL
LCSD: 0.5 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	1250	1670	74.9%	1240	1670	74.3%	0.8%
Bis-(2-Chloroethyl) Ether	1140	1670	68.3%	1060	1670	63.5%	7.3%
2-Chlorophenol	1130	1670	67.7%	1110	1670	66.5%	1.8%
1,3-Dichlorobenzene	976	1670	58.4%	975	1670	58.4%	0.1%
1,4-Dichlorobenzene	991	1670	59.3%	971	1670	58.1%	2.0%
Benzyl Alcohol	1870	3330	56.2%	2000	3330	60.1%	6.7%
1,2-Dichlorobenzene	983	1670	58.9%	1030	1670	61.7%	4.7%
2-Methylphenol	981	1670	58.7%	1030	1670	61.7%	4.9%
2,2'-Oxybis(1-Chloropropane)	1090	1670	65.3%	1080	1670	64.7%	0.9%
4-Methylphenol	1910	3330	57.4%	2030	3330	61.0%	6.1%
N-Nitroso-Di-N-Propylamine	1090	1670	65.3%	1080	1670	64.7%	0.9%
Hexachloroethane	1040	1670	62.3%	1050	1670	62.9%	1.0%
Nitrobenzene	1170	1670	70.1%	1170	1670	70.1%	0.0%
Isophorone	1320	1670	79.0%	1320	1670	79.0%	0.0%
2-Nitrophenol	1130	1670	67.7%	1180	1670	70.7%	4.3%
2,4-Dimethylphenol	1050	1670	62.9%	1120	1670	67.1%	6.5%
Benzoic Acid	3120	5000	62.4%	3000	5000	60.0%	3.9%
bis(2-Chloroethoxy) Methane	1100	1670	65.9%	1160	1670	69.5%	5.3%
2,4-Dichlorophenol	1240	1670	74.3%	1230	1670	73.7%	0.8%
1,2,4-Trichlorobenzene	1110	1670	66.5%	1130	1670	67.7%	1.8%
Naphthalene	1220	1670	73.1%	1250	1670	74.9%	2.4%
4-Chloroaniline	2930	4000	73.2%	3030	4000	75.8%	3.4%
Hexachlorobutadiene	1150	1670	68.9%	1190	1670	71.3%	3.4%
4-Chloro-3-methylphenol	1250	1670	74.9%	1250	1670	74.9%	0.0%
2-Methylnaphthalene	1060	1670	63.5%	1100	1670	65.9%	3.7%
Hexachlorocyclopentadiene	3290	5000	65.8%	3610	5000	72.2%	9.3%
2,4,6-Trichlorophenol	1140	1670	68.3%	1250	1670	74.9%	9.2%
2,4,5-Trichlorophenol	1010	1670	60.5%	1090	1670	65.3%	7.6%
2-Chloronaphthalene	1120	1670	67.1%	1190	1670	71.3%	6.1%
2-Nitroaniline	1170	1670	70.1%	1270	1670	76.0%	8.2%
Dimethylphthalate	1130	1670	67.7%	1200	1670	71.9%	6.0%
Acenaphthylene	1200	1670	71.9%	1250	1670	74.9%	4.1%
3-Nitroaniline	3160	4270	74.0%	3350	4270	78.5%	5.8%
Acenaphthene	1140	1670	68.3%	1200	1670	71.9%	5.1%

Lab Sample ID: LCS-020211 QC Report No: SG07-The Boeing Company
LIMS ID: 11-1530 Project: Jorgensen Forge
Matrix: Soil 7KPL2JOR
Date Analyzed LCS: 02/04/11 16:18
LCSD: 02/04/11 17:24

Analyte	LCS		Spike Added-LCS	LCS Recovery	LCSD		Spike Added-LCSD	LCSD Recovery	RPD
2,4-Dinitrophenol	3880		5000	77.6%	4210		5000	84.2%	8.2%
4-Nitrophenol	1240		1670	74.3%	1290		1670	77.2%	4.0%
Dibenzofuran	1130		1670	67.7%	1140		1670	68.3%	0.9%
2,6-Dinitrotoluene	1130		1670	67.7%	1220		1670	73.1%	7.7%
2,4-Dinitrotoluene	1140		1670	68.3%	1150		1670	68.9%	0.9%
Diethylphthalate	1140		1670	68.3%	1210		1670	72.5%	6.0%
4-Chlorophenyl-phenylether	1120		1670	67.1%	1190		1670	71.3%	6.1%
Fluorene	1190		1670	71.3%	1250		1670	74.9%	4.9%
4-Nitroaniline	915		1670	54.8%	984		1670	58.9%	7.3%
4,6-Dinitro-2-Methylphenol	3460		5000	69.2%	3790		5000	75.8%	9.1%
N-Nitrosodiphenylamine	1180		1670	70.7%	1230		1670	73.7%	4.1%
4-Bromophenyl-phenylether	1160		1670	69.5%	1260		1670	75.4%	8.3%
Hexachlorobenzene	1190		1670	71.3%	1250		1670	74.9%	4.9%
Pentachlorophenol	1230		1670	73.7%	1350		1670	80.8%	9.3%
Phenanthrene	1290		1670	77.2%	1370		1670	82.0%	6.0%
Carbazole	1110		1670	66.5%	1160		1670	69.5%	4.4%
Anthracene	1240		1670	74.3%	1300		1670	77.8%	4.7%
Di-n-Butylphthalate	1200		1670	71.9%	1210		1670	72.5%	0.8%
Fluoranthene	1290		1670	77.2%	1260		1670	75.4%	2.4%
Pyrene	1400		1670	83.8%	1410		1670	84.4%	0.7%
Butylbenzylphthalate	1330		1670	79.6%	1360		1670	81.4%	2.2%
3,3'-Dichlorobenzidine	3110		4270	72.8%	3220		4270	75.4%	3.5%
Benzo(a)anthracene	1240		1670	74.3%	1250		1670	74.9%	0.8%
bis(2-Ethylhexyl)phthalate	1190	B	1670	71.3%	1210	B	1670	72.5%	1.7%
Chrysene	1350		1670	80.8%	1350		1670	80.8%	0.0%
Di-n-Octyl phthalate	1090		1670	65.3%	1100		1670	65.9%	0.9%
Benzo(a)pyrene	1250		1670	74.9%	1270		1670	76.0%	1.6%
Indeno(1,2,3-cd)pyrene	1870	Q	1670	112%	1850	Q	1670	111%	1.1%
Dibenz(a,h)anthracene	1930	Q	1670	116%	1880	Q	1670	113%	2.6%
Benzo(g,h,i)perylene	1950	Q	1670	117%	1890	Q	1670	113%	3.1%
1-Methylnaphthalene	1130		1670	67.7%	1170		1670	70.1%	3.5%
Total Benzofluoranthenes	2670		3330	80.2%	2620		3330	78.7%	1.9%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	69.6%	71.2%
2-Fluorobiphenyl	66.8%	68.8%
d14-p-Terphenyl	81.6%	79.2%
d4-1,2-Dichlorobenzene	64.4%	60.8%
d5-Phenol	67.2%	66.7%
2-Fluorophenol	61.6%	59.7%
2,4,6-Tribromophenol	69.9%	72.3%
d4-2-Chlorophenol	66.7%	62.7%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
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Sample ID: LCS-020811
LCS/LCSD

Lab Sample ID: LCS-020811
LIMS ID: 11-1523
Matrix: Soil
Data Release Authorized:
Reported: 02/10/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted LCS/LCSD: 02/08/11

Date Analyzed LCS: 02/10/11 13:20
LCSD: 02/10/11 13:53
Instrument/Analyst LCS: NT4/JZ
LCSD: NT4/JZ
GPC Cleanup: Yes

Sample Amount LCS: 7.50 g
LCSD: 7.50 g
Final Extract Volume LCS: 0.5 mL
LCSD: 0.5 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Percent Moisture: NA

Analyte	LCS		Spike Added-LCS	LCS Recovery	LCSD		Spike Added-LCSD	LCSD Recovery	RPD
Phenol	1490		1670	89.2%	1450		1670	86.8%	2.7%
Bis-(2-Chloroethyl) Ether	1250		1670	74.9%	1230		1670	73.7%	1.6%
2-Chlorophenol	1250		1670	74.9%	1250		1670	74.9%	0.0%
1,3-Dichlorobenzene	1080		1670	64.7%	1100		1670	65.9%	1.8%
1,4-Dichlorobenzene	1090		1670	65.3%	1080		1670	64.7%	0.9%
Benzyl Alcohol	2240		3330	67.3%	2260		3330	67.9%	0.9%
1,2-Dichlorobenzene	1100		1670	65.9%	1130		1670	67.7%	2.7%
2-Methylphenol	1140		1670	68.3%	1140		1670	68.3%	0.0%
2,2'-Oxybis(1-Chloropropane)	1280		1670	76.6%	1260		1670	75.4%	1.6%
4-Methylphenol	2300		3330	69.1%	2320		3330	69.7%	0.9%
N-Nitroso-Di-N-Propylamine	1270		1670	76.0%	1270		1670	76.0%	0.0%
Hexachloroethane	1160		1670	69.5%	1140		1670	68.3%	1.7%
Nitrobenzene	1280		1670	76.6%	1300		1670	77.8%	1.6%
Isophorone	1460		1670	87.4%	1510		1670	90.4%	3.4%
2-Nitrophenol	1320		1670	79.0%	1320		1670	79.0%	0.0%
2,4-Dimethylphenol	1230		1670	73.7%	1270		1670	76.0%	3.2%
Benzoic Acid	2280		5000	45.6%	2770		5000	55.4%	19.4%
bis(2-Chloroethoxy) Methane	1290		1670	77.2%	1290		1670	77.2%	0.0%
2,4-Dichlorophenol	1340		1670	80.2%	1360		1670	81.4%	1.5%
1,2,4-Trichlorobenzene	1110		1670	66.5%	1170		1670	70.1%	5.3%
Naphthalene	1290		1670	77.2%	1310		1670	78.4%	1.5%
4-Chloroaniline	3430		4000	85.8%	3500		4000	87.5%	2.0%
Hexachlorobutadiene	1170		1670	70.1%	1250		1670	74.9%	6.6%
4-Chloro-3-methylphenol	1510		1670	90.4%	1590		1670	95.2%	5.2%
2-Methylnaphthalene	1180		1670	70.7%	1230		1670	73.7%	4.1%
Hexachlorocyclopentadiene	3560		5000	71.2%	3570		5000	71.4%	0.3%
2,4,6-Trichlorophenol	1310		1670	78.4%	1330		1670	79.6%	1.5%
2,4,5-Trichlorophenol	1170		1670	70.1%	1140		1670	68.3%	2.6%
2-Chloronaphthalene	1190		1670	71.3%	1230		1670	73.7%	3.3%
2-Nitroaniline	1400	Q	1670	83.8%	1480	Q	1670	88.6%	5.6%
Dimethylphthalate	1340		1670	80.2%	1320		1670	79.0%	1.5%
Acenaphthylene	1330		1670	79.6%	1320		1670	79.0%	0.8%
3-Nitroaniline	4160		4270	97.4%	4200		4270	98.4%	1.0%
Acenaphthene	1310		1670	78.4%	1280		1670	76.6%	2.3%

SG07 : 00053

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCSD-020811
LCS/LCSD

Lab Sample ID: LCS-020811
LIMS ID: 11-1523
Matrix: Soil
Date Analyzed LCS: 02/10/11 13:20
LCSD: 02/10/11 13:53

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
2,4-Dinitrophenol	4460	5000	89.2%	4770 Q	5000	95.4%	6.7%
4-Nitrophenol	1680 Q	1670	101%	1610	1670	96.4%	4.3%
Dibenzofuran	1240	1670	74.3%	1240	1670	74.3%	0.0%
2,6-Dinitrotoluene	1320	1670	79.0%	1340	1670	80.2%	1.5%
2,4-Dinitrotoluene	1390	1670	83.2%	1370	1670	82.0%	1.4%
Diethylphthalate	1400	1670	83.8%	1400	1670	83.8%	0.0%
4-Chlorophenyl-phenylether	1270	1670	76.0%	1300	1670	77.8%	2.3%
Fluorene	1350	1670	80.8%	1390	1670	83.2%	2.9%
4-Nitroaniline	1320	1670	79.0%	1370	1670	82.0%	3.7%
4,6-Dinitro-2-Methylphenol	4200	5000	84.0%	4570	5000	91.4%	8.4%
N-Nitrosodiphenylamine	1310	1670	78.4%	1300	1670	77.8%	0.8%
4-Bromophenyl-phenylether	1270	1670	76.0%	1320	1670	79.0%	3.9%
Hexachlorobenzene	1270	1670	76.0%	1320	1670	79.0%	3.9%
Pentachlorophenol	1090	1670	65.3%	1240	1670	74.3%	12.9%
Phenanthrene	1430	1670	85.6%	1470	1670	88.0%	2.8%
Carbazole	1300	1670	77.8%	1390	1670	83.2%	6.7%
Anthracene	1400	1670	83.8%	1430	1670	85.6%	2.1%
Di-n-Butylphthalate	1320	1670	79.0%	1380	1670	82.6%	4.4%
Fluoranthene	1410	1670	84.4%	1450	1670	86.8%	2.8%
Pyrene	1570	1670	94.0%	1590	1670	95.2%	1.3%
Butylbenzylphthalate	1580	1670	94.6%	1560	1670	93.4%	1.3%
3,3'-Dichlorobenzidine	3510	4270	82.2%	3510	4270	82.2%	0.0%
Benzo(a)anthracene	1370	1670	82.0%	1350	1670	80.8%	1.5%
bis(2-Ethylhexyl)phthalate	1240	1670	74.3%	1250	1670	74.9%	0.8%
Chrysene	1490	1670	89.2%	1510	1670	90.4%	1.3%
Di-n-Octyl phthalate	1010	1670	60.5%	1010	1670	60.5%	0.0%
Benzo(a)pyrene	1420	1670	85.0%	1440	1670	86.2%	1.4%
Indeno(1,2,3-cd)pyrene	1650	1670	98.8%	1660	1670	99.4%	0.6%
Dibenz(a,h)anthracene	1660	1670	99.4%	1710	1670	102%	3.0%
Benzo(g,h,i)perylene	1550	1670	92.8%	1580	1670	94.6%	1.9%
1-Methylnaphthalene	1280	1670	76.6%	1300	1670	77.8%	1.6%
Total Benzofluoranthenes	3120	3330	93.7%	3160	3330	94.9%	1.3%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	78.8%	79.6%
2-Fluorobiphenyl	71.6%	69.2%
d14-p-Terphenyl	92.0%	88.8%
d4-1,2-Dichlorobenzene	71.2%	69.6%
d5-Phenol	76.0%	70.4%
2-Fluorophenol	65.1%	66.9%
2,4,6-Tribromophenol	81.6%	78.1%
d4-2-Chlorophenol	69.9%	70.9%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

SG07:00070

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-37-7-M
MS/MSD

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/11/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Date Extracted MS/MSD: 02/02/11

Date Analyzed MS: 02/07/11 17:56
MSD: 02/07/11 18:28
Instrument/Analyst MS: NT4/JZ
MSD: NT4/JZ
GPC Cleanup: Yes

Sample Amount MS: 7.81 g-dry-wt
MSD: 7.70 g-dry-wt
Final Extract Volume MS: 0.5 mL
MSD: 0.5 mL
Dilution Factor MS: 1.00
MSD: 1.00
Percent Moisture: 45.4 %

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Phenol	94.9	1160	1600	66.6%	1250	1620	71.3%	7.5%
Bis-(2-Chloroethyl) Ether	< 65.0 U	1050	1600	65.6%	974	1620	60.1%	7.5%
2-Chlorophenol	< 65.0 U	1040	1600	65.0%	1010	1620	62.3%	2.9%
1,3-Dichlorobenzene	< 65.0 U	863	1600	53.9%	858	1620	53.0%	0.6%
1,4-Dichlorobenzene	< 65.0 U	872	1600	54.5%	914	1620	56.4%	4.7%
Benzyl Alcohol	< 325 U	1870	3200	58.4%	1860	3250	57.2%	0.5%
1,2-Dichlorobenzene	< 65.0 U	891	1600	55.7%	895	1620	55.2%	0.4%
2-Methylphenol	< 65.0 U	809	1600	50.6%	784	1620	48.4%	3.1%
2,2'-Oxybis(1-Chloropropane	< 65.0 U	1020	1600	63.8%	1010	1620	62.3%	1.0%
4-Methylphenol	< 65.0 U	1830	3200	57.2%	1710	3250	52.6%	6.8%
N-Nitroso-Di-N-Propylamine	< 65.0 U	1030	1600	64.4%	996	1620	61.5%	3.4%
Hexachloroethane	< 65.0 U	890	1600	55.6%	827	1620	51.0%	7.3%
Nitrobenzene	< 65.0 U	1010	1600	63.1%	1090	1620	67.3%	7.6%
Isophorone	< 65.0 U	1110	1600	69.4%	1190	1620	73.5%	7.0%
2-Nitrophenol	< 65.0 U	962	1600	60.1%	1090	1620	67.3%	12.5%
2,4-Dimethylphenol	< 65.0 U	232	1600	14.5%	205	1620	12.7%	12.4%
Benzoic Acid	< 650 U	1230	4800	25.6%	860	4870	17.7%	35.4%
bis(2-Chloroethoxy) Methane	< 65.0 U	985	1600	61.6%	1070	1620	66.0%	8.3%
2,4-Dichlorophenol	< 325 U	1090	1600	68.1%	1120	1620	69.1%	2.7%
1,2,4-Trichlorobenzene	< 65.0 U	967	1600	60.4%	1020	1620	63.0%	5.3%
Naphthalene	160	1190	1600	64.4%	1220	1620	65.4%	2.5%
4-Chloroaniline	< 325 U	339	3840	8.8%	958	3900	24.6%	95.5%
Hexachlorobutadiene	< 65.0 U	1040	1600	65.0%	1070	1620	66.0%	2.8%
4-Chloro-3-methylphenol	< 325 U	1070	1600	66.9%	1160	1620	71.6%	8.1%
2-Methylnaphthalene	174	1090	1600	57.2%	1140	1620	59.6%	4.5%
Hexachlorocyclopentadiene	< 325 U	< 320 U	4800	NA	471	4870	9.7%	NA
2,4,6-Trichlorophenol	< 325 U	1100	1600	68.8%	1170	1620	72.2%	6.2%
2,4,5-Trichlorophenol	< 325 U	1010	1600	63.1%	1020	1620	63.0%	1.0%
2-Chloronaphthalene	< 65.0 U	1130	1600	70.6%	1140	1620	70.4%	0.9%
2-Nitroaniline	< 325 U	1230	1600	76.9%	1240	1620	76.5%	0.8%
Dimethylphthalate	< 65.0 U	1130	1600	70.6%	1150	1620	71.0%	1.8%
Acenaphthylene	< 65.0 U	1200	1600	75.0%	1240	1620	76.5%	3.3%
3-Nitroaniline	< 325 U	988	4100	24.1%	2020	4160	48.6%	68.6%
Acenaphthene	1040	1280	1600	15.0%	1280	1620	14.8%	0.0%
2,4-Dinitrophenol	< 650 U	< 640 U	4800	NA	< 649 U	4870	NA	NA
4-Nitrophenol	< 325 U	1030 Q	1600	64.4%	1060 Q	1620	65.4%	2.9%
Dibenzofuran	447	1220	1600	48.3%	1220	1620	47.7%	0.0%
2,6-Dinitrotoluene	< 325 U	1090	1600	68.1%	1150	1620	71.0%	5.4%
2,4-Dinitrotoluene	< 325 U	1100	1600	68.8%	1130	1620	69.8%	2.7%
Diethylphthalate	< 65.0 U	1140	1600	71.2%	1140	1620	70.4%	0.0%
4-Chlorophenyl-phenylether	< 65.0 U	1130	1600	70.6%	1130	1620	69.8%	0.0%
Fluorene	754	1390	1600	39.8%	1440	1620	42.3%	3.5%
4-Nitroaniline	< 325 U	< 320 U	1600	NA	401	1620	24.8%	NA
4,6-Dinitro-2-Methylphenol	< 650 U	< 640 U	4800	NA	< 649 U	4870	NA	NA
N-Nitrosodiphenylamine	< 65.0 U	952	1600	59.5%	945	1620	58.3%	0.7%

5667:00071

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: JF-PLSD-PS-37-7-M
MS/MSD

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Date Analyzed MS: 02/07/11 17:56
MSD: 02/07/11 18:28

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
4-Bromophenyl-phenylether	< 65.0 U	948	1600	59.2%	912	1620	56.3%	3.9%
Hexachlorobenzene	< 65.0 U	992	1600	62.0%	937	1620	57.8%	5.7%
Pentachlorophenol	< 325 U	1050	1600	65.6%	980	1620	60.5%	6.9%
Phenanthrene	3250	2500	1600	NA	2740	1620	NA	9.2%
Carbazole	492	1230	1600	46.1%	1260	1620	47.4%	2.4%
Anthracene	736	1280	1600	34.0%	1400	1620	41.0%	9.0%
Di-n-Butylphthalate	508	1350	1600	52.6%	1440	1620	57.5%	6.5%
Fluoranthene	4460	3500	1600	NA	4210	1620	NA	18.4%
Pyrene	4790	4220	1600	NA	4710	1620	NA	11.0%
Butylbenzylphthalate	270	1330	1600	66.2%	1500	1620	75.9%	12.0%
3,3'-Dichlorobenzidine	< 325 U	< 320 U	4100	NA	771	4160	18.5%	NA
Benzo(a)anthracene	2090	2150	1600	3.8%	2590	1620	30.9%	18.6%
bis(2-Ethylhexyl)phthalate	962 B	2180 B	1600	76.1%	2110 B	1620	70.9%	3.3%
Chrysene	2550	2890	1600	21.2%	2810	1620	16.0%	2.8%
Di-n-Octyl phthalate	< 65.0 U	898	1600	56.1%	1100	1620	67.9%	20.2%
Benzo(a)pyrene	2370	2580	1600	13.1%	3030	1620	40.7%	16.0%
Indeno(1,2,3-cd)pyrene	909	1420	1600	31.9%	1550	1620	39.6%	8.8%
Dibenz(a,h)anthracene	118 Q	1110 Q	1600	62.0%	1220 Q	1620	68.0%	9.4%
Benzo(g,h,i)perylene	945 Q	1330 Q	1600	24.1%	1440 Q	1620	30.6%	7.9%
1-Methylnaphthalene	154	1120	1600	60.4%	1200	1620	64.6%	6.9%
Total Benzofluoranthenes	6350	8660	3200	72.2%	10200	3250	118%	16.3%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.
NA-No recovery due to high concentration of analyte in original sample and/or calculated negative recovery.

SG07:00072

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-PS-15A
SAMPLE

Lab Sample ID: SG07A
LIMS ID: 11-1522
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Percent Total Solids: 78.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/26/11	6010B	02/01/11	**7440-38-2**	**Arsenic**	30	**30**	
3050B	01/26/11	6010B	02/01/11	7440-43-9	Cadmium	1	1	U
3050B	01/26/11	6010B	02/01/11	**7440-50-8**	**Copper**	1	**838**	
3050B	01/26/11	6010B	02/01/11	**7439-92-1**	**Lead**	10	**180**	
3050B	01/26/11	6010B	02/01/11	**7440-02-0**	**Nickel**	6	**1,590**	
3050B	01/26/11	6010B	02/01/11	**7440-66-6**	**Zinc**	6	**698**	

U-Analyte undetected at given RL
RL-Reporting Limit

SG07 : 00073

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-PS-15B
SAMPLE

Lab Sample ID: SG07B
LIMS ID: 11-1523
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Percent Total Solids: 70.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/26/11	6010B	02/01/11	**7440-38-2**	**Arsenic**	30	**70**	
3050B	01/26/11	6010B	02/01/11	**7440-43-9**	**Cadmium**	1	**21**	
3050B	01/26/11	6010B	02/01/11	**7440-50-8**	**Copper**	1	**4,060**	
3050B	01/26/11	6010B	02/01/11	**7439-92-1**	**Lead**	10	**1,410**	
3050B	01/26/11	6010B	02/01/11	**7440-02-0**	**Nickel**	7	**837**	
3050B	01/26/11	6010B	02/01/11	**7440-66-6**	**Zinc**	7	**5,490**	

U-Analyte undetected at given RL
RL-Reporting Limit

SG07:00074

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-PS-24A
SAMPLE

Lab Sample ID: SG07C
LIMS ID: 11-1524
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Percent Total Solids: 81.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/26/11	6010B	02/01/11	7440-38-2	Arsenic	30	30	U
3050B	01/26/11	6010B	02/01/11	7440-43-9	Cadmium	1	1	U
3050B	01/26/11	6010B	02/01/11	**7440-50-8**	**Copper**	1	**333**	
3050B	01/26/11	6010B	02/01/11	**7439-92-1**	**Lead**	10	**80**	
3050B	01/26/11	6010B	02/01/11	**7440-02-0**	**Nickel**	6	**648**	
3050B	01/26/11	6010B	02/01/11	**7440-66-6**	**Zinc**	6	**789**	

U-Analyte undetected at given RL
RL-Reporting Limit

SG07:00075

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: JF-PLSD-PS-24B
SAMPLE

Lab Sample ID: SG07D
LIMS ID: 11-1525
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Percent Total Solids: 63.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/26/11	6010B	02/01/11	**7440-38-2**	**Arsenic**	20	**40**	
3050B	01/26/11	6010B	02/01/11	**7440-43-9**	**Cadmium**	0.8	**0.8**	
3050B	01/26/11	6010B	02/01/11	**7440-50-8**	**Copper**	0.8	**190**	
3050B	01/26/11	6010B	02/01/11	**7439-92-1**	**Lead**	8	**335**	
3050B	01/26/11	6010B	02/01/11	**7440-02-0**	**Nickel**	4	**136**	
3050B	01/26/11	6010B	02/01/11	**7440-66-6**	**Zinc**	4	**367**	

U-Analyte undetected at given RL
RL-Reporting Limit

SG07 : 00076

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-PS-37-7
SAMPLE

Lab Sample ID: SG07E
LIMS ID: 11-1526
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Percent Total Solids: 44.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/26/11	6010B	02/01/11	**7440-38-2**	**Arsenic**	10	**40**	
3050B	01/26/11	6010B	02/01/11	**7440-43-9**	**Cadmium**	0.4	**2.8**	
3050B	01/26/11	6010B	02/01/11	**7440-50-8**	**Copper**	0.4	**271**	
3050B	01/26/11	6010B	02/01/11	**7439-92-1**	**Lead**	4	**839**	
3050B	01/26/11	6010B	02/01/11	**7440-02-0**	**Nickel**	2	**97**	
3050B	01/26/11	6010B	02/01/11	**7440-66-6**	**Zinc**	2	**749**	

U-Analyte undetected at given RL
RL-Reporting Limit

SG07:00077

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-PS-37-2
SAMPLE

Lab Sample ID: SG07F
LIMS ID: 11-1527
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Percent Total Solids: 64.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/26/11	6010B	02/01/11	**7440-38-2**	**Arsenic**	8	**45**	
3050B	01/26/11	6010B	02/01/11	**7440-43-9**	**Cadmium**	0.3	**9.2**	
3050B	01/26/11	6010B	02/01/11	**7440-50-8**	**Copper**	0.3	**332**	
3050B	01/26/11	6010B	02/01/11	**7439-92-1**	**Lead**	3	**1,000**	
3050B	01/26/11	6010B	02/01/11	**7440-02-0**	**Nickel**	2	**154**	
3050B	01/26/11	6010B	02/01/11	**7440-66-6**	**Zinc**	2	**822**	

U-Analyte undetected at given RL
RL-Reporting Limit

SG07:00078

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-PS-PUBLIC
SAMPLE

Lab Sample ID: SG07G
LIMS ID: 11-1528
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Percent Total Solids: 67.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/26/11	6010B	02/01/11	**7440-38-2**	**Arsenic**	20	**30**	
3050B	01/26/11	6010B	02/01/11	**7440-43-9**	**Cadmium**	0.7	**4.0**	
3050B	01/26/11	6010B	02/01/11	**7440-50-8**	**Copper**	0.7	**159**	
3050B	01/26/11	6010B	02/01/11	**7439-92-1**	**Lead**	7	**358**	
3050B	01/26/11	6010B	02/01/11	**7440-02-0**	**Nickel**	3	**64**	
3050B	01/26/11	6010B	02/01/11	**7440-66-6**	**Zinc**	3	**569**	

U-Analyte undetected at given RL
RL-Reporting Limit

SG07 : 00073

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-PS-24B-D
SAMPLE

Lab Sample ID: SG07H
LIMS ID: 11-1529
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Percent Total Solids: 59.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/26/11	6010B	02/01/11	**7440-38-2**	**Arsenic**	8	**34**	
3050B	01/26/11	6010B	02/01/11	**7440-43-9**	**Cadmium**	0.3	**1.1**	
3050B	01/26/11	6010B	02/01/11	**7440-50-8**	**Copper**	0.3	**265**	
3050B	01/26/11	6010B	02/01/11	**7439-92-1**	**Lead**	3	**420**	
3050B	01/26/11	6010B	02/01/11	**7440-02-0**	**Nickel**	2	**174**	
3050B	01/26/11	6010B	02/01/11	**7440-66-6**	**Zinc**	2	**441**	

U-Analyte undetected at given RL
RL-Reporting Limit

SG07 : 00080

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-PS-37-7-M
SAMPLE

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Percent Total Solids: 43.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/26/11	6010B	02/01/11	**7440-38-2**	**Arsenic**	10	**40**	
3050B	01/26/11	6010B	02/01/11	**7440-43-9**	**Cadmium**	0.4	**2.5**	
3050B	01/26/11	6010B	02/01/11	**7440-50-8**	**Copper**	0.4	**281**	
3050B	01/26/11	6010B	02/01/11	**7439-92-1**	**Lead**	4	**713**	
3050B	01/26/11	6010B	02/01/11	**7440-02-0**	**Nickel**	2	**90**	
3050B	01/26/11	6010B	02/01/11	**7440-66-6**	**Zinc**	2	**720**	

U-Analyte undetected at given RL
RL-Reporting Limit

SG07:00081

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-PS-37-7-M
DUPLICATE

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010B	40	40	0.0%	+/- 10	L
Cadmium	6010B	2.5	2.1	17.4%	+/- 20%	
Copper	6010B	281	243	14.5%	+/- 20%	
Lead	6010B	713	698	2.1%	+/- 20%	
Nickel	6010B	90	88	2.2%	+/- 20%	
Zinc	6010B	720	733	1.8%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

5607:00082

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: JF-PLSD-PS-37-7-M
MATRIX SPIKE

Lab Sample ID: SG07I
LIMS ID: 11-1530
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010B	40	440	420	95.2%	
Cadmium	6010B	2.5	102	105	94.8%	
Copper	6010B	281	350	105	65.7%	N
Lead	6010B	713	1,100	420	92.1%	
Nickel	6010B	90	194	105	99.0%	
Zinc	6010B	720	813	105	88.6%	H

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: SG07MB
LIMS ID: 11-1522
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/26/11	6010B	02/01/11	7440-38-2	Arsenic	5	5	U
3050B	01/26/11	6010B	02/01/11	7440-43-9	Cadmium	0.2	0.2	U
3050B	01/26/11	6010B	02/01/11	7440-50-8	Copper	0.2	0.2	U
3050B	01/26/11	6010B	02/01/11	7439-92-1	Lead	2	2	U
3050B	01/26/11	6010B	02/01/11	7440-02-0	Nickel	1	1	U
3050B	01/26/11	6010B	02/01/11	7440-66-6	Zinc	1	1	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: SG07LCS
LIMS ID: 11-1522
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010B	197	200	98.5%	
Cadmium	6010B	48.8	50.0	97.6%	
Copper	6010B	48.4	50.0	96.8%	
Lead	6010B	197	200	98.5%	
Nickel	6010B	48	50	96.0%	
Zinc	6010B	49	50	98.0%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

5007 : 00085

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS
Page 1 of 1

Sample ID: JF-PLSD-PS-TCLP
SAMPLE

Lab Sample ID: SG07J
LIMS ID: 11-1531
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
1311	02/01/11	6010B	02/03/11	7440-38-2	Arsenic	0.2	0.2	U
1311	02/01/11	6010B	02/03/11	**7440-39-3**	**Barium**	0.02	**0.37**	
1311	02/01/11	6010B	02/03/11	**7440-43-9**	**Cadmium**	0.01	**0.04**	
1311	02/01/11	6010B	02/03/11	**7440-47-3**	**Chromium**	0.02	**0.05**	
1311	02/01/11	6010B	02/03/11	**7439-92-1**	**Lead**	0.1	**0.9**	
1311	02/01/11	7470A	02/04/11	7439-97-6	Mercury	0.0001	0.0001	U
1311	02/01/11	6010B	02/03/11	7782-49-2	Selenium	0.2	0.2	U
1311	02/01/11	6010B	02/03/11	7440-22-4	Silver	0.02	0.02	U

U-Analyte undetected at given RL
RL-Reporting Limit

SG07 : 00086

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS
Page 1 of 1

Sample ID: JF-PLSD-PS-TCLP DUPLICATE

Lab Sample ID: SG07J
LIMS ID: 11-1531
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010B	0.2 U	0.2 U	0.0%	+/- 0.2	L
Barium	6010B	0.37	0.36	2.7%	+/- 20%	
Cadmium	6010B	0.04	0.04	0.0%	+/- 0.01	L
Chromium	6010B	0.05	0.04	22.2%	+/- 0.02	L
Lead	6010B	0.9	0.9	0.0%	+/- 20%	
Mercury	7470A	0.0001 U	0.0001 U	0.0%	+/- 0.0001	L
Selenium	6010B	0.2 U	0.2 U	0.0%	+/- 0.2	L
Silver	6010B	0.02 U	0.02 U	0.0%	+/- 0.02	L

Reported in mg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

SG07 : 00087

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS
Page 1 of 1

Sample ID: JF-PLSD-PS-TCLP
MATRIX SPIKE

Lab Sample ID: SG07J
LIMS ID: 11-1531
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010B	0.2 U	4.0	4.0	100%	
Barium	6010B	0.37	4.31	4.00	98.5%	
Cadmium	6010B	0.04	1.08	1.00	104%	
Chromium	6010B	0.05	1.02	1.00	97.0%	
Lead	6010B	0.9	4.9	4.0	100%	
Mercury	7470A	0.0001 U	0.0010	0.0010	100%	
Selenium	6010B	0.2 U	4.3	4.0	108%	
Silver	6010B	0.02 U	1.02	1.00	102%	

Reported in mg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

SG07:00068

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS **Sample ID: METHOD BLANK**

Lab Sample ID: SG07MB
LIMS ID: 11-1531
Matrix: Soil
Data Release Authorized:
Reported: 02/07/11

QC Report No: SG07-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
1311	02/01/11	6010B	02/03/11	7440-38-2	Arsenic	0.2	0.2	U
1311	02/01/11	6010B	02/03/11	**7440-39-3**	**Barium**	0.02	**0.04**	
1311	02/01/11	6010B	02/03/11	7440-43-9	Cadmium	0.01	0.01	U
1311	02/01/11	6010B	02/03/11	7440-47-3	Chromium	0.02	0.02	U
1311	02/01/11	6010B	02/03/11	7439-92-1	Lead	0.1	0.1	U
1311	02/01/11	7470A	02/04/11	7439-97-6	Mercury	0.0001	0.0001	U
1311	02/01/11	6010B	02/03/11	7782-49-2	Selenium	0.2	0.2	U
1311	02/01/11	6010B	02/03/11	7440-22-4	Silver	0.02	0.02	U

U-Analyte undetected at given RL
RL-Reporting Limit

SG07:00089

Analytical Resources, Incorporated
Analytical Chemists and Consultants

March 7, 2011

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge
ARI Job No: SK68

Dear Tom:

Please find enclosed analytical results and the original Chain of Custody documentation (COC) for the project referenced above. Analytical Resources, Incorporated (ARI) accepted three water samples and one solid sample on February 25, 2011. The samples were received in good condition. The water samples have been logged under a different ARI SDG SK67 based on client specified turn around times.

The sample was analyzed for PCBs, as requested.

No analytical complications were noted for this analysis. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206-695-6211
Enclosures

Chain of Custody Record & Laboratory Analysis Request

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

ARI Assigned Number: SK68 ~~SK68~~	Turn-around Requested: Water-5 Day; Solid-Standard	Page: 1	of 1
ARI Client Company: Floyd | Snider	Phone: 206-292-2078	Date: 2/25/11	Ice Present? Y
Client Contact: Nick Garson / Tom Colligan		No. of Coolers: 1	Cooler Temps: 2.7, 1.8
Client Project Name: Jorgensen Forge			
Client Project #: 7KPL2JOR	Samplers: D. BRAME		

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: pH	Total Metals	HEM (FOG)	Settleable Solids	MTCA PCBs (8)	TOTAL PCBs			Notes/Comments
JF-PLSD-WC-B08	2/25/11	1250	Water	6	x	x	x	x	x				5-Day
JF-PLSD-WC-B59	2/25/11	1330	Water	6	x	x	x	x	x				5-Day
JF-PLSD-WC-B89	2/25/11	1355	Water	6	x	x	x	x	x				5-Day
JF-PLSD-WD-12	2/25/11	1445	Solid	1						x			Standard

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: DEAN BRAME	Printed Name: Taylor Streeter	Printed Name:	Printed Name:
	Company: FLOYD | SNIDER	Company: ARI	Company:	Company:
	Date & Time: 2/25/11 1605	Date & Time: 2-25-11 16:10	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: ~~Floyd Snider~~ Boeing

Project Name: Jorgensen Forge

COC No(s): _____ NA

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

Assigned ARI Job No: SIK68

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)..... 2.7 1.8 ___ ___ ___

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

Temp Gun ID#: 90941619

Cooler Accepted by: TB Date: 2-25-11 Time: 16:10

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)		

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

Samples Logged by: JM Date: 2/25/11 Time: 1709

***** 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:

By: Date:

Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SK68
Client: The Boeing Company
Project Event: 7KPL2JOR
Project Name: Jorgensen Forge

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	JF-PLSD-WD-12	SK68A	11-4085	Solid	02/25/11 14:45	02/25/11 16:10

Printed 02/25/11

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-PLSD-WD-12
SAMPLE

Lab Sample ID: SK68A
LIMS ID: 11-4085
Matrix: Solid
Data Release Authorized:
Reported: 03/07/11

QC Report No: SK68-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/25/11
Date Received: 02/25/11

Date Extracted: 03/01/11
Date Analyzed: 03/04/11 20:05
Instrument/Analyst: ECD5/JLW
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 5.04 g-as-rec
Final Extract Volume: 40 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	790	< 790 U
53469-21-9	Aroclor 1242	790	< 790 U
12672-29-6	Aroclor 1248	12,000	< 12,000 Y
11097-69-1	**Aroclor 1254**	**790**	**34,000**
11096-82-5	Aroclor 1260	2,000	< 2,000 Y
11104-28-2	Aroclor 1221	790	< 790 U
11141-16-5	Aroclor 1232	790	< 790 U
37324-23-5	Aroclor 1262	790	< 790 U
11100-14-4	Aroclor 1268	790	< 790 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	95.0%
Tetrachlorometaxylene	77.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: MB-030111
METHOD BLANK

Lab Sample ID: MB-030111
LIMS ID: 11-4085
Matrix: Solid
Data Release Authorized:
Reported: 03/07/11

QC Report No: SK68-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 03/01/11
Date Analyzed: 03/04/11 19:28
Instrument/Analyst: ECD5/JLW
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 5.00 g
Final Extract Volume: 40 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	800	< 800 U
53469-21-9	Aroclor 1242	800	< 800 U
12672-29-6	Aroclor 1248	800	< 800 U
11097-69-1	Aroclor 1254	800	< 800 U
11096-82-5	Aroclor 1260	800	< 800 U
11104-28-2	Aroclor 1221	800	< 800 U
11141-16-5	Aroclor 1232	800	< 800 U
37324-23-5	Aroclor 1262	800	< 800 U
11100-14-4	Aroclor 1268	800	< 800 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	85.2%
Tetrachlorometaxylene	71.8%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Solid

QC Report No: SK68-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-030111	85.2%	51-127	71.8%	49-110	0
LCS-030111	87.5%	51-127	70.5%	49-110	0
JF-PLSD-WD-12	95.0%	22-168	77.6%	28-106	0

Medium Level Control Limits
Prep Method: SW3580A
Log Number Range: 11-4085 to 11-4085

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: LCS-030111
LAB CONTROL

Lab Sample ID: LCS-030111
LIMS ID: 11-4085
Matrix: Solid
Data Release Authorized:
Reported: 03/07/11

QC Report No: SK68-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 03/01/11
Date Analyzed: 03/04/11 19:46
Instrument/Analyst: ECD5/JLW
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 5.00 g-as-rec
Final Extract Volume: 40 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Aroclor 1016	3430	4000	85.8%
Aroclor 1260	3160	4000	79.0%

PCB Surrogate Recovery

Decachlorobiphenyl	87.5%
Tetrachlorometaxylene	70.5%

Results reported in µg/kg (ppb)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

February 23, 2011

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge PLO
ARI Job No: SJ49

Dear Tom:

Please find enclosed analytical results and the original Chain of Custody documentation (COC) for the project referenced above. Analytical Resources, Incorporated (ARI) accepted ten soil samples and one water sample on January 24, 2011. The samples were received in good condition. Select samples were placed on hold pending further instructions.

The samples were originally analyzed for Total Metals, TCLP Metals, SVOCs, PCBs and NWTPH-Dx, as requested and reported under ARI SDG SG07.

At the request of Floyd Snider, select samples were analyzed for TCLP follow ups.

No analytical complications were noted for these analyses. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206-695-6211
Enclosures

Subject: TCLP request- Jorgensen Project
From: Tom Colligan <Tom.Colligan@floydsnider.com>
Date: Wed, 23 Feb 2011 12:43:08 -0800
To: Kelly Bottem <kellyb@arilabs.com>

Kelly, please submit each of the remaining 8 oz sample of the samples on this COC, less the last two samples, for TCLP analysis. 7 day TAT. Thanks.

Tom Colligan
FLOYD|SNIDER
Two Union Square
601 Union Street, Suite 600
Seattle, WA 98101
tel: 206.292.2078
direct line: 206-805-2166
fax: 206.682.7867
cell: 206-276-8527

tom.colligan@floydsnider.com

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 5	Turn-around Requested: Standard	Page 1 of 2	
ARI Client Company: FLOYD | SNIDER 3006.09 Phone: 206-292-2078		Date: 1/24/11	Ice Present? Y
Client Contact: NICK GARSON / TOM COLLIGAN		No. of Coolers: 1	Cooler Temps: 6.6
Client Project Name: JORGENSEN FORGE			
Client Project #: 7KPL2JOR	Samplers: DEAN BRAME / TOM COLLIGAN		

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

Sample ID	Date	Time	Matrix	No. Containers	PCBs	SVOCs	TPH-D	Metals As, Cd, Cu, Pb Li Zn	Notes/Comments
JF-PLSD-PS-15A	1/24/11	1310	SOIL	3	X	X	X	X	
JF-PLSD-PS-15B		1455							
JF-PLSD-PS-24A		1340							
JF-PLSD-PS-24B		1415							
JF-PLSD-PS-37-7		1230							
JF-PLSD-PS-37-2		1200							
JF-PLSD-PS-PUBLIC		1110							
JF-PLSD-PS-~~15B-R~~ 24B-D		1420							
JF-PLSD-PS-37-7-M		1235	↓	↓	↓	↓	↓	↓	MS/MSD
JF-PLSD-PS-15B-R		1515	WATER	2	X				

Comments/Special Instructions

Relinquished by (Signature):	Received by (Signature):	Relinquished by (Signature):	Received by (Signature):
Printed Name: DEAN BRAME	Printed Name: Taylor Stracker	Printed Name:	Printed Name:
Company: FLOYD | SNIDER	Company: ARI	Company:	Company:
Date & Time: 1/24/11 1606	Date & Time: 1/24/11 1606	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

Picture (Device Independent Bitmap) 1.jpg

Content-Description: Picture (Device Independent Bitmap) 1.jpg
Content-Type: image/jpeg

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SJ49
Client: The Boeing Company
Project Event: 7KPL2JOR
Project Name: Jorgensen Forge

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	JF-PLSD-PS-15A	SJ49A	11-3467	Soil	01/24/11 13:10	01/24/11 16:06
2.	JF-PLSD-PS-15B	SJ49B	11-3468	Soil	01/24/11 14:55	01/24/11 16:06
3.	JF-PLSD-PS-24A	SJ49C	11-3469	Soil	01/24/11 13:40	01/24/11 16:06
4.	JF-PLSD-PS-24B	SJ49D	11-3470	Soil	01/24/11 14:15	01/24/11 16:06
5.	JF-PLSD-PS-37-7	SJ49E	11-3471	Soil	01/24/11 12:30	01/24/11 16:06
6.	JF-PLSD-PS-37-2	SJ49F	11-3472	Soil	01/24/11 12:00	01/24/11 16:06
7.	JF-PLSD-PS-PUBLIC	SJ49G	11-3473	Soil	01/24/11 11:10	01/24/11 16:06

Printed 02/17/11

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 5	Turn-around Requested: Standard
ARI Client Company: FLOYD | SNIDER	Phone: 206-292-2078
Client Contact: NICK GARSON / TOM COLLIGAN	
Client Project Name: JORGENSEN FORGE	
Client Project #: 7KPL2JOR	Samplers: DEAN BRAME / TOM COLLIGAN

Page: 1 of 2

Date: 1/24/11 | Ice Present? Y

No. of Coolers: 1 | Cooler Temps: 6.6

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

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: PCBs	SVOCs	TPH-D	Metals As, Cd, Cu, Pb Ni, Zn					Notes/Comments
JF-PLSD-PS-15A	1/24/11	1310	SOIL	3	x	x	x	x					
JF-PLSD-PS-15B		1455											
JF-PLSD-PS-24A		1340											
JF-PLSD-PS-24B		1415											
JF-PLSD-PS-37-7		1230											
JF-PLSD-PS-37-2		1200											
JF-PLSD-PS-PUBLIC		1110											
JF-PLSD-PS-~~15B-R~~ 24B-D		1420											
JF-PLSD-PS-37-7-M		1235											MS/MSD
JF-PLSD-PS-15B-R		1515	WATER	2	x								

Comments/Special Instructions

Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Printed Name: DEAN BRAME	Printed Name: Taylor Streeter	Printed Name:	Printed Name:
Company: FLOYD | SNIDER	Company: ARI	Company:	Company:
Date & Time: 1/24/11 1606	Date & Time: 1/24/11 1606	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

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample ID: JF-PLSD-PS-15A
SAMPLE

Lab Sample ID: SJ49A
LIMS ID: 11-3467
Matrix: Soil
Data Release Authorized:
Reported: 02/23/11

QC Report No: SJ49-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
1311	02/18/11	6010B	02/21/11	7440-38-2	Arsenic	0.2	0.2	U
1311	02/18/11	6010B	02/21/11	**7440-39-3**	**Barium**	0.02	**0.19**	
1311	02/18/11	6010B	02/21/11	7440-43-9	Cadmium	0.01	0.01	U
1311	02/18/11	6010B	02/21/11	7440-47-3	Chromium	0.02	0.02	U
1311	02/18/11	6010B	02/21/11	7439-92-1	Lead	0.1	0.1	U
1311	02/18/11	7470A	02/22/11	7439-97-6	Mercury	0.0001	0.0001	U
1311	02/18/11	6010B	02/21/11	**7440-02-0**	**Nickel**	0.05	**2.74**	
1311	02/18/11	6010B	02/21/11	7782-49-2	Selenium	0.2	0.2	U
1311	02/18/11	6010B	02/21/11	7440-22-4	Silver	0.02	0.02	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample ID: JF-PLSD-PS-15A
DUPLICATE

Lab Sample ID: SJ49A
LIMS ID: 11-3467
Matrix: Soil
Data Release Authorized:
Reported: 02/23/11

QC Report No: SJ49-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010B	0.2 U	0.2 U	0.0%	+/- 0.2	L
Barium	6010B	0.19	0.19	0.0%	+/- 20%	
Cadmium	6010B	0.01 U	0.01 U	0.0%	+/- 0.01	L
Chromium	6010B	0.02 U	0.02 U	0.0%	+/- 0.02	L
Lead	6010B	0.1 U	0.1 U	0.0%	+/- 0.1	L
Mercury	7470A	0.0001 U	0.0001 U	0.0%	+/- 0.0001	L
Nickel	6010B	2.74	2.70	1.5%	+/- 20%	
Selenium	6010B	0.2 U	0.2 U	0.0%	+/- 0.2	L
Silver	6010B	0.02 U	0.02 U	0.0%	+/- 0.02	L

Reported in mg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample ID: JF-PLSD-PS-15A
MATRIX SPIKE

Lab Sample ID: SJ49A
LIMS ID: 11-3467
Matrix: Soil
Data Release Authorized:
Reported: 02/23/11

QC Report No: SJ49-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010B	0.2 U	4.2	4.0	105%	
Barium	6010B	0.19	4.14	4.00	98.8%	
Cadmium	6010B	0.01 U	1.04	1.00	104%	
Chromium	6010B	0.02 U	1.01	1.00	101%	
Lead	6010B	0.1 U	4.1	4.0	102%	
Mercury	7470A	0.0001 U	0.0011	0.0010	110%	
Nickel	6010B	2.74	3.74	1.00	100%	
Selenium	6010B	0.2 U	4.3	4.0	108%	
Silver	6010B	0.02 U	1.02	1.00	102%	

Reported in mg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS
Page 1 of 1

Sample ID: JF-PLSD-PS-15B
SAMPLE

Lab Sample ID: SJ49B
LIMS ID: 11-3468
Matrix: Soil
Data Release Authorized:
Reported: 02/23/11

QC Report No: SJ49-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
1311	02/18/11	6010B	02/21/11	7440-38-2	Arsenic	0.2	0.2	U
1311	02/18/11	6010B	02/21/11	**7440-39-3**	**Barium**	0.02	**0.75**	
1311	02/18/11	6010B	02/21/11	**7440-43-9**	**Cadmium**	0.01	**0.11**	
1311	02/18/11	6010B	02/21/11	**7440-47-3**	**Chromium**	0.02	**0.12**	
1311	02/18/11	6010B	02/21/11	**7439-92-1**	**Lead**	0.1	**1.3**	
1311	02/18/11	7470A	02/22/11	7439-97-6	Mercury	0.0001	0.0001	U
1311	02/18/11	6010B	02/21/11	**7440-02-0**	**Nickel**	0.05	**2.47**	
1311	02/18/11	6010B	02/21/11	7782-49-2	Selenium	0.2	0.2	U
1311	02/18/11	6010B	02/21/11	7440-22-4	Silver	0.02	0.02	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS
Page 1 of 1

Sample ID: JF-PLSD-PS-24A
SAMPLE

Lab Sample ID: SJ49C
LIMS ID: 11-3469
Matrix: Soil
Data Release Authorized:
Reported: 02/23/11

QC Report No: SJ49-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
1311	02/18/11	6010B	02/21/11	7440-38-2	Arsenic	0.2	0.2	U
1311	02/18/11	6010B	02/21/11	**7440-39-3**	**Barium**	0.02	**0.18**	
1311	02/18/11	6010B	02/21/11	**7440-43-9**	**Cadmium**	0.01	**0.08**	
1311	02/18/11	6010B	02/21/11	**7440-47-3**	**Chromium**	0.02	**0.05**	
1311	02/18/11	6010B	02/21/11	**7439-92-1**	**Lead**	0.1	**0.2**	
1311	02/18/11	7470A	02/22/11	7439-97-6	Mercury	0.0001	0.0001	U
1311	02/18/11	6010B	02/21/11	**7440-02-0**	**Nickel**	0.05	**2.46**	
1311	02/18/11	6010B	02/21/11	7782-49-2	Selenium	0.2	0.2	U
1311	02/18/11	6010B	02/21/11	7440-22-4	Silver	0.02	0.02	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS
Page 1 of 1

Sample ID: JF-PLSD-PS-24B
SAMPLE

Lab Sample ID: SJ49D
LIMS ID: 11-3470
Matrix: Soil
Data Release Authorized:
Reported: 02/23/11

QC Report No: SJ49-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
1311	02/18/11	6010B	02/21/11	7440-38-2	Arsenic	0.2	0.2	U
1311	02/18/11	6010B	02/21/11	**7440-39-3**	**Barium**	0.02	**0.07**	
1311	02/18/11	6010B	02/21/11	7440-43-9	Cadmium	0.01	0.01	U
1311	02/18/11	6010B	02/21/11	7440-47-3	Chromium	0.02	0.02	U
1311	02/18/11	6010B	02/21/11	7439-92-1	Lead	0.1	0.1	U
1311	02/18/11	7470A	02/22/11	7439-97-6	Mercury	0.0001	0.0001	U
1311	02/18/11	6010B	02/21/11	**7440-02-0**	**Nickel**	0.05	**1.30**	
1311	02/18/11	6010B	02/21/11	7782-49-2	Selenium	0.2	0.2	U
1311	02/18/11	6010B	02/21/11	7440-22-4	Silver	0.02	0.02	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS
Page 1 of 1

Sample ID: JF-PLSD-PS-37-7
SAMPLE

Lab Sample ID: SJ49E
LIMS ID: 11-3471
Matrix: Soil
Data Release Authorized:
Reported: 02/23/11

QC Report No: SJ49-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
1311	02/18/11	6010B	02/21/11	7440-38-2	Arsenic	0.2	0.2	U
1311	02/18/11	6010B	02/21/11	**7440-39-3**	**Barium**	0.02	**0.09**	
1311	02/18/11	6010B	02/21/11	**7440-43-9**	**Cadmium**	0.01	**0.02**	
1311	02/18/11	6010B	02/21/11	7440-47-3	Chromium	0.02	0.02	U
1311	02/18/11	6010B	02/21/11	**7439-92-1**	**Lead**	0.1	**0.8**	
1311	02/18/11	7470A	02/22/11	7439-97-6	Mercury	0.0001	0.0001	U
1311	02/18/11	6010B	02/21/11	**7440-02-0**	**Nickel**	0.05	**0.32**	
1311	02/18/11	6010B	02/21/11	7782-49-2	Selenium	0.2	0.2	U
1311	02/18/11	6010B	02/21/11	7440-22-4	Silver	0.02	0.02	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample ID: JF-PLSD-PS-37-2
SAMPLE

Lab Sample ID: SJ49F
LIMS ID: 11-3472
Matrix: Soil
Data Release Authorized:
Reported: 02/23/11

QC Report No: SJ49-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
1311	02/18/11	6010B	02/21/11	7440-38-2	Arsenic	0.2	0.2	U
1311	02/18/11	6010B	02/21/11	**7440-39-3**	**Barium**	0.02	**0.24**	
1311	02/18/11	6010B	02/21/11	**7440-43-9**	**Cadmium**	0.01	**0.07**	
1311	02/18/11	6010B	02/21/11	**7440-47-3**	**Chromium**	0.02	**0.06**	
1311	02/18/11	6010B	02/21/11	**7439-92-1**	**Lead**	0.1	**4.0**	
1311	02/18/11	7470A	02/22/11	7439-97-6	Mercury	0.0001	0.0001	U
1311	02/18/11	6010B	02/21/11	**7440-02-0**	**Nickel**	0.05	**1.23**	
1311	02/18/11	6010B	02/21/11	7782-49-2	Selenium	0.2	0.2	U
1311	02/18/11	6010B	02/21/11	7440-22-4	Silver	0.02	0.02	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample ID: JF-PLSD-PS-PUBLIC
SAMPLE

Lab Sample ID: SJ49G
LIMS ID: 11-3473
Matrix: Soil
Data Release Authorized:
Reported: 02/23/11

QC Report No: SJ49-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 01/24/11
Date Received: 01/24/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
1311	02/18/11	6010B	02/21/11	7440-38-2	Arsenic	0.2	0.2	U
1311	02/18/11	6010B	02/21/11	**7440-39-3**	**Barium**	0.02	**0.34**	
1311	02/18/11	6010B	02/21/11	**7440-43-9**	**Cadmium**	0.01	**0.04**	
1311	02/18/11	6010B	02/21/11	**7440-47-3**	**Chromium**	0.02	**0.04**	
1311	02/18/11	6010B	02/21/11	**7439-92-1**	**Lead**	0.1	**1.2**	
1311	02/18/11	7470A	02/22/11	7439-97-6	Mercury	0.0001	0.0001	U
1311	02/18/11	6010B	02/21/11	**7440-02-0**	**Nickel**	0.05	**0.21**	
1311	02/18/11	6010B	02/21/11	7782-49-2	Selenium	0.2	0.2	U
1311	02/18/11	6010B	02/21/11	7440-22-4	Silver	0.02	0.02	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample ID: METHOD BLANK

Lab Sample ID: SJ49MB
LIMS ID: 11-3468
Matrix: Soil
Data Release Authorized:
Reported: 02/23/11

QC Report No: SJ49-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
1311	02/18/11	6010B	02/21/11	7440-38-2	Arsenic	0.2	0.2	U
1311	02/18/11	6010B	02/21/11	7440-39-3	Barium	0.02	0.02	U
1311	02/18/11	6010B	02/21/11	7440-43-9	Cadmium	0.01	0.01	U
1311	02/18/11	6010B	02/21/11	7440-47-3	Chromium	0.02	0.02	U
1311	02/18/11	6010B	02/21/11	7439-92-1	Lead	0.1	0.1	U
1311	02/18/11	7470A	02/22/11	7439-97-6	Mercury	0.0001	0.0001	U
1311	02/18/11	6010B	02/21/11	7440-02-0	Nickel	0.05	0.05	U
1311	02/18/11	6010B	02/21/11	7782-49-2	Selenium	0.2	0.2	U
1311	02/18/11	6010B	02/21/11	7440-22-4	Silver	0.02	0.02	U

U-Analyte undetected at given RL
RL-Reporting Limit

Analytical Resources, Incorporated
Analytical Chemists and Consultants

February 21, 2011

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge
ARI Job No: SJ56

Dear Tom:

Please find enclosed analytical results and the original Chain of Custody documentation (COC) for the project referenced above. Analytical Resources, Incorporated (ARI) accepted one water sample and one soil sample soil sample on February 17, 2011. The samples were received in good condition. The soil sample was logged under a different ARI SDG based on client specified turn around times.

The sample was analyzed for PCBs, as requested.

No analytical complications were noted for this analysis. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206-695-6211
Enclosures

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 5J56	Turn-around Requested: 2DAY sample #1 ; Standard other	Page: 1	of 1
ARI Client Company: FLOYD SNIDER	Phone: 206 292 2078	Date: 2/17/11	Ice Present? Y
Client Contact: NICK GARSON / TOM COLLIGAN		No. of Coolers: 1	Cooler Temps: 2.2
Client Project Name: JORGENSEN FORGE			
Client Project #: 7KPL2JOR	Samplers: D. BRAME		

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

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: MTCA PCBs (8)	Analysis Requested: RCRA Metals TCLP	Notes/Comments
JF-PLSD-RJW-4L	2/15/11	1145	Water	1	X		2-DAY
JF-PLSD-SWC-17	2/17/11	1215	Soil	1	X	X	STANDARD

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: DEAN BRAME	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: FLOYD SNIDER	Company: ARI	Company:	Company:
	Date & Time: 2/17/11 1434	Date & Time: 2/17/11 1436	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.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SJ56
Client: The Boeing Company
Project Event: 7KPL2JOR
Project Name: Jorgensen Forge

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	JF-PLSD-RJW-4L	SJ56A	11-3497	Water	02/15/11 11:45	02/17/11 14:36

Printed 02/17/11

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Boeing Project Name: Jorgansen forge.

COC No(s): _____ NA Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: SJ56 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)	2.2	

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: AV Date: 2/17/11 Time: 1436

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)		

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

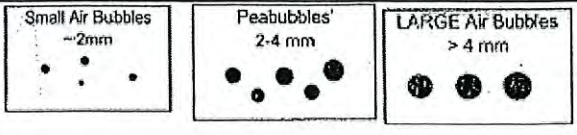
Samples Logged by: _____ Date: 2/17/11 Time: 1452.

***** 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:

By: Date:



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-PLSD-RJW-4L
SAMPLE

Lab Sample ID: SJ56A
LIMS ID: 11-3497
Matrix: Water
Data Release Authorized:
Reported: 02/21/11

QC Report No: SJ56-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/15/11
Date Received: 02/17/11

Date Extracted: 02/17/11
Date Analyzed: 02/18/11 12:56
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.10	< 0.10 U
53469-21-9	Aroclor 1242	0.10	< 0.10 U
12672-29-6	**Aroclor 1248**	**0.10**	**1.6**
11097-69-1	**Aroclor 1254**	**0.10**	**1.9**
11096-82-5	Aroclor 1260	0.16	< 0.16 Y
11104-28-2	Aroclor 1221	0.10	< 0.10 U
11141-16-5	Aroclor 1232	0.10	< 0.10 U
37324-23-5	Aroclor 1262	0.10	< 0.10 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	80.8%
Tetrachlorometaxylene	68.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: MB-021711
METHOD BLANK

Lab Sample ID: MB-021711
LIMS ID: 11-3497
Matrix: Water
Data Release Authorized:
Reported: 02/21/11

QC Report No: SJ56-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 02/17/11
Date Analyzed: 02/18/11 10:56
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.10	< 0.10 U
53469-21-9	Aroclor 1242	0.10	< 0.10 U
12672-29-6	Aroclor 1248	0.10	< 0.10 U
11097-69-1	Aroclor 1254	0.10	< 0.10 U
11096-82-5	Aroclor 1260	0.10	< 0.10 U
11104-28-2	Aroclor 1221	0.10	< 0.10 U
11141-16-5	Aroclor 1232	0.10	< 0.10 U
37324-23-5	Aroclor 1262	0.10	< 0.10 U

Reported in µg/L (ppb)

PCB Surrogate Recovery	
Decachlorobiphenyl	78.0%
Tetrachlorometaxylene	66.0%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: SJ56-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-021711	78.0%	35-116	66.0%	29-100	0
LCS-021711	81.2%	35-116	67.0%	29-100	0
LCSD-021711	78.8%	35-116	62.0%	29-100	0
JF-PLSD-RJW-4L	80.8%	10-128	68.5%	25-100	0

Prep Method: SW3510C
Log Number Range: 11-3497 to 11-3497

FORM-II SW8082

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: LCS-021711
LCS/LCSD

Lab Sample ID: LCS-021711
LIMS ID: 11-3497
Matrix: Water
Data Release Authorized:
Reported: 02/21/11

QC Report No: SJ56-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 02/17/11

Date Analyzed LCS: 02/18/11 11:20
LCSD: 02/18/11 11:44
Instrument/Analyst LCS: ECD7/JGR
LCSD: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	0.654	1.00	65.4%	0.647	1.00	64.7%	1.1%
Aroclor 1260	0.733	1.00	73.3%	0.735	1.00	73.5%	0.3%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	81.2%	78.8%
Tetrachlorometaxylene	67.0%	62.0%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

February 28, 2011

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge
ARI Job No: SJ68

Dear Tom:

Please find enclosed analytical results and the original Chain of Custody documentation (COC) for the project referenced above. Analytical Resources, Incorporated (ARI) accepted one water sample and one soil sample soil sample on February 17, 2011. The samples were received in good condition. The water sample was logged under ARI SDG SJ56 based on client specified turn around times.

The sample was analyzed for PCBs and TCLP metals, as requested.

The PCBs LCS is out of control high for aroclor 1016. No action was taken.

The surrogate TCMX is out of control high for sample JF-PLSD-SWC-17.

No other analytical complications were noted for this analysis. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206-695-6211
Enclosures

Chain of Custody Record & Laboratory Analysis Request

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

ARI Assigned Number: SJ168	Turn-around Requested: 2DAY sample#1 ; Standard other
ARI Client Company: FLOYD SNIDER	Phone: 206 292 2078
Client Contact: NICK GARSON / TOM COLLIGAN	
Client Project Name: JORGENSEN FORGE	
Client Project #: 7KPL2JOR	Samplers: D. BRAME

Page: 1	of 1
Date: 2/17/11	Ice Present? Y
No. of Coolers: 1	Cooler Temps: 2.2

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: MTCA PCBs (8)	RCRA metals TCLP							Notes/Comments
JF-PLSD-RJW-4L	2/15/11	1145	Water	1	X								2-DAY
JF-PLSD-SWC-17	2/17/11	1215	Soil	1	X	X							STANDARD
					↑								
					9 aractor Regular PCB STD								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: DEAN BRAME	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: FLOYD SNIDER	Company: ARI	Company:	Company:
	Date & Time: 2/17/11 1434	Date & Time: 2/17/11 1436	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: Boeing Project Name: Jorgensen Forge

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other: _____

Assigned ARI Job No: SJ168 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)..... 2.2

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: AV Date: 2/17/11 Time: 1430

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)		

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

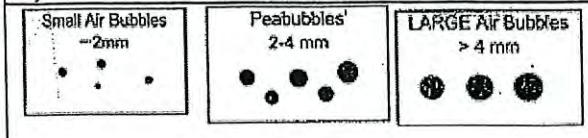
Samples Logged by: AV Date: 2/17/11 Time: 1755

***** 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:

By: Date:



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SJ68
Client: The Boeing Company
Project Event: 7KPL2JOR
Project Name: Jorgensen Forge

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	JF-PLSD-SWC-17	SJ68A	11-3586	Soil	02/17/11 12:15	02/17/11 14:36

Printed 02/17/11

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-PLSD-SWC-17
SAMPLE

Lab Sample ID: SJ68A
LIMS ID: 11-3586
Matrix: Soil
Data Release Authorized:
Reported: 02/28/11

QC Report No: SJ68-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/17/11
Date Received: 02/17/11

Date Extracted: 02/22/11
Date Analyzed: 02/25/11 09:49
Instrument/Analyst: ECD5/JLW
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 0.84 g-dry-wt
Final Extract Volume: 40 mL
Dilution Factor: 50.0
Silica Gel: No

Percent Moisture: 18.0%

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	48,000	< 48,000 U
53469-21-9	Aroclor 1242	48,000	< 48,000 U
12672-29-6	Aroclor 1248	190,000	< 190,000 Y
11097-69-1	**Aroclor 1254**	**48,000**	**350,000**
11096-82-5	Aroclor 1260	48,000	< 48,000 U
11104-28-2	Aroclor 1221	48,000	< 48,000 U
11141-16-5	Aroclor 1232	48,000	< 48,000 U
37324-23-5	Aroclor 1262	48,000	< 48,000 U
11100-14-4	Aroclor 1268	48,000	< 48,000 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	145%
Tetrachlorometaxylene	114%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: SJ68-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-022211	92.9%	51-127	88.0%	49-110	0
LCS-022211	101%	51-127	98.9%	49-110	0
JF-PLSD-SWC-17	145%	22-168	114%*	28-106	1

Medium Level Control Limits
Prep Method: SW3580A
Log Number Range: 11-3586 to 11-3586

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: MB-022211
METHOD BLANK

Lab Sample ID: MB-022211
LIMS ID: 11-3586
Matrix: Soil
Data Release Authorized:
Reported: 02/28/11

QC Report No: SJ68-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 02/22/11
Date Analyzed: 02/25/11 09:11
Instrument/Analyst: ECD5/JLW
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 5.00 g
Final Extract Volume: 40 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: NA

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	800	< 800 U
53469-21-9	Aroclor 1242	800	< 800 U
12672-29-6	Aroclor 1248	800	< 800 U
11097-69-1	Aroclor 1254	800	< 800 U
11096-82-5	Aroclor 1260	800	< 800 U
11104-28-2	Aroclor 1221	800	< 800 U
11141-16-5	Aroclor 1232	800	< 800 U
37324-23-5	Aroclor 1262	800	< 800 U
11100-14-4	Aroclor 1268	800	< 800 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	92.9%
Tetrachlorometaxylene	88.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: LCS-022211
LAB CONTROL

Lab Sample ID: LCS-022211
LIMS ID: 11-3586
Matrix: Soil
Data Release Authorized:
Reported: 02/28/11

QC Report No: SJ68-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 02/22/11
Date Analyzed: 02/25/11 09:30
Instrument/Analyst: ECD5/JLW
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 5.00 g-dry-wt
Final Extract Volume: 40 mL
Dilution Factor: 5.00
Silica Gel: No

Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Aroclor 1016	4460	4000	112%
Aroclor 1260	4060	4000	102%

PCB Surrogate Recovery

Decachlorobiphenyl	101%
Tetrachlorometaxylene	98.9%

Results reported in µg/kg (ppb)

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS
Page 1 of 1

Sample ID: JF-PLSD-SWC-17
SAMPLE

Lab Sample ID: SJ68A
LIMS ID: 11-3586
Matrix: Soil
Data Release Authorized:
Reported: 02/25/11

QC Report No: SJ68-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/17/11
Date Received: 02/17/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
1311	02/22/11	6010B	02/24/11	7440-38-2	Arsenic	0.2	0.2	U
1311	02/22/11	6010B	02/24/11	**7440-39-3**	**Barium**	0.02	**0.06**	
1311	02/22/11	6010B	02/24/11	**7440-43-9**	**Cadmium**	0.01	**0.01**	
1311	02/22/11	6010B	02/24/11	7440-47-3	Chromium	0.02	0.02	U
1311	02/22/11	6010B	02/24/11	7439-92-1	Lead	0.1	0.1	U
1311	02/22/11	7470A	02/22/11	7439-97-6	Mercury	0.0001	0.0001	U
1311	02/22/11	6010B	02/24/11	7782-49-2	Selenium	0.2	0.2	U
1311	02/22/11	6010B	02/24/11	7440-22-4	Silver	0.02	0.02	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample ID: JF-PLSD-SWC-17
DUPLICATE

Lab Sample ID: SJ68A
LIMS ID: 11-3586
Matrix: Soil
Data Release Authorized:
Reported: 02/25/11

QC Report No: SJ68-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/17/11
Date Received: 02/17/11

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010B	0.2 U	0.2 U	0.0%	+/- 0.2	L
Barium	6010B	0.06	0.06	0.0%	+/- 0.02	L
Cadmium	6010B	0.01	0.01	0.0%	+/- 0.01	L
Chromium	6010B	0.02 U	0.02 U	0.0%	+/- 0.02	L
Lead	6010B	0.1 U	0.1 U	0.0%	+/- 0.1	L
Mercury	7470A	0.0001 U	0.0001 U	0.0%	+/- 0.0001	L
Selenium	6010B	0.2 U	0.2 U	0.0%	+/- 0.2	L
Silver	6010B	0.02 U	0.02 U	0.0%	+/- 0.02	L

Reported in mg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS

Sample ID: JF-PLSD-SWC-17
MATRIX SPIKE

Lab Sample ID: SJ68A
LIMS ID: 11-3586
Matrix: Soil
Data Release Authorized:
Reported: 02/25/11

QC Report No: SJ68-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/17/11
Date Received: 02/17/11

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010B	0.2 U	4.1	4.0	102%	
Barium	6010B	0.06	3.93	4.00	96.8%	
Cadmium	6010B	0.01	1.08	1.00	107%	
Chromium	6010B	0.02 U	1.00	1.00	100%	
Lead	6010B	0.1 U	4.1	4.0	102%	
Mercury	7470A	0.0001 U	0.0011	0.0010	110%	
Selenium	6010B	0.2 U	4.2	4.0	105%	
Silver	6010B	0.02 U	1.02	1.00	102%	

Reported in mg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TCLP METALS **Sample ID: METHOD BLANK**

Lab Sample ID: SJ68MB
LIMS ID: 11-3586
Matrix: Soil
Data Release Authorized:
Reported: 02/25/11

QC Report No: SJ68-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
1311	02/22/11	6010B	02/24/11	7440-38-2	Arsenic	0.2	0.2	U
1311	02/22/11	6010B	02/24/11	7440-39-3	Barium	0.02	0.02	U
1311	02/22/11	6010B	02/24/11	7440-43-9	Cadmium	0.01	0.01	U
1311	02/22/11	6010B	02/24/11	7440-47-3	Chromium	0.02	0.02	U
1311	02/22/11	6010B	02/24/11	7439-92-1	Lead	0.1	0.1	U
1311	02/22/11	7470A	02/22/11	7439-97-6	Mercury	0.0001	0.0001	U
1311	02/22/11	6010B	02/24/11	7782-49-2	Selenium	0.2	0.2	U
1311	02/22/11	6010B	02/24/11	7440-22-4	Silver	0.02	0.02	U

U-Analyte undetected at given RL
RL-Reporting Limit

Analytical Resources, Incorporated
Analytical Chemists and Consultants

March 3, 2011

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge
ARI Job No: SK67

Dear Tom:

Please find enclosed analytical results and the original Chain of Custody documentation (COC) for the project referenced above. Analytical Resources, Incorporated (ARI) accepted three water samples and one solid sample on February 25, 2011. The samples were received in good condition. The solid sample has been logged under a different ARI SDG based on client specified turn around times.

The samples were analyzed for PCBs, Total Metals, pH, Settleable Solids and Oil and Grease, as requested.

The PCB surrogate DCBP is out of control high for all associated samples. No action was taken.

No other analytical complications were noted for this analysis. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206-695-6211
Enclosures

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: SK67	Turn-around Requested: Water-5 Day; Solid-Standard	Page: 1 of 1	
ARI Client Company: Floyd | Snider	Phone: 206-292-2078	Date: 2/25/11	Ice Present? Y
Client Contact: Nick Garson / Tom Colligan		No. of Coolers: 2	Cooler Temps: 2.7, 1.8
Client Project Name: Jorgensen Forge			
Client Project #: 7KPL2JOR	Samplers: D. BRAME		

Sample ID	Date	Time	Matrix	No. Containers	pH	Total Metals	HEM (FOG)	Settleable Solids	MTCA PCBs (8)	TOTAL PCBs			Notes/Comments
					Analysis Requested								
JF-PLSD-WC-B08	2/25/11	1250	Water	6	x	x	x	x	x				5-Day
JF-PLSD-WC-B59	2/25/11	1330	Water	6	x	x	x	x	x				5-Day
JF-PLSD-WC-B89	2/25/11	1355	Water	6	x	x	x	x	x				5-Day
JF-PLSD-WD-12	2/25/11	1445	Solid	1						x			Standard

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: DEAN BRAME	Printed Name: Taylor Strecter	Printed Name:	Printed Name:
	Company: FLOYD | SNIDER	Company: ARI	Company:	Company:
	Date & Time: 2/25/11 1605	Date & Time: 2-25-11 16:10	Date & Time:	Date & Time:

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

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: ~~Floyd Snider~~ Boeing JM

Project Name: Jorgensen Forge

COC No(s): _____ NA

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

Assigned ARI Job No: SK67

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)..... 2.7 1.8 ___ ___ ___ ___

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: TB Date: 2-25-11 Time: 16:10

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)		

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

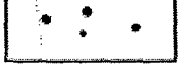
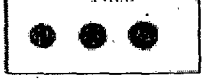
Samples Logged by: JM Date: 2/25/11 Time: 1649

***** 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:

By: Date:

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

Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SK67
Client: The Boeing Company
Project Event: 7KPL2JOR
Project Name: Jorgensen Forge

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	JF-PLSD-WC-B08	SK67A	11-4082	Water	02/25/11 12:50	02/25/11 16:10
2.	JF-PLSD-WC-B59	SK67B	11-4083	Water	02/25/11 13:30	02/25/11 16:10
3.	JF-PLSD-WC-B89	SK67C	11-4084	Water	02/25/11 13:55	02/25/11 16:10

Printed 02/25/11

PRESERVATION VERIFICATION 02/25/11
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **SK67**

Inquiry Number: NONE
Analysis Requested: 02/28/11
Contact: Garson, Nick
Client: The Boeing Company
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

PC: Kelly
VTSR: 02/25/11

Project #: 7KPL2JOR
Project: Jorgensen Forge
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
11-4082 **SK67A**	JF-PLSD-WC-B08					pass	TOT pass															
11-4083 **SK67B**	JF-PLSD-WC-B59						TOT															
11-4084 **SK67C**	JF-PLSD-WC-B89						TOT															

Checked By JM Date 2/25/11

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: JF-PLSD-WC-B08
SAMPLE

Lab Sample ID: SK67A
LIMS ID: 11-4082
Matrix: Water
Data Release Authorized:
Reported: 03/02/11

QC Report No: SK67-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/25/11
Date Received: 02/25/11

Date Extracted: 02/28/11
Date Analyzed: 03/02/11 09:31
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 1.0 mL
Dilution Factor: 10.0
Silica Gel: No
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	3.5	< 3.5 Y
11097-69-1	**Aroclor 1254**	**1.0**	**5.5**
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U
37324-23-5	Aroclor 1262	1.0	< 1.0 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	140%
Tetrachlorometaxylene	73.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: JF-PLSD-WC-B59
SAMPLE

Lab Sample ID: SK67B
LIMS ID: 11-4083
Matrix: Water
Data Release Authorized:
Reported: 03/02/11

QC Report No: SK67-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/25/11
Date Received: 02/25/11

Date Extracted: 02/28/11
Date Analyzed: 03/02/11 09:55
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 1.0 mL
Dilution Factor: 10.0
Silica Gel: No
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	2.6	< 2.6 Y
11097-69-1	**Aroclor 1254**	**1.0**	**3.2**
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U
37324-23-5	Aroclor 1262	1.0	< 1.0 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	137%
Tetrachlorometaxylene	74.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: JF-PLSD-WC-B89
SAMPLE

Lab Sample ID: SK67C
LIMS ID: 11-4084
Matrix: Water
Data Release Authorized:
Reported: 03/02/11

QC Report No: SK67-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/25/11
Date Received: 02/25/11

Date Extracted: 02/28/11
Date Analyzed: 03/02/11 10:19
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 1.0 mL
Dilution Factor: 10.0
Silica Gel: No
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	2.0	< 2.0 Y
11097-69-1	**Aroclor 1254**	**1.0**	**2.1**
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U
37324-23-5	Aroclor 1262	1.0	< 1.0 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	131%
Tetrachlorometaxylene	69.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: MB-022811
METHOD BLANK

Lab Sample ID: MB-022811
LIMS ID: 11-4082
Matrix: Water
Data Release Authorized:
Reported: 03/02/11

QC Report No: SK67-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 02/28/11
Date Analyzed: 03/01/11 13:25
Instrument/Analyst: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	0.10	< 0.10 U
53469-21-9	Aroclor 1242	0.10	< 0.10 U
12672-29-6	Aroclor 1248	0.10	< 0.10 U
11097-69-1	Aroclor 1254	0.10	< 0.10 U
11096-82-5	Aroclor 1260	0.10	< 0.10 U
11104-28-2	Aroclor 1221	0.10	< 0.10 U
11141-16-5	Aroclor 1232	0.10	< 0.10 U
37324-23-5	Aroclor 1262	0.10	< 0.10 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	89.2%
Tetrachlorometaxylene	71.2%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: SK67-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-022811	89.2%	35-116	71.2%	29-100	0
LCS-022811	92.0%	35-116	77.0%	29-100	0
LCSD-022811	90.8%	35-116	75.5%	29-100	0
JF-PLSD-WC-B08	140%*	10-128	73.0%	25-100	1
JF-PLSD-WC-B59	137%*	10-128	74.2%	25-100	1
JF-PLSD-WC-B89	131%*	10-128	69.2%	25-100	1

Prep Method: SW3510C
Log Number Range: 11-4082 to 11-4084

FORM-II SW8082

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: LCS-022811
LCS/LCSD

Lab Sample ID: LCS-022811
LIMS ID: 11-4082
Matrix: Water
Data Release Authorized:
Reported: 03/02/11

QC Report No: SK67-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 02/28/11

Date Analyzed LCS: 03/01/11 13:49
LCSD: 03/01/11 14:13
Instrument/Analyst LCS: ECD7/AAR
LCSD: ECD7/AAR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: No
Acid Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	0.756	1.00	75.6%	0.790	1.00	79.0%	4.4%
Aroclor 1260	0.796	1.00	79.6%	0.822	1.00	82.2%	3.2%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	92.0%	90.8%
Tetrachlorometaxylene	77.0%	75.5%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: JF-PLSD-WC-B08
SAMPLE

Lab Sample ID: SK67A
LIMS ID: 11-4082
Matrix: Water
Data Release Authorized:
Reported: 03/02/11

QC Report No: SK67-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/25/11
Date Received: 02/25/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	02/28/11	6010B	03/01/11	7440-43-9	Cadmium	0.002	0.002	U
3010A	02/28/11	6010B	03/01/11	7440-47-3	Chromium	0.005	0.005	U
3010A	02/28/11	6010B	03/01/11	**7440-50-8**	**Copper**	0.002	**0.006**	
3010A	02/28/11	6010B	03/01/11	7439-92-1	Lead	0.02	0.02	U
3010A	02/28/11	6010B	03/01/11	7440-02-0	Nickel	0.01	0.01	U
3010A	02/28/11	6010B	03/01/11	7440-22-4	Silver	0.003	0.003	U
3010A	02/28/11	6010B	03/01/11	**7440-66-6**	**Zinc**	0.01	**0.01**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: JF-PLSD-WC-B59
SAMPLE

Lab Sample ID: SK67B
LIMS ID: 11-4083
Matrix: Water
Data Release Authorized:
Reported: 03/02/11

QC Report No: SK67-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/25/11
Date Received: 02/25/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	02/28/11	6010B	03/01/11	7440-43-9	Cadmium	0.002	0.002	U
3010A	02/28/11	6010B	03/01/11	7440-47-3	Chromium	0.005	0.005	U
3010A	02/28/11	6010B	03/01/11	**7440-50-8**	**Copper**	0.002	**0.006**	
3010A	02/28/11	6010B	03/01/11	7439-92-1	Lead	0.02	0.02	U
3010A	02/28/11	6010B	03/01/11	7440-02-0	Nickel	0.01	0.01	U
3010A	02/28/11	6010B	03/01/11	7440-22-4	Silver	0.003	0.003	U
3010A	02/28/11	6010B	03/01/11	**7440-66-6**	**Zinc**	0.01	**0.01**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: SK67MB
LIMS ID: 11-4082
Matrix: Water
Data Release Authorized:
Reported: 03/02/11

QC Report No: SK67-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	02/28/11	6010B	03/01/11	7440-43-9	Cadmium	0.002	0.002	U
3010A	02/28/11	6010B	03/01/11	7440-47-3	Chromium	0.005	0.005	U
3010A	02/28/11	6010B	03/01/11	7440-50-8	Copper	0.002	0.002	U
3010A	02/28/11	6010B	03/01/11	7439-92-1	Lead	0.02	0.02	U
3010A	02/28/11	6010B	03/01/11	7440-02-0	Nickel	0.01	0.01	U
3010A	02/28/11	6010B	03/01/11	7440-22-4	Silver	0.003	0.003	U
3010A	02/28/11	6010B	03/01/11	7440-66-6	Zinc	0.01	0.01	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: SK67LCS
LIMS ID: 11-4082
Matrix: Water
Data Release Authorized:
Reported: 03/02/11

QC Report No: SK67-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Cadmium	6010B	0.514	0.500	103%	
Chromium	6010B	0.498	0.500	99.6%	
Copper	6010B	0.506	0.500	101%	
Lead	6010B	1.98	2.00	99.0%	
Nickel	6010B	0.49	0.50	98.0%	
Silver	6010B	0.519	0.500	104%	
Zinc	6010B	0.49	0.50	98.0%	

Reported in mg/L

N-Control limit not met
Control Limits: 80-120%

SAMPLE RESULTS-CONVENTIONALS
SK67-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/02/11

Project: Jorgensen Forge
Event: 7KPL2JOR
Date Sampled: 02/25/11
Date Received: 02/25/11

Client ID: JF-PLSD-WC-B08
ARI ID: 11-4082 SK67A

Analyte	Date Batch	Method	Units	RL	Sample
pH	02/25/11 022511#1	EPA 150.1	std units	0.01	7.58
Settleable Solids	02/26/11 022611#1	EPA 160.5	mL/L	0.1	< 0.1 U
HEM Oil & Grease	03/01/11 030111#1	EPA 1664A	mg/L	5.7	< 5.7 U

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
SK67-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/02/11

Project: Jorgensen Forge
Event: 7KPL2JOR
Date Sampled: 02/25/11
Date Received: 02/25/11

Client ID: JF-PLSD-WC-B59
ARI ID: 11-4083 SK67B

Analyte	Date Batch	Method	Units	RL	Sample
pH	02/25/11 022511#1	EPA 150.1	std units	0.01	7.57
Settleable Solids	02/26/11 022611#1	EPA 160.5	mL/L	0.1	< 0.1 U
HEM Oil & Grease	03/01/11 030111#1	EPA 1664A	mg/L	5.7	< 5.7 U

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
SK67-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/02/11

Project: Jorgensen Forge
Event: 7KPL2JOR
Date Sampled: 02/25/11
Date Received: 02/25/11

Client ID: JF-PLSD-WC-B89
ARI ID: 11-4084 SK67C

Analyte	Date Batch	Method	Units	RL	Sample
pH	02/25/11 022511#1	EPA 150.1	std units	0.01	7.61
Settleable Solids	02/26/11 022611#1	EPA 160.5	mL/L	0.1	< 0.1 U
HEM Oil & Grease	03/01/11 030111#1	EPA 1664A	mg/L	5.7	< 5.7 U

RL Analytical reporting limit
U Undetected at reported detection limit

METHOD BLANK RESULTS-CONVENTIONALS
SK67-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/02/11

Project: Jorgensen Forge
Event: 7KPL2JOR
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Settleable Solids	EPA 160.5	02/26/11	mL/L	< 0.1 U	
HEM Oil & Grease	EPA 1664A	03/01/11	mg/L	< 5.0 U	

LAB CONTROL RESULTS-CONVENTIONALS
SK67-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/02/11

Project: Jorgensen Forge
Event: 7KPL2JOR
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
pH EPA 150.1	ICVL	02/25/11	std units	7.01	7.00	0.01
HEM Oil & Grease EPA 1664A	ICVL	03/01/11	mg/L	32.3	40.0	80.8%

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

REPLICATE RESULTS-CONVENTIONALS
SK67-The Boeing Company

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/02/11

Project: Jorgensen Forge
Event: 7KPL2JOR
Date Sampled: 02/25/11
Date Received: 02/25/11

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: SK67A Client ID: JF-PLSD-WC-B08						
pH	EPA 150.1	02/25/11	std units	7.58	7.58	0.00

pH is evaluated as the Absolute Difference between the values rather than Relative Percent Difference

Analytical Resources, Incorporated
Analytical Chemists and Consultants

March 1, 2011

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge
ARI Job No: SK80

Dear Tom:

Please find enclosed analytical results and the original Chain of Custody documentation (COC) for the project referenced above. Analytical Resources, Incorporated (ARI) accepted seven wipe samples and one solid sample on February 28, 2011. The samples were received in good condition. The solid sample has been placed on hold pending further instructions.

The samples were analyzed for PCBs, as requested.

No analytical complications were noted for this analysis. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206-695-6211
Enclosures

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 5880	Turn-around Requested: 5-24hr; 1-Standard, 1-HOLD
ARI Client Company: FLOYD | SNIDER	Phone: 206 292 2078
Client Contact: NICK GARSON / TOM COLLIGAN	
Client Project Name: Sorgensen Forge	
Client Project #: 7KPL2 SOR	Samplers: D. BRAME

Page: 1	of 1
Date: 2/28/11	Ice Present? Y
No. of Coolers: 1	Cooler Temps: 4.6

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

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: PCBs (1ppb)	Notes/Comments
JF-PLSD-WP-B10K1	2/28/11	1215	HEX WIPE	1	x	24HR TURN
JF-PLSD-WP-B10K2		1215		1		
JF-PLSD-WP-B10K3		1215		1		
JF-PLSD-WP-B10K4		1215		1		
JF-PLSD-WP-B10K5		1215		1		
JF-PLSD-WP-SF		1210		1		STANDARD
JF-PLSD-PS-4L		1115	Solid	1		HOLD
JF-PLSD-WP-4L	2/28/11	10:45	Wipe	1	x	

Kelly to 2/28/11 3:20 pm

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: DEAN BRAME	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: FLOYD | SNIDER	Company: ARI	Company:	Company:
	Date & Time: 2/28/11 1445	Date & Time: 2/28/11 1450	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.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SK80
Client: The Boeing Company
Project Event: 7KPL2JOR
Project Name: Jorgensen Forge

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	JF-PLSD-WP-B10K1	SK80A	11-4124	Wipe	02/28/11 12:15	02/28/11 14:50
2.	JF-PLSD-WP-B10K2	SK80B	11-4125	Wipe	02/28/11 12:15	02/28/11 14:50
3.	JF-PLSD-WP-B10K3	SK80C	11-4126	Wipe	02/28/11 12:15	02/28/11 14:50
4.	JF-PLSD-WP-B10K4	SK80D	11-4127	Wipe	02/28/11 12:15	02/28/11 14:50
5.	JF-PLSD-WP-B10K5	SK80E	11-4128	Wipe	02/28/11 12:15	02/28/11 14:50
6.	JF-PLSD-WP-SF	SK80F	11-4129	Wipe	02/28/11 12:10	02/28/11 14:50
7.	JF-PLSD-WP-4L	SK80G	11-4130	Wipe	02/28/11 10:45	02/28/11 14:50
8.	JF-PLSD-PS-4L	SK80H	11-4131	Solid	02/28/11 11:15	02/28/11 14:50

Printed 03/01/11

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Boeing Project Name: Jorgensen forge

COC No(s): _____ NA Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: SK80 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)..... 4.6 ___ ___ ___ ___

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: AV Date: 2/28/11 Time: 1450

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)		

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

Samples Logged by: MM Date: 2/28/11 Time: 1500

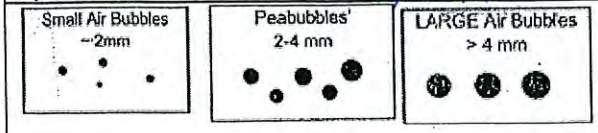
***** Notify Project Manager of discrepancies or concerns *****

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

Additional Notes, Discrepancies, & Resolutions:

JF-DLSD-WP-4L not on C.O.C, sampled 2/28/11 @ 1045.

By: AV Date: 2/28/11



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-PLSD-WP-B10K1
SAMPLE

Lab Sample ID: SK80A
LIMS ID: 11-4124
Matrix: Wipe
Data Release Authorized:
Reported: 03/01/11

QC Report No: SK80-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/28/11
Date Received: 02/28/11

Date Extracted: 02/28/11
Date Analyzed: 03/01/11 09:15
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 1.00 Wipe
Final Extract Volume: 10 mL
Dilution Factor: 5.00
Silica Gel: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U

Reported in Total µg

PCB Surrogate Recovery

Decachlorobiphenyl	100%
Tetrachlorometaxylene	86.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-PLSD-WP-B10K2
SAMPLE

Lab Sample ID: SK80B
LIMS ID: 11-4125
Matrix: Wipe
Data Release Authorized:
Reported: 03/01/11

QC Report No: SK80-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/28/11
Date Received: 02/28/11

Date Extracted: 02/28/11
Date Analyzed: 03/01/11 09:34
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 1.00 Wipe
Final Extract Volume: 10 mL
Dilution Factor: 5.00
Silica Gel: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U

Reported in Total µg

PCB Surrogate Recovery

Decachlorobiphenyl	100%
Tetrachlorometaxylene	82.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-PLSD-WP-B10K3
SAMPLE

Lab Sample ID: SK80C
LIMS ID: 11-4126
Matrix: Wipe
Data Release Authorized:
Reported: 03/01/11

QC Report No: SK80-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/28/11
Date Received: 02/28/11

Date Extracted: 02/28/11
Date Analyzed: 03/01/11 09:53
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 1.00 Wipe
Final Extract Volume: 10 mL
Dilution Factor: 5.00
Silica Gel: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U

Reported in Total µg

PCB Surrogate Recovery

Decachlorobiphenyl	104%
Tetrachlorometaxylene	86.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-PLSD-WP-B10K4
SAMPLE

Lab Sample ID: SK80D
LIMS ID: 11-4127
Matrix: Wipe
Data Release Authorized:
Reported: 03/01/11

QC Report No: SK80-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/28/11
Date Received: 02/28/11

Date Extracted: 02/28/11
Date Analyzed: 03/01/11 10:12
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 1.00 Wipe
Final Extract Volume: 10 mL
Dilution Factor: 5.00
Silica Gel: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U

Reported in Total µg

PCB Surrogate Recovery

Decachlorobiphenyl	100%
Tetrachlorometaxylene	89.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: JF-PLSD-WP-B10K5
SAMPLE

Lab Sample ID: SK80E
LIMS ID: 11-4128
Matrix: Wipe
Data Release Authorized:
Reported: 03/01/11

QC Report No: SK80-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/28/11
Date Received: 02/28/11

Date Extracted: 02/28/11
Date Analyzed: 03/01/11 10:31
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 1.00 Wipe
Final Extract Volume: 10 mL
Dilution Factor: 5.00
Silica Gel: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U

Reported in Total µg

PCB Surrogate Recovery

Decachlorobiphenyl	104%
Tetrachlorometaxylene	89.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-PLSD-WP-SF
SAMPLE

Lab Sample ID: SK80F
LIMS ID: 11-4129
Matrix: Wipe
Data Release Authorized:
Reported: 03/01/11

QC Report No: SK80-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/28/11
Date Received: 02/28/11

Date Extracted: 02/28/11
Date Analyzed: 03/01/11 10:49
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 1.00 Wipe
Final Extract Volume: 10 mL
Dilution Factor: 5.00
Silica Gel: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U

Reported in Total µg

PCB Surrogate Recovery

Decachlorobiphenyl	103%
Tetrachlorometaxylene	88.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-PLSD-WP-4L
SAMPLE

Lab Sample ID: SK80G
LIMS ID: 11-4130
Matrix: Wipe
Data Release Authorized:
Reported: 03/01/11

QC Report No: SK80-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/28/11
Date Received: 02/28/11

Date Extracted: 02/28/11
Date Analyzed: 03/01/11 11:08
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 1.00 Wipe
Final Extract Volume: 10 mL
Dilution Factor: 5.00
Silica Gel: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	4.0	< 4.0 Y
11097-69-1	**Aroclor 1254**	**1.0**	**4.9**
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U

Reported in Total µg

PCB Surrogate Recovery

Decachlorobiphenyl	96.2%
Tetrachlorometaxylene	90.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: MB-022811
METHOD BLANK

Lab Sample ID: MB-022811
LIMS ID: 11-4124
Matrix: Wipe
Data Release Authorized:
Reported: 03/01/11

QC Report No: SK80-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 02/28/11
Date Analyzed: 03/01/11 11:27
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 1.00 Wipe
Final Extract Volume: 10 mL
Dilution Factor: 5.00
Silica Gel: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U

Reported in Total µg

PCB Surrogate Recovery

Decachlorobiphenyl	110%
Tetrachlorometaxylene	89.9%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SURROGATE RECOVERY SUMMARY

Matrix: Wipe

QC Report No: SK80-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

Client ID	DCBP	TCMX	TOT OUT
MB-022811	110%	89.9%	0
LCS-022811	105%	91.8%	0
LCSD-022811	106%	95.4%	0
JF-PLSD-WP-B10K1	100%	86.9%	0
JF-PLSD-WP-B10K2	100%	82.1%	0
JF-PLSD-WP-B10K3	104%	86.6%	0
JF-PLSD-WP-B10K4	100%	89.4%	0
JF-PLSD-WP-B10K5	104%	89.6%	0
JF-PLSD-WP-SF	103%	88.4%	0
JF-PLSD-WP-4L	96.2%	90.5%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(30-160)	(30-160)
(TCMX) = Tetrachlorometaxylene	(30-160)	(30-160)

Prep Method: SW3550C
Log Number Range: 11-4124 to 11-4130

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: LCS-022811
LCS/LCSD

Lab Sample ID: LCS-022811
LIMS ID: 11-4124
Matrix: Wipe
Data Release Authorized:
Reported: 03/01/11

QC Report No: SK80-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 02/28/11
Date Received: 02/28/11

Date Extracted LCS/LCSD: 02/28/11

Date Analyzed LCS: 03/01/11 11:46
LCSD: 03/01/11 12:05
Instrument/Analyst LCS: ECD5/JGR
LCSD: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount LCS: 1.00 Wipe
LCSD: 1.00 Wipe
Final Extract Volume LCS: 10 mL
LCSD: 10 mL
Dilution Factor LCS: 5.00
LCSD: 5.00
Silica Gel: No
Acid Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	5.2	5.0	104%	5.2	5.0	104%	0.0%
Aroclor 1260	4.8	5.0	96.0%	5.1	5.0	102%	6.1%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	105%	106%
Tetrachlorometaxylene	91.8%	95.4%

Reported in Total µg
RPD calculated using sample concentrations per SW846.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

March 15, 2011

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge
ARI Job No: SL50

Dear Tom:

Please find enclosed analytical results and the original Chain of Custody documentation (COC) for the project referenced above. Analytical Resources, Incorporated (ARI) accepted one water sample on March 3, 2011. The sample was received in good condition.

The sample was analyzed for PCBs, as requested.

No analytical complications were noted for this analysis. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206-695-6211
Enclosures

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: SL50	Turn-around Requested: STANDARD	Page: 1 of 1	
ARI Client Company: FLOYD ISNIDER	Phone: 206 292 2078	Date: 3/3/11	Ice Present? Y
Client Contact: NICK GARSON / TOM COLLIGAN		No. of Coolers: 1	Cooler Temps: 5.6
Client Project Name: Jorgensen Forge			
Client Project #: 7KPL2JOR	Samplers: D. BRAME		

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

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: TOTAL PCBs	Notes/Comments
JF-PLSD-CB-10K	3/3/11	0830	Water	1	X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: DEAN BRAME	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: FLOYD|SNIDER	Company: ARI	Company:	Company:
	Date & Time: 3/3/11 1435	Date & Time: 3/3/11 1435	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: Floyd / Snider Project Name: Jorgensen Forge

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier Hand Delivered Other:_____

Assigned ARI Job No: SL50 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)..... 5.6 ___ ___ ___ ___

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: JM Date: 3/3/11 Time: 1435

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)		

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

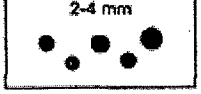
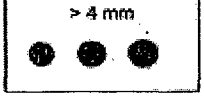
Samples Logged by: AV Date: 3/3/11 Time: 1725

***** 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:

By: Date:

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

Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SL50
Client: The Boeing Company
Project Event: 7KPL2JOR
Project Name: Jorgensen Forge

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	JF-PLSD-CB-10K	SL50A	11-4526	Water	03/03/11 08:30	03/03/11 14:35

Printed 03/03/11

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-PLSD-CB-10K
SAMPLE

Lab Sample ID: SL50A
LIMS ID: 11-4526
Matrix: Water
Data Release Authorized:
Reported: 03/14/11

QC Report No: SL50-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 03/03/11
Date Received: 03/03/11

Date Extracted: 03/04/11
Date Analyzed: 03/09/11 06:16
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	**Aroclor 1254**	**1.0**	**1.0**
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	76.8%
Tetrachlorometaxylene	75.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: MB-030411
METHOD BLANK

Lab Sample ID: MB-030411
LIMS ID: 11-4526
Matrix: Water
Data Release Authorized:
Reported: 03/14/11

QC Report No: SL50-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 03/04/11
Date Analyzed: 03/09/11 04:17
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No
Acid Cleanup: Yes

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	57.8%
Tetrachlorometaxylene	75.2%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: SL50-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-030411	57.8%	41-111	75.2%	40-118	0
LCS-030411	58.2%	41-111	81.0%	40-118	0
LCSD-030411	58.8%	41-111	73.8%	40-118	0
JF-PLSD-CB-10K	76.8%	29-118	75.5%	38-118	0

Prep Method: SW3510C
Log Number Range: 11-4526 to 11-4526

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: LCS-030411
LCS/LCSD

Lab Sample ID: LCS-030411
LIMS ID: 11-4526
Matrix: Water
Data Release Authorized:
Reported: 03/14/11

QC Report No: SL50-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 03/04/11

Date Analyzed LCS: 03/09/11 04:41
LCSD: 03/09/11 05:05
Instrument/Analyst LCS: ECD7/JGR
LCSD: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 5.0 mL
LCSD: 5.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: No
Acid Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	4.60	5.00	92.0%	4.48	5.00	89.6%	2.6%
Aroclor 1260	4.08	5.00	81.6%	3.99	5.00	79.8%	2.2%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	58.2%	58.8%
Tetrachlorometaxylene	81.0%	73.8%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

March 9, 2011

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge
ARI Job No: SL80

Dear Tom:

Please find enclosed analytical results and the original Chain of Custody documentation (COC) for the project referenced above. Analytical Resources, Incorporated (ARI) accepted one wipe sample on March 7, 2011. The sample was received in good condition.

The sample was analyzed for PCBs, as requested.

No analytical complications were noted for this analysis. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206-695-6211
Enclosures

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: SL80	Turn-around Requested: 24 HR	Page: 1 of 1	
ARI Client Company: FLOYD | SNIDER	Phone: 206 292 2078	Date: 3/7/11	Ice Present? Y
Client Contact: NICK GARSON / TOM COLLIGAN		No. of Coolers: 1	Cooler Temps: 3.1
Client Project Name: SORGENSEN FORGE			
Client Project #: 7KPL2SOR	Samplers: D. BRAME		

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

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: PCBs (1400)	Notes/Comments
JF-PLSD-WP-VT	3/7/11	1245	HEX WIPE	1	X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: DEAN BRAME	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: FLOYD | SNIDER	Company: ARI	Company:	Company:
	Date & Time: 3/7/11 1346	Date & Time: 3/7/11 1346	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: Boeing | Project Name: Jorgensen Forge

COC No(s): _____ (NA) | Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other: _____

Assigned ARI Job No: SL80 | 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)..... 3.1 ___ ___ ___ ___

If cooler temperature is out of compliance fill out form 00070F | Temp Gun ID#: 90941619

Cooler Accepted by: JM Date: 3/7/11 Time: 1346

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) JM
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)		

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

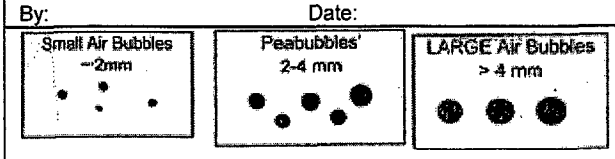
Samples Logged by: JM Date: 3/7/11 Time: 1450

*** 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:

By: Date:



Small → "sm"	
Peabubbles → "pb"	
Large → "lg"	
Headspace → "hs"	

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SL80
Client: The Boeing Company
Project Event: 7KPL2JOR
Project Name: Jorgensen Forge

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	JF-PLSD-WP-VT	SL80A	11-4666	Wipe	03/07/11 12:45	03/07/11 13:46

Printed 03/07/11

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: JF-PLSD-WP-VT
SAMPLE

Lab Sample ID: SL80A
LIMS ID: 11-4666
Matrix: Wipe
Data Release Authorized:
Reported: 03/09/11

QC Report No: SL80-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 03/07/11
Date Received: 03/07/11

Date Extracted: 03/07/11
Date Analyzed: 03/09/11 09:22
Instrument/Analyst: ECD5/JLW
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 1.00 Wipe
Final Extract Volume: 10 mL
Dilution Factor: 5.00
Silica Gel: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	**Aroclor 1254**	**1.0**	**6.3**
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U
37324-23-5	Aroclor 1262	1.0	< 1.0 U
11100-14-4	Aroclor 1268	1.0	< 1.0 U

Reported in Total µg

PCB Surrogate Recovery

Decachlorobiphenyl	112%
Tetrachlorometaxylene	95.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: MB-030711
METHOD BLANK

Lab Sample ID: MB-030711
LIMS ID: 11-4666
Matrix: Wipe
Data Release Authorized:
Reported: 03/09/11

QC Report No: SL80-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 03/07/11
Date Analyzed: 03/09/11 08:26
Instrument/Analyst: ECD5/JLW
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 1.00 Wipe
Final Extract Volume: 10 mL
Dilution Factor: 5.00
Silica Gel: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U
37324-23-5	Aroclor 1262	1.0	< 1.0 U
11100-14-4	Aroclor 1268	1.0	< 1.0 U

Reported in Total µg

PCB Surrogate Recovery

Decachlorobiphenyl	132%
Tetrachlorometaxylene	118%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SURROGATE RECOVERY SUMMARY

Matrix: Wipe

QC Report No: SL80-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

Client ID	DCBP	TCMX	TOT OUT
MB-030711	132%	118%	0
LCS-030711	132%	117%	0
LCSD-030711	124%	109%	0
JF-PLSD-WP-VT	112%	95.2%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(30-160)	(30-160)
(TCMX) = Tetrachlorometaxylene	(30-160)	(30-160)

Prep Method: SW3580A
Log Number Range: 11-4666 to 11-4666

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082
Page 1 of 1

Sample ID: LCS-030711
LCS/LCSD

Lab Sample ID: LCS-030711
LIMS ID: 11-4666
Matrix: Wipe
Data Release Authorized:
Reported: 03/09/11

QC Report No: SL80-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 03/07/11
Date Received: 03/07/11

Date Extracted LCS/LCSD: 03/07/11

Date Analyzed LCS: 03/09/11 08:44
LCSD: 03/09/11 09:03
Instrument/Analyst LCS: ECD5/JLW
LCSD: ECD5/JLW
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount LCS: 1.00 Wipe
LCSD: 1.00 Wipe
Final Extract Volume LCS: 10 mL
LCSD: 10 mL
Dilution Factor LCS: 5.00
LCSD: 5.00
Silica Gel: No
Acid Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	6.6	5.0	132%	6.2	5.0	124%	6.2%
Aroclor 1260	6.4	5.0	128%	6.1	5.0	122%	4.8%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	132%	124%
Tetrachlorometaxylene	117%	109%

Reported in Total µg
RPD calculated using sample concentrations per SW846.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

April 15, 2011

Tom Colligan
Floyd Snider
601 Union Street, Suite 600
Seattle, WA 98101-2341

RE: Project: Jorgensen Forge
ARI Job No: SR61

Dear Tom:

Please find enclosed analytical results and the original Chain of Custody documentation (COC) for the project referenced above. Analytical Resources, Incorporated (ARI) accepted three wipe samples on April 13, 2011. The samples were received in good condition.

The samples were analyzed for PCBs, as requested on the COC.

No analytical complications were noted for this analysis. Quality control results are included for your review.

A copy of the reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206-695-6211
Enclosures

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: SR101	Turn-around Requested: 24 HR
ARI Client Company: FLOYD|SNIDER	Phone: 206 292 2078
Client Contact: NICK GARSON / TOM COLLIGAN	
Client Project Name: Jorgensen Forge	
Client Project #: 7KPL2 JOR	Samplers: D. BRAME

Page: 1	of 1
Date: 4/13/11	Ice Present? N
No. of Coolers: 1	Cooler Temps: 13.7

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

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: PCB (1668)	Notes/Comments
JFPLSD-WP-B08	4/13/11	1510	HEX WIPE	1	X	
JF-PLSD-WP-B59	↓	1513	↓	1	↓	
JF-PLSD-WP-B89	↓	1518	↓	1	↓	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: DEAN BRAME	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: FLOYD|SNIDER	Company: ARI	Company:	Company:
	Date & Time: 4/13/11 1555	Date & Time: 4/13/11 1555	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.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SR61
Client: The Boeing Company
Project Event: 7KPL2JOR
Project Name: Jorgensen Forge

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	JF-PLSD-WP-B08	SR61A	11-8056	Wipe	04/13/11 15:10	04/13/11 15:55
2.	JF-PLSD-WP-B59	SR61B	11-8057	Wipe	04/13/11 15:13	04/13/11 15:55
3.	JF-PLSD-WP-B89	SR61C	11-8058	Wipe	04/13/11 15:18	04/13/11 15:55

Printed 04/13/11

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Boeing

Project Name: Jorgensen Forge

COC No(s): _____ NA

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

Assigned ARI Job No: SR61

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)..... 13.7

If cooler temperature is out of compliance fill out form 00070F NA for wipes 4/15/11 xb

Temp Gun ID#: 90941619

Cooler Accepted by: AV Date: 4/13/11 Time: 1555

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	_____	

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

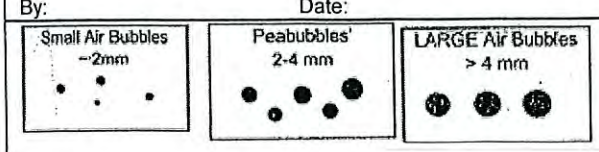
Samples Logged by: AV Date: 4/13/11 Time: 1600

***** 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:

By: Date:



Small → "sm"	
Peabubbles → "pb"	
Large → "lg"	
Headspace → "hs"	

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-PLSD-WP-B08
SAMPLE

Lab Sample ID: SR61A
LIMS ID: 11-8056
Matrix: Wipe
Data Release Authorized:
Reported: 04/15/11

QC Report No: SR61-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 04/13/11
Date Received: 04/13/11

Date Extracted: 04/14/11
Date Analyzed: 04/15/11 09:10
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 1.00 Wipe
Final Extract Volume: 10 mL
Dilution Factor: 1.00
Silica Gel: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U

Reported in Total µg

PCB Surrogate Recovery

Decachlorobiphenyl	89.0%
Tetrachlorometaxylene	85.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-PLSD-WP-B59
SAMPLE

Lab Sample ID: SR61B
LIMS ID: 11-8057
Matrix: Wipe
Data Release Authorized:
Reported: 04/15/11

QC Report No: SR61-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 04/13/11
Date Received: 04/13/11

Date Extracted: 04/14/11
Date Analyzed: 04/15/11 09:34
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 1.00 Wipe
Final Extract Volume: 10 mL
Dilution Factor: 1.00
Silica Gel: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U

Reported in Total µg

PCB Surrogate Recovery

Decachlorobiphenyl	91.0%
Tetrachlorometaxylene	87.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: JF-PLSD-WP-B89
SAMPLE

Lab Sample ID: SR61C
LIMS ID: 11-8058
Matrix: Wipe
Data Release Authorized:
Reported: 04/15/11

QC Report No: SR61-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 04/13/11
Date Received: 04/13/11

Date Extracted: 04/14/11
Date Analyzed: 04/15/11 09:58
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 1.00 Wipe
Final Extract Volume: 10 mL
Dilution Factor: 1.00
Silica Gel: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U

Reported in Total µg

PCB Surrogate Recovery

Decachlorobiphenyl	96.0%
Tetrachlorometaxylene	94.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: MB-041411
METHOD BLANK

Lab Sample ID: MB-041411
LIMS ID: 11-8056
Matrix: Wipe
Data Release Authorized:
Reported: 04/15/11

QC Report No: SR61-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: NA
Date Received: NA

Date Extracted: 04/14/11
Date Analyzed: 04/15/11 10:22
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 1.00 Wipe
Final Extract Volume: 10 mL
Dilution Factor: 1.00
Silica Gel: No

CAS Number	Analyte	RL	Result
12674-11-2	Aroclor 1016	1.0	< 1.0 U
53469-21-9	Aroclor 1242	1.0	< 1.0 U
12672-29-6	Aroclor 1248	1.0	< 1.0 U
11097-69-1	Aroclor 1254	1.0	< 1.0 U
11096-82-5	Aroclor 1260	1.0	< 1.0 U
11104-28-2	Aroclor 1221	1.0	< 1.0 U
11141-16-5	Aroclor 1232	1.0	< 1.0 U

Reported in Total µg

PCB Surrogate Recovery

Decachlorobiphenyl	112%
Tetrachlorometaxylene	108%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SURROGATE RECOVERY SUMMARY

Matrix: Wipe

QC Report No: SR61-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR

Client ID	DCBP	TCMX	TOT OUT
MB-041411	112%	108%	0
LCS-041411	106%	106%	0
LCSD-041411	106%	104%	0
JF-PLSD-WP-B08	89.0%	85.8%	0
JF-PLSD-WP-B59	91.0%	87.5%	0
JF-PLSD-WP-B89	96.0%	94.8%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(30-160)	(30-160)
(TCMX) = Tetrachlorometaxylene	(30-160)	(30-160)

Prep Method: SW3580A
Log Number Range: 11-8056 to 11-8058

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082

Sample ID: LCS-041411
LCS/LCSD

Lab Sample ID: LCS-041411
LIMS ID: 11-8056
Matrix: Wipe
Data Release Authorized:
Reported: 04/15/11

QC Report No: SR61-The Boeing Company
Project: Jorgensen Forge
7KPL2JOR
Date Sampled: 04/13/11
Date Received: 04/13/11

Date Extracted LCS/LCSD: 04/14/11

Date Analyzed LCS: 04/15/11 10:46
LCSD: 04/15/11 11:10
Instrument/Analyst LCS: ECD7/JGR
LCSD: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount LCS: 1.00 Wipe
LCSD: 1.00 Wipe
Final Extract Volume LCS: 10 mL
LCSD: 10 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: No
Acid Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	5.9	5.0	118%	4.2	5.0	84.0%	33.7%
Aroclor 1260	6.2	5.0	124%	4.3	5.0	86.0%	36.2%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	106%	106%
Tetrachlorometaxylene	106%	104%

Reported in Total µg
RPD calculated using sample concentrations per SW846.

Jorgensen Forge Outfall Site
Seattle, Washington

Source Control Action Completion Report

Appendix G
Waste Disposal Documentation and Manifests

The Boeing Company
P.O. Box 3707
Seattle, WA 98124-2207

January 31, 2011
G-1241-YNG-012

DELIVERED BY EMAIL AND OVERNIGHT MAIL

Mr. Dan Duso
RCRA Compliance Inspector
Oregon Department of Environmental Quality
700 SE Emigrant, Suite 330
Pendleton OR 97804

Subject: Written Notification Regarding Shipment of Waste to Off-Site Facility

Dear Mr. Duso:

Boeing is partnering with the Jorgensen Forge Corporation on a stormwater pipe source control project on the Duwamish Waterway south of Seattle, Washington. We are working under the direction of Mike Sibley, USEPA Emergency Response Group. This work is being done under an Agreed Order to removing PCB-containing solids from stormwater pipes. We intend to begin the source removal project within a few weeks and need your assistance with the following.

Per the requirements of the Order Section 21, Boeing/Jorgensen are required to provide written notification to your state of our intent to ship the waste from the project to a waste management facility in Oregon. An Order excerpt follows:

> *21. Off-Site Shipments.*
> *a. Respondents shall, prior to any off-Site shipment of Waste Material that is generated pursuant to this Order from the Site to an out-of-state waste management facility, provide written notification of such shipment of Waste Material to the appropriate state environmental official in the receiving facility's state and to the OSC. However, this notification requirement shall not apply to any off-Site shipments when the total volume of all such shipments will not exceed 10 cubic yards in a calendar year.*
>
> *i. Respondents shall include in the written notification the following information: 1) the name and location of the facility to which the Waste Material is to be shipped; 2) the type and quantity of the Waste Material to be shipped; 3) the expected schedule for the shipment of the Waste Material; and 4) the method of transportation. Respondents shall notify the state in which the planned receiving facility is located of major changes in the shipment plan, such as a decision to ship the Waste Material to another facility within the same state, or to a facility in another state.*

The following provides the applicable information.

1) the name and location of the facility to which the Waste Material is to be shipped

Soils and solids (BULK):
CHEM. WASTE MGT - ARLINGTON
17629 CEDAR SPRINGS LANE
ARLINGTON, OR 97812
EPA ID: ORD089452353

2) the type and quantity of the Waste Material to be shipped-

BULK: Approximately 20 tons of solids will shipped - may be contaminated with PCBs and/or RCRA metals (pending characterization samples to be collected in late January)

3) the expected schedule for the shipment of the Waste Material

February 2011

BOEING

4) the method of transportation

BULK - Roll Off Boxes, transported by licensed hauler.

We believe provision of this information completes this Order requirement and that no further information needs to be provided in that regard. Please contact me with any questions.

Sincerely,

Y. Nicholas Garson, P.G.
Project Coordinator
Boeing EHS Environmental Remediation
P.O. Box 3707, Mail Code 9U4-26, Seattle WA; 98124-2207
425-269-7866
nick.garson@boeing.com;

cc: Mike Sibley, USEPA
Wayne Desberg, Jorgensen Forge Corporation
Mary Jo Donnelly, The Boeing Company

From:	DUSO Dan
To:	Garson, Nick
Subject:	RE: Jorgensen Outfall Source Removal Project - Waste Disposal Notification
Date:	Monday, January 31, 2011 12:26:25 PM

Nick,

The letter looks fine to me. I will make sure the letter is placed in our files.

Thanks
Dan

From: Garson, Nick [mailto:nick.garson@boeing.com]
Sent: Monday, January 31, 2011 12:21 PM
To: DUSO Dan
Cc: Sibley.Michael@epamail.epa.gov; Desberg,Wayne; Ed Berschinski; Donnelly, MaryJo
Subject: Jorgensen Outfall Source Removal Project - Waste Disposal Notification

Dan,

Please see the attached letter. I will send you a hard copy via overnight mail.

Please let me know if you have any questions.

Nick Garson, P. G.
Project Manager
Boeing EHS Remediation Group
Cell Phone 425-269-7866

From: DUSO Dan [mailto:DUSO.Dan@deq.state.or.us]
Sent: Wednesday, January 12, 2011 12:38 PM
To: Garson, Nick
Subject: RE: Jorgensen Outfall Source Removal Project - Waste Disposal Notification

Thanks Nick,

You can send the letter for my files to:

Oregon Department of Environmental Quality
700 SE Emigrant, Suite 330
Pendleton, OR 97801
Attention Dan Duso

From: Garson, Nick [mailto:nick.garson@boeing.com]

Sent: Tuesday, January 11, 2011 3:23 PM
To: DUSO Dan
Subject: Jorgensen Outfall Source Removal Project - Waste Disposal Notification

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From: Garson, Nick
Sent: Tuesday, January 11, 2011 3:15 PM
To: Dan Dusso (dusso.dan@deq.state.or.us)
Cc: 'Desberg,Wayne'; Ed Berschinski; 'Tom Colligan'; Donnelly, MaryJo; Ernst, William D; 'Sibley.Michael@epamail.epa.gov'
Subject: Jorgensen Outfall Source Removal Project - Waste Disposal Notification

Good afternoon Dan,

Thanks for contacting me yesterday. As we discussed, Boeing is partnered with the Jorgensen Forge Corporation on a stormwater outfall source removal project. We are working under the direction of Mike Sibley, USEPA Emergency Response Group and have initiated an Agreed Order to perform the work which consists of removing PCB-containing solids from stormwater pipes. We intend to begin the source removal project within a few weeks and need your assistance with the following.

Per the requirements of the Order Section 21, Boeing/Jorgensen are required to do the following:

21. Off-Site Shipments.
a. Respondents shall, prior to any off-Site shipment of Waste Material that is generated pursuant to this Order from the Site to an out-of-state waste management facility, provide written notification of such shipment of Waste Material to the appropriate state environmental official in the receiving facility's state and to the OSC. However, this notification requirement shall not apply to any off-Site shipments when the total volume of all such shipments will not exceed 10 cubic yards in a calendar year.

Respondents shall notify the state in which the planned receiving facility is located of major changes in the shipment plan, such as a decision to ship the Waste Material to another facility within the same state, or to a facility in another state.

Here's what we think we need to send you to comply with section 21 of the order. If you see anything else - please let me know.

1) the name and location of the facility to which the Waste Material is to be shipped;

Soils and solids (BULK):

CHEM. WASTE MGT - ARLINGTON
17629 CEDAR SPRINGS LANE

ARLINGTON, OR 97812
EPA ID: ORD089452353

Containers

BURLINGTON ENV. - KENT
20245 77TH AVE SO
KENT, WA 98032
EPA ID: WAD991281767

2) the type and quantity of the Waste Material to be shipped;

BULK

Approximately 20 tons of Solids - may be contaminated with PCBs and/or RCRA metals (pending characterization samples to be collected in late January)

3) the expected schedule for the shipment of the Waste Material;

February 2011

4) the method of transportation.

BULK - Roll Off Boxes

I will also send you this information in a follow up letter. What is your mailing address?

Thank you and please contact me if you have any questions.

Nick Garson, P. G.
Project Manager
Boeing EHS Remediation Group
Cell Phone 425-269-7866

740

411980

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: WAD009256819
2. Page 1 of: 1
3. Emergency Response Phone: 800-424-9300
4. Manifest Tracking Number: 003443754 FLE

5. Generator's Name and Mailing Address
THE BOEING CO. - PLANT 2
P.O. BOX 3707, (MC 9U4-20), SEATTLE, WA 98124
Generator's Phone: (425) 237-1933

Generator's Site Address (if different than mailing address)
7755 E. MARGINAL WAY S.,
SEATTLE, WA 98108

6. Transporter 1 Company Name: MP ENVIRONMENTAL SERVICES
U.S. EPA ID Number: CAT000624247

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT
17629 CEDAR SPRINGS LANE, ARLINGTON, OR 97812
Facility's Phone: (541) 454-2643
U.S. EPA ID Number: ORD089452353

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN3432, POLYCHLORINATED BIPHENYLS, SOLID, 9, PG II, RQ (POLYCHLORINATED BIPHENYLS)	1	CM	~~5,000~~ ~~2-6~~ ~~4559~~	~~Kg~~ ~~Y~~ ~~K~~	X002 PCB2
	2.			5000	K	
	3.					
	4.					

14. Special Handling Instructions and Additional Information
BTN=V0732, 1. Profile RXN00066-00, CHEMTREC# CCN22118 030 12-05-10 MAM.
MP Box #5453 4559K

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: JENNIFER A. PARSONS
Signature: Jennifer A. Parsons
Month 03 Day 14 Year 11

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Mark A Merritt
Signature: [signature]
Month 05 Day 14 Year 11
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Driver changed Total Qty - 3/14/11
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Janice Strand
Signature: [signature]
Month 3 Day 14 Year 11

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

BMS

WASTE MANAGEMENT

CHEMICAL WASTE MANAGEMENT OF THE NW
17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2643
(541) 454-3279 Fax

BOEING COMPANY
WAD009256819
7755 E MARGINAL WAY S
SEATTLE WA 98108-4002

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material and certifies that the material has been landfilled in accordance with 40 CFR part 761 as it pertains to the land disposal of Polychlorinated Biphenyl contaminated materials.

GENERATOR:	BOEING COMPANY
MANIFEST #:	003443754FLE
LINE ITEM:	9b.1
PROFILE #:	RXN00066
CWM TRACKING ID:	411980-01
RECEIVED DATE:	03/14/11
DISPOSAL METHOD:	LANDFILL

DRUM #(S)	DISPOSAL DATE	DISPOSAL LOCATION
CCN22118	03/14/11	LANDFILL 14

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

CWMNW RECORDS DEPARTMENT
Date 03/17/11

From everyday collection to environmental protection, Think Green® Think Waste Management.

Printed on 100% post-consumer recycled paper.

41979

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: WAD009256819
2. Page 1 of: 1
3. Emergency Response Phone: 800-424-9300
4. Manifest Tracking Number: 003443753 FLE

5. Generator's Name and Mailing Address
THE BOEING CO. - PLANT 2
P.O. BOX 3707, (MC 9U4-20), SEATTLE, WA 98124
Generator's Phone: (425) 237-1933

Generator's Site Address (if different than mailing address)
7755 E. MARGINAL WAY S.,
SEATTLE, WA 98108

6. Transporter 1 Company Name: MP ENVIRONMENTAL SERVICES
U.S. EPA ID Number: CAT000624247

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT
17629 CEDAR SPRINGS LANE , ARLINGTON, OR 97812
Facility's Phone: (541) 454-2643
U.S. EPA ID Number: ORD089452353

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN3432, POLYCHLORINATED BIPHENYLS, SOLID, 9, PG II, RQ (POLYCHLORINATED BIPHENYLS)	1	CM	9,000 ~~20~~	Kg ~~Y~~	X002 PCB2
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
BTN=V0733, 1. Profile RXN00066-00, CHEMTREC# CCN22118 OSP 12-05.10
MP Box #5617
9344 K.

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: JENNIFER A. PARSONS
Signature: Jennifer A. Parsons
Month 03 Day 14 Year 11

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: G. Skewis
Signature: G Skewis
Month 03 Day 14 Year 11
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132
2.
3.
4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Janice Strand
Signature: [signature]
Month 3 Day 14 Year 11

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

BMS

WASTE MANAGEMENT

CHEMICAL WASTE MANAGEMENT OF THE NW
17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2643
(541) 454-3279 Fax

BOEING COMPANY
WAD009256819
7755 E MARGINAL WAY S
SEATTLE WA 98108-4002

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material and certifies that the material has been landfilled in accordance with 40 CFR part 761 as it pertains to the land disposal of Polychlorinated Biphenyl contaminated materials.

GENERATOR:	BOEING COMPANY
MANIFEST #:	003443753FLE
LINE ITEM:	9b.1
PROFILE #:	RXN00066
CWM TRACKING ID:	411979-01
RECEIVED DATE:	03/14/11
DISPOSAL METHOD:	LANDFILL

DRUM #(S)	DISPOSAL DATE	DISPOSAL LOCATION
CCN22118	03/14/11	LANDFILL 14

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

CWMNW RECORDS DEPARTMENT
Date 03/17/11

From everyday collection to environmental protection, Think Green® Think Waste Management.

Printed on 100% post-consumer recycled paper.

691 A12225 (4)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	WAD009256819	1	800-424-9300	003443763 FLE

GENERATOR

5. Generator's Name and Mailing Address

THE BOEING CO. - PLANT 2
P.O. BOX 3707, (MC 9U4-20), SEATTLE, WA 98124

Generator's Site Address (if different than mailing address)

7755 E. MARGINAL WAY S.,
SEATTLE, WA 98108

Generator's Phone: (425) 237-1933

6. Transporter 1 Company Name: MP ENVIRONMENTAL SERVICES — U.S. EPA ID Number: CAT000624247

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address

CHEMICAL WASTE MANAGEMENT
17629 CEDAR SPRINGS LANE, ARLINGTON, OR 97812

Facility's Phone: (541) 454-2643

U.S. EPA ID Number: ORD089452353

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN3432, POLYCHLORINATED BIPHENYLS, SOLID, 9, PG II, RQ (POLYCHLORINATED BIPHENYLS)	1	C M	9,000 ~~24~~ 6033	P	K001 PCB's
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

BTN=V0893, 1. Profile RXN000061-00, CHEMTREC# CCN221118

R. Ilott #5637 OSD 2/7/11 D4/4/11 per Kevin Lundberg/Clean Harbors 17300P

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: JENNIFER A. PARSONS — Signature: Jennifer A. Parsons — Month: 04 Day: 04 Year: 11

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Ed Biemold — Signature: Ed Biemold — Month: 4 Day: 4 Year: 11

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Driver changed Total Qty D4/4/11DK per Kevin Lundberg/Clean Harbors

Facility's Phone: — Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Janice Sturd — Signature: Janice Sturd — Month: 4 Day: 4 Year: 11

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR

BMS

WASTE MANAGEMENT

CHEMICAL WASTE MANAGEMENT OF THE NW

17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2643
(541) 454-3279 Fax

BOEING COMPANY
WAD009256819
7755 E MARGINAL WAY S
SEATTLE WA 98108-4002

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc., ORD089452353, has received the following waste material and certifies that the material has been landfilled in accordance with 40 CFR part 761 as it pertains to the land disposal of Polychlorinated Biphenyl contaminated materials.

GENERATOR:	BOEING COMPANY
MANIFEST #:	003443763FLE
LINE ITEM:	9b.1
PROFILE #:	RXN00066
CWM TRACKING ID:	412225-01
RECEIVED DATE:	04/04/11
DISPOSAL METHOD:	LANDFILL

DRUM #(S)	DISPOSAL DATE	DISPOSAL LOCATION
UN3432	04/04/11	LANDFILL 14

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

CWMNW RECORDS DEPARTMENT
Date 04/08/11

From everyday collection to environmental protection, Think Green® Think Waste Management.

Printed on 100% post-consumer recycled paper.

691 A12225 (4)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	WAD009256819	1	800-424-9300	003443763 FLE

GENERATOR

5. Generator's Name and Mailing Address

THE BOEING CO. - PLANT 2
P.O. BOX 3707, (MC 9U4-20), SEATTLE, WA 98124

Generator's Site Address (if different than mailing address)

7755 E. MARGINAL WAY S.,
SEATTLE, WA 98108

Generator's Phone: (425) 237-1933

6. Transporter 1 Company Name: MP ENVIRONMENTAL SERVICES — U.S. EPA ID Number: CAT000624247

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address

CHEMICAL WASTE MANAGEMENT
17629 CEDAR SPRINGS LANE, ARLINGTON, OR 97812

Facility's Phone: (541) 454-2643

U.S. EPA ID Number: ORD089452353

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN3432, POLYCHLORINATED BIPHENYLS, SOLID, 9, PG II, RQ (POLYCHLORINATED BIPHENYLS)	1	C M	9,000 ~~24~~ 6033	P	K001 PCB's
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

BTN=V0893, 1. Profile RXN000061-00, CHEMTREC# CCN221118

R. Ilott #5637 OSD 2/7/11 D4/4/11 per Kevin Lundberg/Clean Harbors 17300P

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: JENNIFER A. PARSONS — Signature: Jennifer A. Parsons — Month: 04 Day: 04 Year: 11

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Ed Biemold — Signature: Ed Biemold — Month: 4 Day: 4 Year: 11

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Driver changed Total Qty D4/4/11DK per Kevin Lundberg/Clean Harbors

Facility's Phone: — Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Janice Sturd — Signature: Janice Sturd — Month: 4 Day: 4 Year: 11

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. DESIGNATED FACILITY TO GENERATOR

BMS

WASTE MANAGEMENT

CHEMICAL WASTE MANAGEMENT OF THE NW

17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2643
(541) 454-3279 Fax

BOEING COMPANY
WAD009256819
7755 E MARGINAL WAY S
SEATTLE WA 98108-4002

CERTIFICATE OF DISPOSAL

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MANIFEST #:	003443763FLE
LINE ITEM:	9b.1
PROFILE #:	RXN00066
CWM TRACKING ID:	412225-01
RECEIVED DATE:	04/04/11
DISPOSAL METHOD:	LANDFILL

DRUM #(S)	DISPOSAL DATE	DISPOSAL LOCATION
UN3432	04/04/11	LANDFILL 14

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

CWMNW RECORDS DEPARTMENT
Date 04/08/11

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King County
Wastewater Treatment Division
Industrial Waste Program
Department of Natural Resources and Parks
130 Nickerson Street, Suite 200
Seattle, WA 98109-1658
206-263-3000 Fax 206-263-3001
TTY Relay: 711

July 15, 2010

Michael L. Verhaar
Boeing Commercial Airplane – North Field
P.O. Box 3707, MC 67-74
Seattle, WA 98124

Letter of Authorization 11196-01 to Discharge to the Sanitary Sewer – Temporary PCB Pretreatment System

Dear Mr. Verhaar:

The King County Industrial Waste Program has reviewed your letter requesting authorization to discharge wastewater from the temporary stormwater polychlorinated biphenyl (PCB) washwater pretreatment system at Boeing Commercial Airplane - North Field located at 7500 East Marginal Way South, Seattle, Washington, to the sanitary sewer. In accordance with King County Code 28.84.060, King County grants approval for the discharge of up to 20,000 gallons per day (gpd) from July 19 through December 31, 2010, provided that:

- You notify the King County Industrial Waste Program when the discharge begins.
- You meet the discharge limitations, special conditions, monitoring and reporting requirements listed below.

Discharge Limitations

All PCB limits are per Aroclor. The detection limit for Aroclor analysis shall be no greater than 0.25 micrograms per liter (µg/L).

PCB (per Aroclor)	CAS Number	Discharge Limit		PCB (per aroclor)	CAS	Discharge Limit
Aroclor 1016	CAS 12674-11-2	1.0 µg/L		Aroclor 1248	CAS 12672-29-6	1.0 µg/L
Aroclor 1221	CAS 1104-28-2	1.0 µg/L		Aroclor 1254	CAS 11141-16-5	1.0 µg/L
Aroclor 1232	CAS 11141-16-5	1.0 µg/L		Aroclor 1260	CAS 11096-82-5	1.0 µg/L
Aroclor 1242	CAS 53469-21-9	1.0 µg/L		Aroclor 1262	CAS 37324-23-5	1.0 µg/L

There shall be no odor of solvent, gasoline, or hydrogen sulfide (rotten egg odor), oil sheen, unusual color, or visible turbidity. The discharge must remain translucent. If any of the discharge limits are exceeded, you must stop discharging and notify the King County Industrial Waste Program at 206-263-3000.

Special Conditions

Each batch of wastewater from this temporary PCB treatment system must be sampled after the treatment through granulated activated carbon and prior to discharge. Sample results must be obtained prior to discharge.

Monitoring Requirements

You shall conduct the following self-monitoring requirements for this discharge authorization:

Parameter	Frequency	Sample Type/Method
Discharge volume	Each batch	Pump estimate
PCBs (report per Aroclor)	Each batch	Grab

Reporting Requirements

A self-monitoring report (form enclosed) containing results of required self-monitoring and total volume discharged to the sewer shall be submitted to the King County Industrial Waste Program by the 15th of each month.

If you propose to increase the volume of your discharge or change the type or quantities of substances discharged, you must contact the King County Industrial Waste Program at least 60 days before making these changes.

Chapter 28.84 of the King County Code – Water Pollution Abatement sanctions a fee for each letter of authorization issued by the Department of Natural Resources and Parks. The fee for issuance of a letter of authorization in 2010 is $245. You will be sent an invoice for this amount.

If you have any questions about this authorization, or other questions about your wastewater discharge, please call me at 206-263-3028 or e-mail me at peggy.rice@kingcounty.gov. You may also wish to visit our program's Internet pages at www.kingcounty.gov/industrialwaste.

Sincerely,

Peggy Rice

Peggy Rice
Compliance Investigator

Enclosure

cc: Doris Turner, Boeing Commercial Airplane - North Field
Julie Howell, Seattle Public Utilities
Doug Hilderbrand, King County

King County

Industrial Waste Program
Discharge Monitoring Sheet

Company Name: Boeing Commercial Airplane - North Field
Location: 7500 East Marginal Way South, Seattle
Authorization No.: 11196-01

Your King County Industrial Waste Program Contact: Peggy Rice, 206-263-3028

Date	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Volume

Mail or FAX to: King County Industrial Waste Program
130 Nickerson Street, Suite 200
Seattle, WA 98109-1658
206-263-3001 FAX

Turner, Doris S

From: Turner, Doris S
Sent: Monday, November 08, 2010 9:55 AM
To: 'Rice, Peggy'
Subject: Letter of Authorization 11196-01 , North Boeing Field Facility

Attachments: Letter_Authorization_11196-01_PCB_Trtmt_System.pdf

Peggy - We would like to extend the duration of the "Letter of Authorization 11196-01 to Discharge to the Sanitary Sewer - Temporary PCB Pretreatment System" at North Boeing Field issued July 15, 2010 to March 15, 2011. This extension will allow us to leave this temporary system at North Boeing Field rather than dismantle and relocate this system to the Plant 2 facility where we expect to process water from cleaning of approximately 27,000 lineal feet of storm sewer piping. I have attached your original "Letter of Authorization". We appreciate your assistance in this matter.

Letter_Authorization_11196-01_...

Doris Turner
Environmental Engineer
737 Airplane Program EHS
Phone: (425) 965-2304 ; Cell: (206) 650-7146
MC 67-74
e-mail: Doris.S.Turner@boeing.com

King County
Wastewater Treatment Division
Industrial Waste Program
Department of Natural Resources and Parks
130 Nickerson Street, Suite 200
Seattle, WA 98109-1658
206-263-3000 Fax 206-263-3001
TTY Relay: 711

November 22, 2010

Michael L. Verhaar
Boeing Commercial Airplane – North Field
P.O. Box 3707, MC 67-74
Seattle, WA 98124

Revision of Letter of Authorization 11196-02 for Temporary PCB Pretreatment System

Dear Mr. Verhaar:

The King County Industrial Waste Program has reviewed your November 8, 2010, letter requesting an extension of the letter of authorization issued on July 15, 2010, for discharges from the trucked waste operation at Boeing Commercial Airplane - North Field located at 7500 East Marginal Way South, Seattle, Washington, to the sanitary sewer. In accordance with King County Code 28.84.060, King County grants approval for the discharge of up to 20,000 gallons per day effective November 22, 2010, through July 15, 2011, provided that you meet the discharge limitations, special conditions, monitoring and reporting requirements listed below.

Discharge Limitations

All PCB limits are per Aroclor. The detection limit for Aroclor analysis shall be no greater than 0.25 micrograms per liter (µg/L).

PCB (per Aroclor)	CAS Number	Discharge Limit		PCB (per aroclor)	CAS	Discharge Limit
Aroclor 1016	CAS 12674-11-2	1.0 µg/L		Aroclor 1248	CAS 12672-29-6	1.0 µg/L
Aroclor 1221	CAS 1104-28-2	1.0 µg/L		Aroclor 1254	CAS 11141-16-5	1.0 µg/L
Aroclor 1232	CAS 11141-16-5	1.0 µg/L		Aroclor 1260	CAS 11096-82-5	1.0 µg/L
Aroclor 1242	CAS 53469-21-9	1.0 µg/L		Aroclor 1262	CAS 37324-23-5	1.0 µg/L

There shall be no odor of solvent, gasoline, or hydrogen sulfide (rotten egg odor), oil sheen, unusual color, or visible turbidity. The discharge must remain translucent. If any of the discharge limits are exceeded, you must stop discharging and notify the King County Industrial Waste Program at 206-263-3000.

Special Conditions

Each batch of wastewater from this temporary PCB treatment system must be sampled after the treatment through granulated activated carbon and prior to discharge. Sample results must be obtained prior to discharge.

Monitoring Requirements

You shall conduct the following self-monitoring requirements for this discharge authorization:

Parameter	Frequency	Sample Type/Method
Discharge volume	Each batch	Pump estimate
PCBs (report per Aroclor)	Each batch	Grab

Reporting Requirements

A self-monitoring report containing results of required self-monitoring and total volume discharged to the sewer shall be submitted to the King County Industrial Waste Program by the 15th of each month.

If you propose to increase the volume of your discharge or change the type or quantities of substances discharged, you must contact the King County Industrial Waste Program at least 60 days before making these changes.

There is no fee for this first revision of your authorization. However, future revisions that you request will be assessed the King County fee in effect at the time the revised Letter of Authorization is issued.

If you have any questions about this authorization, or other questions about your wastewater discharge, please call me at 206-263-3028 or e-mail me at peggy.rice@kingcounty.gov. You may also wish to visit our program's Internet pages at www.kingcounty.gov/industrialwaste.

Sincerely,

Peggy Rice

Peggy Rice
Compliance Investigator

Enclosure

cc: Julie Howell, Seattle Public Utilities
Doug Hilderbrand, King County

Christy Schmidt Wyborny

From: Rice, Peggy [Peggy.Rice@kingcounty.gov]
Sent: Thursday, March 17, 2011 4:23 PM
To: Turner, Doris S
Subject: RE: Plant2/Jorgensen Steel Storm Line Cleaning Water

Dear Doris;

King County has reviewed your March 9, 2011 email request to pretreat and discharge PCB contaminated wastewater generated from the storm sewer line cleaning project between the Plant 2 and the Jorgenson Steel Facility into and through the temporary PCB Treatment System located at the North Boeing Field facility. King County grants approval for this discharge for up to 20,000 gallons per day. This wastewater is regulated under of Letter of Authorization 11196-02 issued to Boeing on November 22, 2010. Discharge limitations, special conditions, monitoring and reporting requirements of Letter of Authorization 11196-02 shall be adhered to.

There is no fee for this approval.

If you have any questions, please contact me.

Sincerely,

Peggy Rice
KC Industrial Waste Pretreatment Program
206-263-3028
peggy.rice@kingcounty.gov
http://www.kingcounty.gov/environment/wastewater/industrialwaste.aspx

-----Original Message-----
From: Turner, Doris S [mailto:doris.s.turner@boeing.com]
Sent: Wednesday, March 09, 2011 6:59 AM
To: Rice, Peggy
Subject: Plant2/Jorgensen Steel Storm Line Cleaning Water

Peggy - We recently completed a storm sewer line cleaning project between the Plant 2 and the Jorgensen Steel Facility. Approximately 36,000 gallons of water was collected in 3 Baker tanks during the project. The water was analyzed and the results are in the attached file sk67.pdf . The PCB levels of Aroclor 1254 in this water was above the 1ppb limit required for discharge by King County. All other parameters met King County discharge limits. We propose transferring this water to our North Boeing Field Facility and processing it through the Temporary PCB Treatment System under the "Letter of Authorization 11196-01" issued by King County on July 15, 2010.- I have also attached this document.
We request King County's approval to transfer this water to our North Boeing Field facility for treatment and discharge to the sanitary sewer system. We appreciate you assistance in this matter.

If you have any questions or concerns please feel free to contact me.

Doris Turner
Environmental Engineer

737 Airplane Program EHS
Phone: (425) 965-2304 ; Cell: (206) 650-7146 MC 67-74
e-mail: Doris.S.Turner@boeing.com

Jorgensen Forge Outfall Site
Seattle, Washington

Source Control Action Completion Report

Appendix H
Quality Assurance Memoranda

BOEING COMPANY – JORGENSEN FORGE OUTFALL SITE
SEATTLE, WASHINGTON
LINE SOLIDS SAMPLING - WINTER OF 2011
DATA VALIDATION QA/QC REVIEW

INTRODUCTION

A total of ten catch basin solids samples, one rinsate blank, and a decontamination or a rinsate water sample were collected January 24 and February 25 of 2011. This sampling was conducted as part of the property line pipes cleanout action according to the *Source Control Action - 15-inch and 24-inch Pipes Cleanout Work Plan (Floyd|Snider, 2010).* Samples were analyzed by Analytical Resources Incorporated (ARI) of Tukwila, Washington for the following parameters:

- Polychlorinated biphenyls (PCBs) by USEPA 8082
- Diesel and Extended Range by Washington State Department of Ecology NWTPH-Dx
- Semivolatile Organic Compounds (SVOCs) by USEPA Method 8270D
- Metals (Arsenic, Cadmium, Copper, Lead, Nickel, and Zinc) by USEPA Method 6010.
- TCLP Metals (Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver) by USEPA Methods 1311/6010/7470A.

Samples were analyzed in accordance with procedures described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (USEPA SW-846)* and *Washington State Department of Ecology Methods for Petroleum Hydrocarbon Analysis.*

Samples were analyzed and results reported by the laboratory in batch numbers as summarized below:

SDG SG07/SJ49 (PCBs, SVOCs, Diesel and Extended Range, Metals and TCLP Metals):

JF-PLSD-PS-15A	JF-PLSD-PS-37-7	JF-PLSD-PS-37-7-M
JF-PLSD-PS-15B	JF-PLSD-PS-37-2	JF-PLSD-PS-TCLP
JF-PLSD-PS-24A	JF-PLSD-PS-PUBLIC	
JF-PLSD-PS-24B	JF-PLSD-PS-24B-D	

SDG SJ56 (PCBs):

JF-PLSD-RJW-4L

Quality assurance/quality control (QA/QC) reviews of laboratory data were performed in the laboratory in accordance with the laboratory quality assurance program plan. The data validation QA/QC review focused primarily on laboratory result summary sheets and quality control summary sheets to ensure that work plan data quality objectives were met for the project. Data validation was conducted in accordance with the criteria outlined in the National Functional Guidelines for Organic Data Review (EPA 1999 and 2008) and the National Functional Guidelines for Inorganic Data Review (EPA 2004), modified to include method specific requirements of the laboratory analytical methods.

For work involving the cleanout of the property line pipes, the validation level specified in the Work Plan and Appendix B Sampling Analysis Plan and Quality Assurance Project Plan (SAP/QAPP) of the *Source Control Action - 15-inch and 24-inch Pipes Cleanout Work Plan (Floyd|Snider, 2010)* is a Level 1, which is considered a basic review. Qualified results (referred to in the Work Plan as external data validation qualifiers) were added by the data validator to electronic data deliverables (EDD). The following data requirements were evaluated:

- Package completeness
- Sample identifications and reported analyses match the Chain-of-Custody Form
- Sample holding times and sample preservation
- Verification that the required detection limits and reporting limits have been achieved.
- Verification that the field duplicates, matrix spike/ matrix spike duplicate samples (MS/MSDs), and laboratory control samples were analyzed at the proper frequency.
- Matrix spike recoveries
- Laboratory control sample recoveries
- Surrogate recoveries (organics only)
- Laboratory method blanks
- Rinsate blank

CASE NARRATIVE COMMENTS

Review of the cover letters associated with the Sample Delivery Groups (SDGs) indicates multiple analytical issues for SDG SG07. These are addressed in appropriate sections of this report. The following summarizes data anomalies or discrepancies noted in the case narratives:

SDG SG07: Issues with PCB surrogate recovery and matrix spike recoveries. Refer to PCB section for more details.

SDG SG07: Issues with SVOC method blank contamination, SVOC surrogate recoveries, SVOC continuing calibrations, SVOC internal standard, and SVOC matrix spike recovery. Refer to SVOC section for more details.

SDG SG07: Issues with diesel matrix spike recovery. Refer to Diesel section of this report for more details.

SDG SG07: Issues with metals matrix spike recovery and the TCLP method blank is contaminated. Refer to Metals section for more details.

SDG SJ49: Selected samples from SDG SG07 were put on hold by Floyd|Snider pending further instructions. These samples (7) were submitted for TCLP metals analysis on February 23, 2011 and reported by ARI on February 23 of 2011.

SDG SJ56: A soil and a water were collected and submitted. Standard turnaround analysis request was made for the soil sample. ARI logged the soil under a different ARI SDG. The water sample (Sample JF-PLSD-RJW-4L) was analyzed for PCBs as requested within a 2-day turnaround. Results for the Sample (Sample JF-PLSD-RJW-4L) are reviewed in this data validation report.

SAMPLE CUSTODY, SAMPLE RECEIPT, and PRESERVATION

Chain of custody (COC) record, laboratory analysis request, cooler receipt forms, and other documentation (i.e. preservation verification form) were reviewed. Samples were received by ARI Laboratory in good condition with the following discussion:

SDG SG07: Cooler temperature was received by the laboratory at 6.6°C slightly above the National Functional Guideline recommended temperature of 2°C to 6°C. No action was taken since the samples were collected and delivered to ARI on the same day. Samples did not have sufficient time to cool.

REPORTING CRITERIA

In certain cases the laboratory performs dilutions, re-extractions, and/or re-analyses and reports multiple sample results on an analytical parameter. These data are considered useful however it should be noted that database results reflect ONLY one result for each sample. The data user should be aware that decision criteria used to report these results in these cases typically are as follows:

1) If the analyte exceeds the calibration range, then the diluted result is selected;
2) If an analyte is detected in both runs, then the higher concentration is selected from the two runs (more conservative);
3) If an analyte is detected in one run, but not the other, then the detection (more conservative) is selected;
4) If the analyte is not detected in either run, the lower reporting limit is selected.

It should be noted that there are some exceptions to the decision criteria listed above but in these cases the selected result will be clearly identified (and the reasons for doing so) for the data user.

SEMIVOLATILE ORGANIC COMPOUNDS

The laboratory provided a complete Level 1 data package for the SVOC analyses. The items reviewed during validation are summarized below. It should be noted that case narrative notes included discussions on calibration and internal standard issues which is outside a typical Level 1 review. Associated results are qualified accordingly.

Analytical Methods: Samples for SVOC analysis were analyzed by gas chromatography/mass spectrometry (GC/MS) using USEPA Method 8270D, in accordance with the method specified in the SAP/QAPP.

Sample Holding Times: All samples were extracted within 14 days of sample collection and analyzed within 40 days from the date of extraction to analysis with the following exception:

SDG SG07: Sample JF-PLSD-PS-15B was re-extracted one day past the recommended holding time of 14 days. No action was taken as this is a minor holding time exceedance.

Laboratory Reporting Limits: The laboratory achieved the reporting limits (RLs) required by the approved SAP/QAPP (Floyd|Snider, 2010) with the following discussions:

The SAP/QAPP specifies a reporting limit range for SVOCs and is not compound specific.

SDG SG07: ARI reported initial run results and diluted run results for Samples JF-PLSD-PS-15A, JF-PLSD-PS-24B, and JF-PLSD-PS-37-7-M. Soil sample JF-PLSD-PS-15A SVOC compounds bis(2-ethylhexyl) phthalate (DEHP) and butylbenzylphthalate (BBP) were qualified as "ES" by ARI to indicate that the concentration of the target analyte exceeded the instrument calibration range and saturated the detector. The data validator qualified DEHP and BBP results in the initial run for sample JF-PLSD-PS-15A as Do Not Report (DNR). Refer to diluted sample re-analysis for DEHP and BBP results. Refer to Reporting Criteria discussion above for guidance on selection of other SVOC results from the initial run versus the diluted run.

The reporting limits were not met in cases in which the samples were analyzed at dilutions due to high concentrations of target compounds. No action was taken.

Calibration and Internal Standard Issues: Case narrative notes indicate the following:

SDG SG07: SVOC continuing calibration (CCAL) data for 2/4/11 and 2/8/11 show high recovery (above acceptance criteria) for compounds indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene. No action was taken in this case since there were no detections of these analytes in associated samples.

SDG SG07: SVOC CCAL data for 2/7/11 show high recovery (above acceptance criteria) for compounds 4-nitrophenol, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene. As a result all samples with positive detections for these analytes are "Q" qualified by ARI to indicate that the "detected analyte does not meet established acceptance criteria". Associated samples (JF-PLSD-PS-15B, JF-PLSD-PS-24B, JF-PLSD-PS-37-7, JF-PLSD-PS-37-2, JF-PLSD-PS-PUBLIC, JF-PLSD-PS-24B-D, JF-PLSD-PS-37-7-M and JF-PLSD-PS-37-7-M DILUTION) with 4-nitrophenol, dibenzo(a,h)anthracene, and benzo(g,h,i) perylene detections were qualified as estimated (J) by the data validator.

SDG SG07: SVOC CCAL data for 2/10/11 show high recovery for compounds 4-nitroaniline and 4-nitrophenol. No action was taken in this case since there were no detections of these analytes in associated samples.

SDG SG07: SVOC internal standard perylene-d12 was out of control low for sample JF-PLSD-PS-37-7-M. The sample was reanalyzed at a dilution and all internal standards were in control. Both sets of data are provided for review. Compounds associated with internal standard perylene-d12 are qualified as estimated (UJ/J) on the initial run for sample JF-PLSD-PS-37-7-M. It should also be noted that the matrix spike analysis was performed on this sample with poor and unacceptable recoveries for many compounds. Refer to the matrix spike portion of this report for more discussion.

Blank Contamination: The method blanks and equipment blanks were free of contamination with the following exceptions:

SDG SG07: The method blank analyzed on 2/2/11 contained bis(2-ethylhexyl) phthalate (DEHP). ALL associated samples with DEHP detections were "B" qualified by ARI to indicate that the analyte was detected in the method blank. Associated samples (Samples JF-PLSD-PS-15B, JF-PLSD-PS-15B REEXTRACT, JF-PLSD-PS-24A, JF-PLSD-PS-24B, JF-PLSD-PS-24B DILUTION, JF-PLSD-PS-37-7, JF-PLSD-PS-24B-D, JF-PLSD-PS-37-7-M DILUTION) with DEHP detections below 930 µg /kg (sample weight, volume or dilution factors were not considered) are qualified as not detected due to blank contamination (UB) to indicate laboratory contamination.

Surrogate Recovery: All surrogate recoveries were within ARI control limits with the following exceptions:

SDG SG07: Case narrative notes indicate that three of four acid fraction surrogates were low and below control limit criteria for Sample JF-PLSD-PS-15B. Sample JF-PLSD-PS-15B was re-extracted and re-analyzed at a 1X dilution with all surrogate recoveries within ARI control limit criteria. Original results for sample JF-PLSD-PS-15B are qualified as Do Not Report (DNR) due to surrogate issues. As noted above, Sample JF-

PLSD-PS-15B re-extraction occurred one day outside of the recommended 14 day holding time. No action was taken in this case as it is a minor holding time exceedance.

SDG SG07: Case narrative notes indicate that acid fraction surrogates were low (but greater than 10%) and below control limit criteria for sample JF-PLSD-PS-24B. Sample JF-PLSD-PS-24B was re-extracted and re-analyzed at a 3X dilution with all surrogate recoveries within ARI control limit criteria. Acid fraction results for initial run on Sample JF-PLSD-PS-24B are qualified as estimated (UJ/J). Both sets of results were provided by ARI for review. In this case the highest detected concentration from the initial run or dilution run for an analyte is reported. In cases where compounds are non-detect for both runs the lowest reporting limit is reported. Refer to Reporting Criteria discussion above for further guidance.

SDG SG07: Case narrative notes indicate that several surrogates were outside control limit criteria recovery were either high or low. No action was taken in these cases since no more than two or more surrogates were outside of control limit for each fraction and none were below 10%.

Matrix Spike Compound Recovery: MS/MSD spike recoveries and relative percent difference (RPD) were evaluated. It should be noted that ARI defaults to Laboratory Control Sample (LCS) criteria to internally evaluate matrix spike recoveries. Approved SAP/QAPP (Floyd|Snider, 2010) acceptance criteria for soil matrix spikes is 10 – 160% for recoveries and 50% for RPDs. MS/MSD recoveries and RPDs are acceptable per the SAP/QAPP with the following exceptions and discussions:

SDG SG07: Matrix spike analysis was performed on Sample JF-PLSD-PS-37-7-M. Percent recoveries of various compounds were low and some were reported as "NA" because of matrix interference. All SVOC results are qualified as estimated for JF-PLSD-PS-37-7-M due to poor spike compound recoveries. Note the sample was successfully reanalyzed at a dilution but the matrix spike was performed only at the initial dilution level.

Laboratory Control Sample Recovery: Laboratory control samples/laboratory control sample duplicates (LCS/LCSD) were evaluated using ARI's control limit criteria. Approved SAP/QAPP (Floyd|Snider, 2010) LCS acceptance criteria indicate that ARI control limits are updated periodically. Current LCS control limit for SVOCs were downloaded from ARIs website. LCS/LCSD percent recoveries and RPD were acceptable and within specified ARI criteria.

Field Duplicate Sample Analysis: Field duplicate results for SVOCs are comparable and within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 50% RPD for soil:

SDG SG07: Field duplicate sample pair (JF-PLSD-PS-24B, and JF-PLSD-PS-24B-D) PCB RPD results are less than 50 % RPD.

POLYCHLORINATED BIPHENYLS

The laboratory provided a complete Level 1 data package for the PCB analysis and the items reviewed during validation are summarized below.

Analytical Methods: Samples for PCB analysis were analyzed by gas chromatography/electron capture detector (GC/ECD) using USEPA Method 8082, in accordance with the method specified in the SAP/QAPP (Floyd|Snider 2010).

Sample Holding Times: All samples were prepared and/or analyzed within the recommended holding times as follows:

All soil samples were extracted within 14 days of sample collection and analyzed within 40 days of extraction. The rinsate sample (JF-PLSD-PS-15B-R) and PCB wash water sample (JF-PLSD-RJW-4L) were extracted within 7 days of sample collection and analyzed within 40 days of extraction. Holding time criteria were met.

Laboratory Reporting Limits: The laboratory achieved the reporting limits (RLs) required by the approved SAP/QAPP (Floyd|Snider, 2010) with the following discussions:

The SAP/QAPP specifies a reporting limit range for PCBs and is not compound specific.

SDG SG07: PCB reporting limits for soil as stipulated in SAP/QAPP (Floyd|Snider, 2010) are 33 µg /kg or 4 µg /kg (low level). ARI equated the low level PCB analysis request to Puget Sound Dredged Disposal Analysis (PSDDA) reporting limit and reported all associated soil results under "PSDDA PCB by GC/ECD". ARI clarified that EPA Method 8082 was performed to analyze samples as requested in the SAP/QAPP (Floyd|Snider, 2010). The requested reporting levels were not met for samples associated with this SDG due to elevated concentrations of PCBs in the samples. ALL samples associated with these SDG were analyzed at medium level due to elevated sample PCB concentrations. No action was taken other than to note this.

SDG SG07: In certain cases the laboratory assigned a "Y" qualifier to Aroclor result(s) to indicate that "the analyte was not detected at or above the reported concentration". The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a "raised reporting limit".

SJ56: PCB reporting limits for water are 0.01 µg/L. This requested reporting levels were not met for this PCB wash sample (Sample JF-PLSD-RJW-4L) associated with this SDG. No action was taken other than to note that this is a rinsate and was used to verify the decontamination procedure.

Blank Contamination: The method blanks and rinsate blank (JF-PLSD-PS-15B-R) were free of target compounds with the following exceptions:

SDG SG07: Aroclor 1254 was detected at 0.19 µg/L (reporting level of 0.010 µg /L) in the rinsate blank (JF-PLSD-PS-15B-R). The rinsate blank was collected immediately after soil sample JF-PLSD-PS-15B. No action was taken since the Aroclor 1254 detection in Sample JF-PLSD-PS-15B was greater than ten times the detection in the rinsate blank.

SDG SJ56: Aroclors 1248 and 1254 was detected at low levels in the PCB wash sample (Sample JF-PLSD-RJW-4L). No action was taken other than to note that this is a rinsate and was used to verify the decontamination procedure.

Surrogate Recovery: Soil surrogate recoveries were evaluated against current ARI control limits for medium level PCBs which are 22 -168 % for decachlorobiphenyl (DCBP) and 28 - 106 % for tetrachlorometaxylene (TCMX). Water surrogate recoveries were evaluated against current ARI control limits of 10 - 128 % for DCBP and 25 - 100 % for TCMX. All criteria were met with the following exceptions:

SDG SG07: ALL sample surrogate results, with two exceptions (JF-PLSD-PS-15A and JF-PLSD-PS-24A), were reported by the laboratory as "D" to indicate "the spiked compound was not detected due to sample extract dilution". Sample extracts were diluted due to elevated PCB concentrations and as a result surrogates were diluted out. No action was taken in these cases.

SDG SG07: Sample JF-PLSD-PS-15A surrogate TCMX recovery is high at 124%. DCBP surrogate recovery was within criteria. No action was taken.

Matrix Spike Compound Recovery: Matrix Spike/Matrix Spike Duplicate (MS/MSD) spike recoveries and relative percent difference (RPD) were evaluated. It should be noted that ARI defaults to LCS criteria to internally evaluate matrix spike recoveries. Approved SAP/QAPP (Floyd|Snider, 2010) acceptance criteria for soil matrix spikes is 40–140 % for recoveries and 50% for RPDs.

SDG SG07: MS/MSD was performed on sample JF-PLSD-PS-37-7-M. Percent recoveries were reported as "NA" because of the elevated concentration of PCBs in the sample and subsequent dilution of the extract. No action was taken in this case.

SDGs SG07/SJ49 and SJ56: An MS/MSD is not required on various QC samples such as a rinsate and/or PCB Wash Sample (Samples JF-PLSD-PS-15B-R and JF-PLSD-RJW-4L).

Laboratory Control Sample Recovery: LCS/LCSD were evaluated using ARI's control limit criteria. Approved SAP/QAPP (Floyd|Snider, 2010) LCS acceptance criteria indicate that ARI control limits are updated periodically. Current LCS control limit for PCBs were downloaded from ARIs website. LCS/LCSD percent recoveries and RPDs were acceptable and within specified ARI criteria.

Field Duplicate Sample Analysis: Field duplicate results for PCBs are comparable and within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 50% RPD for soil as identified below:

SDG SG07: Field duplicate sample pair (JF-PLSD-PS-24B, and JF-PLSD-PS-24B-D) PCB RPD results are less than 50 % RPD.

DIESEL AND EXTENDED RANGE TOTAL PETROLEUM HYDROCARBONS - diesel, motor oil and mineral oil

The laboratory provided a complete Level 1 data package for total petroleum hydrocarbon (TPH) analysis. The items reviewed during validation are summarized below.

Analytical Methods: Samples for TPH parameters were analyzed according to the method specified in the SAP/QAPP using the following methodology:

- TPH- Diesel in the C12-C24 range,
- TPH- Motor Oil in the C24-C38 range.
- TPH- Mineral Oil in the C24-C38 range.

Sample Holding Times: All samples were extracted within 14 days (7 days for water) of sample collection and analyzed within 40 days from the date of extraction to analysis. Holding time criteria were met.

Laboratory Reporting: The laboratory compared sample chromatograms with diesel, motor oil, and mineral oil standard chromatograms and, in some cases, based on this comparison ARI qualified results as diesel range organics (DRO) and residual range organics (RRO) to indicate qualitative or quantitative uncertainty with the results (the chromatogram was a poor match or other organics were detected in the sample). NWTPH-Dx (diesel, motor oil, and mineral oil) sample results which are qualified "DRO" or "RRO" by the laboratory are considered estimated and qualified (J). Diesel results for samples JF-PLSD-PS-15A, JF-PLSD-PS-15B, JF-PLSD-PS-24A, JF-PLSD-24B, JF-PLSD-PS-37-7, JF-PLSD-PS-37-2, JF-PLSD-PS-24B-D, JF-PLSD-PS-37-7-M are qualified as estimated (J) due to laboratory qualification (DRO).

SDG SG07: Mineral oil range is described in the footnotes as CEMPTY - CEMPTY. ARI was contacted to modify the footnotes for mineral oil to read C24 to C38.

Laboratory Reporting Limits: The laboratory achieved the reporting limits (RLs) required by the approved Work Plan (Floyd|Snider, 2010). The reporting limits were not met in cases in which the samples were analyzed at dilutions due to high concentrations of target compounds. No action was taken.

Blank Contamination: The method blanks were free of target compounds.

Surrogate Recovery: All surrogate recoveries were within ARI control limits with the following exceptions:

SDG SG07: Sample JF-PLSD-PS-37-2 fuel concentrations are elevated and the sample extract was diluted, and as a result the surrogates were diluted out. No action was taken.

Matrix Spike Compound Recovery: Matrix Spike/Matrix Spike Duplicate (MS/MSD) spike recoveries and relative percent difference (RPD) were evaluated. It should be noted that ARI defaults to LCS criteria to internally evaluate matrix spike recoveries. Approved SAP/QAPP (Floyd|Snider, 2010) acceptance criteria for MS/MSDs is 40–140 % for recoveries and 50% for RPDs for soils.

SDG SG07: Matrix spike analysis was performed on sample JF-PLSD-PS-37-7-M. Percent recoveries were reported as "NA" because of the elevated concentration of diesel and extended range fuels in the sample. No action was taken in this case.

Laboratory Control Sample Recovery: LCS/LCSD were evaluated using ARI's control limit criteria. Approved SAP/QAPP (Floyd|Snider, 2010) LCS acceptance criteria indicate that ARI control limits are updated periodically. Current LCS control limit for TPH were downloaded from ARIs website. LCS/LCSD percent recoveries and RPD were acceptable and within specified ARI criteria.

Field Duplicate Sample Analysis: Field duplicate results for TPH are comparable and within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 50% RPD for soil are identified below:

SDG SG07: Field duplicate sample pair (JF-PLSD-PS-24B, and JF-PLSD-PS-24B-D) TPH RPD results are less than 50 % RPD.

INORGANICS

The laboratory provided a complete Level 1 data package for the inorganic analysis. The items reviewed during validation are summarized below.

Analytical Methods: Soil sample metals analysis were prepared using EPA Methods 3050B and for TCLP metals digestion USEPA Method 1311. Metals analysis was completed by USEPA Methods 6010B and for TCLP analysis USEPA Methods 6010B and 7470A, in accordance with the methods specified in the SAP/QAPP.

Sample Holding Times: All samples were prepared and analyzed within the recommended holding period from the date of collection; 180 days for metals and 28 days for mercury. All holding time criteria were met.

Laboratory Reporting Limits: The laboratory achieved the reporting limits (RLs) required by the approved SAP/QAPP (Floyd|Snider, 2010) with the following discussion:

Requested method reporting levels were not specified for the water samples (mostly rinsates) undergoing metals (Arsenic, Cadmium, Copper, Lead, Nickel or Zinc) analysis nor for soils undergoing TCLP metals (Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver) analysis. No action was necessary.

The reporting limits were not met in cases in which the samples were analyzed at dilutions due to high concentrations of target compounds or interferences. No action was taken.

Blank Contamination: The method blanks were free of target compounds with the following exception:

SG07: A low concentration of barium was detected in the TCLP metals method blank and case narrative notes indicate that this is likely due to the filtering process. This detection has no impact on the associated sample result since barium was detected in the sample greater than 5X the low level detection in the blank.

Laboratory Control Sample Recovery: LCS (blank spike) samples were performed with each analytical batch. All LCS were acceptable and within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 75 to 125 percent.

Matrix Spike Analysis: Matrix Spike (MS) analysis was performed on selected samples. Blank spike data was used to assess accuracy in cases where matrix spike quality control was not performed by ARI. The metals MS percent recoveries were acceptable and within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 75 to 125 percent with the following exceptions:

SDG SG07: Matrix spike analysis was performed on Sample JF-PLSD-PS-37-7-M with poor copper spike recovery (at 65.7%). The copper result for Sample JF-PLSD-PS-37-7-M is qualified as estimated (J).

Laboratory Duplicate Analysis: Laboratory duplicate analysis was performed on selected samples. Duplicate analysis was within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 20% RPD for both soil and water (with few exceptions the RPD is calculated when results are greater than five times the reporting level).

Field Duplicate Sample Analysis: Field duplicate results for metals are comparable and within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 20% RPD for both soil and water (with few exceptions the RPD is calculated when results are greater than five times the reporting level) with the following exceptions:

SDG SG07: Field duplicate sample pair (JF-PLSD-PS-24B, and JF-PLSD-PS-24B-D) metal RPDs results are less than 20 % RPD except for copper, lead, and nickel. Copper, lead, and nickel results for samples JF-PLSD-PS-24B and JF-PLSD-PS-24B-D are qualified as estimated (J).

Data Qualifiers

The following qualifiers were used to modify the data quality and usefulness of individual analytical results.

U - The constituent was analyzed for, but was not detected above the reported sample quantitation limit.

B - The constituent was detected in the associated method blank.

J - The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not met.

UJ – The constituent was not detected; the associated quantitation limit is an estimated value because quality control criteria were not met.

DNR - Do Not Report result(s). Use re-extracted and re-analyzed result(s).

R – Data are rejected due to significant exceedence of quality control criteria. The analyte may or may not be present. Additional sampling and analysis may be required to determine the presence or absence of the constituent. For statistical reasons, rejected values are not included in the database.

Y – The reporting limit is elevated due to interference. The result is not detected.

Data Assessment

Independent review was performed on chemistry data from the analytical laboratory to determine that data are of known and documented quality. Data have been evaluated and based on this information and in my professional judgment, the data are acceptable for use except where indicated by data qualifiers which may modify the usability of the data.

Jessie Compeau

Jessie Compeau
Validator
Informa, LLC

March 8, 2011
Date

Erin Breckel

Erin Breckel;
Acting Quality Assurance Manager
Floyd|Snider

3/28/11
Date

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BOEING COMPANY – JORGENSEN FORGE OUTFALL SITE
SEATTLE, WASHINGTON
CMP Sampling - January of 2011
DATA VALIDATION QA/QC REVIEW

INTRODUCTION

A total of thirty-six soil samples, nine groundwater samples, two rinsate blank samples were collected January 13 and 14 of 2011. This sampling was conducted as part of the Corrugated Metal Pipe investigation according to the specifications in the *Source Control Action - 15-inch and 24-inch Pipes Cleanout Work Plan (Floyd|Snider, 2010)*. Samples were analyzed by Analytical Resources Incorporated (ARI) of Tukwila, Washington for the following parameters:

- Volatile Oraganic Compounds (VOCs) by USEPA 8260C
- Semivolatile Organic Compounds (SVOCs) by USEPA Method 8270D
- Polychlorinated biphenyls (PCBs) by USEPA 8082
- Diesel and Extended Range by Washington State Department of Ecology NWTPH-Dx
- Metals (Arsenic, Cadmium, Copper, Lead, Nickel, and Zinc) by USEPA Method 6010

Samples were analyzed in accordance with procedures described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (USEPA SW-846)* and *Washington State Department of Ecology Methods for Petroleum Hydrocarbon Analysis*.

Samples were analyzed and results reported by the laboratory in batch numbers as summarized below:

SDG SE66 (VOCs, SVOCs, PCBs, Diesel and Extended Range, and Total Metals):

Groundwater Samples

JF-T2B2-GW-15	JF-T2B4-GW-20	JF-T3B1-SO-13-R
JF-T2B3-GW-15	JF-T3B4-GW-24	
JF-T2B3-GW-15-D	JF-T3B3-GW-15	

Soil Samples

JF-T2B1-SO-03	JF-T2B2-SO-08	JF-T2B3-SO-13
JF-T2B1-SO-08	JF-T2B2-SO-13	JF-T2B4-SO-03
JF-T2B1-SO-13	JF-T2B3-SO-02	
JF-T2B2-SO-03	JF-T2B3-SO-08	

SDG SE67 (SVOCs, PCBs, Diesel and Extended Range, and Total Metals):

Soil Samples

JF-T3B2-SO-08	JF-T3B1-SO-13	JF-T3B4-SO-23
JF-T3B2-SO-13	JF-T2B4-SO-18	JF-T3B3-SO-03
JF-T3B2-SO-13-D	JF-T2B4-SO-23	JF-T3B3-SO-08
JF-T3B1-SO-03	JF-T3B4-SO-03	JF-T3B3-SO-13
JF-T3B1-SO-08	JF-T3B4-SO-13	JF-T3B2-SO-03

SDG SE82 (VOCs, SVOCs, PCBs, Diesel and Extended Range, and Total Metals):

Groundwater Samples

JF-T1B2-SO-03	JF-T1B4-SO-12	JF-T1B2-SO-03-D
JF-T1B1-SO-03	JF-T1B4-SO-18	JF-T1B2-SO-08
JF-T1B1-SO-08	JF-T1B3-SO-03	JF-T1B2-SO-13
JF-T1B1-SO-13	JF-T1B3-SO-08	
JF-T1B4-SO-03	JF-T1B3-SO-18	

Soil Samples

JF-T1B2-GW-15	JF-T1B4-GW-20	JF-T3B2-GW-15
JF-T1B3-GW-20	JF-T1B1-SO-13-R	

Quality assurance/quality control (QA/QC) reviews of laboratory data were performed in the laboratory in accordance with the laboratory quality assurance program plan. The data validation QA/QC review focused primarily on laboratory result summary sheets and quality control summary sheets to ensure that work plan data quality objectives were met for the project. Data validation was conducted in accordance with the criteria outlined in the National Functional Guidelines for Organic Data Review (EPA 1999 and 2008) and the National Functional Guidelines for Inorganic Data Review (EPA 2004), modified to include method specific requirements of the laboratory analytical methods.

The validation level specified in Work Plan and Appendix B SAP/QAPP of the *Source Control Action - 15-inch and 24-inch Pipes Cleanout Work Plan (Floyd|Snider, 2010)* is a Level 3 for the Corrugated Metal Pipe (CMP) work which is considered an in-depth review. Due to an inadvertent oversight Level 3 data packages were not initially requested from ARI. After receipt of requested data from the laboratory, a Level 3 review was performed and results are provided in this report. Qualified results (referred to in the Work Plan as external data validation qualifiers) were added by the data validator to electronic data deliverables (EDD). The following data requirements were evaluated:

- Package completeness
- Sample identifications and reported analyses match the Chain-of-Custody Form
- Sample holding times and sample preservation
- Verification that the required detection limits and reporting limits have been achieved.
- Verification that the field duplicates, matrix spike/matrix spike duplicate samples MS/MSDs, and laboratory control samples were analyzed at the proper frequency.

- Laboratory control sample recoveries
- Surrogate recoveries (organics only)
- Laboratory method blanks
- Rinsate blank

Organic Review

- Instrument Tuning Summary (VOC and SVOC)
- Initial and Continuing Calibration Summary (VOC, SVOC, PCB, TPH, and Metals)
- Internal Standard Summary (VOC, SVOC, and PCB)

Metals Review

- Initial and Continuing Calibration Blanks Summary
- Interference Check Standard Recovery Summary (Metals)
- Instrument or Method Detection Limit Summary
- ICP Interelement Correction Factors Summary
- Linear Range Summary
- Preparation Log and Analysis Sequence Summaries

CASE NARRATIVE COMMENTS

Review of the cover letters associated with the Sample Delivery Groups (SDGs) indicates multiple analytical issues for SDG SE66, SE67, and SE82. These are addressed in appropriate sections of this report. The following summarizes data anomalies or discrepancies noted in the case narratives:

SDG SE66: Issues with VOC continuing calibrations (CCAL) and VOC laboratory control sample (LCS) recovery. Refer to VOC section for more details.

SDG SE66: Issues with SVOC CCAL and SVOC LCS recovery. Refer to SVOC section for more details.

SDGs SE66 and SE67: Level 3 Package Addendum March 22, 2011 case narrative notes indicate that there was an issue with the mineral oil CCAL data. Refer to the TPH section for more details.

SDG SE67: Issues with SVOC CCAL. Refer to SVOC section for more details.

SDG SE67: Issues with PCB surrogate and matrix spike recovery. Refer to PCB section for more details.

SDG SE67: Issues with the metals matrix spike recovery and duplicate relative percent differences (RPDs). Refer to the metals section for more details.

SDG SE82: Issues with VOC CCALs and VOC LCS recovery. Refer to VOC section for more details.

SDG SE82: Issues with SVOC surrogate recovery, SVOC CCALs, and SVOC LCS recoveries. Refer to SVOC section for more details.

SDG SE82: Issues with PCB surrogate recoveries. Refer to PCB section for more details.

SDG SE82: Issues with the metals duplicate RPDs for nickel. Refer to the metals section for more details.

SDGs SE66 and SE82: Case narrative notes indicate that SVOC 1/20/11 CCAL is out of control low for phenol, n-nitroso-di-n-propylamine, 2,2-oxybis (1-chloropropane) **and** 2,4-dinitrophenol **and** benzo (g,h,i) perylene and dibenzo (a,h) anthracene were out of control high. Due to typographical error (too many ands) ARI was contacted and confirmed that recovery of 2,4-dinitrophenol was recovered low and remaining compounds were recovered high.

SDG SE82: Nine soil samples were submitted to ARI but archived for possible analysis at a later date.

SAMPLE CUSTODY, SAMPLE RECEIPT, and PRESERVATION

Chain of custody (COC) record, laboratory analysis request, cooler receipt forms, and other documentation (i.e. preservation verification form) were reviewed. Samples were received by ARI Laboratory in good condition with the following discussion:

SDG SE66: Review of Cooler Receipt Form indicates that there was a discrepancy between sample identifications on a bottle and chain-of-custody. ARI resolved this discrepancy internally. The label reading JF-T3B3-GW-23 on the bottle should read Sample JF-T3B3-GW-15 (as recorded on the chain of custody). This was confirmed by ARI internally by comparing time of collection on the bottle to the COC.

SDG SE66: Review of Cooler Receipt Form shows that the COC reported eight containers were provided for Sample JF-T3B1-SO-13-R however ARI confirmed that nine containers were received. No action was taken.

SDGs SE66 and SE82: Review of the data package versus the COC indicates that Trip Blank sample was analyzed but not recorded on the COC. No action was taken other than to note that the Trip Blank should be recorded on the COC.

SDG SE82: Cooler temperature was received by the laboratory at 19.3°C above the National Functional Guideline recommended temperature of 2°C to 6°C. No action was taken since the samples were collected and delivered to ARI on the same day. Samples did not have sufficient time to cool.

SDG SE82: Sample identifications on bottles read Sample JF-T1B1-13-R and Sample JF-T1B2-GW and should read (as they read on the COC) Sample JF-T1B1-**SO**-13-R and Sample JF-

T1B2-GW-**15** respectively. ARI resolved the issue internally and corrected the sample bottle identifications.

REPORTING CRITERIA

In certain cases the laboratory performs dilutions, re-extractions, and/or re-analyses and reports multiple sample results on an analytical parameter. These data are considered useful however it should be noted that database results reflect ONLY one result for each sample. The data user should be aware that decision criteria used to report these results in these cases typically are as follows:

1) If the analyte exceeds the calibration range, then the diluted result is selected;
2) If an analyte is detected in both runs, then the higher concentration is selected from the two runs (more conservative);
3) If an analyte is detected in one run, but not the other, then the detection (more conservative) is selected;
4) If the analyte is not detected in either run, the lower reporting limit is selected.

It should be noted that there are some exceptions to the decision criteria listed above but in these cases the selected result will be clearly identified (and the reasons for doing so) for the data user.

VOLATILE ORGANIC COMPOUNDS

The laboratory provided a complete Level 3 data package for the VOC analyses. The items reviewed during validation are summarized below. Associated results are qualified accordingly.

Analytical Methods: Samples for VOC analysis were analyzed by purge & trap gas chromatography/mass spectrometry (GC/MS) using USEPA Method 8260C in accordance with the method specified in the SAP/QAPP (Floyd|Snider, 2010).

Sample Holding Times: All water samples were analyzed within 14 days of sample collection. Holding times were met.

Laboratory Reporting Limits: The laboratory achieved the reporting limits (RLs) required by the approved SAP/QAPP (Floyd|Snider, 2010) with the following discussions:

The SAP/QAPP specifies a reporting limit range for water VOCs and is not compound specific. The reporting limit range in the SAP/QAPP was not met in cases in which the samples were analyzed at dilutions due to high concentrations of target compounds. No action was taken.

SDG SE82: Sample JF-T1B2-GW-15 VOC compound trichloroethene was qualified as "E" by ARI to indicate that the concentration of the target analyte exceeded the instrument calibration range. Data validator qualified trichloroethene result in the initial run (1/17/11) for sample JF-T1B2-GW-15 as Do Not Report (DNR). Refer to diluted sample re-analysis (1/18/11) for

trichloroethene result. Refer to the Reporting Criteria section for further guidance on selection of other VOC results from the initial run versus the diluted run.

Instrument Performance Check (Tuning): Functional guidelines stipulate that tuning should be performed (via check solution) to ensure optimum instrument performance. Tuning should be performed and verified at the beginning of each 12-hour period during which samples are analyzed. Relative % abundance of bromofluorobenzene (BFB) ions should fall within ion abundance criteria. Summary forms were reviewed to verify that ion abundance criteria for BFB were met and that 12-hour criteria were met. All criteria were met.

Instrument Calibration: Functional guideline criteria for initial calibrations (ICALs) shall demonstrate linearity between instrument response and at least five calibration standards at a range of concentrations. The ICAL relative response factors (RRFs) for compounds are greater than or equal to 0.05, percent relative standard deviations (% RSDs) are less than 30% (or for linear or non-linear calibration curves the best curve fit must be at least 0.99). Continuing calibration (CCAL) shall be performed to verify instrument linearity and performance and shall be analyzed at the beginning of each 12-hour analysis period. CCAL RRF should be greater than or equal to 0.05 and percent difference (%D) between the ICAL RRF and CCAL RRF shall not exceed $\pm$ 25% D. ARI applies a more stringent criteria of $\pm$ 20% D (as required by the method) for evaluating CCALs. These compounds are noted in the case narratives and associated positive detections are qualified (Q) by the laboratory. Calibration criteria were met with exceptions noted below:

SDGs SE66 and SE82: VOC ICAL (Instrument ID is NT5) was performed on 12/3/2010. Review indicates that RRF data for acrolein was less than 0.05. All associated groundwater sample results for acrolein are qualified as rejected (R) due to poor ICAL RRF.

SDGs SE66 and SE82: VOC CCAL data from 1/17/11 show low recovery (below acceptance criteria) for compound 2-Chloroethylvinylether (2CEVE). Level 3 review indicates that percent difference (% D) for 2CEVE was less than $\pm$ 25% D. No action was taken for 2CEVE results in associated samples.

SDG SE82: VOC CCAL data from 1/18/11 show low (below acceptance criteria) recovery for compound 2CEVE AND high (above acceptance criteria) recovery for acrolein and methyl iodide. Level 3 review indicates that percent difference (% D) for 2CEVE and methyl iodide were less than $\pm$ 25% D. No action was taken for 2CEVE and methyl iodide results in associated samples. Refer to the ICAL discussion above regarding poor RRF results for acrolein.

Internal Standards: Functional guidelines stipulate that internal standard area counts may not be more than a factor of 2 (-50 percent to +100 percent) from either the ICAL midpoint standard or the associated CCAL. The internal standard retention times in each sample must not vary by more than $\pm$ 30 seconds from the ICAL midpoint standard or the associated CCAL. ARI used the ICAL midpoint standard to establish upper and lower limits for area counts and retention time windows. All internal standard area counts and retention times are acceptable.

Blank Contamination: The method blanks and rinsate blanks were free of contamination with the following exceptions

SDG SE82: Rinsate blank sample (JF-T1B1-SO-13-R) contained low level hits of methylene chloride and chloroform. The rinsate blank was collected immediately after soil sample JF-T1B1-SO-13 (refer to SDG SE82M). No action was taken as the soil samples were not analyzed for VOCs.

Surrogate Recovery: All surrogate recoveries were within ARI control limits.

Matrix Spike Compound Recovery: For SDGs SE66 and SE82 matrix spike analysis was not performed by the laboratory. Refer to LCS/LCSD and field duplicate results for accuracy and precision data.

Laboratory Control Sample Recovery: Laboratory control samples/laboratory control sample duplicates (LCS/LCSD) were evaluated using ARI's control limit criteria. Approved SAP/QAPP (Floyd|Snider, 2010) LCS acceptance criteria indicate that ARI control limits are updated periodically. Current LCS control limit for VOCs were downloaded from ARIs website. LCS/LCSD percent recoveries and RPD were acceptable and within specified ARI criteria with the following exceptions:

SDGs SE66 and SE82: LCS/LCSD (1/17/11) recoveries were below ARI control limits for 2CEVE and above ARI control limits for methyl iodide. The 2CEVE result for the LCS is 76% slightly below ARI's lower limit criteria of 80% but above ARI's marginal exceedance criteria of 75%. The 2CEVE result for the LCSD is 72%, slightly below ARI's marginal exceedance criteria of 75%. Since the LCS result is within marginal exceedance criteria, no further action is taken. Methyl iodide results are slightly above ARI control limit of 120% but within marginal exceedance upper limit criteria of 127%. No action is taken in this case.

SDG SE82: LCS (1/18/11) recovery was above ARI control limits for methyl iodide. Methyl iodide is not detected in associated samples. No further action was taken.

Field Duplicate Sample Analysis: Field duplicate results for VOCs are comparable and within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 20% RPD for water:

SDG SE66: Field duplicate sample pair (JF-T2B3-GW-15 and JF-T2B3-GW-15-D) VOC RPD results are less than 20 % RPD.

SEMIVOLATILE ORGANIC COMPOUNDS

The laboratory provided a complete Level 3 data package for the SVOC analyses. The items reviewed during validation are summarized below. Associated results are qualified accordingly.

Analytical Methods: Samples for SVOC analysis were analyzed by gas chromatography/mass spectrometry (GC/MS) using USEPA Method 8270D, in accordance with the method specified in the SAP/QAPP.

Sample Holding Times: All soil samples were extracted within 14 days of sample collection and analyzed within 40 days from the date of extraction to analysis. The rinsate samples (JF-T1B1-SO-13-R and JF-T3B1-SO-13-R) were extracted within 7 days of sample collection and analyzed within 40 days of extraction. Holding time criteria are met.

Laboratory Reporting Limits: The laboratory achieved the reporting limits (RLs) required by the approved SAP/QAPP (Floyd|Snider, 2010) with the following discussions:

The SAP/QAPP specifies a reporting limit range for soil SVOCs and is not compound specific. The SAP/QAPP did not specify reporting limits for water SVOCs. The only water samples collected were rinsate samples.

The soil reporting limits were not met in cases in which the samples were analyzed at dilutions due to high concentrations of target compounds. No action was taken.

SDG SE67: For sample JF-T2B4-SO-18, SVOC compound bis(2-ethylhexyl) phthalate (DEHP) was qualified as "ES" by ARI to indicate that the concentration of the target analyte exceeded the instrument calibration range and saturated the detector. Data validator qualified DEHP result in the initial run (1/21/11) for sample JF-T2B4-SO-18 as Do Not Report (DNR). Refer to diluted sample re-analysis (1/24/11) for the DEHP result. Remaining SVOC results should be reported from the initial analysis with one exception. Compound di-n-butylphthalate was not detected initially however it was detected in the diluted re-analysis and is reported. Refer to Reporting Criteria discussion above for further guidance.

Instrument Performance Check - Tuning: Functional guidelines stipulate that tuning should be performed (via check solution) to ensure optimum instrument performance. Tuning should be performed and verified at the beginning of each 12-hour period during which samples are analyzed. Relative % abundance of decafluorotriphenylphophine (DFTPP) ions should fall within ion abundance criteria. Summary forms were reviewed to verify that ion abundance criteria for DFTPP were met and that 12-criteria were met. All criteria were met.

Instrument Calibration:
Functional guideline criteria for initial calibrations (ICALs) shall demonstrate instrument linearity with at least five calibration standards at a range of concentrations. The ICAL relative response factors (RRFs) for compounds are greater than or equal to 0.05, percent relative standard deviations (% RSDs) are less than 30% (or for linear or non-linear calibration curves the best curve fit must be at least 0.99). Continuing calibration (CCAL) shall be performed to verify instrument linearity and performance and shall be analyzed at the beginning of each 12-hour analysis period. CCAL RRF should be greater than or equal to 0.05 and percent difference (% D) between the ICAL RRF and CCAL RRF shall not exceed $\pm$ 25% D. ARI applies a more stringent criteria of $\pm$ 20% D (as required by the method) for evaluating CCALs. These compounds are noted in the case narratives and associated positive detections are qualified (Q) by the laboratory. Calibration criteria were met with exceptions noted below:

SDG SE66: SVOC ICAL (Instrument ID is NT4) was performed 1/6/2011. Review indicates that RRF data for 2,4-Dinitrophenol was less than 0.05. Associated soil results were non-detect for 2,4-Dinitrophenol and are qualified as rejected (R) due to poor ICAL RRF.

SDG SE66 and SE82: Case narrative notes indicate that SVOC CCAL for water data on 1/20/11 show low recovery (below ARI acceptance criteria) for compounds phenol, n-nitroso-di-n-propylamine, 2,2-oxybis(1-chloropropane) and 2,4-dinitrophenol AND high recovery (above ARI acceptance criteria) for benzo(g,h,i)perylene and dibenzo(a,h)anthracene. Level 3 review indicates that percent difference (% D) for phenol, n-nitroso-di-n-propylamine, 2,2-oxybis(1-chloropropane), benzo(g,h,i)perylene, and dibenzo(a,h)anthracene) were less than $\pm$ 25% D. Therefore, no action was taken for these analytes. Results for the compound 2,4-dinitrophenol is qualified as estimated (UJ) in the associated rinsate samples (Samples JF-T3B1-SO-13-R and JF-T1B1-SO-13-R).

SDG SE66: Case narrative notes indicate that SVOC CCAL for soil data on 1/20/11 show low recovery (below ARI acceptance criteria) for compound 2,4-dinitrophenol AND high recovery (above ARI acceptance criteria) for 4-nitrophenol and flouranthene. Review of Level 3 data package indicates that benzo(b)fluoranthene also shows high recovery. As a result associated samples with positive detections for these analytes are "Q" qualified by ARI laboratory to indicate that the "detected analyte does not meet established acceptance criteria". Level 3 review indicates that % D for 2,4-Dinitrophenol and fluoranthene recovery are less than $\pm$ 25% D; however, refer to the ICAL discussion above since 2,4-dinitrophenol is already qualified due to poor ICAL result. No action was taken regarding fluoranthene. Associated samples (JF-T2B1-SO-03, JF-T2B1-SO-08, JF-T2B1-SO-13, JFT2B2-SO-03 and JFT2B2-SO-13) results for 4-nitrophenol and benzo(b)fluoranthene (reported as Total Benzofluoranthene) are qualified as estimated (UJ/J).

SDG SE66: SVOC CCAL for soil data on 1/21/11 show high recovery (above acceptance criteria) for compound 4-nitrophenol. Associated sample (JF-T2B2-SO-08, JF-T2B3-SO-02, JF-T2B3-SO-08, JF-T2B2-SO-13 and JF-T2B4-SO-03) results for 4-nitrophenol are qualified as estimated (UJ).

SDG SE66: SVOC CCAL for soil data on 1/21/11 for fluoranthene is "Q" qualified by ARI laboratory to indicate that the "detected analyte does not meet established acceptance criteria". No action was taken since Level 3 review indicates that % D was less than $\pm$25%.

SDG SE66: Sample JF-T2B4-SO-03 chrysene result is "M" qualified by ARI to indicate poor spectral match. The chrysene result for Sample JF-T2B4-SO-03 is considered estimated (J).

SDG SE67: SVOC CCAL for soil data on1/21/11 show low recovery (below acceptance criteria) for compounds 2,4-dinitrophenol (using $\pm$25% D). ALL associated sample results for 2,4-dinitrophenol are qualified as estimated (UJ).

SDG SE67: SVOC continuing calibration (CCAL) for soil data on 1/24/11 show low recovery (below ARI acceptance criteria) for compounds benzidine and 2,4-dinitrophenol and high recovery (above ARI acceptance criteria) for indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene,

and benzo(g,h,i) perylene. Level 3 review indicates that % D for indeno(1,2,3-cd)pyrene recovery is less than ± 25% D, therefore no action was taken. ALL associated sample results (Samples JF-T2B4-SO-18 Dilution and JF-T2B4-SO-23) for 2,4-dinitrophenol, dibenzo(a,h)anthracene, and benzo(g,h,i) perylene are qualified as estimated (UJ). No action was taken for benzidine as it is not listed on the client target analyte list.

SDG SE82: SVOC CCAL for soil data on 1/24/11 show low recovery (below ARI acceptance criteria) for compounds benzidine and 2,4-dinitrophenol and high recovery (above ARI acceptance criteria) for indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i) perylene . Level 3 review indicates that % D for indeno(1,2,3-cd)pyrene recovery is less than ± 25% D, therefore no action was taken. ALL associated sample results for 2,4-dinitrophenol are qualified as estimated (UJ). ALL associated sample results for dibenzo(a,h)anthracene and benzo(g,h,i) perylene are also qualified as estimated (UJ). No action was taken for benzidine as it is not listed on the client target analyte list.

SDG SE82: SVOC continuing calibration (CCAL) for soil data on 1/25/11 show low recovery (below acceptance criteria) for compounds 4,6-Dinitro-2-methylphenol and 2,4-Dinitrophenol AND high recovery (above acceptance criteria) for indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene and dibenzo(a,h)anthracene. Associated sample results (Samples JF-T1B2-SO-08 and JF-T1B2-SO-13) for the compounds 4,6-Dinitro-2-methylphenol, 2,4-Dinitrophenol, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene, and dibenzo(a,h)anthracene are qualified as estimated (UJ).

SDG SE82: SVOC CCAL for soil data on 1/26/11 show high recovery (above acceptance criteria) for 2,4-dinitrophenol and benzo(g,h,i)perylene. ARI notes other compounds but these are under ± 25% D. The results for compound 2,4-dintirophenol and benzo(g,h,i)perylene are qualified as estimated (UJ) in the associated sample (Sample -T1B3-SO-08).

Internal Standards: Functional guidelines stipulate that internal standard area counts may not be more than a factor of 2 (-50 percent to +100 percent) from either the ICAL midpoint standard or the associated CCAL. The internal standard retention times in each sample must not vary by more than ± 30 seconds from the ICAL midpoint standard or the associated CCAL. ARI used the ICAL midpoint standard to establish upper and lower limits for area counts and CCAL midpoint to determine retention time windows. All internal standard area counts and retention times are acceptable.

Blank Contamination: The method blanks and equipment blanks were free of contamination with the following exceptions:

SDG SE66: Rinsate blank sample (JF-T3B1-SO-13-R) contained low level hits of phenol, diethylphthalate, di-n-butylphthalate. The rinsate blank was collected immediately after soil sample JF- T3B1-SO-13 (refer to SDG SE67F). No action was taken as compounds detected in the rinsate were not detected in the associated sample.

Surrogate Recovery: All surrogate recoveries were within ARI control limits with the following exceptions:

SDG SE82: Case narrative notes indicate that surrogate 2,4,6-Tribromophenol (TBP) recovery in soil sample JF-T1B3-SO-08 was below control limit criteria. No action was taken in this case since two or more surrogates were not outside of control limits for each fraction and none were below 10%.

Matrix Spike Compound Recovery: Matrix Spike/Matrix Spike Duplicate (MS/MSD) spike recoveries and relative percent difference (RPD) were evaluated. It should be noted that ARI defaults to LCS criteria to internally evaluate matrix spike recoveries. Approved SAP/QAPP (Floyd|Snider, 2010) acceptance criteria for soil matrix spikes is 10 –160% for recoveries and 50% for RPDs. The MS/MSD was performed on a client selected sample, Sample JF-T3B3-SO-03 from SDG SE67 and is representative for the two day CMP sampling event. MS/MSD recoveries and RPDs are acceptable per SAP/QAPP.

Laboratory Control Sample Recovery: LCS/LCSD were evaluated using ARI's control limit criteria. Approved SAP/QAPP (Floyd|Snider, 2010) LCS acceptance criteria indicate that ARI control limits are updated periodically. Current LCS control limit for SVOCs were downloaded from ARIs website. LCS/LCSD % recoveries and RPD were acceptable and within specified ARI criteria with the following exception:

SDGs SE66 and SE82: LCS recoveries for chrysene and indeno(1,2,3-cd)pyrene and dibenzo(a,h)anthracene are high. The LCSD results for these compounds are within ARI control limit criteria. No action was taken.

Field Duplicate Sample Analysis: Field duplicate results for SVOCs are comparable and within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 50% RPD for soil:

SDG SE67: Field duplicate sample pair (JF-T3B2-S0-13 and JF-T3B2-S0-13-D) SVOC RPD results are less than 50% RPD.

SDG SE82: Field duplicate sample pair (JF-T1B2-S0-03 and JF-T1B2-S0-03-D) SVOC RPD results are less than 50% RPD.

POLYCHLORINATED BIPHENYLS

The laboratory provided a complete Level 3 data package for the PCB analysis and the items reviewed during validation are summarized below.

Analytical Methods: Samples for PCB analysis were analyzed by gas chromatography/electron capture detector (GC/ECD) using USEPA Method 8082 in accordance to the method in the SAP/QAPP.

Sample Holding Times: All samples were prepared and/or analyzed within the recommended holding times as follows:

All soil samples were extracted within 14 days of sample collection and analyzed within 40 days of extraction. The groundwater and rinsate samples (JF-T1B1-SO-13-R and JF-T3B1-SO-13-R)

were extracted within 7 days of sample collection and analyzed within 40 days of extraction. Holding time criteria were met.

Laboratory Reporting Limits: The laboratory achieved the reporting limits (RLs) required by the approved SAP/QAPP (Floyd|Snider, 2010) with the following discussions:

PCB reporting limits for soil stipulated in SAP/QAPP (Floyd|Snider, 2010) are 33 µg /kg (routine analysis) or 4 µg /kg (low level). ARI equated the low level PCB analysis request to Puget Sound Dredged Disposal Analysis (PSDDA) reporting limit and reported all associated soil results under "PSDDA PCB by GC/ECD". ARI clarified that EPA Method 8082 was performed to analyze samples as requested in the SAP/QAPP (Floyd|Snider, 2010). Several samples associated with these SDGs were analyzed at medium level with a reporting limit of 800 µg/kg due to elevated sample PCB concentrations. No action was taken other than to note this.

SDGs SE66 and SE82: PCB reporting limits for water stipulated in SAP/QAPP (Floyd|Snider, 2010) are 0.01 µg /L (low level). Floyd|Snider (1/14/2011) requested that the water samples undergo filtration using a 0.45 micron filter to ensure that sampling was in accordance with the EPA approved work plan. The 0.45 micron filtration step was to be performed in the field per the procedure outlined in the SAP/QAPP but this was modified by Floyd|Snider so that filtration could be performed by ARI upon sample receipt. Both EPA and client(s) were notified of the modification to the approved SAP/QAPP (Floyd|Snider, 2010). ARI includes a case narrative describing filtration steps (a 1 micron filter was utilized by ARI) in SDGs SE66 and SE82. Requested reporting levels were achieved except in cases were samples were analyzed at dilutions due to high concentrations of target compounds.

The reporting limits were not met in cases in which the samples were analyzed at dilutions due to high concentrations of target compounds. No action was taken.

Multiple SDGs: In certain cases the laboratory assigned a "Y" qualifier to Aroclor result(s) to indicate that "the analyte was not detected at or above the reported concentration". The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a "raised reporting limit".

Instrument Calibration: Functional guidelines stipulate that ICALs shall consist of a 5-point calibration using Aroclors 1016 and 1260 and single mid-range standard for remaining Aroclors. Functional guidelines also stipulate that ICAL % RSDs should be less than 20%. The CCAL shall consist of a mid-range standard and shall be analyzed at the beginning and end of each 12-hour analysis period. CCAL % D shall be within ±15% D. All calibration criteria were met with the following exceptions:

SDG SE66: For the CCAL performed on 1/22/2011, the Aroclor 1248 average % D was elevated on one column and outside of acceptance criteria of ±15% D. Associated samples were reanalyzed with acceptable CCAL data. Initial results were not reported. No action was necessary.

SDG SE67: For the closing CCAL performed on 1/21/11, the Aroclor 1260 average % D was recovered high and above acceptance criteria of ±15%D. ALL Arolors in associated samples (JF-T3B4-SO-13, JF-T3B4-SO-23, JF-T3B3-SO-03, JF-T3B3-SO-13, and JF-T3B2-SO-03) are qualified as estimated (UJ/J).

SDG SE67: For the closing CCAL performed on 1/25/2011, the Aroclor 1260 average % D was recovered high and above acceptance criteria of +15%D. All Aroclors in associated samples (JF-T3B4-SO-13 DILUTION, and JF-T3B4-SO-23) are qualified as estimated (UJ/J). There are two sets of results for these samples. Due to poor internal standard recovery on the initial run (refer to the Internal Standard section for further information) the reanalyzed results (re-analysis performed on 1/25/2011) should be reported with two exceptions:

> For Sample JF-T3B4-SO-13, Aroclor 1260 was initially detected at 11 µg/Kg and upon dilution and re-analysis was detected 10 µg/Kg. In this case Aroclor 1260 should be reported from the initial set of results and the reanalyzed Aroclor 1260 result for Sample JF-T3B4-SO-13 is reported as DNR.
>
> For Sample JF-T3B4-SO-23, Aroclor 1254 was initially detected at 4.5 µg/Kg but was not detected in the diluted and reanalyzed extract due to elevated reporting level. In this case Aroclor 1254 was reported from the initial set of results and the reanalyzed Aroclor 1254 result for Sample JF-T3B4-SO-23 was reported as DNR.

Internal Standards: Functional guidelines and method guidances specify that internal standard area counts in each sample must not vary by more than a factor of 2 from either the ICAL midpoint standard or the associated CCAL. Functional guidelines specify a retention time (RT) window of +0.07 minutes. USEPA Method 8000C (Determinative Chromatographic Separations) provides detailed methods for calculating RT windows which are applicable to USEPA Method 8082. ARI's RT window is acceptable at + 0.10 minutes. No action was taken. All internal standard area counts and retention times are acceptable with the following exceptions:

SDG SE67: Internal standard recovery (hexabromobiphenyl) for samples JF-T3B4-SO-13 and JF-T3B4-SO-23 (analyzed on 1/22/11) were below lower control limits for area on both columns. Both samples were re-analyzed at a dilution on 1/25/2011. It should be noted that internal standard recoveries for hexabromobiphenyl in both samples were still low on both columns but just above lower limit criteria. Refer to instrument calibration results for additional information. The initial PCB results for Samples JF-T3B4-SO-13 and JF-T3B4-SO-23 are considered estimated (UJ/J) and also qualified as DNR since there are two sets of results with the following exception. Aroclor 1254 was detected at 4.5 µg/Kg in the initial analysis of Sample JF-T3B4-SO-23 but was not detected in the reanalyzed and diluted sample extract. In this case the initial Aroclor 1254 result was reported and the reanalyzed result was reported as DNR.

Blank Contamination: The method and rinsate blanks (JF-T1B1-SO-13-R and JF-T3B1-SO-13-R) were free of target compounds with the following exception:

SDG SE66: Aroclor 1254 was detected at 0.057 µg/L (reporting level of 0.010 µg /L) in rinsate blank (JF-T3B1-SO-13-R). The rinsate blank was collected immediately after soil sample JF-T3B1-SO-13 (refer to SDG SE67). No action was taken since the Aroclor 1254 detection in Sample JF- T3B1-SO-13 was greater than ten times the detection in the rinsate blank.

Surrogate Recovery: Soil and water surrogate recoveries were evaluated against current ARI control limits. All criteria were met with the following exceptions:

SDG SE66: Sample JF-T2B4-SO-03 surrogate results were reported by the laboratory as "D" to indicate "the spiked compound was not detected due to sample extract dilution". Sample extracts were diluted due to elevated PCB concentrations and as a result surrogates were diluted out. No action was taken in this case.

SDG SE67: LCS surrogate decachlorobiphenyl (DCBP) is high and outside ARI's control limit criteria. No action was taken since LCSD surrogates were within the control limits.

SDG SE67: Sample JF-T3B3-SO-08 surrogates are outside control limit criteria. Sample results are considered estimated (UJ/J) due to poor surrogate recovery.

SDG SE67: Sample JF-T3B3-SO-03 DCBP surrogate (DCBP) was not reported. Matrix spike analysis was also performed on this sample with similar poor surrogate recovery for DCBP. Sample results are considered estimated (UJ/J) due to poor surrogate recovery. Refer to matrix spike discussion for additional details.

SDG SE82: Sample JF-T1B4-SO-03 tetrachlorometaxylene (TCMX) surrogate recovery was elevated and DCBP was not reported. Sample results are considered estimated (UJ/J) due to poor surrogate recovery.

SDG SE82: LCSD soil surrogate DCBP recovery was high at 110% slightly above ARI's control limit criteria for quality control samples (40-109%). No action was taken for since LCS soil surrogate recoveries are within the criteria.

Matrix Spike Compound Recovery: Matrix Spike/Matrix Spike Duplicate (MS/MSD) spike recoveries and relative percent difference (RPD) were evaluated. It should be noted that ARI defaults to LCS criteria to internally evaluate matrix spike recoveries. Approved SAP/QAPP (Floyd|Snider, 2010) acceptance criteria for soil matrix spikes is 40–140% and 50% RPD. Matrix spike recoveries are acceptable per SAP/QAPP with the following exceptions and discussions:

SDGSE67: MS/MSD analysis was performed on sample JF-T3B3-SO-03 with poor Aroclor 1260 recoveries. PCB results for sample JF-T3B3-SO-03 are qualified as estimated (UJ/J) due to poor spike recovery. Refer to surrogate section for more information regarding Sample JF-T3B3-SO-03 and the MS/MSD analysis on this sample.

SDGs SE66 and SE82: MS/MSD analysis was not performed. No action is taken. Refer to associated spike data from SDG SE67, LCS/LCSD data, surrogate recoveries, and field duplicate results for accuracy and precision data.

Laboratory Control Sample Recovery: LCS/LCSD were evaluated using ARI's control limit criteria. Approved SAP/QAPP (Floyd|Snider, 2010) LCS acceptance criteria indicate that ARI control limits are updated periodically. Current LCS control limit for SVOCs were downloaded from ARIs website. LCS/LCSD percent recoveries and RPDs were acceptable and within specified ARI criteria.

Field Duplicate Sample Analysis: Field duplicate results for PCBs are comparable and within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 50% RPD for soil and 20% RPD for water as identified below:

SDG SE66: Field duplicate sample pair (JF-T2B3-GW-15 and JF-T2B3-GW-15-D) PCB RPD results are less than 20% RPD.

SDG SE67: Field duplicate sample pair (JF-T3B2-S0-13 and JF-T3B2-S0-13-D) PCB RPD results are less than 50% RPD.

SDG SE82: Field duplicate sample pair (JF-T1B2-S0-03 and JF-T1B2-S0-03-D) PCB RPD results are less than 50% RPD.

DIESEL AND EXTENDED RANGE TOTAL PETROLEUM HYDROCARBONS - diesel, motor oil and mineral oil

The laboratory provided a complete Level 3 data package for total petroleum hydrocarbon (TPH) analysis. The items reviewed during validation are summarized below.

Analytical Methods: Samples for TPH parameters were analyzed using the following methodologies in accordance to the methods specified in the SAP/QAPP:

- TPH- Diesel in the C12-C24 range,
- TPH- Motor Oil in the C24-C38 range.
- TPH- Mineral Oil in the C24-C38 range.

Sample Holding Times: All soil samples were extracted within 14 days (7 days for water) of sample collection and analyzed within 40 days from the date of extraction to analysis. Holding time criteria were met.

Laboratory Reporting: The laboratory compared sample chromatograms with diesel, motor oil, and mineral oil standard chromatograms and, in some cases, based on this comparison ARI qualified results for diesel range organics (DRO) or residual range organics (RRO) to indicate qualitative or quantitative uncertainty with the results (the chromatogram was a poor match or other organics were detected in the sample). NWTPH-Dx (diesel, motor oil, and mineral oil)

sample results which are qualified "DRO" or "RRO" by the laboratory are considered estimated and qualified (J). Diesel results for the following SDGs are qualified as estimated (J) due to laboratory qualification (DRO).

- SDG SE66 - Samples JF-T2B1-SO-13, JF-T2B3-SO-02, JF-T2B3-SO-08, and JF-T2B4-SO-03,
- SDG SE67- Samples JFT3B4-SO-13, JF-T3B3-SO-03, JF-T3B3-SO-13 and,
- SDG SE82 - Samples JF-T3B2-SO-03; SDG SE82 JF-T1B1-SO-03, JF-T1B4-SO-12

Laboratory Reporting Limits: The laboratory achieved the reporting limits (RLs) required by the approved Work Plan (Floyd|Snider, 2010). The reporting limits were not met in cases in which the samples were analyzed at dilutions due to high concentrations of target compounds. No action was taken.

The SAP/QAPP did not specify reporting limits for water TPHs. No action was taken since these were rinsate samples.

Initial and Continuing Calibration: *Analytical Methods For Petroleum Hydrocarbons* (Ecology, 1997) stipulate that the initial calibration curve must consist of a five point curve demonstrating linearity of the instrument and that the low standard should demonstrate analytical ability to achieve the reporting limit level. The initial calibration must have a linear correlation coefficient of at least 0.990 (data validator defaulted to RSD of 20% to evaluate) and no standard may exceed ±15% difference from the true value. Continuing calibration shall consist of a mid-range check standards analyzed before and after sample(s) and associated QC analysis. Frequency of CCAL analysis is not specified. The CCAL shall not exceed ±15% D from the true value of the standard. It should be noted that WA State stipulates that diesel #2 is the default fuel type for reporting purposes.

SDG SDG66: It was noted during the Level 3 data review that the case narrative was revised to indicate that CCALs for mineral oil were elevated and above acceptance criteria of ±15%D. Review of the run sequence log indicates that all SE66 samples are associated with mineral oil CCALs #2 and #3. ALL mineral oil results (all soil sample results and the rinsate result) are qualified as estimated (UJ/J) due to poor CCAL results for mineral oil. Motor oil is also quantitated in the same range (C24 to C38), but no action was taken since motor oil CCALs were acceptable.

SDG SDG67: It was noted during the Level 3 data review that the case narrative was revised to indicate that CCALs for mineral oil were elevated and above acceptance criteria of ±15%D. Review of the run sequence log indicates that one sample Sample JF-T2B4-SO-18 is associated with mineral oil CCALs #2 and #3. Mineral oil result in sample JF-T2B4-SO-18 is qualified as estimated due to poor CCAL results for mineral oil. Motor oil is also quantitated in the same range (C24 to C38) but no action was taken since motor oil CCALs were acceptable.

Blank Contamination: The method blanks were free of target compounds.

Surrogate Recovery: All surrogate recoveries were within ARI control limits with the following exceptions:

SDG SE67: Sample JF-T2B4-SO-18 fuel concentrations are elevated and the sample extract was diluted, and as a result the surrogates were diluted out. No action was taken.

Matrix Spike Compound Recovery: MS spike recovery was evaluated. It should be noted that ARI defaults to LCS criteria to internally evaluate matrix spike recoveries. Approved SAP/QAPP (Floyd|Snider, 2010) acceptance criteria for soil matrix spike recoveries are 40 to 140%. Matrix spike analysis was performed on a client selected sample, Sample JF-T3B3-SO-03, from SDG SE67 and is representative sample of the two day CMP sampling event. MS recoveries are acceptable per the SAP/QAPP. Refer to LCS/LSCSD and field duplicate results for precision data.

Laboratory Control Sample Recovery: LCS/LCSD were evaluated using ARI's control limit criteria. Approved SAP/QAPP (Floyd|Snider, 2010) LCS acceptance criteria indicate that ARI control limits are updated periodically. Current LCS control limit for SVOCs were downloaded from ARIs website. LCS/LCSD % recoveries and RPD were acceptable and within specified ARI criteria.

Field Duplicate Sample Analysis: Field duplicate results for TPH are comparable and within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 50% RPD for soil and are identified below:

SDG SE67: Field duplicate sample pair (JF-T3B2-S0-13 and JF-T3B2-S0-13-D) PCB RPD results are less than 50% RPD.

SDG SE82: Field duplicate sample pair (JF-T1B2-S0-03 and JF-T1B2-S0-03-D) PCB RPD results are less than 50% RPD.

METALS

The laboratory provided a complete Level 3 data package for the inorganic analysis. The items reviewed during validation are summarized below.

Analytical Methods: Soil and water sample metals analysis were prepared using EPA Methods 3050B and 3010A, respectively. Metals analysis was completed by USEPA Method 6010B in accordance with the method specified in the SAP/QAPP.

Sample Holding Times: All samples were prepared and analyzed within the recommended holding period from the date of collection; 180 days for metals. All holding time criteria were met.

Laboratory Reporting Limits: The laboratory achieved the reporting limits (RLs) required by the approved SAP/QAPP (Floyd|Snider, 2010) with the following discussion:

Requested method reporting levels were not specified for the water samples (rinsates) undergoing metals (Arsenic, Cadmium, Copper, Lead, Nickel or Zinc) analysis. No action was necessary.

The reporting limits were not met in cases in which the samples were analyzed at dilutions due to high concentrations of target compounds or interferences. No action was taken.

Initial and Continuing Calibration Verification: Functional guidelines stipulate that initial calibration verification (ICV) should be performed daily and prior to analytical run with a maximum difference of ±10% of the true value. Functional guidelines stipulate that continuing calibration verification (CCV) will be analyzed at a frequency of 10% or every two hours and recovery will also be within ± 10% of the true value. These criteria were met.

Initial and Continuing Calibration Blank Summary Form: Functional guidelines stipulate that the initial calibration blank (ICB) will be analyzed after the ICV as required. The continuing calibration blanks (CCBs) were run at the frequency of 10% or every two hours after the CCV. ICB and CCVs analysis frequency criteria were met and both ICB and CCVs were free of target compounds.

Interference Check Standard Recovery: Functional guidelines stipulate that ICS consist of two solutions (ICSA and ICSAB). The purpose of the ICS is to evaluate potential interferences and the instruments ability to analyze samples with these interferents. Solution ICSA contains interferents and solution ICSAB contains analytes mixed with interferents. ICS must be run at the beginning of each run, after the ICV and at the end of each run (or every 20 samples). The functional guidelines criteria of ICS are +/- 20% recovery of the spiked analytes and the absolute values of the non-spiked analytes must be less than the reporting level. These criteria were met.

Serial Dilution Summary Form: Functional guidelines stipulate that an "ICP Serial Dilution analysis shall be performed on a sample from each group of samples with a similar matrix type or for each SDG, whichever is more frequent." ARI did not report serial dilution results with SDGs associated with this project as it was not requested prior to sample analysis. Adequate data are provided to assess interferences due to sample matrix. No action was taken.

Instrument or Method Detection Limit Summary Form: ICP instrument (Optima ICP 2) detection limit and linear ranges were established April 1, 2010 and February 3 of 2011. Sample results were within linear range.

ICP Interelement Correction Factors Summary Form: Correction factor data were provided by ARI. No action was taken other than to note that inter-element and background corrections were applied.

Blank Contamination: The method and rinsate blanks were free of target compounds.

Laboratory Control Sample Recovery: LCS (blank spike) samples were performed with each analytical batch. All LCS recoveries were acceptable and within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 75 to 125 percent.

Matrix Spike Analysis: Matrix Spike (MS) analysis was performed on selected samples. Blank spike data was used to assess accuracy in cases where matrix spike quality control was not performed by ARI (SDG SE66). The metals MS percent recoveries were acceptable and within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 75 to 125 percent with the following exceptions:

SDG SE67: Matrix spike analysis was performed on Sample JF-T3B3-SO-03 with elevated zinc spike recovery (at 141%). Zinc result for Sample JF-T3B3-SO-03 is qualified as estimated (J).

Laboratory Duplicate Analysis: Laboratory duplicate analysis was performed on selected samples. Duplicate analysis was within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 20% RPD for both soil and water with the following exceptions:

SDG SE67: Laboratory duplicate was performed on Sample JF-T3B3-SO-03. Copper and zinc RPD values were greater than 20%. Sample JF-T3B3-SO-03 copper and zinc results are qualified as estimated (J) due to poor precision values.

SDG SE82: Laboratory duplicate was performed Sample JF-T1B2-SO-03. The Nickel RPD value was greater than 20%. Nickel results for Sample JF-T1B2-SO-03 as well as its field duplicate (JF-T1B2-SO-03-D) are qualified as estimated (J) due to poor precision values.

Field Duplicate Sample Analysis: Field duplicate results for metals are identified as follows:

- SDG SE67: Field duplicate sample pair (JF-T3B2-S0-13 and JF-T3B2-S0-13-D)
- SDG SE82: Field duplicate sample pair (JF-T1B2-S0-03 and JF-T1B2-S0-03-D)

Field duplicate results are comparable and within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 20% RPD for both soil and water (with few exceptions the RPD is calculated when results are greater than five times the reporting level) with the following exceptions:

> SDG SE82: On field duplicate sample pair (JF-T1B2-S0-03 and JF-T1B2-S0-03-D), the nickel RPD value was greater than 20%. As discussed above, ARI also performed a laboratory duplicate on Sample JF-T1B2-SO-03 which had an RPD value for nickel of greater than 20%. Nickel results for Sample JF-T1B2-SO-03 as well as its field duplicate (Sample JF-T1B2-SO-03-D) are qualified as estimated (J) due to these poor precision values.

Data Qualifiers

The following qualifiers were used to modify the data quality and usefulness of individual analytical results:

U - The constituent was analyzed for, but was not detected above the reported sample quantitation limit.

J - The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not met.

UJ – The constituent was not detected; the associated quantitation limit is an estimated value because quality control criteria were not met.

DNR - Do Not Report result(s). Use re-extracted and re-analyzed result(s).

R – Data are rejected due to significant exceedence of quality control criteria. The analyte may or may not be present. Additional sampling and analysis may be required to determine the presence or absence of the constituent. For statistical reasons, rejected values are not included in the database.

Y – The reporting limit is elevated due to interference. The result is not detected.

Data Assessment

Independent review was performed on chemistry data from the analytical laboratory to determine that data are of known and documented quality. Data have been evaluated and based on this information and in my professional judgment, the data are acceptable for use except where indicated by data qualifiers which may modify the usability of the data.

Jessie Compeau

Date: April 6, 2011

Jessie Compeau
Validator
Informa, LLC

Erin Beckel

4/6/11
Date

Erin Beckel;
Acting Quality Assurance Manager
Floyd|Snider

REFERENCES

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BOEING COMPANY – JORGENSEN FORGE OUTFALL SITE
SEATTLE, WASHINGTON
Tidal Study Surface Water/Stilling Well Sampling -Winter 2010/2011
DATA VALIDATION QA/QC REVIEW

INTRODUCTION

A total of seven surface water samples were collected December 22, 2010 and January 6, 2011. This sampling was conducted as part of the preparatory work for the property line pipes cleanout action according to the *Source Control Action - 15-inch and 24-inch Pipes Cleanout Work Plan (Floyd|Snider, 2010)*. Samples were analyzed by Analytical Resources Incorporated (ARI) of Tukwila, Washington for the following parameters:

- pH by USEPA Method 150.1
- Alkalinity by SM2320
- Conductivity by USEPA 120.1
- Anions (Chloride and Sulfate) by EPA Method 300.0
- Salinity by SM 2520.B
- Cations (Calcium, Magnesium, Potassium, Sodium) by USEPA Method 6010B

Samples were analyzed in accordance with procedures described in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (USEPA SW-846, 3rd edition)* and *Standard Methods (SM) for Examination of Water and Wastewater.*

Samples were analyzed and results reported by the laboratory in batch numbers as summarized below:

SDG SC18 (pH, Alkalinity, Conductivity, Anions, Salinity, and Cations):

JF-PLSD-SW-24A JF-PLSD-SW-37-7 JF-PLSD-SW-Public

JF-PLSD-SW-24B JF-PLSD-SW-37-2 JF-PLSD-SW-Public-D

SDG SJ56 (pH, Alkalinity, Conductivity, Anions, Salinity, and Cations):

LDW-Stilling Well

Quality assurance/quality control (QA/QC) reviews of laboratory data were performed in the laboratory in accordance with the laboratory quality assurance program plan. The data validation QA/QC review focused primarily on laboratory result summary sheets and quality control summary sheets to ensure that work plan data quality objectives were met for the project. Data validation was conducted in accordance with the criteria

outlined in the National Functional Guidelines for Inorganic Data Review (EPA 2004), modified to include method specific requirements of the laboratory analytical methods.

The validation level specified in Work Plan and Appendix B Sampling Analysis Plan and Quality Assurance Project Plan (SAP/QAPP) of the *Source Control Action - 15-inch and 24-inch Pipes Cleanout Work Plan (Floyd|Snider, 2010)* is a Level 1 which is considered a basic review of the analytical data collected during work involving the cleanout of the pipes. Qualified results (referred to in the Work Plan as external data validation qualifiers) were added by the data validator to electronic data deliverables (EDD). The following data requirements were evaluated:

- Package completeness
- Sample identifications and reported analyses match the Chain-of-Custody Form
- Sample holding times and sample preservation
- Verification that the required detection limits and reporting limits have been achieved.
- Verification that the field duplicates, matrix spike/ matrix spike duplicate samples (MS/MSDs), and laboratory control samples were analyzed at the proper frequency.
- Matrix spike recoveries
- Laboratory control sample recoveries
- Laboratory method blanks
- Rinsate blank

CASE NARRATIVE COMMENTS

Review of cover letters, which include case narrative notes, with associated Sample Delivery Groups (SDGs) indicates no anomalies or discrepancies for SDGs SC18 and SD56.

For SDG SC18, ARI reported that the date of analyses for the alkalinity analysis preceded the date of sample collection. ARI was contacted to correct the date of analysis and reissue sample results for alkalinity. A revised report was received from ARI.

SAMPLE CUSTODY, SAMPLE RECEIPT, and PRESERVATION

Chain of custody (COC) record, laboratory analysis request, cooler receipt forms, and other documentation (i.e. preservation verification form) were reviewed. Samples were received by ARI in good condition.

INORGANICS - Metals

The laboratory provided a complete Level 1 data package for the inorganic analysis; the items reviewed during validation are summarized below.

Analytical Methods: For metals analysis, the water samples were prepared using EPA Methods 3010A. Metals analysis was completed by USEPA Methods 6010B, in accordance with the method listed in the SAP/QAPP.

Sample Holding Times: All samples were prepared and analyzed within the recommended holding period from the date of collection; 180 days for metals. All holding time criteria were met.

Laboratory Reporting Limits: The laboratory achieved the reporting limits (RLs) required by the approved SAP/QAPP (Floyd|Snider, 2010). It should be noted that SAP/QAPP reporting levels are in u µg/L and ARI results are reported in mg/L. No action was taken other than to note this. The reporting limits were not met in cases in which the samples were analyzed at dilutions due to high concentrations of target compounds or interferences. No action was taken.

Blank Contamination: The method blanks were free of target compounds.

Laboratory Control Sample (LCS) Recovery: LCS (blank spike) samples were performed with each analytical batch. All LCS recoveries were acceptable and within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 75 to 125 percent.

Matrix Spike Analysis: For SDGs SC18 and SD56: Matrix spike analyses were not performed. Refer to field duplicate results for a measure of precision and refer to LCS results for accuracy.

Laboratory Duplicate Analysis: Laboratory duplicate analysis, a measure of precision, was not performed for SDGs SC18 or SD56. Refer to field duplicate results for a measure of precision.

Field Duplicate Sample Analysis: Field duplicate results for metals are comparable and within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 20% relative percent difference (RPD) for water samples (field duplicate pair JF-PLSD-SW-Public and JF-PLSD-SW-Public-D).

GENERAL CHEMISTRY

The laboratory provided a complete Level 1 data package for general chemistry analysis; the items reviewed during validation are summarized below.

Analytical Methods: Samples for general chemical parameters were analyzed using the following methodology:

- pH by USEPA Method 150.1
- Alkalinity by SM2320
- Conductivity by USEPA 120.1
- Anions (Chloride and Sulfate) by EPA Method 300.0
- Salinity by SM 2520.B

All samples were analyzed according to methods identified in the approved SAP/QAPP (Floyd|Snider, 2010) with two exceptions:

Salinity measurements were conducted by method SM 2520.B instead of USEPA Method 120.1. No action was taken other than to note that the methods are comparable.

pH measurements were conducted by USEPA Method 150.1 instead of SAP/QAPP listed methods as either USEPA 305.1 or SM2310. No action was taken other than to note that USEPA Method 150.1 can be used to measure pH in surface and saline waters, domestic and industrial wastes and acid rain.

Sample Holding Times: All samples were prepared and analyzed within the recommended holding period from the date of collection; 28 days for anions, salinity, and conductivity; 14 days for alkalinity, and 14 days for pH. It should be noted that ARI analyzed all samples submitted for pH analysis immediately, upon receipt. All holding time criteria were met.

Laboratory Reporting Limits: The laboratory achieved the reporting limits (RLs) required by the approved SAP/QAPP (Floyd|Snider, 2010) with the following discussions:

Units for salinity are expressed as parts per thousand by the laboratory and not µS/cm as stipulated in the SAP/QAPP. No action was taken.

The reporting limits were not met in cases in which the samples were analyzed at dilutions due to high concentrations of target compounds or interferences. No action was taken.

Blank Contamination: The method blanks were free of target compounds.

Laboratory Control Sample Recovery: LCS (blank spike) and Standard Reference Material Samples (SRM) were performed with each analytical batch. All LCS and SRM recoveries (and absolute difference for pH) were acceptable and within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 75 to 125 percent (absolute difference for pH is acceptable).

Matrix Spike Analysis: Matrix Spike (MS) analysis were not performed. Refer to LCS/SRM and field or laboratory duplicate results for accuracy and precision data.

Laboratory Duplicate Analysis: Laboratory duplicate analysis was performed on selected samples. Duplicate analysis was within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 20% RPD.

Field Duplicate Sample Analysis: Field duplicate results for conventionals are comparable and within the approved SAP/QAPP (Floyd|Snider, 2010) QC limits of 20% RPD for water samples (field duplicate pair JF-PLSD-SW-Public and JF-PLSD-SW-Public-D).

Data Qualifiers

No qualifiers were applied by the data validator to SDGs SC18 and SD56.

Data Assessment

Independent review was performed on chemistry data from the analytical laboratory to determine that data are of known and documented quality. Data have been evaluated and based on this information and in my professional judgment, the data are acceptable for use except where indicated by data qualifiers which may modify the usability of the data.

Jessie Compeau

Jessie Compeau
Validator
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March 8, 2011
Date

Erin Breckel

Erin Breckel;
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3/29/11
Date

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