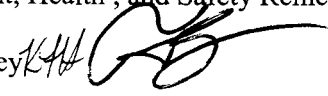


TECHNICAL MEMORANDUM

TO: Joe Flaherty, Boeing Environment, Health, and Safety Remediation

FROM: Tim Syverson and Kathryn Hartley 

DATE: April 29, 2011

RE: **SUPPLEMENTAL PHASE II ENVIRONMENTAL SITE ASSESSMENT FINDINGS
BOEING STRIKER PROPERTY
KENT, WASHINGTON**

INTRODUCTION

At the request of The Boeing Company (Boeing), Landau Associates conducted a Supplemental Phase II Environmental Site Assessment (ESA) for the approximately 75-acre Striker Property, located within the Boeing Space Center at 20403 68th Avenue South, in Kent, Washington (subject property; Figure 1). The Supplemental Phase II investigation was conducted as part of due diligence prior to the potential sale of the subject property to document current site conditions and assess potential liabilities for Boeing due to its operations at the property. The scope of work performed was established in our Supplemental Phase II ESA Work Plan dated January 19, 2011 and was developed to address recommendations identified in the initial Phase II ESA that was also conducted as part of Boeing's due diligence. The initial Phase II ESA results, conclusions, and recommendations are summarized in the Phase II ESA technical memorandum dated December 6, 2010. The Supplemental Phase II investigation also included follow-on soil and groundwater sampling in the area of a former diesel generator, where soil excavation was conducted in November 2010, and within the former footprint of Building 18-22. The generator and Building 18-22 were removed after the initial Phase II investigation.

This technical memorandum summarizes the results of the Supplemental Phase II ESA. Table 1 summarizes the sampling locations and sample analysis. The sampling locations are shown on Figure 2. Tables 2 and 3 summarize the results of the soil and groundwater sampling and analyses, respectively.

SOIL GAS SAMPLING

On January 27, 2011, Cascade Drilling and Landau Associates mobilized to collect soil gas samples from the area around location DP-16. According to the current draft Ecology guidance, soil gas samples should not be collected from depths shallower than 5 feet (ft) below ground surface (BGS) due to the possibility of diluting the collected soil gas with atmospheric air (Ecology 2009¹). Soil gas samples

¹ Ecology. 2009. Review Draft: *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action*. Publication No. 09-09-047. Washington State Department of Ecology, Toxics Cleanup Program. October.

could not be collected from deeper than 4 ft BGS at the subject property because the water table was elevated to within 4 ft of the ground surface due to seasonal fluctuations. Additionally, based on helium leak detection tests, a competent seal could not be achieved with the Post Run Tubing (PRT) soil gas sampling equipment setup. Therefore, the soil gas sampling was not conducted.

SOIL AND GROUNDWATER SAMPLING

On January 25 through January 27, 2011, Cascade Drilling advanced 17 direct-push borings at the subject property to collect soil and groundwater samples. Borings were advanced to depths ranging from 8 ft BGS to 15 ft BGS. Soil samples were collected from 15 of the 17 borings and groundwater samples were collected from all 17 borings, as summarized in Table 1. One boring was also completed at location DP-25, but the boring encountered backfill from the diesel generator area excavation, so the drilling rig moved about 15 ft to the west and completed boring DP-25b. A groundwater sample was collected from DP-25, but was not analyzed. Boring DP-25b replaced boring DP-25, so boring DP-25 is not included in Table 1, on Figure 2, or discussed in the sections below.

The soil and groundwater samples were delivered to Analytical Resources, Inc. of Tukwila, Washington and samples were submitted for selected analysis for volatile organic compounds (VOCs) by Method SW8260C, gasoline-range total petroleum hydrocarbons (TPH-G) by Method NWTPH-G, diesel-range total petroleum hydrocarbons (TPH-D) and oil-range petroleum hydrocarbons (TPH-O) by Method NWTPH-Dx, hexavalent chromium by Method SM3500CrD, and arsenic by Method 200.8.

The analytical results for soil and groundwater were compared to preliminary Washington State Model Toxics Control Act (MTCA) Method B cleanup levels for screening purposes. The analytical results for the soil samples are provided in Table 2 and are summarized as follows:

- TPH-G was detected at a concentration of 790 milligrams per kilogram (mg/kg) in the sample collected from DP-24 at a depth of 6 to 7 ft BGS. The detected concentration is greater than the screening level (100 mg/kg). TPH-G was also detected in the sample collected at a depth of 8 to 9 ft BGS from DP-24, but the detected concentration (an estimated 23 mg/kg) is less than the screening level. TPH-G was also detected in the sample collected at a depth of 4.5 to 5 ft BGS from DP 25b, but the detected concentration (56 mg/kg) is less than the screening level. The deeper sample (7 to 8 ft BGS) from DP-25b was not submitted for laboratory analysis. The laboratory analytical report indicates that the reported detections are within the gasoline range, but do not match an identifiable gasoline pattern.
- TPH-D was detected at DP-24 (7.0 mg/kg) and DP-25b (560 mg/kg) at concentrations less than the screening level (2,000 mg/kg). TPH-O was detected at DP-25b (43 mg/kg) at a concentration less than the screening level (2,000 mg/kg).
- VOCs were detected in each of the five soil samples analyzed for VOCs at concentrations greater than the laboratory reporting limits. At DP-17 and DP-19, two compounds were detected, at DP-20, three compounds were detected, and at DP-21, four compounds were detected. The detected concentrations at these locations were all less than their respective screening levels. At DP-18, five compounds were detected at concentrations greater than the

laboratory reporting limits. The detected concentration of methylene chloride [24 micrograms per kilogram ($\mu\text{g}/\text{kg}$)] in the sample from DP-18 is slightly greater than the screening level (22 $\mu\text{g}/\text{kg}$). The detected concentrations of the other compounds detected at DP-18 were all less than their respective screening levels.

- Arsenic was detected in each of the 12 soil samples analyzed for arsenic at concentrations greater than the laboratory reporting limits. The detected concentrations are all below the screening levels, with the exception of arsenic at DP-32 (7.7 mg/kg) and DP-33 (8.6 mg/kg), which are slightly greater than the screening level (7 mg/kg).
- Hexavalent chromium was not detected in any of the soil samples at concentrations greater than the laboratory reporting limits.

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

- TPH-G was detected in two of the four groundwater samples analyzed (DP-24 and DP-25b) and TPH-Dx was detected in one of the groundwater samples analyzed (DP-25b) at a concentration greater than the laboratory reporting limit. All of the detected TPH-G and TPH-D concentrations were less than their respective screening levels. TPH-O was not detected in any of the samples analyzed at concentrations greater than the laboratory reporting limits.
- VOCs were detected in all five of the groundwater samples analyzed at concentrations greater than the laboratory reporting limits. Three of the five samples indicated concentrations of VOCs greater than the screening levels: vinyl chloride was detected at DP-17 [0.8 micrograms per liter ($\mu\text{g}/\text{L}$)] and DP-18 (1.4 $\mu\text{g}/\text{L}$) at concentrations greater than the screening level (0.29 $\mu\text{g}/\text{L}$), and acetone was detected at DP-21 (980 $\mu\text{g}/\text{L}$) at a concentration greater than the screening level (800 $\mu\text{g}/\text{L}$).
- Arsenic was detected above the laboratory reporting limit in all 16 of the groundwater samples analyzed at concentrations ranging from 0.3 $\mu\text{g}/\text{L}$ to 115 $\mu\text{g}/\text{L}$. The detected concentrations in 11 of the samples are greater than the MTCA Method B screening level (5 $\mu\text{g}/\text{L}$).
- Hexavalent chromium was detected in one of the five groundwater samples analyzed (DP-30) at a concentration greater than the laboratory reporting limit. The detected concentration [0.014 milligrams per liter (mg/L)] is less than the screening level (0.048 mg/L).

CONCLUSIONS AND RECOMMENDATIONS

As noted above, the Supplemental Phase II investigation was designed to address recommendations identified in the initial Phase II ESA, and to document current conditions at the subject property in the area of the former diesel generator and within the footprint of former Building 18-22 per Boeing Environment, Health, and Safety protocol. Based on the findings of the Supplemental Phase II investigation, further evaluation does not appear warranted. The conclusions of this investigation are as follows:

1. **Chlorinated Solvents in northeastern portion of subject property:** Chlorinated solvents (methylene chloride and vinyl chloride) were detected in soil (methylene chloride only) and in groundwater (vinyl chloride only) in the northeastern portion of the subject property

consistent with the findings of the initial Phase II ESA. The results of the initial and supplemental Phase II investigations indicate localized VOC contamination in this area at low concentrations, which is consistent with the results for the northern portion of the subject property from the previous Clearwater investigation in 2002. Also consistent with the previous Clearwater investigation, the initial and supplemental Phase II investigations did not identify a source for the low concentrations of VOCs detected. Given that a No Further Action (NFA) determination was issued by the Washington State Department of Ecology (Ecology) for this portion of the Boeing Space Center in 2003, and that contaminant concentrations are consistent with the findings of the investigations on which the NFA determination was based, no further investigation is warranted.

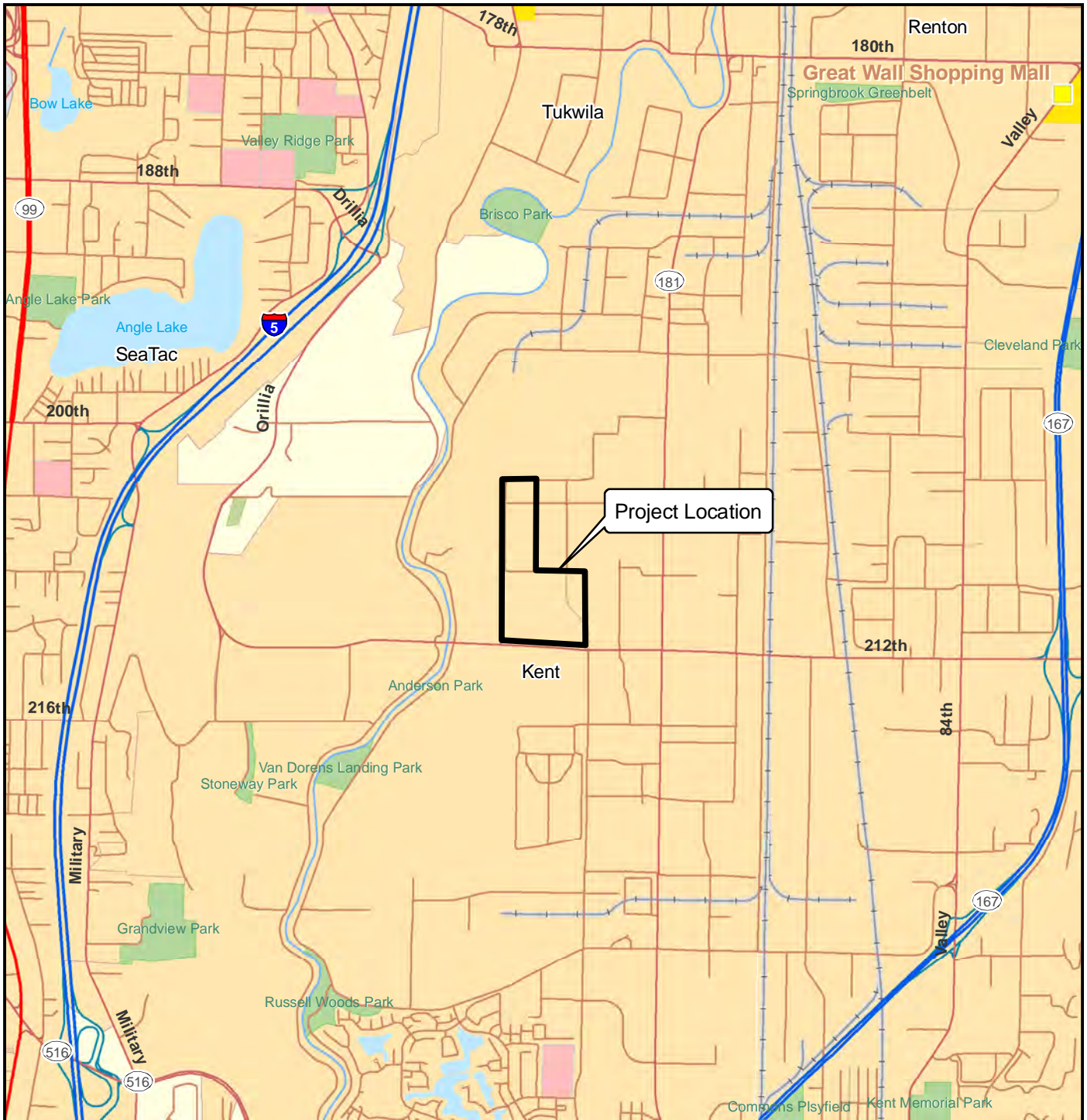
2. **Acetone in Groundwater (DP-21):** Acetone was detected in groundwater at one location (DP-21) at a concentration greater than the screening level. During the initial Phase II sampling, acetone was detected at a concentration slightly greater than the laboratory reporting limits, but well below the screening level, in one of the nine groundwater samples analyzed. Acetone was not detected in the groundwater sample from location DP-2, which is downgradient of DP-21. Acetone was detected at low concentrations in soil in this area; the detected concentrations were well below the screening level. The analytical data do not suggest a source for acetone in soil or widespread acetone impact to groundwater.
3. **Diesel Generator Spill and Excavation Area (DP-24):** TPH-G was the only analyte detected at a concentration greater than the screening level in soil at a single location (DP-24) near the southern extent of the excavation area around the former diesel generator and associated aboveground storage tank KSA-46, and there were no detections above the screening levels in any of the groundwater samples, including samples analyzed from DP-24 and the samples collected from locations directly downgradient of the diesel generator. Based on the analytical data, the recent excavation of petroleum hydrocarbon-impacted soil from this area, and because this area is currently paved, the concentration of TPH-G detected in soil is not considered a source for impact to groundwater; therefore, no further action appears warranted. A summary report will be prepared for submittal to Ecology under the Voluntary Cleanup Program (VCP) in support of a request for an NFA determination for the diesel generator area.
4. **Arsenic in Groundwater (site-wide):** Arsenic has been detected at concentrations greater than the screening level in groundwater from locations across the subject property. The investigations of the nature and extent of arsenic in groundwater have not identified a potential source of arsenic at the subject property. Based on the analytical data, the arsenic appears to reflect area-wide groundwater conditions and does not appear to be due to a subject property-specific source; therefore, no further investigation is warranted regarding the concentrations of arsenic detected in groundwater at the subject property. Additionally, Boeing will file a deed restriction for the property to restrict drinking water production wells, or any other consumption or use of groundwater from the subject property.
5. **Hexavalent Chromium in Groundwater:** During the initial Phase II ESA, hexavalent chromium was detected in groundwater at one location (DP-5, 0.049 mg/L) at a concentration 0.001 mg/L greater than the screening level (0.048 mg/L). During the Supplemental Phase II investigation, hexavalent chromium was detected in one of five groundwater samples analyzed at a concentration greater than the laboratory reporting limit, but less than the screening level. MTCA allows for compliance with the screening levels if: 1) no single sample concentration is greater than two times the screening level; 2) less than 10 percent of the concentrations exceed the screening level; and 3) the upper one-sided 95 percent confidence limit (UCL) on the true mean concentration is less than the screening level. Based on evaluation of site wide groundwater data and a calculated UCL of 0.042 mg/L, the

hexavalent chromium concentrations in groundwater at the subject property comply with the screening level. In addition, hexavalent chromium has not been detected in any of the soil samples analyzed from the subject property at concentrations greater than the laboratory reporting limits. Based on the analytical data, the low concentrations of hexavalent chromium detected in groundwater appear to reflect area-wide groundwater conditions and do not appear to be due to a subject property-specific source; therefore, no further investigation is warranted regarding the concentrations of hexavalent chromium detected in groundwater at the subject property. As discussed above, Boeing will file a deed restriction for the property to restrict drinking water production wells, or any other consumption or use of groundwater from the property.

With the exception of the diesel generator area and the detection of acetone in groundwater at one location at a concentration greater than the screening level, as discussed above, conditions in the northern portion of the subject property are consistent with conditions at the time the NFA determination was made for the Clearwater property, which included the northern portion of the subject property. No further action is recommended for this area, with the exception of submittal of a request for closure to Ecology for the diesel generator area. Investigation of subsurface soil, groundwater, and soil gas in the southern portion of the subject property has identified property-wide impact by arsenic and limited low concentrations of hexavalent chromium in groundwater that appear to reflect area-wide groundwater conditions and that are not related to a source on the subject property. As we have discussed, the data for the southern portion of the subject property will be summarized in a report that can be submitted to Ecology in support of a request for an NFA determination for this portion of the subject property.

ATTACHMENTS

- Figure 1: Vicinity Map
- Figure 2: Site Plan and Sampling Locations
- Table 1: Summary of Sample Locations and Analyses
- Table 2: Soil Analytical Results
- Table 3: Groundwater Analytical Results
- Attachment 1: Laboratory Analytical Reports (on CD-ROM)



Y:\Projects\025195\Mapdocs\Fig1.mxd 7/20/2010



Data Source: ESRI 2008



Project Striker
Kent, Washington

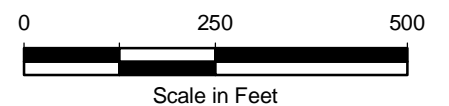
Vicinity Map

Figure
1



Legend

- Supplemental Phase II Sample Location
- Direct Push Groundwater Sample
- Direct Push Soil and Groundwater Sample
- Sub-slab Vapor Using Hand Tools, Direct Push Soil and Groundwater Sample
- Sub-slab Vapor Using Hand Tools
- ⊕ Soil Gas from Direct Push Boring
- ⊕ Soil Gas and Groundwater from Direct Push Boring
- ⊕ Soil Gas from Direct Push Boring
- ⊕ Soil Gas from Direct Push Boring
- Project Boundary
- 200 ft Sampling Grid



Data Source: Google Earth Image; King County GIS

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

**TABLE 1
SUMMARY OF SAMPLING LOCATIONS AND ANALYSIS
STRIKER PROPERTY, KENT SPACE CENTER
KENT, WASHINGTON**

Sample ID	Purpose	Sample Type	Number of Samples	Collection Method	Field Observations	Sample Depths	Sample Depth Selected for Analysis	Analysis
DP-17	Further investigation of previous detections of VOCs at Phase II ESA location DP-16/SG-3. Soil and groundwater samples were collected north, south, east, and west of DP-16 to evaluate the extent of contamination identified at DP-16/SG-3. Soil gas sampling was also planned for the original location of DP-16/SG-3 (DP-16a), and for locations to north, south, east, and west of DP-16, but samples were not collected due to the high groundwater elevation.	Soil	2	Direct Push	No evidence of contamination	2-3 ft BGS and 4-5 ft BGS	4-5 ft BGS	VOCs, Arsenic
		Groundwater	1	Direct Push	No evidence of contamination	Temporary screen placed from 6-10 ft BGS	6-10 ft BGS	VOCs, Arsenic
DP-18		Soil	2	Direct Push	No evidence of contamination	2-3 ft BGS and 4-5 ft BGS	4-5 ft BGS	VOCs, Arsenic
		Groundwater	1	Direct Push	No evidence of contamination	Temporary screen placed from 6-10 ft BGS	6-10 ft BGS	VOCs, Arsenic
DP-19		Soil	2	Direct Push	No evidence of contamination	2-3 ft BGS and 3.5-4.5 ft BGS	3.5-4.5 ft BGS	VOCs, Arsenic
		Groundwater	1	Direct Push	No evidence of contamination	Temporary screen placed from 6-10 ft BGS	6-10 ft BGS	VOCs, Arsenic
DP-20		Soil	2	Direct Push	No evidence of contamination	2-3 ft BGS and 4.5-5.5 ft BGS	4.5-5.5 ft BGS	VOCs, Arsenic
		Groundwater	1	Direct Push	No evidence of contamination	Temporary screen placed from 6-10 ft BGS	6-10 ft BGS	VOCs, Arsenic
DP-21		Soil	3	Direct Push	No evidence of contamination	0-0.5 ft BGS, 2.5-3 ft BGS, and 3-3.5 ft BGS	3-3.5 ft BGS	VOCs
		Groundwater	1	Direct Push	No evidence of contamination	Temporary screen placed from 4-8 ft BGS	4-8 ft BGS	VOCs
DP-22	Document groundwater quality in the area where soil was removed from the former diesel generator location. Groundwater samples were collected from just beyond the north, south, east, and west boundaries of the soil excavation.	Groundwater	1	Direct Push	No evidence of contamination	Temporary screen placed from 6-10 ft BGS	6-10 ft BGS	TPH-Dx, TPH-G, Arsenic
DP-23		Groundwater	1	Direct Push	No evidence of contamination	Temporary screen placed from 6-10 ft BGS	6-10 ft BGS	TPH-Dx, TPH-G, Arsenic
DP-24		Soil	2	Direct Push	Hydrocarbon odor and slight sheen from 4-7 ft BGS	6-7 ft BGS and 8-9 ft BGS	6-7 ft BGS and 8-9 ft BGS	TPH-Dx, TPH-G, Arsenic
		Groundwater	1	Direct Push	Sheen on purge water	Temporary screen placed from 6-10 ft BGS	6-10 ft BGS	TPH-Dx, TPH-G, Arsenic
DP-25b		Soil	2	Direct Push	Hydrocarbon odor from 4.5-7 ft BGS	4.5-5 ft BGS and 7-8 ft BGS	4.5-5 ft BGS	TPH-Dx, TPH-G, Arsenic
		Groundwater	1	Direct Push	No evidence of contamination	Temporary screen placed from 6-10 ft BGS	6-10 ft BGS	TPH-Dx, TPH-G, Arsenic
DP-26	Further investigation in area of Phase II location DP-5 where metals were detected in groundwater. Five soil borings were advanced to the north, south, east, and southeast of DP-5 to evaluate the potential for impacted groundwater to be migrating from Building 18-03 (where arsenic and chromium were previously detected in wastewater generated from the former film processing operation).	Soil	1	Direct Push	No evidence of contamination	1-1.5 ft BGs	1-1.5 ft BGS	Hexavalent Chromium, Arsenic
		Groundwater	1	Direct Push	No evidence of contamination	Temporary screen placed from 6-10 ft BGS	6-10 ft BGS	Hexavalent Chromium, Arsenic
DP-27		Soil	1	Direct Push	No evidence of contamination	1-2 ft BGS	1-2 ft BGS	Hexavalent Chromium, Arsenic
		Groundwater	1	Direct Push	No evidence of contamination	Temporary screen placed from 11-15 ft BGS	11-15 ft BGS	Hexavalent Chromium, Arsenic
DP-28		Soil	1	Direct Push	No evidence of contamination	2.5-3.5 ft BGS	2.5-3.5 ft BGS	Hexavalent Chromium, Arsenic
		Groundwater	1	Direct Push	No evidence of contamination	Temporary screen placed from 6-10 ft BGS	6-10 ft BGS	Hexavalent Chromium, Arsenic
DP-29		Soil	1	Direct Push	No evidence of contamination	7-8 ft BGS	7-8 ft BGS	Hexavalent Chromium, Arsenic
		Groundwater	1	Direct Push	No evidence of contamination	Temporary screen placed from 6-10 ft BGS	6-10 ft BGS	Hexavalent Chromium, Arsenic
DP-30		Soil	1	Direct Push	No evidence of contamination	2.5-3.5 ft BGS	2.5-3.5 ft BGS	Hexavalent Chromium, Arsenic
		Groundwater	1	Direct Push	No evidence of contamination	Temporary screen placed from 6-10 ft BGS	6-10 ft BGS	Hexavalent Chromium, Arsenic

**TABLE 1
SUMMARY OF SAMPLING LOCATIONS AND ANALYSIS
STRIKER PROPERTY, KENT SPACE CENTER
KENT, WASHINGTON**

Sample ID	Purpose	Sample Type	Number of Samples	Collection Method	Field Observations	Sample Depths	Sample Depth Selected for Analysis	Analysis
DP-31	Further investigation in area of Phase II ESA location DP-11 where metals were detected in groundwater. Soil borings were advanced to the west, northwest, and southeast of DP-11 to evaluate groundwater conditions upgradient and downgradient of DP-11 and to evaluate potential sources of previous detections of arsenic in groundwater in this area.	Soil	1	Direct Push	No evidence of contamination	5-6 ft BGS	5-6 ft BGS	Arsenic
		Groundwater	1	Direct Push	No evidence of contamination	Temporary screen placed from 4-8 ft BGS	4-8 ft BGS	Arsenic
DP-32		Soil	1	Direct Push	No evidence of contamination	3.5-4.5 ft BGS	3.5-4.5 ft BGS	Arsenic
		Groundwater	1	Direct Push	No evidence of contamination	Temporary screen placed from 4-8 ft BGS	4-8 ft BGS	Arsenic
DP-33		Soil	1	Direct Push	No evidence of contamination	1.5-2.5 ft BGS	1.5-2.5 ft BGS	Arsenic
		Groundwater	1	Direct Push	No evidence of contamination	Temporary screen placed from 4-8 ft BGS	4-8 ft BGS	Arsenic

**TABLE 2
SOIL ANALYTICAL RESULTS
STRIKER PROPERTY, KENT SPACE CENTER
KENT, WASHINGTON**

	MTCA Method A		KSC-DP-17	KSC-DP-18	KSC-DP-19	KSC-DP-20	KSC-DP-21	KSC-DP-24	KSC-DP-24	KSC-DP-25b	KSC-DP-26	KSC-DP-27	KSC-DP-28	KSC-DP-29	KSC-DP-30	KSC-DP-31
	Cleanup Levels for Unrestricted Land Uses	MTCA Method B Cleanup Levels	S-4-5 SG59E 01/27/2011	S-4-5 SG59H 01/27/2011	S-3.5-4.5 SG59G 01/27/2011	S-4.5-5.5 SG59F 01/27/2011	S-3-3.5 SG59I 01/27/2011	S-6-7 SG42O 01/26/2011	S-8-9 SJ32A 1/26/2011	S-4.5-5 SG42N 01/26/2011	S-1-1.5 SG19F 01/25/2011	S-1-2 SG19H 01/25/2011	S-2.5-3.5 SG19J 01/25/2011	S-7-8 SG19G 01/25/2011	S-2.5-3.5 SG19I 01/25/2011	S-5-6 SG42I 01/26/2011
VOLATILES (µg/kg)																
Method SW8260C																
Chloromethane			1.1 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ									
Bromomethane			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Vinyl Chloride	1.8		1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Chloroethane			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Methylene Chloride	22		17	24	9.0	11	4.9									
Acetone	3200		22 J	49 J	18 J	35 J	62 J									
Carbon Disulfide	5700		1.1 U	1.4	1.0 U	1.0 U	1.0 U									
1,1-Dichloroethene			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
1,1-Dichloroethane			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
trans-1,2-Dichloroethene			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
cis-1,2-Dichloroethene	350		1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Chloroform			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
1,2-Dichloroethane			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
2-Butanone	20000		5.3 U	5.0 U	5.1 U	4.8 U	4.8 U									
1,1,1-Trichloroethane			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Carbon Tetrachloride			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Vinyl Acetate			5.3 U	5.0 U	5.1 U	4.8 U	4.8 U									
Bromodichloromethane			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
1,2-Dichloropropane			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
cis-1,3-Dichloropropene			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Trichloroethene	30	3	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Dibromochloromethane			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
1,1,2-Trichloroethane			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Benzene		28	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
trans-1,3-Dichloropropene			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
2-Chloroethylvinylether			5.3 U	5.0 U	5.1 U	4.8 U	4.8 U									
Bromoform			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
4-Methyl-2-Pentanone (MIBK)			5.3 U	5.0 U	5.1 U	4.8 U	4.8 U									
2-Hexanone			5.3 U	5.0 U	5.1 U	4.8 U	4.8 U									
Tetrachloroethene			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
1,1,2,2-Tetrachloroethane			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Toluene	7,000	4,700	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Chlorobenzene			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Ethylbenzene	6,000	6,000	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Styrene			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Trichlorofluoromethane		34,000	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
1,1,2-Trichloro-1,2,2-trifluoroethane			2.1 U	2.0 U	2.0 U	1.9 U	1.9 U									
m, p-Xylene			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
o-Xylene	9,000	15,000	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
1,2-Dichlorobenzene			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
1,3-Dichlorobenzene			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
1,4-Dichlorobenzene			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Acrolein			53 UJ	50 UJ	51 UJ	48 UJ	48 UJ									
Methyl Iodide			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Bromoethane			2.1 U	2.0 U	2.0 U	1.9 U	1.9 U									
Acrylonitrile			5.3 U	5.0 U	5.1 U	4.8 U	4.8 U									
1,1-Dichloropropene			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Dibromomethane			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
1,1,1,2-Tetrachloroethane			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
1,2-Dibromo-3-chloropropane			5.3 U	5.0 U	5.1 U	4.8 U	4.8 U									
1,2,3-Trichloropropane			2.1 U	2.0 U	2.0 U	1.9 U	1.9 U									
trans-1,4-Dichloro-2-butene			5.3 U	5.0 U	5.1 U	4.8 U	4.8 U									
1,3,5-Trimethylbenzene		4,000,000	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
1,2,4-Trimethylbenzene		4,000,000	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Hexachlorobutadiene			5.3 U	5.0 U	5.1 U	4.8 U	4.8 U									

**TABLE 2
SOIL ANALYTICAL RESULTS
STRIKER PROPERTY, KENT SPACE CENTER
KENT, WASHINGTON**

	MTCA Method A Cleanup Levels for Unrestricted Land Uses	MTCA Method B Cleanup Levels	KSC-DP-17	KSC-DP-18	KSC-DP-19	KSC-DP-20	KSC-DP-21	KSC-DP-24	KSC-DP-24	KSC-DP-25b	KSC-DP-26	KSC-DP-27	KSC-DP-28	KSC-DP-29	KSC-DP-30	KSC-DP-31
			S-4-5 SG59E 01/27/2011	S-4-5 SG59H 01/27/2011	S-3.5-4.5 SG59G 01/27/2011	S-4.5-5.5 SG59F 01/27/2011	S-3-3.5 SG59I 01/27/2011	S-6-7 SG42O 01/26/2011	S-8-9 SJ32A 1/26/2011	S-4.5-5 SG42N 01/26/2011	S-1-1.5 SG19F 01/25/2011	S-1-2 SG19H 01/25/2011	S-2.5-3.5 SG19J 01/25/2011	S-7-8 SG19G 01/25/2011	S-2.5-3.5 SG19I 01/25/2011	S-5-6 SG42I 01/26/2011
Ethylene Dibromide			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Bromochloromethane			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
2,2-Dichloropropane			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
1,3-Dichloropropane			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Isopropylbenzene		--	1.1 U	2.3	1.0 U	1.0 U	1.0 U									
n-Propylbenzene		--	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
Bromobenzene			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
2-Chlorotoluene			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
4-Chlorotoluene			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
tert-Butylbenzene			1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
sec-Butylbenzene		--	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
4-Isopropyltoluene		--	1.1 U	1.3 J	1.0 U	1.6 J	1.0 U									
n-Butylbenzene		--	1.1 U	1.0 U	1.0 U	1.0 U	1.0 U									
1,2,4-Trichlorobenzene			5.3 U	5.0 U	5.1 U	4.8 U	4.8 U									
Naphthalene	5,000	4,500	5.3 U	5.0 U	5.1 U	4.8 U	4.8 U									
1,2,3-Trichlorobenzene			5.3 U	5.0 U	5.1 U	4.8 U	4.8 U									
TOTAL METALS (mg/kg) Method EPA 200.8																
Arsenic	20	7	2.6	1.9	2.3	2.6					3.1	3.5	3.8	4.1	4.7	4.3
TOTAL PETROLEUM HYDROCARBONS (mg/kg)																
NWTPH-Dx																
Diesel Range Organics	2,000	2,000						7.0		560						
Lube Oil	2,000	2,000						11 U		43						
NWTPH-Gx																
Gasoline Range Organics	100	100						790	23 J	56						
CONVENTIONALS																
Hexavalent Chrome (mg/kg) Method SM3500CrD	19	18									0.452 UJ	0.436 U	0.455 U	0.430 U	0.462 U	
Total Solids (%) Method EPA 160.3											85.80	90.00	84.60	86.40	85.60	

**TABLE 2
SOIL ANALYTICAL RESULTS
STRIKER PROPERTY, KENT SPACE CENTER
KENT, WASHINGTON**

	MTCA Method A Cleanup Levels for Unrestricted Land Uses	MTCA Method B Cleanup Levels	KSC-DP-32	KSC-DP-33
			S-3.5-4.5 SG42J 01/26/2011	S-1.5-2.5 SG42K 01/26/2011
VOLATILES (µg/kg)				
Method SW8260C				
Chloromethane				
Bromomethane				
Vinyl Chloride		1.8		
Chloroethane				
Methylene Chloride		22		
Acetone		3200		
Carbon Disulfide		5700		
1,1-Dichloroethene				
1,1-Dichloroethane				
trans-1,2-Dichloroethene				
cis-1,2-Dichloroethene		350		
Chloroform				
1,2-Dichloroethane				
2-Butanone		20000		
1,1,1-Trichloroethane				
Carbon Tetrachloride				
Vinyl Acetate				
Bromodichloromethane				
1,2-Dichloropropane				
cis-1,3-Dichloropropene				
Trichloroethene	30	3		
Dibromochloromethane				
1,1,2-Trichloroethane				
Benzene		28		
trans-1,3-Dichloropropene				
2-Chloroethylvinylether				
Bromoform				
4-Methyl-2-Pentanone (MIBK)				
2-Hexanone				
Tetrachloroethene				
1,1,2,2-Tetrachloroethane				
Toluene	7,000	4,700		
Chlorobenzene				
Ethylbenzene	6,000	6,000		
Styrene				
Trichlorofluoromethane		34,000		
1,1,2-Trichloro-1,2,2-trifluoroethane				
m, p-Xylene				
o-Xylene	9,000	15,000		
1,2-Dichlorobenzene				
1,3-Dichlorobenzene				
1,4-Dichlorobenzene				
Acrolein				
Methyl Iodide				
Bromoethane				
Acrylonitrile				
1,1-Dichloropropene				
Dibromomethane				
1,1,1,2-Tetrachloroethane				
1,2-Dibromo-3-chloropropane				
1,2,3-Trichloropropane				
trans-1,4-Dichloro-2-butene				
1,3,5-Trimethylbenzene		4,000,000		
1,2,4-Trimethylbenzene		4,000,000		
Hexachlorobutadiene				

**TABLE 2
SOIL ANALYTICAL RESULTS
STRIKER PROPERTY, KENT SPACE CENTER
KENT, WASHINGTON**

	MTCA Method A Cleanup Levels for Unrestricted Land Uses	MTCA Method B Cleanup Levels	KSC-DP-32	KSC-DP-33
			S-3.5-4.5 SG42J 01/26/2011	S-1.5-2.5 SG42K 01/26/2011
Ethylene Dibromide				
Bromochloromethane				
2,2-Dichloropropane				
1,3-Dichloropropane				
Isopropylbenzene		--		
n-Propylbenzene		--		
Bromobenzene				
2-Chlorotoluene				
4-Chlorotoluene				
tert-Butylbenzene				
sec-Butylbenzene		--		
4-Isopropyltoluene		--		
n-Butylbenzene		--		
1,2,4-Trichlorobenzene				
Naphthalene	5,000	4,500		
1,2,3-Trichlorobenzene				
TOTAL METALS (mg/kg) Method EPA 200.8				
Arsenic	20	7	7.7	8.6
TOTAL PETROLEUM HYDROCARBONS (mg/kg)				
NWTPH-Dx				
Diesel Range Organics	2,000	2,000		
Lube Oil	2,000	2,000		
NWTPH-Gx				
Gasoline Range Organics	100	100		
CONVENTIONALS				
Hexavalent Chrome (mg/kg) Method SM3500CrD	19	18		
Total Solids (%) Method EPA 160.3				

U = Indicates the compound was undetected at the reported concentration.
 J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
 UJ = The analyte was not detected in the sample; the reported sample reporting limit is an estimate.
 Bold = Detected compound.
 Box = Indicates detected concentration exceeds screening level.

**TABLE 3
GROUNDWATER ANALYTICAL RESULTS
STRIKER PROPERTY, KENT SPACE CENTER
KENT, WASHINGTON**

	MTCA Method A Cleanup Levels	MTCA Method B Cleanup Levels	KSC-DP-17 SG59A 01/27/2011	KSC-DP-18 SG59D 01/27/2011	KSC-DP-19 SG59C 01/27/2011	KSC-DP-20 SG59B 01/27/2011	KSC-DP-21 SG42D 01/26/2011	KSC-DP-22 SG42E 01/26/2011	KSC-DP-23 SG42F 01/26/2011	KSC-DP-24 SG42G 01/26/2011	KSC-DP-25b SG42H 01/26/2011	KSC-DP-26 SG19A 01/25/2011	KSC-DP-27 SG19C 01/25/2011	KSC-DP-28 SG19E 01/25/2011	KSC-DP-29 SG19B 01/25/2011	KSC-DP-30 SG19D 01/25/2011
VOLATILES (µg/L)																
Method SW8260C																
Chloromethane			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U									
Bromomethane			1.0 U	1.0 U	1.0 U	1.0 U	1.0 U									
Vinyl Chloride	0.2	0.29	0.8	1.4	0.2	0.2 U	0.2 U									
Chloroethane			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U									
Methylene Chloride			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	2.4								
Acetone		800	5.0 U	5.0 U	5.0 U	5.2	980									
Carbon Disulfide			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
1,1-Dichloroethene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
1,1-Dichloroethane			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
trans-1,2-Dichloroethene		100	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
cis-1,2-Dichloroethene		70	0.2	0.4	0.2 U	0.2 U	0.2 U	0.2 U								
Chloroform			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
1,2-Dichloroethane			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
2-Butanone			5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	240 J								
1,1,1-Trichloroethane			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
Carbon Tetrachloride			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
Vinyl Acetate			1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U								
Bromodichloromethane			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
1,2-Dichloropropane			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
cis-1,3-Dichloropropene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
Trichloroethene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.8								
Dibromochloromethane			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
1,1,2-Trichloroethane			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
Benzene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.8								
trans-1,3-Dichloropropene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
2-Chloroethylvinylether			1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U								
Bromoform			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
4-Methyl-2-Pentanone (MIBK)			5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	40 J								
2-Hexanone			5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	26 J								
Tetrachloroethene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2								
1,1,2,2-Tetrachloroethane			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
Toluene	1,000	640	0.2 U	0.2	0.6	0.2	0.2	1.6								
Chlorobenzene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
Ethylbenzene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.3								
Styrene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	3.0								
Trichlorofluoromethane			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.6								
1,1,2-Trichloro-1,2,2-trifluoroethane			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	3.4								
m, p-Xylene			0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.7								
o-Xylene	1,000		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.4								
1,2-Dichlorobenzene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
1,3-Dichlorobenzene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
1,4-Dichlorobenzene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
Acrolein			5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U								
Methyl Iodide			1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U								
Bromoethane			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
Acrylonitrile			1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 U								
1,1-Dichloropropene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
Dibromomethane			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
1,1,1,2-Tetrachloroethane			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
1,2-Dibromo-3-chloropropane			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U								
1,2,3-Trichloropropane			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U								
trans-1,4-Dichloro-2-butene			1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U								
1,3,5-Trimethylbenzene		400	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
1,2,4-Trimethylbenzene		40	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
Hexachlorobutadiene			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U								

**TABLE 3
GROUNDWATER ANALYTICAL RESULTS
STRIKER PROPERTY, KENT SPACE CENTER
KENT, WASHINGTON**

	MTCA Method A Cleanup Levels	MTCA Method B Cleanup Levels	KSC-DP-17 SG59A 01/27/2011	KSC-DP-18 SG59D 01/27/2011	KSC-DP-19 SG59C 01/27/2011	KSC-DP-20 SG59B 01/27/2011	KSC-DP-21 SG42D 01/26/2011	KSC-DP-22 SG42E 01/26/2011	KSC-DP-23 SG42F 01/26/2011	KSC-DP-24 SG42G 01/26/2011	KSC-DP-25b SG42H 01/26/2011	KSC-DP-26 SG19A 01/25/2011	KSC-DP-27 SG19C 01/25/2011	KSC-DP-28 SG19E 01/25/2011	KSC-DP-29 SG19B 01/25/2011	KSC-DP-30 SG19D 01/25/2011
Ethylene Dibromide			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U									
Bromochloromethane			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U									
2,2-Dichloropropane			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U									
1,3-Dichloropropane			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U									
Isopropylbenzene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U									
n-Propylbenzene		--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U									
Bromobenzene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U									
2-Chlorotoluene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U									
4-Chlorotoluene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U									
tert-Butylbenzene			0.2 U	0.2 U	0.2 U	0.2 U	0.2 U									
sec-Butylbenzene		--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U									
4-Isopropyltoluene		--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.4								
n-Butylbenzene		--	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U								
1,2,4-Trichlorobenzene			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U								
Naphthalene	160	160	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	1.9								
1,2,3-Trichlorobenzene			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U								
DISSOLVED METALS (µg/L) Method EPA 200.8																
Arsenic	5	5	59.9	115	77.0	33.7		66.0	66.7	2.7	71.6	0.8	111	18.0	1.1	31.9
TOTAL PETROLEUM HYDROCARBONS (mg/L)																
NWTPH-Dx																
Diesel Range Organics	0.5	0.5						0.11 U	0.10 U	0.11 U	0.20					
Lube Oil	0.5	0.5						0.22 U	0.21 U	0.21 U	0.21 U					
NWTPH-Gx																
Gasoline Range Organics	1	1						0.10 U	0.10 U	0.35	0.38					
Hexavalent Chrome (mg/L) Method SM3500CrD		0.048										0.010 U	0.010 U	0.010 U	0.010 U	0.014

TABLE 3
GROUNDWATER ANALYTICAL RESULTS
STRIKER PROPERTY, KENT SPACE CENTER
KENT, WASHINGTON

	MTCA Method A Cleanup Levels	MTCA Method B Cleanup Levels	KSC-DP-31 SG42A 01/26/2011	KSC-DP-32 SG42B 01/26/2011	KSC-DP-33 SG42C 01/26/2011
VOLATILES (µg/L)					
Method SW8260C					
Chloromethane					
Bromomethane					
Vinyl Chloride	0.2	0.29			
Chloroethane					
Methylene Chloride					
Acetone		800			
Carbon Disulfide					
1,1-Dichloroethene					
1,1-Dichloroethane					
trans-1,2-Dichloroethene		100			
cis-1,2-Dichloroethene		70			
Chloroform					
1,2-Dichloroethane					
2-Butanone					
1,1,1-Trichloroethane					
Carbon Tetrachloride					
Vinyl Acetate					
Bromodichloromethane					
1,2-Dichloropropane					
cis-1,3-Dichloropropene					
Trichloroethene					
Dibromochloromethane					
1,1,2-Trichloroethane					
Benzene					
trans-1,3-Dichloropropene					
2-Chloroethylvinylether					
Bromoform					
4-Methyl-2-Pentanone (MIBK)					
2-Hexanone					
Tetrachloroethene					
1,1,2,2-Tetrachloroethane					
Toluene	1,000	640			
Chlorobenzene					
Ethylbenzene					
Styrene					
Trichlorofluoromethane					
1,1,2-Trichloro-1,2,2-trifluoroethane					
m, p-Xylene					
o-Xylene	1,000				
1,2-Dichlorobenzene					
1,3-Dichlorobenzene					
1,4-Dichlorobenzene					
Acrolein					
Methyl Iodide					
Bromoethane					
Acrylonitrile					
1,1-Dichloropropene					
Dibromomethane					
1,1,1,2-Tetrachloroethane					
1,2-Dibromo-3-chloropropane					
1,2,3-Trichloropropane					
trans-1,4-Dichloro-2-butene					
1,3,5-Trimethylbenzene		400			
1,2,4-Trimethylbenzene		40			
Hexachlorobutadiene					

**TABLE 3
GROUNDWATER ANALYTICAL RESULTS
STRIKER PROPERTY, KENT SPACE CENTER
KENT, WASHINGTON**

	MTCA Method A Cleanup Levels	MTCA Method B Cleanup Levels	KSC-DP-31 SG42A 01/26/2011	KSC-DP-32 SG42B 01/26/2011	KSC-DP-33 SG42C 01/26/2011
Ethylene Dibromide					
Bromochloromethane					
2,2-Dichloropropane					
1,3-Dichloropropane					
Isopropylbenzene					
n-Propylbenzene		--			
Bromobenzene					
2-Chlorotoluene					
4-Chlorotoluene					
tert-Butylbenzene					
sec-Butylbenzene		--			
4-Isopropyltoluene		--			
n-Butylbenzene		--			
1,2,4-Trichlorobenzene					
Naphthalene	160	160			
1,2,3-Trichlorobenzene					
DISSOLVED METALS (µg/L) Method EPA 200.8					
Arsenic	5	5	65.4	2.8	0.3
TOTAL PETROLEUM HYDROCARBONS (mg/L)					
NWTPH-Dx					
Diesel Range Organics	0.5	0.5			
Lube Oil	0.5	0.5			
NWTPH-Gx					
Gasoline Range Organics	1	1			
Hexavalent Chrome (mg/L) Method SM3500CrD		0.048			

U = Indicates the compound was undetected at the reported concentration.
 J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
 UJ = The analyte was not detected in the sample; the reported sample reporting limit is an estimate.
 Bold = Detected compound.
 Box = Indicates detected concentration exceeds screening level.

Laboratory Analytical Reports



Analytical Resources, Incorporated
Analytical Chemists and Consultants

February 2, 2011

Kathryn Hartley
Landau Associates
130 Second Avenue South
Edmonds, WA 98020

RE: Project: Striker 025195.030.032
ARI Job: SG19

Dear Kathryn,

Enclosed, please find the original Chain-of-Custody (COC) records, sample receipt documentation, and final data report for the samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted five soil samples and five water samples in good condition on January 25, 2011 under sample delivery group (SDGs) SG19. For further details regarding sample receipt, please refer to the enclosed Cooler Receipt Forms.

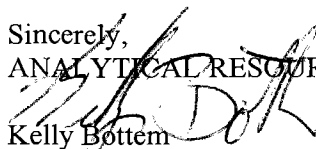
The samples were analyzed for Dissolved Metals and Hexavalent Chrome, as requested on the COC.

The soluble hexavalent chrome matrix spike is out of control low for KSC-DP-26-S-1-1.5-110125. No action was taken.

There were no other irregularities with the samples.

Quality control analysis results are included for your review. An electronic copy of this report and all associated raw data will be kept on file at 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
(206) 695-6211
kellyb@arilabs.com
www.arilabs.com



- Seattle/Edmonds (425) 778-0907
- Tacoma (253) 926-2493
- Spokane (509) 327-9737
- Portland (503) 542-1080
- _____

Date 01/25/2011
Page 1 of 1

Chain-of-Custody Record

Project Name Striker Project No. 025195.030.032

Project Location/Event Supplemental Phase II / Kent, WA

Sampler's Name PRR + SED

Project Contact Tim Syverson, Kathryn Hartley, Joe Flaherty (Boeing)

Send Results To " " " " " "

Turnaround Time
 Standard - AS
 Accelerated - Hex Chrom

Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters										Observations/Comments		
					Hexavalent Chromium*	Arsenic											
KSC-DP-26-S-1-1.5-110125	1/25/11	0900	soil	2	X	X											X Allow water samples to settle, collect aliquot from clear portion
KSC-DP-26-GW-110125		0926	H2O	2	X	X											
KSC-DP-29-S-7-8-110125		1150	soil	2	X	X											X NWTPH-Dx - run acid wash/silica gel cleanup
KSC-DP-29-GW-110125		1220	H2O	2	X	X											
KSC-DP-27-S-1-2-110125		1230	soil	2	X	X											__ run samples standardized to _____ product
KSC-DP-27-GW-110125		1300	H2O	2	X	X											__ Analyze for EPH if no specific product identified
KSC-DP-30-S-2.5-3.5-110125		1340	soil	2	X	X											VOC/BTEX/VPH (soil):
KSC-DP-30-GW-110125		1420	H2O	2	X	X											__ non-preserved
KSC-DP-28-S-2.5-3.5-110125		1440	soil	2	X	X											__ preserved w/methanol
KSC-DP-28-GW-110125		1515	H2O	2	X	X											__ preserved w/sodium bisulfate
																	__ Freeze upon receipt
																	<input checked="" type="checkbox"/> Dissolved metal water samples field filtered
																	Other <u>*Note 24-hr hold time for Hex Chrome</u>

Special Shipment/Handling or Storage Requirements on ice Method of Shipment deliver to ARI

Relinquished by <u>Susan E. Dickerson</u> Signature <u>Susan E Dickerson</u> Printed Name <u>Landau Assoc.</u> Company Date <u>1/25/11</u> Time <u>1625</u>	Received by <u>Jennifer Millbay</u> Signature <u>Jennifer Millbay</u> Printed Name <u>ARI</u> Company Date <u>1/25/11</u> Time <u>1625</u>	Relinquished by Signature _____ Printed Name _____ Company _____ Date _____ Time _____	Received by Signature _____ Printed Name _____ Company _____ Date _____ Time _____
---	--	---	---



Cooler Receipt Form

ARI Client: Landolt Boeing
 COC No(s): _____ (NA)
 Assigned ARI Job No: SG19

Project Name: Striker
 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)..... 44
 If cooler temperature is out of compliance fill out form 00070F
 Cooler Accepted by: JM Date: 1/25/11 Time: 1625 Temp Gun ID#: 90941679

Complete custody forms and attach all shipping documents

Log-In Phase:


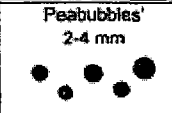
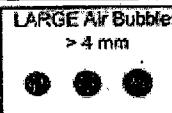
Was a temperature blank included in the cooler? YES (NO)
 What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES NO
 Were all bottles sealed in individual plastic bags? YES (NO)
 Did all bottles 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: 1/25/11 Time: 1645

**** 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"



Inquiry Number: NONE
 Analysis Requested: 01/26/11
 Contact: Syverson, Tim
 Client: The Boeing Company
 Logged by: JM
 Sample Set Used: Yes-481
 Validatable Package: No
 Deliverables:

Project #: 025195.030.032
 Project: Striker
 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
11-1596 SG19A	KSC-DP-26-GW-110125						DIS									Y						
11-1597 SG19B	KSC-DP-29-GW-110125						DIS									Y						
11-1598 SG19C	KSC-DP-27-GW-110125						DIS									Y						
11-1599 SG19D	KSC-DP-30-GW-110125						DIS									Y						
11-1600 SG19E	KSC-DP-28-GW-110125						DIS									Y						

Checked By JM Date 1/25/11

INORGANICS ANALYSIS DATA SHEET

DISSOLVED METALS

Page 1 of 1


Sample ID: KSC-DP-26-GW-110125

SAMPLE

Lab Sample ID: SG19A

LIMS ID: 11-1596

Matrix: Water

Data Release Authorized: 

Reported: 02/02/11

QC Report No: SG19-The Boeing Company

Project: Striker

025195.030.032

Date Sampled: 01/25/11

Date Received: 01/25/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	01/28/11	200.8	02/01/11	7440-38-2	Arsenic	0.2	0.8	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

DISSOLVED METALS

Page 1 of 1

Sample ID: KSC-DP-29-GW-110125

SAMPLE

Lab Sample ID: SG19B


QC Report No: SG19-The Boeing Company

LIMS ID: 11-1597

Project: Striker

Matrix: Water

025195.030.032

Data Release Authorized: 

Date Sampled: 01/25/11

Reported: 02/02/11

Date Received: 01/25/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	01/28/11	200.8	02/01/11	7440-38-2	Arsenic	0.2	1.1	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

DISSOLVED METALS

Page 1 of 1

Sample ID: KSC-DP-27-GW-110125

SAMPLE

Lab Sample ID: SG19C

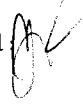
QC Report No: SG19-The Boeing Company

LIMS ID: 11-1598

Project: Striker

Matrix: Water

025195.030.032

Data Release Authorized: 

Date Sampled: 01/25/11

Reported: 02/02/11

Date Received: 01/25/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	01/28/11	200.8	02/01/11	7440-38-2	Arsenic	0.2	111	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

DISSOLVED METALS

Page 1 of 1

Sample ID: KSC-DP-30-GW-110125

SAMPLE

Lab Sample ID: SG19D


QC Report No: SG19-The Boeing Company

LIMS ID: 11-1599

Project: Striker

Matrix: Water

025195.030.032

Data Release Authorized: 

Date Sampled: 01/25/11

Reported: 02/02/11

Date Received: 01/25/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	01/28/11	200.8	02/01/11	7440-38-2	Arsenic	0.2	31.9	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: KSC-DP-28-GW-110125
SAMPLE

Lab Sample ID: SG19E
LIMS ID: 11-1600
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 02/02/11

QC Report No: SG19-The Boeing Company
Project: Striker
025195.030.032
Date Sampled: 01/25/11
Date Received: 01/25/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	01/28/11	200.8	02/01/11	7440-38-2	Arsenic	0.2	18.0	

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

DISSOLVED METALS

Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: SG19MB


QC Report No: SG19-The Boeing Company

LIMS ID: 11-1596

Project: Striker

Matrix: Water

025195.030.032

Data Release Authorized: 

Date Sampled: NA

Reported: 02/02/11

Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	01/28/11	200.8	02/01/11	7440-38-2	Arsenic	0.2	0.2	U

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: SG19LCS


QC Report No: SG19-The Boeing Company

LIMS ID: 11-1596

Project: Striker

Matrix: Water

025195.030.032

Data Release Authorized: 

Date Sampled: NA

Reported: 02/02/11

Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	26.0	25.0	104%	

Reported in $\mu\text{g/L}$

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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: KSC-DP-26-S-1-1.5-110125

SAMPLE

Lab Sample ID: SG19F


QC Report No: SG19-The Boeing Company

LIMS ID: 11-1601

Project: Striker

Matrix: Soil

025195.030.032

Data Release Authorized: 

Date Sampled: 01/25/11

Reported: 02/02/11

Date Received: 01/25/11

Percent Total Solids: 85.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/31/11	200.8	02/01/11	7440-38-2	Arsenic	0.2	3.1	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: KSC-DP-29-S-7-8-110125

SAMPLE

Lab Sample ID: SG19G


QC Report No: SG19-The Boeing Company

LIMS ID: 11-1602

Project: Striker

Matrix: Soil

025195.030.032

Data Release Authorized: 

Date Sampled: 01/25/11

Reported: 02/02/11

Date Received: 01/25/11

Percent Total Solids: 86.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/31/11	200.8	02/01/11	7440-38-2	Arsenic	0.2	4.1	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: KSC-DP-27-S-1-2-110125

SAMPLE

Lab Sample ID: SG19H


QC Report No: SG19-The Boeing Company

LIMS ID: 11-1603

Project: Striker

Matrix: Soil

025195.030.032

Data Release Authorized: 

Date Sampled: 01/25/11

Reported: 02/02/11

Date Received: 01/25/11

Percent Total Solids: 86.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/31/11	200.8	02/01/11	7440-38-2	Arsenic	0.2	3.5	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: KSC-DP-30-S-2.5-3.5-110125

SAMPLE

Lab Sample ID: SG19I

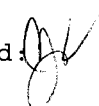
QC Report No: SG19-The Boeing Company

LIMS ID: 11-1604

Project: Striker

Matrix: Soil

025195.030.032

Data Release Authorized: 

Date Sampled: 01/25/11

Reported: 02/02/11

Date Received: 01/25/11

Percent Total Solids: 84.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/31/11	200.8	02/01/11	7440-38-2	Arsenic	0.2	4.7	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: KSC-DP-28-S-2.5-3.5-110125

SAMPLE

Lab Sample ID: SG19J


QC Report No: SG19-The Boeing Company

LIMS ID: 11-1605

Project: Striker

Matrix: Soil

025195.030.032

Data Release Authorized: 

Date Sampled: 01/25/11

Reported: 02/02/11

Date Received: 01/25/11

Percent Total Solids: 86.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/31/11	200.8	02/01/11	7440-38-2	Arsenic	0.2	3.8	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Sample ID: METHOD BLANK

Page 1 of 1

Lab Sample ID: SG19MB

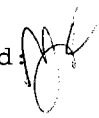
QC Report No: SG19-The Boeing Company

LIMS ID: 11-1601

Project: Striker

Matrix: Soil

025195.030.032

Data Release Authorized: 

Date Sampled: NA

Reported: 02/02/11

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/31/11	200.8	02/01/11	7440-38-2	Arsenic	0.2	0.2	U

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: SG19LCS

LIMS ID: 11-1601

Matrix: Soil

Data Release Authorized: 

Reported: 02/02/11

QC Report No: SG19-The Boeing Company

Project: Striker

025195.030.032

Date Sampled: NA

Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	26.4	25.0	106%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%

SAMPLE RESULTS-CONVENTIONALS
SG19-The Boeing Company



Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 02/01/11

Project: Striker
Event: 025195.030.032
Date Sampled: 01/25/11
Date Received: 01/25/11


Client ID: KSC-DP-26-GW-110125
ARI ID: 11-1596 SG19A

Analyte	Date Batch	Method	Units	RL	Sample
Hexavalent Chrome	01/25/11 012511#1	SM3500Cr-D	mg/L	0.010	< 0.010 U

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
SG19-The Boeing Company



Matrix: Water
Data Release Authorized: 
Reported: 02/01/11

Project: Striker
Event: 025195.030.032
Date Sampled: 01/25/11
Date Received: 01/25/11

Client ID: KSC-DP-29-GW-110125
ARI ID: 11-1597 SG19B

Analyte	Date Batch	Method	Units	RL	Sample
Hexavalent Chrome	01/25/11 012511#1	SM3500Cr-D	mg/L	0.010	< 0.010 U

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
SG19-The Boeing Company



Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 02/01/11

Project: Striker
Event: 025195.030.032
Date Sampled: 01/25/11
Date Received: 01/25/11


Client ID: KSC-DP-27-GW-110125
ARI ID: 11-1598 SG19C

Analyte	Date Batch	Method	Units	RL	Sample
Hexavalent Chrome	01/25/11 012511#1	SM3500Cr-D	mg/L	0.010	< 0.010 U

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
SG19-The Boeing Company



Matrix: Water
Data Release Authorized: 
Reported: 02/01/11

Project: Striker
Event: 025195.030.032
Date Sampled: 01/25/11
Date Received: 01/25/11

Client ID: KSC-DP-30-GW-110125
ARI ID: 11-1599 SG19D

Analyte	Date Batch	Method	Units	RL	Sample
Hexavalent Chrome	01/25/11 012511#1	SM3500Cr-D	mg/L	0.010	0.014

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
SG19-The Boeing Company



Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 02/01/11

Project: Striker
Event: 025195.030.032
Date Sampled: 01/25/11
Date Received: 01/25/11

Client ID: KSC-DP-28-GW-110125
ARI ID: 11-1600 SG19E

Analyte	Date Batch	Method	Units	RL	Sample
Hexavalent Chrome	01/25/11 012511#1	SM3500Cr-D	mg/L	0.010	< 0.010 U

RL Analytical reporting limit
U Undetected at reported detection limit

METHOD BLANK RESULTS-CONVENTIONALS
SG19-The Boeing Company



Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 02/01/11

Project: Striker
Event: 025195.030.032
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Hexavalent Chrome	SM3500Cr-D	01/25/11	mg/L	< 0.010 U	

STANDARD REFERENCE RESULTS-CONVENTIONALS
SG19-The Boeing Company



Matrix: Water
Data Release Authorized
Reported: 02/01/11


A handwritten signature or initials, possibly 'AS', written in black ink.

Project: Striker
Event: 025195.030.032
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Hexavalent Chrome ERA #41065	SM3500Cr-D	01/25/11	mg/L	0.622	0.630	98.7%

REPLICATE RESULTS-CONVENTIONALS
SG19-The Boeing Company



Matrix: Water
Data Release Authorized: 
Reported: 02/01/11

Project: Striker
Event: 025195.030.032
Date Sampled: 01/25/11
Date Received: 01/25/11

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: SG19A Client ID: KSC-DP-26-GW-110125						
Hexavalent Chrome	SM3500Cr-D	01/25/11	mg/L	< 0.010	< 0.010	NA

MS/MSD RESULTS-CONVENTIONALS
SG19-The Boeing Company



Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 02/01/11

Project: Striker
Event: 025195.030.032
Date Sampled: 01/25/11
Date Received: 01/25/11

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
---------	--------	------	-------	--------	-------	-------------	----------

ARI ID: SG19A Client ID: KSC-DP-26-GW-110125

Hexavalent Chrome	SM3500Cr-D	01/25/11	mg/L	< 0.010	0.617	0.627	98.4%
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SAMPLE RESULTS-CONVENTIONALS
SG19-The Boeing Company



Matrix: Soil
Data Release Authorized: *[Signature]*
Reported: 02/01/11

Project: Striker
Event: 025195.030.032
Date Sampled: 01/25/11
Date Received: 01/25/11

Client ID: KSC-DP-26-S-1-1.5-110125
ARI ID: 11-1601 SG19F


Analyte	Date	Method	Units	RL	Sample
Hexavalent Chrome	01/28/11 012811#1	SM3500Cr-D	mg/kg	0.452	< 0.452 U
Total Solids	01/27/11 012711#1	EPA 160.3	Percent	0.01	85.80

RL Analytical reporting limit
U Undetected at reported detection limit

Hexavalent Chrome prepared using Method 3060.

SAMPLE RESULTS-CONVENTIONALS
SG19-The Boeing Company



Matrix: Soil
Data Release Authorized: 
Reported: 02/01/11

Project: Striker
Event: 025195.030.032
Date Sampled: 01/25/11
Date Received: 01/25/11

Client ID: KSC-DP-29-S-7-8-110125
ARI ID: 11-1602 SG19G


Analyte	Date	Method	Units	RL	Sample
Hexavalent Chrome	01/28/11 012811#1	SM3500Cr-D	mg/kg	0.430	< 0.430 U
Total Solids	01/27/11 012711#1	EPA 160.3	Percent	0.01	86.40

RL Analytical reporting limit
U Undetected at reported detection limit

Hexavalent Chrome prepared using Method 3060.

SAMPLE RESULTS-CONVENTIONALS
SG19-The Boeing Company



Matrix: Soil
Data Release Authorized: 
Reported: 02/01/11

Project: Striker
Event: 025195.030.032
Date Sampled: 01/25/11
Date Received: 01/25/11

Client ID: KSC-DP-27-S-1-2-110125
ARI ID: 11-1603 SG19H

Analyte	Date	Method	Units	RL	Sample
Hexavalent Chrome	01/28/11 012811#1	SM3500Cr-D	mg/kg	0.436	< 0.436 U
Total Solids	01/27/11 012711#1	EPA 160.3	Percent	0.01	90.00

RL Analytical reporting limit
U Undetected at reported detection limit

Hexavalent Chrome prepared using Method 3060.

SAMPLE RESULTS-CONVENTIONALS
SG19-The Boeing Company



Matrix: Soil
Data Release Authorized: *[Signature]*
Reported: 02/01/11

Project: Striker
Event: 025195.030.032
Date Sampled: 01/25/11
Date Received: 01/25/11

Client ID: KSC-DP-30-S-2.5-3.5-110125
ARI ID: 11-1604 SG19I

Analyte	Date	Method	Units	RL	Sample
Hexavalent Chrome	01/28/11 012811#1	SM3500Cr-D	mg/kg	0.462	< 0.462 U
Total Solids	01/27/11 012711#1	EPA 160.3	Percent	0.01	85.60

RL Analytical reporting limit
U Undetected at reported detection limit

Hexavalent Chrome prepared using Method 3060.

SAMPLE RESULTS-CONVENTIONALS
SG19-The Boeing Company



Matrix: Soil
Data Release Authorized: *[Signature]*
Reported: 02/01/11

Project: Striker
Event: 025195.030.032
Date Sampled: 01/25/11
Date Received: 01/25/11

Client ID: KSC-DP-28-S-2.5-3.5-110125
ARI ID: 11-1605 SG19J


Analyte	Date	Method	Units	RL	Sample
Hexavalent Chrome	01/28/11 012811#1	SM3500Cr-D	mg/kg	0.455	< 0.455 U
Total Solids	01/27/11 012711#1	EPA 160.3	Percent	0.01	84.60

RL Analytical reporting limit
U Undetected at reported detection limit

Hexavalent Chrome prepared using Method 3060.

METHOD BLANK RESULTS-CONVENTIONALS
SG19-The Boeing Company




Matrix: Soil
Data Release Authorized: 
Reported: 02/01/11

Project: Striker
Event: 025195.030.032
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank
Hexavalent Chrome	01/28/11	mg/kg	< 0.395 U
Total Solids	01/27/11	Percent	< 0.01 U

STANDARD REFERENCE RESULTS-CONVENTIONALS
SG19-The Boeing Company



Matrix: Soil
Data Release Authorized: 
Reported: 02/01/11

Project: Striker
Event: 025195.030.032
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Soluble Hexavalent Chrome	01/28/11	mg/kg	37.7	39.5	95.4%
Insoluble Hexavalent Chrome	01/28/11	mg/kg	526	553	95.1%
Soil Hexavalent Chrome					

REPLICATE RESULTS-CONVENTIONALS
SG19-The Boeing Company



Matrix: Soil
Data Release Authorized: *[Signature]*
Reported: 02/01/11

Project: Striker
Event: 025195.030.032
Date Sampled: 01/25/11
Date Received: 01/25/11

Analyte	Date	Units	Sample	Replicate (s)	RPD/RSD
ARI ID: SG19F Client ID: KSC-DP-26-S-1-1.5-110125					
Hexavalent Chrome	01/28/11	mg/kg	< 0.452	< 0.450	NA
Total Solids	01/27/11	Percent	85.80	84.60 86.00	0.9%

MS/MSD RESULTS-CONVENTIONALS
SG19-The Boeing Company



Matrix: Soil
Data Release Authorized: *[Signature]*
Reported: 02/01/11

Project: Striker
Event: 025195.030.032
Date Sampled: 01/25/11
Date Received: 01/25/11

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: SG19F Client ID: KSC-DP-26-S-1-1.5-110125						
Hexavalent Chrome	01/28/11	mg/kg	< 0.452	20.1	45.9	43.8%
Hexavalent Chrome	01/28/11	mg/kg	< 0.452	568	652	87.2%



Analytical Resources, Incorporated
Analytical Chemists and Consultants

February 11, 2011

Kathryn Hartley
Landau Associates
130 Second Avenue South
Edmonds, WA 98020

RE: Project: Striker, 025195.003.032
ARI Job: SG42

Dear Kathryn,

Enclosed, please find the original and revised Chain-of-Custody (COC) records, sample receipt documentation, email documentation, and the final data report for the samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted nine water samples, ten soil samples, and a trip blank on January 26, 2011 under sample delivery group (SDG) SG42. For further details regarding sample receipt, please refer to the enclosed Cooler Receipt Forms. Select samples were placed on hold pending further instructions. Per Landau Associates, samples were allowed to settle and sample volume was collected from the clear portion.

The samples were analyzed for Total and Dissolved Arsenic, VOCs, NWTPH-Gx, and NWTPH-Dx, as requested.

The VOC continuing calibration (CCAL) analyzed on January 28, 2011 was outside the 20% control limit high for Acrolein, 2-Butanone, and 2-Hexanone. All results associated with this CCAL have been flagged with a "Q" qualifier. No further corrective action was taken.

The VOC LCS and LCSD percent recoveries Methyl Iodide of were outside the control limits high for **LCS-013011**. The LCSD percent recovery of Methyl Iodide and the LCS/LCSD percent recoveries of 2-Hexanone and Acrolein were outside the control limits high for **LCS-012811**. No corrective action was taken.

Several VOC matrix spike and matrix spike duplicate percent recoveries were outside the advisory control limits for sample **KSC-DP-21-GW-110126**. No corrective action is required for matrix QC.

There were no other analytical complications noted.

Quality control analysis results are included for your review. An electronic copy of this report and all associated raw data will be kept on file at ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,
ANALYTICAL RESOURCES, INC


Cheronne Oreiro
Project Manager

-For-
Kelly Bottem
Client Services Manager
(206) 695-6211
kellyb@arilabs.com
www.arilabs.com

- Seattle/Edmonds (425) 778-0907
- Tacoma (253) 926-2493
- Spokane (509) 327-9737
- Portland (503) 542-1080
- _____



Date 1/26/2011
Page 1 of 2

Chain-of-Custody Record

Project Name Striker Project No. 025195.003 032

Project Location/Event Kent, WA / Phase II Supplemental

Sampler's Name PRR / SED

Project Contact Tim Syverson, Kathryn Hartley, Joe Flaherty

Send Results To " " " (Boeing)
Anne Halvorsen

Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters										Observations/Comments			
					Arsenic	VOCs	TPH-Dx	TPH-G										
KSC-DP-31-GW-110126	1/26/11	0920	H ₂ O	1	X													X Allow water samples to settle, collect aliquot from clear portion
KSC-DP-32-GW-110126		0955	H ₂ O	1	X													X NWTPH-Dx - run acid wash/silica gel cleanup
KSC-DP-33-GW-110126		1020	H ₂ O	1	X													
KSC-DP-21-GW-110126		1120	H ₂ O	3		X												
KSC-DP-31-S-5-6-110126		0850	Soil	1	X													___ run samples standardized to _____ product
KSC-DP-32-S-3.5-4.5-110126		0910	Soil	1	X													___ Analyze for EPH if no specific product identified
KSC-DP-33-S-7.5-7.5-110126		0935	Soil	1	X													VOC/BTEX/VPH (soil):
KSC-DP-21-S-0-0.5-110126		1040	Soil	3		X												___ non-preserved
KSC-DP-21-S-3-3.5-110126		1045	Soil	3		X												___ preserved w/methanol
KSC-DP-21-S-2.5-3-110126		1050	Soil	3														___ preserved w/sodium bisulfate
KSC-DP-25b-S-4.5-5-110126		1310	Soil	4			X	X										___ Freeze upon receipt
KSC-DP-25b-S-7-8-110126		1315	Soil	4			X	X										✓ Dissolved metal water samples field filtered
KSC-DP-24-S-6-7-110126		1400	Soil	4			X	X										Other Archive Samples not marked for analysis
KSC-DP-24-S-8-9-110126		1405	Soil	3														
KSC-DP-22-GW-110126		1515	H ₂ O	5	X		X	X										
KSC-DP-23-GW-110126		1540	H ₂ O	5	X		X	X										
KSC-DP-24-GW-110126		1430	H ₂ O	5	X		X	X										
KSC-DP-25b-GW-110126		1340	H ₂ O	5	X		X	X										

Special Shipment/Handling or Storage Requirements on ice Method of Shipment deliver to ARI


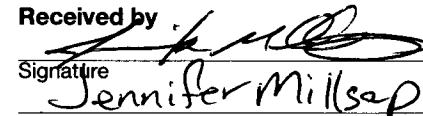
Relinquished by Signature <u>Paul Rymaker</u> Printed Name <u>CAI</u> Company Date <u>1/26/11</u> Time <u>1650</u>	Received by Signature <u>Jennifer Millsap</u> Printed Name <u>ARI</u> Company Date <u>1/26/11</u> Time <u>1650</u>	Relinquished by Signature Printed Name Company Date _____ Time _____	Received by Signature Printed Name Company Date _____ Time _____
---	---	---	---



- Seattle/Edmonds (425) 778-0907
- Tacoma (253) 926-2493
- Spokane (509) 327-9737
- Portland (503) 542-1080
- _____

Date 1/26/2011
Page 2 of 2

Chain-of-Custody Record

Project Name <u>Striker</u> Project No. <u>025195.030.032</u>					Testing Parameters										Turnaround Time <input type="checkbox"/> Standard <input type="checkbox"/> Accelerated <input type="checkbox"/> _____				
Project Location/Event <u>Kent, WA / Phase II Supplemental</u>					VOCs														
Sampler's Name <u>PRR/SEO</u>																			
Project Contact <u>Tim Syverson, Kathryn Hartley, Joe Flaherty</u>																			
Send Results To <u>"", "", "", Anne Halvorsen</u>																			
Sample I.D.	Date	Time	Matrix	No. of Containers											Observations/Comments				
<u>TB</u>	<u>1/20/11</u>			<u>2</u>											<input checked="" type="checkbox"/> Allow water samples to settle, collect aliquot from clear portion <input checked="" type="checkbox"/> NWTPH-Dx - run acid wash/silica gel cleanup ___ run samples standardized to _____ product ___ Analyze for EPH if no specific product identified VOC/BTEX/VPH (soil): ___ non-preserved ___ preserved w/methanol ___ preserved w/sodium bisulfate ___ Freeze upon receipt ___ Dissolved metal water samples field filtered Other _____				
<u>BSC-DR-25-GW-110126</u>	<u>1/26/11</u>	<u>1300</u>	<u>H₂O</u>	<u>5</u>															
Special Shipment/Handling or Storage Requirements <u>On ice</u>					Method of Shipment <u>Delivered</u>														
Relinquished by Signature  Printed Name <u>Paul Ryznar</u> Company <u>CAE</u> Date <u>1/26/11</u> Time <u>1050</u>					Received by Signature  Printed Name <u>Jennifer Millsap</u> Company <u>ART</u> Date <u>1/26/11</u> Time <u>1650</u>					Relinquished by Signature _____ Printed Name _____ Company _____ Date _____ Time _____					Received by Signature _____ Printed Name _____ Company _____ Date _____ Time _____				



Cooler Receipt Form

ARI Client: Landau

Project Name: Striker

COC No(s): _____ (NA)

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

Assigned ARI Job No: SG42

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)..... 6.0 5.0

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: JM Date: 1/26/11 Time: 1650

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? JM 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 1/26/11

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

Samples Logged by: JM Date: 1/27/11 Time: 1000

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

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
<u>KSC-DP-25B-GW-110126</u>	<u>KSC-DP-25b-GW-110126</u>		
<p>Additional Notes, Discrepancies, & Resolutions: <u>KSC-DP-23-GW-110126 - sm in lot 2.</u> <u>TB = sm in 2 of 2</u> <u>2 - SOB1 preserved vials + 1 - HCl preserved vial received for samples KSC-DP-21-S-0-CIS-110126</u> <u>KSC-DP-21-S-3-35-110126 + KSC-DP-21-S-2.5-3-110126</u> <u>Cannot use HCl vial for analysis, should be preserved with MeOH.</u></p>			
By: <u>JM</u> Date: <u>1/27/11</u>			
<p>Small Air Bubbles ~2mm</p>	<p>Peabubbles 2-4 mm</p>	<p>LARGE Air Bubbles > 4 mm</p>	<p>Small → "sm"</p> <p>Peabubbles → "pb"</p> <p>Large → "lg"</p> <p>Headspace → "hs"</p>

PRESERVATION VERIFICATION 01/27/11

Page 1 of 1



ARI Job No: SG42

PC: Kelly
VTSR: 01/26/11

Inquiry Number: NONE
Analysis Requested: 01/27/11
Contact: Syverson, Tim
Client: Landau Associates, Inc.
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

Project #: 025195.003.032
Project: Striker
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
11-1693 SG42A	KSC-DP-31-GW-110126						DIS									Y						
11-1694 SG42B	KSC-DP-32-GW-110126						DIS									Y						
11-1695 SG42C	KSC-DP-33-GW-110126						DIS									Y						
11-1697 SG42E	KSC-DP-22-GW-110126						DIS									Y						
11-1698 SG42F	KSC-DP-23-GW-110126						DIS									Y						
11-1699 SG42G	KSC-DP-24-GW-110126						DIS									Y						
11-1700 SG42H	KSC-DP-25b-GW-110126						DIS									Y						

Checked By JM Date 1/27/11

Subject: Striker - revised COC sg42
From: "Kathryn Hartley" <khartley@landauinc.com>
Date: Fri, 28 Jan 2011 11:13:33 -0800
To: Kelly Bottem <kellyb@arilabs.com>
CC: "Tim Syverson" <tsyverson@landauinc.com>, Paul Raymaker <praymaker@landauinc.com>, Susan Dickerson <SDickerson@landauinc.com>

Kelly,

Per the attached revised COC, please archive sample KSC-DP-21-S-0-0.5-110126 and please analyze the trip blank for TPH-G in addition to VOCs.

Please confirm that you received this request and let me know if you have any questions.

Thanks,
Kathryn

Kathryn F. Hartley " Senior Project Scientist
Landau Associates, Inc.
130 2nd Ave. S, Edmonds, WA 98020
425.778.0907 " direct 425.329.0268 " cell 425.248.7520
khartley@landauinc.com " www.landauinc.com

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Notice: This communication may contain privileged or other confidential information. If you have received it in error, please advise the sender by reply email and immediately delete the message and any attachments without copying or disclosing the contents. Thank you.

Content-Description: Striker_COC_sg42_rev012811.pdf
Striker_COC_sg42_rev012811.pdf **Content-Type:** application/pdf
Content-Encoding: base64

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- Spokane (509) 327-9737
- Portland (503) 542-1080
- _____

Added by KFM 1/26/11



Date 1/26/2011
Page 1 of 2

Chain-of-Custody Record

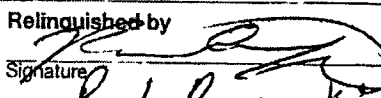
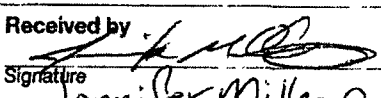
Project Name <u>Striker</u>		Project No. <u>025195.003.032</u>		Testing Parameters				Turnaround Time		
Project Location/Event <u>Kent, WA / Phase II Supplemental</u>		Sampler's Name <u>PRR / SED</u>		Arsenic VOCs TPH-Dx TPH-G				<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Accelerated <input type="checkbox"/> _____		
Project Contact <u>Tim Syverson, Kathryn Hartley, Joe Flaherty</u>								Send Results To _____		
Send Results To _____		* <u>Anna Halvorsen</u>								
Sample I.D.	Date	Time	Matrix	No. of Containers					Observations/Comments	
KSC-DP-31-GW-110126	1/26/11	0920	H ₂ O	1	X				X Allow water samples to settle, collect aliquot from clear portion	
KSC-DP-32-GW-110126		0955	H ₂ O	1	X				X NWTPH-Dx - run acid wash/silica gel cleanup	
KSC-DP-33-GW-110126		1020	H ₂ O	1	X					
KSC-DP-21-GW-110126		1120	H ₂ O	3		X				
KSC-DP-31-S-5-6-110126		0850	Soil	1	X				____ run samples standardized to _____ product	
KSC-DP-32-S-3.5-4.5-110126		0910	Soil	1	X				____ Analyze for EPH if no specific product identified	
KSC-DP-33-S-1.5-2.5-110126		0935	Soil	1	X				VOC/BTEX/VPH (soil):	
KSC-DP-21-S-0-0.5-110126		1040	Soil	3	X				____ non-preserved	
KSC-DP-21-S-3-3.5-110126		1045	Soil	3	X				____ preserved w/methanol	
KSC-DP-21-S-2.5-3-110126		1050	Soil	3					____ preserved w/sodium bisulfate	
KSC-DP-25b-S-4.5-5-110126		1310	Soil	1		X	X		____ Freeze upon receipt	
KSC-DP-25b-S-7-8-110126		1315	Soil	1		X	X		✓ Dissolved metal water samples field filtered	
KSC-DP-24-S-6-7-110126		1400	Soil	4		X	X		Other <u>Archive Samples not marked for analysis</u>	
KSC-DP-24-S-8-9-110126		1405	Soil	3						
KSC-DP-22-GW-110126		1515	H ₂ O	5	X	X	X			
KSC-DP-23-GW-110126		1540	H ₂ O	5	X	X	X			
KSC-DP-24-GW-110126		1430	H ₂ O	5	X	X	X			
KSC-DP-25b-GW-110126		1340	H ₂ O	5	X	X	X			
Special Shipment/Handling or Storage Requirements		on ice				Method of Shipment				deliver to ARI
Relinquished by		Received by		Relinquished by		Received by				
Signature _____		Signature _____		Signature _____		Signature _____				
Printed Name _____		Printed Name _____		Printed Name _____		Printed Name _____				
Company _____		Company _____		Company _____		Company _____				
Date <u>1/26/11</u> Time <u>1650</u>		Date <u>1/26/11</u> Time <u>1650</u>		Date _____ Time _____		Date _____ Time _____				



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- _____

Date 1/26/2011
Page 2 of 2

Chain-of-Custody Record

Project Name <u>Striker</u> Project No. <u>025195.032032</u>					Testing Parameters					Turnaround Time <input type="checkbox"/> Standard <input type="checkbox"/> Accelerated <input type="checkbox"/> _____	
Project Location/Event <u>Kent, WA / Phase II Supplemental</u>					VOCs						
Sampler's Name <u>PRR/SED</u>											
Project Contact <u>Tim Syverson, Kathryn Hartley, Joe Flaherty</u>											
Send Results To _____, _____, _____, <u>Anne Halvorsen</u>											
Sample I.D.	Date	Time	Matrix	No. of Containers							Observations/Comments
<u>TB</u>	<u>1/20/11</u>			<u>2</u>	<u>7</u>	<u>8</u>					
<u>PSL-DR-25-GW-110126</u>	<u>1/26/11</u>	<u>1300</u>	<u>H₂O</u>	<u>5</u>							<input checked="" type="checkbox"/> Allow water samples to settle, collect aliquot from clear portion <input checked="" type="checkbox"/> NWTPH-Dx - run acid wash/silica gel cleanup <input type="checkbox"/> run samples standardized to _____ product <input type="checkbox"/> Analyze for EPH if no specific product identified VOC/BTEX/VPH (soil): <input type="checkbox"/> non-preserved <input type="checkbox"/> preserved w/methanol <input type="checkbox"/> preserved w/sodium bisulfate <input type="checkbox"/> Freeze upon receipt <input type="checkbox"/> Dissolved metal water samples field filtered Other _____
Special Shipment/Handling or Storage Requirements <u>On ice</u>					Method of Shipment <u>Priority</u>						
Relinquished by  Signature <u>P. L. Syverson</u> Printed Name <u>CAF</u> Company Date <u>1/26/11</u> Time <u>1650</u>			Received by  Signature <u>Jennifer Millsap</u> Printed Name <u>ART</u> Company Date <u>1/26/11</u> Time <u>1650</u>			Relinquished by Signature Printed Name Company Date _____ Time _____			Received by Signature Printed Name Company Date _____ Time _____		

Subject: RE: SG59 - Confirmation
From: "Kathryn Hartley" <khartley@landauinc.com>
Date: Fri, 28 Jan 2011 14:19:10 -0800
To: Eric Branson <eric@arilabs.com>
CC: Kelly Bottem <kellyb@arilabs.com>

Eric,

That is correct. We do not want to run the 0-0.5 sample (which is why additional sample was not collected). The 2.5-3 sample should be placed on hold and the 2.5-3 sample should be run for VOCs. The samples should have the same number. Everything looks correct.

I sent the attached revised COC to Kelly this morning as well. Please note that we are requesting analysis of the trip blank submitted 1/26/11 for TPH-G in addition to VOCs.

Let me know if you have any additional questions.

Thank you,
Kathryn

Kathryn F. Hartley * Senior Project Scientist
Landau Associates, Inc.
130 2nd Ave. S, Edmonds, WA 98020
425.778.0907 * direct 425.329.0268 * cell 425.248.7520
khartley@landauinc.com * www.landauinc.com

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From: Eric Branson [<mailto:eric@arilabs.com>]
Sent: Friday, January 28, 2011 1:39 PM
To: Kathryn Hartley
Cc: Kelly Bottem
Subject: SG59 - Confirmation

Kathryn,

Can you take a look at this? To be honest, having not processed the paperwork from the first job myself, this is pretty confusing to me. It seems that the sample we didn't receive additional volume for is KSC-DP-21-S-0-0.5-110126. Hopefully that is the sample you didn't plan on running VOCs on. 21-S-2.5-3 is the sample we received VOC volume for, but is only on hold. 21-3-3.5 is the sample we we received additional volume for and is being run.

Resamples on 01/27 have 01/27 as the sample date, but retain the -110126 sample suffix to match the previously received volume.

Let me know if anything looks out of place before I give final approval to process the samples. Thanks.

-Eric-

--

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 2

Sample ID: KSC-DP-21-GW-110126
SAMPLE

Lab Sample ID: SG42D

QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1696

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized:

Date Sampled: 01/26/11

Reported: 02/11/11

Date Received: 01/26/11

Instrument/Analyst: NT5/PAB

Sample Amount: 10.0 mL

Date Analyzed: 01/28/11 14:36

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	2.4	
67-64-1	Acetone	5.0	970	E
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	240	Q
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	0.8	
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	0.8	
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	40	
591-78-6	2-Hexanone	5.0	26	Q
127-18-4	Tetrachloroethene	0.2	0.2	
79-34-5	1,1,2,2-Tetrachloroethane	0.2	< 0.2	U
108-88-3	Toluene	0.2	1.6	
108-90-7	Chlorobenzene	0.2	< 0.2	U
100-41-4	Ethylbenzene	0.2	0.3	
100-42-5	Styrene	0.2	3.0	
75-69-4	Trichlorofluoromethane	0.2	0.6	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.2	3.4	
179601-23-1	m,p-Xylene	0.4	0.7	
95-47-6	o-Xylene	0.2	0.4	
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: KSC-DP-21-GW-110126

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SAMPLE

Lab Sample ID: SG42D

QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1696

Project: Striker

Matrix: Water

025195.003.032

Date Analyzed: 01/28/11 14:36

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	0.4	
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	1.9	
87-61-6	1,2,3-Trichlorobenzene	0.5	< 0.5	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	94.9%
d8-Toluene	99.9%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	98.9%

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

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: KSC-DP-21-GW-110126

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DILUTION

Lab Sample ID: SG42D

QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1696

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: *MW*

Date Sampled: 01/26/11

Reported: 02/02/11

Date Received: 01/26/11

Instrument/Analyst: NT5/PAB

Sample Amount: 1.00 mL

Date Analyzed: 01/30/11 14:08

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	5.0	< 5.0	U
74-83-9	Bromomethane	10	< 10	U
75-01-4	Vinyl Chloride	2.0	< 2.0	U
75-00-3	Chloroethane	2.0	< 2.0	U
75-09-2	Methylene Chloride	5.0	< 5.0	U
67-64-1	Acetone	50	980	
75-15-0	Carbon Disulfide	2.0	< 2.0	U
75-35-4	1,1-Dichloroethene	2.0	< 2.0	U
75-34-3	1,1-Dichloroethane	2.0	< 2.0	U
156-60-5	trans-1,2-Dichloroethene	2.0	< 2.0	U
156-59-2	cis-1,2-Dichloroethene	2.0	< 2.0	U
67-66-3	Chloroform	2.0	< 2.0	U
107-06-2	1,2-Dichloroethane	2.0	< 2.0	U
78-93-3	2-Butanone	50	220	
71-55-6	1,1,1-Trichloroethane	2.0	< 2.0	U
56-23-5	Carbon Tetrachloride	2.0	< 2.0	U
108-05-4	Vinyl Acetate	10	< 10	U
75-27-4	Bromodichloromethane	2.0	< 2.0	U
78-87-5	1,2-Dichloropropane	2.0	< 2.0	U
10061-01-5	cis-1,3-Dichloropropene	2.0	< 2.0	U
79-01-6	Trichloroethene	2.0	< 2.0	U
124-48-1	Dibromochloromethane	2.0	< 2.0	U
79-00-5	1,1,2-Trichloroethane	2.0	< 2.0	U
71-43-2	Benzene	2.0	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	< 2.0	U
110-75-8	2-Chloroethylvinylether	10	< 10	U
75-25-2	Bromoform	2.0	< 2.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	50	< 50	U
591-78-6	2-Hexanone	50	< 50	U
127-18-4	Tetrachloroethene	2.0	< 2.0	U
79-34-5	1,1,2,2-Tetrachloroethane	2.0	< 2.0	U
108-88-3	Toluene	2.0	< 2.0	U
108-90-7	Chlorobenzene	2.0	< 2.0	U
100-41-4	Ethylbenzene	2.0	< 2.0	U
100-42-5	Styrene	2.0	< 2.0	U
75-69-4	Trichlorofluoromethane	2.0	< 2.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	2.9	
179601-23-1	m,p-Xylene	4.0	< 4.0	U
95-47-6	o-Xylene	2.0	< 2.0	U
95-50-1	1,2-Dichlorobenzene	2.0	< 2.0	U
541-73-1	1,3-Dichlorobenzene	2.0	< 2.0	U
106-46-7	1,4-Dichlorobenzene	2.0	< 2.0	U
107-02-8	Acrolein	50	< 50	U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 2 of 2

Sample ID: KSC-DP-21-GW-110126
DILUTION

Lab Sample ID: SG42D
LIMS ID: 11-1696
Matrix: Water
Date Analyzed: 01/30/11 14:08

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
025195.003.032

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	10	< 10	U
74-96-4	Bromoethane	2.0	< 2.0	U
107-13-1	Acrylonitrile	10	< 10	U
563-58-6	1,1-Dichloropropene	2.0	< 2.0	U
74-95-3	Dibromomethane	2.0	< 2.0	U
630-20-6	1,1,1,2-Tetrachloroethane	2.0	< 2.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	< 5.0	U
96-18-4	1,2,3-Trichloropropane	5.0	< 5.0	U
110-57-6	trans-1,4-Dichloro-2-butene	10	< 10	U
108-67-8	1,3,5-Trimethylbenzene	2.0	< 2.0	U
95-63-6	1,2,4-Trimethylbenzene	2.0	< 2.0	U
87-68-3	Hexachlorobutadiene	5.0	< 5.0	U
106-93-4	Ethylene Dibromide	2.0	< 2.0	U
74-97-5	Bromochloromethane	2.0	< 2.0	U
594-20-7	2,2-Dichloropropane	2.0	< 2.0	U
142-28-9	1,3-Dichloropropane	2.0	< 2.0	U
98-82-8	Isopropylbenzene	2.0	< 2.0	U
103-65-1	n-Propylbenzene	2.0	< 2.0	U
108-86-1	Bromobenzene	2.0	< 2.0	U
95-49-8	2-Chlorotoluene	2.0	< 2.0	U
106-43-4	4-Chlorotoluene	2.0	< 2.0	U
98-06-6	tert-Butylbenzene	2.0	< 2.0	U
135-98-8	sec-Butylbenzene	2.0	< 2.0	U
99-87-6	4-Isopropyltoluene	2.0	< 2.0	U
104-51-8	n-Butylbenzene	2.0	< 2.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	< 5.0	U
91-20-3	Naphthalene	5.0	< 5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	< 5.0	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.6%
d8-Toluene	99.2%
Bromofluorobenzene	93.6%
d4-1,2-Dichlorobenzene	99.4%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 2

Sample ID: TB
SAMPLE

Lab Sample ID: SG42P

QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1708

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: *WV*

Date Sampled: 01/26/11

Reported: 02/02/11

Date Received: 01/26/11

Instrument/Analyst: NT5/PAB

Sample Amount: 10.0 mL

Date Analyzed: 01/28/11 15:04

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-trifluoroethane	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
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Sample ID: TB
SAMPLE

Lab Sample ID: SG42P
LIMS ID: 11-1708
Matrix: Water
Date Analyzed: 01/28/11 15:04

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
025195.003.032

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	96.1%
d8-Toluene	98.5%
Bromofluorobenzene	93.3%
d4-1,2-Dichlorobenzene	98.5%

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

VOA SURROGATE RECOVERY SUMMARY



Matrix: Water

QC Report No: SG42-Landau Associates, Inc.
 Project: Striker
 025195.003.032

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-013011	Method Blank	10	97.9%	96.3%	93.6%	98.5%	0
LCS-013011	Lab Control	10	96.6%	98.0%	96.1%	96.9%	0
LCSD-013011	Lab Control Dup	10	95.2%	98.3%	97.5%	96.4%	0
SG42D	KSC-DP-21-GW-110126	10	94.9%	99.9%	101%	98.9%	0
SG42DDL	KSC-DP-21-GW-110126	10	97.6%	99.2%	93.6%	99.4%	0
SG42DMS	KSC-DP-21-GW-110126	10	96.5%	98.5%	97.8%	98.0%	0
SG42DMSD	KSC-DP-21-GW-110126	10	95.1%	98.2%	101%	97.5%	0
MB-012811	Method Blank	10	109%	99.8%	98.0%	96.0%	0
LCS-012811	Lab Control	10	105%	100%	104%	96.1%	0
LCSD-012811	Lab Control Dup	10	105%	101%	102%	96.1%	0
SG42P	TB	10	96.1%	98.5%	93.3%	98.5%	0

LCS/MB LIMITS

QC LIMITS

SW8260C

(DCE) = d4-1,2-Dichloroethane
 (TOL) = d8-Toluene
 (BFB) = Bromofluorobenzene
 (DCB) = d4-1,2-Dichlorobenzene

80-120
 80-120
 80-120
 80-120

80-120
 80-120
 80-120
 80-120

Prep Method: SW5030B
 Log Number Range: 11-1696 to 11-1708

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: KSC-DP-21-GW-110126

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MATRIX SPIKE

Lab Sample ID: SG42D

QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1696

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: *SM*

Date Sampled: 01/26/11

Reported: 02/02/11

Date Received: 01/26/11

Instrument/Analyst MS: NT5/PAB

Sample Amount MS: 1.00 mL

MSD: NT5/PAB

MSD: 1.00 mL

Date Analyzed MS: 01/30/11 18:13

Purge Volume MS: 10.0 mL

MSD: 01/30/11 18:40

MSD: 10.0 mL

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Chloromethane	< 5.0 U	84.9	100	84.9%	89.3	100	89.3%	5.1%
Bromomethane	< 10.0 U	101	100	101%	107	100	107%	5.8%
Vinyl Chloride	< 2.0 U	90.2	100	90.2%	94.7	100	94.7%	4.9%
Chloroethane	< 2.0 U	101	100	101%	108	100	108%	6.7%
Methylene Chloride	< 5.0 U	107	100	107%	107	100	107%	0.0%
Acetone	975	1550	500	115%	1580	500	121%	1.9%
Carbon Disulfide	< 2.0 U	98.4	100	98.4%	96.3	100	96.3%	2.2%
1,1-Dichloroethene	< 2.0 U	105	100	105%	99.8	100	99.8%	5.1%
1,1-Dichloroethane	< 2.0 U	98.4	100	98.4%	99.6	100	99.6%	1.2%
trans-1,2-Dichloroethene	< 2.0 U	97.8	100	97.8%	99.9	100	99.9%	2.1%
cis-1,2-Dichloroethene	< 2.0 U	101	100	101%	102	100	102%	1.0%
Chloroform	< 2.0 U	98.2	100	98.2%	99.3	100	99.3%	1.1%
1,2-Dichloroethane	< 2.0 U	95.6	100	95.6%	97.9	100	97.9%	2.4%
2-Butanone	224	796	500	114%	814	500	118%	2.2%
1,1,1-Trichloroethane	< 2.0 U	97.7	100	97.7%	97.9	100	97.9%	0.2%
Carbon Tetrachloride	< 2.0 U	97.3	100	97.3%	97.1	100	97.1%	0.2%
Vinyl Acetate	< 10.0 U	92.1	100	92.1%	99.0	100	99.0%	7.2%
Bromodichloromethane	< 2.0 U	97.3	100	97.3%	98.4	100	98.4%	1.1%
1,2-Dichloropropane	< 2.0 U	96.1	100	96.1%	98.0	100	98.0%	2.0%
cis-1,3-Dichloropropene	< 2.0 U	98.3	100	98.3%	100	100	100%	1.7%
Trichloroethene	< 2.0 U	97.5	100	97.5%	96.5	100	96.5%	1.0%
Dibromochloromethane	< 2.0 U	98.3	100	98.3%	98.9	100	98.9%	0.6%
1,1,2-Trichloroethane	< 2.0 U	103	100	103%	104	100	104%	1.0%
Benzene	2.0	105	100	103%	106	100	104%	0.9%
trans-1,3-Dichloropropene	< 2.0 U	101	100	101%	101	100	101%	0.0%
2-Chloroethylvinylether	< 10.0 U	83.4	100	83.4%	82.1	100	82.1%	1.6%
Bromoform	< 2.0 U	100	100	100%	97.6	100	97.6%	2.4%
4-Methyl-2-Pentanone (MIBK)	< 50.0 U	646	500	129%	676	500	135%	4.5%
2-Hexanone	< 50.0 U	644	500	129%	678	500	136%	5.1%
Tetrachloroethene	< 2.0 U	91.7	100	91.7%	90.7	100	90.7%	1.1%
1,1,2,2-Tetrachloroethane	< 2.0 U	102	100	102%	103	100	103%	1.0%
Toluene	< 2.0 U	103	100	103%	102	100	102%	1.0%
Chlorobenzene	< 2.0 U	102	100	102%	102	100	102%	0.0%
Ethylbenzene	< 2.0 U	101	100	101%	101	100	101%	0.0%
Styrene	< 2.0 U	112	100	112%	112	100	112%	0.0%
Trichlorofluoromethane	< 2.0 U	97.2	100	97.2%	94.9	100	94.9%	2.4%
1,1,2-Trichloro-1,2,2-trifl	2.9	99.9	100	97.0%	101	100	98.1%	1.1%
m,p-Xylene	< 4.0 U	215	200	108%	213	200	106%	0.9%
o-Xylene	< 2.0 U	104	100	104%	105	100	105%	1.0%
1,2-Dichlorobenzene	< 2.0 U	101	100	101%	99.6	100	99.6%	1.4%
1,3-Dichlorobenzene	< 2.0 U	100	100	100%	98.1	100	98.1%	1.9%
1,4-Dichlorobenzene	< 2.0 U	100	100	100%	98.0	100	98.0%	2.0%
Acrolein	< 50.0 U	594	500	119%	632	500	126%	6.2%
Methyl Iodide	< 10.0 U	130	100	130%	131	100	131%	0.8%
Bromoethane	< 2.0 U	111	100	111%	107	100	107%	3.7%
Acrylonitrile	< 10.0 U	97.0	100	97.0%	101	100	101%	4.0%
1,1-Dichloropropene	< 2.0 U	96.6	100	96.6%	98.1	100	98.1%	1.5%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
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Sample ID: KSC-DP-21-GW-110126
MATRIX SPIKE

Lab Sample ID: SG42D
LIMS ID: 11-1696
Matrix: Water

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
025195.003.032

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Dibromomethane	< 2.0 U	97.7	100	97.7%	97.6	100	97.6%	0.1%
1,1,1,2-Tetrachloroethane	< 2.0 U	102	100	102%	101	100	101%	1.0%
1,2-Dibromo-3-chloropropane	< 5.0 U	99.9	100	99.9%	101	100	101%	1.1%
1,2,3-Trichloropropane	< 5.0 U	103	100	103%	103	100	103%	0.0%
trans-1,4-Dichloro-2-butene	< 10.0 U	97.7	100	97.7%	90.1	100	90.1%	8.1%
1,3,5-Trimethylbenzene	< 2.0 U	105	100	105%	103	100	103%	1.9%
1,2,4-Trimethylbenzene	< 2.0 U	106	100	106%	104	100	104%	1.9%
Hexachlorobutadiene	< 5.0 U	91.1	100	91.1%	90.7	100	90.7%	0.4%
Ethylene Dibromide	< 2.0 U	100	100	100%	102	100	102%	2.0%
Bromochloromethane	< 2.0 U	101	100	101%	95.4	100	95.4%	5.7%
2,2-Dichloropropane	< 2.0 U	90.3	100	90.3%	89.8	100	89.8%	0.6%
1,3-Dichloropropane	< 2.0 U	97.5	100	97.5%	100	100	100%	2.5%
Isopropylbenzene	< 2.0 U	105	100	105%	104	100	104%	1.0%
n-Propylbenzene	< 2.0 U	102	100	102%	101	100	101%	1.0%
Bromobenzene	< 2.0 U	98.2	100	98.2%	95.0	100	95.0%	3.3%
2-Chlorotoluene	< 2.0 U	102	100	102%	101	100	101%	1.0%
4-Chlorotoluene	< 2.0 U	105	100	105%	102	100	102%	2.9%
tert-Butylbenzene	< 2.0 U	104	100	104%	103	100	103%	1.0%
sec-Butylbenzene	< 2.0 U	105	100	105%	103	100	103%	1.9%
4-Isopropyltoluene	< 2.0 U	106	100	106%	105	100	105%	0.9%
n-Butylbenzene	< 2.0 U	103	100	103%	102	100	102%	1.0%
1,2,4-Trichlorobenzene	< 5.0 U	99.6	100	99.6%	99.9	100	99.9%	0.3%
Naphthalene	< 5.0 U	119	100	119%	124	100	124%	4.1%
1,2,3-Trichlorobenzene	< 5.0 U	111	100	111%	113	100	113%	1.8%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.
Recoveries calculated from secondary analysis.

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: KSC-DP-21-GW-110126

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MATRIX SPIKE

Lab Sample ID: SG42D

QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1696

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: *MMW*

Date Sampled: 01/26/11

Reported: 02/02/11

Date Received: 01/26/11

Instrument/Analyst: NT5/PAB

Sample Amount: 1.00 mL

Date Analyzed: 01/30/11 18:13

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	5.0	---	
74-83-9	Bromomethane	10	---	
75-01-4	Vinyl Chloride	2.0	---	
75-00-3	Chloroethane	2.0	---	
75-09-2	Methylene Chloride	5.0	---	
67-64-1	Acetone	50	---	
75-15-0	Carbon Disulfide	2.0	---	
75-35-4	1,1-Dichloroethene	2.0	---	
75-34-3	1,1-Dichloroethane	2.0	---	
156-60-5	trans-1,2-Dichloroethene	2.0	---	
156-59-2	cis-1,2-Dichloroethene	2.0	---	
67-66-3	Chloroform	2.0	---	
107-06-2	1,2-Dichloroethane	2.0	---	
78-93-3	2-Butanone	50	---	
71-55-6	1,1,1-Trichloroethane	2.0	---	
56-23-5	Carbon Tetrachloride	2.0	---	
108-05-4	Vinyl Acetate	10	---	
75-27-4	Bromodichloromethane	2.0	---	
78-87-5	1,2-Dichloropropane	2.0	---	
10061-01-5	cis-1,3-Dichloropropene	2.0	---	
79-01-6	Trichloroethene	2.0	---	
124-48-1	Dibromochloromethane	2.0	---	
79-00-5	1,1,2-Trichloroethane	2.0	---	
71-43-2	Benzene	2.0	---	
10061-02-6	trans-1,3-Dichloropropene	2.0	---	
110-75-8	2-Chloroethylvinylether	10	---	
75-25-2	Bromoform	2.0	---	
108-10-1	4-Methyl-2-Pentanone (MIBK)	50	---	
591-78-6	2-Hexanone	50	---	
127-18-4	Tetrachloroethene	2.0	---	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	---	
108-88-3	Toluene	2.0	---	
108-90-7	Chlorobenzene	2.0	---	
100-41-4	Ethylbenzene	2.0	---	
100-42-5	Styrene	2.0	---	
75-69-4	Trichlorofluoromethane	2.0	---	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	---	
179601-23-1	m,p-Xylene	4.0	---	
95-47-6	o-Xylene	2.0	---	
95-50-1	1,2-Dichlorobenzene	2.0	---	
541-73-1	1,3-Dichlorobenzene	2.0	---	
106-46-7	1,4-Dichlorobenzene	2.0	---	
107-02-8	Acrolein	50	---	

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
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Sample ID: KSC-DP-21-GW-110126
MATRIX SPIKE

Lab Sample ID: SG42D
LIMS ID: 11-1696
Matrix: Water
Date Analyzed: 01/30/11 18:13

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
025195.003.032

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	10	---	
74-96-4	Bromoethane	2.0	---	
107-13-1	Acrylonitrile	10	---	
563-58-6	1,1-Dichloropropene	2.0	---	
74-95-3	Dibromomethane	2.0	---	
630-20-6	1,1,1,2-Tetrachloroethane	2.0	---	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	---	
96-18-4	1,2,3-Trichloropropane	5.0	---	
110-57-6	trans-1,4-Dichloro-2-butene	10	---	
108-67-8	1,3,5-Trimethylbenzene	2.0	---	
95-63-6	1,2,4-Trimethylbenzene	2.0	---	
87-68-3	Hexachlorobutadiene	5.0	---	
106-93-4	Ethylene Dibromide	2.0	---	
74-97-5	Bromochloromethane	2.0	---	
594-20-7	2,2-Dichloropropane	2.0	---	
142-28-9	1,3-Dichloropropane	2.0	---	
98-82-8	Isopropylbenzene	2.0	---	
103-65-1	n-Propylbenzene	2.0	---	
108-86-1	Bromobenzene	2.0	---	
95-49-8	2-Chlorotoluene	2.0	---	
106-43-4	4-Chlorotoluene	2.0	---	
98-06-6	tert-Butylbenzene	2.0	---	
135-98-8	sec-Butylbenzene	2.0	---	
99-87-6	4-Isopropyltoluene	2.0	---	
104-51-8	n-Butylbenzene	2.0	---	
120-82-1	1,2,4-Trichlorobenzene	5.0	---	
91-20-3	Naphthalene	5.0	---	
87-61-6	1,2,3-Trichlorobenzene	5.0	---	

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	96.5%
d8-Toluene	98.5%
Bromofluorobenzene	97.8%
d4-1,2-Dichlorobenzene	98.0%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 2

Sample ID: KSC-DP-21-GW-110126
MATRIX SPIKE DUP

Lab Sample ID: SG42D

QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1696

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: *WV*

Date Sampled: 01/26/11

Reported: 02/02/11

Date Received: 01/26/11

Instrument/Analyst: NT5/PAB

Sample Amount: 1.00 mL

Date Analyzed: 01/30/11 18:40

Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	5.0	---	
74-83-9	Bromomethane	10	---	
75-01-4	Vinyl Chloride	2.0	---	
75-00-3	Chloroethane	2.0	---	
75-09-2	Methylene Chloride	5.0	---	
67-64-1	Acetone	50	---	
75-15-0	Carbon Disulfide	2.0	---	
75-35-4	1,1-Dichloroethene	2.0	---	
75-34-3	1,1-Dichloroethane	2.0	---	
156-60-5	trans-1,2-Dichloroethene	2.0	---	
156-59-2	cis-1,2-Dichloroethene	2.0	---	
67-66-3	Chloroform	2.0	---	
107-06-2	1,2-Dichloroethane	2.0	---	
78-93-3	2-Butanone	50	---	
71-55-6	1,1,1-Trichloroethane	2.0	---	
56-23-5	Carbon Tetrachloride	2.0	---	
108-05-4	Vinyl Acetate	10	---	
75-27-4	Bromodichloromethane	2.0	---	
78-87-5	1,2-Dichloropropane	2.0	---	
10061-01-5	cis-1,3-Dichloropropene	2.0	---	
79-01-6	Trichloroethene	2.0	---	
124-48-1	Dibromochloromethane	2.0	---	
79-00-5	1,1,2-Trichloroethane	2.0	---	
71-43-2	Benzene	2.0	---	
10061-02-6	trans-1,3-Dichloropropene	2.0	---	
110-75-8	2-Chloroethylvinylether	10	---	
75-25-2	Bromoform	2.0	---	
108-10-1	4-Methyl-2-Pentanone (MIBK)	50	---	
591-78-6	2-Hexanone	50	---	
127-18-4	Tetrachloroethene	2.0	---	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	---	
108-88-3	Toluene	2.0	---	
108-90-7	Chlorobenzene	2.0	---	
100-41-4	Ethylbenzene	2.0	---	
100-42-5	Styrene	2.0	---	
75-69-4	Trichlorofluoromethane	2.0	---	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	---	
179601-23-1	m,p-Xylene	4.0	---	
95-47-6	o-Xylene	2.0	---	
95-50-1	1,2-Dichlorobenzene	2.0	---	
541-73-1	1,3-Dichlorobenzene	2.0	---	
106-46-7	1,4-Dichlorobenzene	2.0	---	
107-02-8	Acrolein	50	---	

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
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Sample ID: KSC-DP-21-GW-110126
MATRIX SPIKE DUP

Lab Sample ID: SG42D
LIMS ID: 11-1696
Matrix: Water
Date Analyzed: 01/30/11 18:40

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
025195.003.032

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	10	---	
74-96-4	Bromoethane	2.0	---	
107-13-1	Acrylonitrile	10	---	
563-58-6	1,1-Dichloropropene	2.0	---	
74-95-3	Dibromomethane	2.0	---	
630-20-6	1,1,1,2-Tetrachloroethane	2.0	---	
96-12-8	1,2-Dibromo-3-chloropropane	5.0	---	
96-18-4	1,2,3-Trichloropropane	5.0	---	
110-57-6	trans-1,4-Dichloro-2-butene	10	---	
108-67-8	1,3,5-Trimethylbenzene	2.0	---	
95-63-6	1,2,4-Trimethylbenzene	2.0	---	
87-68-3	Hexachlorobutadiene	5.0	---	
106-93-4	Ethylene Dibromide	2.0	---	
74-97-5	Bromochloromethane	2.0	---	
594-20-7	2,2-Dichloropropane	2.0	---	
142-28-9	1,3-Dichloropropane	2.0	---	
98-82-8	Isopropylbenzene	2.0	---	
103-65-1	n-Propylbenzene	2.0	---	
108-86-1	Bromobenzene	2.0	---	
95-49-8	2-Chlorotoluene	2.0	---	
106-43-4	4-Chlorotoluene	2.0	---	
98-06-6	tert-Butylbenzene	2.0	---	
135-98-8	sec-Butylbenzene	2.0	---	
99-87-6	4-Isopropyltoluene	2.0	---	
104-51-8	n-Butylbenzene	2.0	---	
120-82-1	1,2,4-Trichlorobenzene	5.0	---	
91-20-3	Naphthalene	5.0	---	
87-61-6	1,2,3-Trichlorobenzene	5.0	---	

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	95.1%
d8-Toluene	98.2%
Bromofluorobenzene	101%
d4-1,2-Dichlorobenzene	97.5%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-012811

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LAB CONTROL SAMPLE

Lab Sample ID: LCS-012811

QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1708

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: *WVW*

Date Sampled: NA

Reported: 02/02/11

Date Received: NA

Instrument/Analyst LCS: NT5/PAB

Sample Amount LCS: 10.0 mL

LCS D: NT5/PAB

LCS D: 10.0 mL

Date Analyzed LCS: 01/28/11 10:20

Purge Volume LCS: 10.0 mL

LCS D: 01/28/11 10:47

LCS D: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCS D	Spike Added-LCS D	LCS D Recovery	RPD
Chloromethane	10.2	10.0	102%	10.4	10.0	104%	1.9%
Bromomethane	10.9	10.0	109%	11.3	10.0	113%	3.6%
Vinyl Chloride	10.6	10.0	106%	10.8	10.0	108%	1.9%
Chloroethane	11.8	10.0	118%	12.0	10.0	120%	1.7%
Methylene Chloride	10.5	10.0	105%	10.6	10.0	106%	0.9%
Acetone	53.3	50.0	107%	54.5	50.0	109%	2.2%
Carbon Disulfide	11.0	10.0	110%	11.1	10.0	111%	0.9%
1,1-Dichloroethene	9.9	10.0	99.0%	10.2	10.0	102%	3.0%
1,1-Dichloroethane	10.6	10.0	106%	10.5	10.0	105%	0.9%
trans-1,2-Dichloroethene	10.0	10.0	100%	9.8	10.0	98.0%	2.0%
cis-1,2-Dichloroethene	10.3	10.0	103%	10.4	10.0	104%	1.0%
Chloroform	10.1	10.0	101%	10.2	10.0	102%	1.0%
1,2-Dichloroethane	9.3	10.0	93.0%	9.8	10.0	98.0%	5.2%
2-Butanone	58.1 Q	50.0	116%	59.3 Q	50.0	119%	2.0%
1,1,1-Trichloroethane	9.9	10.0	99.0%	10.0	10.0	100%	1.0%
Carbon Tetrachloride	9.2	10.0	92.0%	9.2	10.0	92.0%	0.0%
Vinyl Acetate	10.8	10.0	108%	11.2	10.0	112%	3.6%
Bromodichloromethane	9.6	10.0	96.0%	9.8	10.0	98.0%	2.1%
1,2-Dichloropropane	10.1	10.0	101%	10.4	10.0	104%	2.9%
cis-1,3-Dichloropropene	10.3	10.0	103%	10.6	10.0	106%	2.9%
Trichloroethene	9.1	10.0	91.0%	9.3	10.0	93.0%	2.2%
Dibromochloromethane	9.4	10.0	94.0%	9.5	10.0	95.0%	1.1%
1,1,2-Trichloroethane	9.8	10.0	98.0%	9.9	10.0	99.0%	1.0%
Benzene	10.1	10.0	101%	10.3	10.0	103%	2.0%
trans-1,3-Dichloropropene	10.1	10.0	101%	10.2	10.0	102%	1.0%
2-Chloroethylvinylether	9.3	10.0	93.0%	9.8	10.0	98.0%	5.2%
Bromoform	9.6	10.0	96.0%	9.8	10.0	98.0%	2.1%
4-Methyl-2-Pentanone (MIBK)	56.4	50.0	113%	57.9	50.0	116%	2.6%
2-Hexanone	60.9 Q	50.0	122%	61.8 Q	50.0	124%	1.5%
Tetrachloroethene	8.6	10.0	86.0%	8.7	10.0	87.0%	1.2%
1,1,2,2-Tetrachloroethane	10.1	10.0	101%	10.2	10.0	102%	1.0%
Toluene	9.6	10.0	96.0%	9.9	10.0	99.0%	3.1%
Chlorobenzene	9.8	10.0	98.0%	9.9	10.0	99.0%	1.0%
Ethylbenzene	9.7	10.0	97.0%	9.9	10.0	99.0%	2.0%
Styrene	10.8	10.0	108%	10.6	10.0	106%	1.9%
Trichlorofluoromethane	9.6	10.0	96.0%	9.9	10.0	99.0%	3.1%
1,1,2-Trichloro-1,2,2-trifluoroethane	9.9	10.0	99.0%	10.0	10.0	100%	1.0%
m,p-Xylene	20.3	20.0	102%	20.2	20.0	101%	0.5%
o-Xylene	10.0	10.0	100%	10.1	10.0	101%	1.0%
1,2-Dichlorobenzene	9.4	10.0	94.0%	9.6	10.0	96.0%	2.1%
1,3-Dichlorobenzene	9.5	10.0	95.0%	9.6	10.0	96.0%	1.0%
1,4-Dichlorobenzene	9.5	10.0	95.0%	9.6	10.0	96.0%	1.0%
Acrolein	65.4 Q	50.0	131%	65.8 Q	50.0	132%	0.6%
Methyl Iodide	12.0	10.0	120%	12.1	10.0	121%	0.8%
Bromoethane	10.6	10.0	106%	10.9	10.0	109%	2.8%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 2 of 2

Sample ID: LCS-012811

LAB CONTROL SAMPLE

Lab Sample ID: LCS-012811

LIMS ID: 11-1708

Matrix: Water

QC Report No: SG42-Landau Associates, Inc.

Project: Striker

025195.003.032

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Acrylonitrile	10.9	10.0	109%	10.8	10.0	108%	0.9%
1,1-Dichloropropene	10.1	10.0	101%	10.3	10.0	103%	2.0%
Dibromomethane	9.6	10.0	96.0%	9.7	10.0	97.0%	1.0%
1,1,1,2-Tetrachloroethane	9.6	10.0	96.0%	9.7	10.0	97.0%	1.0%
1,2-Dibromo-3-chloropropane	9.2	10.0	92.0%	9.4	10.0	94.0%	2.2%
1,2,3-Trichloropropane	10.0	10.0	100%	10.1	10.0	101%	1.0%
trans-1,4-Dichloro-2-butene	9.6	10.0	96.0%	9.8	10.0	98.0%	2.1%
1,3,5-Trimethylbenzene	10.6	10.0	106%	10.7	10.0	107%	0.9%
1,2,4-Trimethylbenzene	10.7	10.0	107%	10.8	10.0	108%	0.9%
Hexachlorobutadiene	8.2	10.0	82.0%	8.7	10.0	87.0%	5.9%
Ethylene Dibromide	9.6	10.0	96.0%	9.8	10.0	98.0%	2.1%
Bromochloromethane	9.3	10.0	93.0%	9.4	10.0	94.0%	1.1%
2,2-Dichloropropane	10.1	10.0	101%	10.1	10.0	101%	0.0%
1,3-Dichloropropane	10.1	10.0	101%	10.1	10.0	101%	0.0%
Isopropylbenzene	10.7	10.0	107%	10.8	10.0	108%	0.9%
n-Propylbenzene	10.5	10.0	105%	10.6	10.0	106%	0.9%
Bromobenzene	9.2	10.0	92.0%	9.4	10.0	94.0%	2.2%
2-Chlorotoluene	10.6	10.0	106%	10.7	10.0	107%	0.9%
4-Chlorotoluene	10.7	10.0	107%	10.8	10.0	108%	0.9%
tert-Butylbenzene	10.3	10.0	103%	10.4	10.0	104%	1.0%
sec-Butylbenzene	9.1	10.0	91.0%	9.1	10.0	91.0%	0.0%
4-Isopropyltoluene	10.5	10.0	105%	10.6	10.0	106%	0.9%
n-Butylbenzene	10.8	10.0	108%	10.9	10.0	109%	0.9%
1,2,4-Trichlorobenzene	9.0	10.0	90.0%	9.2	10.0	92.0%	2.2%
Naphthalene	10.0	10.0	100%	10.4	10.0	104%	3.9%
1,2,3-Trichlorobenzene	9.2	10.0	92.0%	9.4	10.0	94.0%	2.2%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	105%	105%
d8-Toluene	100%	101%
Bromofluorobenzene	104%	102%
d4-1,2-Dichlorobenzene	96.1%	96.1%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-013011

Page 1 of 2

LAB CONTROL SAMPLE

Lab Sample ID: LCS-013011

QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1696

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: *WV*

Date Sampled: NA

Reported: 02/02/11

Date Received: NA

Instrument/Analyst LCS: NT5/PAB

Sample Amount LCS: 10.0 mL

LCS: NT5/PAB

LCS: 10.0 mL

Date Analyzed LCS: 01/30/11 11:56

Purge Volume LCS: 10.0 mL

LCS: 01/30/11 12:23

LCS: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCS	LCS	Spike Added-LCS	LCS Recovery	RPD
Chloromethane	8.8	10.0	88.0%	8.7	10.0	87.0%	1.1%	
Bromomethane	10.3	10.0	103%	10.7	10.0	107%	3.8%	
Vinyl Chloride	9.3	10.0	93.0%	9.4	10.0	94.0%	1.1%	
Chloroethane	10.4	10.0	104%	10.5	10.0	105%	1.0%	
Methylene Chloride	10.2	10.0	102%	10.0	10.0	100%	2.0%	
Acetone	46.0	50.0	92.0%	45.2	50.0	90.4%	1.8%	
Carbon Disulfide	10.5	10.0	105%	10.8	10.0	108%	2.8%	
1,1-Dichloroethene	10.8	10.0	108%	10.1	10.0	101%	6.7%	
1,1-Dichloroethane	9.8	10.0	98.0%	9.9	10.0	99.0%	1.0%	
trans-1,2-Dichloroethene	9.9	10.0	99.0%	9.9	10.0	99.0%	0.0%	
cis-1,2-Dichloroethene	10.2	10.0	102%	10.0	10.0	100%	2.0%	
Chloroform	9.8	10.0	98.0%	9.8	10.0	98.0%	0.0%	
1,2-Dichloroethane	9.5	10.0	95.0%	9.7	10.0	97.0%	2.1%	
2-Butanone	47.4	50.0	94.8%	47.7	50.0	95.4%	0.6%	
1,1,1-Trichloroethane	9.9	10.0	99.0%	9.8	10.0	98.0%	1.0%	
Carbon Tetrachloride	9.7	10.0	97.0%	9.7	10.0	97.0%	0.0%	
Vinyl Acetate	9.1	10.0	91.0%	9.2	10.0	92.0%	1.1%	
Bromodichloromethane	9.6	10.0	96.0%	9.7	10.0	97.0%	1.0%	
1,2-Dichloropropane	9.4	10.0	94.0%	9.7	10.0	97.0%	3.1%	
cis-1,3-Dichloropropene	10.1	10.0	101%	10.2	10.0	102%	1.0%	
Trichloroethene	9.6	10.0	96.0%	9.6	10.0	96.0%	0.0%	
Dibromochloromethane	9.7	10.0	97.0%	9.8	10.0	98.0%	1.0%	
1,1,2-Trichloroethane	9.8	10.0	98.0%	9.8	10.0	98.0%	0.0%	
Benzene	10.2	10.0	102%	10.3	10.0	103%	1.0%	
trans-1,3-Dichloropropene	9.8	10.0	98.0%	10.0	10.0	100%	2.0%	
2-Chloroethylvinylether	8.6	10.0	86.0%	8.7	10.0	87.0%	1.2%	
Bromoform	10.1	10.0	101%	10.0	10.0	100%	1.0%	
4-Methyl-2-Pentanone (MIBK)	50.6	50.0	101%	51.1	50.0	102%	1.0%	
2-Hexanone	50.8	50.0	102%	51.4	50.0	103%	1.2%	
Tetrachloroethene	9.4	10.0	94.0%	9.5	10.0	95.0%	1.1%	
1,1,2,2-Tetrachloroethane	9.8	10.0	98.0%	9.6	10.0	96.0%	2.1%	
Toluene	10.0	10.0	100%	10.1	10.0	101%	1.0%	
Chlorobenzene	10.2	10.0	102%	10.2	10.0	102%	0.0%	
Ethylbenzene	10.2	10.0	102%	10.2	10.0	102%	0.0%	
Styrene	11.2	10.0	112%	11.3	10.0	113%	0.9%	
Trichlorofluoromethane	9.8	10.0	98.0%	10.0	10.0	100%	2.0%	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.2	10.0	102%	9.7	10.0	97.0%	5.0%	
m,p-Xylene	21.6	20.0	108%	21.6	20.0	108%	0.0%	
o-Xylene	10.4	10.0	104%	10.3	10.0	103%	1.0%	
1,2-Dichlorobenzene	10.3	10.0	103%	10.1	10.0	101%	2.0%	
1,3-Dichlorobenzene	10.3	10.0	103%	10.3	10.0	103%	0.0%	
1,4-Dichlorobenzene	10.3	10.0	103%	10.3	10.0	103%	0.0%	
Acrolein	58.8	50.0	118%	59.4	50.0	119%	1.0%	
Methyl Iodide	13.0	10.0	130%	13.1	10.0	131%	0.8%	
Bromoethane	11.1	10.0	111%	10.6	10.0	106%	4.6%	

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

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Sample ID: LCS-013011

LAB CONTROL SAMPLE

Lab Sample ID: LCS-013011

LIMS ID: 11-1696

Matrix: Water

QC Report No: SG42-Landau Associates, Inc.

Project: Striker

025195.003.032

Analyte	LCS			LCSD			RPD
	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	
Acrylonitrile	8.8	10.0	88.0%	8.8	10.0	88.0%	0.0%
1,1-Dichloropropene	9.9	10.0	99.0%	10.0	10.0	100%	1.0%
Dibromomethane	9.5	10.0	95.0%	9.5	10.0	95.0%	0.0%
1,1,1,2-Tetrachloroethane	10.0	10.0	100%	10.0	10.0	100%	0.0%
1,2-Dibromo-3-chloropropane	8.6	10.0	86.0%	9.0	10.0	90.0%	4.5%
1,2,3-Trichloropropane	9.7	10.0	97.0%	9.8	10.0	98.0%	1.0%
trans-1,4-Dichloro-2-butene	10.8	10.0	108%	10.8	10.0	108%	0.0%
1,3,5-Trimethylbenzene	11.0	10.0	110%	10.9	10.0	109%	0.9%
1,2,4-Trimethylbenzene	11.1	10.0	111%	11.1	10.0	111%	0.0%
Hexachlorobutadiene	9.4	10.0	94.0%	9.5	10.0	95.0%	1.1%
Ethylene Dibromide	9.7	10.0	97.0%	9.7	10.0	97.0%	0.0%
Bromochloromethane	10.1	10.0	101%	10.1	10.0	101%	0.0%
2,2-Dichloropropane	9.7	10.0	97.0%	9.6	10.0	96.0%	1.0%
1,3-Dichloropropane	9.6	10.0	96.0%	9.7	10.0	97.0%	1.0%
Isopropylbenzene	11.0	10.0	110%	11.0	10.0	110%	0.0%
n-Propylbenzene	10.8	10.0	108%	10.7	10.0	107%	0.9%
Bromobenzene	10.0	10.0	100%	9.9	10.0	99.0%	1.0%
2-Chlorotoluene	10.6	10.0	106%	10.6	10.0	106%	0.0%
4-Chlorotoluene	10.9	10.0	109%	10.8	10.0	108%	0.9%
tert-Butylbenzene	10.7	10.0	107%	10.7	10.0	107%	0.0%
sec-Butylbenzene	11.0	10.0	110%	11.0	10.0	110%	0.0%
4-Isopropyltoluene	11.1	10.0	111%	11.1	10.0	111%	0.0%
n-Butylbenzene	10.8	10.0	108%	10.9	10.0	109%	0.9%
1,2,4-Trichlorobenzene	9.6	10.0	96.0%	9.8	10.0	98.0%	2.1%
Naphthalene	10.1	10.0	101%	10.2	10.0	102%	1.0%
1,2,3-Trichlorobenzene	10.0	10.0	100%	10.2	10.0	102%	2.0%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	96.6%	95.2%
d8-Toluene	98.0%	98.3%
Bromofluorobenzene	96.1%	97.5%
d4-1,2-Dichlorobenzene	96.9%	96.4%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 2

Sample ID: MB-013011
METHOD BLANK

Lab Sample ID: MB-013011

QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1696

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: *MMW*

Date Sampled: NA

Reported: 02/02/11

Date Received: NA

Instrument/Analyst: NT5/PAB

Sample Amount: 10.0 mL

Date Analyzed: 01/30/11 13:14

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-trifluoroethane	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
Page 2 of 2

Sample ID: MB-013011
METHOD BLANK

Lab Sample ID: MB-013011
LIMS ID: 11-1696
Matrix: Water
Date Analyzed: 01/30/11 13:14

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
025195.003.032

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	96.3%
Bromofluorobenzene	93.6%
d4-1,2-Dichlorobenzene	98.5%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 2

Sample ID: MB-012811
METHOD BLANK

Lab Sample ID: MB-012811

QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1708

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: *WV*

Date Sampled: NA

Reported: 02/02/11

Date Received: NA

Instrument/Analyst: NT5/PAB

Sample Amount: 10.0 mL

Date Analyzed: 01/28/11 11:14

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-trifluoroethane	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
Page 2 of 2

Sample ID: MB-012811
METHOD BLANK

Lab Sample ID: MB-012811
LIMS ID: 11-1708
Matrix: Water
Date Analyzed: 01/28/11 11:14

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
025195.003.032

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	109%
d8-Toluene	99.8%
Bromofluorobenzene	98.0%
d4-1,2-Dichlorobenzene	96.0%

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Matrix: Water

Data Release Authorized: 
 Reported: 02/07/11

QC Report No: SG42-Landau Associates, Inc.

Project: Striker

Event: 025195.003.032

Date Sampled: 01/26/11

Date Received: 01/26/11



ARI ID	Client ID	Analysis Date	DL	Range	Result
MB-020211 11-1697	Method Blank	02/02/11 PID2	1.0	Gasoline HC ID Trifluorotoluene Bromobenzene	< 0.10 U --- 94.4% 94.4%
SG42E 11-1697	KSC-DP-22-GW-110126	02/02/11 PID2	1.0	Gasoline HC ID Trifluorotoluene Bromobenzene	< 0.10 U --- 98.5% 96.9%
SG42F 11-1698	KSC-DP-23-GW-110126	02/02/11 PID2	1.0	Gasoline HC ID Trifluorotoluene Bromobenzene	< 0.10 U --- 99.6% 96.3%
SG42G 11-1699	KSC-DP-24-GW-110126	02/02/11 PID2	1.0	Gasoline HC ID Trifluorotoluene Bromobenzene	0.35 GRO 97.7% 94.3%
SG42H 11-1700	KSC-DP-25b-GW-110126	02/02/11 PID2	1.0	Gasoline HC ID Trifluorotoluene Bromobenzene	0.38 GRO 98.2% 94.8%
SG42P 11-1708	TB	02/02/11 PID2	1.0	Gasoline HC ID Trifluorotoluene Bromobenzene	< 0.10 U --- 101% 98.8%

Gasoline values reported in mg/L (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: SG42
Matrix: Water

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
Event: 025195.003.032


<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-020211	94.4%	94.4%	0
LCS-020211	98.2%	99.9%	0
LCSD-020211	98.5%	98.9%	0
KSC-DP-22-GW-11012	98.5%	96.9%	0
KSC-DP-23-GW-11012	99.6%	96.3%	0
KSC-DP-24-GW-11012	97.7%	94.3%	0
KSC-DP-25b-GW-1101	98.2%	94.8%	0
TB	101%	98.8%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 11-1697 to 11-1708

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: LCS-020211
LAB CONTROL SAMPLE

Lab Sample ID: LCS-020211
LIMS ID: 11-1697
Matrix: Water
Data Release Authorized: 
Reported: 02/07/11

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
Event: 025195.003.032
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 02/02/11 06:37
LCSD: 02/02/11 07:05
Instrument/Analyst LCS: PID2/MH
LCSD: PID2/MH

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike	LCS	LCS	LCSD	Spike	LCSD	RPD
		Added-LCS	Recovery			Added-LCS	Recovery	
Gasoline Range Hydrocarbons	1.00	1.00	100%	0.99	1.00	99.0%	1.0%	

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	98.2%	98.5%
Bromobenzene	99.9%	98.9%

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Matrix: Water


QC Report No: SG42-Landau Associates, Inc.

Project: Striker

Event: 025195.003.032

Date Sampled: 01/26/11

Date Received: 01/26/11

Data Release Authorized: 
Reported: 02/08/11

ARI ID	Client ID	Analysis Date	DL	Range	Result
SG42P	TB	02/02/11	1.0	Gasoline	< 0.10 U
11-1708		PID2		HC ID	---
				Trifluorotoluene	101%
				Bromobenzene	98.8%

Gasoline values reported in mg/L (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: SG42
Matrix: Water

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
Event: 025195.003.032

<u>Client ID</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
TB	101%	98.8%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 11-1708 to 11-1708

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Matrix: Soil


QC Report No: SG42-Landau Associates, Inc.

Project: Striker

Event: 025195.003.032

Date Sampled: 01/26/11

Date Received: 01/26/11

Data Release Authorized: 
Reported: 02/08/11

ARI ID	Client ID	Analysis Date	Basis	Range	Result
MB-020211 11-1706	Method Blank	02/02/11 PID2	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 5.0 U --- 94.4% 94.4%
SG42N 11-1706	KSC-DP-25b-S-4.5-5-110126	02/02/11 PID2	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	56 GRO 98.9% 108%
SG42O 11-1707	KSC-DP-24-S-6-7-110126	02/02/11 PID2	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	790 GRO 95.1% 110%

Gasoline values reported in mg/kg (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: SG42
Matrix: Soil

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
Event: 025195.003.032

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT</u>	<u>OUT</u>
MB-020211	NA	94.4%	94.4%	0	
LCS-020211	NA	98.2%	99.9%	0	
LCSD-020211	NA	98.5%	98.9%	0	
KSC-DP-25b-S-4.5-5-1101	NA	98.9%	108%	0	
KSC-DP-24-S-6-7-110126	NA	95.1%	110%	0	

	LCS/MB LIMITS	QC LIMITS
(BFB) = Bromofluorobenzene	(70-130)	(70-130)
(TFT) = Trifluorotoluene	(80-120)	(66-123)
(BBZ) = Bromobenzene	(80-120)	(62-130)

Log Number Range: 11-1706 to 11-1707

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-020211

LAB CONTROL SAMPLE

Lab Sample ID: LCS-020211

LIMS ID: 11-1706

Matrix: Soil

Data Release Authorized: *B*

Reported: 02/08/11

QC Report No: SG42-Landau Associates, Inc.

Project: Striker

Event: 025195.003.032

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 02/02/11 06:37

Purge Volume: 5.0 mL

LCSD: 02/02/11 07:05

Instrument/Analyst LCS: PID2/MH

Sample Amount LCS: 100 mg-dry-wt

LCSD: PID2/MH

LCSD: 100 mg-dry-wt

Analyte	LCS	Spike	LCS	LCSD	Spike	LCSD	RPD
		Added-LCS	Recovery		Added-LCSD	Recovery	
Gasoline Range Hydrocarbons	50.2	50.0	100%	49.5	50.0	99.0%	1.4%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	98.2%	98.5%
Bromobenzene	99.9%	98.9%

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: SG42-Landau Associates, Inc.

Project: Striker

025195.003.032

Data Release Authorized: *MS*

Reported: 02/02/11

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-012811 11-1697	Method Blank HC ID: ---	01/28/11	02/01/11 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	0.10 0.20	< 0.10 U < 0.20 U 79.8%
SG42E 11-1697	KSC-DP-22-GW-110126 HC ID: ---	01/28/11	02/02/11 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	0.11 0.22	< 0.11 U < 0.22 U 84.7%
SG42F 11-1698	KSC-DP-23-GW-110126 HC ID: ---	01/28/11	02/02/11 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	0.10 0.21	< 0.10 U < 0.21 U 77.6%
SG42G 11-1699	KSC-DP-24-GW-110126 HC ID: ---	01/28/11	02/02/11 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	0.11 0.21	< 0.11 U < 0.21 U 74.7%
SG42H 11-1700	KSC-DP-25b-GW-110126 HC ID: DIESEL	01/28/11	02/02/11 FID9	1.00 1.0	Diesel Motor Oil o-Terphenyl	0.11 0.21	0.20 < 0.21 U 78.5%

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.

HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
025195.003.032

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-012811	79.8%	0
LCS-012811	83.3%	0
LCSD-012811	83.4%	0
KSC-DP-22-GW-110126	84.7%	0
KSC-DP-23-GW-110126	77.6%	0
KSC-DP-24-GW-110126	74.7%	0
KSC-DP-25b-GW-110126	78.5%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(53-123)

(49-118)

Prep Method: SW3510C
Log Number Range: 11-1697 to 11-1700

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Water
Date Received: 01/26/11


ARI Job: SG42
Project: Striker
025195.003.032

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
11-1697-012811MB1	Method Blank	500 mL	1.00 mL	01/28/11
11-1697-012811LCS1	Lab Control	500 mL	1.00 mL	01/28/11
11-1697-012811LCSD1	Lab Control Dup	500 mL	1.00 mL	01/28/11
11-1697-SG42E	KSC-DP-22-GW-110126	460 mL	1.00 mL	01/28/11
11-1698-SG42F	KSC-DP-23-GW-110126	480 mL	1.00 mL	01/28/11
11-1699-SG42G	KSC-DP-24-GW-110126	470 mL	1.00 mL	01/28/11
11-1700-SG42H	KSC-DP-25b-GW-110126	470 mL	1.00 mL	01/28/11

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID-Silica and Acid Cleaned
Page 1 of 1
Matrix: Soil

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
025195.003.032

Data Release Authorized: 
Reported: 02/03/11

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DL	Range	RL	Result
MB-012811 11-1706	Method Blank HC ID: ---	01/28/11	01/31/11 FID4A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.0 10	< 5.0 U < 10 U 99.6%
SG42N 11-1706	KSC-DP-25b-S-4.5-5-1101/28/11 HC ID: DIESEL/MOTOR OIL	02/01/11	02/01/11 FID4A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.9 12	670 E 43 NR
SG42N DL 11-1706	KSC-DP-25b-S-4.5-5-1101/28/11 HC ID: DIESEL	02/02/11	02/02/11 FID9	1.00 5.0	Diesel Motor Oil o-Terphenyl	29 59	560 < 59 U 72.4%
SG42O 11-1707	KSC-DP-24-S-6-7-1101201/28/11 HC ID: DIESEL	02/01/11	02/01/11 FID4A	1.00 1.0	Diesel Motor Oil o-Terphenyl	5.7 11	7.0 < 11 U 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.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
025195.003.032

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-012811	99.6%	0
LCS-012811	98.2%	0
LCSD-012811	102%	0
KSC-DP-25b-S-4.5-5	NR	0
KSC-DP-25b-S-4.5-5 DL	72.4%	0
KSC-DP-24-S-6-7-11	97.3%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(59-134)

(43-137)

Prep Method: SW3546
Log Number Range: 11-1706 to 11-1707

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID-Silica and Acid Cleaned

Page 1 of 1

Sample ID: LCS-012811

LCS/LCSD

Lab Sample ID: LCS-012811

LIMS ID: 11-1706

Matrix: Soil

Data Release Authorized: *[Signature]*

Reported: 02/11/11

QC Report No: SG42-Landau Associates, Inc.

Project: Striker

025195.003.032

Date Sampled: 01/26/11

Date Received: 01/26/11

Date Extracted LCS/LCSD: 01/28/11

Sample Amount LCS: 10.0 g

LCSD: 10.0 g

Date Analyzed LCS: 02/01/11 00:16

Final Extract Volume LCS: 1.0 mL

LCSD: 02/01/11 00:39

LCSD: 1.0 mL

Instrument/Analyst LCS: FID/MS

Dilution Factor LCS: 1.0

LCSD: FID/MS

LCSD: 1.0

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	134	150	89.3%	146	150	97.3%	8.6%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	98.2%	102%

Results reported in mg/kg

RPD calculated using sample concentrations per SW846.

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT


Matrix: Soil
Date Received: 01/26/11

ARI Job: SG42
Project: Striker
025195.003.032

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
11-1706-012811MB1	Method Blank	10.0 g	1.00 mL	-	01/28/11
11-1706-012811LCS1	Lab Control	10.0 g	1.00 mL	-	01/28/11
11-1706-012811LCSD1	Lab Control Dup	10.0 g	1.00 mL	-	01/28/11
11-1706-SG42N	KSC-DP-25b-S-4.5-5-8.522g		1.00 mL	D	01/28/11
11-1707-SG42O	KSC-DP-24-S-6-7-1108.82 g		1.00 mL	D	01/28/11

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: KSC-DP-31-GW-110126
SAMPLE

Lab Sample ID: SG42A
LIMS ID: 11-1693
Matrix: Water
Data Release Authorized: 
Reported: 02/03/11

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
025195.003.032
Date Sampled: 01/26/11
Date Received: 01/26/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	02/01/11	200.8	02/02/11	7440-38-2	Arsenic	0.2	65.4	

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: KSC-DP-32-GW-110126
SAMPLE

Lab Sample ID: SG42B


QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1694

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: 

Date Sampled: 01/26/11

Reported: 02/03/11


Date Received: 01/26/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	02/01/11	200.8	02/02/11	7440-38-2	Arsenic	0.2	2.8	

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: KSC-DP-33-GW-110126
SAMPLE

Lab Sample ID: SG42C
LIMS ID: 11-1695
Matrix: Water
Data Release Authorized: 
Reported: 02/03/11

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
025195.003.032
Date Sampled: 01/26/11
Date Received: 01/26/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	02/01/11	200.8	02/02/11	7440-38-2	Arsenic	0.2	0.3	

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

DISSOLVED METALS

Page 1 of 1

Sample ID: KSC-DP-22-GW-110126

SAMPLE

Lab Sample ID: SG42E


QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1697

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized 

Date Sampled: 01/26/11

Reported: 02/03/11

Date Received: 01/26/11


Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	02/01/11	200.8	02/02/11	7440-38-2	Arsenic	0.2	66.0	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: KSC-DP-23-GW-110126
SAMPLE

Lab Sample ID: SG42F
LIMS ID: 11-1698
Matrix: Water
Data Release Authorized: 
Reported: 02/03/11

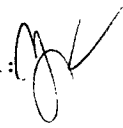
QC Report No: SG42-Landau Associates, Inc.
Project: Striker
025195.003.032
Date Sampled: 01/26/11
Date Received: 01/26/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	02/01/11	200.8	02/02/11	7440-38-2	Arsenic	0.2	66.7	

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: KSC-DP-24-GW-110126
SAMPLE

Lab Sample ID: SG42G
LIMS ID: 11-1699
Matrix: Water
Data Release Authorized: 
Reported: 02/03/11

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
025195.003.032
Date Sampled: 01/26/11
Date Received: 01/26/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	02/01/11	200.8	02/02/11	7440-38-2	Arsenic	0.2	2.7	

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: KSC-DP-25b-GW-110126
SAMPLE

Lab Sample ID: SG42H
LIMS ID: 11-1700
Matrix: Water
Data Release Authorized
Reported: 02/03/11

QC Report No: SG42-Landau Associates, Inc.
Project: Striker
025195.003.032
Date Sampled: 01/26/11
Date Received: 01/26/11



Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	02/01/11	200.8	02/02/11	7440-38-2	Arsenic	0.2	71.6	

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: SG42LCS


QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1693

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: 

Date Sampled: NA

Reported: 02/03/11

Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	25.0	25.0	100%	

Reported in $\mu\text{g/L}$

N-Control limit not met

Control Limits: 80-120%

INORGANICS ANALYSIS DATA SHEET

DISSOLVED METALS

Sample ID: METHOD BLANK

Page 1 of 1

Lab Sample ID: SG42MB


QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1693

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: 

Date Sampled: NA

Reported: 02/03/11

Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	02/01/11	200.8	02/02/11	7440-38-2	Arsenic	0.2	0.2	U

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: KSC-DP-31-S-5-6-110126

SAMPLE

Lab Sample ID: SG42I


QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1701

Project: Striker

Matrix: Soil

025195.003.032

Data Release Authorized: 

Date Sampled: 01/26/11

Reported: 02/03/11

Date Received: 01/26/11

Percent Total Solids: 80.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/31/11	200.8	02/02/11	7440-38-2	Arsenic	0.2	4.3	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: KSC-DP-32-S-3.5-4.5-110126
SAMPLE

Lab Sample ID: SG42J


QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1702

Project: Striker

Matrix: Soil

025195.003.032

Data Release Authorized: 

Date Sampled: 01/26/11

Reported: 02/03/11

Date Received: 01/26/11

Percent Total Solids: 79.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/31/11	200.8	02/02/11	7440-38-2	Arsenic	0.2	7.7	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: KSC-DP-33-S-1.5-2.5-110126
SAMPLE

Lab Sample ID: SG42K


QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1703

Project: Striker

Matrix: Soil

025195.003.032

Data Release Authorized: 

Date Sampled: 01/26/11

Reported: 02/03/11

Date Received: 01/26/11

Percent Total Solids: 70.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/31/11	200.8	02/02/11	7440-38-2	Arsenic	0.3	8.6	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: SG42LCS

LIMS ID: 11-1701

Matrix: Soil

Data Release Authorized: 

Reported: 02/03/11

QC Report No: SG42-Landau Associates, Inc.

Project: Striker

025195.003.032

Date Sampled: NA

Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	25.6	25.0	102%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Sample ID: METHOD BLANK

Page 1 of 1

Lab Sample ID: SG42MB


QC Report No: SG42-Landau Associates, Inc.

LIMS ID: 11-1701

Project: Striker

Matrix: Soil

025195.003.032

Data Release Authorized: 

Date Sampled: NA

Reported: 02/03/11

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/31/11	200.8	02/02/11	7440-38-2	Arsenic	0.2	0.2	U

U-Analyte undetected at given RL

RL-Reporting Limit



Analytical Resources, Incorporated
Analytical Chemists and Consultants

February 8, 2011

Kathryn Hartley
Landau Associates
130 Second Avenue South
Edmonds, WA 98020

RE: Project: Striker 025195.003.032
ARI Job: SG59

Dear Kathryn,

Enclosed, please find the original Chain-of-Custody (COC) records, sample receipt documentation, e-mail documentation and final data report for the samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted five soil samples and four water samples and ten soil samples and a trip blank in good condition on January 27, 2011 under sample delivery group (SDGs) SG59. For further details regarding sample receipt, please refer to the enclosed Cooler Receipt Forms. Several samples were placed on hold pending further instructions. Per Landau Associates, samples were allowed to settle and sample volume was collected from the clear portion.

The samples were analyzed for Dissolved Arsenic and VOCs, as requested on the COC.

The water VOCs method blank contained hexachlorobutadiene. All associated samples that contain analyte have been flagged with a "B" qualifier.

The water VOCs CCAL is out of control low for acrylonitrile, 2-chloroethylvinylether and out of control high for 4-Isopropyltoluene and n-butylbenzene. All associated samples that contain analyte have been flagged with a "Q" qualifier.


The water VOCs LCS is out of control low for 2-chloroethylvinylether. The LCSD is in control and no further action was taken.

The soil VOCs CCAL is out of control low for acetone, acrolein and chloromethane and out of control high for 2-chloroethylvinylether, 4-Isopropyltoluene and n-butylbenzene. All associated samples that contain analyte have been flagged with a "Q" qualifier.

There were no other irregularities with the samples.

Quality control analysis results are included for your review. An electronic copy of this report and all associated raw data will be kept on file at 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
(206) 695-6211
kellyb@arilabs.com
www.arilabs.com



- Seattle/Edmonds (425) 778-0907
- Tacoma (253) 926-2493
- Spokane (509) 327-9737
- Portland (503) 542-1080
- _____

Date 1/27/2011
Page 1 of 1

Chain-of-Custody Record

Project Name <u>Striker</u> Project No. <u>025195.003.052</u>					Testing Parameters										Turnaround Time		
Project Location/Event <u>Supplemental Phase II / Kent, WA</u>					<div style="display: flex; justify-content: space-around;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">VOCs</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Arsenic*</div> </div>										<input checked="" type="checkbox"/> Standard		
Sampler's Name <u>PRR & SED</u>															<input type="checkbox"/> Accelerated		
Project Contact <u>Tim Syverson / Kathryn Hartley / Joe Flaherty (Boeing)</u>															<input type="checkbox"/> _____		
Send Results To <u>SAME & Anne Halvorsen</u>																	
Sample I.D.	Date	Time	Matrix	No. of Containers													Observations/Comments
KSC-DP-17-6W-110127	1/27/11	0915	H ₂ O	4	X	X											X Allow water samples to settle, collect aliquot from clear portion
KSC-DP-20-6W-110127		1245	H ₂ O	4	X	X											X NWTPH-Dx - run acid wash/silica gel cleanup
KSC-DP-19-6W-110127		1325	H ₂ O	4	X	X											
KSC-DP-18-6W-110127		1410	H ₂ O	4	X	X											
KSC-DP-17-S-2-3-110127		0845	Soil	4													run samples standardized to _____ product
KSC-DP-17-S-4-5-110127		0850	Soil	4	X	X											Analyze for EPH if no specific product identified
KSC-DP-20-S-2-3-110127		1220	soil	4													VOC/BTEX/VPH (soil):
KSC-DP-20-S-4.5-5.5-110127		1225	soil	4	X	X											non-preserved
KSC-DP-19-S-2-3-110127		1300	soil	4													preserved w/methanol
KSC-DP-19-S-3.5-4.5-110127		1305	soil	4	X	X											preserved w/sodium bisulfate
KSC-DP-18-S-2-3-110127		1345	soil	4													Freeze upon receipt
KSC-DP-18-S-4-5-110127		1350	soil	4	X	X											Freeze upon receipt
KSC-DP-21-S-3-3.5-110126		1450	soil	2	X												Freeze upon receipt
KSC-DP-21-S-2.5-3-110126		1440	soil	2	X												Freeze upon receipt
TB				2	X												Other Archive Samples not marked for analysis *Using method 200.8

Special Shipment/Handling or Storage Requirements <u>on ice</u>		Method of Shipment <u>deliver to ARI</u>	
Relinquished by Signature <u>[Signature]</u> Printed Name <u>Susan E. Dickerson</u> Company <u>Landau</u> Date <u>1/27/11</u> Time <u>1600</u>		Received by Signature <u>[Signature]</u> Printed Name <u>ARI</u> Company <u>ARI</u> Date <u>1/27/11</u> Time <u>1600</u>	
Relinquished by Signature _____ Printed Name _____ Company _____ Date _____ Time _____		Received by Signature _____ Printed Name _____ Company _____ Date _____ Time _____	

SG59

On 1-26-11 we received
2-SOBI + 1-HCl preserved
vials for samples

For VOC KSC-DP-21-S-0-0.5-110126

analysis KSC-DP-21-S-3-3.5-110126

On hold KSC-DP-21-S-2.5-3-110126.

Kelly asked them to recollect
a MeOH bottle + Total Solids
bottle for the 2 samples they
requested for VOC analysis.

They recollected samples

KSC-DP-21-S-3-3.5-110126 +

KSC-DP-21-S-2.5-3-110126.

KSC-DP-21-S-0-0.5-110126 does
not have MeOH vial or
Total Solids jar, so I
put that sample on hold.



Cooler Receipt Form

ARI Client: Landau/Boring
 COC No(s): _____ (NA)
 Assigned ARI Job No: 5459

Project Name: StrikeV
 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)..... 31
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619
 Cooler Accepted by: AV Date: 1/27/11 Time: 1600

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 1/20/11
 Was Sample Split by ARI : NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 1/28/11 Time: 1027

**** 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:

Sample KSC-DP-21-S-3-3.5-110126 had 2 SOB1 vials ~~reflected~~ received on 1/26/11, Sample KSC-DP-21-S-2.5-3-110126 was ~~in~~ resampled instead of KSC-DP-21-S-0-0.5-110126. Samples KSC-DP-21-S-0-0.5-110126 + KSC-DP-21-S-2.5-3-110126 were put on hold.
 By: JM Date: 1-28-11

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

Subject: RE: SG59 - Confirmation
From: "Kathryn Hartley" <khartley@landauinc.com>
Date: Fri, 28 Jan 2011 14:19:10 -0800
To: Eric Branson <eric@arilabs.com>
CC: Kelly Bottem <kellyb@arilabs.com>

Eric,

That is correct. We do not want to run the 0-0.5 sample (which is why additional sample was not collected). The 2.5-3 sample should be placed on hold and the 2.5-3 sample should be run for VOCs. The samples should have the same number. Everything looks correct.

I sent the attached revised COC to Kelly this morning as well. Please note that we are requesting analysis of the trip blank submitted 1/26/11 for TPH-G in addition to VOCs.

Let me know if you have any additional questions.

Thank you,
Kathryn

Kathryn F. Hartley ~ Senior Project Scientist
Landau Associates, Inc.
130 2nd Ave. S, Edmonds, WA 98020
425.778.0907 ~ direct 425.329.0268 ~ cell 425.248.7520
khartley@landauinc.com ~ www.landauinc.com

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From: Eric Branson [mailto:eric@arilabs.com]
Sent: Friday, January 28, 2011 1:39 PM
To: Kathryn Hartley
Cc: Kelly Bottem
Subject: SG59 - Confirmation

Kathryn,

Can you take a look at this? To be honest, having not processed the paperwork from the first job myself, this is pretty confusing to me. It seems that the sample we didn't receive additional volume for is **KSC-DP-21-S-0-0.5-110126**. Hopefully that is the sample you didn't plan on running VOCs on. **21-S-2.5-3** is the sample we received VOC volume for, but is only on hold. **21-3-3.5** is the sample we received additional volume for and is being run.

Resamples on 01/27 have 01/27 as the sample date, but retain the **-110126** sample suffix to match the previously received volume.

Let me know if anything looks out of place before I give final approval to process the samples.
Thanks.

-Eric-

--

Eric Branson
Project Manager
Analytical Resources, Inc.
eric@arilabs.com
(206) 695-6213

www.arilabs.com

NOTE: I am out of the office by 4:30 on Monday & Wednesday.

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If you have received this correspondence in error, please notify sender immediately. Thank you.

Striker_COC_sg42_rev012811.pdf	Content-Description: Striker_COC_sg42_rev012811.pdf
	Content-Type: application/pdf
	Content-Encoding: base64

PRESERVATION VERIFICATION 01/28/11

Page 1 of 1



ARI Job No: SG59

PC: Kelly
VTSR: 01/27/11

Inquiry Number: NONE
Analysis Requested: 01/28/11
Contact: Flaherty, Joe
Client: The Boeing Company
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

Project #: 025195.003.032
Project: Striker
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
11-1806 SG59A	KSC-DP-17-GW-110127						DIS									Y						
11-1807 SG59B	KSC-DP-20-GW-110127						DIS									Y						
11-1808 SG59C	KSC-DP-19-GW-110127						DIS									Y						
11-1809 SG59D	KSC-DP-18-GW-110127						DIS									Y						

Checked By JM Date 1/28/11

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 2

Sample ID: KSC-DP-17-S-4-5-110127
SAMPLE

Lab Sample ID: SG59E
LIMS ID: 11-1810
Matrix: Soil
Data Release Authorized: *MW*
Reported: 02/08/11

QC Report No: SG59-The Boeing Company
Project: Striker
025195.003.032
Date Sampled: 01/27/11
Date Received: 01/27/11

Instrument/Analyst: FINN5/PAB
Date Analyzed: 02/02/11 17:32

Sample Amount: 4.70 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 12.4%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.1	< 1.1	U
74-83-9	Bromomethane	1.1	< 1.1	U
75-01-4	Vinyl Chloride	1.1	< 1.1	U
75-00-3	Chloroethane	1.1	< 1.1	U
75-09-2	Methylene Chloride	2.1	17	
67-64-1	Acetone	5.3	22	Q
75-15-0	Carbon Disulfide	1.1	< 1.1	U
75-35-4	1,1-Dichloroethene	1.1	< 1.1	U
75-34-3	1,1-Dichloroethane	1.1	< 1.1	U
156-60-5	trans-1,2-Dichloroethene	1.1	< 1.1	U
156-59-2	cis-1,2-Dichloroethene	1.1	< 1.1	U
67-66-3	Chloroform	1.1	< 1.1	U
107-06-2	1,2-Dichloroethane	1.1	< 1.1	U
78-93-3	2-Butanone	5.3	< 5.3	U
71-55-6	1,1,1-Trichloroethane	1.1	< 1.1	U
56-23-5	Carbon Tetrachloride	1.1	< 1.1	U
108-05-4	Vinyl Acetate	5.3	< 5.3	U
75-27-4	Bromodichloromethane	1.1	< 1.1	U
78-87-5	1,2-Dichloropropane	1.1	< 1.1	U
10061-01-5	cis-1,3-Dichloropropene	1.1	< 1.1	U
79-01-6	Trichloroethene	1.1	< 1.1	U
124-48-1	Dibromochloromethane	1.1	< 1.1	U
79-00-5	1,1,2-Trichloroethane	1.1	< 1.1	U
71-43-2	Benzene	1.1	< 1.1	U
10061-02-6	trans-1,3-Dichloropropene	1.1	< 1.1	U
110-75-8	2-Chloroethylvinylether	5.3	< 5.3	U
75-25-2	Bromoform	1.1	< 1.1	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.3	< 5.3	U
591-78-6	2-Hexanone	5.3	< 5.3	U
127-18-4	Tetrachloroethene	1.1	< 1.1	U
79-34-5	1,1,2,2-Tetrachloroethane	1.1	< 1.1	U
108-88-3	Toluene	1.1	< 1.1	U
108-90-7	Chlorobenzene	1.1	< 1.1	U
100-41-4	Ethylbenzene	1.1	< 1.1	U
100-42-5	Styrene	1.1	< 1.1	U
75-69-4	Trichlorofluoromethane	1.1	< 1.1	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.1	< 2.1	U
179601-23-1	m,p-Xylene	1.1	< 1.1	U
95-47-6	o-Xylene	1.1	< 1.1	U
95-50-1	1,2-Dichlorobenzene	1.1	< 1.1	U
541-73-1	1,3-Dichlorobenzene	1.1	< 1.1	U
106-46-7	1,4-Dichlorobenzene	1.1	< 1.1	U
107-02-8	Acrolein	53	< 53	U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: KSC-DP-17-S-4-5-110127

Page 2 of 2

SAMPLE

Lab Sample ID: SG59E

QC Report No: SG59-The Boeing Company

LIMS ID: 11-1810

Project: Striker

Matrix: Soil

025195.003.032

Date Analyzed: 02/02/11 17:32

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.1	< 1.1	U
74-96-4	Bromoethane	2.1	< 2.1	U
107-13-1	Acrylonitrile	5.3	< 5.3	U
563-58-6	1,1-Dichloropropene	1.1	< 1.1	U
74-95-3	Dibromomethane	1.1	< 1.1	U
630-20-6	1,1,1,2-Tetrachloroethane	1.1	< 1.1	U
96-12-8	1,2-Dibromo-3-chloropropane	5.3	< 5.3	U
96-18-4	1,2,3-Trichloropropane	2.1	< 2.1	U
110-57-6	trans-1,4-Dichloro-2-butene	5.3	< 5.3	U
108-67-8	1,3,5-Trimethylbenzene	1.1	< 1.1	U
95-63-6	1,2,4-Trimethylbenzene	1.1	< 1.1	U
87-68-3	Hexachlorobutadiene	5.3	< 5.3	U
106-93-4	Ethylene Dibromide	1.1	< 1.1	U
74-97-5	Bromochloromethane	1.1	< 1.1	U
594-20-7	2,2-Dichloropropane	1.1	< 1.1	U
142-28-9	1,3-Dichloropropane	1.1	< 1.1	U
98-82-8	Isopropylbenzene	1.1	< 1.1	U
103-65-1	n-Propylbenzene	1.1	< 1.1	U
108-86-1	Bromobenzene	1.1	< 1.1	U
95-49-8	2-Chlorotoluene	1.1	< 1.1	U
106-43-4	4-Chlorotoluene	1.1	< 1.1	U
98-06-6	tert-Butylbenzene	1.1	< 1.1	U
135-98-8	sec-Butylbenzene	1.1	< 1.1	U
99-87-6	4-Isopropyltoluene	1.1	< 1.1	U
104-51-8	n-Butylbenzene	1.1	< 1.1	U
120-82-1	1,2,4-Trichlorobenzene	5.3	< 5.3	U
91-20-3	Naphthalene	5.3	< 5.3	U
87-61-6	1,2,3-Trichlorobenzene	5.3	< 5.3	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	105%
d8-Toluene	95.1%
Bromofluorobenzene	93.6%
d4-1,2-Dichlorobenzene	99.6%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 2

Sample ID: KSC-DP-20-S-4.5-5.5-110127
SAMPLE

Lab Sample ID: SG59F
LIMS ID: 11-1811
Matrix: Soil
Data Release Authorized: *WVW*
Reported: 02/08/11

QC Report No: SG59-The Boeing Company
Project: Striker
025195.003.032
Date Sampled: 01/27/11
Date Received: 01/27/11

Instrument/Analyst: FINN5/PAB
Date Analyzed: 02/02/11 17:59

Sample Amount: 5.18 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 10.8%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	< 1.0	U
74-83-9	Bromomethane	1.0	< 1.0	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	1.9	11	
67-64-1	Acetone	4.8	35	Q
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	< 1.0	U
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	4.8	< 4.8	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	4.8	< 4.8	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	< 1.0	U
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	4.8	< 4.8	U
75-25-2	Bromoform	1.0	< 1.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	4.8	< 4.8	U
591-78-6	2-Hexanone	4.8	< 4.8	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U
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-trifluoroethane	1.9	< 1.9	U
179601-23-1	m,p-Xylene	1.0	< 1.0	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	48	< 48	U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 2 of 2

Sample ID: KSC-DP-20-S-4.5-5.5-110127
SAMPLE

Lab Sample ID: SG59F
LIMS ID: 11-1811
Matrix: Soil
Date Analyzed: 02/02/11 17:59

QC Report No: SG59-The Boeing Company
Project: Striker
025195.003.032

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	1.9	< 1.9	U
107-13-1	Acrylonitrile	4.8	< 4.8	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	4.8	< 4.8	U
96-18-4	1,2,3-Trichloropropane	1.9	< 1.9	U
110-57-6	trans-1,4-Dichloro-2-butene	4.8	< 4.8	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	4.8	< 4.8	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	1.6	
104-51-8	n-Butylbenzene	1.0	< 1.0	U
120-82-1	1,2,4-Trichlorobenzene	4.8	< 4.8	U
91-20-3	Naphthalene	4.8	< 4.8	U
87-61-6	1,2,3-Trichlorobenzene	4.8	< 4.8	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	107%
d8-Toluene	94.1%
Bromofluorobenzene	94.5%
d4-1,2-Dichlorobenzene	101%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 2

Sample ID: KSC-DP-19-S-3.5-4.5-110127
SAMPLE

Lab Sample ID: SG59G
LIMS ID: 11-1812
Matrix: Soil
Data Release Authorized: *WV*
Reported: 02/08/11

QC Report No: SG59-The Boeing Company
Project: Striker
025195.003.032
Date Sampled: 01/27/11
Date Received: 01/27/11

Instrument/Analyst: FINN5/PAB
Date Analyzed: 02/02/11 18:25

Sample Amount: 4.88 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 11.8%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	< 1.0	U
74-83-9	Bromomethane	1.0	< 1.0	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	2.0	9.0	
67-64-1	Acetone	5.1	18	Q
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	< 1.0	U
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	5.1	< 5.1	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	5.1	< 5.1	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	< 1.0	U
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	5.1	< 5.1	U
75-25-2	Bromoform	1.0	< 1.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.1	< 5.1	U
591-78-6	2-Hexanone	5.1	< 5.1	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U
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-trifluoroethane	2.0	< 2.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	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	51	< 51	U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 2 of 2

Sample ID: KSC-DP-19-S-3.5-4.5-110127
SAMPLE

Lab Sample ID: SG59G

QC Report No: SG59-The Boeing Company

LIMS ID: 11-1812

Project: Striker

Matrix: Soil

025195.003.032

Date Analyzed: 02/02/11 18:25

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	2.0	< 2.0	U
107-13-1	Acrylonitrile	5.1	< 5.1	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	5.1	< 5.1	U
96-18-4	1,2,3-Trichloropropane	2.0	< 2.0	U
110-57-6	trans-1,4-Dichloro-2-butene	5.1	< 5.1	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	5.1	< 5.1	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	5.1	< 5.1	U
91-20-3	Naphthalene	5.1	< 5.1	U
87-61-6	1,2,3-Trichlorobenzene	5.1	< 5.1	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	107%
d8-Toluene	95.3%
Bromofluorobenzene	96.0%
d4-1,2-Dichlorobenzene	100%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: KSC-DP-18-S-4-5-110127

Page 1 of 2

SAMPLE

Lab Sample ID: SG59H

QC Report No: SG59-The Boeing Company

LIMS ID: 11-1813

Project: Striker

Matrix: Soil

025195.003.032

Data Release Authorized: *MWJ*

Date Sampled: 01/27/11

Reported: 02/08/11

Date Received: 01/27/11

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.00 g-dry-wt

Date Analyzed: 02/02/11 18:52

Purge Volume: 5.0 mL

Moisture: 11.9%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	< 1.0	U
74-83-9	Bromomethane	1.0	< 1.0	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	2.0	24	
67-64-1	Acetone	5.0	49	Q
75-15-0	Carbon Disulfide	1.0	1.4	
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	< 1.0	U
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	5.0	< 5.0	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	< 1.0	U
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)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U
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-trifluoroethane	2.0	< 2.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	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	50	< 50	U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: KSC-DP-18-S-4-5-110127

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SAMPLE

Lab Sample ID: SG59H

QC Report No: SG59-The Boeing Company

LIMS ID: 11-1813

Project: Striker

Matrix: Soil

025195.003.032

Date Analyzed: 02/02/11 18:52

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	2.0	< 2.0	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	5.0	< 5.0	U
96-18-4	1,2,3-Trichloropropane	2.0	< 2.0	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	5.0	< 5.0	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	2.3	
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	1.3	
104-51-8	n-Butylbenzene	1.0	< 1.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	< 5.0	U
91-20-3	Naphthalene	5.0	< 5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	< 5.0	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	111%
d8-Toluene	92.5%
Bromofluorobenzene	94.6%
d4-1,2-Dichlorobenzene	102%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 2

Sample ID: KSC-DP-21-S-3-3.5-110126
SAMPLE

Lab Sample ID: SG59I

QC Report No: SG59-The Boeing Company

LIMS ID: 11-1814

Project: Striker

Matrix: Soil

025195.003.032

Data Release Authorized: *MMW*

Date Sampled: 01/27/11

Reported: 02/08/11

Date Received: 01/27/11

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.22 g-dry-wt

Date Analyzed: 02/02/11 19:18

Purge Volume: 5.0 mL

Moisture: 18.0%

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	< 1.0	U
74-83-9	Bromomethane	1.0	< 1.0	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	1.9	4.9	
67-64-1	Acetone	4.8	62	Q
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	< 1.0	U
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	4.8	< 4.8	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	4.8	< 4.8	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	1.0	
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	4.8	< 4.8	U
75-25-2	Bromoform	1.0	< 1.0	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	4.8	< 4.8	U
591-78-6	2-Hexanone	4.8	< 4.8	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U
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	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoro	1.9	< 1.9	U
179601-23-1	m,p-Xylene	1.0	< 1.0	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	48	< 48	U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 2 of 2

Sample ID: KSC-DP-21-S-3-3.5-110126
SAMPLE

Lab Sample ID: SG59I
LIMS ID: 11-1814
Matrix: Soil
Date Analyzed: 02/02/11 19:18

QC Report No: SG59-The Boeing Company
Project: Striker
025195.003.032

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	1.9	< 1.9	U
107-13-1	Acrylonitrile	4.8	< 4.8	U
563-58-6	1,1-Dichloropropane	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	4.8	< 4.8	U
96-18-4	1,2,3-Trichloropropane	1.9	< 1.9	U
110-57-6	trans-1,4-Dichloro-2-butene	4.8	< 4.8	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	4.8	< 4.8	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	4.8	< 4.8	U
91-20-3	Naphthalene	4.8	< 4.8	U
87-61-6	1,2,3-Trichlorobenzene	4.8	< 4.8	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	119%
d8-Toluene	92.9%
Bromofluorobenzene	87.2%
d4-1,2-Dichlorobenzene	102%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-020211

Page 1 of 2

METHOD BLANK

Lab Sample ID: MB-020211

QC Report No: SG59-The Boeing Company

LIMS ID: 11-1810

Project: Striker

Matrix: Soil

025195.003.032

Data Release Authorized: *MW*

Date Sampled: NA

Reported: 02/08/11

Date Received: NA

Instrument/Analyst: FINN5/PAB

Sample Amount: 5.00 g-dry-wt

Date Analyzed: 02/02/11 16:34

Purge Volume: 5.0 mL

Moisture: NA

CAS Number	Analyte	RL	Result	Q
74-87-3	Chloromethane	1.0	< 1.0	U
74-83-9	Bromomethane	1.0	< 1.0	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	2.0	< 2.0	U
67-64-1	Acetone	5.0	< 5.0	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	< 1.0	U
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	5.0	< 5.0	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	< 1.0	U
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)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	1.0	< 1.0	U
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-trifluoroethane	2.0	< 2.0	U
179601-23-1	m,p-Xylene	1.0	< 1.0	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	50	< 50	U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-020211

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METHOD BLANK

Lab Sample ID: MB-020211

QC Report No: SG59-The Boeing Company

LIMS ID: 11-1810

Project: Striker

Matrix: Soil

025195.003.032

Date Analyzed: 02/02/11 16:34

CAS Number	Analyte	RL	Result	Q
74-88-4	Methyl Iodide	1.0	< 1.0	U
74-96-4	Bromoethane	2.0	< 2.0	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	5.0	< 5.0	U
96-18-4	1,2,3-Trichloropropane	2.0	< 2.0	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	5.0	< 5.0	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	5.0	< 5.0	U
91-20-3	Naphthalene	5.0	< 5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	< 5.0	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	82.7%
d8-Toluene	96.3%
Bromofluorobenzene	93.0%
d4-1,2-Dichlorobenzene	95.2%

VOA SURROGATE RECOVERY SUMMARY



Matrix: Soil

QC Report No: SG59-The Boeing Company

Project: Striker

025195.003.032

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
MB-020211	Method Blank	Low	82.7%	96.3%	93.0%	95.2%	0
LCS-020211	Lab Control	Low	81.5%	96.1%	98.8%	97.2%	0
LCSD-020211	Lab Control Dup	Low	91.3%	94.5%	96.9%	97.6%	0
SG59E	KSC-DP-17-S-4-5-110127	Low	105%	95.1%	93.6%	99.6%	0
SG59F	KSC-DP-20-S-4.5-5.5-1101	Low	107%	94.1%	94.5%	101%	0
SG59G	KSC-DP-19-S-3.5-4.5-1101	Low	107%	95.3%	96.0%	100%	0
SG59H	KSC-DP-18-S-4-5-110127	Low	111%	92.5%	94.6%	102%	0
SG59I	KSC-DP-21-S-3-3.5-110126	Low	119%	92.9%	87.2%	102%	0

SW8260C	LCS/MB LIMITS		QC LIMITS	
	Low	Med	Low	Med
(DCE) = d4-1,2-Dichloroethane	79-121	76-120	75-152	69-120
(TOL) = d8-Toluene	80-120	80-120	82-115	80-120
(BFB) = Bromofluorobenzene	80-120	80-120	64-120	76-128
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120	80-120	80-120

Log Number Range: 11-1810 to 11-1814

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-020211

Page 1 of 2

LAB CONTROL SAMPLE

Lab Sample ID: LCS-020211

QC Report No: SG59-The Boeing Company

LIMS ID: 11-1810

Project: Striker

Matrix: Soil

025195.003.032

Data Release Authorized: *mm*

Date Sampled: NA

Reported: 02/08/11

Date Received: NA

Instrument/Analyst LCS: FINN5/PAB

Sample Amount LCS: 5.00 g-dry-wt

LCSD: FINN5/PAB

LCSD: 5.00 g-dry-wt

Date Analyzed LCS: 02/02/11 12:40

Purge Volume LCS: 5.0 mL

LCSD: 02/02/11 14:56

LCSD: 5.0 mL

Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	43.5 Q	50.0	87.0%	44.8 Q	50.0	89.6%	2.9%
Bromomethane	50.9	50.0	102%	50.1	50.0	100%	1.6%
Vinyl Chloride	47.0	50.0	94.0%	53.3	50.0	107%	12.6%
Chloroethane	52.1	50.0	104%	55.4	50.0	111%	6.1%
Methylene Chloride	51.9	50.0	104%	53.8	50.0	108%	3.6%
Acetone	197 Q	250	78.8%	231 Q	250	92.4%	15.9%
Carbon Disulfide	51.7	50.0	103%	62.0	50.0	124%	18.1%
1,1-Dichloroethene	53.1	50.0	106%	56.2	50.0	112%	5.7%
1,1-Dichloroethane	52.7	50.0	105%	54.3	50.0	109%	3.0%
trans-1,2-Dichloroethene	52.6	50.0	105%	55.3	50.0	111%	5.0%
cis-1,2-Dichloroethene	52.6	50.0	105%	54.9	50.0	110%	4.3%
Chloroform	50.8	50.0	102%	52.0	50.0	104%	2.3%
1,2-Dichloroethane	50.5	50.0	101%	48.5	50.0	97.0%	4.0%
2-Butanone	231	250	92.4%	245	250	98.0%	5.9%
1,1,1-Trichloroethane	53.3	50.0	107%	55.0	50.0	110%	3.1%
Carbon Tetrachloride	53.2	50.0	106%	51.8	50.0	104%	2.7%
Vinyl Acetate	50.0	50.0	100%	50.7	50.0	101%	1.4%
Bromodichloromethane	54.7	50.0	109%	52.2	50.0	104%	4.7%
1,2-Dichloropropane	51.3	50.0	103%	48.2	50.0	96.4%	6.2%
cis-1,3-Dichloropropene	57.1	50.0	114%	54.2	50.0	108%	5.2%
Trichloroethene	51.8	50.0	104%	51.1	50.0	102%	1.4%
Dibromochloromethane	56.0	50.0	112%	53.0	50.0	106%	5.5%
1,1,2-Trichloroethane	52.3	50.0	105%	50.5	50.0	101%	3.5%
Benzene	54.6	50.0	109%	53.9	50.0	108%	1.3%
trans-1,3-Dichloropropene	57.8	50.0	116%	54.8	50.0	110%	5.3%
2-Chloroethylvinylether	72.6 Q	50.0	145%	69.9 Q	50.0	140%	3.8%
Bromoform	53.6	50.0	107%	53.5	50.0	107%	0.2%
4-Methyl-2-Pentanone (MIBK)	246	250	98.4%	241	250	96.4%	2.1%
2-Hexanone	249	250	99.6%	246	250	98.4%	1.2%
Tetrachloroethene	56.2	50.0	112%	57.5	50.0	115%	2.3%
1,1,2,2-Tetrachloroethane	48.8	50.0	97.6%	47.9	50.0	95.8%	1.9%
Toluene	54.1	50.0	108%	53.0	50.0	106%	2.1%
Chlorobenzene	55.6	50.0	111%	55.7	50.0	111%	0.2%
Ethylbenzene	60.0	50.0	120%	60.2	50.0	120%	0.3%
Styrene	58.9	50.0	118%	59.0	50.0	118%	0.2%
Trichlorofluoromethane	56.4	50.0	113%	63.1	50.0	126%	11.2%
1,1,2-Trichloro-1,2,2-trifluoroethane	49.4	50.0	98.8%	49.0	50.0	98.0%	0.8%
m,p-Xylene	121	100	121%	124	100	124%	2.4%
o-Xylene	57.1	50.0	114%	57.3	50.0	115%	0.3%
1,2-Dichlorobenzene	53.9	50.0	108%	56.2	50.0	112%	4.2%
1,3-Dichlorobenzene	55.7	50.0	111%	59.4	50.0	119%	6.4%
1,4-Dichlorobenzene	55.4	50.0	111%	58.6	50.0	117%	5.6%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-020211

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LAB CONTROL SAMPLE

Lab Sample ID: LCS-020211

QC Report No: SG59-The Boeing Company

LIMS ID: 11-1810

Project: Striker

Matrix: Soil

025195.003.032

Analyte	Spike		LCS		Spike		LCSD	
	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	RPD	
Acrolein	204 Q	250	81.6%	224 Q	250	89.6%	9.3%	
Methyl Iodide	54.8	50.0	110%	58.5	50.0	117%	6.5%	
Bromoethane	57.6	50.0	115%	60.2	50.0	120%	4.4%	
Acrylonitrile	48.8	50.0	97.6%	50.7	50.0	101%	3.8%	
1,1-Dichloropropene	53.4	50.0	107%	53.4	50.0	107%	0.0%	
Dibromomethane	50.9	50.0	102%	48.3	50.0	96.6%	5.2%	
1,1,1,2-Tetrachloroethane	55.5	50.0	111%	54.0	50.0	108%	2.7%	
1,2-Dibromo-3-chloropropane	45.7	50.0	91.4%	45.4	50.0	90.8%	0.7%	
1,2,3-Trichloropropane	53.7	50.0	107%	54.8	50.0	110%	2.0%	
trans-1,4-Dichloro-2-butene	48.2	50.0	96.4%	48.0	50.0	96.0%	0.4%	
1,3,5-Trimethylbenzene	59.2	50.0	118%	60.2	50.0	120%	1.7%	
1,2,4-Trimethylbenzene	59.0	50.0	118%	60.1	50.0	120%	1.8%	
Hexachlorobutadiene	52.1	50.0	104%	55.0	50.0	110%	5.4%	
Ethylene Dibromide	53.3	50.0	107%	50.9	50.0	102%	4.6%	
Bromochloromethane	55.3	50.0	111%	58.9	50.0	118%	6.3%	
2,2-Dichloropropane	55.7	50.0	111%	56.8	50.0	114%	2.0%	
1,3-Dichloropropane	55.6	50.0	111%	53.6	50.0	107%	3.7%	
Isopropylbenzene	60.3	50.0	121%	60.7	50.0	121%	0.7%	
n-Propylbenzene	55.8	50.0	112%	57.6	50.0	115%	3.2%	
Bromobenzene	54.6	50.0	109%	55.0	50.0	110%	0.7%	
2-Chlorotoluene	56.3	50.0	113%	55.5	50.0	111%	1.4%	
4-Chlorotoluene	55.3	50.0	111%	61.3	50.0	123%	10.3%	
tert-Butylbenzene	58.3	50.0	117%	58.6	50.0	117%	0.5%	
sec-Butylbenzene	58.0	50.0	116%	60.3	50.0	121%	3.9%	
4-Isopropyltoluene	61.8 Q	50.0	124%	65.1 Q	50.0	130%	5.2%	
n-Butylbenzene	59.3 Q	50.0	119%	63.5 Q	50.0	127%	6.8%	
1,2,4-Trichlorobenzene	51.1	50.0	102%	55.5	50.0	111%	8.3%	
Naphthalene	48.5	50.0	97.0%	48.2	50.0	96.4%	0.6%	
1,2,3-Trichlorobenzene	47.8	50.0	95.6%	49.3	50.0	98.6%	3.1%	

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	81.5%	91.3%
d8-Toluene	96.1%	94.5%
Bromofluorobenzene	98.8%	96.9%
d4-1,2-Dichlorobenzene	97.2%	97.6%



Inquiry Number: NONE
Analysis Requested: 01/28/11
Contact: Flaherty, Joe
Client: The Boeing Company
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: No

PC: Kelly
VTSR: 01/27/11 16:00
Data Due: 02/08/11

Project #: 025195.003.032
Project: Striker
Sample Site:
SDG No:

Deliverables Require Spectra (Circle one): YES NO
VOA Water RL (ug/L): 1 0.2 See QAPP
Special Instructions All Samples:

See enclosed instructions
[X] No enclosed instructions

WATER

10 Sample(s) * Sample(s) Preserved **Samples(s) Preserved, No Sampling Time

GC/MS VOA Analytes (71 Total)

Table listing various chemical analytes such as 1,1,1,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,2,3-Trichlorobenzene, etc.

GC/MS VOA Surrogates

Table listing surrogate compounds: Bromofluorobenzene, d4-1,2-Dichlorobenzene, d4-1,2-Dichloroethane, d8-Toluene

Main data table with columns: ARI ID, Client ID, Matrix, Sampling Date, Holding Time Up, SW8260C VOA, Rtype. Contains 15 rows of sample data.

VOA Special Instructions: None

Table with columns: Sample, Condition, Sample Comment-All Analyses. Lists sample IDs 11-1806-SG59A through 11-1809-SG59D.

LCS/LCSD

PM OK [Signature] Date 1/28/11

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: KSC-DP-17-GW-110127

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SAMPLE

Lab Sample ID: SG59A


QC Report No: SG59-The Boeing Company

LIMS ID: 11-1806

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: 

Date Sampled: 01/27/11

Reported: 01/31/11

Date Received: 01/27/11

Instrument/Analyst: NT3/PKC

Sample Amount: 10.0 mL

Date Analyzed: 01/28/11 16:11

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	0.8	
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	
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-trifluoroethane	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: KSC-DP-17-GW-110127

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SAMPLE

Lab Sample ID: SG59A

QC Report No: SG59-The Boeing Company

LIMS ID: 11-1806

Project: Striker

Matrix: Water

025195.003.032

Date Analyzed: 01/28/11 16:11

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	98.2%
d8-Toluene	99.0%
Bromofluorobenzene	99.7%
d4-1,2-Dichlorobenzene	99.7%

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

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: KSC-DP-20-GW-110127

Page 1 of 2

SAMPLE

Lab Sample ID: SG59B


QC Report No: SG59-The Boeing Company

LIMS ID: 11-1807

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: 

Date Sampled: 01/27/11

Reported: 01/31/11

Date Received: 01/27/11

Instrument/Analyst: NT3/PKC

Sample Amount: 10.0 mL

Date Analyzed: 01/28/11 16:38

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	5.2	
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	
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-trifluoroethane	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: KSC-DP-20-GW-110127

Page 2 of 2

SAMPLE

Lab Sample ID: SG59B

QC Report No: SG59-The Boeing Company

LIMS ID: 11-1807

Project: Striker

Matrix: Water

025195.003.032

Date Analyzed: 01/28/11 16:38

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	102%
d8-Toluene	99.2%
Bromofluorobenzene	99.7%
d4-1,2-Dichlorobenzene	98.7%

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

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: KSC-DP-19-GW-110127

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SAMPLE

Lab Sample ID: SG59C


QC Report No: SG59-The Boeing Company

LIMS ID: 11-1808

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: 

Date Sampled: 01/27/11

Reported: 01/31/11

Date Received: 01/27/11

Instrument/Analyst: NT3/PKC

Sample Amount: 10.0 mL

Date Analyzed: 01/28/11 17:05

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	
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	0.6	
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-trifluoroethane	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
Page 2 of 2

Sample ID: KSC-DP-19-GW-110127
SAMPLE

Lab Sample ID: SG59C
LIMS ID: 11-1808
Matrix: Water
Date Analyzed: 01/28/11 17:05

QC Report No: SG59-The Boeing Company
Project: Striker
025195.003.032

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	103%
d8-Toluene	100%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	98.5%

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

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: KSC-DP-18-GW-110127

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SAMPLE

Lab Sample ID: SG59D


QC Report No: SG59-The Boeing Company

LIMS ID: 11-1809

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: 

Date Sampled: 01/27/11

Reported: 01/31/11

Date Received: 01/27/11

Instrument/Analyst: NT3/PKC

Sample Amount: 10.0 mL

Date Analyzed: 01/28/11 17:31

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	1.4	
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	< 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	
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-trifluoroethane	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
Page 2 of 2

Sample ID: KSC-DP-18-GW-110127
SAMPLE

Lab Sample ID: SG59D
LIMS ID: 11-1809
Matrix: Water
Date Analyzed: 01/28/11 17:31

QC Report No: SG59-The Boeing Company
Project: Striker
025195.003.032

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	105%
d8-Toluene	97.8%
Bromofluorobenzene	99.0%
d4-1,2-Dichlorobenzene	101%

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

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: TB

Page 1 of 2

SAMPLE

Lab Sample ID: SG59J


QC Report No: SG59-The Boeing Company

LIMS ID: 11-1815

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: 

Date Sampled: 01/27/11

Reported: 01/31/11

Date Received: 01/27/11

Instrument/Analyst: NT3/PKC

Sample Amount: 10.0 mL

Date Analyzed: 01/28/11 15:44

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-trifluoroethane	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: TB

Page 2 of 2

SAMPLE

Lab Sample ID: SG59J

QC Report No: SG59-The Boeing Company

LIMS ID: 11-1815

Project: Striker

Matrix: Water

025195.003.032

Date Analyzed: 01/28/11 15:44

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	88.8%
d8-Toluene	101%
Bromofluorobenzene	96.0%
d4-1,2-Dichlorobenzene	94.6%

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

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-012811

Page 1 of 2

METHOD BLANK

Lab Sample ID: MB-012811


QC Report No: SG59-The Boeing Company

LIMS ID: 11-1806

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: 

Date Sampled: NA

Reported: 01/31/11

Date Received: NA

Instrument/Analyst: NT3/PKC

Sample Amount: 10.0 mL

Date Analyzed: 01/28/11 11:58

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-trifluoroethane	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-012811

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METHOD BLANK

Lab Sample ID: MB-012811

QC Report No: SG59-The Boeing Company

LIMS ID: 11-1806

Project: Striker

Matrix: Water

025195.003.032

Date Analyzed: 01/28/11 11:58

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	
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	100%
Bromofluorobenzene	99.1%
d4-1,2-Dichlorobenzene	101%

VOA SURROGATE RECOVERY SUMMARY



Matrix: Water

QC Report No: SG59-The Boeing Company
 Project: Striker
 025195.003.032

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-012811	Method Blank	10	100%	100%	99.1%	101%	0
LCS-012811	Lab Control	10	103%	100%	96.9%	97.8%	0
LCSD-012811	Lab Control Dup	10	104%	101%	99.7%	99.9%	0
SG59A	KSC-DP-17-GW-110127	10	98.2%	99.0%	99.7%	99.7%	0
SG59B	KSC-DP-20-GW-110127	10	102%	99.2%	99.7%	98.7%	0
SG59C	KSC-DP-19-GW-110127	10	103%	100%	100%	98.5%	0
SG59D	KSC-DP-18-GW-110127	10	105%	97.8%	99.0%	101%	0
SG59J	TB	10	88.8%	101%	96.0%	94.6%	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: 11-1806 to 11-1815

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-012811

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LAB CONTROL SAMPLE

Lab Sample ID: LCS-012811

QC Report No: SG59-The Boeing Company

LIMS ID: 11-1806

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: *B*

Date Sampled: NA

Reported: 01/31/11

Date Received: NA

Instrument/Analyst LCS: NT3/PKC

Sample Amount LCS: 10.0 mL

LCS: NT3/PKC

LCS: 10.0 mL

Date Analyzed LCS: 01/28/11 11:04

Purge Volume LCS: 10.0 mL

LCS: 01/28/11 11:31

LCS: 10.0 mL

Analyte	Spike		LCS		Spike		LCS	
	LCS	Added-LCS	Recovery	LCS	Added-LCS	Recovery	RPD	
Chloromethane	9.5	10.0	95.0%	9.4	10.0	94.0%	1.1%	
Bromomethane	10.1	10.0	101%	10.1	10.0	101%	0.0%	
Vinyl Chloride	9.7	10.0	97.0%	9.3	10.0	93.0%	4.2%	
Chloroethane	10.0	10.0	100%	9.8	10.0	98.0%	2.0%	
Methylene Chloride	9.6	10.0	96.0%	9.6	10.0	96.0%	0.0%	
Acetone	46.5	50.0	93.0%	47.7	50.0	95.4%	2.5%	
Carbon Disulfide	10.0	10.0	100%	9.8	10.0	98.0%	2.0%	
1,1-Dichloroethene	9.8	10.0	98.0%	9.7	10.0	97.0%	1.0%	
1,1-Dichloroethane	9.8	10.0	98.0%	9.7	10.0	97.0%	1.0%	
trans-1,2-Dichloroethene	10.0	10.0	100%	10.0	10.0	100%	0.0%	
cis-1,2-Dichloroethene	9.8	10.0	98.0%	9.8	10.0	98.0%	0.0%	
Chloroform	9.8	10.0	98.0%	9.9	10.0	99.0%	1.0%	
1,2-Dichloroethane	9.7	10.0	97.0%	9.7	10.0	97.0%	0.0%	
2-Butanone	47.8	50.0	95.6%	47.5	50.0	95.0%	0.6%	
1,1,1-Trichloroethane	10.2	10.0	102%	10.1	10.0	101%	1.0%	
Carbon Tetrachloride	10.6	10.0	106%	10.4	10.0	104%	1.9%	
Vinyl Acetate	8.7	10.0	87.0%	8.9	10.0	89.0%	2.3%	
Bromodichloromethane	10.4	10.0	104%	10.1	10.0	101%	2.9%	
1,2-Dichloropropane	9.7	10.0	97.0%	9.4	10.0	94.0%	3.1%	
cis-1,3-Dichloropropene	10.4	10.0	104%	10.0	10.0	100%	3.9%	
Trichloroethene	9.7	10.0	97.0%	9.5	10.0	95.0%	2.1%	
Dibromochloromethane	10.8	10.0	108%	10.6	10.0	106%	1.9%	
1,1,2-Trichloroethane	9.6	10.0	96.0%	9.6	10.0	96.0%	0.0%	
Benzene	10.1	10.0	101%	9.8	10.0	98.0%	3.0%	
trans-1,3-Dichloropropene	10.0	10.0	100%	9.9	10.0	99.0%	1.0%	
2-Chloroethylvinylether	7.8 Q	10.0	78.0%	8.0 Q	10.0	80.0%	2.5%	
Bromoform	10.7	10.0	107%	10.8	10.0	108%	0.9%	
4-Methyl-2-Pentanone (MIBK)	49.7	50.0	99.4%	49.3	50.0	98.6%	0.8%	
2-Hexanone	55.0	50.0	110%	54.4	50.0	109%	1.1%	
Tetrachloroethene	10.2	10.0	102%	10.1	10.0	101%	1.0%	
1,1,2,2-Tetrachloroethane	10.4	10.0	104%	10.4	10.0	104%	0.0%	
Toluene	9.8	10.0	98.0%	9.5	10.0	95.0%	3.1%	
Chlorobenzene	10.5	10.0	105%	10.3	10.0	103%	1.9%	
Ethylbenzene	10.9	10.0	109%	10.7	10.0	107%	1.9%	
Styrene	10.7	10.0	107%	10.6	10.0	106%	0.9%	
Trichlorofluoromethane	10.1	10.0	101%	10.1	10.0	101%	0.0%	
1,1,2-Trichloro-1,2,2-trifluoroethane	10.1	10.0	101%	9.6	10.0	96.0%	5.1%	
m,p-Xylene	21.4	20.0	107%	21.3	20.0	106%	0.5%	
o-Xylene	10.4	10.0	104%	10.5	10.0	105%	1.0%	
1,2-Dichlorobenzene	10.2	10.0	102%	10.1	10.0	101%	1.0%	
1,3-Dichlorobenzene	10.4	10.0	104%	10.3	10.0	103%	1.0%	
1,4-Dichlorobenzene	10.4	10.0	104%	10.4	10.0	104%	0.0%	
Acrolein	42.7	50.0	85.4%	43.7	50.0	87.4%	2.3%	
Methyl Iodide	9.6	10.0	96.0%	9.6	10.0	96.0%	0.0%	
Bromoethane	9.6	10.0	96.0%	9.7	10.0	97.0%	1.0%	

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-012811

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LAB CONTROL SAMPLE

Lab Sample ID: LCS-012811

QC Report No: SG59-The Boeing Company

LIMS ID: 11-1806

Project: Striker

Matrix: Water

025195.003.032

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCS LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Acrylonitrile	8.8 Q	10.0	88.0%	9.0 Q	10.0	90.0%	2.2%
1,1-Dichloropropene	10.0	10.0	100%	9.8	10.0	98.0%	2.0%
Dibromomethane	10.1	10.0	101%	9.7	10.0	97.0%	4.0%
1,1,1,2-Tetrachloroethane	10.9	10.0	109%	10.7	10.0	107%	1.9%
1,2-Dibromo-3-chloropropane	9.9	10.0	99.0%	9.9	10.0	99.0%	0.0%
1,2,3-Trichloropropane	10.3	10.0	103%	10.5	10.0	105%	1.9%
trans-1,4-Dichloro-2-butene	8.2	10.0	82.0%	7.9	10.0	79.0%	3.7%
1,3,5-Trimethylbenzene	11.4	10.0	114%	11.3	10.0	113%	0.9%
1,2,4-Trimethylbenzene	11.4	10.0	114%	11.2	10.0	112%	1.8%
Hexachlorobutadiene	10.0	10.0	100%	10.0	10.0	100%	0.0%
Ethylene Dibromide	9.5	10.0	95.0%	9.3	10.0	93.0%	2.1%
Bromochloromethane	9.6	10.0	96.0%	9.5	10.0	95.0%	1.0%
2,2-Dichloropropane	10.3	10.0	103%	10.2	10.0	102%	1.0%
1,3-Dichloropropane	9.6	10.0	96.0%	10.0	10.0	100%	4.1%
Isopropylbenzene	11.1	10.0	111%	11.0	10.0	110%	0.9%
n-Propylbenzene	11.4	10.0	114%	11.3	10.0	113%	0.9%
Bromobenzene	10.2	10.0	102%	9.9	10.0	99.0%	3.0%
2-Chlorotoluene	10.4	10.0	104%	10.4	10.0	104%	0.0%
4-Chlorotoluene	10.9	10.0	109%	10.7	10.0	107%	1.9%
tert-Butylbenzene	11.1	10.0	111%	10.9	10.0	109%	1.8%
sec-Butylbenzene	11.3	10.0	113%	11.2	10.0	112%	0.9%
4-Isopropyltoluene	11.6 Q	10.0	116%	11.4 Q	10.0	114%	1.7%
n-Butylbenzene	11.4 Q	10.0	114%	11.1 Q	10.0	111%	2.7%
1,2,4-Trichlorobenzene	10.2	10.0	102%	10.2	10.0	102%	0.0%
Naphthalene	10.3	10.0	103%	10.3	10.0	103%	0.0%
1,2,3-Trichlorobenzene	10.2	10.0	102%	10.3	10.0	103%	1.0%

Reported in µg/L (ppb)


RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	103%	104%
d8-Toluene	100%	101%
Bromofluorobenzene	96.9%	99.7%
d4-1,2-Dichlorobenzene	97.8%	99.9%

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: KSC-DP-17-GW-110127
SAMPLE

Lab Sample ID: SG59A
LIMS ID: 11-1806
Matrix: Water
Data Release Authorized: 
Reported: 02/07/11

QC Report No: SG59-The Boeing Company
Project: Striker
025195.003.032
Date Sampled: 01/27/11
Date Received: 01/27/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	02/01/11	200.8	02/04/11	7440-38-2	Arsenic	0.2	59.9	

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

DISSOLVED METALS

Page 1 of 1


Sample ID: KSC-DP-20-GW-110127

SAMPLE

Lab Sample ID: SG59B

LIMS ID: 11-1807

Matrix: Water

Data Release Authorized 

Reported: 02/07/11

QC Report No: SG59-The Boeing Company

Project: Striker

025195.003.032

Date Sampled: 01/27/11

Date Received: 01/27/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	02/01/11	200.8	02/04/11	7440-38-2	Arsenic	0.5	33.7	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

DISSOLVED METALS

Page 1 of 1


Sample ID: KSC-DP-19-GW-110127

SAMPLE

Lab Sample ID: SG59C

LIMS ID: 11-1808

Matrix: Water

Data Release Authorized: 

Reported: 02/07/11

QC Report No: SG59-The Boeing Company

Project: Striker

025195.003.032

Date Sampled: 01/27/11

Date Received: 01/27/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	02/01/11	200.8	02/04/11	7440-38-2	Arsenic	0.5	77.0	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
 Page 1 of 1

Sample ID: KSC-DP-18-GW-110127
SAMPLE

Lab Sample ID: SG59D
 LIMS ID: 11-1809
 Matrix: Water
 Data Release Authorized:
 Reported: 02/07/11



QC Report No: SG59-The Boeing Company
 Project: Striker
 025195.003.032
 Date Sampled: 01/27/11
 Date Received: 01/27/11

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	02/01/11	200.8	02/04/11	7440-38-2	Arsenic	0.5	115	

U-Analyte undetected at given RL
 RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: KSC-DP-17-S-4-5-110127
SAMPLE

Lab Sample ID: SG59E


QC Report No: SG59-The Boeing Company

LIMS ID: 11-1810

Project: Striker

Matrix: Soil

025195.003.032

Data Release Authorized 

Date Sampled: 01/27/11

Reported: 02/07/11

Date Received: 01/27/11

Percent Total Solids: 87.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/31/11	200.8	02/04/11	7440-38-2	Arsenic	0.2	2.6	

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: KSC-DP-20-S-4.5-5.5-110127
SAMPLE

Lab Sample ID: SG59F

LIMS ID: 11-1811

Matrix: Soil

Data Release Authorized 

Reported: 02/07/11

QC Report No: SG59-The Boeing Company

Project: Striker

025195.003.032

Date Sampled: 01/27/11

Date Received: 01/27/11

Percent Total Solids: 89.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/31/11	200.8	02/04/11	7440-38-2	Arsenic	0.2	2.6	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: KSC-DP-19-S-3.5-4.5-110127
SAMPLE

Lab Sample ID: SG59G


QC Report No: SG59-The Boeing Company

LIMS ID: 11-1812

Project: Striker

Matrix: Soil

025195.003.032

Data Release Authorized 

Date Sampled: 01/27/11

Reported: 02/07/11

Date Received: 01/27/11

Percent Total Solids: 88.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/31/11	200.8	02/04/11	7440-38-2	Arsenic	0.2	2.3	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: KSC-DP-18-S-4-5-110127

SAMPLE

Lab Sample ID: SG59H


QC Report No: SG59-The Boeing Company

LIMS ID: 11-1813

Project: Striker

Matrix: Soil

025195.003.032

Data Release Authorized: 

Date Sampled: 01/27/11

Reported: 02/07/11

Date Received: 01/27/11

Percent Total Solids: 88.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/31/11	200.8	02/04/11	7440-38-2	Arsenic	0.2	1.9	

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

DISSOLVED METALS

Sample ID: METHOD BLANK

Page 1 of 1

Lab Sample ID: SG59MB

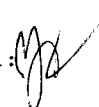
QC Report No: SG59-The Boeing Company

LIMS ID: 11-1806

Project: Striker

Matrix: Water

025195.003.032

Data Release Authorized: 

Date Sampled: NA

Reported: 02/07/11


Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	02/01/11	200.8	02/04/11	7440-38-2	Arsenic	0.2	0.2	U

U-Analyte undetected at given RL
RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: SG59LCS
LIMS ID: 11-1806
Matrix: Water
Data Release Authorized: 
Reported: 02/07/11

QC Report No: SG59-The Boeing Company
Project: Striker
025195.003.032
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	25.6	25.0	102%	

Reported in $\mu\text{g/L}$

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

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Sample ID: METHOD BLANK

Page 1 of 1

Lab Sample ID: SG59MB


QC Report No: SG59-The Boeing Company

LIMS ID: 11-1810

Project: Striker

Matrix: Soil

025195.003.032

Data Release Authorized 

Date Sampled: NA

Reported: 02/07/11

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry	Q
3050B	01/31/11	200.8	02/04/11	7440-38-2	Arsenic	0.2	0.2	U

U-Analyte undetected at given RL

RL-Reporting Limit

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

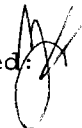
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: SG59LCS

LIMS ID: 11-1810

Matrix: Soil

Data Release Authorized: 

Reported: 02/07/11

QC Report No: SG59-The Boeing Company

Project: Striker

025195.003.032

Date Sampled: NA

Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	200.8	26.3	25.0	105%	

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

February 18, 2011

Kathryn Hartley
Landau Associates
130 Second Avenue South
Edmonds, WA 98020

RE: Project: Striker, 025195.003.032
ARI Job: SJ32

Dear Kathryn,

Enclosed, please find the original and revised Chain-of-Custody (COC) records, sample receipt documentation, email documentation, and the final data report for the samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted nine water samples, ten soil samples, and a trip blank on January 26, 2011 originally under sample delivery group (SDG) SG42. For further details regarding sample receipt, please refer to the enclosed Cooler Receipt Forms. Select samples were placed on hold pending further instructions. Per Landau Associates, samples were allowed to settle and sample volume was collected from the clear portion.

The samples were originally analyzed for Total and Dissolved Arsenic, VOCs, NWTPH-Gx, and NWTPH-Dx, as requested and reported under SG42.

On 2/16/11 at the request of Landau Associates, select samples were analyzed for NWTP-Gx outside of the method recommended holding time.

There were no analytical complications noted.

Quality control analysis results are included for your review. An electronic copy of this report and all associated raw data will be kept on file at ARI. If you have any questions or require additional information, please contact me at your convenience.

Sincerely,
ANALYTICAL RESOURCES, INC

A handwritten signature in blue ink, appearing to read "Kelly Bottem".

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



Cooler Receipt Form

ARI Client: Landau
 COC No(s): _____ (NA)
 Assigned ARI Job No: SG42

Project Name: Striker
 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)..... 6.0 5.0
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619
 Cooler Accepted by: JM Date: 1/26/11 Time: 1650

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 1/26/11
 Was Sample Split by ARI : NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 1/27/11 Time: 1000

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

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
<u>KSC-DP-25B-GW-110126</u>	<u>KSC-DP-25b-GW-110126</u>		

Additional Notes, Discrepancies, & Resolutions:
KSC-DP-23-GW-110126 - sm in 1 of 2.
TB = sm in 2 of 2
2 - SOB1 preserved vials + 1 - HCl preserved vial received for samples KSC-DP-21-S-0-0.5-110126
KSC-DP-21-S-3-3.5-110126 + KSC-DP-21-S-2.5-3-110126
Cannot use HCl vial for analysis, should be preserved with MeOH.

By: JM Date: 1/27/11

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



LANDAU ASSOCIATES

- Seattle/Edmonds (425) 778-0907
- Tacoma (253) 926-2493
- Spokane (509) 327-9737
- Portland (503) 542-1080
-

added by KFH 1/28/11
added by PRR 2/1/11

Date 1/26/2011
Page 1 of 2

Chain-of-Custody Record

Project Name <u>Striker</u> Project No. <u>025195.003.032</u>					Testing Parameters					Turnaround Time	
Project Location/Event <u>Kent, WA / Phase II Supplemental</u>					<div style="display: flex; flex-direction: column; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Arsenic</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">VOCs</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH-Dx</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH-G</div> </div>					<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Accelerated <input type="checkbox"/>	
Sampler's Name <u>PRR / SED</u>											
Project Contact <u>Tim Syverson, Kathryn Hartley, Joe Flaherty</u>											
Send Results To <u>" " " (Boeing)</u>											
* <u>Anne Halvorsen</u>											
Sample I.D.	Date	Time	Matrix	No. of Containers							Observations/Comments
KSC-DP-31-6W-110126	1/26/11	0920	H ₂ O	1	X						X Allow water samples to settle, collect aliquot from clear portion
KSC-DP-32-6W-110126		0955	H ₂ O	1	X						X NWTPH-Dx - run acid wash/silica gel cleanup
KSC-DP-33-6W-110126		1020	H ₂ O	1	X						
KSC-DP-21-6W-110126		1120	H ₂ O	3		X					
KSC-DP-31-S-5-6-110126		0850	Soil	1	X						run samples standardized to _____ product
KSC-DP-32-S-3.5-4.5-110126		0910	Soil	1	X						Analyze for EPH if no specific product identified
KSC-DP-33-S-4.5-7.5-110126		0935	Soil	1	X						VOC/BTEX/VPH (soil):
KSC-DP-21-S-0-0.5-110126		1040	Soil	3		X					non-preserved
KSC-DP-21-S-3-3.5-110126		1045	Soil	3		X					preserved w/methanol
KSC-DP-21-S-2.5-3-110126		1050	Soil	3							preserved w/sodium bisulfate
KSC-DP-25b-5-4.5-5-110126		1310	Soil	4			X	X			Freeze upon receipt
KSC-DP-25b-5-7-8-110126		1315	Soil	4							Freeze upon receipt
KSC-DP-24-S-6-7-110126		1400	Soil	4			X	X			✓ Dissolved metal water samples field filtered
KSC-DP-24-S-8-9-110126		1405	Soil	3							Other Archive Samples not checked for analysis
KSC-DP-22-6W-110126		1515	H ₂ O	5	X		X	X			
KSC-DP-23-6W-110126		1540	H ₂ O	5	X		X	X			
KSC-DP-24-6W-110126		1430	H ₂ O	5	X		X	X			
KSC-DP-25b-6W-110126		1340	H ₂ O	5	X		X	X			
Special Shipment/Handling or Storage Requirements <u>on ice</u>					Method of Shipment <u>deliver to ARI</u>						
Relinquished by <u>[Signature]</u>			Received by <u>[Signature]</u>			Relinquished by			Received by		
Signature <u>Paul Rymaker</u>			Signature <u>Jennifer Millsap</u>			Signature			Signature		
Printed Name <u>Paul Rymaker</u>			Printed Name <u>Jennifer Millsap</u>			Printed Name			Printed Name		
Company <u>LA I</u>			Company <u>ARI</u>			Company			Company		
Date <u>1/26/11</u> Time <u>1650</u>			Date <u>1/26/11</u> Time <u>1650</u>			Date			Time		

2011
1/28/11

PRR
2/1/11



- Seattle/Edmonds (425) 778-0907
- Tacoma (253) 926-2493
- Spokane (509) 327-9737
- Portland (503) 542-1080
- _____

Date 1/26/2011
Page 2 of 2

Chain-of-Custody Record

Project Name <u>Striker</u> Project No. <u>025195.032032</u>					Testing Parameters					Turnaround Time <input type="checkbox"/> Standard <input type="checkbox"/> Accelerated <input type="checkbox"/> _____	
Project Location/Event <u>Kent, WA / Phase II Supplemental</u>					<div style="border: 1px solid black; padding: 5px; transform: rotate(-45deg); display: inline-block;"> VOCs TPAIC </div>						
Sampler's Name <u>RRR/SED</u>											
Project Contact <u>Tim Syversen, Kathryn Hartney, Joe Flaherty</u>											
Send Results To <u>"", "", "", Anna Helversen</u>											
Sample I.D.	Date	Time	Matrix	No. of Containers							Observations/Comments
<u>TB</u>	<u>1/26/11</u>			<u>2</u>	<u>X</u>						<input checked="" type="checkbox"/> Allow water samples to settle, collect aliquot from clear portion <input checked="" type="checkbox"/> NWT/PH-Dx - run acid wash/silica gel cleanup <input type="checkbox"/> run samples standardized to _____ product <input type="checkbox"/> Analyze for EPH if no specific product identified VOC/BTEX/VPH (soil): <input type="checkbox"/> non-preserved <input type="checkbox"/> preserved w/methanol <input type="checkbox"/> preserved w/sodium bisulfate <input type="checkbox"/> Freeze upon receipt <input type="checkbox"/> Dissolved metal water samples field filtered Other _____
<u>PSC-09-25-GW-110126</u>	<u>1/26/11</u>	<u>1300</u>	<u>H₂O</u>	<u>5</u>							
Special Shipment/Handling or Storage Requirements <u>On ice</u>										Method of Shipment <u>air, cooled</u>	
Relinquished by <u>[Signature]</u> Signature <u>Paul Ruyter</u> Printed Name <u>CAE</u> Company Date <u>1/26/11</u> Time <u>1650</u>			Received by <u>[Signature]</u> Signature <u>Jennifer Millsap</u> Printed Name <u>ART</u> Company Date <u>1/26/11</u> Time <u>1650</u>			Relinquished by Signature Printed Name Company Date _____ Time _____			Received by Signature Printed Name Company Date _____ Time _____		

Sample ID Cross Reference Report



ARI Job No: SJ32
Client: The Boeing Company
Project Event: 025195.003.032
Project Name: Striker

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. KSC-DP-24-S-8-9-110126	SJ32A	11-3378	Soil	01/26/11 14:05	01/26/11 16:50

Printed 02/16/11

Subject: Additional Analysis for Boeing Striker
From: Paul Raymaker <praymaker@landauinc.com>
Date: Wed, 16 Feb 2011 13:21:07 -0800
To: Kelly Bottem <kellyb@arilabs.com>
CC: "Kathryn Hartley" <khartley@landauinc.com>

Kelly-

Attached is a revised COC from the Boeing Striker job. We are requesting sample KSC-DP-24-S-8-9-110126 be analyzed for TPH-G. We are aware that the sample is beyond hold time however we would still like it analyzed. Please let me know if you have any questions.

Thank you,

Paul Raymaker " Senior Staff Geologist
Landau Associates, Inc.

130 2nd Ave. S, Edmonds, WA 98020
425.778.0907 " fax 425.778.6409 " direct 425.329.0289
praymaker@landauinc.com " www.landauinc.com

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Content-Description: Striker_COC_012611_rev021611.pdf

Striker_COC_012611_rev021611.pdf **Content-Type:** application/pdf

Content-Encoding: base64

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Matrix: Soil


QC Report No: SJ32-The Boeing Company

Project: Striker

Event: 025195.003.032

Date Sampled: 01/26/11

Date Received: 01/26/11

Data Release Authorized: 

Reported: 02/18/11

ARI ID	Client ID	Analysis Date	Basis	Range	Result
MB-021711 11-3378	Method Blank	02/17/11 PID2	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	< 5.0 U --- 91.9% 90.5%
SJ32A 11-3378	KSC-DP-24-S-8-9-110126	02/17/11 PID2	Dry	Gasoline HC ID Trifluorotoluene Bromobenzene	23 GRO 98.5% 96.6%

Gasoline values reported in mg/kg (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: SJ32
Matrix: Soil

QC Report No: SJ32-The Boeing Company
Project: Striker
Event: 025195.003.032

<u>Client ID</u>	<u>BFB</u>	<u>TFT</u>	<u>BBZ</u>	<u>TOT OUT</u>
MB-021711	NA	91.9%	90.5%	0
LCS-021711	NA	98.3%	98.5%	0
LCSD-021711	NA	92.0%	91.5%	0
KSC-DP-24-S-8-9-110126	NA	98.5%	96.6%	0

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(BFB) = Bromofluorobenzene	(70-130)	(70-130)
(TFT) = Trifluorotoluene	(80-120)	(66-123)
(BBZ) = Bromobenzene	(80-120)	(62-130)

Log Number Range: 11-3378 to 11-3378

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: LCS-021711
LAB CONTROL SAMPLE

Lab Sample ID: LCS-021711
LIMS ID: 11-3378
Matrix: Soil
Data Release Authorized: *AS*
Reported: 02/18/11

QC Report No: SJ32-The Boeing Company
Project: Striker
Event: 025195.003.032
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 02/17/11 07:03
LCSD: 02/17/11 07:32
Instrument/Analyst LCS: PID2/MH
LCSD: PID2/MH

Purge Volume: 5.0 mL
Sample Amount LCS: 100 mg-dry-wt
LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	47.0	50.0	94.0%	42.4	50.0	84.8%	10.3%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	98.3%	92.0%
Bromobenzene	98.5%	91.5%