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January 13, 2010

NAVFAC Mid-Atlantic
Marine Corps North Carolina IPT
Environmental Business Line
Code: OPNCEV
Attn: Mr. David Borton, P.G.
6506 Hampton Boulevard
Building C, Room 314
Norfolk, VA 23508-1278

Re: **CSFF Former UST#8 Area – Soil Sampling (FINAL)**
Marine Corps Air Station, New River, North Carolina
Navy Contract No. N62470-05-D-6200
Delivery Order No. 0074
CATLIN Project No. 209-034

Dear Mr. Borton:

CATLIN Engineers and Scientists (CATLIN) has collected four soil samples within the footprint of a former Underground Storage Tank (UST) at the Campbell Street Fuel Farm (CSFF) aboard Marine Corps Air Station (MCAS) New River. The four soil samples obtained by CATLIN were collected to determine if soil contamination above the North Carolina Department of Environment and Natural Resources (NCDENR) Maximum Soil Contaminant Concentrations (MSCCs) was present in this portion of the CSFF site. It is our understanding that this information will be used by the Contractor that will be doing excavation of the contaminated soil in this area. Please find below a summary of the sampling activities, results and CATLIN's recommendations.

CSFF General Site Information and History

The CSFF project site is located along White Street aboard the MCAS, New River in Onslow County, North Carolina (See Figure 1). The CSFF is an active fuel storage facility, which stores JP-5 fuel in four steel Aboveground Storage Tanks (ASTs) with capacities of 215,000 gallons each. These ASTs are connected by an aboveground fuel transfer line that enters a filter building before fuel is pumped to the flightline through an underground pipeline located along White Street. These ASTs replaced a system of eight USTs in 1985. The former USTs were reported to contain JP-5 fuel and aviation gasoline (AVGAS) and were of varying capacities ranging from unknown (two

USTs) to 120,000 gallons. Seven of the eight USTs were excavated and removed, and one AVGAS UST was reportedly filled with sand and abandoned in place. The abandoned AVGAS UST is reportedly located behind the filter building; however, the exact location is unknown. The CSFF UST site under NCDENR Incident Number 23297 is classified as Low Risk and Industrial/Commercial Land Use.

Various site assessments were completed at the CSFF project site in the early 1990s identifying soil and groundwater petroleum contamination, and the presence of free-phase product. The contamination was reportedly due to leaks from the former USTs and associated piping at the Fuel Farm/Building AS-143 area. The findings of the previous assessments have been summarized in reports submitted to NCDENR, Division of Waste Management (DWM), UST Section in the Wilmington Regional Office (WiRO).

Former UST#8 Area Information and History

As documented in the September 4, 2009 CSFF 2005 Fuel Port Release – Risk-based Soil Sampling Letter Report by CATLIN, historically several soil samples were collected in the vicinity of former UST#8, specifically the USTCSFF-SB12 location. Please refer to this letter report for a detailed history of the sampling activities and strategies conducted at this area over the past several years. The former UST#8 area should be included in the UST portion of the site under NCDENR Incident Number 23297. This incident number is classified as Low Risk and Industrial/Commercial Land Use and the Industrial/Commercial MSCCs are the applicable soil cleanup goals. The two most recent sampling events (July 2009 and November 2009) are discussed below.

July 2009 Soil Sampling

On July 27, 2009 CATLIN personnel were on-site to conduct soil sampling activities. One soil boring was installed in the vicinity of previous soil sample USTCSFF-SB12 to approximately three feet BLS by hand auger technique. A soil sample, USTCSFF-SB12 (2009), was collected for laboratory analysis from this boring at a depth of 2.5 to 3 feet BLS. An additional soil boring was installed approximately 20 feet east of the USTCSFF-SB12 (2009), a soil sample was collected from this boring at a depth of 2.5 to 3 feet BLS and was identified as USTCSFF-SB13 (2009). See Figure 2 for soil sample locations.

The soil samples collected for laboratory analysis were packed in the appropriate pre-labeled glassware and placed in a chilled cooler pending delivery to SGS Environmental Services, Inc. (SGS) in Wilmington, North Carolina. SGS analyzed the samples per EPA Method 8260B, 8270C and MADEP VPH/EPH. The complete laboratory report and documentation is found in Attachment 1 and summarized as follows:

EPA Method 8260B

As indicated in Table 1, twelve compounds were detected at concentrations above the Method Detection Limits (MDLs) in the USTCSFF-SB12 (2009) and USTCSFF-SB13

(2009) soil samples. However, only two compounds were detected at concentrations above the lowest established MSCC. 4-Isopropyltoluene was detected at concentrations of 0.0622 mg/kg and 0.00525 mg/kg in the USTCSFF-SB12 (2009) and USTCSFF-SB13 (2009) soil samples, respectively. Also, Methylene Chloride was detected at an estimated concentration of 0.0329 mg/kg in the USTCSFF-SB12 (2009) sample, which was above the Soil-to-Groundwater (STGW) MSCC for this compound.

Please note, there are no established MSCCs for 4-Isopropyltoluene. Since the 4-Isopropyltoluene does not have established MSCCs, any detection is considered reportable. The compound 4-Isopropyltoluene, with molecular formula $C_{10}H_{14}$, is an Aromatic compound whose structure is based on the Benzene ring. By definition, Aromatics are carbon compounds whose structures are based on rings of carbon. The compound 4-Isopropyltoluene contains ten carbon atoms and has a ringed structure, so detections can be compared to the MSCCs for the C_9 - C_{22} Aromatics hydrocarbon fraction. A comparison of the detected concentrations of 4-Isopropyltoluene to the MSCCs for the C_9 - C_{22} Aromatics hydrocarbon fraction reveals that the concentrations are well below the established MSCCs. Also, Methylene Chloride is not a petroleum-related compound. The detection of this compound is likely a laboratory artifact. All other detected EPA Method 8260B compounds were revealed at concentrations below the lowest MSCCs.

EPA Method 8270

Please note, the EPA Method 8270 analysis was conducted twice on the submitted soil samples. The first analysis was conducted on July 29, 2009; however, the surrogate recovery was not confirmed by duplicate analysis due to matrix interference. Therefore, the samples were re-extracted and re-analyzed on August 5, 2009. The "second run" on the samples again revealed low surrogate recovery although different surrogates from the first analysis, and again this was attributable to matrix interference. At the direction of SGS, CATLIN has reported both analyses. As indicated in Table 2, eighteen compounds were detected at concentrations above the MDLs in the USTCSFF-SB12 (2009) and USTCSFF-SB13 (2009) soil samples. Eight of these compounds were detected at concentrations in excess of the lowest MSCCs. In addition, three compounds were detected at concentrations above the Industrial/Commercial MSCCs. Benzo(a)pyrene was detected at concentrations of 6.07 mg/kg and 1.82 mg/kg in the USTCSFF-SB12 (2009) sample from the July 29 and August 5 analyses, respectively. Each of these concentrations were above the Industrial/Commercial MSCC of 0.78 mg/kg for this compound. Benzo(b)fluoranthene was detected at a concentration of 8.91 mg/kg in sample USTCSFF-SB12 (2009) from the July 29 analysis, which was above the Industrial/Commercial MSCC of 8 mg/kg for this compound. Dibenzo(a,h)anthracene was detected at a concentration of 0.997 mg/kg in sample USTCSFF-SB12 (2009) from the July 29 analysis, which was above the Industrial/Commercial MSCC of 0.78 mg/kg for this compound. All other detected EPA Method 8270 compounds were revealed at concentrations below the Industrial/Commercial MSCCs.

MADEP VPH/EPH

As indicated in Tables 3 and 4, the C₉-C₁₈ aliphatics hydrocarbon fraction in the USTCSFF-SB12 (2009) and USTCSFF-SB13 (2009) soil samples were detected at concentrations of 845.3 mg/kg and 2,162 mg/kg, respectively. Both of these detected concentrations were below all MSCCs. The C₉-C₂₂ aromatics hydrocarbon fraction was detected at concentrations of 275 mg/kg and 344.4 mg/kg in the USTCSFF-SB12 (2009) and USTCSFF-SB13 (2009) soil samples, respectively. These concentrations of the C₉-C₂₂ aromatics hydrocarbon fraction were above the STGW MSCC, but below the Residential and Industrial/Commercial MSCCs. All other MADEP compounds were not detected at concentrations above the MDLs.

November 2009 Soil Sampling

On November 24, 2009 CATLIN personnel were on-site to conduct soil sampling activities in an attempt to delineate the extent of vadose zone soil contamination around previous sample location USTCSFF-SB12 (2009). Four soil borings (UST#8-CSFF-SB01 through UST#8-CSFF-SB04) were installed in the vicinity of previous soil sample USTCSFF-SB12 (2009) to approximately four feet BLS by hand auger technique (See Attachment 2 for Boring Logs). One soil sample was collected for laboratory analysis from each boring at the interval with the highest Organic Vapor Analyzer (OVA) reading from within the vadose zone. See Figure 2 for soil sample locations.

The soil samples collected for laboratory analysis were packed in the appropriate pre-labeled glassware and placed in a chilled cooler pending delivery to SGS Environmental Services, Inc. (SGS) in Wilmington, North Carolina. SGS analyzed the samples per EPA Method 8260B, 8270C and MADEP VPH/EPH. The complete laboratory report and documentation is found in Attachment 1.

For ease of review the analytical results from the November 2009 sampling event have been added to Tables 1 through 4, which also contain the July 2009 sampling results. The results for the November 2009 sampling event are summarized as follows:

EPA Method 8260B

As indicated in Table 1, seven compounds were detected at concentrations above the MDLs in the UST#8-CSFF-SB01 through UST#8-CSFF-SB04 soil samples. However, no compounds were detected at concentrations above any of the established MSCCs. Tetrachloroethene was detected at an estimated concentration of 0.00291 mg/kg in sample UST#8-CSFF-SB01. Please note, there are no established MSCCs for Tetrachloroethene. All other detected EPA Method 8260B compounds were revealed at concentrations below the lowest MSCCs.

EPA Method 8270

As indicated in Table 2, five compounds were detected at concentrations above the MDLs in the UST#8-CSFF-SB01 through UST#8-CSFF-SB04 soil samples. However,

all detected EPA Method 8270 compounds were revealed at concentrations below the lowest MSCCs.

MADEP VPH/EPH

As indicated in Tables 3 and 4, the C₉-C₁₈ aliphatics, C₁₉-C₃₆ aliphatics, and C₉-C₂₂ aromatics hydrocarbon fractions were detected in the UST#8-CSFF-SB01 through UST#8-CSFF-SB04 soil samples. The detected concentrations of the C₉-C₁₈ aliphatics and C₁₉-C₃₆ aliphatics hydrocarbon fractions were well below all of the MSCCs. The C₉-C₂₂ aromatics hydrocarbon fraction was detected at concentrations of 194.9 mg/kg and 38.36 mg/kg in the UST#8-CSFF-SB01 and UST#8-CSFF-SB03 soil samples, respectively. These concentrations of the C₉-C₂₂ aromatics hydrocarbon fraction were above the STGW MSCC, but below the Residential and Industrial/Commercial MSCCs. All other MADEP compounds were not detected at concentrations above the lowest MSCCs or MDLs.

Recommendations

Three compounds were detected above the Industrial/Commercial MSCCs in the USTCSFF-SB12 (2009) soil sample. For the UST portion of the CSFF site the Industrial/Commercial MSCCs are the applicable soil cleanup levels. CATLIN feels that the soil contamination identified in the USTCSFF-SB12 (2009) sample is most likely attributable to the Former UST#8. Therefore, CATLIN recommends that a small soil excavation be conducted around the USTCSFF-SB12 (2009) location as illustrated on Figure 2. CATLIN recommends that the area of soil contamination be excavated into the water table (estimated excavation depth of five feet BLS) to remove vadose zone and smear zone contamination. Since "clean" soil samples have been collected around the perimeter of the USTCSFF-SB12 (2009) soil sample, CATLIN recommends that the soil excavation boundary extend to the location of the clean soil samples. Therefore, CATLIN further recommends that no confirmation soil samples be collected as the excavation will extend to the previously identified clean locations. The estimated extent of the soil excavation is shown on Figure 2, and is approximately 10 feet by 15 feet. Assuming an excavation depth of approximately five feet, the estimated volume of soil to be removed is 750 cubic feet or 28 cubic yards.

It is recommended that this report be provided to NCDENR prior to the start of excavation activities in order to verify that no confirmation sampling will be needed and excavation activities can be documented within a Soil Cleanup Report.

CATLIN Engineers and Scientists appreciate the opportunity to continue to provide services to NAVFAC Mid-Atlantic and the MCB on your environmental projects.

Sincerely,



Shane A. Chasteen
Project Scientist



Jeffery K. Becken, P.E.
Project Manager



Attachments

cc: Ms. Susan Tsimpinos - NAVFAC Mid-Atlantic Contracts
Commanding Officer - Attn: Director I&E/EMD/EQB (with two copies)

209034_CSFF_UST#8_LtrRpt.doc

TABLES

TABLE 1
SUMMARY OF SOIL LABORATORY RESULTS
EPA METHOD 8260B/5035

Incident Name and No.: Former UST #8 Area - 23297

Sample ID	Contaminant of Concern →		Acetone	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Isopropylbenzene	4-Isopropyltoluene	Methylene chloride	Naphthalene	n-Propyl benzene	Tetrachloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	All Other EPA Method 8260B/5035 Compounds
	Date Collected	Sample Depth (ft. BLS)														
Residential MSCC (mg/kg)			1,564	9,385	626	626	626	1,564	NE	85	313	626	NE	782	782	Varies
Industrial/Commercial MSCC (mg/kg)			40,880	245,280	16,350	16,350	16,350	40,880	NE	763	8,176	16,350	NE	20,440	20,440	Varies
STGW MSCC (mg/kg)			2.8	17	4.3	3.3	3.4	1.7	NE	0.02	0.58	1.7	NE	7.5	7.3	Varies
USTCSFF-SB12 (2009)	7/27/2009	2.5-3.0	<0.0983	0.160 J	0.216	0.0834	0.00902 J	0.0122 J	0.0622	0.0329 J	0.135	0.0280 J	<0.00311	0.0225 J	0.0104 J	BMDL
USTCSFF-SB13 (2009)	7/27/2009	2.5-3.0	0.0819	0.0103 J	0.0112	0.0122	<0.00099	0.00102 J	0.00525	<0.00106	0.00334 J	<0.00112	<0.00081	<0.00112	<0.00101	BMDL
UST#8-CSFF-SB01	11/24/2009	2.0-3.0	0.0752	0.0103 J	<0.00114	<0.00120	<0.00133	<0.00106	<0.00127	0.00530 J	0.00318 J	<0.00150	0.00291 J	<0.00150	<0.00136	BMDL
UST#8-CSFF-SB02	11/24/2009	1.0-2.0	0.0432 J	0.00522 J	<0.00084	<0.00089	<0.00098	<0.00078	<0.00094	0.00230 J	<0.00075	<0.00111	<0.00081	<0.00111	<0.00100	BMDL
UST#8-CSFF-SB03	11/24/2009	2.0-3.0	0.0591	0.00733 J	0.00166 J	0.00144 J	<0.00098	<0.00078	<0.00094	0.00341 J	0.00233 J	<0.00111	<0.00080	<0.00111	<0.00100	BMDL
UST#8-CSFF-SB04	11/24/2009	2.0-3.0	0.0626	<0.00528	<0.00093	<0.00098	<0.00109	<0.00086	<0.00104	0.00268 J	<0.00083	<0.00123	<0.00089	<0.00123	<0.00111	BMDL

All results in milligrams per kilogram (mg/kg).
BMDL = Below Method Detection Limit
NE = None Established
ft. BLS = Feet Below Land Surface.
< = Less than method detection limit
J = Estimated value, below calibration range and above MDL
STGW = Soil-to-Groundwater
MSCC = Maximum Soil Contaminant Concentration
Bold results indicate concentration above the lowest MSCC.

TABLE 2
SUMMARY OF SOIL LABORATORY RESULTS
EPA METHOD 8270

Incident Name and No.: Former UST #8 Area - 23297

Sample ID	Contaminant of Concern		Acenaphthene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Bis(2-ethylhexyl)phthalate	Chrysene	Dibenzo[a,h]anthracene	Dibenzofuran	2,4-Dimethylphenol	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene	All Other EPA Method 8270 Compounds
	Date Collected	Sample Depth (ft. BLS)																				
Residential MSCC (mg/kg)			940	4,600	0.88	0.088	0.88	469	9	46	88	0.088	62	312	620	620	0.88	63	313	469	469	Vaires
Industrial/Commercial MSCC (mg/kg)			24,000	122,000	8	0.78	8	12,264	78	410	780	0.78	1,635	8,176	16,400	16,400	8	1,635	8,176	12,264	12,264	Varies
STGW MSCC (mg/kg)			8.2	1,000	0.34	0.091	1.2	6,700	12	5.6	38	0.17	4.7	0.9	280	44	3.3	1.7	0.58	60	290	Varies
USTCSFF-SB12 (2009)	7/27/2009	2.5-3.0	<0.057	0.112 J	7.11	6.07	8.91	3.00	2.26	<0.057	6.41	0.997	<0.053	0.390	8.77	<0.058	3.09	0.933	0.217 J	0.667	8.27	BMDL
USTCSFF-SB12 (2009)*	7/27/2009	2.5-3.0	0.092 J	0.263 J	2.06	1.82	2.51	1.09	0.910	<0.052	2.15	0.291 J	<0.048	0.482	3.51	<0.053	1.06	0.722	<0.048	<0.048	2.78	BMDL
USTCSFF-SB13 (2009)	7/27/2009	2.5-3.0	0.621	<0.053	0.096 J	<0.056	0.077 J	<0.067	<0.055	<0.059	0.085 J	<0.049	0.339 J	0.336 J	0.247 J	0.613	<0.046	0.617	1.44	1.23	0.471	BMDL
USTCSFF-SB13 (2009)*	7/27/2009	2.5-3.0	2.10	0.392	0.216 J	0.083 J	0.158 J	<0.060	0.062 J	<0.053	0.172 J	<0.044	1.64	0.907	1.46	1.99	<0.041	3.80	7.58	3.49	0.972	BMDL
UST#8-CSFF-SB01	11/24/2009	2.0-3.0	<0.057	<0.051	<0.051	<0.054	<0.052	<0.065	<0.053	0.326 J	0.045 J	<0.048	<0.053	<0.068	0.094 J	<0.059	<0.044	<0.061	<0.053	0.112 J	0.079 J	BMDL
UST#8-CSFF-SB02	11/24/2009	1.0-2.0	<0.055	<0.049	<0.050	<0.052	<0.050	<0.063	<0.051	<0.055	<0.035	<0.046	<0.051	<0.066	<0.058	<0.057	<0.043	<0.059	<0.051	<0.051	<0.049	BMDL
UST#8-CSFF-SB03	11/24/2009	2.0-3.0	<0.056	<0.050	<0.050	<0.053	<0.051	<0.064	<0.052	<0.056	<0.035	<0.047	<0.052	<0.066	<0.059	<0.057	<0.043	<0.060	<0.051	<0.051	<0.050	BMDL
UST#8-CSFF-SB04	11/24/2009	2.0-3.0	<0.057	<0.050	<0.051	<0.053	<0.051	<0.064	<0.053	<0.057	<0.036	<0.047	<0.052	<0.067	0.196 J	<0.058	<0.044	<0.060	<0.052	0.196 J	0.126 J	BMDL

All results in milligrams per kilogram (mg/kg).
BMDL = Below Method Detection Limit
ft. BLS = Feet Below Land Surface.
< = Less than method detection limit
J = Estimated value, below calibration range and above MDL
STGW = Soil-to-Groundwater
MSCC = Maximum Soil Contaminant Concentration
Bold results indicate concentration above one or more of the MSCCs.
* = Results from re-extraction and re-analysis on 8/5/09 because surrogate recovery not confirmed by duplicate analysis due to matrix interference.

TABLE 3
SUMMARY OF SOIL LABORATORY RESULTS
MADEP VPH/EPH

Incident Name and No.: Former UST #8 Area - 23297

Sample ID	Contaminant of Concern →		C5-C8 Aliphatics	C9-C12 Aliphatics	C9-C10 Aromatics	C9-C18 Aliphatics	C19-C36 Aliphatics	C11-C22 Aromatics
	Date Collected	Sample Depth (ft. BLS)						
USTCSFF-SB12 (2009)	7/27/2009	2.5-3.0	<10.0	34.3	156	811	<10.0	119
USTCSFF-SB13 (2009)	7/27/2009	2.5-3.0	<10.0	32.0	56.4	2130	<10.0	288
UST#8-CSFF-SB01	11/24/2009	2.0-3.0	<10.0	36.4	40.9	556	1.99 J	154
UST#8-CSFF-SB02	11/24/2009	1.0-2.0	<10.0	<10.0	13.4	21.4	2.42 J	2.05 J
UST#8-CSFF-SB03	11/24/2009	2.0-3.0	<10.0	34.2	36.2	166	5.88 J	2.16 J
UST#8-CSFF-SB04	11/24/2009	2.0-3.0	<10.0	<10.0	<10.0	159	10.4	4.71 J

All results in milligrams per kilogram (mg/kg).

ft. BLS = Feet Below Land Surface.

J = Estimated value, below calibration range and above MDL

< = Less than method detection limit

TABLE 4
SUMMARY OF SOIL LABORATORY RESULTS
MADEP VPH/EPH AS COMPARED TO NCDENR MSCCs

Incident Name and No.: Former UST #8 Area - 23297

Sample ID	Contaminant of Concern →		C5-C8 Aliphatics	C9-C18 Aliphatics	C19-C36 Aliphatics	C9-C22 Aromatics
	Date Collected	Sample Depth (ft. BLS)				
Residential MSCC (mg/kg)			939	9,386	93,860	469
Industrial/Commercial MSCC (mg/kg)			24,528	245,280	#	12,264
STGW MSCC (mg/kg)			72	3,300	##	34
USTCSFF-SB12 (2009)	7/27/2009	2.5-3.0	<10.0	845.3	<10.0	275
USTCSFF-SB13 (2009)	7/27/2009	2.5-3.0	<10.0	2,162	<10.0	344.4
UST#8-CSFF-SB01	11/24/2009	2.0-3.0	<10.0	592.4	1.99 J	194.9
UST#8-CSFF-SB02	11/24/2009	1.0-2.0	<10.0	<31.4	2.42 J	15.45 J
UST#8-CSFF-SB03	11/24/2009	2.0-3.0	<10.0	200.2	5.88 J	38.36 J
UST#8-CSFF-SB04	11/24/2009	2.0-3.0	<10.0	<169.0	10.4	4.71 J

All results in milligrams per kilogram (mg/kg).

= Health based level > 100%

= Considered Immobile

ft. BLS = Feet Below Land Surface.

< = Less than method detection limit

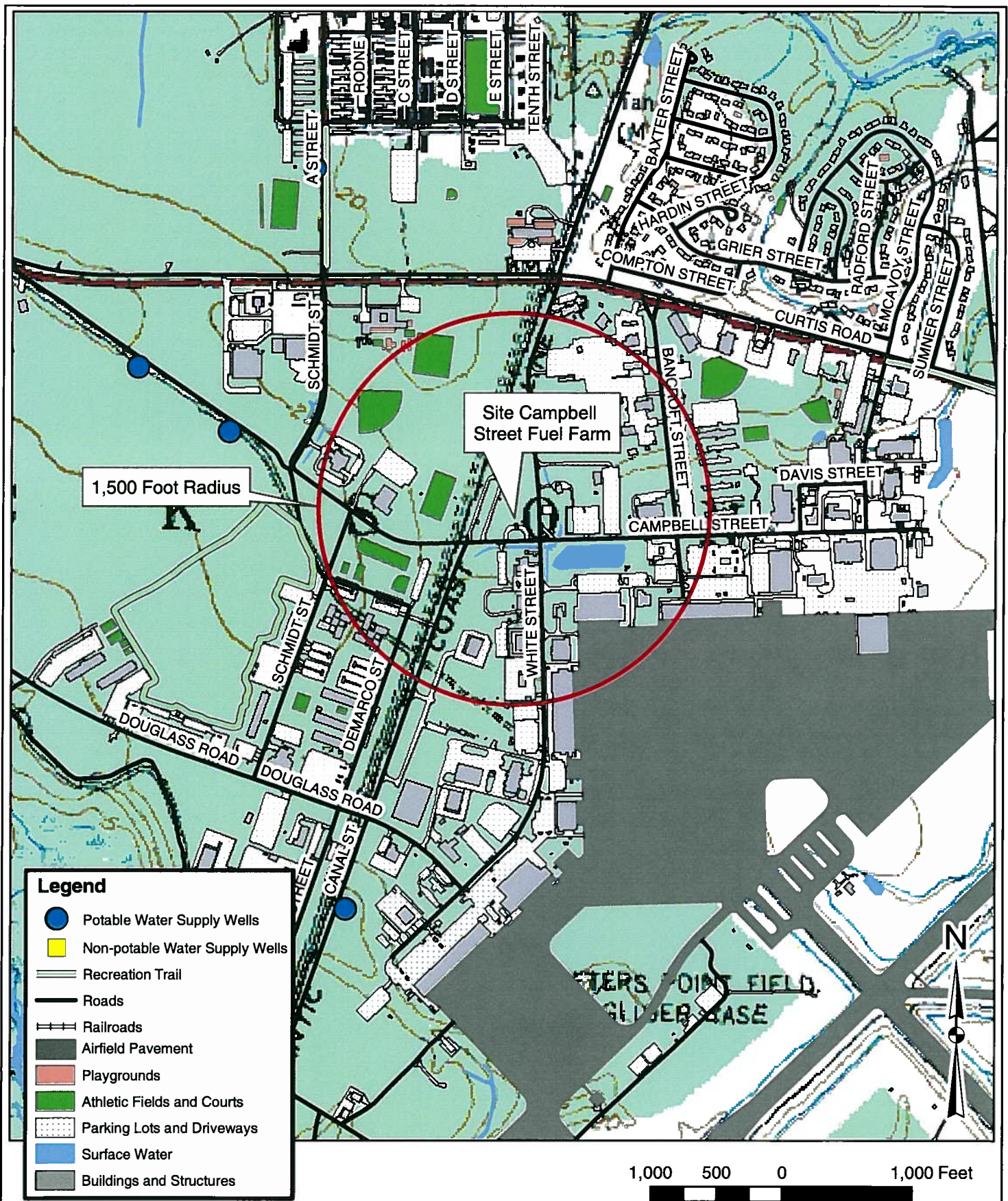
J = Estimated value, below calibration range and above MDL

STGW = Soil-to-Groundwater

MSCC = Maximum Soil Contaminant Concentration

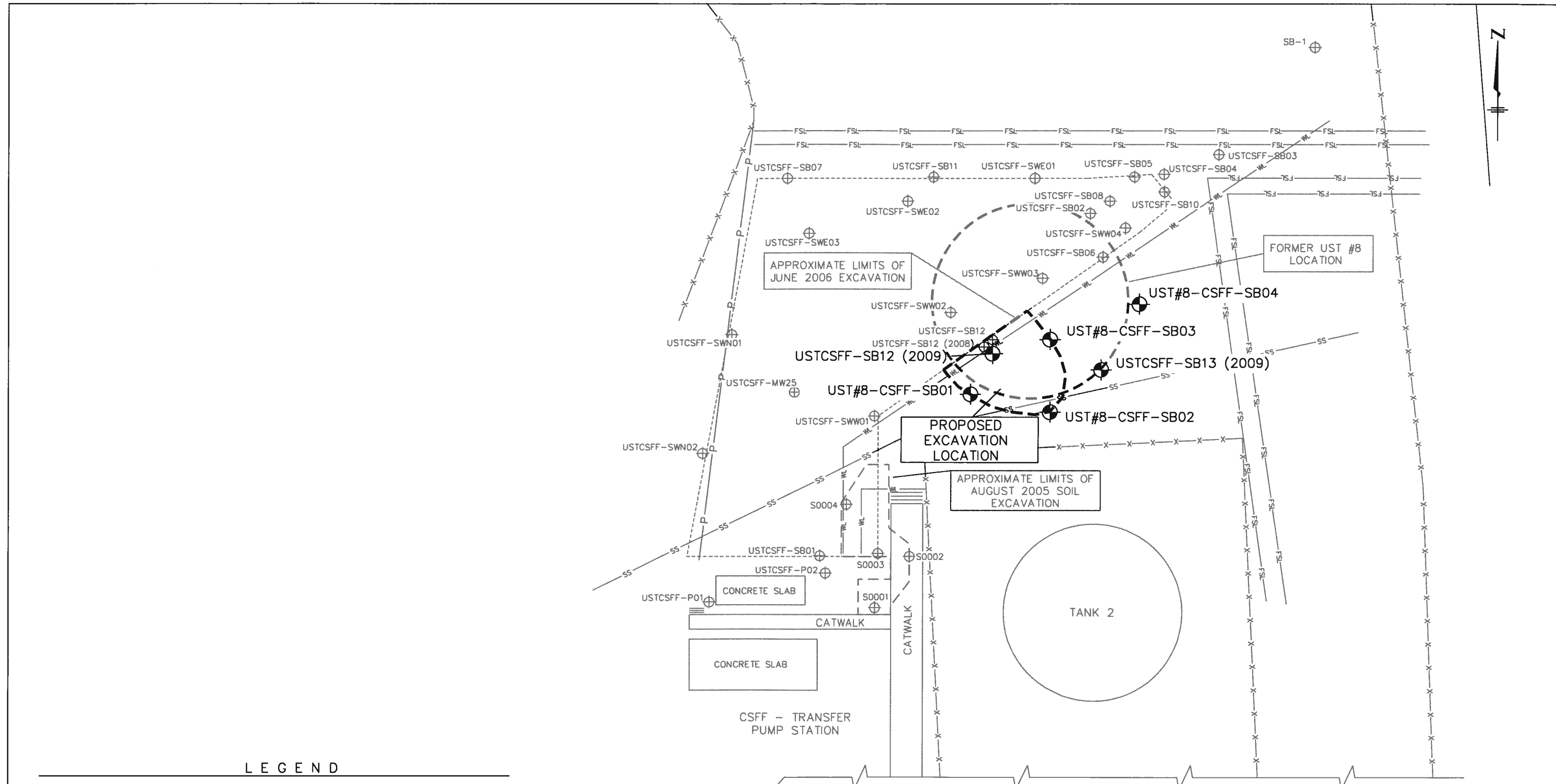
Bold results indicate concentration above the lowest MSCC.

FIGURES



Data Sources: Data Layers provided by MCB Camp Lejeune GIS Office.

 CATLIN Engineers and Scientists 220 Old Dairy Road Wilmington, NC 28405 Corporate License No. for Engineering Services C-0585	PROJECT SOIL SAMPLING REPORT CSFF FORMER UST#8 AREA MARINE CORPS AIR STATION NEW RIVER, NC		TITLE SITE LOCATION MAP		FIGURE
	JOB NO. 209-034	DATE DEC 2009	SCALE AS SHOWN	DRAWN BY SAC	CHECKED BY MEM



LEGEND

EXISTING	NEW	DESCRIPTION	EXISTING	DESCRIPTION
		BUILDING		SEWER LINE
		RECOVERY WELL		POWER LINE
		TYPE II MONITORING WELL		WATER LINE
		TYPE III MONITORING WELL		JUNE 2006 EXCAVATION LINE
		SOIL BORING		AUGUST 2005 EXCAVATION LINE
		FENCE		FORMER UST TANK
				FIRE SUPPRESSION LINE

NOTE: SAMPLE LOCATIONS AND EXCAVATION BOUNDARIES ARE APPROXIMATE.

CATLIN Engineers and Scientists 220 Old Dairy Road Wilmington, NC 28405 Corporate License No. for Engineering Services C-0585	PROJECT SOIL SAMPLING REPORT FORMER UST #8 AREA CAMPBELL STREET FUEL FARM NEW RIVER AIR STATION, N.C.	TITLE SITE PLAN WITH SOIL SAMPLE LOCATIONS AND PROPOSED EXCAVATION AREA		FIGURE 2
	JOB NO. 209-034	DATE: DEC 2009	SCALE: 1"=20'	DRAWN BY: THW

ATTACHMENT 1

LABORATORY REPORT AND CHAIN-OF-CUSTODY DOCUMENTATION



Shane Chasteen
Richard Catlin & Associates
P.O. Box 10279
Wilmington, NC 28404-0279

Report Number: G128-2423

Client Project: CSFF

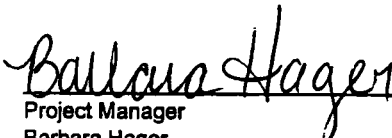
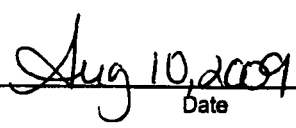
Dear Shane Chasteen,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. Any samples submitted to our laboratory will be retained for a maximum of thirty (30) days from the date of this report unless other arrangements are requested.

If there are any questions about the report or services performed during this project, please call Barbara Hager at (910) 350-1903. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America, Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America, Inc.

 
Project Manager
Barbara Hager



Case Narrative

Catlin

SGS Project: **G128-2423**

Project Name: **CSFF**

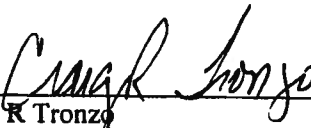
SGS North America; Inc.

August 10, 2009

- Four soil samples were accepted into the laboratory on July 28, 2009 at 0847 for analyses as indicated on the chain of custody. The samples were received in good condition, with a temperature of 4.8°C.
- All extractions and analyses were completed within holding time limits, with the following quality control exceptions.

8270 Analysis

- Samples **USTCSFF-SB12** and **USTCSFF-SB13** were reextracted for reported surrogate recoveries that were below the method's QC limit. These two samples have reported low surrogate recoveries in the reextracted sample data, although different surrogates. This can be attributed to matrix interferences. Both sets of data are reported in this SDG.

 _____ Date 8/10/09
Craig R. Tronzo
Data Review

SGS North America, Inc.
List of Reporting Abbreviations
And Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantification Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

D = Detected, but RPD is > 40% between results in dual column method.

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL/CL = Reporting Limit / Control Limit

RPD = Relative Percent Difference

UJ = Target analytes with recoveries that are $10\% < \%R < LCL$; # of MEs are allowable and compounds are not detected in the sample.

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% solids = Percent Solids

Special Notes:

- 1) Metals and mercury samples are digested with a hot block; see the standard operating procedure document for details.
- 2) Uncertainty for all reported data is less than or equal to 30 percent.

SGS North America, Inc.

Results for Volatiles
by GCMS 8260B/5035

Client Sample ID: USTCSFF-SB12 (2009)

Client Project ID: CSFF

Lab Sample ID: G128-2423-1E

Lab Project ID: G128-2423

Report Basis: Dry Weight

Analyzed By: DVO

Date Collected: 7/27/2009 14:00

Date Received: 7/28/2009

Matrix: Soil

Sample Amount: 6.6 g

%Solids: 84.0

Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	BQL	1.13	0.0983	50	8/3/2009	
Benzene	BQL	0.0451	0.00293	50	8/3/2009	
Bromobenzene	BQL	0.0451	0.00253	50	8/3/2009	
Bromochloromethane	BQL	0.0451	0.00456	50	8/3/2009	
Bromodichloromethane	BQL	0.0451	0.00343	50	8/3/2009	
Bromoform	BQL	0.0451	0.00541	50	8/3/2009	
Bromomethane	BQL	0.0451	0.00600	50	8/3/2009	
2-Butanone	0.160	1.13	0.0245	50	8/3/2009	J
n-Butylbenzene	0.216	0.0451	0.00492	50	8/3/2009	
sec-Butylbenzene	0.0834	0.0451	0.00379	50	8/3/2009	
tert-Butylbenzene	0.00902	0.0451	0.00225	50	8/3/2009	J
Carbon disulfide	BQL	0.0451	0.00311	50	8/3/2009	
Carbon tetrachloride	BQL	0.0451	0.00392	50	8/3/2009	
Chlorobenzene	BQL	0.0451	0.00370	50	8/3/2009	
Chloroethane	BQL	0.0451	0.00478	50	8/3/2009	
Chloroform	BQL	0.0451	0.00356	50	8/3/2009	
Chloromethane	BQL	0.0451	0.00658	50	8/3/2009	
2-Chlorotoluene	BQL	0.0451	0.00446	50	8/3/2009	
4-Chlorotoluene	BQL	0.0451	0.00361	50	8/3/2009	
Dibromochloromethane	BQL	0.0451	0.00406	50	8/3/2009	
1,2-Dibromo-3-chloropropane	BQL	0.225	0.0546	50	8/3/2009	
Dibromomethane	BQL	0.0451	0.00510	50	8/3/2009	
1,2-Dibromoethane (EDB)	BQL	0.0451	0.00559	50	8/3/2009	
1,2-Dichlorobenzene	BQL	0.0451	0.00573	50	8/3/2009	
1,3-Dichlorobenzene	BQL	0.0451	0.00365	50	8/3/2009	
1,4-Dichlorobenzene	BQL	0.0451	0.00356	50	8/3/2009	
trans-1,4-Dichloro-2-butene	BQL	0.225	0.0284	50	8/3/2009	
1,1-Dichloroethane	BQL	0.0451	0.00334	50	8/3/2009	
1,1-Dichloroethene	BQL	0.0451	0.00401	50	8/3/2009	
1,2-Dichloroethane	BQL	0.0451	0.00356	50	8/3/2009	
cis-1,2-Dichloroethene	BQL	0.0451	0.00293	50	8/3/2009	
trans-1,2-dichloroethene	BQL	0.0451	0.00401	50	8/3/2009	
1,2-Dichloropropane	BQL	0.0451	0.00424	50	8/3/2009	
1,3-Dichloropropane	BQL	0.0451	0.00573	50	8/3/2009	
2,2-Dichloropropane	BQL	0.0451	0.00266	50	8/3/2009	
1,1-Dichloropropene	BQL	0.0451	0.00325	50	8/3/2009	
cis-1,3-Dichloropropene	BQL	0.0451	0.00343	50	8/3/2009	
trans-1,3-Dichloropropene	BQL	0.0451	0.00343	50	8/3/2009	
Dichlorodifluoromethane	BQL	0.225	0.00424	50	8/3/2009	
Diisopropyl ether (DIPE)	BQL	0.0451	0.00329	50	8/3/2009	
Ethylbenzene	BQL	0.0451	0.00347	50	8/3/2009	
Hexachlorobutadiene	BQL	0.0451	0.0103	50	8/3/2009	
2-Hexanone	BQL	0.225	0.0325	50	8/3/2009	
Iodomethane	BQL	0.0451	0.00189	50	8/3/2009	
Isopropylbenzene	0.0122	0.0451	0.00320	50	8/3/2009	J

SGS North America, Inc.

Results for Volatiles
by GCMS 8260B/5035

Client Sample ID: USTCSFF-SB12 (2009)
Client Project ID: CSFF
Lab Sample ID: G128-2423-1E
Lab Project ID: G128-2423
Report Basis: Dry Weight

Analyzed By: DVO
Date Collected: 7/27/2009 14:00
Date Received: 7/28/2009
Matrix: Soil
Sample Amount: 6.6 g
%Solids: 84.0

Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
4-Isopropyltoluene	0.0622	0.0451	0.00216	50	8/3/2009	
Methylene chloride	0.0329	0.225	0.00442	50	8/3/2009	J
4-Methyl-2-pentanone	BQL	0.225	0.0248	50	8/3/2009	
Methyl-tert-butyl ether (MTBE)	BQL	0.0451	0.00302	50	8/3/2009	
Naphthalene	0.135	0.0451	0.00600	50	8/3/2009	
n-Propyl benzene	0.0280	0.0451	0.00361	50	8/3/2009	J
Styrene	BQL	0.0451	0.00383	50	8/3/2009	
1,1,1,2-Tetrachloroethane	BQL	0.0451	0.00406	50	8/3/2009	
1,1,2,2-Tetrachloroethane	BQL	0.0451	0.00519	50	8/3/2009	
Tetrachloroethene	BQL	0.0451	0.00311	50	8/3/2009	
Toluene	BQL	0.0451	0.00343	50	8/3/2009	
1,2,3-Trichlorobenzene	BQL	0.0451	0.00857	50	8/3/2009	
1,2,4-Trichlorobenzene	BQL	0.0451	0.00537	50	8/3/2009	
Trichloroethene	BQL	0.0451	0.00244	50	8/3/2009	
1,1,1-Trichloroethane	BQL	0.0451	0.00244	50	8/3/2009	
1,1,2-Trichloroethane	BQL	0.0451	0.00821	50	8/3/2009	
Trichlorofluoromethane	BQL	0.0451	0.00501	50	8/3/2009	
1,2,3-Trichloropropane	BQL	0.0451	0.00541	50	8/3/2009	
1,2,4-Trimethylbenzene	0.0225	0.0451	0.00293	50	8/3/2009	J
1,3,5-Trimethylbenzene	0.0104	0.0451	0.00334	50	8/3/2009	J
Vinyl chloride	BQL	0.0451	0.00672	50	8/3/2009	
m-,p-Xylene	BQL	0.0902	0.00442	50	8/3/2009	
o-Xylene	BQL	0.0451	0.00293	50	8/3/2009	
		Spike Added	Spike Result	Percent Recovered		
1,2-Dichloroethane-d4		0.01	0.00962	96		
Toluene-d8		0.01	0.011	110		
4-Bromofluorobenzene		0.01	0.00997	100		

Comments:

Flags:

BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Analyst: DVO

Reviewed By: GA

SGS North America, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTCSFF-SB13 (2009)
Client Project ID: CSFF
Lab Sample ID G128-2423-2A
Lab Project ID: G128-2423
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 07-27-2009 15:10
Date Received: 7/28/2009
Matrix: Soil
Sample Amount: 6.96 g
%Solids: 81.0

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	0.0819	0.0444	0.00613	1	7/31/2009	
Benzene	BQL	0.00444	0.00095	1	7/31/2009	
Bromobenzene	BQL	0.00444	0.00091	1	7/31/2009	
Bromochloromethane	BQL	0.00444	0.00153	1	7/31/2009	
Bromodichloromethane	BQL	0.00444	0.00088	1	7/31/2009	
Bromoform	BQL	0.00444	0.00089	1	7/31/2009	
Bromomethane	BQL	0.00444	0.00093	1	7/31/2009	
2-Butanone	0.0103	0.0222	0.00482	1	7/31/2009	J
n-Butylbenzene	0.0112	0.00444	0.00085	1	7/31/2009	
sec-Butylbenzene	0.0122	0.00444	0.00090	1	7/31/2009	
tert-Butylbenzene	BQL	0.00444	0.00099	1	7/31/2009	
Carbon disulfide	BQL	0.00444	0.00238	1	7/31/2009	
Carbon tetrachloride	BQL	0.00444	0.00091	1	7/31/2009	
Chlorobenzene	BQL	0.00444	0.00106	1	7/31/2009	
Chloroethane	BQL	0.00444	0.00141	1	7/31/2009	
Chloroform	BQL	0.00444	0.00106	1	7/31/2009	
Chloromethane	BQL	0.00444	0.00100	1	7/31/2009	
2-Chlorotoluene	BQL	0.00444	0.00090	1	7/31/2009	
4-Chlorotoluene	BQL	0.00444	0.00111	1	7/31/2009	
Dibromochloromethane	BQL	0.00444	0.00122	1	7/31/2009	
1,2-Dibromo-3-chloropropane	BQL	0.0222	0.00129	1	7/31/2009	
Dibromomethane	BQL	0.00444	0.00134	1	7/31/2009	
1,2-Dibromoethane (EDB)	BQL	0.00444	0.00100	1	7/31/2009	
1,2-Dichlorobenzene	BQL	0.00444	0.00114	1	7/31/2009	
1,3-Dichlorobenzene	BQL	0.00444	0.00114	1	7/31/2009	
1,4-Dichlorobenzene	BQL	0.00444	0.00093	1	7/31/2009	
trans-1,4-Dichloro-2-butene	BQL	0.0222	0.00122	1	7/31/2009	
1,1-Dichloroethane	BQL	0.00444	0.00094	1	7/31/2009	
1,1-Dichloroethene	BQL	0.00444	0.00131	1	7/31/2009	
1,2-Dichloroethane	BQL	0.00444	0.00117	1	7/31/2009	
cis-1,2-Dichloroethene	BQL	0.00444	0.00114	1	7/31/2009	
trans-1,2-dichloroethene	BQL	0.00444	0.00100	1	7/31/2009	
1,2-Dichloropropane	BQL	0.00444	0.00105	1	7/31/2009	
1,3-Dichloropropane	BQL	0.00444	0.00099	1	7/31/2009	
2,2-Dichloropropane	BQL	0.00444	0.00106	1	7/31/2009	
1,1-Dichloropropene	BQL	0.00444	0.00139	1	7/31/2009	
cis-1,3-Dichloropropene	BQL	0.00444	0.00074	1	7/31/2009	
trans-1,3-Dichloropropene	BQL	0.00444	0.00085	1	7/31/2009	
Dichlorodifluoromethane	BQL	0.00444	0.00117	1	7/31/2009	
Diisopropyl ether (DIPE)	BQL	0.00444	0.00100	1	7/31/2009	
Ethylbenzene	BQL	0.00444	0.00077	1	7/31/2009	
Hexachlorobutadiene	BQL	0.00444	0.00087	1	7/31/2009	
2-Hexanone	BQL	0.0111	0.00287	1	7/31/2009	
Iodomethane	BQL	0.00444	0.00096	1	7/31/2009	

SGS North America, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: USTCSFF-SB13 (2009)
Client Project ID: CSFF
Lab Sample ID G128-2423-2A
Lab Project ID: G128-2423
Report Basis: Dry Weight

Analyzed By: MJC
Date Collected: 07-27-2009 15:10
Date Received: 7/28/2009
Matrix: Soil
Sample Amount: 6.96 g
%Solids: 81.0

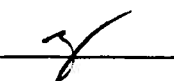
Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	0.00102	0.00444	0.00079	1	7/31/2009	J
4-Isopropyltoluene	0.00525	0.00444	0.00095	1	7/31/2009	
Methylene chloride	BQL	0.0177	0.00106	1	7/31/2009	
4-Methyl-2-pentanone	BQL	0.0111	0.00411	1	7/31/2009	
Methyl-tert-butyl ether (MTBE)	BQL	0.00444	0.00099	1	7/31/2009	
Naphthalene	0.00334	0.00444	0.00075	1	7/31/2009	J
n-Propyl benzene	BQL	0.00444	0.00112	1	7/31/2009	
Styrene	BQL	0.00444	0.00098	1	7/31/2009	
1,1,1,2-Tetrachloroethane	BQL	0.00444	0.00091	1	7/31/2009	
1,1,2,2-Tetrachloroethane	BQL	0.00444	0.00100	1	7/31/2009	
Tetrachloroethene	BQL	0.00444	0.00081	1	7/31/2009	
Toluene	BQL	0.00444	0.00088	1	7/31/2009	
1,2,3-Trichlorobenzene	BQL	0.00444	0.00092	1	7/31/2009	
1,2,4-Trichlorobenzene	BQL	0.00444	0.00091	1	7/31/2009	
Trichloroethene	BQL	0.00444	0.00085	1	7/31/2009	
1,1,1-Trichloroethane	BQL	0.00444	0.00100	1	7/31/2009	
1,1,2-Trichloroethane	BQL	0.00444	0.00145	1	7/31/2009	
Trichlorofluoromethane	BQL	0.00444	0.00091	1	7/31/2009	
1,2,3-Trichloropropane	BQL	0.00444	0.00110	1	7/31/2009	
1,2,4-Trimethylbenzene	BQL	0.00444	0.00112	1	7/31/2009	
1,3,5-Trimethylbenzene	BQL	0.00444	0.00101	1	7/31/2009	
Vinyl chloride	BQL	0.00444	0.00121	1	7/31/2009	
m-,p-Xylene	BQL	0.00887	0.00170	1	7/31/2009	
o-Xylene	BQL	0.00444	0.00086	1	7/31/2009	

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	0.05	0.059	118
Toluene-d8	0.05	0.0524	105
4-Bromofluorobenzene	0.05	0.0566	113

Comments:

Flags:

BQL = Below Quantitation Limits.

Analyst: 

Reviewed By: 

SGS North America, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: Trip Blanks (Not on COC)
 Client Project ID: CSFF
 Lab Sample ID G128-2423-5A
 Lab Project ID: G128-2423
 Report Basis: 0.0

Analyzed By: MJC
 Date Collected: 07-27-2009 00:00
 Date Received: 7/28/2009
 Matrix: Soil
 Sample Amount: 5 g
 %Solids: 100.0

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	BQL	0.0500	0.00691	1	7/31/2009	
Benzene	BQL	0.00500	0.00107	1	7/31/2009	
Bromobenzene	BQL	0.00500	0.00103	1	7/31/2009	
Bromochloromethane	BQL	0.00500	0.00172	1	7/31/2009	
Bromodichloromethane	BQL	0.00500	0.00099	1	7/31/2009	
Bromoform	BQL	0.00500	0.00100	1	7/31/2009	
Bromomethane	BQL	0.00500	0.00105	1	7/31/2009	
2-Butanone	BQL	0.0250	0.00543	1	7/31/2009	
n-Butylbenzene	BQL	0.00500	0.00096	1	7/31/2009	
sec-Butylbenzene	BQL	0.00500	0.00101	1	7/31/2009	
tert-Butylbenzene	BQL	0.00500	0.00112	1	7/31/2009	
Carbon disulfide	BQL	0.00500	0.00268	1	7/31/2009	
Carbon tetrachloride	BQL	0.00500	0.00102	1	7/31/2009	
Chlorobenzene	BQL	0.00500	0.00119	1	7/31/2009	
Chloroethane	BQL	0.00500	0.00159	1	7/31/2009	
Chloroform	BQL	0.00500	0.00120	1	7/31/2009	
Chloromethane	BQL	0.00500	0.00113	1	7/31/2009	
2-Chlorotoluene	BQL	0.00500	0.00101	1	7/31/2009	
4-Chlorotoluene	BQL	0.00500	0.00125	1	7/31/2009	
Dibromochloromethane	BQL	0.00500	0.00138	1	7/31/2009	
1,2-Dibromo-3-chloropropane	BQL	0.0250	0.00145	1	7/31/2009	
Dibromomethane	BQL	0.00500	0.00151	1	7/31/2009	
1,2-Dibromoethane (EDB)	BQL	0.00500	0.00113	1	7/31/2009	
1,2-Dichlorobenzene	BQL	0.00500	0.00129	1	7/31/2009	
1,3-Dichlorobenzene	BQL	0.00500	0.00128	1	7/31/2009	
1,4-Dichlorobenzene	BQL	0.00500	0.00105	1	7/31/2009	
trans-1,4-Dichloro-2-butene	BQL	0.0250	0.00138	1	7/31/2009	
1,1-Dichloroethane	BQL	0.00500	0.00106	1	7/31/2009	
1,1-Dichloroethene	BQL	0.00500	0.00148	1	7/31/2009	
1,2-Dichloroethane	BQL	0.00500	0.00132	1	7/31/2009	
cis-1,2-Dichloroethene	BQL	0.00500	0.00128	1	7/31/2009	
trans-1,2-dichloroethene	BQL	0.00500	0.00113	1	7/31/2009	
1,2-Dichloropropane	BQL	0.00500	0.00118	1	7/31/2009	
1,3-Dichloropropane	BQL	0.00500	0.00112	1	7/31/2009	
2,2-Dichloropropane	BQL	0.00500	0.00120	1	7/31/2009	
1,1-Dichloropropene	BQL	0.00500	0.00157	1	7/31/2009	
cis-1,3-Dichloropropene	BQL	0.00500	0.00083	1	7/31/2009	
trans-1,3-Dichloropropene	BQL	0.00500	0.00096	1	7/31/2009	
Dichlorodifluoromethane	BQL	0.00500	0.00132	1	7/31/2009	
Diisopropyl ether (DIPE)	BQL	0.00500	0.00113	1	7/31/2009	
Ethylbenzene	BQL	0.00500	0.00087	1	7/31/2009	
Hexachlorobutadiene	BQL	0.00500	0.00098	1	7/31/2009	
2-Hexanone	BQL	0.0125	0.00324	1	7/31/2009	
Iodomethane	BQL	0.00500	0.00108	1	7/31/2009	

SGS North America, Inc.

**Results for Volatiles
by GCMS 8260-5035**

Client Sample ID: Trip Blanks (Not on COC)
Client Project ID: CSFF
Lab Sample ID G128-2423-5A
Lab Project ID: G128-2423
Report Basis: 0.0

Analyzed By: MJC
Date Collected: 07-27-2009 00:00
Date Received: 7/28/2009
Matrix: Soil
Sample Amount: 5 g
%Solids: 100.0

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	0.00500	0.00089	1	7/31/2009	
4-Isopropyltoluene	BQL	0.00500	0.00107	1	7/31/2009	
Methylene chloride	BQL	0.0200	0.00119	1	7/31/2009	
4-Methyl-2-pentanone	BQL	0.0125	0.00463	1	7/31/2009	
Methyl-tert-butyl ether (MTBE)	BQL	0.00500	0.00111	1	7/31/2009	
Naphthalene	BQL	0.00500	0.00085	1	7/31/2009	
n-Propyl benzene	BQL	0.00500	0.00126	1	7/31/2009	
Styrene	BQL	0.00500	0.00110	1	7/31/2009	
1,1,1,2-Tetrachloroethane	BQL	0.00500	0.00102	1	7/31/2009	
1,1,2,2-Tetrachloroethane	BQL	0.00500	0.00113	1	7/31/2009	
Tetrachloroethene	BQL	0.00500	0.00092	1	7/31/2009	
Toluene	BQL	0.00500	0.00100	1	7/31/2009	
1,2,3-Trichlorobenzene	BQL	0.00500	0.00104	1	7/31/2009	
1,2,4-Trichlorobenzene	BQL	0.00500	0.00103	1	7/31/2009	
Trichloroethene	BQL	0.00500	0.00095	1	7/31/2009	
1,1,1-Trichloroethane	BQL	0.00500	0.00113	1	7/31/2009	
1,1,2-Trichloroethane	BQL	0.00500	0.00164	1	7/31/2009	
Trichlorofluoromethane	BQL	0.00500	0.00103	1	7/31/2009	
1,2,3-Trichloropropane	BQL	0.00500	0.00124	1	7/31/2009	
1,2,4-Trimethylbenzene	BQL	0.00500	0.00126	1	7/31/2009	
1,3,5-Trimethylbenzene	BQL	0.00500	0.00114	1	7/31/2009	
Vinyl chloride	BQL	0.00500	0.00136	1	7/31/2009	
m-,p-Xylene	BQL	0.0100	0.00192	1	7/31/2009	
o-Xylene	BQL	0.00500	0.00097	1	7/31/2009	
		Spike Added	Spike Result	Percent Recovered		
1,2-Dichloroethane-d4		0.05	0.0631	126		
Toluene-d8		0.05	0.051	102		
4-Bromofluorobenzene		0.05	0.0483	97		

Comments:

Flags:

BQL = Below Quantitation Limits.

Analyst: 

Reviewed By: _____

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTCSFF-SB12 (2009)
Client Project ID: CSFF
Lab Sample ID: G128-2423-1G
Lab Project ID: G128-2423
Report Basis: Dry weight
Initial Weight: 31.78 g

Analyzed By: EAW
Date Collected: 7/27/2009 14:00
Date Received: 7/28/2009
Date Extracted: 7/28/2009
Matrix: Soil
% Solids: 83.99

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.375	0.057	1	7/29/2009	
Acenaphthylene	BQL	0.375	0.053	1	7/29/2009	
Anthracene	0.112	0.375	0.051	1	7/29/2009	J
Benzo[a]anthracene	7.11	0.375	0.051	1	7/29/2009	
Benzo[a]pyrene	6.07	0.375	0.054	1	7/29/2009	
Benzo[b]fluoranthene	8.91	0.375	0.052	1	7/29/2009	
Benzo[g,h,i]perylene	3.00	0.375	0.065	1	7/29/2009	
Benzo[k]fluoranthene	2.26	0.375	0.053	1	7/29/2009	
Benzoic Acid	BQL	1.87	0.463	1	7/29/2009	
Bis(2-chloroethoxy)methane	BQL	0.375	0.055	1	7/29/2009	
Bis(2-chloroethyl)ether	BQL	0.375	0.076	1	7/29/2009	
Bis(2-chloroisopropyl)ether	BQL	0.375	0.060	1	7/29/2009	
Bis(2-ethylhexyl)phthalate	BQL	0.375	0.057	1	7/29/2009	
4-bromophenyl phenyl ether	BQL	0.375	0.066	1	7/29/2009	
Butylbenzylphthalate	BQL	0.375	0.055	1	7/29/2009	
2-Chloronaphthalene	BQL	0.375	0.052	1	7/29/2009	
2-Chlorophenol	BQL	0.375	0.048	1	7/29/2009	
4-Chloro-3-methylphenol	BQL	0.375	0.055	1	7/29/2009	
4-Chloroaniline	BQL	1.87	0.061	1	7/29/2009	
4-Chlorophenyl phenyl ether	BQL	0.375	0.055	1	7/29/2009	
Chrysene	6.41	0.375	0.036	1	7/29/2009	
Dibenzo[a,h]anthracene	0.997	0.375	0.048	1	7/29/2009	
Dibenzofuran	BQL	0.375	0.053	1	7/29/2009	
Di-n-Butylphthalate	BQL	0.375	0.055	1	7/29/2009	
1,2-Dichlorobenzene	BQL	0.375	0.063	1	7/29/2009	
1,3-Dichlorobenzene	BQL	0.375	0.061	1	7/29/2009	
1,4-Dichlorobenzene	BQL	0.375	0.054	1	7/29/2009	
3,3'-Dichlorobenzidine	BQL	0.749	0.062	1	7/29/2009	
2,4-Dichlorophenol	BQL	0.375	0.041	1	7/29/2009	
Diethylphthalate	BQL	0.375	0.050	1	7/29/2009	
Dimethylphthalate	BQL	0.375	0.058	1	7/29/2009	
2,4-Dimethylphenol	0.390	0.375	0.068	1	7/29/2009	
Di-n-octylphthalate	BQL	0.375	0.058	1	7/29/2009	
4,6-Dinitro-2-methylphenol	BQL	1.87	0.045	1	7/29/2009	
2,4-Dinitrophenol	BQL	1.87	0.049	1	7/29/2009	
2,4-Dinitrotoluene	BQL	0.375	0.057	1	7/29/2009	
2,6-Dinitrotoluene	BQL	0.375	0.062	1	7/29/2009	
Fluoranthene	8.77	0.375	0.060	1	7/29/2009	
Fluorene	BQL	0.375	0.058	1	7/29/2009	
Hexachlorobenzene	BQL	0.375	0.081	1	7/29/2009	
Hexachlorobutadiene	BQL	0.375	0.068	1	7/29/2009	
Hexachlorocyclopentadiene	BQL	0.749	0.073	1	7/29/2009	
Hexachloroethane	BQL	0.375	0.058	1	7/29/2009	
Indeno(1,2,3-c,d)pyrene	3.09	0.375	0.044	1	7/29/2009	
Isophorone	BQL	0.375	0.055	1	7/29/2009	
2-Methylnaphthalene	0.933	0.375	0.061	1	7/29/2009	
2-Methylphenol	BQL	0.375	0.057	1	7/29/2009	

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTCSFF-SB12 (2009)
Client Project ID: CSFF
Lab Sample ID: G128-2423-1G
Lab Project ID: G128-2423
Report Basis: Dry weight
Initial Weight: 31.78 g

Analyzed By: EAW
Date Collected: 7/27/2009 14:00
Date Received: 7/28/2009
Date Extracted: 7/28/2009
Matrix: Soil
% Solids: 83.99

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
3- & 4-Methylphenol	BQL	0.375	0.049	1	7/29/2009	
Naphthalene	0.217	0.375	0.053	1	7/29/2009	J
2-Nitroaniline	BQL	0.375	0.050	1	7/29/2009	
3-Nitroaniline	BQL	1.87	0.055	1	7/29/2009	
4-Nitroaniline	BQL	1.87	0.050	1	7/29/2009	
Nitrobenzene	BQL	0.375	0.050	1	7/29/2009	
2-Nitrophenol	BQL	0.375	0.055	1	7/29/2009	
4-Nitrophenol	BQL	1.87	0.065	1	7/29/2009	
Diphenylamine *	BQL	0.375	0.060	1	7/29/2009	
Pentachlorophenol	BQL	1.87	0.035	1	7/29/2009	
Phenanthrene	0.667	0.375	0.053	1	7/29/2009	
Phenol	BQL	0.375	0.051	1	7/29/2009	
Pyrene	8.27	0.375	0.051	1	7/29/2009	
1,2,4-Trichlorobenzene	BQL	0.375	0.067	1	7/29/2009	
2,4,5-Trichlorophenol	BQL	0.375	0.056	1	7/29/2009	
2,4,6-Trichlorophenol	BQL	0.375	0.033	1	7/29/2009	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	4.8	48 #		
2-Fluorophenol		10	7.2	72		
Nitrobenzene-d5		10	9.2	92		
Phenol-d6		10	7.7	77		
2,4,6-Tribromophenol		10	9.2	92		
4-Terphenyl-d14		10	7.2	72		

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.
Surrogate recovery not confirmed by duplicate analysis due to matrix interference.

Flags:

BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: 

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTCSFF-SB12 (2009)
 Client Project ID: CSFF
 Lab Sample ID: G128-2423-11
 Lab Project ID: G128-2423
 Report Basis: Dry weight
 Initial Weight: 34.81 g

Analyzed By: EAW
 Date Collected: 7/27/2009 14:00
 Date Received: 7/28/2009
 Date Extracted: 8/5/2009
 Matrix: Soil
 % Solids: 83.99

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	0.092	0.342	0.052	1	8/5/2009	J
Acenaphthylene	BQL	0.342	0.048	1	8/5/2009	
Anthracene	0.263	0.342	0.047	1	8/5/2009	J
Benzo[a]anthracene	2.06	0.342	0.047	1	8/5/2009	
Benzo[a]pyrene	1.82	0.342	0.049	1	8/5/2009	
Benzo[b]fluoranthene	2.51	0.342	0.048	1	8/5/2009	
Benzo[g,h,i]perylene	1.09	0.342	0.060	1	8/5/2009	
Benzo[k]fluoranthene	0.910	0.342	0.049	1	8/5/2009	
Benzoic Acid	BQL	1.71	0.422	1	8/5/2009	
Bis(2-chloroethoxy)methane	BQL	0.342	0.050	1	8/5/2009	
Bis(2-chloroethyl)ether	BQL	0.342	0.069	1	8/5/2009	
Bis(2-chloroisopropyl)ether	BQL	0.342	0.055	1	8/5/2009	
Bis(2-ethylhexyl)phthalate	BQL	0.342	0.052	1	8/5/2009	
4-bromophenyl phenyl ether	BQL	0.342	0.061	1	8/5/2009	
Butylbenzylphthalate	BQL	0.342	0.051	1	8/5/2009	
2-Chloronaphthalene	BQL	0.342	0.048	1	8/5/2009	
2-Chlorophenol	BQL	0.342	0.043	1	8/5/2009	
4-Chloro-3-methylphenol	BQL	0.342	0.050	1	8/5/2009	
4-Chloroaniline	BQL	1.71	0.056	1	8/5/2009	
4-Chlorophenyl phenyl ether	BQL	0.342	0.050	1	8/5/2009	
Chrysene	2.15	0.342	0.033	1	8/5/2009	
Dibenzo[a,h]anthracene	0.291	0.342	0.044	1	8/5/2009	J
Dibenzofuran	BQL	0.342	0.048	1	8/5/2009	
Di-n-Butylphthalate	BQL	0.342	0.050	1	8/5/2009	
1,2-Dichlorobenzene	BQL	0.342	0.058	1	8/5/2009	
1,3-Dichlorobenzene	BQL	0.342	0.055	1	8/5/2009	
1,4-Dichlorobenzene	BQL	0.342	0.050	1	8/5/2009	
3,3'-Dichlorobenzidine	BQL	0.684	0.056	1	8/5/2009	
2,4-Dichlorophenol	BQL	0.342	0.037	1	8/5/2009	
Diethylphthalate	BQL	0.342	0.046	1	8/5/2009	
Dimethylphthalate	BQL	0.342	0.053	1	8/5/2009	
2,4-Dimethylphenol	0.482	0.342	0.062	1	8/5/2009	
Di-n-octylphthalate	BQL	0.342	0.053	1	8/5/2009	
4,6-Dinitro-2-methylphenol	BQL	1.71	0.041	1	8/5/2009	
2,4-Dinitrophenol	BQL	1.71	0.045	1	8/5/2009	
2,4-Dinitrotoluene	BQL	0.342	0.052	1	8/5/2009	
2,6-Dinitrotoluene	BQL	0.342	0.056	1	8/5/2009	
Fluoranthene	3.51	0.342	0.055	1	8/5/2009	
Fluorene	BQL	0.342	0.053	1	8/5/2009	
Hexachlorobenzene	BQL	0.342	0.074	1	8/5/2009	
Hexachlorobutadiene	BQL	0.342	0.062	1	8/5/2009	
Hexachlorocyclopentadiene	BQL	0.684	0.067	1	8/5/2009	
Hexachloroethane	BQL	0.342	0.053	1	8/5/2009	
Indeno(1,2,3-c,d)pyrene	1.06	0.342	0.040	1	8/5/2009	
Isophorone	BQL	0.342	0.050	1	8/5/2009	
2-Methylnaphthalene	0.722	0.342	0.056	1	8/5/2009	
2-Methylphenol	BQL	0.342	0.052	1	8/5/2009	

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTCSFF-SB12 (2009)
Client Project ID: CSFF
Lab Sample ID: G128-2423-11
Lab Project ID: G128-2423
Report Basis: Dry weight
Initial Weight: 34.81 g

Analyzed By: EAW
Date Collected: 7/27/2009 14:00
Date Received: 7/28/2009
Date Extracted: 8/5/2009
Matrix: Soil
% Solids: 83.99

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
3- & 4-Methylphenol	BQL	0.342	0.045	1	8/5/2009	
Naphthalene	BQL	0.342	0.048	1	8/5/2009	
2-Nitroaniline	BQL	0.342	0.046	1	8/5/2009	
3-Nitroaniline	BQL	1.71	0.050	1	8/5/2009	
4-Nitroaniline	BQL	1.71	0.046	1	8/5/2009	
Nitrobenzene	BQL	0.342	0.046	1	8/5/2009	
2-Nitrophenol	BQL	0.342	0.050	1	8/5/2009	
4-Nitrophenol	BQL	1.71	0.060	1	8/5/2009	
Diphenylamine *	BQL	0.342	0.055	1	8/5/2009	
Pentachlorophenol	BQL	1.71	0.032	1	8/5/2009	
Phenanthrene	BQL	0.342	0.048	1	8/5/2009	
Phenol	BQL	0.342	0.047	1	8/5/2009	
Pyrene	2.78	0.342	0.047	1	8/5/2009	
1,2,4-Trichlorobenzene	BQL	0.342	0.062	1	8/5/2009	
2,4,5-Trichlorophenol	BQL	0.342	0.051	1	8/5/2009	
2,4,6-Trichlorophenol	BQL	0.342	0.030	1	8/5/2009	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.6	86		
2-Fluorophenol		10	9.3	93		
Nitrobenzene-d5		10	14.1	141 #		
Phenol-d6		10	9.8	98		
2,4,6-Tribromophenol		10	11.6	116		
4-Terphenyl-d14		10	9.3	93		

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.
Surrogate recovery not confirmed by duplicate analysis due to matrix interference.

Flags:

BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By:  _____

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTCSFF-SB13 (2009)
Client Project ID: CSFF
Lab Sample ID: G128-2423-2G
Lab Project ID: G128-2423
Report Basis: Dry weight
Initial Weight: 32.01 g

Analyzed By: EAW
Date Collected: 7/27/2009 15:10
Date Received: 7/28/2009
Date Extracted: 7/28/2009
Matrix: Soil
% Solids: 80.98

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	0.621	0.386	0.059	1	7/29/2009	
Acenaphthylene	BQL	0.386	0.054	1	7/29/2009	
Anthracene	BQL	0.386	0.053	1	7/29/2009	
Benzo[a]anthracene	0.096	0.386	0.053	1	7/29/2009	J
Benzo[a]pyrene	BQL	0.386	0.056	1	7/29/2009	
Benzo[b]fluoranthene	0.077	0.386	0.054	1	7/29/2009	J
Benzo[g,h,i]perylene	BQL	0.386	0.067	1	7/29/2009	
Benzo[k]fluoranthene	BQL	0.386	0.055	1	7/29/2009	
Benzoic Acid	BQL	1.93	0.476	1	7/29/2009	
Bis(2-chloroethoxy)methane	BQL	0.386	0.057	1	7/29/2009	
Bis(2-chloroethyl)ether	BQL	0.386	0.078	1	7/29/2009	
Bis(2-chloroisopropyl)ether	BQL	0.386	0.062	1	7/29/2009	
Bis(2-ethylhexyl)phthalate	BQL	0.386	0.059	1	7/29/2009	
4-bromophenyl phenyl ether	BQL	0.386	0.068	1	7/29/2009	
Butylbenzylphthalate	BQL	0.386	0.057	1	7/29/2009	
2-Chloronaphthalene	BQL	0.386	0.054	1	7/29/2009	
2-Chlorophenol	BQL	0.386	0.049	1	7/29/2009	
4-Chloro-3-methylphenol	BQL	0.386	0.056	1	7/29/2009	
4-Chloroaniline	BQL	1.93	0.063	1	7/29/2009	
4-Chlorophenyl phenyl ether	BQL	0.386	0.057	1	7/29/2009	
Chrysene	0.085	0.386	0.037	1	7/29/2009	J
Dibenzo[a,h]anthracene	BQL	0.386	0.049	1	7/29/2009	
Dibenzofuran	0.339	0.386	0.054	1	7/29/2009	J
Di-n-Butylphthalate	BQL	0.386	0.056	1	7/29/2009	
1,2-Dichlorobenzene	BQL	0.386	0.065	1	7/29/2009	
1,3-Dichlorobenzene	BQL	0.386	0.063	1	7/29/2009	
1,4-Dichlorobenzene	BQL	0.386	0.056	1	7/29/2009	
3,3'-Dichlorobenzidine	BQL	0.772	0.064	1	7/29/2009	
2,4-Dichlorophenol	BQL	0.386	0.042	1	7/29/2009	
Diethylphthalate	BQL	0.386	0.052	1	7/29/2009	
Dimethylphthalate	BQL	0.386	0.060	1	7/29/2009	
2,4-Dimethylphenol	0.336	0.386	0.070	1	7/29/2009	J
Di-n-octylphthalate	BQL	0.386	0.059	1	7/29/2009	
4,6-Dinitro-2-methylphenol	BQL	1.93	0.046	1	7/29/2009	
2,4-Dinitrophenol	BQL	1.93	0.050	1	7/29/2009	
2,4-Dinitrotoluene	BQL	0.386	0.059	1	7/29/2009	
2,6-Dinitrotoluene	BQL	0.386	0.064	1	7/29/2009	
Fluoranthene	0.247	0.386	0.062	1	7/29/2009	J
Fluorene	0.613	0.386	0.060	1	7/29/2009	
Hexachlorobenzene	BQL	0.386	0.084	1	7/29/2009	
Hexachlorobutadiene	BQL	0.386	0.070	1	7/29/2009	
Hexachlorocyclopentadiene	BQL	0.772	0.075	1	7/29/2009	
Hexachloroethane	BQL	0.386	0.060	1	7/29/2009	
Indeno(1,2,3-c,d)pyrene	BQL	0.386	0.046	1	7/29/2009	
Isophorone	BQL	0.386	0.056	1	7/29/2009	
2-Methylnaphthalene	0.617	0.386	0.063	1	7/29/2009	
2-Methylphenol	BQL	0.386	0.059	1	7/29/2009	

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTCSFF-SB13 (2009)
Client Project ID: CSFF
Lab Sample ID: G128-2423-2G
Lab Project ID: G128-2423
Report Basis: Dry weight
Initial Weight: 32.01 g

Analyzed By: EAW
Date Collected: 7/27/2009 15:10
Date Received: 7/28/2009
Date Extracted: 7/28/2009
Matrix: Soil
% Solids: 80.98

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
3- & 4-Methylphenol	BQL	0.386	0.050	1	7/29/2009	
Naphthalene	1.44	0.386	0.054	1	7/29/2009	
2-Nitroaniline	BQL	0.386	0.052	1	7/29/2009	
3-Nitroaniline	BQL	1.93	0.057	1	7/29/2009	
4-Nitroaniline	BQL	1.93	0.052	1	7/29/2009	
Nitrobenzene	BQL	0.386	0.051	1	7/29/2009	
2-Nitrophenol	BQL	0.386	0.056	1	7/29/2009	
4-Nitrophenol	BQL	1.93	0.067	1	7/29/2009	
Diphenylamine *	BQL	0.386	0.062	1	7/29/2009	
Pentachlorophenol	BQL	1.93	0.036	1	7/29/2009	
Phenanthrene	1.23	0.386	0.054	1	7/29/2009	
Phenol	BQL	0.386	0.053	1	7/29/2009	
Pyrene	0.471	0.386	0.053	1	7/29/2009	
1,2,4-Trichlorobenzene	BQL	0.386	0.069	1	7/29/2009	
2,4,5-Trichlorophenol	BQL	0.386	0.058	1	7/29/2009	
2,4,6-Trichlorophenol	BQL	0.386	0.034	1	7/29/2009	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	4.8	48 #		
2-Fluorophenol		10	6.6	66		
Nitrobenzene-d5		10	8.1	81		
Phenol-d6		10	7	70		
2,4,6-Tribromophenol		10	8.3	83		
4-Terphenyl-d14		10	5.7	57		

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.
Surrogate recovery not confirmed by duplicate analysis due to matrix interference.

Flags:

BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: 

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTCSFF-SB13 (2009)
Client Project ID: CSFF
Lab Sample ID: G128-2423-2I
Lab Project ID: G128-2423
Report Basis: Dry weight
Initial Weight: 35.94 g

Analyzed By: EAW
Date Collected: 7/27/2009 15:10
Date Received: 7/28/2009
Date Extracted: 8/5/2009
Matrix: Soil
% Solids: 80.98

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	2.10	0.344	0.053	1	8/5/2009	
Acenaphthylene	BQL	0.344	0.048	1	8/5/2009	
Anthracene	0.392	0.344	0.047	1	8/5/2009	
Benzo[a]anthracene	0.216	0.344	0.047	1	8/5/2009	J
Benzo[a]pyrene	0.083	0.344	0.050	1	8/5/2009	J
Benzo[b]fluoranthene	0.158	0.344	0.048	1	8/5/2009	J
Benzo[g,h,i]perylene	BQL	0.344	0.060	1	8/5/2009	
Benzo[k]fluoranthene	0.062	0.344	0.049	1	8/5/2009	J
Benzoic Acid	BQL	1.72	0.424	1	8/5/2009	
Bis(2-chloroethoxy)methane	BQL	0.344	0.051	1	8/5/2009	
Bis(2-chloroethyl)ether	BQL	0.344	0.070	1	8/5/2009	
Bis(2-chloroisopropyl)ether	BQL	0.344	0.055	1	8/5/2009	
Bis(2-ethylhexyl)phthalate	BQL	0.344	0.053	1	8/5/2009	
4-bromophenyl phenyl ether	BQL	0.344	0.061	1	8/5/2009	
Butylbenzylphthalate	BQL	0.344	0.051	1	8/5/2009	
2-Chloronaphthalene	BQL	0.344	0.048	1	8/5/2009	
2-Chlorophenol	BQL	0.344	0.044	1	8/5/2009	
4-Chloro-3-methylphenol	BQL	0.344	0.050	1	8/5/2009	
4-Chloroaniline	BQL	1.72	0.056	1	8/5/2009	
4-Chlorophenyl phenyl ether	BQL	0.344	0.051	1	8/5/2009	
Chrysene	0.172	0.344	0.033	1	8/5/2009	J
Dibenzo[a,h]anthracene	BQL	0.344	0.044	1	8/5/2009	
Dibenzofuran	1.64	0.344	0.048	1	8/5/2009	
Di-n-Butylphthalate	BQL	0.344	0.050	1	8/5/2009	
1,2-Dichlorobenzene	BQL	0.344	0.058	1	8/5/2009	
1,3-Dichlorobenzene	BQL	0.344	0.056	1	8/5/2009	
1,4-Dichlorobenzene	BQL	0.344	0.050	1	8/5/2009	
3,3'-Dichlorobenzidine	BQL	0.687	0.057	1	8/5/2009	
2,4-Dichlorophenol	BQL	0.344	0.038	1	8/5/2009	
Diethylphthalate	BQL	0.344	0.046	1	8/5/2009	
Dimethylphthalate	BQL	0.344	0.053	1	8/5/2009	
2,4-Dimethylphenol	0.907	0.344	0.062	1	8/5/2009	
Di-n-octylphthalate	BQL	0.344	0.053	1	8/5/2009	
4,6-Dinitro-2-methylphenol	BQL	1.72	0.041	1	8/5/2009	
2,4-Dinitrophenol	BQL	1.72	0.045	1	8/5/2009	
2,4-Dinitrotoluene	BQL	0.344	0.052	1	8/5/2009	
2,6-Dinitrotoluene	BQL	0.344	0.057	1	8/5/2009	
Fluoranthene	1.46	0.344	0.055	1	8/5/2009	
Fluorene	1.99	0.344	0.054	1	8/5/2009	
Hexachlorobenzene	BQL	0.344	0.075	1	8/5/2009	
Hexachlorobutadiene	BQL	0.344	0.063	1	8/5/2009	
Hexachlorocyclopentadiene	BQL	0.687	0.067	1	8/5/2009	
Hexachloroethane	BQL	0.344	0.054	1	8/5/2009	
Indeno(1,2,3-c,d)pyrene	BQL	0.344	0.041	1	8/5/2009	
Isophorone	BQL	0.344	0.050	1	8/5/2009	
2-Methylnaphthalene	3.80	0.344	0.056	1	8/5/2009	
2-Methylphenol	BQL	0.344	0.053	1	8/5/2009	

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: USTCSFF-SB13 (2009)
Client Project ID: CSFF
Lab Sample ID: G128-2423-2I
Lab Project ID: G128-2423
Report Basis: Dry weight
Initial Weight: 35.94 g

Analyzed By: EAW
Date Collected: 7/27/2009 15:10
Date Received: 7/28/2009
Date Extracted: 8/5/2009
Matrix: Soil
% Solids: 80.98

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
3- & 4-Methylphenol	BQL	0.344	0.045	1	8/5/2009	
Naphthalene	7.58	0.344	0.048	1	8/5/2009	
2-Nitroaniline	BQL	0.344	0.046	1	8/5/2009	
3-Nitroaniline	BQL	1.72	0.051	1	8/5/2009	
4-Nitroaniline	BQL	1.72	0.046	1	8/5/2009	
Nitrobenzene	BQL	0.344	0.046	1	8/5/2009	
2-Nitrophenol	BQL	0.344	0.050	1	8/5/2009	
4-Nitrophenol	BQL	1.72	0.060	1	8/5/2009	
Diphenylamine *	BQL	0.344	0.055	1	8/5/2009	
Pentachlorophenol	BQL	1.72	0.032	1	8/5/2009	
Phenanthrene	3.49	0.344	0.048	1	8/5/2009	
Phenol	BQL	0.344	0.047	1	8/5/2009	
Pyrene	0.972	0.344	0.047	1	8/5/2009	
1,2,4-Trichlorobenzene	BQL	0.344	0.062	1	8/5/2009	
2,4,5-Trichlorophenol	BQL	0.344	0.051	1	8/5/2009	
2,4,6-Trichlorophenol	BQL	0.344	0.031	1	8/5/2009	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	7.7	77		
2-Fluorophenol		10	9.4	94		
Nitrobenzene-d5		10	12.1	121 #		
Phenol-d6		10	9.8	98		
2,4,6-Tribromophenol		10	13.3	133 #		
4-Terphenyl-d14		10	9.1	91		

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.
Surrogate recovery not confirmed by duplicate analysis due to matrix interference.

Flags:

BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: MD

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & AssociatesProject Name: CSFF

Sample Information	
Sample Identification	USTCSFF-SB12 (2009)
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	07/27/09 14:00
Date Received	07/28/09
Date Extracted	07/28/09
Date Analyzed	07/30/09 21:29 - 07/30/09 21:29
Dry Weight	84.0
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags	
C ₅ -C ₈ Aliphatics**	BQL	10.0		
C ₉ -C ₁₂ Aliphatics**	34.3	10.0		
C ₉ -C ₁₀ Aromatics**	156	10.0		
	Percent Recovery	Flags	Limits Lower Upper	
Surrogate % Recovery - PID	110		70	130
Surrogate % Recovery - FID	136	***	70	130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

*** = High surrogate recovery due to matrix interference.

Lab Info: g128-2423-1e	Lab Info: g128-2423-1e
FID Info: VP073009/025F0101.D	PID Info: VP073009/025R0101.D

Reviewed By: CA

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & AssociatesProject Name: CSFF

Sample Information	
Sample Identification	USTCSFF-SB13 (2009)
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	07/27/09 15:10
Date Received	07/28/09
Date Extracted	07/28/09
Date Analyzed	08/03/09 21:17 - 08/03/09 21:17
Dry Weight	81.0
Dilution Factor	1 - 1

Analytical Results			
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags
C ₅ -C ₈ Aliphatics**	BQL	10.0	
C ₉ -C ₁₂ Aliphatics**	32.0	10.0	
C ₉ -C ₁₀ Aromatics**	56.4	10.0	
		Percent Recovery	Flags
		Limits Lower Upper	
Surrogate % Recovery - PID		113	70 130
Surrogate % Recovery - FID		119	70 130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: g128-2423-2e	Lab Info: g128-2423-2e
FID Info: VP080309/028F0101.D	PID Info: VP080309/028R0101.D

Reviewed By: CA

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 05/08/09PID Initial Calibration Date: 05/08/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	8.80	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	1.00	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	21.76	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 07/30/09Filename: VP073009/002F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C ₅ -C ₈ Aliphatics	200	16	-14.6	±25%
C ₉ -C ₁₂ Aliphatics	200	16	-7.7	±25%
C ₉ -C ₁₀ Aromatics	200	16	10.8	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date:

05/08/09

PID Initial Calibration Date:

05/08/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	8.80	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	1.00	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	21.76	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date:

07/30/09

Filename:

VP073009/031F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C ₅ -C ₈ Aliphatics	200	16	-18.4	±25%
C ₉ -C ₁₂ Aliphatics	200	16	-12.1	±25%
C ₉ -C ₁₀ Aromatics	200	16	8.4	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 05/08/09PID Initial Calibration Date: 05/08/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	8.80	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	1.00	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	21.76	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 08/03/09Filename: VP080309/002F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C ₅ -C ₈ Aliphatics	200	16	-19.9	±25%
C ₉ -C ₁₂ Aliphatics	200	16	-4.5	±25%
C ₉ -C ₁₀ Aromatics	200	16	12.3	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 05/08/09PID Initial Calibration Date: 05/08/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	8.80	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	1.00	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	21.76	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 08/03/09Filename: VP080309/030F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C ₅ -C ₈ Aliphatics	200	16	11.7	±25%
C ₉ -C ₁₂ Aliphatics	200	16	-5.8	±25%
C ₉ -C ₁₀ Aromatics	200	16	16.2	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & AssociatesProject Name: CSFF

Sample Information	
Sample Identification	USTCSFF-SB12 (2009)
Sample Matrix	Soil
Date Collected	07/27/09 14:00
Date Received	07/28/09
Date Extracted	07/28/09
Date Analyzed	08/06/09 12:12 - 08/06/09 12:40
Dry Weight	84.0
Dilution Factor	10 - 1
Initial weight (g)	13.82
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	811	10.0	
C19-C36 Aliphatics	BQL	10.0	
C11-C22 Aromatics	119	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	103		40	140
Aromatic (ortho-terphenyl)	69.9		40	140
Fractionation 1 (2-bromonaphthalene)	80.1		40	140
Fractionation 2 (2-fluorobiphenyl)	69.9		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2423-1H	Lab Info: G128-2423-1H
Aliphatic: EP080609/007F0101.D	Aromatic: EP080609/008F0201.D

Reviewed By: CDA

EPH (Aliphatics/Aromatics) Laboratory Reporting FormClient Name: Richard Catlin & AssociatesProject Name: CSFF

Sample Information	
Sample Identification	USTCSFF-SB13 (2009)
Sample Matrix	Soil
Date Collected	07/27/09 15:10
Date Received	07/28/09
Date Extracted	07/28/09
Date Analyzed	08/06/09 13:09 - 08/05/09 18:44
Dry Weight	81.0
Dilution Factor	10 - 1
Initial weight (g)	12.16
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	2130	10.0	
C19-C36 Aliphatics	BQL	10.0	
C11-C22 Aromatics	288	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	96.7		40	140
Aromatic (ortho-terphenyl)	67.4		40	140
Fractionation 1 (2-bromonaphthalene)	99.0		40	140
Fractionation 2 (2-fluorobiphenyl)	70.4		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2423-2H	Lab Info: G128-2423-2H
Aliphatic: EP080609/009F0301.D	Aromatic: EP080509/018F1401.D

Reviewed By: CA

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date:

07/17/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	14.33	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	16.98	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	7.33	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date:

08/05/09

Filenames:

ep080509/001f0101.d08/05/09ep080509/002f0201.d

Calibration Check

Range	Levels (mg/Kg)	Levels (µg/L)	%Difference if CF %Drift if LR	Limits
C9-C18 Aliphatics	100	16.7	8.6	±25%
C19-C36 Aliphatics	100	16.7	2.1	±25%
C11-C22 Aromatics	100	16.7	-2.9	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date:

07/17/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	14.33	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	16.98	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	7.33	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date:

08/05/09

Filenames:

ep080509/023f1901.d08/05/09ep080509/024f2001.d

Calibration Check

Range	Levels (mg/Kg)	(µg/L)	%Difference if CF %Drift if LR	Limits
C9-C18 Aliphatics	100	16.7	11.1	≤±25%
C19-C36 Aliphatics	100	16.7	10.5	≤±25%
C11-C22 Aromatics	100	16.7	1.7	≤±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 07/17/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	14.33	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	16.98	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	7.33	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 08/06/09
08/06/09Filenames: ep080609/001f0101.d
ep080609/002f0201.d

Calibration Check

Range	Levels (µg/L) (mg/Kg)		%Difference if CF %Drift if LR	Limits
C9-C18 Aliphatics	100	16.7	4.3	≤±25%
C19-C36 Aliphatics	100	16.7	5.4	≤±25%
C11-C22 Aromatics	100	16.7	4.1	≤±25%

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable LimitRPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date:

07/17/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	14.33	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	16.98	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	7.33	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date:

08/06/09

Filenames:

ep080609/010f0401.d08/06/09ep080609/011f0501.d

Calibration Check

Range	Levels (mg/Kg)	(µg/L)	%Difference if CF %Drift if LR	Limits
C9-C18 Aliphatics	100	16.7	7.6	±25%
C19-C36 Aliphatics	100	16.7	2.6	±25%
C11-C22 Aromatics	100	16.7	7.9	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve



Locations Nationwide

- Alaska
- Maryland
- New Jersey
- New York
- North Carolina
- Ohio

www.us.sgs.com

058107

SGS North America, Inc.

SGS North America, Inc.

1

CLIENT: **Cattin**

2

CONTACT: **Shane Chasteen**

3

PROJECT: **CSFF**

4

REPORTS TO: **Shane Chasteen**

5

INVOICE TO: **Sheila @ Cattin**

6

PHONE NO: (910) 452-5861

7

SITE/PWSID#: **209-0805**

8

FAX NO: ()

9

QUOTE #: **D0D1D1**

10

P.O. NUMBER: **290728-1**

11

SGS Reference: **G7 28-2423**

12

Preservatives Used: **None**

13

Analysis Required: **3**

14

Sample Type: **8260/8235**

15

Container: **6**

16

Matrix: **S**

17

Time: **1400**

18

Date: **7/27**

19

Sample Identification: **USTCSFF-SB12 (2009)**

20

Time: **1510**

21

Date: **7/27**

22

Sample Identification: **USTCSFF-SB13 (2009)**

23

Time: **1520**

24

Date: **7/27**

25

Sample Identification: **CSFF-SB05B (2009)**

26

Time: **1530**

27

Date: **7/27**

28

Sample Identification: **CSFF-SB15 (2009)**

29

Time: **1530**

30

Date: **7/27**

31

Remarks: *** See Below**

32

Shipping Carrier: **48**

33

Shipping Ticket No: **48**

34

Special Deliverable Requirements: **Report lowest runs. Report in EDO format.**

35

Chain of Custody Seal: **INTACT**

36

Chain of Custody Seal: **BROKEN**

37

Chain of Custody Seal: **ABSENT**

38

Requested Turnaround Time: **RUSH**

39

Date Needed: **12 STD**

☐ 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
☐ 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

SGS

Member of the SGS Group
Page 1 of 62

SGS North America, Inc.

Case Narrative

Catlin

SGS Project: G128-2466

Project Name: CSFF Soil sampling UST#8

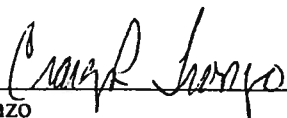
SGS North America; Inc.

December 14th, 2009

- Four soil samples were accepted into the laboratory on November 25th, 2009 at 1017 for analyses as indicated on the chain of custody. The samples were received in good condition, with a temperature range of 5.2-5.5°C.
- All extractions and analyses were completed within holding time limits, with the following quality control exceptions.

8260D Analysis

- The Trip Blank associated with these samples contains Methylene Chloride and Toluene at reported concentrations that are 'J' flagged.

 _____ Date 12/12/09
Craig R Tronzo
Data Validation/QC

SGS North America, Inc.

List of Reporting Abbreviations
And Data Qualifiers

B = Compound also detected in batch blank

BQL = Below Quantification Limit (RL or MDL)

DF = Dilution Factor

Dup = Duplicate

D = Detected, but RPD is > 40% between results in dual column method.

E = Estimated concentration, exceeds calibration range.

J = Estimated concentration, below calibration range and above MDL

LCS(D) = Laboratory Control Spike (Duplicate)

MDL = Method Detection Limit

MS(D) = Matrix Spike (Duplicate)

PQL = Practical Quantitation Limit

RL/CL = Reporting Limit / Control Limit

RPD = Relative Percent Difference

UJ = Target analytes with recoveries that are $10\% < \%R < LCL$; # of MEs are allowable and compounds are not detected in the sample.

mg/kg = milligram per kilogram, ppm, parts per million

ug/kg = micrograms per kilogram, ppb, parts per billion

mg/L = milligram per liter, ppm, parts per million

ug/L = micrograms per liter, ppb, parts per billion

% Rec = Percent Recovery

% solids = Percent Solids

Special Notes:

- 1) Metals and mercury samples are digested with a hot block; see the standard operating procedure document for details.
- 2) Uncertainty for all reported data is less than or equal to 30 percent.

SGS North America, Inc.

Results for Volatiles by GCMS 8260-5035

Client Sample ID: UST#8-CSFF-SB01
 Client Project ID: CSFF Soil Sampling UST #8
 Lab Sample ID G128-2466-1A
 Lab Project ID: G128-2466
 Report Basis: Dry Weight

Analyzed By: CLP
 Date Collected: 11-24-2009 10:45
 Date Received: 11/25/2009
 Matrix: Soil
 Sample Amount: 5.07 g
 %Solids: 82.8

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	0.0752	0.0596	0.00823	1	12/4/2009	
Benzene	BQL	0.00596	0.00127	1	12/4/2009	
Bromobenzene	BQL	0.00596	0.00123	1	12/4/2009	
Bromochloromethane	BQL	0.00596	0.00205	1	12/4/2009	
Bromodichloromethane	BQL	0.00596	0.00118	1	12/4/2009	
Bromoform	BQL	0.00596	0.00119	1	12/4/2009	
Bromomethane	BQL	0.00596	0.00125	1	12/4/2009	
2-Butanone	0.0103	0.0298	0.00647	1	12/4/2009	J
n-Butylbenzene	BQL	0.00596	0.00114	1	12/4/2009	
sec-Butylbenzene	BQL	0.00596	0.00120	1	12/4/2009	
tert-Butylbenzene	BQL	0.00596	0.00133	1	12/4/2009	
Carbon disulfide	BQL	0.00596	0.00319	1	12/4/2009	
Carbon tetrachloride	BQL	0.00596	0.00122	1	12/4/2009	
Chlorobenzene	BQL	0.00596	0.00142	1	12/4/2009	
Chloroethane	BQL	0.00596	0.00189	1	12/4/2009	
Chloroform	BQL	0.00596	0.00143	1	12/4/2009	
Chloromethane	BQL	0.00596	0.00135	1	12/4/2009	
2-Chlorotoluene	BQL	0.00596	0.00120	1	12/4/2009	
4-Chlorotoluene	BQL	0.00596	0.00149	1	12/4/2009	
Dibromochloromethane	BQL	0.00596	0.00164	1	12/4/2009	
1,2-Dibromo-3-chloropropane	BQL	0.0298	0.00173	1	12/4/2009	
Dibromomethane	BQL	0.00596	0.00180	1	12/4/2009	
1,2-Dibromoethane (EDB)	BQL	0.00596	0.00135	1	12/4/2009	
1,2-Dichlorobenzene	BQL	0.00596	0.00154	1	12/4/2009	
1,3-Dichlorobenzene	BQL	0.00596	0.00152	1	12/4/2009	
1,4-Dichlorobenzene	BQL	0.00596	0.00125	1	12/4/2009	
trans-1,4-Dichloro-2-butene	BQL	0.0298	0.00164	1	12/4/2009	
1,1-Dichloroethane	BQL	0.00596	0.00126	1	12/4/2009	
1,1-Dichloroethene	BQL	0.00596	0.00176	1	12/4/2009	
1,2-Dichloroethane	BQL	0.00596	0.00157	1	12/4/2009	
cis-1,2-Dichloroethene	BQL	0.00596	0.00152	1	12/4/2009	
trans-1,2-dichloroethene	BQL	0.00596	0.00135	1	12/4/2009	
1,2-Dichloropropane	BQL	0.00596	0.00141	1	12/4/2009	
1,3-Dichloropropane	BQL	0.00596	0.00133	1	12/4/2009	
2,2-Dichloropropane	BQL	0.00596	0.00143	1	12/4/2009	
1,1-Dichloropropene	BQL	0.00596	0.00187	1	12/4/2009	
cis-1,3-Dichloropropene	BQL	0.00596	0.00099	1	12/4/2009	
trans-1,3-Dichloropropene	BQL	0.00596	0.00115	1	12/4/2009	
Dichlorodifluoromethane	BQL	0.00596	0.00157	1	12/4/2009	
Diisopropyl ether (DIPE)	BQL	0.00596	0.00135	1	12/4/2009	
Ethylbenzene	BQL	0.00596	0.00103	1	12/4/2009	
Hexachlorobutadiene	BQL	0.00596	0.00116	1	12/4/2009	
2-Hexanone	BQL	0.0149	0.00386	1	12/4/2009	
Iodomethane	BQL	0.00596	0.00129	1	12/4/2009	

SGS North America, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: UST#8-CSFF-SB01
Client Project ID: CSFF Soil Sampling UST #8
Lab Sample ID G128-2466-1A
Lab Project ID: G128-2466
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 11-24-2009 10:45
Date Received: 11/25/2009
Matrix: Soil
Sample Amount: 5.07 g
%Solids: 82.8

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	0.00596	0.00106	1	12/4/2009	
4-Isopropyltoluene	BQL	0.00596	0.00127	1	12/4/2009	
Methylene chloride	0.00530	0.0238	0.00142	1	12/4/2009	J
4-Methyl-2-pentanone	BQL	0.0149	0.00552	1	12/4/2009	
Methyl-tert-butyl ether (MTBE)	BQL	0.00596	0.00132	1	12/4/2009	
Naphthalene	0.00318	0.00596	0.00101	1	12/4/2009	J
n-Propyl benzene	BQL	0.00596	0.00150	1	12/4/2009	
Styrene	BQL	0.00596	0.00131	1	12/4/2009	
1,1,1,2-Tetrachloroethane	BQL	0.00596	0.00122	1	12/4/2009	
1,1,2,2-Tetrachloroethane	BQL	0.00596	0.00135	1	12/4/2009	
Tetrachloroethene	0.00291	0.00596	0.00109	1	12/4/2009	J
Toluene	BQL	0.00596	0.00119	1	12/4/2009	
1,2,3-Trichlorobenzene	BQL	0.00596	0.00124	1	12/4/2009	
1,2,4-Trichlorobenzene	BQL	0.00596	0.00123	1	12/4/2009	
Trichloroethene	BQL	0.00596	0.00114	1	12/4/2009	
1,1,1-Trichloroethane	BQL	0.00596	0.00135	1	12/4/2009	
1,1,2-Trichloroethane	BQL	0.00596	0.00195	1	12/4/2009	
Trichlorofluoromethane	BQL	0.00596	0.00123	1	12/4/2009	
1,2,3-Trichloropropane	BQL	0.00596	0.00148	1	12/4/2009	
1,2,4-Trimethylbenzene	BQL	0.00596	0.00150	1	12/4/2009	
1,3,5-Trimethylbenzene	BQL	0.00596	0.00136	1	12/4/2009	
Vinyl chloride	BQL	0.00596	0.00162	1	12/4/2009	
m-,p-Xylene	BQL	0.0119	0.00229	1	12/4/2009	
o-Xylene	BQL	0.00596	0.00115	1	12/4/2009	
		Spike Added	Spike Result	Percent Recovered		
1,2-Dichloroethane-d4		0.05	0.0671	134		
Toluene-d8		0.05	0.0514	103		
4-Bromofluorobenzene		0.05	0.0513	103		

Comments:

Flags:

BQL = Below Quantitation Limits.

Analyst: 

Reviewed By: 

SGS North America, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: UST#8-CSFF-SB02
 Client Project ID: CSFF Soil Sampling UST #8
 Lab Sample ID G128-2466-2A
 Lab Project ID: G128-2466
 Report Basis: Dry Weight

Analyzed By: CLP
 Date Collected: 11-24-2009 11:00
 Date Received: 11/25/2009
 Matrix: Soil
 Sample Amount: 6.71 g
 %Solids: 84.7

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	0.0432	0.0439	0.00607	1	12/4/2009	J
Benzene	BQL	0.00439	0.00094	1	12/4/2009	
Bromobenzene	BQL	0.00439	0.00091	1	12/4/2009	
Bromochloromethane	BQL	0.00439	0.00151	1	12/4/2009	
Bromodichloromethane	BQL	0.00439	0.00087	1	12/4/2009	
Bromoform	BQL	0.00439	0.00088	1	12/4/2009	
Bromomethane	BQL	0.00439	0.00092	1	12/4/2009	
2-Butanone	0.00522	0.0220	0.00477	1	12/4/2009	J
n-Butylbenzene	BQL	0.00439	0.00084	1	12/4/2009	
sec-Butylbenzene	BQL	0.00439	0.00089	1	12/4/2009	
tert-Butylbenzene	BQL	0.00439	0.00098	1	12/4/2009	
Carbon disulfide	BQL	0.00439	0.00236	1	12/4/2009	
Carbon tetrachloride	BQL	0.00439	0.00090	1	12/4/2009	
Chlorobenzene	BQL	0.00439	0.00105	1	12/4/2009	
Chloroethane	BQL	0.00439	0.00140	1	12/4/2009	
Chloroform	BQL	0.00439	0.00105	1	12/4/2009	
Chloromethane	BQL	0.00439	0.00099	1	12/4/2009	
2-Chlorotoluene	BQL	0.00439	0.00089	1	12/4/2009	
4-Chlorotoluene	BQL	0.00439	0.00110	1	12/4/2009	
Dibromochloromethane	BQL	0.00439	0.00121	1	12/4/2009	
1,2-Dibromo-3-chloropropane	BQL	0.0220	0.00127	1	12/4/2009	
Dibromomethane	BQL	0.00439	0.00133	1	12/4/2009	
1,2-Dibromoethane (EDB)	BQL	0.00439	0.00099	1	12/4/2009	
1,2-Dichlorobenzene	BQL	0.00439	0.00113	1	12/4/2009	
1,3-Dichlorobenzene	BQL	0.00439	0.00112	1	12/4/2009	
1,4-Dichlorobenzene	BQL	0.00439	0.00092	1	12/4/2009	
trans-1,4-Dichloro-2-butene	BQL	0.0220	0.00121	1	12/4/2009	
1,1-Dichloroethane	BQL	0.00439	0.00093	1	12/4/2009	
1,1-Dichloroethene	BQL	0.00439	0.00130	1	12/4/2009	
1,2-Dichloroethane	BQL	0.00439	0.00116	1	12/4/2009	
cis-1,2-Dichloroethene	BQL	0.00439	0.00112	1	12/4/2009	
trans-1,2-dichloroethene	BQL	0.00439	0.00099	1	12/4/2009	
1,2-Dichloropropane	BQL	0.00439	0.00104	1	12/4/2009	
1,3-Dichloropropane	BQL	0.00439	0.00098	1	12/4/2009	
2,2-Dichloropropane	BQL	0.00439	0.00105	1	12/4/2009	
1,1-Dichloropropene	BQL	0.00439	0.00138	1	12/4/2009	
cis-1,3-Dichloropropene	BQL	0.00439	0.00073	1	12/4/2009	
trans-1,3-Dichloropropene	BQL	0.00439	0.00085	1	12/4/2009	
Dichlorodifluoromethane	BQL	0.00439	0.00116	1	12/4/2009	
Diisopropyl ether (DIPE)	BQL	0.00439	0.00099	1	12/4/2009	
Ethylbenzene	BQL	0.00439	0.00076	1	12/4/2009	
Hexachlorobutadiene	BQL	0.00439	0.00086	1	12/4/2009	
2-Hexanone	BQL	0.0110	0.00285	1	12/4/2009	
Iodomethane	BQL	0.00439	0.00095	1	12/4/2009	

SGS North America, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: UST#8-CSFF-SB02
Client Project ID: CSFF Soil Sampling UST #8
Lab Sample ID G128-2466-2A
Lab Project ID: G128-2466
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 11-24-2009 11:00
Date Received: 11/25/2009
Matrix: Soil
Sample Amount: 6.71 g
%Solids: 84.7

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	0.00439	0.00078	1	12/4/2009	
4-Isopropyltoluene	BQL	0.00439	0.00094	1	12/4/2009	
Methylene chloride	0.00230	0.0176	0.00105	1	12/4/2009	J
4-Methyl-2-pentanone	BQL	0.0110	0.00407	1	12/4/2009	
Methyl-tert-butyl ether (MTBE)	BQL	0.00439	0.00098	1	12/4/2009	
Naphthalene	BQL	0.00439	0.00075	1	12/4/2009	
n-Propyl benzene	BQL	0.00439	0.00111	1	12/4/2009	
Styrene	BQL	0.00439	0.00097	1	12/4/2009	
1,1,1,2-Tetrachloroethane	BQL	0.00439	0.00090	1	12/4/2009	
1,1,2,2-Tetrachloroethane	BQL	0.00439	0.00099	1	12/4/2009	
Tetrachloroethene	BQL	0.00439	0.00081	1	12/4/2009	
Toluene	BQL	0.00439	0.00088	1	12/4/2009	
1,2,3-Trichlorobenzene	BQL	0.00439	0.00091	1	12/4/2009	
1,2,4-Trichlorobenzene	BQL	0.00439	0.00091	1	12/4/2009	
Trichloroethene	BQL	0.00439	0.00084	1	12/4/2009	
1,1,1-Trichloroethane	BQL	0.00439	0.00099	1	12/4/2009	
1,1,2-Trichloroethane	BQL	0.00439	0.00144	1	12/4/2009	
Trichlorofluoromethane	BQL	0.00439	0.00091	1	12/4/2009	
1,2,3-Trichloropropane	BQL	0.00439	0.00109	1	12/4/2009	
1,2,4-Trimethylbenzene	BQL	0.00439	0.00111	1	12/4/2009	
1,3,5-Trimethylbenzene	BQL	0.00439	0.00100	1	12/4/2009	
Vinyl chloride	BQL	0.00439	0.00120	1	12/4/2009	
m-,p-Xylene	BQL	0.00879	0.00169	1	12/4/2009	
o-Xylene	BQL	0.00439	0.00085	1	12/4/2009	

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	0.05	0.0651	130
Toluene-d8	0.05	0.0512	102
4-Bromofluorobenzene	0.05	0.0489	98

Comments:

Flags:

BQL = Below Quantitation Limits.

Analyst: CL

Reviewed By: CLP

SGS North America, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: UST#8-CSFF-SB03

Client Project ID: CSFF Soil Sampling UST #8

Lab Sample ID G128-2466-3A

Lab Project ID: G128-2466

Report Basis: Dry Weight

Analyzed By: CLP

Date Collected: 11-24-2009 11:15

Date Received: 11/25/2009

Matrix: Soil

Sample Amount: 6.84 g

%Solids: 83.3

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	0.0591	0.0439	0.00606	1	12/4/2009	
Benzene	BQL	0.00439	0.00094	1	12/4/2009	
Bromobenzene	BQL	0.00439	0.00090	1	12/4/2009	
Bromochloromethane	BQL	0.00439	0.00151	1	12/4/2009	
Bromodichloromethane	BQL	0.00439	0.00087	1	12/4/2009	
Bromoform	BQL	0.00439	0.00088	1	12/4/2009	
Bromomethane	BQL	0.00439	0.00092	1	12/4/2009	
2-Butanone	0.00733	0.0219	0.00476	1	12/4/2009	J
n-Butylbenzene	0.00166	0.00439	0.00084	1	12/4/2009	J
sec-Butylbenzene	0.00144	0.00439	0.00089	1	12/4/2009	J
tert-Butylbenzene	BQL	0.00439	0.00098	1	12/4/2009	
Carbon disulfide	BQL	0.00439	0.00235	1	12/4/2009	
Carbon tetrachloride	BQL	0.00439	0.00090	1	12/4/2009	
Chlorobenzene	BQL	0.00439	0.00104	1	12/4/2009	
Chloroethane	BQL	0.00439	0.00140	1	12/4/2009	
Chloroform	BQL	0.00439	0.00105	1	12/4/2009	
Chloromethane	BQL	0.00439	0.00099	1	12/4/2009	
2-Chlorotoluene	BQL	0.00439	0.00089	1	12/4/2009	
4-Chlorotoluene	BQL	0.00439	0.00110	1	12/4/2009	
Dibromochloromethane	BQL	0.00439	0.00121	1	12/4/2009	
1,2-Dibromo-3-chloropropane	BQL	0.0219	0.00127	1	12/4/2009	
Dibromomethane	BQL	0.00439	0.00132	1	12/4/2009	
1,2-Dibromoethane (EDB)	BQL	0.00439	0.00099	1	12/4/2009	
1,2-Dichlorobenzene	BQL	0.00439	0.00113	1	12/4/2009	
1,3-Dichlorobenzene	BQL	0.00439	0.00112	1	12/4/2009	
1,4-Dichlorobenzene	BQL	0.00439	0.00092	1	12/4/2009	
trans-1,4-Dichloro-2-butene	BQL	0.0219	0.00121	1	12/4/2009	
1,1-Dichloroethane	BQL	0.00439	0.00093	1	12/4/2009	
1,1-Dichloroethene	BQL	0.00439	0.00130	1	12/4/2009	
1,2-Dichloroethane	BQL	0.00439	0.00116	1	12/4/2009	
cis-1,2-Dichloroethene	BQL	0.00439	0.00112	1	12/4/2009	
trans-1,2-dichloroethene	BQL	0.00439	0.00099	1	12/4/2009	
1,2-Dichloropropane	BQL	0.00439	0.00104	1	12/4/2009	
1,3-Dichloropropane	BQL	0.00439	0.00098	1	12/4/2009	
2,2-Dichloropropane	BQL	0.00439	0.00105	1	12/4/2009	
1,1-Dichloropropene	BQL	0.00439	0.00138	1	12/4/2009	
cis-1,3-Dichloropropene	BQL	0.00439	0.00073	1	12/4/2009	
trans-1,3-Dichloropropene	BQL	0.00439	0.00085	1	12/4/2009	
Dichlorodifluoromethane	BQL	0.00439	0.00116	1	12/4/2009	
Diisopropyl ether (DIPE)	BQL	0.00439	0.00099	1	12/4/2009	
Ethylbenzene	BQL	0.00439	0.00076	1	12/4/2009	
Hexachlorobutadiene	BQL	0.00439	0.00086	1	12/4/2009	
2-Hexanone	BQL	0.0110	0.00284	1	12/4/2009	
Iodomethane	BQL	0.00439	0.00095	1	12/4/2009	

SGS North America, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: UST#8-CSFF-SB03
Client Project ID: CSFF Soil Sampling UST #8
Lab Sample ID G128-2466-3A
Lab Project ID: G128-2466
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 11-24-2009 11:15
Date Received: 11/25/2009
Matrix: Soil
Sample Amount: 6.84 g
%Solids: 83.3

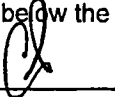
Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	0.00439	0.00078	1	12/4/2009	
4-Isopropyltoluene	BQL	0.00439	0.00094	1	12/4/2009	
Methylene chloride	0.00341	0.0175	0.00104	1	12/4/2009	J
4-Methyl-2-pentanone	BQL	0.0110	0.00406	1	12/4/2009	
Methyl-tert-butyl ether (MTBE)	BQL	0.00439	0.00097	1	12/4/2009	
Naphthalene	0.00233	0.00439	0.00075	1	12/4/2009	J
n-Propyl benzene	BQL	0.00439	0.00111	1	12/4/2009	
Styrene	BQL	0.00439	0.00097	1	12/4/2009	
1,1,1,2-Tetrachloroethane	BQL	0.00439	0.00090	1	12/4/2009	
1,1,2,2-Tetrachloroethane	BQL	0.00439	0.00099	1	12/4/2009	
Tetrachloroethene	BQL	0.00439	0.00080	1	12/4/2009	
Toluene	BQL	0.00439	0.00088	1	12/4/2009	
1,2,3-Trichlorobenzene	BQL	0.00439	0.00091	1	12/4/2009	
1,2,4-Trichlorobenzene	BQL	0.00439	0.00090	1	12/4/2009	
Trichloroethene	BQL	0.00439	0.00084	1	12/4/2009	
1,1,1-Trichloroethane	BQL	0.00439	0.00099	1	12/4/2009	
1,1,2-Trichloroethane	BQL	0.00439	0.00144	1	12/4/2009	
Trichlorofluoromethane	BQL	0.00439	0.00090	1	12/4/2009	
1,2,3-Trichloropropane	BQL	0.00439	0.00109	1	12/4/2009	
1,2,4-Trimethylbenzene	BQL	0.00439	0.00111	1	12/4/2009	
1,3,5-Trimethylbenzene	BQL	0.00439	0.00100	1	12/4/2009	
Vinyl chloride	BQL	0.00439	0.00119	1	12/4/2009	
m-,p-Xylene	BQL	0.00877	0.00168	1	12/4/2009	
o-Xylene	BQL	0.00439	0.00085	1	12/4/2009	

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	0.05	0.0649	130
Toluene-d8	0.05	0.0517	103
4-Bromofluorobenzene	0.05	0.0508	102

Comments:

Flags:

BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Analyst: 

Reviewed By: 

SGS North America, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: UST#8-CSFF-SB04
Client Project ID: CSFF Soil Sampling UST #8
Lab Sample ID G128-2466-4A
Lab Project ID: G128-2466
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 11-24-2009 11:45
Date Received: 11/25/2009
Matrix: Soil
Sample Amount: 6.09 g
%Solids: 84.3

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	0.0626	0.0486	0.00672	1	12/2/2009	
Benzene	BQL	0.00486	0.00104	1	12/2/2009	
Bromobenzene	BQL	0.00486	0.00100	1	12/2/2009	
Bromochloromethane	BQL	0.00486	0.00167	1	12/2/2009	
Bromodichloromethane	BQL	0.00486	0.00097	1	12/2/2009	
Bromoform	BQL	0.00486	0.00097	1	12/2/2009	
Bromomethane	BQL	0.00486	0.00102	1	12/2/2009	
2-Butanone	BQL	0.0243	0.00528	1	12/2/2009	
n-Butylbenzene	BQL	0.00486	0.00093	1	12/2/2009	
sec-Butylbenzene	BQL	0.00486	0.00098	1	12/2/2009	
tert-Butylbenzene	BQL	0.00486	0.00109	1	12/2/2009	
Carbon disulfide	BQL	0.00486	0.00261	1	12/2/2009	
Carbon tetrachloride	BQL	0.00486	0.00099	1	12/2/2009	
Chlorobenzene	BQL	0.00486	0.00116	1	12/2/2009	
Chloroethane	BQL	0.00486	0.00155	1	12/2/2009	
Chloroform	BQL	0.00486	0.00117	1	12/2/2009	
Chloromethane	BQL	0.00486	0.00110	1	12/2/2009	
2-Chlorotoluene	BQL	0.00486	0.00098	1	12/2/2009	
4-Chlorotoluene	BQL	0.00486	0.00122	1	12/2/2009	
Dibromochloromethane	BQL	0.00486	0.00134	1	12/2/2009	
1,2-Dibromo-3-chloropropane	BQL	0.0243	0.00141	1	12/2/2009	
Dibromomethane	BQL	0.00486	0.00147	1	12/2/2009	
1,2-Dibromoethane (EDB)	BQL	0.00486	0.00110	1	12/2/2009	
1,2-Dichlorobenzene	BQL	0.00486	0.00125	1	12/2/2009	
1,3-Dichlorobenzene	BQL	0.00486	0.00124	1	12/2/2009	
1,4-Dichlorobenzene	BQL	0.00486	0.00102	1	12/2/2009	
trans-1,4-Dichloro-2-butene	BQL	0.0243	0.00134	1	12/2/2009	
1,1-Dichloroethane	BQL	0.00486	0.00103	1	12/2/2009	
1,1-Dichloroethene	BQL	0.00486	0.00144	1	12/2/2009	
1,2-Dichloroethane	BQL	0.00486	0.00128	1	12/2/2009	
cis-1,2-Dichloroethene	BQL	0.00486	0.00124	1	12/2/2009	
trans-1,2-dichloroethene	BQL	0.00486	0.00110	1	12/2/2009	
1,2-Dichloropropane	BQL	0.00486	0.00115	1	12/2/2009	
1,3-Dichloropropane	BQL	0.00486	0.00109	1	12/2/2009	
2,2-Dichloropropane	BQL	0.00486	0.00117	1	12/2/2009	
1,1-Dichloropropene	BQL	0.00486	0.00153	1	12/2/2009	
cis-1,3-Dichloropropene	BQL	0.00486	0.00081	1	12/2/2009	
trans-1,3-Dichloropropene	BQL	0.00486	0.00094	1	12/2/2009	
Dichlorodifluoromethane	BQL	0.00486	0.00128	1	12/2/2009	
Diisopropyl ether (DIPE)	BQL	0.00486	0.00110	1	12/2/2009	
Ethylbenzene	BQL	0.00486	0.00084	1	12/2/2009	
Hexachlorobutadiene	BQL	0.00486	0.00095	1	12/2/2009	
2-Hexanone	BQL	0.0122	0.00315	1	12/2/2009	
Iodomethane	BQL	0.00486	0.00105	1	12/2/2009	

SGS North America, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: UST#8-CSFF-SB04
Client Project ID: CSFF Soil Sampling UST #8
Lab Sample ID G128-2466-4A
Lab Project ID: G128-2466
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected: 11-24-2009 11:45
Date Received: 11/25/2009
Matrix: Soil
Sample Amount: 6.09 g
%Solids: 84.3

Report Name Compound	Result MG/KG	Quantitation Limit MG/KG	MDL MG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	0.00486	0.00086	1	12/2/2009	
4-Isopropyltoluene	BQL	0.00486	0.00104	1	12/2/2009	
Methylene chloride	0.00268	0.0194	0.00116	1	12/2/2009	J
4-Methyl-2-pentanone	BQL	0.0122	0.00450	1	12/2/2009	
Methyl-tert-butyl ether (MTBE)	BQL	0.00486	0.00108	1	12/2/2009	
Naphthalene	BQL	0.00486	0.00083	1	12/2/2009	
n-Propyl benzene	BQL	0.00486	0.00123	1	12/2/2009	
Styrene	BQL	0.00486	0.00107	1	12/2/2009	
1,1,1,2-Tetrachloroethane	BQL	0.00486	0.00099	1	12/2/2009	
1,1,2,2-Tetrachloroethane	BQL	0.00486	0.00110	1	12/2/2009	
Tetrachloroethene	BQL	0.00486	0.00089	1	12/2/2009	
Toluene	BQL	0.00486	0.00097	1	12/2/2009	
1,2,3-Trichlorobenzene	BQL	0.00486	0.00101	1	12/2/2009	
1,2,4-Trichlorobenzene	BQL	0.00486	0.00100	1	12/2/2009	
Trichloroethene	BQL	0.00486	0.00093	1	12/2/2009	
1,1,1-Trichloroethane	BQL	0.00486	0.00110	1	12/2/2009	
1,1,2-Trichloroethane	BQL	0.00486	0.00159	1	12/2/2009	
Trichlorofluoromethane	BQL	0.00486	0.00100	1	12/2/2009	
1,2,3-Trichloropropane	BQL	0.00486	0.00121	1	12/2/2009	
1,2,4-Trimethylbenzene	BQL	0.00486	0.00123	1	12/2/2009	
1,3,5-Trimethylbenzene	BQL	0.00486	0.00111	1	12/2/2009	
Vinyl chloride	BQL	0.00486	0.00132	1	12/2/2009	
m-,p-Xylene	BQL	0.00972	0.00187	1	12/2/2009	
o-Xylene	BQL	0.00486	0.00094	1	12/2/2009	

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	0.05	0.0739	148
Toluene-d8	0.05	0.0525	105
4-Bromofluorobenzene	0.05	0.0508	102

Comments:

Flags:

BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Analyst: 

Reviewed By: 

SGS North America, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID VBLK9120209B
Lab Project ID:
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected:
Date Received:
Matrix: Soil
Sample Amount: 5 g
%Solids: 100.0

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	BQL	50.0	6.91	1	12/2/2009	
Benzene	BQL	5.00	1.07	1	12/2/2009	
Bromobenzene	BQL	5.00	1.03	1	12/2/2009	
Bromochloromethane	BQL	5.00	1.72	1	12/2/2009	
Bromodichloromethane	BQL	5.00	0.992	1	12/2/2009	
Bromoform	BQL	5.00	1.00	1	12/2/2009	
Bromomethane	BQL	5.00	1.05	1	12/2/2009	
2-Butanone	BQL	25.0	5.43	1	12/2/2009	
n-Butylbenzene	BQL	5.00	0.955	1	12/2/2009	
sec-Butylbenzene	BQL	5.00	1.01	1	12/2/2009	
tert-Butylbenzene	BQL	5.00	1.12	1	12/2/2009	
Carbon disulfide	BQL	5.00	2.68	1	12/2/2009	
Carbon tetrachloride	BQL	5.00	1.02	1	12/2/2009	
Chlorobenzene	BQL	5.00	1.19	1	12/2/2009	
Chloroethane	BQL	5.00	1.59	1	12/2/2009	
Chloroform	BQL	5.00	1.20	1	12/2/2009	
Chloromethane	BQL	5.00	1.13	1	12/2/2009	
2-Chlorotoluene	BQL	5.00	1.01	1	12/2/2009	
4-Chlorotoluene	BQL	5.00	1.25	1	12/2/2009	
Dibromochloromethane	BQL	5.00	1.38	1	12/2/2009	
1,2-Dibromo-3-chloropropane	BQL	25.0	1.45	1	12/2/2009	
Dibromomethane	BQL	5.00	1.51	1	12/2/2009	
1,2-Dibromoethane (EDB)	BQL	5.00	1.13	1	12/2/2009	
1,2-Dichlorobenzene	BQL	5.00	1.29	1	12/2/2009	
1,3-Dichlorobenzene	BQL	5.00	1.28	1	12/2/2009	
1,4-Dichlorobenzene	BQL	5.00	1.05	1	12/2/2009	
trans-1,4-Dichloro-2-butene	BQL	25.0	1.38	1	12/2/2009	
1,1-Dichloroethane	BQL	5.00	1.06	1	12/2/2009	
1,1-Dichloroethene	BQL	5.00	1.48	1	12/2/2009	
1,2-Dichloroethane	BQL	5.00	1.32	1	12/2/2009	
cis-1,2-Dichloroethene	BQL	5.00	1.28	1	12/2/2009	
trans-1,2-dichloroethene	BQL	5.00	1.13	1	12/2/2009	
1,2-Dichloropropane	BQL	5.00	1.18	1	12/2/2009	
1,3-Dichloropropane	BQL	5.00	1.12	1	12/2/2009	
2,2-Dichloropropane	BQL	5.00	1.20	1	12/2/2009	
1,1-Dichloropropene	BQL	5.00	1.57	1	12/2/2009	
cis-1,3-Dichloropropene	BQL	5.00	0.833	1	12/2/2009	
trans-1,3-Dichloropropene	BQL	5.00	0.963	1	12/2/2009	
Dichlorodifluoromethane	BQL	5.00	1.32	1	12/2/2009	
Diisopropyl ether (DIPE)	BQL	5.00	1.13	1	12/2/2009	
Ethylbenzene	BQL	5.00	0.866	1	12/2/2009	
Hexachlorobutadiene	BQL	5.00	0.975	1	12/2/2009	
2-Hexanone	BQL	12.5	3.24	1	12/2/2009	
Iodomethane	BQL	5.00	1.08	1	12/2/2009	

SGS North America, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID VBLK9120209B
Lab Project ID:
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected:
Date Received:
Matrix: Soil
Sample Amount: 5 g
%Solids: 100.0

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	5.00	0.888	1	12/2/2009	
4-Isopropyltoluene	BQL	5.00	1.07	1	12/2/2009	
Methylene chloride	BQL	20.0	1.19	1	12/2/2009	
4-Methyl-2-pentanone	BQL	12.5	4.63	1	12/2/2009	
Methyl-tert-butyl ether (MTBE)	BQL	5.00	1.11	1	12/2/2009	
Naphthalene	BQL	5.00	0.850	1	12/2/2009	
n-Propyl benzene	BQL	5.00	1.26	1	12/2/2009	
Styrene	BQL	5.00	1.10	1	12/2/2009	
1,1,1,2-Tetrachloroethane	BQL	5.00	1.02	1	12/2/2009	
1,1,2,2-Tetrachloroethane	BQL	5.00	1.13	1	12/2/2009	
Tetrachloroethene	BQL	5.00	0.916	1	12/2/2009	
Toluene	BQL	5.00	0.997	1	12/2/2009	
1,2,3-Trichlorobenzene	BQL	5.00	1.04	1	12/2/2009	
1,2,4-Trichlorobenzene	BQL	5.00	1.03	1	12/2/2009	
Trichloroethene	BQL	5.00	0.954	1	12/2/2009	
1,1,1-Trichloroethane	BQL	5.00	1.13	1	12/2/2009	
1,1,2-Trichloroethane	BQL	5.00	1.64	1	12/2/2009	
Trichlorofluoromethane	BQL	5.00	1.03	1	12/2/2009	
1,2,3-Trichloropropane	BQL	5.00	1.24	1	12/2/2009	
1,2,4-Trimethylbenzene	BQL	5.00	1.26	1	12/2/2009	
1,3,5-Trimethylbenzene	BQL	5.00	1.14	1	12/2/2009	
Vinyl chloride	BQL	5.00	1.36	1	12/2/2009	
m,p-Xylene	BQL	10.0	1.92	1	12/2/2009	
o-Xylene	BQL	5.00	0.969	1	12/2/2009	

	Spike Added	Spike Result	Percent Recovered
1,2-Dichloroethane-d4	50	55.1	110
Toluene-d8	50	51.3	103
4-Bromofluorobenzene	50	49.7	99

Comments:

Flags:

BQL = Below Quantitation Limits.

Analyst: CL

Reviewed By: DVD

SGS North America, Inc.

SGS Environmental Services

LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: SGS Environmental

Dilution: 1

Lab Code: NC00919

Matrix: Soil

LCS: LCS9120209A

Ilename: 1202904.D

Date Analyzed: 12/02/09 12:45

LCSD: LCS9120209B

Ilename: 1202905.D

Date Analyzed: 12/02/09 13:11

COMPOUND	LCS SPIKE	LCS CONC	LCS %	LCSD SPIKE	LCSD CONC	LCSD %	%	QC LIMITS	
	(µg/kg)	(µg/kg)	REC #	(µg/kg)	(µg/kg)	REC #	RPD	RPD	REC
acetone	75.0	88.2	118	75.0	97.9	130	10.3	30	16.7-286
acrolein	300	328	109	300	367	122	11.3	30	16.7-226
acrylonitrile	300	328	109	300	352	118	7.16	30	13.3-201
benzene	30.0	29.6	98.5	30.0	31.2	104	5.43	30	68.6-132
bromobenzene	30.0	30.2	101	30.0	30.8	103	2.13	30	56.7-146
bromochloromethane	30.0	31.5	105	30.0	32.8	109	4.08	30	52.5-154
bromodichloromethane	30.0	29.9	99.7	30.0	31.7	106	5.81	30	65.4-137
bromoform	30.0	29.5	98.5	30.0	30.8	103	4.27	30	48.3-147
bromomethane	30.0	32.0	106	30.0	29.5	98.3	8.07	30	16.7-246
2-butanone	75.0	85.3	114	75.0	96.2	128	12.1	30	16.7-314
n-butylbenzene	30.0	28.5	95.1	30.0	29.2	97.3	2.32	30	58.4-135
sec-butylbenzene	30.0	28.7	95.6	30.0	29.6	98.8	3.29	30	57.2-136
tert-butylbenzene	30.0	28.5	94.9	30.0	29.7	99.1	4.33	30	50.8-139
Carbon disulfide	30.0	28.7	95.8	30.0	30.3	101	5.32	30	16.7-276
carbon tetrachloride	30.0	29.2	97.2	30.0	31.1	104	6.50	30	61.1-141
chlorobenzene	30.0	29.2	97.5	30.0	29.8	99.2	1.73	30	63.0-129
chloroethane	30.0	32.2	107	30.0	32.6	108	1.11	30	22.5-200
2-chloroethyl vinyl ether	300	304	101	300	336	112	10.1	30	16.7-275
chloroform	30.0	29.4	98.1	30.0	30.8	103	4.64	30	65.0-137
chloromethane	30.0	32.6	109	30.0	32.9	110	0.946	30	16.7-182
2-chlorotoluene	30.0	29.4	98.1	30.0	29.9	99.7	1.58	30	61.1-138
4-chlorotoluene	30.0	28.6	95.2	30.0	30.1	100	5.18	30	63.8-134
dibromochloromethane	30.0	29.6	98.6	30.0	30.6	102	3.29	30	56.0-144
1,2-dibromo-3-chloropropane	150	152	102	150	161	107	5.44	30	16.7-213
1,2-dibromoethane	30.0	30.1	100	30.0	31.0	104	3.11	30	58.8-139
dibromomethane	30.0	31.0	103	30.0	32.8	109	5.55	30	54.1-154
1,2-dichlorobenzene	30.0	30.1	100	30.0	31.0	103	2.68	30	61.5-138
1,3-dichlorobenzene	30.0	29.5	98.4	30.0	30.5	102	3.10	30	61.5-138
1,4-dichlorobenzene	30.0	29.2	97.4	30.0	30.4	101	3.96	30	61.1-138
trans-1,4-Dichloro-2-butene	150	158	106	150	169	113	6.71	30	16.7-212
dichlorodifluoromethane	30.0	33.1	110	30.0	33.5	112	1.44	30	25.4-165
1,1-dichloroethane	30.0	29.3	97.6	30.0	30.8	103	5.16	30	62.4-140
1,2-dichloroethane	30.0	31.0	103	30.0	32.5	108	4.88	30	55.3-152
1,1-dichloroethene	30.0	28.7	95.7	30.0	30.5	102	6.37	30	65.4-134
cis-1,2-dichloroethene	30.0	30.4	101	30.0	31.9	106	4.85	30	63.8-138
trans-1,2-dichloroethene	30.0	29.2	97.4	30.0	30.9	103	5.49	30	63.3-139
1,2-dichloropropane	30.0	30.2	100	30.0	31.5	105	4.41	30	60.0-139
1,3-dichloropropane	30.0	29.8	99.4	30.0	30.2	101	1.30	30	62.3-136
2,2-dichloropropane	30.0	29.1	96.9	30.0	31.0	103	6.26	30	62.5-140
1,1-dichloropropene	30.0	29.7	99.0	30.0	31.5	105	5.79	30	60.9-136
cis-1,3-dichloropropene	30.0	30.9	103	30.0	32.5	108	5.08	30	59.8-141

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

SGS North America, Inc.

SGS Environmental Services

LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: SGS Environmental

Dilution: 1

Lab Code: NC00919

Matrix: Soil

LCS: LCS9120209A

Filename: 1202904.D

Date Analyzed: 12/02/09 12:45

LCSD: LCS9120209B

Filename: 1202905.D

Date Analyzed: 12/02/09 13:11

COMPOUND	LCS SPIKE (µg/kg)	LCS CONC (µg/kg)	LCS % REC #	LCSD SPIKE (µg/kg)	LCSD CONC (µg/kg)	LCSD % REC #	% RPD	QC LIMITS	
								RPD	REC
trans-1,3-dichloropropene	30.0	31.6	105	30.0	33.0	110	4.49	30	7.27-173
Diisopropyl ether	30.0	30.0	100	30.0	31.8	106	5.73	30	9.01-172
ethylbenzene	30.0	27.8	92.8	30.0	29.0	96.6	4.05	30	16.7-187
hexachlorobutadiene	30.0	28.6	95.3	30.0	30.0	100	4.78	30	16.7-173
2-hexanone	75.0	84.2	112	75.0	89.4	119	6.04	30	16.7-304
Iodomethane	30.0	31.6	105	30.0	33.1	110	4.76	30	16.7-200
isopropylbenzene	30.0	28.2	94.2	30.0	29.4	97.8	3.78	30	6.43-167
4-isopropyltoluene	30.0	28.5	95.1	30.0	29.6	98.8	3.82	30	6.97-170
Methyl-tert-butyl ether	30.0	30.6	102	30.0	32.9	110	7.34	30	10.7-173
methylene chloride	30.0	30.2	101	30.0	31.5	105	4.11	30	8.58-169
4-methyl-2-pentanone	75.0	84.8	113	75.0	91.8	122	7.99	30	16.7-293
naphthalene	30.0	31.1	104	30.0	33.4	111	7.11	30	16.7-175
n-propyl benzene	30.0	28.2	93.9	30.0	29.2	97.5	3.83	30	7.25-172
styrene	30.0	28.6	95.4	30.0	29.3	97.7	2.42	30	10.2-168
1,1,1,2-tetrachloroethane	30.0	29.3	97.7	30.0	29.8	99.5	1.79	30	5.87-177
1,1,2,2-tetrachloroethane	30.0	31.7	106	30.0	32.9	110	3.62	30	10.9-168
tetrachloroethene	30.0	27.8	92.8	30.0	29.0	96.5	3.94	30	16.7-195
toluene	30.0	29.5	98.2	30.0	31.5	105	6.69	30	26.6-159
1,2,3-trichlorobenzene	30.0	32.4	108	30.0	33.2	111	2.41	30	4.64-169
1,2,4-trichlorobenzene	30.0	30.2	101	30.0	31.1	104	2.90	30	6.55-165
1,1,1-trichloroethane	30.0	29.2	97.4	30.0	30.9	103	5.52	30	8.40-173
1,1,2-trichloroethane	30.0	29.6	98.7	30.0	30.4	102	2.83	30	12.2-166
trichloroethene	30.0	29.7	99.1	30.0	31.6	105	5.78	30	24.0-158
trichlorofluoromethane	30.0	29.3	97.8	30.0	29.7	99.1	1.32	30	5.64-183
1,2,3-trichloropropane	30.0	32.3	108	30.0	33.3	111	3.11	30	16.7-186
1,2,4-trimethylbenzene	30.0	28.5	94.9	30.0	29.1	97.1	2.32	30	8.60-168
1,3,5-trimethylbenzene	30.0	28.2	93.9	30.0	29.0	96.8	2.97	30	8.09-168
Vinyl acetate	75.0	77.6	103	75.0	82.8	110	6.52	30	16.7-225
vinyl chloride	30.0	33.9	113	30.0	33.9	113	0.059	30	7.56-178
m/p-xylene	60.0	55.3	92.2	60.0	57.5	95.8	3.83	30	8.91-169
o-xylene	30.0	28.8	96.1	30.0	29.2	97.5	1.48	30	9.45-167

System Monitoring Compound Results

System Monitoring Compound Results		LCS SPIKE (µg/kg)	LCS CONC (µg/kg)	LCS % REC #	LCSD SPIKE (µg/kg)	LCSD CONC (µg/kg)	LCSD % REC #	QC LIMITS REC
460-00-4	4-Bromofluorobenzene	50	52.02	104	50	51.19	102	49.1-151
17060-07-0	1,2-Dichloroethane-d4	50	53.52	107	50	53.29	108	37.8-170
2037-26-5	Toluene-d8	50	51.14	102	50	52.37	105	58.8-144

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

LCS Spike Recovery: 0 failure(s) out of 72. LCSD Spike Recovery: 0 failure(s) out of 72.

RPD: 0 out of 72 outside of limits

COMMENTS:

Analyst: CL

Reviewed by: OVO

SGS North America, Inc.

SGS Environmental Services

3B

SOIL VOLATILE MATRIX SPIKE RECOVERY

Lab Name: SGS Environmental

Contract:

Lab Code: NC00919

Case No.:

SAS No.:

SDG No.:

Matrix Spike - EPA Sample No.: g671-210-1c

Dilution:

1

FileNames:

1202910.D, 1202917.D

COMPOUND	SAMPLE CONC (µg/kg)	MS SPIKE (µg/kg)	MS CONC (µg/kg)	MS % REC #	Recovery Limits
acetone	BQL	27.3	73.9	270*	17.7-85.2
acrolein	BQL	273	249	91.3	NA-424
acrylonitrile	BQL	273	399	146	85.0-175
benzene	BQL	27.3	22.6	82.6	61.6-135
bromobenzene	BQL	27.3	20.4	74.8	65.1-125
bromochloromethane	BQL	27.3	29.5	108	75.5-126
bromodichloromethane	BQL	27.3	25.6	93.9	74.3-123
bromoform	BQL	27.3	29.1	106	52.3-122
bromomethane	BQL	27.3	19.6	71.7	10.0-284
2-butanone	BQL	27.3	99.9	366*	36.1-107
n-butylbenzene	BQL	27.3	14.5	53.1*	70.2-124
sec-butylbenzene	BQL	27.3	15.2	55.8*	62.0-133
tert-butylbenzene	BQL	27.3	14.5	53.1*	73.5-121
Carbon disulfide	BQL	27.3	20.9	76.5	68.8-129
carbon tetrachloride	BQL	27.3	21.2	77.5	71.8-122
chlorobenzene	BQL	27.3	18.9	69.2*	77.2-118
chloroethane	BQL	27.3	20.4	74.9	10.0-233
2-chloroethyl vinyl ether	BQL	27.3	0.00	0.00	NA-283
chloroform	BQL	27.3	23.6	86.5	74.0-128
chloromethane	BQL	27.3	22.5	82.3	72.0-138
2-chlorotoluene	BQL	27.3	18.0	65.8*	79.3-118
4-chlorotoluene	BQL	27.3	18.1	66.4*	76.8-120
dibromochloromethane	BQL	27.3	25.3	92.6	69.0-117
1,2-dibromo-3-chloropropane	BQL	136	191	140	20.2-171
1,2-dibromomethane	BQL	27.3	28.5	104	78.5-123
dibromomethane	BQL	27.3	32.2	118	71.3-137
1,2-dichlorobenzene	BQL	27.3	20.7	75.9	75.1-120
1,3-dichlorobenzene	BQL	27.3	18.4	67.2*	73.1-121
1,4-dichlorobenzene	BQL	27.3	19.0	69.7*	74.8-118
trans-1,4-Dichloro-2-butene	BQL	136	184	135	25.7-149
dichlorodifluoromethane	BQL	27.3	21.3	78.0	41.7-166
1,1-dichloroethane	BQL	27.3	23.0	84.3	75.6-128
1,2-dichloroethane	BQL	27.3	30.4	111	71.1-127
1,1-dichloroethene	BQL	27.3	21.0	76.8	64.4-130
cis-1,2-dichloroethene	BQL	27.3	24.3	88.9	72.7-134
trans-1,2-dichloroethene	BQL	27.3	21.8	79.7	74.6-124
1,2-dichloropropane	BQL	27.3	25.4	92.9	76.5-129
1,3-dichloropropane	BQL	27.3	26.1	95.5	79.1-121
2,2-dichloropropane	BQL	27.3	21.6	79.2	31.5-157
1,1-dichloropropene	BQL	27.3	21.4	78.3	72.5-120
cis-1,3-dichloropropene	BQL	27.3	26.1	95.6	66.6-132

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 72 outside of limits

Spike Recovery: 24 out of 144 outside of limits

COMMENTS:

SGS North America, Inc.

SGS Environmental Services

Lab Name: SGS Environmental

Contract:

Lab Code: NC00919

Case No.:

SAS No.:

SDG No.:

Matrix Spike - EPA Sample No.: G121-406-3b

COMPOUND	SAMPLE CONC (µg/kg)	MS SPIKE (µg/kg)	MS CONC (µg/kg)	MS % REC #	Recovery Limits
trans-1,3-dichloropropene	BQL	27.3	30.3	111	44.7-144
Diisopropyl ether	BQL	27.3	26.4	96.7	79.4-122
ethylbenzene	BQL	27.3	18.0	65.9*	73.8-126
hexachlorobutadiene	BQL	27.3	9.60	35.2*	51.8-134
2-hexanone	BQL	27.3	97.1	356*	41.6-111
Iodomethane	BQL	27.3	22.7	83.2	40.6-126
isopropylbenzene	BQL	27.3	17.4	63.6*	74.3-123
4-isopropyltoluene	BQL	27.3	15.9	58.2*	74.6-122
Methyl-tert-butyl ether	BQL	27.3	34.8	128	66.5-136
methylene chloride	BQL	109	33.6	30.7*	48.6-155
4-methyl-2-pentanone	BQL	27.3	122	446*	6.88-166
naphthalene	BQL	27.3	28.7	105	55.1-140
n-propyl benzene	BQL	27.3	16.5	60.4*	71.6-128
styrene	BQL	27.3	19.5	71.4*	73.2-123
1,1,1,2-tetrachloroethane	BQL	27.3	21.0	76.8	69.4-120
1,1,2,2-tetrachloroethane	BQL	27.3	31.8	116	75.7-136
tetrachloroethene	BQL	27.3	16.0	58.4	45.8-153
toluene	BQL	27.3	22.0	80.5	66.4-128
1,2,3-trichlorobenzene	BQL	27.3	19.4	71.2	61.0-126
1,2,4-trichlorobenzene	BQL	27.3	17.7	64.8	60.6-125
1,1,1-trichloroethane	BQL	27.3	21.8	79.8	78.4-121
1,1,2-trichloroethane	BQL	27.3	26.8	98.2	64.8-128
trichloroethene	BQL	27.3	21.7	79.6*	84.9-136
trichlorofluoromethane	BQL	27.3	19.8	72.3*	76.8-132
1,2,3-trichloropropane	BQL	27.3	33.2	121	10.0-218
1,2,4-trimethylbenzene	BQL	27.3	17.8	65.1	31.0-172
1,3,5-trimethylbenzene	BQL	27.3	16.7	61.2*	67.7-132
Vinyl acetate	BQL	68.3	69.9	102	NA-355
vinyl chloride	BQL	27.3	21.8	79.9	68.1-137
m/p-xylene	BQL	54.6	35.8	65.5*	79.8-118
o-xylene	BQL	27.3	18.9	69.1*	80.0-121

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 72 outside of limits

Spike Recovery: 24 out of 144 outside of limits

COMMENTS:

SGS North America, Inc.

Results for Volatiles by GCMS 8260-5035

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID VBLK9120409B
Lab Project ID:
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected:
Date Received:
Matrix: Soil
Sample Amount: 5 g
%Solids: 100.0

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Acetone	BQL	50.0	6.91	1	12/4/2009	
Benzene	BQL	5.00	1.07	1	12/4/2009	
Bromobenzene	BQL	5.00	1.03	1	12/4/2009	
Bromochloromethane	BQL	5.00	1.72	1	12/4/2009	
Bromodichloromethane	BQL	5.00	0.992	1	12/4/2009	
Bromoform	BQL	5.00	1.00	1	12/4/2009	
Bromomethane	BQL	5.00	1.05	1	12/4/2009	
2-Butanone	BQL	25.0	5.43	1	12/4/2009	
n-Butylbenzene	BQL	5.00	0.955	1	12/4/2009	
sec-Butylbenzene	BQL	5.00	1.01	1	12/4/2009	
tert-Butylbenzene	BQL	5.00	1.12	1	12/4/2009	
Carbon disulfide	BQL	5.00	2.68	1	12/4/2009	
Carbon tetrachloride	BQL	5.00	1.02	1	12/4/2009	
Chlorobenzene	BQL	5.00	1.19	1	12/4/2009	
Chloroethane	BQL	5.00	1.59	1	12/4/2009	
Chloroform	BQL	5.00	1.20	1	12/4/2009	
Chloromethane	BQL	5.00	1.13	1	12/4/2009	
2-Chlorotoluene	BQL	5.00	1.01	1	12/4/2009	
4-Chlorotoluene	BQL	5.00	1.25	1	12/4/2009	
Dibromochloromethane	BQL	5.00	1.38	1	12/4/2009	
1,2-Dibromo-3-chloropropane	BQL	25.0	1.45	1	12/4/2009	
Dibromomethane	BQL	5.00	1.51	1	12/4/2009	
1,2-Dibromoethane (EDB)	BQL	5.00	1.13	1	12/4/2009	
1,2-Dichlorobenzene	BQL	5.00	1.29	1	12/4/2009	
1,3-Dichlorobenzene	BQL	5.00	1.28	1	12/4/2009	
1,4-Dichlorobenzene	BQL	5.00	1.05	1	12/4/2009	
trans-1,4-Dichloro-2-butene	BQL	25.0	1.38	1	12/4/2009	
1,1-Dichloroethane	BQL	5.00	1.06	1	12/4/2009	
1,1-Dichloroethene	BQL	5.00	1.48	1	12/4/2009	
1,2-Dichloroethane	BQL	5.00	1.32	1	12/4/2009	
cis-1,2-Dichloroethene	BQL	5.00	1.28	1	12/4/2009	
trans-1,2-dichloroethene	BQL	5.00	1.13	1	12/4/2009	
1,2-Dichloropropane	BQL	5.00	1.18	1	12/4/2009	
1,3-Dichloropropane	BQL	5.00	1.12	1	12/4/2009	
2,2-Dichloropropane	BQL	5.00	1.20	1	12/4/2009	
1,1-Dichloropropene	BQL	5.00	1.57	1	12/4/2009	
cis-1,3-Dichloropropene	BQL	5.00	0.833	1	12/4/2009	
trans-1,3-Dichloropropene	BQL	5.00	0.963	1	12/4/2009	
Dichlorodifluoromethane	BQL	5.00	1.32	1	12/4/2009	
Diisopropyl ether (DIPE)	BQL	5.00	1.13	1	12/4/2009	
Ethylbenzene	BQL	5.00	0.866	1	12/4/2009	
Hexachlorobutadiene	BQL	5.00	0.975	1	12/4/2009	
2-Hexanone	BQL	12.5	3.24	1	12/4/2009	
Iodomethane	BQL	5.00	1.08	1	12/4/2009	

SGS North America, Inc.

Results for Volatiles
by GCMS 8260-5035

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID VBLK9120409B
Lab Project ID:
Report Basis: Dry Weight

Analyzed By: CLP
Date Collected:
Date Received:
Matrix: Soil
Sample Amount: 5 g
%Solids: 100.0

Report Name Compound	Result UG/KG	Quantitation Limit UG/KG	MDL UG/KG	Dilution Factor	Date Analyzed	Flag
Isopropylbenzene	BQL	5.00	0.888	1	12/4/2009	
4-Isopropyltoluene	BQL	5.00	1.07	1	12/4/2009	
Methylene chloride	BQL	20.0	1.19	1	12/4/2009	
4-Methyl-2-pentanone	BQL	12.5	4.63	1	12/4/2009	
Methyl-tert-butyl ether (MTBE)	BQL	5.00	1.11	1	12/4/2009	
Naphthalene	BQL	5.00	0.850	1	12/4/2009	
n-Propyl benzene	BQL	5.00	1.26	1	12/4/2009	
Styrene	BQL	5.00	1.10	1	12/4/2009	
1,1,1,2-Tetrachloroethane	BQL	5.00	1.02	1	12/4/2009	
1,1,2,2-Tetrachloroethane	BQL	5.00	1.13	1	12/4/2009	
Tetrachloroethene	BQL	5.00	0.916	1	12/4/2009	
Toluene	BQL	5.00	0.997	1	12/4/2009	
1,2,3-Trichlorobenzene	BQL	5.00	1.04	1	12/4/2009	
1,2,4-Trichlorobenzene	BQL	5.00	1.03	1	12/4/2009	
Trichloroethene	BQL	5.00	0.954	1	12/4/2009	
1,1,1-Trichloroethane	BQL	5.00	1.13	1	12/4/2009	
1,1,2-Trichloroethane	BQL	5.00	1.64	1	12/4/2009	
Trichlorofluoromethane	BQL	5.00	1.03	1	12/4/2009	
1,2,3-Trichloropropane	BQL	5.00	1.24	1	12/4/2009	
1,2,4-Trimethylbenzene	BQL	5.00	1.26	1	12/4/2009	
1,3,5-Trimethylbenzene	BQL	5.00	1.14	1	12/4/2009	
Vinyl chloride	BQL	5.00	1.36	1	12/4/2009	
m-,p-Xylene	BQL	10.0	1.92	1	12/4/2009	
o-Xylene	BQL	5.00	0.969	1	12/4/2009	
		Spike Added	Spike Result	Percent Recovered		
1,2-Dichloroethane-d4		50	50.8	102		
Toluene-d8		50	49.8	100		
4-Bromofluorobenzene		50	49.8	100		

Comments:

Flags:

BQL = Below Quantitation Limits.

Analyst: CL

Reviewed By: DVO

SGS North America, Inc.

SGS Environmental Services

LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: SGS Environmental

Dilution: 1

Lab Code: NC00919

Matrix: Soil

LCS: LCS9120409A

filename: 1204903.D

Date Analyzed: 12/04/09 09:53

LCSD: LCS9120409B

filename: 1204904.D

Date Analyzed: 12/04/09 10:19

COMPOUND	LCS SPIKE	LCS CONC	LCS %	LCSD SPIKE	LCSD CONC	LCSD %	%	QC LIMITS	
	(µg/kg)	(µg/kg)	REC #	(µg/kg)	(µg/kg)	REC #	RPD	RPD	REC
acetone	75.0	110	147	75.0	102	136	7.64	30	16.7-286
acrolein	300	318	106	300	328	109	3.02	30	16.7-226
acrylonitrile	300	318	106	300	326	108	2.25	30	13.3-201
benzene	30.0	30.4	101	30.0	29.4	98.1	2.91	30	68.6-132
bromobenzene	30.0	31.0	103	30.0	31.6	105	1.82	30	56.7-146
bromochloromethane	30.0	32.1	107	30.0	32.4	108	0.837	30	52.5-154
bromodichloromethane	30.0	30.9	103	30.0	30.7	102	0.617	30	65.4-137
bromoform	30.0	33.0	110	30.0	33.2	111	0.574	30	48.3-147
bromomethane	30.0	23.6	78.6	30.0	22.1	73.5	6.62	30	16.7-246
2-butanone	75.0	101	135	75.0	97.5	130	3.63	30	16.7-314
n-butylbenzene	30.0	28.1	93.8	30.0	28.2	94.0	0.177	30	58.4-135
sec-butylbenzene	30.0	29.0	96.8	30.0	29.1	97.0	0.241	30	57.2-136
tert-butylbenzene	30.0	29.2	97.4	30.0	29.5	98.3	0.886	30	50.8-139
Carbon disulfide	30.0	29.7	98.9	30.0	28.5	95.0	4.02	30	16.7-276
carbon tetrachloride	30.0	31.0	103	30.0	30.0	100	3.24	30	61.1-141
chlorobenzene	30.0	30.5	102	30.0	29.9	99.8	2.18	30	63.0-129
chloroethane	30.0	31.8	106	30.0	31.4	104	1.58	30	22.5-200
2-chloroethyl vinyl ether	300	304	101	300	314	104	3.04	30	16.7-275
chloroform	30.0	30.4	101	30.0	30.0	99.9	1.56	30	65.0-137
chloromethane	30.0	30.5	102	30.0	30.2	101	1.09	30	16.7-182
2-chlorotoluene	30.0	30.4	101	30.0	29.7	99.1	2.13	30	61.1-138
4-chlorotoluene	30.0	30.1	100	30.0	29.8	99.3	1.20	30	63.8-134
dibromochloromethane	30.0	32.0	106	30.0	31.6	105	0.975	30	56.0-144
1,2-dibromo-3-chloropropane	150	149	99.4	150	161	107	7.43	30	16.7-213
1,2-dibromoethane	30.0	31.8	106	30.0	31.8	106	0.157	30	58.8-139
dibromomethane	30.0	32.3	108	30.0	32.0	107	0.964	30	54.1-154
1,2-dichlorobenzene	30.0	30.0	100	30.0	30.9	103	2.96	30	61.5-138
1,3-dichlorobenzene	30.0	30.0	100	30.0	30.4	101	1.23	30	61.5-138
1,4-dichlorobenzene	30.0	29.8	99.4	30.0	30.3	101	1.70	30	61.1-138
trans-1,4-Dichloro-2-butene	150	157	105	150	167	111	6.24	30	16.7-212
dichlorodifluoromethane	30.0	30.9	103	30.0	30.8	103	0.324	30	25.4-165
1,1-dichloroethane	30.0	30.1	100	30.0	29.5	98.3	2.18	30	62.4-140
1,2-dichloroethane	30.0	31.0	103	30.0	30.5	102	1.69	30	55.3-152
1,1-dichloroethene	30.0	29.5	98.3	30.0	27.9	93.2	5.33	30	65.4-134
cis-1,2-dichloroethene	30.0	31.2	104	30.0	30.2	101	3.15	30	63.8-138
trans-1,2-dichloroethene	30.0	29.6	98.8	30.0	28.4	94.8	4.16	30	63.3-139
1,2-dichloropropane	30.0	31.2	104	30.0	30.4	101	2.60	30	60.0-139
1,3-dichloropropane	30.0	31.6	105	30.0	31.3	104	1.05	30	62.3-136
2,2-dichloropropane	30.0	30.8	103	30.0	30.1	100	2.43	30	62.5-140
1,1-dichloropropene	30.0	30.5	102	30.0	29.4	98.1	3.64	30	60.9-136
cis-1,3-dichloropropene	30.0	31.7	106	30.0	31.4	104	0.952	30	59.8-141

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

SGS North America, Inc.

SGS Environmental Services

LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: SGS Environmental

Dilution: 1

Lab Code: NC00919

Matrix: Soil

LCS: LCS9120409A

Filename: 1204903.D

Date Analyzed: 12/04/09 09:53

LCSD: LCS9120409B

Filename: 1204904.D

Date Analyzed: 12/04/09 10:19

COMPOUND	LCS SPIKE (µg/kg)	LCS CONC (µg/kg)	LCS % REC #	LCSD SPIKE (µg/kg)	LCSD CONC (µg/kg)	LCSD % REC #	% RPD	QC LIMITS	
								RPD	REC
trans-1,3-dichloropropene	30.0	32.4	108	30.0	32.2	107	0.773	30	7.27-173
Diisopropyl ether	30.0	30.9	103	30.0	30.4	101	1.60	30	9.01-172
ethylbenzene	30.0	29.3	97.6	30.0	28.8	96.0	1.65	30	16.7-187
hexachlorobutadiene	30.0	26.6	88.7	30.0	29.1	97.1	9.04	30	16.7-173
2-hexanone	75.0	95.0	127	75.0	93.6	125	1.57	30	16.7-304
Iodomethane	30.0	30.6	102	30.0	29.3	97.8	4.20	30	16.7-200
isopropylbenzene	30.0	29.6	98.7	30.0	29.2	97.5	1.19	30	6.43-167
4-isopropyltoluene	30.0	28.8	95.9	30.0	29.3	97.8	1.93	30	6.97-170
Methyl-tert-butyl ether	30.0	30.8	103	30.0	30.8	103	0.260	30	10.7-173
methylene chloride	30.0	27.0	89.8	30.0	26.2	87.3	2.82	30	8.58-169
4-methyl-2-pentanone	75.0	84.0	112	75.0	87.3	116	3.83	30	16.7-293
naphthalene	30.0	28.4	94.7	30.0	32.7	109	14.0	30	16.7-175
n-propyl benzene	30.0	29.1	97.0	30.0	28.7	95.6	1.42	30	7.25-172
styrene	30.0	29.8	99.4	30.0	30.0	99.9	0.468	30	10.2-168
1,1,1,2-tetrachloroethane	30.0	31.9	106	30.0	30.6	102	4.06	30	5.87-177
1,1,2,2-tetrachloroethane	30.0	31.6	105	30.0	32.7	109	3.42	30	10.9-168
tetrachloroethene	30.0	30.8	102	30.0	30.0	100	2.44	30	16.7-195
toluene	30.0	30.2	101	30.0	29.5	98.4	2.61	30	26.6-159
1,2,3-trichlorobenzene	30.0	28.0	93.4	30.0	31.7	106	12.4	30	4.64-169
1,2,4-trichlorobenzene	30.0	27.8	92.6	30.0	30.5	102	9.44	30	6.55-165
1,1,1-trichloroethane	30.0	30.5	102	30.0	29.5	98.5	3.13	30	8.40-173
1,1,2-trichloroethane	30.0	30.8	103	30.0	31.0	103	0.518	30	12.2-166
trichloroethene	30.0	30.5	102	30.0	30.0	100	1.98	30	24.0-158
trichlorofluoromethane	30.0	28.3	94.5	30.0	28.2	94.1	0.389	30	5.64-183
1,2,3-trichloropropane	30.0	32.2	107	30.0	33.2	110	3.00	30	16.7-186
1,2,4-trimethylbenzene	30.0	29.0	96.7	30.0	28.9	96.3	0.484	30	8.60-168
1,3,5-trimethylbenzene	30.0	29.2	97.4	30.0	28.6	95.4	2.08	30	8.09-168
Vinyl acetate	75.0	78.9	105	75.0	79.6	106	0.833	30	16.7-225
vinyl chloride	30.0	30.7	102	30.0	30.6	102	0.261	30	7.56-178
m/p-xylene	60.0	58.8	98.1	60.0	57.2	95.3	2.90	30	8.91-169
o-xylene	30.0	30.2	101	30.0	29.7	99.0	1.77	30	9.45-167

System Monitoring Compound Results

System Monitoring Compound Results		LCS SPIKE (µg/kg)	LCS CONC (µg/kg)	LCS % REC #	LCSD SPIKE (µg/kg)	LCSD CONC (µg/kg)	LCSD % REC #	QC LIMITS REC
460-00-4	4-Bromofluorobenzene	50	49.52	99.0	50	50.21	100	49.1-151
17060-07-0	1,2-Dichloroethane-d4	50	49.98	100	50	53.23	108	37.8-170
2037-26-5	Toluene-d8	50	49.92	99.8	50	50.59	101	58.8-144

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

LCS Spike Recovery: 0 failure(s) out of 72. LCSD Spike Recovery: 0 failure(s) out of 72.

RPD: 0 out of 72 outside of limits

COMMENTS:

Analyst: 

Reviewed by: 

SGS North America, Inc.

SGS Environmental Services

3B

SOIL VOLATILE MATRIX SPIKE RECOVERY

Lab Name: SGS Environmental

Contract:

Lab Code: NC00919

Case No.:

SAS No.:

SDG No.:

Matrix Spike - EPA Sample No.: g106-685-3b

Dilution:

1

FileNames:

1204907.D, 1204909.D

COMPOUND	SAMPLE CONC (µg/kg)	MS SPIKE (µg/kg)	MS CONC (µg/kg)	MS % REC #	Recovery Limits
acetone	BQL	34.9	70.5	202*	17.7-85.2
acrolein	BQL	349	276	79.0	NA-424
acrylonitrile	BQL	349	303	86.8	85.0-175
benzene	BQL	34.9	23.4	67.1	61.6-135
bromobenzene	BQL	34.9	22.5	64.6*	65.1-125
bromochloromethane	BQL	34.9	28.2	80.9	75.5-126
bromodichloromethane	BQL	34.9	25.9	74.2*	74.3-123
bromoform	BQL	34.9	27.5	78.8	52.3-122
bromomethane	BQL	34.9	21.0	60.3	10.0-284
2-butanone	BQL	34.9	84.3	242*	36.1-107
n-butylbenzene	BQL	34.9	20.2	57.8*	70.2-124
sec-butylbenzene	BQL	34.9	20.4	58.6*	62.0-133
tert-butylbenzene	BQL	34.9	19.5	56.0*	73.5-121
Carbon disulfide	BQL	34.9	22.2	63.5*	68.8-129
carbon tetrachloride	BQL	34.9	22.6	64.8*	71.8-122
chlorobenzene	BQL	34.9	20.5	58.8*	77.2-118
chloroethane	BQL	34.9	21.9	62.9	10.0-233
2-chloroethyl vinyl ether	BQL	34.9	68.8	197	NA-283
chloroform	BQL	34.9	24.2	69.3*	74.0-128
chloromethane	BQL	34.9	22.0	63.1*	72.0-138
2-chlorotoluene	BQL	34.9	22.2	63.6*	79.3-118
4-chlorotoluene	BQL	34.9	22.5	64.5*	76.8-120
dibromochloromethane	BQL	34.9	24.2	69.5	69.0-117
1,2-dibromo-3-chloropropane	BQL	174	170	97.2	20.2-171
1,2-dibromomethane	BQL	34.9	26.7	76.5*	78.5-123
dibromomethane	BQL	34.9	30.1	86.4	71.3-137
1,2-dichlorobenzene	BQL	34.9	24.3	69.8*	75.1-120
1,3-dichlorobenzene	BQL	34.9	23.2	66.4*	73.1-121
1,4-dichlorobenzene	BQL	34.9	23.1	66.2*	74.8-118
trans-1,4-Dichloro-2-butene	BQL	174	170	97.5	25.7-149
dichlorodifluoromethane	BQL	34.9	21.2	60.8	41.7-166
1,1-dichloroethane	BQL	34.9	23.4	67.2*	75.6-128
1,2-dichloroethane	BQL	34.9	28.3	81.2	71.1-127
1,1-dichloroethene	BQL	34.9	22.1	63.5*	64.4-130
cis-1,2-dichloroethene	BQL	34.9	24.8	71.1*	72.7-134
trans-1,2-dichloroethene	BQL	34.9	22.3	63.9*	74.6-124
1,2-dichloropropane	BQL	34.9	25.7	73.7*	76.5-129
1,3-dichloropropane	BQL	34.9	25.4	72.7*	79.1-121
2,2-dichloropropane	BQL	34.9	23.3	66.8	31.5-157
1,1-dichloropropene	BQL	34.9	22.4	64.1*	72.5-120
cis-1,3-dichloropropene	BQL	34.9	26.0	74.5	66.6-132

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 72 outside of limits

Spike Recovery: 42 out of 144 outside of limits

COMMENTS:

SGS North America, Inc.

SGS Environmental Services

Lab Name: SGS Environmental

Contract:

Lab Code: NC00919

Case No.:

SAS No.:

SDG No.:

Matrix Spike - EPA Sample No.: G121-406-3b

COMPOUND	SAMPLE CONC (µg/kg)	MS SPIKE (µg/kg)	MS CONC (µg/kg)	MS & REC #	Recovery Limits
trans-1,3-dichloropropene	BQL	34.9	28.9	83.0	44.7-144
Diisopropyl ether	BQL	34.9	24.6	70.7*	79.4-122
ethylbenzene	BQL	34.9	21.0	60.3*	73.8-126
hexachlorobutadiene	BQL	34.9	19.0	54.5	51.8-134
2-hexanone	BQL	34.9	81.3	233*	41.6-111
Iodomethane	BQL	34.9	21.2	60.6	40.6-126
isopropylbenzene	BQL	34.9	20.8	59.8*	74.3-123
4-isopropyltoluene	BQL	34.9	20.6	59.1*	74.6-122
Methyl-tert-butyl ether	BQL	34.9	29.2	83.6	66.5-136
methylene chloride	BQL	140	21.5	15.4*	48.6-155
4-methyl-2-pentanone	BQL	34.9	98.3	282*	6.88-166
naphthalene	BQL	34.9	29.4	84.4	55.1-140
n-propyl benzene	BQL	34.9	20.7	59.4*	71.6-128
styrene	BQL	34.9	22.9	65.6*	73.2-123
1,1,1,2-tetrachloroethane	BQL	34.9	22.2	63.6*	69.4-120
1,1,2,2-tetrachloroethane	BQL	34.9	29.8	85.4	75.7-136
tetrachloroethene	1.55	34.9	17.8	51.0	45.8-153
toluene	BQL	34.9	23.6	67.8	66.4-128
1,2,3-trichlorobenzene	BQL	34.9	24.3	69.6	61.0-126
1,2,4-trichlorobenzene	BQL	34.9	23.4	67.1	60.6-125
1,1,1-trichloroethane	BQL	34.9	22.6	64.7*	78.4-121
1,1,2-trichloroethane	BQL	34.9	25.3	72.6	64.8-128
trichloroethene	BQL	34.9	22.9	65.8*	84.9-136
trichlorofluoromethane	BQL	34.9	19.3	55.3*	76.8-132
1,2,3-trichloropropane	BQL	34.9	30.0	85.9	10.0-218
1,2,4-trimethylbenzene	BQL	34.9	21.4	61.5	31.0-172
1,3,5-trimethylbenzene	BQL	34.9	21.1	60.5*	67.7-132
Vinyl acetate	BQL	87.2	73.1	83.8	NA-355
vinyl chloride	BQL	34.9	21.8	62.4*	68.1-137
m/p-xylene	BQL	69.8	42.2	60.5*	79.8-118
o-xylene	BQL	34.9	22.1	63.4*	80.0-121

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 72 outside of limits

Spike Recovery: 42 out of 144 outside of limits

COMMENTS:

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: UST#8-CSFF-SB01
Client Project ID: CSFF Soil Sampling UST #8
Lab Sample ID: G128-2466-1G
Lab Project ID: G128-2466
Report Basis: Dry weight
Initial Weight: 32.22 g

Analyzed By: DCS
Date Collected: 11/24/2009 10:45
Date Received: 11/25/2009
Date Extracted: 11/30/2009
Matrix: Soil
% Solids: 82.78

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.375	0.057	1	12/7/2009	
Acenaphthylene	BQL	0.375	0.053	1	12/7/2009	
Anthracene	BQL	0.375	0.051	1	12/7/2009	
Benzo[a]anthracene	BQL	0.375	0.051	1	12/7/2009	
Benzo[a]pyrene	BQL	0.375	0.054	1	12/7/2009	
Benzo[b]fluoranthene	BQL	0.375	0.052	1	12/7/2009	
Benzo[g,h,i]perylene	BQL	0.375	0.065	1	12/7/2009	
Benzo[k]fluoranthene	BQL	0.375	0.053	1	12/7/2009	
Benzoic Acid	BQL	1.87	0.463	1	12/7/2009	
Bis(2-chloroethoxy)methane	BQL	0.375	0.055	1	12/7/2009	
Bis(2-chloroethyl)ether	BQL	0.375	0.076	1	12/7/2009	
Bis(2-chloroisopropyl)ether	BQL	0.375	0.060	1	12/7/2009	
Bis(2-ethylhexyl)phthalate	0.326	0.375	0.057	1	12/7/2009	J
4-bromophenyl phenyl ether	BQL	0.375	0.066	1	12/7/2009	
Butylbenzylphthalate	BQL	0.375	0.056	1	12/7/2009	
2-Chloronaphthalene	BQL	0.375	0.052	1	12/7/2009	
2-Chlorophenol	BQL	0.375	0.048	1	12/7/2009	
4-Chloro-3-methylphenol	BQL	0.375	0.055	1	12/7/2009	
4-Chloroaniline	BQL	1.87	0.061	1	12/7/2009	
4-Chlorophenyl phenyl ether	BQL	0.375	0.055	1	12/7/2009	
Chrysene	0.045	0.375	0.036	1	12/7/2009	J
Dibenzo[a,h]anthracene	BQL	0.375	0.048	1	12/7/2009	
Dibenzofuran	BQL	0.375	0.053	1	12/7/2009	
Di-n-Butylphthalate	BQL	0.375	0.055	1	12/7/2009	
1,2-Dichlorobenzene	BQL	0.375	0.063	1	12/7/2009	
1,3-Dichlorobenzene	BQL	0.375	0.061	1	12/7/2009	
1,4-Dichlorobenzene	BQL	0.375	0.054	1	12/7/2009	
3,3'-Dichlorobenzidine	BQL	0.750	0.062	1	12/7/2009	
2,4-Dichlorophenol	BQL	0.375	0.041	1	12/7/2009	
Diethylphthalate	BQL	0.375	0.050	1	12/7/2009	
Dimethylphthalate	BQL	0.375	0.058	1	12/7/2009	
2,4-Dimethylphenol	BQL	0.375	0.068	1	12/7/2009	
Di-n-octylphthalate	BQL	0.375	0.058	1	12/7/2009	
4,6-Dinitro-2-methylphenol	BQL	1.87	0.045	1	12/7/2009	
2,4-Dinitrophenol	BQL	1.87	0.049	1	12/7/2009	
2,4-Dinitrotoluene	BQL	0.375	0.057	1	12/7/2009	
2,6-Dinitrotoluene	BQL	0.375	0.062	1	12/7/2009	
Diphenylamine *	BQL	0.375	0.047	1	12/7/2009	
Fluoranthene	0.094	0.375	0.060	1	12/7/2009	J
Fluorene	BQL	0.375	0.059	1	12/7/2009	
Hexachlorobenzene	BQL	0.375	0.081	1	12/7/2009	
Hexachlorobutadiene	BQL	0.375	0.068	1	12/7/2009	
Hexachlorocyclopentadiene	BQL	0.750	0.073	1	12/7/2009	
Hexachloroethane	BQL	0.375	0.059	1	12/7/2009	
Indeno(1,2,3-c,d)pyrene	BQL	0.375	0.044	1	12/7/2009	
Isophorone	BQL	0.375	0.055	1	12/7/2009	
2-Methylnaphthalene	BQL	0.375	0.061	1	12/7/2009	

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: UST#8-CSFF-SB01
Client Project ID: CSFF Soil Sampling UST #8
Lab Sample ID: G128-2466-1G
Lab Project ID: G128-2466
Report Basis: Dry weight
Initial Weight: 32.22 g

Analyzed By: DCS
Date Collected: 11/24/2009 10:45
Date Received: 11/25/2009
Date Extracted: 11/30/2009
Matrix: Soil
% Solids: 82.78

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
2-Methylphenol	BQL	0.375	0.057	1	12/7/2009	
3- & 4-Methylphenol	BQL	0.375	0.049	1	12/7/2009	
Naphthalene	BQL	0.375	0.053	1	12/7/2009	
2-Nitroaniline	BQL	0.375	0.050	1	12/7/2009	
3-Nitroaniline	BQL	1.87	0.055	1	12/7/2009	
4-Nitroaniline	BQL	1.87	0.050	1	12/7/2009	
Nitrobenzene	BQL	0.375	0.050	1	12/7/2009	
2-Nitrophenol	BQL	0.375	0.055	1	12/7/2009	
4-Nitrophenol	BQL	1.87	0.065	1	12/7/2009	
N-Nitrosodi-n-propylamine	BQL	0.375	0.060	1	12/7/2009	
Pentachlorophenol	BQL	1.87	0.035	1	12/7/2009	
Phenanthrene	0.112	0.375	0.053	1	12/7/2009	J
Phenol	BQL	0.375	0.051	1	12/7/2009	
Pyrene	0.079	0.375	0.051	1	12/7/2009	J
1,2,4-Trichlorobenzene	BQL	0.375	0.068	1	12/7/2009	
2,4,5-Trichlorophenol	BQL	0.375	0.056	1	12/7/2009	
2,4,6-Trichlorophenol	BQL	0.375	0.033	1	12/7/2009	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.8	88		
2-Fluorophenol		10	9.1	91		
Nitrobenzene-d5		10	10.3	103		
Phenol-d6		10	9.7	97		
2,4,6-Tribromophenol		10	9.4	94		
4-Terphenyl-d14		10	10.1	101		

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 61

Results of Library Search for Semivolatile Compounds
by GCMS

Client Sample ID: UST#8-CSFF-SB01
 Client Project ID: CSFF Soil Sampling UST #8
 Lab Sample ID: G128-2466-1G
 Lab Project ID: G128-2466
 Sample Wt/Vol: 32.22 g
 Dilution: 1

Analyzed By: DCS
 Date Collected: 11/24/2009 10:45
 Date Received: 11/25/2009
 Date Extracted: 11/30/2009
 Date Analyzed: 12/7/2009
 Matrix: Soil
 % Solids: 82.78

No.	Compound	Retention Time	CAS#	Match Probability	Result mg/Kg
1	Aromatic, Unknown	6.51			3010
2	Tetradecane	6.21	629-59-4	93	2580
3	Alkane, Unknown	6.55			2570
4	Alkane, Unknown	5.44			1470
5	Sulfur, mol. (S8)	9.71	010544-50-0	90	1370
6	Tridecane	5.62	629-50-5	95	1200
7	Alkane, Unknown	6.00			962
8	Aromatic, Unknown	15.00			791
9	Undecane, 2,6-dimethyl-	5.07	17301-23-4	95	698
10	Alcohol, Unknown	4.37			646

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: MA

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: UST#8-CSFF-SB02
Client Project ID: CSFF Soil Sampling UST #8
Lab Sample ID: G128-2466-2G
Lab Project ID: G128-2466
Report Basis: Dry weight
Initial Weight: 32.61 g

Analyzed By: DCS
Date Collected: 11/24/2009 11:00
Date Received: 11/25/2009
Date Extracted: 11/30/2009
Matrix: Soil
% Solids: 84.66

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.362	0.055	1	12/7/2009	
Acenaphthylene	BQL	0.362	0.051	1	12/7/2009	
Anthracene	BQL	0.362	0.049	1	12/7/2009	
Benzo[a]anthracene	BQL	0.362	0.050	1	12/7/2009	
Benzo[a]pyrene	BQL	0.362	0.052	1	12/7/2009	
Benzo[b]fluoranthene	BQL	0.362	0.050	1	12/7/2009	
Benzo[g,h,i]perylene	BQL	0.362	0.063	1	12/7/2009	
Benzo[k]fluoranthene	BQL	0.362	0.051	1	12/7/2009	
Benzoic Acid	BQL	1.81	0.447	1	12/7/2009	
Bis(2-chloroethoxy)methane	BQL	0.362	0.053	1	12/7/2009	
Bis(2-chloroethyl)ether	BQL	0.362	0.074	1	12/7/2009	
Bis(2-chloroisopropyl)ether	BQL	0.362	0.058	1	12/7/2009	
Bis(2-ethylhexyl)phthalate	BQL	0.362	0.055	1	12/7/2009	
4-bromophenyl phenyl ether	BQL	0.362	0.064	1	12/7/2009	
Butylbenzylphthalate	BQL	0.362	0.054	1	12/7/2009	
2-Chloronaphthalene	BQL	0.362	0.050	1	12/7/2009	
2-Chlorophenol	BQL	0.362	0.046	1	12/7/2009	
4-Chloro-3-methylphenol	BQL	0.362	0.053	1	12/7/2009	
4-Chloroaniline	BQL	1.81	0.059	1	12/7/2009	
4-Chlorophenyl phenyl ether	BQL	0.362	0.053	1	12/7/2009	
Chrysene	BQL	0.362	0.035	1	12/7/2009	
Dibenzo[a,h]anthracene	BQL	0.362	0.046	1	12/7/2009	
Dibenzofuran	BQL	0.362	0.051	1	12/7/2009	
Di-n-Butylphthalate	BQL	0.362	0.053	1	12/7/2009	
1,2-Dichlorobenzene	BQL	0.362	0.061	1	12/7/2009	
1,3-Dichlorobenzene	BQL	0.362	0.059	1	12/7/2009	
1,4-Dichlorobenzene	BQL	0.362	0.053	1	12/7/2009	
3,3'-Dichlorobenzidine	BQL	0.724	0.060	1	12/7/2009	
2,4-Dichlorophenol	BQL	0.362	0.040	1	12/7/2009	
Diethylphthalate	BQL	0.362	0.049	1	12/7/2009	
Dimethylphthalate	BQL	0.362	0.056	1	12/7/2009	
2,4-Dimethylphenol	BQL	0.362	0.066	1	12/7/2009	
Di-n-octylphthalate	BQL	0.362	0.056	1	12/7/2009	
4,6-Dinitro-2-methylphenol	BQL	1.81	0.043	1	12/7/2009	
2,4-Dinitrophenol	BQL	1.81	0.047	1	12/7/2009	
2,4-Dinitrotoluene	BQL	0.362	0.055	1	12/7/2009	
2,6-Dinitrotoluene	BQL	0.362	0.060	1	12/7/2009	
Diphenylamine *	BQL	0.362	0.046	1	12/7/2009	
Fluoranthene	BQL	0.362	0.058	1	12/7/2009	
Fluorene	BQL	0.362	0.057	1	12/7/2009	
Hexachlorobenzene	BQL	0.362	0.079	1	12/7/2009	
Hexachlorobutadiene	BQL	0.362	0.066	1	12/7/2009	
Hexachlorocyclopentadiene	BQL	0.724	0.071	1	12/7/2009	
Hexachloroethane	BQL	0.362	0.057	1	12/7/2009	
Indeno(1,2,3-c,d)pyrene	BQL	0.362	0.043	1	12/7/2009	
Isophorone	BQL	0.362	0.053	1	12/7/2009	
2-Methylnaphthalene	BQL	0.362	0.059	1	12/7/2009	

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: UST#8-CSFF-SB02
Client Project ID: CSFF Soil Sampling UST #8
Lab Sample ID: G128-2466-2G
Lab Project ID: G128-2466
Report Basis: Dry weight
Initial Weight: 32.61 g

Analyzed By: DCS
Date Collected: 11/24/2009 11:00
Date Received: 11/25/2009
Date Extracted: 11/30/2009
Matrix: Soil
% Solids: 84.66

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
2-Methylphenol	BQL	0.362	0.055	1	12/7/2009	
3- & 4-Methylphenol	BQL	0.362	0.047	1	12/7/2009	
Naphthalene	BQL	0.362	0.051	1	12/7/2009	
2-Nitroaniline	BQL	0.362	0.049	1	12/7/2009	
3-Nitroaniline	BQL	1.81	0.053	1	12/7/2009	
4-Nitroaniline	BQL	1.81	0.049	1	12/7/2009	
Nitrobenzene	BQL	0.362	0.048	1	12/7/2009	
2-Nitrophenol	BQL	0.362	0.053	1	12/7/2009	
4-Nitrophenol	BQL	1.81	0.063	1	12/7/2009	
N-Nitrosodi-n-propylamine	BQL	0.362	0.058	1	12/7/2009	
Pentachlorophenol	BQL	1.81	0.033	1	12/7/2009	
Phenanthrene	BQL	0.362	0.051	1	12/7/2009	
Phenol	BQL	0.362	0.049	1	12/7/2009	
Pyrene	BQL	0.362	0.049	1	12/7/2009	
1,2,4-Trichlorobenzene	BQL	0.362	0.065	1	12/7/2009	
2,4,5-Trichlorophenol	BQL	0.362	0.054	1	12/7/2009	
2,4,6-Trichlorophenol	BQL	0.362	0.032	1	12/7/2009	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.2	82		
2-Fluorophenol		10	9.3	93		
Nitrobenzene-d5		10	9.8	98		
Phenol-d6		10	10	100		
2,4,6-Tribromophenol		10	9	90		
4-Terphenyl-d14		10	9.6	96		

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 

Results of Library Search for Semivolatile Compounds
by GCMS

Client Sample ID: UST#8-CSFF-SB02
Client Project ID: CSFF Soil Sampling UST #8
Lab Sample ID: G128-2466-2G
Lab Project ID: G128-2466
Sample Wt/Vol: 32.61 g
Dilution: 1

Analyzed By: DCS
Date Collected: 11/24/2009 11:00
Date Received: 11/25/2009
Date Extracted: 11/30/2009
Date Analyzed: 12/7/2009
Matrix: Soil
% Solids: 84.66

No.	Compound	Retention Time	CAS#	Match Probability	Result mg/Kg
1	Alkane, Unknown	5.44			2250
2	Aromatic, Unknown	6.46			2060
3	Alkane, Unknown	6.55			1760
4	Tetradecane	6.21	629-59-4	93	1320
5	Tridecane	5.62	629-50-5	93	828
6	Undecane, 2,6-dimethyl-	5.07	17301-23-4	93	809
7	Unknown	6.00			599
8	Naphthalene, 1,2,3,4,4a,5,6,8a-octahydro-4a	13.70			522
9	Alkene, Unknown	4.37			505
10	Alkane, Unknown	4.44			450

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: 

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: UST#8-CSFF-SB03
Client Project ID: CSFF Soil Sampling UST #8
Lab Sample ID: G128-2466-3G
Lab Project ID: G128-2466
Report Basis: Dry weight
Initial Weight: 32.71 g

Analyzed By: DCS
Date Collected: 11/24/2009 11:15
Date Received: 11/25/2009
Date Extracted: 11/30/2009
Matrix: Soil
% Solids: 83.31

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.367	0.056	1	12/7/2009	
Acenaphthylene	BQL	0.367	0.051	1	12/7/2009	
Anthracene	BQL	0.367	0.050	1	12/7/2009	
Benzo[a]anthracene	BQL	0.367	0.050	1	12/7/2009	
Benzo[a]pyrene	BQL	0.367	0.053	1	12/7/2009	
Benzo[b]fluoranthene	BQL	0.367	0.051	1	12/7/2009	
Benzo[g,h,i]perylene	BQL	0.367	0.064	1	12/7/2009	
Benzo[k]fluoranthene	BQL	0.367	0.052	1	12/7/2009	
Benzoic Acid	BQL	1.83	0.453	1	12/7/2009	
Bis(2-chloroethoxy)methane	BQL	0.367	0.054	1	12/7/2009	
Bis(2-chloroethyl)ether	BQL	0.367	0.075	1	12/7/2009	
Bis(2-chloroisopropyl)ether	BQL	0.367	0.059	1	12/7/2009	
Bis(2-ethylhexyl)phthalate	BQL	0.367	0.056	1	12/7/2009	
4-bromophenyl phenyl ether	BQL	0.367	0.065	1	12/7/2009	
Butylbenzylphthalate	BQL	0.367	0.054	1	12/7/2009	
2-Chloronaphthalene	BQL	0.367	0.051	1	12/7/2009	
2-Chlorophenol	BQL	0.367	0.047	1	12/7/2009	
4-Chloro-3-methylphenol	BQL	0.367	0.054	1	12/7/2009	
4-Chloroaniline	BQL	1.83	0.060	1	12/7/2009	
4-Chlorophenyl phenyl ether	BQL	0.367	0.054	1	12/7/2009	
Chrysene	BQL	0.367	0.035	1	12/7/2009	
Dibenzo[a,h]anthracene	BQL	0.367	0.047	1	12/7/2009	
Dibenzofuran	BQL	0.367	0.052	1	12/7/2009	
Di-n-Butylphthalate	BQL	0.367	0.054	1	12/7/2009	
1,2-Dichlorobenzene	BQL	0.367	0.062	1	12/7/2009	
1,3-Dichlorobenzene	BQL	0.367	0.059	1	12/7/2009	
1,4-Dichlorobenzene	BQL	0.367	0.053	1	12/7/2009	
3,3'-Dichlorobenzidine	BQL	0.734	0.061	1	12/7/2009	
2,4-Dichlorophenol	BQL	0.367	0.040	1	12/7/2009	
Diethylphthalate	BQL	0.367	0.049	1	12/7/2009	
Dimethylphthalate	BQL	0.367	0.057	1	12/7/2009	
2,4-Dimethylphenol	BQL	0.367	0.066	1	12/7/2009	
Di-n-octylphthalate	BQL	0.367	0.057	1	12/7/2009	
4,6-Dinitro-2-methylphenol	BQL	1.83	0.044	1	12/7/2009	
2,4-Dinitrophenol	BQL	1.83	0.048	1	12/7/2009	
2,4-Dinitrotoluene	BQL	0.367	0.056	1	12/7/2009	
2,6-Dinitrotoluene	BQL	0.367	0.061	1	12/7/2009	
Diphenylamine *	BQL	0.367	0.046	1	12/7/2009	
Fluoranthene	BQL	0.367	0.059	1	12/7/2009	
Fluorene	BQL	0.367	0.057	1	12/7/2009	
Hexachlorobenzene	BQL	0.367	0.080	1	12/7/2009	
Hexachlorobutadiene	BQL	0.367	0.067	1	12/7/2009	
Hexachlorocyclopentadiene	BQL	0.734	0.072	1	12/7/2009	
Hexachloroethane	BQL	0.367	0.057	1	12/7/2009	
Indeno(1,2,3-c,d)pyrene	BQL	0.367	0.043	1	12/7/2009	
Isophorone	BQL	0.367	0.054	1	12/7/2009	
2-Methylnaphthalene	BQL	0.367	0.060	1	12/7/2009	

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: UST#8-CSFF-SB03
Client Project ID: CSFF Soil Sampling UST #8
Lab Sample ID: G128-2466-3G
Lab Project ID: G128-2466
Report Basis: Dry weight
Initial Weight: 32.71 g

Analyzed By: DCS
Date Collected: 11/24/2009 11:15
Date Received: 11/25/2009
Date Extracted: 11/30/2009
Matrix: Soil
% Solids: 83.31

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
2-Methylphenol	BQL	0.367	0.056	1	12/7/2009	
3- & 4-Methylphenol	BQL	0.367	0.048	1	12/7/2009	
Naphthalene	BQL	0.367	0.051	1	12/7/2009	
2-Nitroaniline	BQL	0.367	0.049	1	12/7/2009	
3-Nitroaniline	BQL	1.83	0.054	1	12/7/2009	
4-Nitroaniline	BQL	1.83	0.049	1	12/7/2009	
Nitrobenzene	BQL	0.367	0.049	1	12/7/2009	
2-Nitrophenol	BQL	0.367	0.054	1	12/7/2009	
4-Nitrophenol	BQL	1.83	0.064	1	12/7/2009	
N-Nitrosodi-n-propylamine	BQL	0.367	0.059	1	12/7/2009	
Pentachlorophenol	BQL	1.83	0.034	1	12/7/2009	
Phenanthrene	BQL	0.367	0.051	1	12/7/2009	
Phenol	BQL	0.367	0.050	1	12/7/2009	
Pyrene	BQL	0.367	0.050	1	12/7/2009	
1,2,4-Trichlorobenzene	BQL	0.367	0.066	1	12/7/2009	
2,4,5-Trichlorophenol	BQL	0.367	0.055	1	12/7/2009	
2,4,6-Trichlorophenol	BQL	0.367	0.033	1	12/7/2009	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.4	84		
2-Fluorophenol		10	9.2	92		
Nitrobenzene-d5		10	9.6	96		
Phenol-d6		10	9.8	98		
2,4,6-Tribromophenol		10	9.2	92		
4-Terphenyl-d14		10	10	100		

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 

Results of Library Search for Semivolatile Compounds
by GCMS

Client Sample ID: UST#8-CSFF-SB03
Client Project ID: CSFF Soil Sampling UST #8
Lab Sample ID: G128-2466-3G
Lab Project ID: G128-2466
Sample Wt/Vol: 32.71 g
Dilution: 1

Analyzed By: DCS
Date Collected: 11/24/2009 11:15
Date Received: 11/25/2009
Date Extracted: 11/30/2009
Date Analyzed: 12/7/2009
Matrix: Soil
% Solids: 83.31

No.	Compound	Retention Time	CAS#	Match Probability	Result mg/Kg
1	Aromatic, Unknown	6.51			3920
2	Alkane, Unknown	6.55			1260
3	Unknown	5.44			1120
4	Alkane, Unknown	6.00			629
5	Alkane, Unknown	6.29			616
6	Tridecane	5.62			600
7	Alkane, Unknown	5.07			503
8	Dimethylnaphthalene, Isomer of	15.00			500
9	Alkane, Unknown	5.55			425
10	Unknown	5.75			395

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: 

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: UST#8-CSFF-SB04
 Client Project ID: CSFF Soil Sampling UST #8
 Lab Sample ID: G128-2466-4G
 Lab Project ID: G128-2466
 Report Basis: Dry weight
 Initial Weight: 32.09 g

Analyzed By: DCS
 Date Collected: 11/24/2009 11:45
 Date Received: 11/25/2009
 Date Extracted: 11/30/2009
 Matrix: Soil
 % Solids: 84.29

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	0.370	0.057	1	12/8/2009	
Acenaphthylene	BQL	0.370	0.052	1	12/8/2009	
Anthracene	BQL	0.370	0.050	1	12/8/2009	
Benzo[a]anthracene	BQL	0.370	0.051	1	12/8/2009	
Benzo[a]pyrene	BQL	0.370	0.053	1	12/8/2009	
Benzo[b]fluoranthene	BQL	0.370	0.051	1	12/8/2009	
Benzo[g,h,i]perylene	BQL	0.370	0.064	1	12/8/2009	
Benzo[k]fluoranthene	BQL	0.370	0.053	1	12/8/2009	
Benzoic Acid	BQL	1.85	0.457	1	12/8/2009	
Bis(2-chloroethoxy)methane	BQL	0.370	0.054	1	12/8/2009	
Bis(2-chloroethyl)ether	BQL	0.370	0.075	1	12/8/2009	
Bis(2-chloroisopropyl)ether	BQL	0.370	0.060	1	12/8/2009	
Bis(2-ethylhexyl)phthalate	BQL	0.370	0.057	1	12/8/2009	
4-bromophenyl phenyl ether	BQL	0.370	0.065	1	12/8/2009	
Butylbenzylphthalate	BQL	0.370	0.055	1	12/8/2009	
2-Chloronaphthalene	BQL	0.370	0.051	1	12/8/2009	
2-Chlorophenol	BQL	0.370	0.047	1	12/8/2009	
4-Chloro-3-methylphenol	BQL	0.370	0.054	1	12/8/2009	
4-Chloroaniline	BQL	1.85	0.060	1	12/8/2009	
4-Chlorophenyl phenyl ether	BQL	0.370	0.054	1	12/8/2009	
Chrysene	BQL	0.370	0.036	1	12/8/2009	
Dibenzo[a,h]anthracene	BQL	0.370	0.047	1	12/8/2009	
Dibenzofuran	BQL	0.370	0.052	1	12/8/2009	
Di-n-Butylphthalate	BQL	0.370	0.054	1	12/8/2009	
1,2-Dichlorobenzene	BQL	0.370	0.063	1	12/8/2009	
1,3-Dichlorobenzene	BQL	0.370	0.060	1	12/8/2009	
1,4-Dichlorobenzene	BQL	0.370	0.054	1	12/8/2009	
3,3'-Dichlorobenzidine	BQL	0.739	0.061	1	12/8/2009	
2,4-Dichlorophenol	BQL	0.370	0.040	1	12/8/2009	
Diethylphthalate	BQL	0.370	0.050	1	12/8/2009	
Dimethylphthalate	BQL	0.370	0.057	1	12/8/2009	
2,4-Dimethylphenol	BQL	0.370	0.067	1	12/8/2009	
Di-n-octylphthalate	BQL	0.370	0.057	1	12/8/2009	
4,6-Dinitro-2-methylphenol	BQL	1.85	0.044	1	12/8/2009	
2,4-Dinitrophenol	BQL	1.85	0.048	1	12/8/2009	
2,4-Dinitrotoluene	BQL	0.370	0.056	1	12/8/2009	
2,6-Dinitrotoluene	BQL	0.370	0.061	1	12/8/2009	
Diphenylamine *	BQL	0.370	0.047	1	12/8/2009	
Fluoranthene	0.196	0.370	0.060	1	12/8/2009	J
Fluorene	BQL	0.370	0.058	1	12/8/2009	
Hexachlorobenzene	BQL	0.370	0.080	1	12/8/2009	
Hexachlorobutadiene	BQL	0.370	0.067	1	12/8/2009	
Hexachlorocyclopentadiene	BQL	0.739	0.072	1	12/8/2009	
Hexachloroethane	BQL	0.370	0.058	1	12/8/2009	
Indeno(1,2,3-c,d)pyrene	BQL	0.370	0.044	1	12/8/2009	
Isophorone	BQL	0.370	0.054	1	12/8/2009	
2-Methylnaphthalene	BQL	0.370	0.060	1	12/8/2009	

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: UST#8-CSFF-SB04
Client Project ID: CSFF Soil Sampling UST #8
Lab Sample ID: G128-2466-4G
Lab Project ID: G128-2466
Report Basis: Dry weight
Initial Weight: 32.09 g

Analyzed By: DCS
Date Collected: 11/24/2009 11:45
Date Received: 11/25/2009
Date Extracted: 11/30/2009
Matrix: Soil
% Solids: 84.29

Compound	Result mg/Kg	RL mg/Kg	MDL mg/Kg	Dilution Factor	Date Analyzed	Flag
2-Methylphenol	BQL	0.370	0.057	1	12/8/2009	
3- & 4-Methylphenol	BQL	0.370	0.048	1	12/8/2009	
Naphthalene	BQL	0.370	0.052	1	12/8/2009	
2-Nitroaniline	BQL	0.370	0.050	1	12/8/2009	
3-Nitroaniline	BQL	1.85	0.054	1	12/8/2009	
4-Nitroaniline	BQL	1.85	0.050	1	12/8/2009	
Nitrobenzene	BQL	0.370	0.049	1	12/8/2009	
2-Nitrophenol	BQL	0.370	0.054	1	12/8/2009	
4-Nitrophenol	BQL	1.85	0.064	1	12/8/2009	
N-Nitrosodi-n-propylamine	BQL	0.370	0.060	1	12/8/2009	
Pentachlorophenol	BQL	1.85	0.034	1	12/8/2009	
Phenanthrene	0.196	0.370	0.052	1	12/8/2009	J
Phenol	BQL	0.370	0.050	1	12/8/2009	
Pyrene	0.126	0.370	0.050	1	12/8/2009	J
1,2,4-Trichlorobenzene	BQL	0.370	0.067	1	12/8/2009	
2,4,5-Trichlorophenol	BQL	0.370	0.055	1	12/8/2009	
2,4,6-Trichlorophenol	BQL	0.370	0.033	1	12/8/2009	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	8.3	83		
2-Fluorophenol		10	8.5	85		
Nitrobenzene-d5		10	9.8	98		
Phenol-d6		10	9.1	91		
2,4,6-Tribromophenol		10	9.7	97		
4-Terphenyl-d14		10	9.4	94		

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.

J = Detected below the quantitation limit.

Reviewed By: 

Results of Library Search for Semivolatile Compounds
by GCMS

Client Sample ID: UST#8-CSFF-SB04
 Client Project ID: CSFF Soil Sampling UST #8
 Lab Sample ID: G128-2466-4G
 Lab Project ID: G128-2466
 Sample Wt/Vol: 32.09 g
 Dilution: 1

Analyzed By: DCS
 Date Collected: 11/24/2009 11:45
 Date Received: 11/25/2009
 Date Extracted: 11/30/2009
 Date Analyzed: 12/8/2009
 Matrix: Soil
 % Solids: 84.29

No.	Compound	Retention Time	CAS#	Match Probability	Result mg/Kg
1	Tetradecane	6.19	629-59-4	93	4060
2	Alkane, Unknown	6.52			2300
3	Aromatic, Unknown	6.43			2250
4	Tridecane	5.59	629-50-5	97	1400
5	Alkane, Unknown	5.97			1360
6	Alkane, Unknown	5.42			1290
7	Alkane, Unknown	5.90			1190
8	Alkane, Unknown	5.94			823
9	Aromatic, Unknown	15.00			813
10	Alkane, Unknown	5.89			802

Comment:

Tentatively Identified Compound (TIC) refers to substances which are not present in the list of target compounds. Therefore, not all TICs are identified and quantitated using individual standards. TIC listings are prepared utilizing a computerized library search of electron impact mass spectral data and evaluation of the relevant data by a mass spectral data specialist.

Quantitation is accomplished by relative peak area of the compound compared to that of the nearest internal standard from the total ion chromatogram. TICs are identified and quantitated only if the peak area is equal to or greater than 10% of that of the nearest internal standard. Quantitation provided is an estimate.

Reviewed by: 

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: Method Blank
 Client Project ID:
 Lab Sample ID: PB15626
 Lab Project ID:
 Report Basis: Dry Weight
 Initial Weight: 32 g

Analyzed By: DCS
 Date Collected:
 Date Received:
 Date Extracted: 11/30/2009
 Matrix: SOIL
 % Solids: 100

Compound	Result ug/Kg	RL ug/Kg	MDL ug/Kg	Dilution Factor	Date Analyzed	Flag
Acenaphthene	BQL	313	47.8	1	12/6/2009	
Acenaphthylene	BQL	313	43.7	1	12/6/2009	
Anthracene	BQL	313	42.5	1	12/6/2009	
Benzo[a]anthracene	BQL	313	42.8	1	12/6/2009	
Benzo[a]pyrene	BQL	313	45.0	1	12/6/2009	
Benzo[b]fluoranthene	BQL	313	43.4	1	12/6/2009	
Benzo[g,h,i]perylene	BQL	313	54.4	1	12/6/2009	
Benzo[k]fluoranthene	BQL	313	44.4	1	12/6/2009	
Benzoic Acid	BQL	1560	386	1	12/6/2009	
Bis(2-chloroethoxy)methane	BQL	313	45.9	1	12/6/2009	
Bis(2-chloroethyl)ether	BQL	313	63.4	1	12/6/2009	
Bis(2-chloroisopropyl)ether	BQL	313	50.3	1	12/6/2009	
Bis(2-ethylhexyl)phthalate	BQL	313	47.8	1	12/6/2009	
4-bromophenyl phenyl ether	BQL	313	55.3	1	12/6/2009	
Butylbenzylphthalate	BQL	313	46.2	1	12/6/2009	
2-Chloronaphthalene	BQL	313	43.4	1	12/6/2009	
2-Chlorophenol	BQL	313	39.7	1	12/6/2009	
4-Chloro-3-methylphenol	BQL	313	45.6	1	12/6/2009	
4-Chloroaniline	BQL	1560	50.9	1	12/6/2009	
4-Chlorophenyl phenyl ether	BQL	313	45.9	1	12/6/2009	
Chrysene	BQL	313	30.0	1	12/6/2009	
Dibenzo[a,h]anthracene	BQL	313	40.0	1	12/6/2009	
Dibenzofuran	BQL	313	44.1	1	12/6/2009	
Di-n-Butylphthalate	BQL	313	45.6	1	12/6/2009	
1,2-Dichlorobenzene	BQL	313	52.8	1	12/6/2009	
1,3-Dichlorobenzene	BQL	313	50.6	1	12/6/2009	
1,4-Dichlorobenzene	BQL	313	45.3	1	12/6/2009	
3,3'-Dichlorobenzidine	BQL	625	51.6	1	12/6/2009	
2,4-Dichlorophenol	BQL	313	34.1	1	12/6/2009	
Diethylphthalate	BQL	313	41.9	1	12/6/2009	
Dimethylphthalate	BQL	313	48.4	1	12/6/2009	
2,4-Dimethylphenol	BQL	313	56.6	1	12/6/2009	
Di-n-octylphthalate	BQL	313	48.1	1	12/6/2009	
4,6-Dinitro-2-methylphenol	BQL	1560	37.2	1	12/6/2009	
2,4-Dinitrophenol	BQL	1560	40.6	1	12/6/2009	
2,4-Dinitrotoluene	BQL	313	47.5	1	12/6/2009	
2,6-Dinitrotoluene	BQL	313	51.6	1	12/6/2009	
Diphenylamine *	BQL	313	39.4	1	12/6/2009	
Fluoranthene	BQL	313	50.3	1	12/6/2009	
Fluorene	BQL	313	48.8	1	12/6/2009	
Hexachlorobenzene	BQL	313	67.8	1	12/6/2009	
Hexachlorobutadiene	BQL	313	56.9	1	12/6/2009	
Hexachlorocyclopentadiene	BQL	625	60.9	1	12/6/2009	
Hexachloroethane	BQL	313	48.8	1	12/6/2009	
Indeno(1,2,3-c,d)pyrene	BQL	313	36.9	1	12/6/2009	
Isophorone	BQL	313	45.6	1	12/6/2009	
2-Methylnaphthalene	BQL	313	50.9	1	12/6/2009	

SGS North America, Inc.

Results for Semivolatiles
by GCMS 8270

Client Sample ID: Method Blank
Client Project ID:
Lab Sample ID: PB15626
Lab Project ID:
Report Basis: Dry Weight
Initial Weight: 32 g

Analyzed By: DCS
Date Collected:
Date Received:
Date Extracted: 11/30/2009
Matrix: SOIL
% Solids: 100

Compound	Result ug/Kg	RL ug/Kg	MDL ug/Kg	Dilution Factor	Date Analyzed	Flag
2-Methylphenol	BQL	313	47.8	1	12/6/2009	
3- & 4-Methylphenol	BQL	313	40.6	1	12/6/2009	
Naphthalene	BQL	313	43.7	1	12/6/2009	
2-Nitroaniline	BQL	313	41.9	1	12/6/2009	
3-Nitroaniline	BQL	1560	45.9	1	12/6/2009	
4-Nitroaniline	BQL	1560	41.9	1	12/6/2009	
Nitrobenzene	BQL	313	41.6	1	12/6/2009	
2-Nitrophenol	BQL	313	45.6	1	12/6/2009	
4-Nitrophenol	BQL	1560	54.4	1	12/6/2009	
N-Nitrosodi-n-propylamine	BQL	313	50.3	1	12/6/2009	
Pentachlorophenol	BQL	1560	28.8	1	12/6/2009	
Phenanthrene	BQL	313	43.7	1	12/6/2009	
Phenol	BQL	313	42.5	1	12/6/2009	
Pyrene	BQL	313	42.5	1	12/6/2009	
1,2,4-Trichlorobenzene	BQL	313	56.3	1	12/6/2009	
2,4,5-Trichlorophenol	BQL	313	46.6	1	12/6/2009	
2,4,6-Trichlorophenol	BQL	313	27.8	1	12/6/2009	
		Spike Added	Spike Result	Percent Recovered		
2-Fluorobiphenyl		10	9.7	97		
2-Fluorophenol		10	8.7	87		
Nitrobenzene-d5		10	9.9	99		
Phenol-d6		10	9.5	94		
2,4,6-Tribromophenol		10	9.1	91		
4-Terphenyl-d14		10	11.3	113		

Comments:

* N-Nitrosodiphenylamine is reported as the breakdown product Diphenylamine.

Flags:

BQL = Below Quantitation Limits.
J = Detected below the quantitation limit.

Reviewed By: 

SGS North America, Inc.
SGS Environmental Services

LABORATORY CONTROL SAMPLE SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: SGS Environmental Services, Inc.

Lab Code: NC00919

Case No.:

SAS No.:

SDG No:

Matrix: (soil/water) SOIL

Lab Sample ID: LCS15626

Sample wt/vol: 32 (g)

Lab File ID: 1206714.D

Level: (low/med) LOW

% Moisture: 0% Decanted: (Y/N) N

Date Analyzed: 12/06/09 20:04

Concentrated Extract Volume: 10000 (µL)

Dilution Factor: 1

Injection Volume: 1 (µL)

Extraction: (Type) SOXH

GPC Cleanup: N

CAS NO.	COMPOUND	SPIKE AMT (µg/kg)	SAMP CONC (µg/kg)	% REC #	QC LIMITS
83-32-9	Acenaphthene	3125	2910	93.2	80.0-118
208-96-8	Acenaphthylene	3125	3030	96.9	80.1-123
120-12-7	Anthracene	3125	2910	93.2	76.0-110
56-55-3	Benzo[a]anthracene	3125	3130	100	78.7-122
50-32-8	Benzo[a]pyrene	3125	3040	97.3	71.8-130
205-99-2	Benzo[b]fluoranthene	3125	3050	97.7	60.9-139
191-24-2	Benzo[g,h,i]perylene	3125	3080	98.5	80.5-137
207-08-9	Benzo[k]fluoranthene	3125	3050	97.5	60.1-151
65-85-0	Benzoic Acid	3125	1020	32.7	0.00-89.8
100-51-6	Benzyl Alcohol	3125	2880	92.0	77.6-117
111-91-1	Bis(2-chloroethoxy)methane	3125	2770	88.5	84.7-117
111-44-4	Bis(2-chloroethyl)ether	3125	3010	96.3	78.1-116
108-60-1	Bis(2-chloroisopropyl)ether	3125	3020	96.6	72.4-119
117-81-7	Bis(2-ethylhexyl)phthalate	3125	3230	103	79.0-130
101-55-3	4-bromophenyl phenyl ether	3125	3000	96.0	76.4-108
85-68-7	Butylbenzylphthalate	3125	3120	99.9	83.4-127
106-47-8	4-Chloroaniline	3125	2380	76.1	29.7-119
59-50-7	4-Chloro-3-methylphenol	3125	3100	99.2	93.2-120
91-58-7	2-Chloronaphthalene	3125	2600	83.2	68.0-96.1
95-57-8	2-Chlorophenol	3125	2930	93.9	81.3-110
7005-72-3	4-Chlorophenyl phenyl ether	3125	3000	95.9	77.0-113
218-01-9	Chrysene	3125	3130	100	78.1-121
84-74-2	Di-n-Butylphthalate	3125	3140	101	82.9-114
117-84-0	Di-n-octylphthalate	3125	3250	104	58.7-155
53-70-3	Dibenzo[a,h]anthracene	3125	3190	102	63.9-144
132-64-9	Dibenzofuran	3125	3010	96.3	81.5-117
95-50-1	1,2-Dichlorobenzene	3125	2870	91.9	76.6-109
541-73-1	1,3-Dichlorobenzene	3125	2890	92.4	74.5-108
106-46-7	1,4-Dichlorobenzene	3125	2870	91.7	76.0-107
91-94-1	3,3'-Dichlorobenzidine	3125	2940	94.1	50.4-120
120-83-2	2,4-Dichlorophenol	3125	2990	95.6	86.8-116
84-66-2	Diethylphthalate	3125	3040	97.3	80.6-118
105-67-9	2,4-Dimethylphenol	3125	2810	90.0	82.4-115
131-11-3	Dimethylphthalate	3125	3020	96.6	83.4-115
534-52-1	4,6-Dinitro-2-methylphenol	3125	2830	90.4	70.0-106
51-28-5	2,4-Dinitrophenol	3125	2150	68.9	61.7-128
121-14-2	2,4-Dinitrotoluene	3125	2980	95.5	81.7-117
606-20-2	2,6-Dinitrotoluene	3125	2980	95.5	82.3-115
206-44-0	Fluoranthene	3125	3020	96.6	77.8-113
86-73-7	Fluorene	3125	2880	92.3	77.6-124
118-74-1	Hexachlorobenzene	3125	3000	96.0	71.9-110

SGS North America, Inc.
SGS Environmental Services

LABORATORY CONTROL SAMPLE SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: SGS Environmental Services, Inc.

Lab Code: NC00919

Case No.:

SAS No.:

SDG No:

Matrix: (soil/water) SOIL

Lab Sample ID: LCS15626

Sample wt/vol: 32 (g)

Lab File ID: 1206714.D

Level: (low/med) LOW

% Moisture: 0% Decanted: (Y/N) N

Date Analyzed: 12/06/09 20:04

Concentrated Extract Volume: 10000 (µL)

Dilution Factor: 1

Injection Volume: 1 (µL)

Extraction: (Type) SOXH

GPC Cleanup: N

CAS NO.	COMPOUND	SPIKE AMT (µg/kg)	SAMP CONC (µg/kg)	% REC #	QC LIMITS
87-68-3	Hexachlorobutadiene	3125	2940	94.0	76.9-110
77-47-4	Hexachlorocyclopentadiene	3125	5230	167	44.9-270
67-72-1	Hexachloroethane	3125	2870	91.7	75.0-111
193-39-5	Indeno(1,2,3-c,d)pyrene	3125	3130	100	76.6-137
78-59-1	Isophorone	3125	2810	89.9	77.4-104
90-12-0	1-Methylnaphthalene	3125	2900	92.7	76.4-119
91-57-6	2-Methylnaphthalene	3125	3000	96.0	82.4-119
95-48-7	2-Methylphenol	3125	2880	92.0	80.1-112
108-39-4	4-Methylphenol	6250	5950	95.3	52.4-148
621-64-7	N-Nitrosodi-n-propylamine	3125	2930	93.7	72.7-128
86-30-6	Diphenylamine	3125	2950	94.4	69.8-115
91-20-3	Naphthalene	3125	2920	93.4	82.4-129
88-74-4	2-Nitroaniline	3125	2670	85.4	68.6-104
99-09-2	3-Nitroaniline	3125	2590	82.9	37.8-132
100-01-6	4-Nitroaniline	3125	3040	97.4	60.5-133
98-95-3	Nitrobenzene	3125	2930	93.7	85.6-115
88-75-5	2-Nitrophenol	3125	2910	93.2	85.9-114
100-02-7	4-Nitrophenol	3125	2550	81.7	68.5-113
87-86-5	Pentachlorophenol	3125	3370	108	61.8-112
85-01-8	Phenanthrene	3125	3160	101	77.2-112
108-95-2	Phenol	3125	2920	93.5	80.8-113
129-00-0	Pyrene	3125	3090	98.9	75.0-124
110-86-1	Pyridine	3125	2240	71.7	41.7-105
120-82-1	1,2,4-Trichlorobenzene	3125	2840	90.8	78.2-109
95-95-4	2,4,5-Trichlorophenol	3125	3030	96.8	80.8-115
88-06-2	2,4,6-Trichlorophenol	3125	2970	94.9	83.0-115

System Monitoring Compound Results

		Spike Added (µg/kg)	Spike Result (µg/kg)	Percent Rec. (%)	Percent Recovery (%)
118-79-6	2,4,6-Tribromophenol	3125	3280	105	41.1-129
321-60-8	2-Fluorobiphenyl	3125	3130	100	56.4-116
367-12-4	2-Fluorophenol	3125	3050	97.5	41.8-123
1718-51-0	4-Terphenyl-d14	3125	3610	116	43.8-140
4165-60-0	Nitrobenzene-d5	3125	3180	102	46.1-117
13127-88-3	Phenol-d6	3125	3170	101	47.9-125

LCS Spike Recovery: 0 out of 67 outside of limits.

Analyst: *pis*

OP

SGS North America, Inc.
SGS Environmental Services, Inc.

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SGS Environmental Services, InLab Code: NC00919

EPA Sample No.:	Filename:	Date Analyzed	Inst: MSD7
Sample: G128-2466-4G	1208715.D	2009-12-08 14:53:00	Batch: 7120809
MS: G128-2466-4H	1206729.D	2009-12-07 01:36:00	Dilution: 1
MSD: G128-2466-4I	1206730.D	2009-12-07 01:58:00	

COMPOUND	SAMPLE CONC (µg/kg)	MS SPIKE (µg/kg)	MS CONC (µg/kg)	MS % REC #	MSD SPIKE (µg/kg)	MSD CONC (µg/kg)	MSD % REC #	%	QC LIMITS	
									RPD	REC
Acenaphthene	BQL	3720	3280	88.3	3640	3350	92.2	4.32	30	71.0-125
Acenaphthylene	BQL	3720	3330	89.5	3640	3400	93.6	4.48	30	73.0-140
Anthracene	BQL	3720	3230	87.0	3640	3300	90.8	4.26	30	66.9-119
Benzo[a]anthracene	BQL	3720	3430	92.3	3640	3500	96.3	4.22	30	51.8-127
Benzo[a]pyrene	BQL	3720	3390	91.1	3640	3420	94.0	3.13	30	78.5-137
Benzo[b]fluoranthene	BQL	3720	3330	89.7	3640	3520	96.8	7.60	30	62.3-134
Benzo[g,h,i]perylene	BQL	3720	3180	85.5	3640	3140	86.4	1.05	30	56.2-149
Benzo[k]fluoranthene	BQL	3720	3360	90.5	3640	3320	91.2	0.771	30	79.7-133
Benzoic Acid	BQL	3720	4210	113	3640	4950	136	18.4	30	0.00-140
Benzyl Alcohol	BQL	3720	3210	86.5	3640	3310	91.0	5.07	30	66.8-114
Bis(2-chloroethoxy)methane	BQL	3720	3210	86.5	3640	3260	89.7	3.63	30	71.4-123
Bis(2-chloroethyl)ether	BQL	3720	3400	91.4	3640	3560	97.9	6.87	30	64.0-120
Bis(2-chloroisopropyl)ether	BQL	3720	3200	86.2	3640	3330	91.6	6.07	30	60.5-123
Bis(2-ethylhexyl)phthalate	BQL	3720	3610	97.1	3640	3710	102	4.90	30	68.5-134
4-bromophenyl phenyl ether	BQL	3720	3320	89.4	3640	3310	91.1	1.88	30	65.2-127
Butylbenzylphthalate	BQL	3720	3470	93.4	3640	3580	98.6	5.42	30	64.4-133
4-Chloroaniline	BQL	3720	2520	67.7	3640	2580	70.9	4.62	30	25.1-237
4-Chloro-3-methylphenol	BQL	3720	3610	97.0	3640	3620	99.7	2.75	30	80.0-115
2-Chloronaphthalene	BQL	3720	2620	70.4	3640	2700	74.3	5.39	30	70.3-124
2-Chlorophenol	BQL	3720	3290	88.5	3640	3390	93.3	5.28	30	77.1-111
4-Chlorophenyl phenyl ether	BQL	3720	3270	87.9	3640	3330	91.5	4.01	30	72.8-125
Chrysene	BQL	3720	3480	93.5	3640	3530	97.0	3.65	30	72.7-124
Di-n-Butylphthalate	BQL	3720	3460	93.0	3640	3500	96.2	3.37	30	67.9-125
Di-n-octylphthalate	BQL	3720	3690	99.4	3640	3760	103	3.85	30	48.9-162
Dibenzo[a,h]anthracene	BQL	3720	3400	91.6	3640	3360	92.3	0.761	30	58.6-146
Dibenzofuran	BQL	3720	3370	90.7	3640	3440	94.6	4.19	30	70.6-115
1,2-Dichlorobenzene	BQL	3720	3150	84.7	3640	3330	91.5	7.72	30	73.3-121
1,3-Dichlorobenzene	BQL	3720	3210	86.3	3640	3340	91.9	6.29	30	69.7-119
1,4-Dichlorobenzene	BQL	3720	3130	84.3	3640	3270	89.8	6.32	30	70.6-117
3,3'-Dichlorobenzidine	BQL	3720	3090	83.2	3640	3180	87.5	5.04	30	14.2-302
2,4-Dichlorophenol	BQL	3720	3590	96.5	3640	3630	99.9	3.46	30	74.5-115
Diethylphthalate	BQL	3720	3380	90.9	3640	3480	95.6	5.04	30	70.8-127
2,4-Dimethylphenol	BQL	3720	3610	97.1	3640	3680	101	4.04	30	85.4-138
Dimethylphthalate	BQL	3720	3260	87.7	3640	3390	93.3	6.19	30	68.5-122
4,6-Dinitro-2-methylphenol	BQL	3720	2500	67.2	3640	2760	75.9	12.2	30	39.4-126
2,4-Dinitrophenol	BQL	3720	1920	51.6	3640	2420	66.6	25.4	30	20.4-130
2,4-Dinitrotoluene	BQL	3720	3420	91.9	3640	3530	97.1	5.50	30	67.6-136
2,6-Dinitrotoluene	BQL	3720	3420	91.9	3640	3530	97.1	5.50	30	69.3-131
Fluoranthene	BQL	3720	3400	91.5	3640	3380	92.9	1.50	30	64.6-129
Fluorene	BQL	3720	3290	88.4	3640	3320	91.2	3.12	30	72.4-128
Hexachlorobenzene	BQL	3720	3350	90.1	3640	3410	93.8	4.02	30	62.9-124

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

SGS North America, Inc.
SGS Environmental Services, Inc.

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SGS Environmental Services, Inc.

Lab Code: NC00919

Inst: MSD7

EPA Sample No.: G128-2466-4G, G128-2466-4H, G128-2466-4I

Batch: 7120809

FileNames: 1208715.D, 1206729.D, 1206730.D

Dilution: 1

COMPOUND	SAMPLE CONC (µg/kg)	MS SPIKE (µg/kg)	MS CONC (µg/kg)	MS % REC #	MSD SPIKE (µg/kg)	MSD CONC (µg/kg)	MSD % REC #	%	QC LIMITS	
									RPD	REC
Hexachlorobutadiene	BQL	3720	3360	90.4	3640	3530	97.2	7.25	30	69.1-118
Hexachlorocyclopentadiene	BQL	3720	3420	91.9	3640	3660	101	9.04	30	-10.4-176
Hexachloroethane	BQL	3720	2980	80.2	3640	3190	87.6	8.82	30	68.0-122
Indeno(1,2,3-c,d)pyrene	BQL	3720	3330	89.6	3640	3340	91.9	2.53	30	29.1-157
Isophorone	BQL	3720	3300	88.8	3640	3380	92.9	4.51	30	65.2-143
1-Methylnaphthalene	BQL	3720	3190	85.9	3640	3280	90.1	4.77	30	68.0-130
2-Methylnaphthalene	BQL	3720	3420	92.0	3640	3500	96.3	4.55	30	74.1-111
2-Methylphenol	BQL	3720	3190	85.8	3640	3290	90.4	5.22	30	78.7-116
4-Methylphenol	BQL	7430	6620	89.1	7270	6590	90.6	1.73	30	71.2-101
N-Nitrosodi-n-propylamine	BQL	3720	3260	87.8	3640	3290	90.4	2.92	30	74.3-133
Diphenylamine	BQL	3720	3350	90.1	3640	3360	92.4	2.52	30	73.6-208
Naphthalene	BQL	3720	3350	90.0	3640	3440	94.5	4.86	30	49.9-137
2-Nitroaniline	BQL	3720	2790	75.1	3640	2870	78.8	4.81	30	70.0-129
3-Nitroaniline	BQL	3720	3000	80.8	3640	2990	82.1	1.60	30	76.6-356
4-Nitroaniline	BQL	3720	3360	90.5	3640	3430	94.4	4.22	30	50.8-178
Nitrobenzene	BQL	3720	3390	91.1	3640	3440	94.6	3.77	30	71.4-122
2-Nitrophenol	BQL	3720	3460	93.1	3640	3610	99.2	6.34	30	63.3-112
4-Nitrophenol	BQL	3720	2590	69.8	3640	2980	82.0	16.1	30	56.8-133
Pentachlorophenol	BQL	3720	3910	105	3640	4140	114*	7.76	30	29.2-108
Phenanthrene	BQL	3720	3630	97.6	3640	3610	99.4	1.81	30	55.8-128
Phenol	BQL	3720	3400	91.4	3640	3530	97.0	5.94	30	71.2-120
Pyrene	BQL	3720	3480	93.5	3640	3510	96.5	3.18	30	68.5-140
Pyridine	BQL	3720	747	20.1*	3640	1090	30.0*	39.5*	30	50.0-150
1,2,4-Trichlorobenzene	BQL	3720	3360	90.4	3640	3410	93.8	3.69	30	68.9-119
2,4,5-Trichlorophenol	BQL	3720	3380	90.9	3640	3450	94.8	4.20	30	72.4-118
2,4,6-Trichlorophenol	BQL	3720	3260	87.7	3640	3410	93.9	6.83	30	67.9-116

System Monitoring Compound Results

		Spike Added (µg/kg)	MS Result (µg/kg)	MS Rec. (%)	Spike Added (µg/kg)	MSD Result (µg/kg)	MSD Rec. (%)	Percent Recovery (%)
118-79-6	2,4,6-Tribromophenol	10	99.3	99.3	10	106.5	106	41.1-129
321-60-8	2-Fluorobiphenyl	10	87.3	87.3	10	93.6	93.6	56.4-116
367-12-4	2-Fluorophenol	10	90.4	90.4	10	96.3	96.3	41.8-123
1718-51-0	4-Terphenyl-d14	10	104	104	10	111	111	43.8-140
4165-60-0	Nitrobenzene-d5	10	98.5	98.5	10	102.8	103	46.1-117
13127-88-3	Phenol-d6	10	94.8	94.8	10	99.9	99.9	47.9-125

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

MS Spike Recovery: 1 out of 67 outside of limits. MSD Spike Recovery: 2 out of 67 outside of limits

RPD: 1 out of 67 outside of limits

COMMENTS:

Analyst:

Handwritten signature

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & AssociatesProject Name: CSFF Soil Sampling UST #8

Sample Information	
Sample Identification	UST#8-CSFF-SB01
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	11/24/09 10:45
Date Received	11/25/09
Date Extracted	11/30/09
Date Analyzed	12/02/09 19:46 - 12/02/09 19:46
Dry Weight	82.8
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags	
C ₅ -C ₈ Aliphatics**	BQL	10.0		
C ₉ -C ₁₂ Aliphatics**	36.4	10.0		
C ₉ -C ₁₀ Aromatics**	40.9	10.0		
		Percent Recovery	Flags	Limits Lower Upper
Surrogate % Recovery - PID		92.4		70 130
Surrogate % Recovery - FID		109		70 130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: g128-2466-1d	Lab Info: g128-2466-1d
FID Info: VP120209/025F0101.D	PID Info: VP120209/025R0101.D

Reviewed By: ML

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & AssociatesProject Name: CSFF Soil Sampling UST #8

Sample Information	
Sample Identification	UST#8-CSFF-SB02
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	11/24/09 11:00
Date Received	11/25/09
Date Extracted	11/30/09
Date Analyzed	12/02/09 18:26 - 12/02/09 18:26
Dry Weight	84.7
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags	
C ₅ -C ₈ Aliphatics**	BQL	10.0		
C ₉ -C ₁₂ Aliphatics**	BQL	10.0		
C ₉ -C ₁₀ Aromatics**	13.4	10.0		
	Percent Recovery	Flags	Limits Lower Upper	
Surrogate % Recovery - PID	89.4		70	130
Surrogate % Recovery - FID	100		70	130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: g128-2466-2d	Lab Info: g128-2466-2d
FID Info: VP120209/022F0101.D	PID Info: VP120209/022R0101.D

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & AssociatesProject Name: CSFF Soil Sampling UST #8

Sample Information	
Sample Identification	UST#8-CSFF-SB03
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	11/24/09 11:15
Date Received	11/25/09
Date Extracted	11/30/09
Date Analyzed	12/02/09 18:53 - 12/02/09 18:53
Dry Weight	83.3
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags	
C ₅ -C ₈ Aliphatics**	BQL	10.0		
C ₉ -C ₁₂ Aliphatics**	34.2	10.0		
C ₉ -C ₁₀ Aromatics**	36.2	10.0		
	Percent Recovery	Flags	Limits Lower Upper	
Surrogate % Recovery - PID	95.1		70	130
Surrogate % Recovery - FID	115		70	130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: g128-2466-3d	Lab Info: g128-2466-3d
FID Info: VP120209/023F0101.D	PID Info: VP120209/023R0101.D

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting FormClient Name: Richard Catlin & AssociatesProject Name: CSFF Soil Sampling UST #8

Sample Information	
Sample Identification	UST#8-CSFF-SB04
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	11/24/09 11:45
Date Received	11/25/09
Date Extracted	11/30/09
Date Analyzed	12/02/09 19:19 - 12/02/09 19:19
Dry Weight	84.3
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags	
C ₅ -C ₈ Aliphatics**	BQL	10.0		
C ₉ -C ₁₂ Aliphatics**	BQL	10.0		
C ₉ -C ₁₀ Aromatics**	BQL	10.0		
	Percent Recovery	Flags	Limits Lower Upper	
Surrogate % Recovery - PID	92.5		70	130
Surrogate % Recovery - FID	106		70	130

* = Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: g128-2466-4d	Lab Info: g128-2466-4d
FID Info: VP120209/024F0101.D	PID Info: VP120209/024R0101.D

Reviewed By: 

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: _____

Project Name: _____

Sample Information	
Sample Identification	vblk4120209a
Sample Matrix	Soil
Collection Option (for Soil)*	2
Date Collected	
Date Received	
Date Extracted	
Date Analyzed	12/02/09 11:16 - 12/02/09 11:16
Dry Weight	100
Dilution Factor	1 - 1

Analytical Results				
Analyte	Result mg/Kg	Report Limit mg/Kg	Flags	
C ₅ -C ₈ Aliphatics**	BQL	10.0		
C ₉ -C ₁₂ Aliphatics**	BQL	10.0		
C ₉ -C ₁₀ Aromatics**	BQL	10.0		
	Percent Recovery	Flags	Limits Lower Upper	
Surrogate % Recovery - PID	86.6		70	130
Surrogate % Recovery - FID	99.1		70	130

Option 1 = Established fill line on vial, Option 2 = Sampling Device/Brand, or Option 3 = Field weight of soil.
Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: vblk4120209a	Lab Info: vblk4120209a
FID Info: VP120209/006F0101.D	PID Info: VP120209/006R0101.D

Reviewed By: 

SGS North America, Inc.
LABORATORY CONTROL SPIKE RESULTS
 by Method VPH

SGS Environmental Services, Inc.

Lab Sample ID: LCS4120209A
 Lab Project ID: Batch QC
 Report Basis: Dry

Analyzed By:
 Matrix: Soil
 Percent Solids: 100 %

Analytical QC Results Summary

Analyte	Expected Amount mg/Kg	Measured Amount mg/Kg	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
C5-C8 Aliphatics		9.06				
C9-C12 Aliphatics		4.78				
C9-C10 Aromatics		1.77				
Total VPH	16.0	15.6	97.5	70.0	130	

Surrogate Standards	Expected Amount mg/Kg	Measured Amount mg/Kg	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
Surrogate - PID	100	93.0	93.0	70.0	130	
Surrogate - FID	100	105	105	70.0	130	

Reviewed By: 

SGS North America, Inc.
MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS
 by Method VPH

SGS Environmental Services, Inc.

Lab Sample ID: g128-2466-1d
 MS Sample ID: g128-2466-1d
 MSD Sample ID: g128-2466-1d
 Lab Project ID: Batch QC for VP120209
 Report Basis: Dry

Analyzed By: DVO
 Matrix: Soil
 Percent Solids: 100.0 %

Matrix Spike Results Summary

Analyte	Sample Amount mg/Kg	Spiked Amount mg/Kg	Measured Amount mg/Kg	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
C5-C8 Aliphatics	0.00	-	8.19	-	-	-	
C9-C12 Aliphatics	30.20	-	36.80	-	-	-	
C9-C10 Aromatics	33.9000	-	35.30	-	-	-	
Total VPH	64.1	15.6	80.3	104.0	70	130	

Matrix Spike Duplicate Results Summary

Analyte	Spiked Amount mg/Kg	Measured Amount mg/Kg	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
C5-C8 Aliphatics	-	8.29	-	-	-	
C9-C12 Aliphatics	-	38.60	-	-	-	
C9-C10 Aromatics	-	36.90	-	-	-	
Total VPH	15.6	83.8	126.0	70	130	

Analyte	MS Amount mg/Kg	MSD Amount mg/Kg	RPD Value (%)	RPD Limit (%)	Qualifier
C5-C8 Aliphatics	-	-	-	-	
C9-C12 Aliphatics	-	-	-	-	
C9-C10 Aromatics	-	-	-	-	
Total VPH	80.3	83.8	4	20	

Reviewed By: 

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 11/29/09PID Initial Calibration Date: 11/29/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	3.14	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	1.00	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	14.39	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 12/02/09Filename: vp120209/002F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C ₅ -C ₈ Aliphatics	200	16	-8.7	±25%
C ₉ -C ₁₂ Aliphatics	200	16	-19.0	±25%
C ₉ -C ₁₀ Aromatics	200	16	-12.8	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 2

VPH Laboratory Reporting Form

Calibration and QA/QC Information

FID Initial Calibration Date: 11/29/09PID Initial Calibration Date: 11/29/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C ₅ -C ₈ Aliphatics	2.02	0.175	6.42	0.557	100	10
C ₉ -C ₁₂ Aliphatics	1.51	0.118	4.80	0.375	100	10
C ₉ -C ₁₀ Aromatics	0.902	0.132	2.87	0.420	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₅ -C ₈ Aliphatics	10	0.8	3.14	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₂ Aliphatics	10	0.8	1.00	Linear Regression
	50	4		
	100	8		
	200	16		
	500	40		
C ₉ -C ₁₀ Aromatics	10	0.8	14.39	Calibration Factor
	50	4		
	100	8		
	200	16		
	500	40		

Calibration Check Date: 12/02/09Filename: vp120209/029F0101.d

Calibration Check

Range	Levels (µg/L)	Levels (mg/Kg)	%Difference if CF %Drift if LR	Limits
C ₅ -C ₈ Aliphatics	200	16	-3.1	±25%
C ₉ -C ₁₂ Aliphatics	200	16	-11.2	±25%
C ₉ -C ₁₀ Aromatics	200	16	-1.8	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & AssociatesProject Name: CSFF Soil Sampling UST #8

Sample Information	
Sample Identification	UST#8-CSFF-SB01
Sample Matrix	Soil
Date Collected	11/24/09 10:45
Date Received	11/25/09
Date Extracted	11/30/09
Date Analyzed	12/02/09 14:10 - 12/01/09 14:59
Dry Weight	82.8
Dilution Factor	5 - 1
Initial weight (g)	12.20
Final Volume (mL)	10.0

Analytical Results				
Analytes**	Result mg/Kg	Report Limit mg/Kg	MDL Limit mg/Kg	Flags
C9-C18 Aliphatics	556	10.0	1.30	
C19-C36 Aliphatics	1.99	10.0	1.22	J
C11-C22 Aromatics	154	10.0	0.218	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	89.8		40	140
Aromatic (ortho-terphenyl)	93.3		40	140
Fractionation 1 (2-bromonaphthalene)	84.0		40	140
Fractionation 2 (2-fluorobiphenyl)	88.9		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2466-1H	Lab Info: G128-2466-1H
Aliphatic: EP120209/004F0201.D	Aromatic: EP120109/008F0601.D

Reviewed By: 

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & AssociatesProject Name: CSFF Soil Sampling UST #8

Sample Information	
Sample Identification	UST#8-CSFF-SB02
Sample Matrix	Soil
Date Collected	11/24/09 11:00
Date Received	11/25/09
Date Extracted	11/30/09
Date Analyzed	12/01/09 15:28 - 12/01/09 15:56
Dry Weight	84.7
Dilution Factor	1 - 1
Initial weight (g)	12.88
Final Volume (mL)	10.0

Analytical Results				
Analytes**	Result mg/Kg	Report Limit mg/Kg	MDL Limit mg/Kg	Flags
C9-C18 Aliphatics	21.4	10.0	0.247	
C19-C36 Aliphatics	2.42	10.0	0.230	J
C11-C22 Aromatics	2.05	10.0	0.206	J

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	90.8		40	140
Aromatic (ortho-terphenyl)	82.0		40	140
Fractionation 1 (2-bromonaphthalene)	74.4		40	140
Fractionation 2 (2-fluorobiphenyl)	92.2		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2466-2H	Lab Info: G128-2466-2H
Aliphatic: EP120109/009F0701.D	Aromatic: EP120109/010F0801.D

Reviewed By: 

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & AssociatesProject Name: CSFF Soil Sampling UST #8

Sample Information	
Sample Identification	UST#8-CSFF-SB03
Sample Matrix	Soil
Date Collected	11/24/09 11:15
Date Received	11/25/09
Date Extracted	11/30/09
Date Analyzed	12/01/09 16:24 - 12/01/09 16:52
Dry Weight	83.3
Dilution Factor	1 - 1
Initial weight (g)	12.42
Final Volume (mL)	10.0

Analytical Results				
Analytes**	Result mg/Kg	Report Limit mg/Kg	MDL Limit mg/Kg	Flags
C9-C18 Aliphatics	166	10.0	0.256	
C19-C36 Aliphatics	5.88	10.0	0.239	J
C11-C22 Aromatics	2.16	10.0	0.214	J

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	87.1		40	140
Aromatic (ortho-terphenyl)	83.2		40	140
Fractionation 1 (2-bromonaphthalene)	55.2		40	140
Fractionation 2 (2-fluorobiphenyl)	93.8		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2466-3H	Lab Info: G128-2466-3H
Aliphatic: EP120109/011F0901.D	Aromatic: EP120109/012F1001.D

Reviewed By: 

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: Richard Catlin & AssociatesProject Name: CSFF Soil Sampling UST #8

Sample Information	
Sample Identification	UST#8-CSFF-SB04
Sample Matrix	Soil
Date Collected	11/24/09 11:45
Date Received	11/25/09
Date Extracted	11/30/09
Date Analyzed	12/01/09 17:21 - 12/01/09 17:49
Dry Weight	84.3
Dilution Factor	1 - 1
Initial weight (g)	12.07
Final Volume (mL)	10.0

Analytical Results				
Analytes**	Result mg/Kg	Report Limit mg/Kg	MDL Limit mg/Kg	Flags
C9-C18 Aliphatics	159	10.0	0.263	
C19-C36 Aliphatics	10.4	10.0	0.246	
C11-C22 Aromatics	4.71	10.0	0.220	J

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	89.0		40	140
Aromatic (ortho-terphenyl)	88.0		40	140
Fractionation 1 (2-bromonaphthalene)	83.4		40	140
Fractionation 2 (2-fluorobiphenyl)	104		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: G128-2466-4J	Lab Info: G128-2466-4J
Aliphatic: EP120109/013F1101.D	Aromatic: EP120109/014F1201.D

Reviewed By: 

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: _____

Project Name: _____

Sample Information	
Sample Identification	PB15627
Sample Matrix	SOIL
Date Collected	
Date Received	
Date Extracted	11/30/09
Date Analyzed	12/01/09 12:38 - 12/01/09 13:06
Dry Weight	100
Dilution Factor	1 - 1
Initial weight (g)	12.0
Final Volume (mL)	10.0

Analytical Results			
Analytes**	Result mg/Kg	Report Limit mg/Kg	Flags
C9-C18 Aliphatics	BQL	10.0	
C19-C36 Aliphatics	BQL	10.0	
C11-C22 Aromatics	BQL	10.0	

Surrogates	Percent Recovery	Flags	Limits	
			Lower	Upper
Aliphatic (tricosane)	102		40	140
Aromatic (ortho-terphenyl)	101		40	140
Fractionation 1 (2-bromonaphthalene)	73.1		40	140
Fractionation 2 (2-fluorobiphenyl)	84.2		40	140

** = Excludes any surrogates or internal standards and are unadjusted for individual analytes.

Lab Info: PB15627	Lab Info: PB15627
Aliphatic: EP120109/003F0101.D	Aromatic: EP120109/004F0201.D

Reviewed By: 

SGS North America, Inc.

LABORATORY CONTROL SPIKE RESULTS
by Method EPH

SGS Environmental Services, Inc.

Lab Sample ID: LCS15627
Lab Project ID: Batch QC
Report Basis: Dry

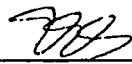
Analyzed By: DTF
Matrix: SOIL
Percent Solids: 100 %
Initial Amount: 12.0 g
Final Volume: 10.0 mL

Analytical QC Results Summary

Analyte	Expected Amount mg/Kg	Measured Amount mg/Kg	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
C9-C18 Aliphatics	8.33	6.15	73.8	40.0	140	
C19-C36 Aliphatics	8.33	7.88	94.6	40.0	140	
C11-C22 Aromatics	8.33	7.10	85.2	40.0	140	

Surrogate Standards	Expected Amount mg/Kg	Measured Amount mg/Kg	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
Aliphatic (COD)	40.0	38.2	95.5	40.0	140	
Aromatic (OTP)	40.0	37.3	93.3	40.0	140	
Frac1 (2-BRN)	100	69.9	69.9	40.0	140	
Frac2 (2-FBP)	100	97.0	97.0	40.0	140	

Fractionation Breakthrough	Aliphatic Fraction area	Aromatic Fraction area	Break through (%)	Limit (%)	Qualifier
Naphthalene	0	571	0.00	≤5	

Reviewed By: 

SGS North America, Inc.

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS
by Method EPH

SGS Environmental Services, Inc.

Lab Sample ID:	G128-2466-4J	Analyzed By:	DTF
MS Sample ID:	G128-2466-4K	Matrix:	Soil
MSD Sample ID:	G128-2466-4L	Percent Solids:	84.3 %
Report Basis:	Dry	Batch ID:	15627

Matrix Spike Results Summary

Analyte*	Sample Amount mg/Kg	Spiked Amount mg/Kg	Measured Amount mg/Kg	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
C9-C18 Aliphatics	7.34	9.84	11.6	43.3	40.0	140	
C19-C36 Aliphatics	0.0488	9.84	10.0	101	40.0	140	
C11-C22 Aromatics	0.277	9.84	9.66	95.4	40.0	140	

Matrix Spike Duplicate Results Summary

Analyte*	Spiked Amount mg/Kg	Measured Amount mg/Kg	Percent Recovery (%)	Lower Limit (%)	Upper Limit (%)	Qualifier
C9-C18 Aliphatics	9.77	9.40	21.1	40.0	140	*
C19-C36 Aliphatics	9.77	9.19	93.5	40.0	140	
C11-C22 Aromatics	9.77	8.87	87.9	40.0	140	

Analyte*	MS Amount mg/Kg	MSD Amount mg/Kg	RPD Value (%)	RPD Limit (%)	Qualifier
C9-C18 Aliphatics	11.6	9.40	21.0	≤50	
C19-C36 Aliphatics	10.0	9.19	8.44	≤50	
C11-C22 Aromatics	9.66	8.87	8.53	≤50	

* = Range value from spiked compounds only.

Note : K1 MSD is low due to non-homogenous sample

Reviewed By: 772

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 10/06/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	12.22	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	8.95	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	3.21	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 12/01/09
12/01/09Filename: ep120109/001f0101.d
ep120109/002f0201.d

Calibration Check

Range	Levels (mg/Kg)	(µg/L)	%Difference if CF %Drift if LR	Limits
C9-C18 Aliphatics	100	16.7	18.4	≤±25%
C19-C36 Aliphatics	100	16.7	17.6	≤±25%
C11-C22 Aromatics	100	16.7	8.0	≤±25%

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable LimitRPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 10/06/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	12.22	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	8.95	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	3.21	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 12/01/09 Filenames: ep120109/024f2201.d
12/01/09 ep120109/023f2101.d

Calibration Check

Range	Levels (mg/Kg)	(µg/L)	%Difference if CF %Drift if LR	Limits
C9-C18 Aliphatics	100	16.7	18.5	≤±25%
C19-C36 Aliphatics	100	16.7	18.9	≤±25%
C11-C22 Aromatics	100	16.7	10.1	≤±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 10/06/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	12.22	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	8.95	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	3.21	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 12/02/09 Filenames: ep120209/003f0101.d
12/02/09 ep120209/002f0201.d

Calibration Check

Range	Levels (mg/Kg)	(µg/L)	%Difference if CF %Drift if LR	Limits
C9-C18 Aliphatics	100	16.7	22.1	±25%
C19-C36 Aliphatics	100	16.7	22.8	±25%
C11-C22 Aromatics	100	16.7	11.8	±25%

MDL = Method Detection Limit

ML = Minimum Limit

RL = Reportable Limit

RPD = Relative Percent Difference

%RSD = Percent Relative Standard Deviation

CCC = Correlation Coefficient of Curve

Attachment 3

EPH Laboratory Reporting Form

Calibration and QA/QC Information

Initial Calibration Date: 10/06/09

Calibration Ranges and Limits

Range	MDL		ML		RL	
	(02/15/08) (µg/L)	(02/11/08) (mg/Kg)	(µg/L)	(mg/Kg)	(µg/L)	(mg/Kg)
C9-C18 Aliphatics	1.66	0.274	5.28	0.871	100	10
C19-C36 Aliphatics	2.79	0.201	8.87	0.639	100	10
C11-C22 Aromatics	2.64	0.110	8.40	0.350	100	10

Calibration Concentration Levels

Range	Levels (µg/L)	Levels (mg/Kg)	%RSD if CF r if LR	Method of Quantitation
C ₉ -C ₁₈ Aliphatics	200	33.3	12.22	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₉ -C ₃₆ Aliphatics	200	33.3	8.95	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		
C ₁₁ -C ₂₂ Aromatics	200	33.3	3.21	Calibration Factor
	100	16.7		
	50	8.33		
	25	4.17		
	5	0.833		

Calibration Check Date: 12/02/09
12/02/09Filenames: ep120209/005f0301.d
ep120209/006f0401.d

Calibration Check

Range	Levels (mg/Kg)	(µg/L)	%Difference if CF %Drift if LR	Limits
C9-C18 Aliphatics	100	16.7	22.0	≤±25%
C19-C36 Aliphatics	100	16.7	22.2	≤±25%
C11-C22 Aromatics	100	16.7	12.4	≤±25%

MDL = Method Detection Limit
ML = Minimum Limit
RL = Reportable LimitRPD = Relative Percent Difference
%RSD = Percent Relative Standard Deviation
CCC = Correlation Coefficient of Curve



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1 CLIENT: CATLIN					SGS Reference: 6128-2466					PAGE 1 OF 1				
CONTACT: Shane Chasteen					PHONE NO: (910) 452-5861									
PROJECT: CSFF Soil Sampling					SITE/PWSID#: 209-034									
REPORTS TO: UST # 8														
Shane					FAX NO: ()									
INVOICE TO: Sheila					QUOTE #: 000 101									
					P.O. NUMBER: 291125-2									
2														
LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE	Preservatives Used	Analysis Required	Method	Method	Method	Method	Method	REMARKS
	UST#8-CSFF-SB01	11/24/09	1045	S	6	G	✓	✓	✓					
	UST#8-CSFF-SB02	11/24/09	1100	S	6	G	✓	✓	✓					Report in "Summary
	UST#8-CSFF-SB03	11/24/09	1115	S	6	G	✓	✓	✓					EDD" Format
	UST#8-CSFF-SB04	11/24/09	1145	S	6	G	✓	✓	✓					Report Low Runs
3														
4														
Collected/Relinquished By: (1) Shane Chasteen					Date 11/25/09					Time 1017				
Relinquished By: (2)					Date					Time				
Relinquished By: (3)					Date					Time				
Relinquished By: (4)					Date					Time				
Received By: [Signature]					Shipping Carrier:					Samples Received Cold? (Circle) YES NO				
Received By: [Signature]					Shipping Ticket No:					Temperature °C: 5.2, 5.5C				
					Special Deliverable Requirements:					Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT				
					Special Instructions:									
					Requested Turnaround Time:					[X] RUSH [] STD				
					Date Needed									

ATTACHMENT 2

BORING LOGS

BORING LOG



CATLIN
Engineers and Scientists

209-034
Wilmington, NC

SHEET 1 OF 1

PROJECT NO.: 209-034	STATE: NC	COUNTY: Onslow	LOCATION: New River Air Base
PROJECT NAME: CSFF Additional Soil Sampling		LOGGED BY: Shane Chasteen	BORING ID: UST#8-CSFF
		DRILLER: Dimitri Talbert	-SB01
NORTHING:	EASTING:	CREW:	
SYSTEM:	BORING LOCATION: SW of former sample SB12		LAND ELEV.: NM
DRILL MACHINE: Hand Auger	METHOD: Hand Auger	0 HOUR DTW: N/A	BORING DEPTH: 5.0
START DATE: 11/24/09	FINISH DATE: 11/24/09	24 HOUR DTW: N/A	ROCK DEPTH: --

DEPTH	BLOW COUNT	MOI.	OVA RESULTS (ppm)	LAB.	U S C S	L O G	SOIL AND ROCK DESCRIPTION	ELEVATION
0.5 0.5 0.5 0.5			0 1000 2000 3000 4000					
0.0							LAND SURFACE	0.0
			▲1.9				Grass and brown Topsoil at surface. CLAYEY, vf. SAND. Moist. No HCO.	
1.0								1.0
			▲2.5				Dark brown, CLAYEY vf. SAND. Moist. Slight HCO.	
2.0								2.0
			▲51.9	UST#8 -CSFF -SB01			Dark brown to gray, SANDY CLAY. Low to med. plasticity. Moist. HCO.	
3.0								3.0
			▲32.5				Same as above. Med. plasticity. Moist to wet. Strong HCO at 4' BLS.	
4.0								4.0
			▲17.2				Gray to black, SANDY CLAY to CLAYEY SAND. Saturated. Strong HCO.	
5.0								5.0
							Boring Terminated at Depth 5.0 ft	

CATLIN ENVIRO. LOG 209-034 CSFF ADDITIONAL SOIL SAMPLING.GPJ CATLIN.GDT 12/22/09

▽ = 0hr. DTW

▼ = 24hr. DTW

BORING LOG



CATLIN
Engineers and Scientists

209-034
Wilmington, NC

SHEET 1 OF 1

PROJECT NO.: 209-034	STATE: NC	COUNTY: Onslow	LOCATION: New River Air Base
PROJECT NAME: CSFF Additional Soil Sampling		LOGGED BY: Shane Chasteen	BORING ID: UST#8-CSFF
		DRILLER: Dimitri Talbert	-SB02
NORTHING:	EASTING:	CREW:	
SYSTEM:	BORING LOCATION: SE of former sample SB12		LAND ELEV.: NM
DRILL MACHINE: Hand Auger	METHOD: Hand Auger	0 HOUR DTW: N/A	BORING DEPTH: 3.0
START DATE: 11/24/09	FINISH DATE: 11/24/09	24 HOUR DTW: N/A	ROCK DEPTH: --

DEPTH	BLOW COUNT	MOI.	OVA RESULTS (ppm)	LAB.	U S C S	L O G	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
	0.5 0.5 0.5 0.5		0 1000 2000 3000 4000				0.0	LAND SURFACE	
0.0			▲3.7					Brown, CLAYEY vf. SAND. Moist. No HCO.	
1.0			▲8.4	UST#8 -CSFF -SB02			1.0	Dark brown, CLAYEY vf. SAND. Moist. No HCO.	
2.0			▲6.8				2.0	Dark brown to gray, SANDY CLAY. Low to med. plasticity. Wet. No HCO.	
3.0							3.0	Boring Terminated at Depth 3.0 ft	

CATLIN ENVIRO. LOG 209-034 CSFF ADDITIONAL SOIL SAMPLING.GPJ CATLIN.GDT 12/22/09

▽ = 0hr. DTW

▼ = 24hr. DTW

BORING LOG



209-034
Wilmington, NC

SHEET 1 OF 1

PROJECT NO.: 209-034	STATE: NC	COUNTY: Onslow	LOCATION: New River Air Base
PROJECT NAME: CSFF Additional Soil Sampling		LOGGED BY: Shane Chasteen	BORING ID: UST#8-CSFF
		DRILLER: Dimitri Talbert	-SB03
NORTHING:	EASTING:	CREW:	
SYSTEM:	BORING LOCATION: E of former sample SB12		LAND ELEV.: NM
DRILL MACHINE: Hand Auger	METHOD: Hand Auger	0 HOUR DTW: N/A	BORING DEPTH: 4.0
START DATE: 11/24/09	FINISH DATE: 11/24/09	24 HOUR DTW: N/A	ROCK DEPTH: --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	OVA RESULTS (ppm)	LAB.	U S C S	L O G	SOIL AND ROCK DESCRIPTION	ELEVATION
0.0			0 1000 2000 3000 4000				0.0 LAND SURFACE	
1.0			▲12.2				Brown, CLAYEY vf. SAND. Moist. No HCO.	
2.0			▲3.8				Dark brown, CLAYEY vf. SAND. Moist. No HCO.	
3.0			▲16.4	UST#8 -CSFF -SB03			Dark brown to gray, SANDY CLAY. Low to med. plasticity. Moist. Slight HCO.	
4.0			▲13.5				Same as above. Wet at 3.5' BLS. Slight HCO.	
							Boring Terminated at Depth 4.0 ft	

CATLIN ENVIRO. LOG 209-034 CSFF ADDITIONAL SOIL SAMPLING.GPJ CATLIN.GDT 12/22/09

▽ = 0hr. DTW

▼ = 24hr. DTW

BORING LOG



CATLIN
Engineers and Scientists

209-034
Wilmington, NC

SHEET 1 OF 1

PROJECT NO.: 209-034	STATE: NC	COUNTY: Onslow	LOCATION: New River Air Base
PROJECT NAME: CSFF Additional Soil Sampling		LOGGED BY: Shane Chasteen	BORING ID: UST#8-CSFF
		DRILLER: Dimitri Talbert	-SB04
NORTHING:	EASTING:	CREW:	
SYSTEM:	BORING LOCATION: NE of former sample SB12		LAND ELEV.: NM
DRILL MACHINE: Hand Auger	METHOD: Hand Auger	0 HOUR DTW: N/A	BORING DEPTH: 4.0
START DATE: 11/24/09	FINISH DATE: 11/24/09	24 HOUR DTW: N/A	ROCK DEPTH: --

DEPTH	BLOW COUNT 0.5 0.5 0.5 0.5	MOI.	OVA RESULTS (ppm)	LAB.	U S C S	L O G	DEPTH	SOIL AND ROCK DESCRIPTION	ELEVATION
0.0			0 1000 2000 3000 4000				0.0	LAND SURFACE	
			▲0.9					Brown, CLAYEY vf. SAND. Moist. No HCO.	
1.0			▲2.2				1.0		
								Dark brown, CLAYEY, vf. SAND. Moist. No HCO.	
2.0							2.0		
			▲7.9	UST#8 -CSFF -SB04				Dark brown to gray, SANDY CLAY. Low to med. plasticity. Moist. No HCO.	
3.0							3.0		
			▲12.3					Same as above. Wet at 3.5' BLS. No HCO.	
4.0							4.0		
								Boring Terminated at Depth 4.0 ft	

CATLIN ENVIRO. LOG 209-034 CSFF ADDITIONAL SOIL SAMPLING.GPJ CATLIN.GDT 12/22/09

▽ = 0hr. DTW

▼ = 24hr. DTW