UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

Final Analytical Report

Site Name	Super salvage
Sample Collection Date(s)	05/29/13 09:25- 05/29/13 11:35
Contact	Gerard Crutchley
Report Date	07/31/13 15:20
Project #	NSF 647
Work Order	1306003

Analyses included in this report:

DROs by SW846 8015D
Total Mercury by SW846 7471A
Total Metals based on SW846 6010B
SVOCs by SW846 8270D
Total Mercury for TCLP analysis by SW846 1311
Total Metals for TCLP analysis by 1311

Approved for Release

C. Capozale

OASQA Representative

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Site Name: **Super salvage**	**Project #:** **NSF 647**

Report Narrative

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Report Narrative

SVOAs Analysis Note:
The sample consisted of two layers, oil-like top layer and water-like bottom layer. Continuous liquid-liquid extraction of both layers due to the oil-like top layer was not possible. Therefore, layers were separated and identified as two separate samples: 1306003-05 is the top layer and 1306003-06 is the bottom layer. Some of the top layer is present in the bottom layer due to the difficulty in separating the layers. Sample 1306003-05 was extracted following EPA Method 3580A. Sample 1306003-06 was extracted following EPA Method 8270D.

Chromatography results for the sample yielded a very large broad peak. Applying cleanup procedures did not improve peak resolution and diluting the sample resulted in loss of the peak. The peak is the most significant peak in the spectrum and is taller than the internal standards and ranges from about 8 minutes to 14 minutes. The mass spectra of the peak matches the characteristics of a hydrocarbon.

Results for 2,4-dinitrophenol are qualified as estimated (UJ) in all samples due to exceeding limits in initial calibration.

The quantitation limits for 4,6-dinitro-2-mthylphenol in 1306003-06 and 4-nitrophenol in 1306003-05 are qualified as estimated (UJ) due to low recoveries in the blank spike quality control sample.

The mid-level blank spike for the analysis of the top layer went to dryness during concentration and no information was used to qualify sample 1306003-05.

Insufficient sample was available to perform matrix spike duplicate.

DRO Analysis Note:
One aqueous sample received was composed of two distinct layers, a lower aqueous layer and an oily layer floating on top of the aqueous layer. The oily layer was approximately 1 inch in thickness (the top layer weighed 98.8g). The top oily layer was siphoned off and a small amount of it (~0.1g) was analyzed as a petroleum product via EPA 3580A (1306003-05). The bottom aqueous layer was analyzed by continuous liquid extraction vial EPA 3520C (1306003-06).

Surrogate recovery failed quality control criteria for 1306003-05, 1306003-06, BF32003-MS1, and BF32003-MSD1 (0% recovery for all). The surrogate failure was due to extreme matrix interferences that were present in both samples. The DRO results for 1306003-05 and 1306003-06 are qualified as estimated (J) because of this failure.

BF32003-MSD1 failed recovery and relative percent difference quality control criteria. The failure was due to extreme matrix interferences.

A matrix spike and matrix spike duplicate could not be performed on the aqueous samples (1306003-06) because insufficient sample volume.

This analysis was performed according to the on-demand procedures.

The following data provides a rough estimate of the amount of DROs in the complete two-layer sample:

Oily Layer (1306003-05)
Total weight of Oily Layer = 98.822 g
Concentration of Oily Layer = 241,000 mg/Kg
Total Weight of DRO in Oily Layer = 23,800 mg

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Report Narrative

Aqueous Layer (1306003-06)
Total Volume of Aqueous Layer = 880 mL
Concentration of Aqueous Layer = 398,000 ug/L
Total Weight of DRO in Aqueous Layer = 350.2 mg

TOTAL WEIGHT OF DRO IN THE SAMPLE JAR = 24150.2 mg

Metals Analysis Note (for TCLP samples):
Sample SS5 was composed of two distinct layers, a lower aqueous layer (1306003-06) and an oily layer (1306003-05) floating on top. The layers were separated by siphoning as much of the oil layer, as possible, off of the water layer. Each layer was analyzed separately for Total Metals.

The Blank Spike failed for lead; however, the Matrix Spike and SRM were acceptable. There should be no impact on the data.

Total Metals Analysis Note (for non-TCLP sample):
Samples 1306003-01 thru -04 were analyzed "wet weight", as received, because of their unique matrices, which were not amenable to drying.

The Blank Spike recovery exceed criteria for lead for sample 1306003-05; however, the Matrix Spike and SRM are acceptable. There should be no impact on the data.

Total Mercury Analysis Note (for non-TCLP sample):
The matrix spike recovery failed due to a matrix effects caused by a coating of oil that was present on the entire soil sample. The corresponding source sample result (1306003-04) is qualified as estimated (J) because of this failure.

Sample 1306003-04 was analyzed "wet weight", as received, because of its' unique matrix which was not amenable to drying.

Sample 1306003-04 was analyzed out of holding time. Therefore, the sample result is qualified as estimated (J).

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ANALYTICAL REPORT FOR SAMPLES

Station ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS1	1306003-01	Solid	05/29/13 09:25	05/30/13 14:00
SS2	1306003-02	Solid	05/29/13 10:12	05/30/13 14:00
SS3	1306003-03	Solid	05/29/13 09:45	05/30/13 14:00
SS4	1306003-04	Solid	05/29/13 11:15	05/30/13 14:00
SS5	1306003-05	Petroleum	05/29/13 11:35	05/30/13 14:00
SS5	1306003-06	Water	05/29/13 11:35	05/30/13 14:00

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ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 3
Curtis Bldg., 6th & Walnut Sts.
Philadelphia, Pennsylvania 19106

CHAIN OF CUSTODY RECORD

PROJ. NO.: NSF647
PROJECT NAME: SUPER SALVAGE
SAMPLERS: (Signature) Gerard Crutchley

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	DRO 8/C 6/5/13	~~PCB~~	SVOC	METALS	MERCURY			REMARKS
SS1	5/30/13	0925		X	large trash can under dust coll. unit	1			1					1306003-01
SS2	↑	1012		X	open plastic drum behind blast booth	1			1					-02
SS3		0945		X	dust on floor next to plastic trash can	2			2					~~lab duplicate~~ JC 5/30/13 -03
SS4	↓	1115		X	sediment near north end of pond	2			1	1				-04
SS5	5/30/13	1135		X	oily water from pond	3	1	1	1					-05

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Gerard Crutchley	5/30/13 2:00pm				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
			5/30/13 14:00	Temp Blank 4°C	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

3-12107

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NSF 647

5/28/13 - Super Salvage XRF screening results:

(sample # SS1) Large trash can under dust collection unit – Chromium – 77,054 ppm

Lead – 713 ppm

(sample # SS2) Open plastic drum behind blast unit – Chromium – 15,484 ppm

Lead – 742 ppm

(sample # SS3) Dust on floor next to plastic trash can – Chromium – 59,196 ppm

Lead – 815 ppm

Sediment from left side near north end of pond – Chromium - 436 ppm

Lead – 1474 ppm

Sediment from right side near north end of pond – Chromium - 231 ppm

Lead – 1294 ppm

Mercury - 16 ppm

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Site Name: **Super salvage** **Project #:** **NSF 647**

Costas, Robin

From: Costas, Robin
Sent: Thursday, July 11, 2013 2:33 PM
To: Molnar, Adam; Martin, Kevin; Dorsey, Joe
Subject: FW: Super Salvage NSF 647, WO1306003

I have edited WO1306003 to add the following analyses and changed the due date to Aug 14th.

robin

Robin Costas, Chemist
EPA Reg3, OASQA
Ft. Meade, Md 20755
410-305-2659

Please consider the environment before printing this email

From: Young, Justin
Sent: Thursday, July 11, 2013 2:24 PM
To: Costas, Robin; Crutchley, Gerard
Cc: Dorsey, Joe; Martin, Kevin; Curry, John
Subject: RE: Super Salvage NSF 647, WO1306003

Sounds good.

Thanks,

From: Costas, Robin
Sent: Thursday, July 11, 2013 2:20 PM
To: Crutchley, Gerard; Young, Justin
Cc: Dorsey, Joe; Martin, Kevin; Curry, John
Subject: RE: Super Salvage NSF 647, WO1306003

Yes, we can run the totals. Please confirm that you want the following analysis added to NSF 647:

Samples SS1, SS2, SS3:
Total Metals by SW846 6010B (ICP) for As, Ba, Cd, Cr Pb, Se, Ag (TCLP list)

Sample SS4:
Total Metals by SW846 6010B (ICP) for As, Ba, Cd, Cr Pb, Se, Ag
Total Mercury by SW846 7471A

We will need to increase the TAT by at least 14 days to August 14th. Is all of this acceptable?

Robin Costas, Chemist
EPA Reg3, OASQA
Ft. Meade, Md 20755
410-305-2659

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From: Crutchley, Gerard
Sent: Wednesday, July 03, 2013 12:21 PM
To: Curry, John
Cc: Costas, Robin; Dorsey, Joe; Young, Justin
Subject: Super Salvage

Justin was talking with Joe yesterday and Joe was giving him some preliminary numbers on the TCLP metals analysis. It appears none of the samples we brought in failed TCLP. I was wondering if we could have the samples analyzed for Total metals. I know Joe mentioned that earlier on and I believe they have enough sample to run totals. Let me know, if I need to modify the original request .

Thanks
Jerry

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Diesel Range Organics

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 1306003-05								
Station ID: SS5								
Sample Matrix: Petroleum								
Collected: 05/29/2013								
Diesel Range Organics	**241000**	J	43200	mg/kg	50	06/04/13	06/25/13 21:38	EPA 8015D/R3QA222

Surrogates

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 1306003-05								
Station ID: SS5								
Sample Matrix: Petroleum								
Collected: 05/29/2013								
Surrogate: n-Triacontane	0.00	A	%	mg/kg	*50-150*	06/04/13	06/25/13 21:38	*EPA 8015D/R3QA222*

Diesel Range Organics

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 1306003-06								
Station ID: SS5								
Sample Matrix: Water								
Collected: 05/29/2013								
Diesel Range Organics	**398000**	J	56800	ug/L	100	06/04/13	06/25/13 20:39	EPA 8015D/R3QA222

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Surrogates

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 1306003-06								
Station ID: SS5								
Sample Matrix: Water								
Collected: 05/29/2013								
Surrogate: n-Triacontane	0.00	A	%	ug/L	*50-150*	06/04/13	06/25/13 20:39	*EPA 8015D/R3QA222*

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Semivolatile Organic Compounds

Lab ID: 1306003-05
Station ID: SS5
Sample Matrix: Petroleum
Collected: 05/29/2013

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Acenaphthene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Acenaphthylene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Acetophenone	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Anthracene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Atrazine	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Benzaldehyde	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Benzo(a)anthracene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Benzo(a)pyrene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Benzo(b)fluoranthene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Benzo(ghi)perylene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Benzo(k)fluoranthene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
1,1-Biphenyl	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Bis(2-chloroethoxy)methane	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Bis(2-chloroethyl)ether	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Bis(2-chloroisopropyl)ether	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Bis(2-ethylhexyl)phthalate	**12.1**	J	99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
4-Bromophenyl phenyl ether	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Butyl benzyl phthalate	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Carbazole	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Caprolactam	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
4-Chloroaniline	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
4-Chloro-3-methylphenol	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
2-Chloronaphthalene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
2-Chlorophenol	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
4-Chlorophenyl phenyl ether	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Chrysene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Dibenz(a,h)anthracene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Dibenzofuran	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
3,3'-Dichlorobenzidine	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Diethyl phthalate	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
2,4-Dichlorophenol	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
2,4-Dimethylphenol	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201

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Site Name: **Super salvage** **Project #:** **NSF 647**

Semivolatile Organic Compounds

Lab ID: 1306003-05
Station ID: SS5
Sample Matrix: Petroleum
Collected: 05/29/2013

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Dimethyl phthalate	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Di-n-butyl phthalate	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
4,6-Dinitro-2-methylphenol	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
2,4-Dinitrophenol	U	UJ	99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
2,4-Dinitrotoluene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
2,6-Dinitrotoluene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Di-n-octyl phthalate	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Fluoranthene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Fluorene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Hexachlorobenzene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Hexachlorobutadiene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Hexachlorocyclopentadiene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Hexachloroethane	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Indeno(1,2,3-cd)pyrene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Isophorone	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
2-Methylnaphthalene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
2-Methylphenol	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
4-Methylphenol	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Naphthalene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
2-Nitroaniline	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
3-Nitroaniline	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
4-Nitroaniline	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Nitrobenzene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
2-Nitrophenol	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
4-Nitrophenol	U	UJ	99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
N-Nitrosodimethylamine	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
N-Nitroso-di-n-propylamine	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
N-Nitrosodiphenylamine	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Pentachlorophenol	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Phenanthrene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Phenol	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
Pyrene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
1,2,4,5-Tetrachlorobenzene	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201

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Semivolatile Organic Compounds

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 1306003-05								
Station ID: SS5								
Sample Matrix: Petroleum								
Collected: 05/29/2013								
2,3,4,6-Tetrachlorophenol	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
2,4,5-Trichlorophenol	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201
2,4,6-Trichlorophenol	U		99.5	mg/kg	1	06/04/13	06/19/13 18:30	EPA 8270D/R3RQ201

Surrogates

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 1306003-05								
Station ID: SS5								
Sample Matrix: Petroleum								
Collected: 05/29/2013								
Surrogate: 2-Fluorophenol	33.2		**67** %	mg/kg	*25-121*	06/04/13	06/19/13 18:30	*EPA 8270D/R3RQ201*
Surrogate: Phenol-d5	39.0		**78** %	mg/kg	*24-113*	06/04/13	06/19/13 18:30	*EPA 8270D/R3RQ201*
Surrogate: Nitrobenzene-d5	18.0		**72** %	mg/kg	*23-120*	06/04/13	06/19/13 18:30	*EPA 8270D/R3RQ201*
Surrogate: 2-Fluorobiphenyl	19.6		**79** %	mg/kg	*30-115*	06/04/13	06/19/13 18:30	*EPA 8270D/R3RQ201*
Surrogate: 2,4,6-Tribromophenol	51.3		**103** %	mg/kg	*19-122*	06/04/13	06/19/13 18:30	*EPA 8270D/R3RQ201*
Surrogate: Terphenyl-d14	29.0		**117** %	mg/kg	*18-137*	06/04/13	06/19/13 18:30	*EPA 8270D/R3RQ201*

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

Site Name: **Super salvage** **Project #:** **NSF 647**

Semivolatile Organic Compounds

Lab ID: 1306003-06
Station ID: SS5
Sample Matrix: Water
Collected: 05/29/2013

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Acenaphthene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Acenaphthylene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Acetophenone	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Anthracene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Atrazine	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Benzaldehyde	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Benzo(a)anthracene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Benzo(a)pyrene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Benzo(b)fluoranthene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Benzo(ghi)perylene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Benzo(k)fluoranthene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
1,1-Biphenyl	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Bis(2-chloroethoxy)methane	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Bis(2-chloroethyl)ether	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Bis(2-chloroisopropyl)ether	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Bis(2-ethylhexyl)phthalate	**4340**		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
4-Bromophenyl phenyl ether	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Butyl benzyl phthalate	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Carbazole	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Caprolactam	U		625	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
4-Chloroaniline	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
4-Chloro-3-methylphenol	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
2-Chloronaphthalene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
2-Chlorophenol	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
4-Chlorophenyl phenyl ether	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Chrysene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Dibenz(a,h)anthracene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Dibenzofuran	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
3,3'-Dichlorobenzidine	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Diethyl phthalate	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
2,4-Dichlorophenol	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
2,4-Dimethylphenol	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201

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701 Mapes Road
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Site Name: **Super salvage** **Project #:** **NSF 647**

Semivolatile Organic Compounds

Lab ID: 1306003-06
Station ID: SS5
Sample Matrix: Water
Collected: 05/29/2013

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Dimethyl phthalate	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Di-n-butyl phthalate	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
4,6-Dinitro-2-methylphenol	U	UJ	625	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
2,4-Dinitrophenol	U	UJ	312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
2,4-Dinitrotoluene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
2,6-Dinitrotoluene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Di-n-octyl phthalate	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Fluoranthene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Fluorene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Hexachlorobenzene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Hexachlorobutadiene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Hexachlorocyclopentadiene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Hexachloroethane	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Indeno(1,2,3-cd)pyrene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Isophorone	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
2-Methylnaphthalene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
2-Methylphenol	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
4-Methylphenol	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Naphthalene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
2-Nitroaniline	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
3-Nitroaniline	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
4-Nitroaniline	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Nitrobenzene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
2-Nitrophenol	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
4-Nitrophenol	U		1250	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
N-Nitrosodimethylamine	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
N-Nitroso-di-n-propylamine	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
N-Nitrosodiphenylamine	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Pentachlorophenol	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Phenanthrene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Phenol	U		625	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
Pyrene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
1,2,4,5-Tetrachlorobenzene	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201

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Site Name: **Super salvage** **Project #:** **NSF 647**

Semivolatile Organic Compounds

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 1306003-06								
Station ID: SS5								
Sample Matrix: Water								
Collected: 05/29/2013								
2,3,4,6-Tetrachlorophenol	U		312	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
2,4,5-Trichlorophenol	U		625	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201
2,4,6-Trichlorophenol	U		625	ug/L	1	06/03/13	06/19/13 21:53	EPA 8270D/R3QA201

Surrogates

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 1306003-06								
Station ID: SS5								
Sample Matrix: Water								
Collected: 05/29/2013								
Surrogate: 2-Fluorophenol	63.8		**102** %	ug/L	*21-110*	06/03/13	06/19/13 21:53	*EPA 8270D/R3QA201*
Surrogate: Phenol-d5	73.1	A	**117** %	ug/L	*39-106*	06/03/13	06/19/13 21:53	*EPA 8270D/R3QA201*
Surrogate: Nitrobenzene-d5	36.1	A	**116** %	ug/L	*43-108*	06/03/13	06/19/13 21:53	*EPA 8270D/R3QA201*
Surrogate: 2-Fluorobiphenyl	44.5	A, UJ	**142** %	ug/L	*43-116*	06/03/13	06/19/13 21:53	*EPA 8270D/R3QA201*
Surrogate: 2,4,6-Tribromophenol	139	A	**222** %	ug/L	*10-123*	06/03/13	06/19/13 21:53	*EPA 8270D/R3QA201*
Surrogate: Terphenyl-d14	U		%	ug/L	*33-141*	06/03/13	06/19/13 21:53	*EPA 8270D/R3QA201*

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Site Name: **Super salvage** **Project #:** **NSF 647**

TCLP Extracted Metals

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 1306003-01								
Station ID: SS1								
Sample Matrix: Solid								
Collected: 05/29/2013								
Arsenic	U		0.800	mg/L	4	06/19/13	06/25/13 12:39	EPA 1311/R3QA159
Barium	**0.831**		0.800	mg/L	4	06/19/13	06/25/13 12:39	EPA 1311/R3QA159
Cadmium	**0.080**		0.050	mg/L	10	06/19/13	06/25/13 12:39	EPA 1311/R3QA159
Chromium	U		0.150	mg/L	10	06/19/13	06/25/13 12:39	EPA 1311/R3QA159
Lead	U		0.200	mg/L	4	06/19/13	06/25/13 12:39	EPA 1311/R3QA159
Selenium	U		2.00	mg/L	10	06/19/13	06/25/13 12:39	EPA 1311/R3QA159
Silver	U		0.040	mg/L	4	06/19/13	06/25/13 12:39	EPA 1311/R3QA159
Lab ID: 1306003-01								
Station ID: SS1								
Sample Matrix: Solid								
Collected: 05/29/2013								
Arsenic	U		199	ug/g	10	07/11/13	07/17/13 12:52	SW6010B/R3QA159
Barium	**271**		199	ug/g	10	07/11/13	07/17/13 12:52	SW6010B/R3QA159
Cadmium	**7.3**		5.0	ug/g	10	07/11/13	07/17/13 12:52	SW6010B/R3QA159
Chromium	**2040**		10.0	ug/g	10	07/11/13	07/17/13 12:52	SW6010B/R3QA159
Lead	**1560**		49.8	ug/g	10	07/11/13	07/17/13 12:52	SW6010B/R3QA159
Selenium	U		199	ug/g	10	07/11/13	07/17/13 12:52	SW6010B/R3QA159
Silver	**75.5**		10.0	ug/g	10	07/11/13	07/17/13 12:52	SW6010B/R3QA159

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Site Name: **Super salvage** **Project #:** **NSF 647**

TCLP Extracted Metals

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 1306003-02								
Station ID: SS2								
Sample Matrix: Solid								
Collected: 05/29/2013								
Arsenic	U		0.800	mg/L	4	06/19/13	06/25/13 12:44	EPA 1311/R3QA159
Barium	U		0.800	mg/L	4	06/19/13	06/25/13 12:44	EPA 1311/R3QA159
Cadmium	U		0.020	mg/L	4	06/19/13	06/25/13 12:44	EPA 1311/R3QA159
Chromium	U		0.060	mg/L	4	06/19/13	06/25/13 12:44	EPA 1311/R3QA159
Lead	U		0.200	mg/L	4	06/19/13	06/25/13 12:44	EPA 1311/R3QA159
Selenium	U		0.800	mg/L	4	06/19/13	06/25/13 12:44	EPA 1311/R3QA159
Silver	U		0.040	mg/L	4	06/19/13	06/25/13 12:44	EPA 1311/R3QA159
Lab ID: 1306003-02								
Station ID: SS2								
Sample Matrix: Solid								
Collected: 05/29/2013								
Arsenic	U		200	ug/g	10	07/11/13	07/17/13 13:01	SW6010B/R3QA159
Barium	**285**		200	ug/g	10	07/11/13	07/17/13 13:01	SW6010B/R3QA159
Cadmium	**10.4**		5.0	ug/g	10	07/11/13	07/17/13 13:01	SW6010B/R3QA159
Chromium	**417**	J	10.0	ug/g	10	07/11/13	07/17/13 13:01	SW6010B/R3QA159
Lead	**3140**		50.0	ug/g	10	07/11/13	07/17/13 13:01	SW6010B/R3QA159
Selenium	U		200	ug/g	10	07/11/13	07/17/13 13:01	SW6010B/R3QA159
Silver	**116**		10.0	ug/g	10	07/11/13	07/17/13 13:01	SW6010B/R3QA159

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Site Name: **Super salvage** **Project #:** **NSF 647**

TCLP Extracted Metals

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 1306003-03								
Station ID: SS3								
Sample Matrix: Solid								
Collected: 05/29/2013								
Arsenic	U		0.800	mg/L	4	06/19/13	06/25/13 12:54	EPA 1311/R3QA159
Barium	U		0.800	mg/L	4	06/19/13	06/25/13 12:54	EPA 1311/R3QA159
Cadmium	**0.558**		0.020	mg/L	4	06/19/13	06/25/13 12:54	EPA 1311/R3QA159
Chromium	**0.165**		0.060	mg/L	4	06/19/13	06/25/13 12:54	EPA 1311/R3QA159
Lead	**4.26**		0.200	mg/L	4	06/19/13	06/25/13 12:54	EPA 1311/R3QA159
Selenium	U		0.800	mg/L	4	06/19/13	06/25/13 12:54	EPA 1311/R3QA159
Silver	**0.053**		0.040	mg/L	4	06/19/13	06/25/13 12:54	EPA 1311/R3QA159
Lab ID: 1306003-03								
Station ID: SS3								
Sample Matrix: Solid								
Collected: 05/29/2013								
Arsenic	U		194	ug/g	10	07/11/13	07/17/13 13:11	SW6010B/R3QA159
Barium	**279**		194	ug/g	10	07/11/13	07/17/13 13:11	SW6010B/R3QA159
Cadmium	**14.2**		4.9	ug/g	10	07/11/13	07/17/13 13:11	SW6010B/R3QA159
Chromium	**2190**		9.7	ug/g	10	07/11/13	07/17/13 13:11	SW6010B/R3QA159
Lead	**1700**		48.5	ug/g	10	07/11/13	07/17/13 13:11	SW6010B/R3QA159
Selenium	U		194	ug/g	10	07/11/13	07/17/13 13:11	SW6010B/R3QA159
Silver	**49.2**		9.7	ug/g	10	07/11/13	07/17/13 13:11	SW6010B/R3QA159

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Site Name: **Super salvage** **Project #:** **NSF 647**

TCLP Extracted Metals

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 1306003-04								
Station ID: SS4								
Sample Matrix: Solid								
Collected: 05/29/2013								
Arsenic	U		0.800	mg/L	4	06/19/13	06/25/13 12:58	EPA 1311/R3QA159
Barium	U		0.800	mg/L	4	06/19/13	06/25/13 12:58	EPA 1311/R3QA159
Cadmium	U		0.020	mg/L	4	06/19/13	06/25/13 12:58	EPA 1311/R3QA159
Chromium	U		0.060	mg/L	4	06/19/13	06/25/13 12:58	EPA 1311/R3QA159
Lead	**1.01**		0.200	mg/L	4	06/19/13	06/25/13 12:58	EPA 1311/R3QA159
Mercury	U		0.0002	mg/L	1	07/08/13	07/08/13 13:12	EPA 1311/R3QA135
Selenium	U		0.800	mg/L	4	06/19/13	06/25/13 12:58	EPA 1311/R3QA159
Silver	U		0.040	mg/L	4	06/19/13	06/25/13 12:58	EPA 1311/R3QA159

Lab ID: 1306003-04								
Station ID: SS4								
Sample Matrix: Solid								
Collected: 05/29/2013								
Arsenic	U		73.1	ug/g	10	07/11/13	07/17/13 13:16	SW6010B/R3QA159
Barium	**92.7**		73.1	ug/g	10	07/11/13	07/17/13 13:16	SW6010B/R3QA159
Cadmium	**9.4**		1.8	ug/g	10	07/11/13	07/17/13 13:16	SW6010B/R3QA159
Chromium	**63.5**		3.7	ug/g	10	07/11/13	07/17/13 13:16	SW6010B/R3QA159
Lead	**1120**		18.3	ug/g	10	07/11/13	07/17/13 13:16	SW6010B/R3QA159
Mercury	**2.8**	J	0.2	ug/g	2	07/15/13	07/15/13 15:32	EPA 7471A/R3QA131
Selenium	U		73.1	ug/g	10	07/11/13	07/17/13 13:16	SW6010B/R3QA159
Silver	U		3.7	ug/g	10	07/11/13	07/17/13 13:16	SW6010B/R3QA159

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701 Mapes Road
Fort Meade, Maryland 20755-5350

Site Name: **Super salvage** **Project #:** **NSF 647**

Total Metals

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 1306003-05								
Station ID: SS5								
Sample Matrix: Petroleum								
Collected: 05/29/2013								
Arsenic	U		11.0	ug/g	1	06/19/13	07/01/13 10:28	SW6010B/R3QA159
Barium	U		11.0	ug/g	1	06/19/13	07/01/13 10:28	SW6010B/R3QA159
Cadmium	U		0.3	ug/g	1	06/19/13	07/01/13 10:28	SW6010B/R3QA159
Chromium	**2.0**		0.5	ug/g	1	06/19/13	07/01/13 10:28	SW6010B/R3QA159
Lead	**18.3**		2.7	ug/g	1	06/19/13	07/01/13 10:28	SW6010B/R3QA159
Selenium	U	J	11.0	ug/g	1	06/19/13	07/01/13 10:28	SW6010B/R3QA159
Silver	U		0.5	ug/g	1	06/19/13	07/01/13 10:28	SW6010B/R3QA159
Lab ID: 1306003-06								
Station ID: SS5								
Sample Matrix: Water								
Collected: 05/29/2013								
Arsenic	U		200	ug/L	1	06/19/13	06/25/13 13:22	SW6010B/R3QA159
Barium	U		200	ug/L	1	06/19/13	06/25/13 13:22	SW6010B/R3QA159
Cadmium	U		5.0	ug/L	1	06/19/13	06/25/13 13:22	SW6010B/R3QA159
Chromium	U		10.0	ug/L	1	06/19/13	06/25/13 13:22	SW6010B/R3QA159
Lead	**85.9**		50.0	ug/L	1	06/19/13	06/25/13 13:22	SW6010B/R3QA159
Selenium	U		200	ug/L	1	06/19/13	06/25/13 13:22	SW6010B/R3QA159
Silver	U		10.0	ug/L	1	06/19/13	06/25/13 13:22	SW6010B/R3QA159

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Tentatively Identified Compound (TIC) Report

Semivolatile Organic Compounds

CAS Number	Compound	Result mg/kg	Analyte Qualifiers	Retention Time	Analyzed	Method/SOP#
Lab ID:	1306003-05					
Station ID:	SS5					
Sample Matrix:	Petroleum					
Collected:	05/29/2013					
3892-00-0	Pentadecane, 2,6,10-trimethyl-	2.07	T	8.32	06/19/13 18:30	EPA 8270D/R3RQ201
638-36-8	Hexadecane, 2,6,10,14-tetramethyl-	5.61	T	8.82	06/19/13 18:30	EPA 8270D/R3RQ201

Semivolatile Organic Compounds

CAS Number	Compound	Result ug/L	Analyte Qualifiers	Retention Time	Analyzed	Method/SOP#
Lab ID:	1306003-06					
Station ID:	SS5					
Sample Matrix:	Water					
Collected:	05/29/2013					
NA	unknown (01)	181	T	4.08	06/19/13 21:53	EPA 8270D/R3QA201
104-76-7	1-Hexanol, 2-ethyl-	1900	T	4.34	06/19/13 21:53	EPA 8270D/R3QA201
NA	unknown (02)	143	T	4.45	06/19/13 21:53	EPA 8270D/R3QA201
37617-26-8	Cyclopropane, 1-methyl-2-octyl-	168	T	4.61	06/19/13 21:53	EPA 8270D/R3QA201
NA	unknown (03)	188	T	4.87	06/19/13 21:53	EPA 8270D/R3QA201
124-07-2	Octanoic Acid	214	T	5.26	06/19/13 21:53	EPA 8270D/R3QA201
112-05-0	Nonanoic acid	185	T	5.89	06/19/13 21:53	EPA 8270D/R3QA201
334-48-5	n-Decanoic acid	201	T	6.48	06/19/13 21:53	EPA 8270D/R3QA201
6175-49-1	2-Dodecanone	271	T	6.68	06/19/13 21:53	EPA 8270D/R3QA201
1604-34-8	2-Undecanone, 6,10-dimethyl-	302	T	6.74	06/19/13 21:53	EPA 8270D/R3QA201
NA	unknown (04)	241	T	6.77	06/19/13 21:53	EPA 8270D/R3QA201
NA	unknown (05)	271	T	7.05	06/19/13 21:53	EPA 8270D/R3QA201
NA	unknown (06)	137	T	7.12	06/19/13 21:53	EPA 8270D/R3QA201
112-88-9	1-Octadecene	194	T	7.21	06/19/13 21:53	EPA 8270D/R3QA201
NA	unknown (07)	281	T	7.25	06/19/13 21:53	EPA 8270D/R3QA201
NA	unknown (08)	226	T	7.51	06/19/13 21:53	EPA 8270D/R3QA201
NA	unknown (09)	192	T	7.75	06/19/13 21:53	EPA 8270D/R3QA201
NA	unknown (10)	400	T	7.79	06/19/13 21:53	EPA 8270D/R3QA201
1921-70-6	Pentadecane, 2,6,10,14-tetramethyl-	654	T	8.33	06/19/13 21:53	EPA 8270D/R3QA201
638-36-8	Hexadecane, 2,6,10,14-tetramethyl-	1250	T	8.83	06/19/13 21:53	EPA 8270D/R3QA201

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QC Data
Diesel Range Organics

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BF31001 - EPA 3520C DROs										
Blank (BF31001-BLK1)				Prepared: 06/04/13 13:30			Analyzed: 06/21/13 11:13			
Diesel Range Organics	U	100	ug/L							
Surrogate: n-Triacontane	*70.2*		*"*	*75.000*		*94*	*50-150*			
LCS (BF31001-BS1)				Prepared: 06/04/13 13:30			Analyzed: 06/21/13 13:12			
Diesel Range Organics	99.8	100	ug/L	100.00		100	70-130			
Surrogate: n-Triacontane	*77.3*		*"*	*75.000*		*103*	*50-150*			
LCS (BF31001-BS2)				Prepared: 06/04/13 13:30			Analyzed: 06/21/13 15:10			
Diesel Range Organics	1030	100	ug/L	1000.0		103	70-130			
Surrogate: n-Triacontane	*78.6*		*"*	*75.000*		*105*	*50-150*			
Batch BF32003 - EPA 3580A DROs										
Blank (BF32003-BLK1)				Prepared: 06/04/13 12:00			Analyzed: 06/21/13 12:12			
Diesel Range Organics	U	1000	mg/kg							
Surrogate: n-Triacontane	*741*		*"*	*750.00*		*99*	*50-150*			
LCS (BF32003-BS1)				Prepared: 06/04/13 12:00			Analyzed: 06/21/13 14:11			
Diesel Range Organics	723	1000	mg/kg	1000.0		72	70-130			
Surrogate: n-Triacontane	*707*		*"*	*750.00*		*94*	*50-150*			
LCS (BF32003-BS2)				Prepared: 06/04/13 12:00			Analyzed: 06/21/13 16:10			
Diesel Range Organics	10600	1000	mg/kg	10000		106	70-130			
Surrogate: n-Triacontane	*790*		*"*	*750.00*		*105*	*50-150*			
Matrix Spike (BF32003-MS1)		**Source: 1306003-05**		Prepared: 06/04/13 12:00			Analyzed: 06/25/13 22:38			
Diesel Range Organics	249000	44000	mg/kg	8795.1	241000	92	70-130			
Surrogate: n-Triacontane	*0.00*		*"*	*659.63*			*50-150*			*A*

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QC Data
Diesel Range Organics

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BF32003 - EPA 3580A DROs										
Matrix Spike Dup (BF32003-MSD1)		**Source: 1306003-05**		Prepared: 06/04/13 12:00			Analyzed: 06/25/13 23:37			
Diesel Range Organics	285000	42400	mg/kg	8474.6	241000	516	70-130	139	20	A
Surrogate: n-Triacontane	*0.00*		*"*	*635.59*			*50-150*			*A*

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QC Data
Semivolatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BF31804 - EPA 3520C SVOC										
Blank (BF31804-BLK1)				Prepared: 06/03/13 14:50			Analyzed: 06/19/13 19:21			
Acenaphthene	U	5.00	ug/L							
Acenaphthylene	U	5.00	"							
Acetophenone	U	5.00	"							
Anthracene	U	5.00	"							
Atrazine	U	5.00	"							
Benzaldehyde	U	5.00	"							
Benzo(a)anthracene	U	5.00	"							
Benzo(a)pyrene	U	5.00	"							
Benzo(b)fluoranthene	U	5.00	"							
Benzo(ghi)perylene	U	5.00	"							
Benzo(k)fluoranthene	U	5.00	"							
1,1-Biphenyl	U	5.00	"							
Bis(2-chloroethoxy)methane	U	5.00	"							
Bis(2-chloroethyl)ether	U	5.00	"							
Bis(2-chloroisopropyl)ether	U	5.00	"							
Bis(2-ethylhexyl)phthalate	1.58	5.00	"							J
4-Bromophenyl phenyl ether	U	5.00	"							
Butyl benzyl phthalate	U	5.00	"							
Carbazole	U	5.00	"							
Caprolactam	U	10.0	"							
4-Chloroaniline	U	5.00	"							
4-Chloro-3-methylphenol	U	5.00	"							
2-Chloronaphthalene	U	5.00	"							
2-Chlorophenol	U	5.00	"							
4-Chlorophenyl phenyl ether	U	5.00	"							
Chrysene	U	5.00	"							
Dibenz(a,h)anthracene	U	5.00	"							
Dibenzofuran	U	5.00	"							
3,3'-Dichlorobenzidine	U	5.00	"							
Diethyl phthalate	U	5.00	"							
2,4-Dichlorophenol	U	5.00	"							
2,4-Dimethylphenol	U	5.00	"							
Dimethyl phthalate	U	5.00	"							
Di-n-butyl phthalate	1.64	5.00	"							J
4,6-Dinitro-2-methylphenol	U	10.0	"							
2,4-Dinitrophenol	U	5.00	"							
2,4-Dinitrotoluene	U	5.00	"							
2,6-Dinitrotoluene	U	5.00	"							
Di-n-octyl phthalate	U	5.00	"							
Fluoranthene	U	5.00	"							
Fluorene	U	5.00	"							
Hexachlorobenzene	U	5.00	"							
Hexachlorobutadiene	U	5.00	"							

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QC Data
Semivolatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BF31804 - EPA 3520C SVOC										
Blank (BF31804-BLK1)				Prepared: 06/03/13 14:50			Analyzed: 06/19/13 19:21			
Hexachlorocyclopentadiene	U	5.00	ug/L							
Hexachloroethane	U	5.00	"							
Indeno(1,2,3-cd)pyrene	U	5.00	"							
Isophorone	U	5.00	"							
2-Methylnaphthalene	U	5.00	"							
2-Methylphenol	U	5.00	"							
4-Methylphenol	U	5.00	"							
Naphthalene	U	5.00	"							
2-Nitroaniline	U	5.00	"							
3-Nitroaniline	U	5.00	"							
4-Nitroaniline	U	5.00	"							
Nitrobenzene	U	5.00	"							
2-Nitrophenol	U	5.00	"							
4-Nitrophenol	U	20.0	"							
N-Nitrosodimethylamine	U	5.00	"							
N-Nitroso-di-n-propylamine	U	5.00	"							
N-Nitrosodiphenylamine	U	5.00	"							
Pentachlorophenol	U	5.00	"							
Phenanthrene	U	5.00	"							
Phenol	U	10.0	"							
Pyrene	U	5.00	"							
1,2,4,5-Tetrachlorobenzene	U	5.00	"							
2,3,4,6-Tetrachlorophenol	U	5.00	"							
2,4,5-Trichlorophenol	U	10.0	"							
2,4,6-Trichlorophenol	U	10.0	"							
unknown (06)	14.2		"							T
unknown (05)	9.48		"							T
unknown (04)	7.16		"							T
unknown (03)	14.9		"							T
unknown (02)	8.35		"							T
unknown (01)	2.52		"							T
Propylene glycol	2.89		"							T
Surrogate: 2-Fluorophenol	*42.8*		*"*	*50.000*		*86*	*21-110*			
Surrogate: Phenol-d5	*45.9*		*"*	*50.000*		*92*	*39-106*			
Surrogate: Nitrobenzene-d5	*21.0*		*"*	*25.000*		*84*	*43-108*			
Surrogate: 2-Fluorobiphenyl	*21.9*		*"*	*25.000*		*88*	*43-116*			
Surrogate: 2,4,6-Tribromophenol	*54.4*		*"*	*50.000*		*109*	*10-123*			
Surrogate: Terphenyl-d14	*22.5*		*"*	*25.000*		*90*	*33-141*			

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QC Data
Semivolatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BF31804 - EPA 3520C SVOC										
LCS (BF31804-BS1)				Prepared: 06/03/13 14:50			Analyzed: 06/19/13 20:12			
Acenaphthene	34.6	5.00	ug/L	40.000		87	60-132			
Acenaphthylene	33.0	5.00	"	40.000		83	53-126			
Acetophenone	31.3	5.00	"	40.000		78	30-160			
Anthracene	36.3	5.00	"	40.000		91	43-118			
Atrazine	39.6	5.00	"	40.000		99	30-160			
Benzaldehyde	33.4	5.00	"	40.000		83	30-160			
Benzo(a)anthracene	38.7	5.00	"	40.000		97	41-133			
Benzo(a)pyrene	41.1	5.00	"	40.000		103	31-148			
Benzo(b)fluoranthene	38.9	5.00	"	40.000		97	42-140			
Benzo(ghi)perylene	38.2	5.00	"	40.000		95	0.01-195			
Benzo(k)fluoranthene	37.3	5.00	"	40.000		93	25-146			
1,1-Biphenyl	32.7	5.00	"	40.000		82	30-160			
Bis(2-chloroethoxy)methane	34.8	5.00	"	40.000		87	49-165			
Bis(2-chloroethyl)ether	30.8	5.00	"	40.000		77	42-126			
Bis(2-chloroisopropyl)ether	31.1	5.00	"	40.000		78	62-139			
Bis(2-ethylhexyl)phthalate	46.0	5.00	"	40.000		115	28-137			
4-Bromophenyl phenyl ether	36.7	5.00	"	40.000		92	64-114			
Butyl benzyl phthalate	45.0	5.00	"	40.000		112	0.01-140			
Carbazole	37.9	5.00	"	40.000		95	30-160			
Caprolactam	40.8	10.0	"	40.000		102	30-160			
4-Chloroaniline	34.4	5.00	"	40.000		86	30-160			
4-Chloro-3-methylphenol	36.3	5.00	"	40.000		91	40-128			
2-Chloronaphthalene	32.9	5.00	"	40.000		82	64-114			
2-Chlorophenol	31.7	5.00	"	40.000		79	36-121			
4-Chlorophenyl phenyl ether	32.7	5.00	"	40.000		82	38-145			
Chrysene	36.8	5.00	"	40.000		92	44-140			
Dibenz(a,h)anthracene	42.6	5.00	"	40.000		107	0.01-200			
Dibenzofuran	33.5	5.00	"	40.000		84	30-160			
3,3'-Dichlorobenzidine	58.1	5.00	"	40.000		145	8-213			
Diethyl phthalate	36.2	5.00	"	40.000		91	0.01-100			
2,4-Dichlorophenol	36.9	5.00	"	40.000		92	52-122			
2,4-Dimethylphenol	28.4	5.00	"	40.000		71	41-109			
Dimethyl phthalate	35.5	5.00	"	40.000		89	0.01-100			
Di-n-butyl phthalate	39.0	5.00	"	40.000		97	8-111			
4,6-Dinitro-2-methylphenol	15.1	10.0	"	40.000		38	53-100			A
2,4-Dinitrophenol	3.67	5.00	"	40.000		9	0.01-173			J
2,4-Dinitrotoluene	36.5	5.00	"	40.000		91	47-127			
2,6-Dinitrotoluene	37.2	5.00	"	40.000		93	68-138			
Di-n-octyl phthalate	48.0	5.00	"	40.000		120	18-132			
Fluoranthene	38.6	5.00	"	40.000		96	42-122			
Fluorene	35.2	5.00	"	40.000		88	71-109			
Hexachlorobenzene	36.3	5.00	"	40.000		91	10-142			
Hexachlorobutadiene	35.9	5.00	"	40.000		90	37-103			

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QC Data
Semivolatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BF31804 - EPA 3520C SVOC										
LCS (BF31804-BS1)				Prepared: 06/03/13 14:50			Analyzed: 06/19/13 20:12			
Hexachlorocyclopentadiene	4.70	5.00	ug/L	40.000		12	0.01-104			J
Hexachloroethane	31.0	5.00	"	40.000		78	55-100			
Indeno(1,2,3-cd)pyrene	42.1	5.00	"	40.000		105	0.01-151			
Isophorone	33.9	5.00	"	40.000		85	46-181			
2-Methylnaphthalene	35.2	5.00	"	40.000		88	30-160			
2-Methylphenol	31.9	5.00	"	40.000		80	30-160			
4-Methylphenol	34.4	5.00	"	40.000		86	30-160			
Naphthalene	35.0	5.00	"	40.000		87	35-120			
2-Nitroaniline	32.5	5.00	"	40.000		81	30-160			
3-Nitroaniline	37.3	5.00	"	40.000		93	30-160			
4-Nitroaniline	45.8	5.00	"	40.000		114	30-160			
Nitrobenzene	32.4	5.00	"	40.000		81	54-158			
2-Nitrophenol	36.4	5.00	"	40.000		91	45-167			
4-Nitrophenol	31.8	20.0	"	40.000		79	13-107			
N-Nitrosodimethylamine	29.5	5.00	"	40.000		74	30-160			
N-Nitroso-di-n-propylamine	31.2	5.00	"	40.000		78	41-116			
N-Nitrosodiphenylamine	39.9	5.00	"	40.000		100	30-160			
Pentachlorophenol	33.6	5.00	"	40.000		84	9-103			
Phenanthrene	35.8	5.00	"	40.000		90	65-109			
Phenol	29.9	10.0	"	40.000		75	12-110			
Pyrene	40.5	5.00	"	40.000		101	69-100			A
1,2,4,5-Tetrachlorobenzene	40.0	5.00	"	40.000		100	30-160			
2,3,4,6-Tetrachlorophenol	43.9	5.00	"	40.000		110	30-160			
2,4,5-Trichlorophenol	35.8	10.0	"	40.000		90	30-160			
2,4,6-Trichlorophenol	36.9	10.0	"	40.000		92	52-130			
Surrogate: 2-Fluorophenol	*35.8*		"	*50.000*		*72*	*21-110*			
Surrogate: Phenol-d5	*42.1*		"	*50.000*		*84*	*39-106*			
Surrogate: Nitrobenzene-d5	*20.5*		"	*25.000*		*82*	*43-108*			
Surrogate: 2-Fluorobiphenyl	*21.2*		"	*25.000*		*85*	*43-116*			
Surrogate: 2,4,6-Tribromophenol	*53.8*		"	*50.000*		*108*	*10-123*			
Surrogate: Terphenyl-d14	*24.1*		"	*25.000*		*96*	*33-141*			

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QC Data
Semivolatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BF31805 - EPA 3580A SVOC										
Blank (BF31805-BLK1)				Prepared: 06/04/13 13:00		Analyzed: 06/19/13 15:06				
Acenaphthene	U	100	mg/kg							
Acenaphthylene	U	100	"							
Acetophenone	U	100	"							
Anthracene	U	100	"							
Atrazine	U	100	"							
Benzaldehyde	U	100	"							
Benzo(a)anthracene	U	100	"							
Benzo(a)pyrene	U	100	"							
Benzo(b)fluoranthene	U	100	"							
Benzo(ghi)perylene	U	100	"							
Benzo(k)fluoranthene	U	100	"							
1,1-Biphenyl	U	100	"							
Bis(2-chloroethoxy)methane	U	100	"							
Bis(2-chloroethyl)ether	U	100	"							
Bis(2-chloroisopropyl)ether	U	100	"							
Bis(2-ethylhexyl)phthalate	U	100	"							
4-Bromophenyl phenyl ether	U	100	"							
Butyl benzyl phthalate	U	100	"							
Carbazole	U	100	"							
Caprolactam	U	100	"							
4-Chloroaniline	U	100	"							
4-Chloro-3-methylphenol	U	100	"							
2-Chloronaphthalene	U	100	"							
2-Chlorophenol	U	100	"							
4-Chlorophenyl phenyl ether	U	100	"							
Chrysene	U	100	"							
Dibenz(a,h)anthracene	U	100	"							
Dibenzofuran	U	100	"							
3,3'-Dichlorobenzidine	U	100	"							
Diethyl phthalate	U	100	"							
2,4-Dichlorophenol	U	100	"							
2,4-Dimethylphenol	U	100	"							
Dimethyl phthalate	U	100	"							
Di-n-butyl phthalate	U	100	"							
4,6-Dinitro-2-methylphenol	U	100	"							
2,4-Dinitrophenol	U	100	"							
2,4-Dinitrotoluene	U	100	"							
2,6-Dinitrotoluene	U	100	"							
Di-n-octyl phthalate	U	100	"							
Fluoranthene	U	100	"							
Fluorene	U	100	"							
Hexachlorobenzene	U	100	"							
Hexachlorobutadiene	U	100	"							

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QC Data
Semivolatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BF31805 - EPA 3580A SVOC										
Blank (BF31805-BLK1)				Prepared: 06/04/13 13:00			Analyzed: 06/19/13 15:06			
Hexachlorocyclopentadiene	U	100	mg/kg							
Hexachloroethane	U	100	"							
Indeno(1,2,3-cd)pyrene	U	100	"							
Isophorone	U	100	"							
2-Methylnaphthalene	U	100	"							
2-Methylphenol	U	100	"							
4-Methylphenol	U	100	"							
Naphthalene	U	100	"							
2-Nitroaniline	U	100	"							
3-Nitroaniline	U	100	"							
4-Nitroaniline	U	100	"							
Nitrobenzene	U	100	"							
2-Nitrophenol	U	100	"							
4-Nitrophenol	U	100	"							
N-Nitrosodimethylamine	U	100	"							
N-Nitroso-di-n-propylamine	U	100	"							
N-Nitrosodiphenylamine	U	100	"							
Pentachlorophenol	U	100	"							
Phenanthrene	U	100	"							
Phenol	U	100	"							
Pyrene	U	100	"							
1,2,4,5-Tetrachlorobenzene	U	100	"							
2,3,4,6-Tetrachlorophenol	U	100	"							
2,4,5-Trichlorophenol	U	100	"							
2,4,6-Trichlorophenol	U	100	"							
Surrogate: 2-Fluorophenol	*38.8*		"	*50.000*		*78*	*25-121*			
Surrogate: Phenol-d5	*42.6*		"	*50.000*		*85*	*24-113*			
Surrogate: Nitrobenzene-d5	*19.4*		"	*25.000*		*77*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*21.3*		"	*25.000*		*85*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*45.7*		"	*50.000*		*91*	*19-122*			
Surrogate: Terphenyl-d14	*23.9*		"	*25.000*		*96*	*18-137*			

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QC Data
Semivolatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BF31805 - EPA 3580A SVOC										
LCS (BF31805-BS1)				Prepared: 06/04/13 13:00			Analyzed: 06/19/13 15:57			
Benzo(a)pyrene	42.4	100	mg/kg	40.000		106	0-200			J
Bis(2-chloroethyl)ether	2.80	100	"	40.000		7	30-150			A, J
4-Chloroaniline	21.2	100	"	40.000		53	30-150			J
4-Chloro-3-methylphenol	27.6	100	"	40.000		69	30-150			J
2-Chlorophenol	3.71	100	"	40.000		9	30-150			A, J
Diethyl phthalate	33.7	100	"	40.000		84	30-150			J
2,4-Dinitrotoluene	33.6	100	"	40.000		84	30-150			J
Hexachlorobenzene	33.9	100	"	40.000		85	30-150			J
Hexachloroethane	0.629	100	"	40.000		2	30-150			A, J
Isophorone	23.6	100	"	40.000		59	30-150			J
Naphthalene	12.2	100	"	40.000		30	30-150			J
4-Nitrophenol	36.1	100	"	40.000		90	30-150			J
N-Nitroso-di-n-propylamine	17.6	100	"	40.000		44	30-150			J
N-Nitrosodiphenylamine	38.9	100	"	40.000		97	30-150			J
Pentachlorophenol	25.8	100	"	40.000		64	30-150			J
Phenol	8.60	100	"	40.000		22	30-150			A, J
Surrogate: 2-Fluorophenol	*1.02*		"	*50.000*		*2*	*25-121*			A
Surrogate: Phenol-d5	*12.3*		"	*50.000*		*25*	*24-113*			
Surrogate: Nitrobenzene-d5	*6.29*		"	*25.000*		*25*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*14.1*		"	*25.000*		*56*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*47.3*		"	*50.000*		*95*	*19-122*			
Surrogate: Terphenyl-d14	*22.1*		"	*25.000*		*88*	*18-137*			
LCS (BF31805-BS2)				Prepared: 06/04/13 13:00			Analyzed: 06/19/13 16:48			
Benzo(a)pyrene	3.40	100	mg/kg	4.0000		85	0-200			J
Bis(2-chloroethyl)ether	1.95	100	"	4.0000		49	30-150			J
4-Chloroaniline	1.37	100	"	4.0000		34	30-150			J
4-Chloro-3-methylphenol	2.35	100	"	4.0000		59	30-150			J
2-Chlorophenol	1.83	100	"	4.0000		46	30-150			J
Diethyl phthalate	3.29	100	"	4.0000		82	30-150			J
2,4-Dinitrotoluene	2.06	100	"	4.0000		51	30-150			J
Hexachlorobenzene	3.54	100	"	4.0000		88	30-150			J
Hexachloroethane	1.78	100	"	4.0000		44	30-150			J
Isophorone	2.58	100	"	4.0000		65	30-150			J
Naphthalene	2.54	100	"	4.0000		63	30-150			J
4-Nitrophenol	1.14	100	"	4.0000		28	30-150			A, J
N-Nitroso-di-n-propylamine	2.28	100	"	4.0000		57	30-150			J
N-Nitrosodiphenylamine	4.10	100	"	4.0000		103	30-150			J
Pentachlorophenol	1.35	100	"	4.0000		34	30-150			J
Phenol	2.01	100	"	4.0000		50	30-150			J
Surrogate: 2-Fluorophenol	*22.5*		"	*50.000*		*45*	*25-121*			
Surrogate: Phenol-d5	*27.8*		"	*50.000*		*56*	*24-113*			
Surrogate: Nitrobenzene-d5	*12.8*		"	*25.000*		*51*	*23-120*			

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QC Data
Semivolatile Organic Compounds

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BF31805 - EPA 3580A SVOC										
LCS (BF31805-BS2)				Prepared: 06/04/13 13:00			Analyzed: 06/19/13 16:48			
Surrogate: 2-Fluorobiphenyl	*15.9*		*mg/kg*	*25.000*		*64*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*43.8*		*"*	*50.000*		*88*	*19-122*			
Surrogate: Terphenyl-d14	*20.3*		*"*	*25.000*		*81*	*18-137*			

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QC Data
TCLP Extracted Metals

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BF31701 - Metals Water Prep										
Blank (BF31701-BLK1)				Prepared: 06/17/13 07:27			Analyzed: 06/25/13 12:24			
Arsenic	U	0.200	mg/L							
Barium	U	0.200	"							
Cadmium	U	0.005	"							
Chromium	U	0.015	"							
Lead	U	0.050	"							
Selenium	U	0.200	"							
Silver	U	0.010	"							
LCS (BF31701-BS1)				Prepared: 06/17/13 07:27			Analyzed: 06/25/13 12:35			
Arsenic	1.024	0.200	mg/L	1.0000		102	85-115			
Barium	4.054	0.200	"	4.0000		101	85-115			
Cadmium	0.0982	0.005	"	0.10000		98	85-115			
Chromium	1.013	0.015	"	1.0000		101	85-115			
Lead	0.9388	0.050	"	1.0000		94	85-115			
Selenium	1.060	0.200	"	1.0000		106	85-115			
Silver	0.0944	0.010	"	0.10000		94	85-115			
Duplicate (BF31701-DUP1)		**Source: 1306003-02**		Prepared: 06/17/13 07:27			Analyzed: 06/25/13 12:48			
Arsenic	U	0.800	mg/L		U				20	
Barium	0.5727	0.800	"		0.6072			6	20	
Cadmium	0.0004	0.020	"		U			200	20	D
Chromium	U	0.060	"		U				20	
Lead	0.0233	0.200	"		0.0265			13	20	
Selenium	U	0.800	"		U				20	
Silver	U	0.040	"		U				20	
Duplicate (BF31701-DUP2)		**Source: 1306003-06**		Prepared: 06/17/13 07:27			Analyzed: 06/25/13 13:25			
Arsenic	0.0042	0.200	mg/L		U			200	20	D
Barium	0.0431	0.200	"		0.0438			2	20	
Cadmium	0.0014	0.005	"		0.0014			2	20	
Chromium	0.0020	0.015	"		U			200	20	D
Lead	0.0814	0.050	"		0.0859			5	20	
Selenium	U	0.200	"		0.0049				20	
Silver	0.0014	0.010	"		0.0011			19	20	

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QC Data
TCLP Extracted Metals

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BF31701 - Metals Water Prep										
Matrix Spike (BF31701-MS1)		**Source: 1306003-04**		Prepared: 06/17/13 07:27			Analyzed: 06/25/13 13:03			
Arsenic	1.091	0.800	mg/L	1.0000	U	109	70-130			
Barium	4.181	0.800	"	4.0000	0.2431	98	70-130			
Cadmium	0.1168	0.020	"	0.10000	0.0193	98	70-130			
Chromium	0.9817	0.060	"	1.0000	U	98	70-130			
Lead	1.943	0.200	"	1.0000	1.008	94	70-130			
Selenium	0.9371	0.800	"	1.0000	U	94	70-130			
Silver	0.0983	0.040	"	0.10000	0.0098	89	70-130			
Matrix Spike (BF31701-MS2)		**Source: 1306003-06**		Prepared: 06/17/13 07:27			Analyzed: 06/25/13 13:28			
Arsenic	1.075	0.200	mg/L	1.0000	U	107	70-130			
Barium	4.304	0.200	"	4.0000	0.0438	107	70-130			
Cadmium	0.1040	0.005	"	0.10000	0.0014	103	70-130			
Chromium	1.082	0.015	"	1.0000	U	108	70-130			
Lead	1.087	0.050	"	1.0000	0.0859	100	70-130			
Selenium	1.154	0.200	"	1.0000	0.0049	115	70-130			
Silver	0.0976	0.010	"	0.10000	0.0011	96	70-130			
Batch BG30201 - Mercury 245.1/245.2/7470a Prep										
Blank (BG30201-BLK1)				Prepared: 07/08/13 12:00			Analyzed: 07/08/13 13:04			
Mercury	U	0.0002	mg/L							
LCS (BG30201-BS1)				Prepared: 07/08/13 12:00			Analyzed: 07/08/13 13:10			
Mercury	0.001970	0.0002	mg/L	0.0020000		98	85-115			
Duplicate (BG30201-DUP1)		**Source: 1306003-04**		Prepared: 07/08/13 12:00			Analyzed: 07/08/13 13:14			
Mercury	0.000080	0.0002	mg/L		0.000080			0	20	

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QC Data
TCLP Extracted Metals

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BG30201 - Mercury 245.1/245.2/7470a Prep										
Matrix Spike (BG30201-MS1)		**Source: 1306003-04**		Prepared: 07/08/13 12:00			Analyzed: 07/08/13 13:16			
Mercury	0.002070	0.0002	mg/L	0.0020000	0.000080	99	70-130			

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QC Data
Total Metals

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BF31701 - Metals Water Prep										
Duplicate (BF31701-DUP2)		**Source: 1306003-06**		Prepared: 06/17/13 07:27			Analyzed: 06/25/13 13:25			
Arsenic	U	200	ug/L		U				20	
Barium	43.1176	200	"		43.8472			2	20	
Cadmium	1.37915	5.0	"		1.35248			2	20	
Chromium	1.97615	10.0	"		U				20	
Lead	81.4270	50.0	"		85.9028			5	20	
Selenium	U	200	"		U				20	
Silver	1.37543	10.0	"		1.14144			19	20	
Matrix Spike (BF31701-MS2)		**Source: 1306003-06**		Prepared: 06/17/13 07:27			Analyzed: 06/25/13 13:28			
Arsenic	1074.64	200	ug/L	1000.0	U	107	70-130			
Barium	4304.40	200	"	4000.0	43.8472	107	70-130			
Cadmium	103.953	5.0	"	100.00	1.35248	103	70-130			
Chromium	1082.16	10.0	"	1000.0	U	108	70-130			
Lead	1086.88	50.0	"	1000.0	85.9028	100	70-130			
Selenium	1153.69	200	"	1000.0	U	115	70-130			
Silver	97.5941	10.0	"	100.00	1.14144	96	70-130			
Batch BF31901 - Metals Petroleum Prep										
Blank (BF31901-BLK1)				Prepared: 06/19/13 09:53			Analyzed: 07/01/13 11:29			
Arsenic	U	20.0	ug/g							
Barium	U	20.0	"							
Cadmium	U	0.5	"							
Chromium	U	1.0	"							
Lead	U	5.0	"							
Selenium	U	20.0	"							
Silver	U	1.0	"							

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QC Data
Total Metals

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BF31901 - Metals Petroleum Prep										
LCS (BF31901-BS1)				Prepared: 06/19/13 09:53			Analyzed: 07/01/13 10:20			
Arsenic	89.8175	20.0	ug/g	100.00		90	85-115			
Barium	355.179	20.0	"	400.00		89	85-115			
Cadmium	8.74406	0.5	"	10.000		87	85-115			
Chromium	92.3469	1.0	"	100.00		92	85-115			
Lead	83.7128	5.0	"	100.00		84	85-115			A
Selenium	92.7312	20.0	"	100.00		93	85-115			
Silver	9.53259	1.0	"	10.000		95	85-115			
Duplicate (BF31901-DUP1)		**Source: 1306003-05**		Prepared: 06/19/13 09:53			Analyzed: 07/01/13 10:31			
Arsenic	U	11.0	ug/g		U				35	
Barium	4.38213	11.0	"		4.55234			4	35	
Cadmium	0.048401	0.3	"		0.074799			43	35	D
Chromium	1.88888	0.5	"		1.99836			6	35	
Lead	17.2077	2.7	"		18.2936			6	35	
Selenium	U	11.0	"		U				35	
Silver	0.128190	0.5	"		0.161529			23	35	
Matrix Spike (BF31901-MS1)		**Source: 1306003-05**		Prepared: 06/19/13 09:53			Analyzed: 07/01/13 10:34			
Arsenic	45.0254	9.4	ug/g	46.992	U	96	70-130			
Barium	188.446	9.4	"	187.97	4.55234	98	70-130			
Cadmium	4.64270	0.2	"	4.6992	0.074799	97	70-130			
Chromium	49.6845	0.5	"	46.992	1.99836	101	70-130			
Lead	60.7251	2.3	"	46.992	18.2936	90	70-130			
Selenium	46.5252	9.4	"	46.992	U	99	70-130			
Silver	4.98310	0.5	"	4.6992	0.161529	103	70-130			
Reference (BF31901-SRM1)				Prepared: 06/19/13 09:53			Analyzed: 07/01/13 10:23			
Arsenic	156.021	40.3	ug/g	161.00		97	80-120			
Barium	232.047	40.3	"	252.00		92	82-118			
Cadmium	120.025	1.0	"	128.00		94	81-125			
Chromium	64.9122	2.0	"	69.500		93	79-121			
Lead	134.390	10.1	"	142.00		95	80-120			
Selenium	25.5804	40.3	"	64.200		40	76-124			A
Silver	136.519	2.0	"	130.00		105	53-147			

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QC Data
Total Metals

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BG31002 - Metals Solid prep										
Blank (BG31002-BLK1)				Prepared: 07/11/13 11:53			Analyzed: 07/17/13 12:01			
Arsenic	U	20.0	ug/g							
Barium	U	20.0	"							
Cadmium	U	0.5	"							
Chromium	U	1.0	"							
Lead	U	5.0	"							
Selenium	U	20.0	"							
Silver	U	1.0	"							
LCS (BG31002-BS1)				Prepared: 07/11/13 11:53			Analyzed: 07/17/13 12:47			
Arsenic	196.200	20.0	ug/g	200.00		98	85-115			
Barium	770.686	20.0	"	800.00		96	85-115			
Cadmium	18.7411	0.5	"	20.000		94	85-115			
Chromium	197.906	1.0	"	200.00		99	85-115			
Lead	176.284	5.0	"	200.00		88	85-115			
Selenium	179.400	20.0	"	200.00		90	85-115			
Silver	17.6168	1.0	"	20.000		88	85-115			
Duplicate (BG31002-DUP1)		**Source: 1306003-01**		Prepared: 07/11/13 11:53			Analyzed: 07/17/13 12:57			
Arsenic	46.5551	192	ug/g		21.9124			72	35	D
Barium	256.458	192	"		271.190			6	35	
Cadmium	6.50957	4.8	"		7.26543			11	35	
Chromium	1680.14	9.6	"		2036.63			19	35	
Lead	1471.25	47.9	"		1556.25			6	35	
Selenium	6.78831	192	"		21.5040			104	35	D
Silver	68.5963	9.6	"		75.5045			10	35	
Matrix Spike (BG31002-MS1)		**Source: 1306003-02**		Prepared: 07/11/13 11:53			Analyzed: 07/17/13 13:06			
Arsenic	240.400	200	ug/g	200.00	45.5871	97	70-130			
Barium	988.324	200	"	800.00	285.054	88	70-130			
Cadmium	28.8840	5.0	"	20.000	10.4427	92	70-130			
Chromium	517.217	10.0	"	200.00	416.558	50	70-130			A
Lead	2620.87	50.0	"	200.00	3145.00	NR	70-130			TD
Selenium	165.000	200	"	200.00	7.90200	79	70-130			
Silver	87.8572	10.0	"	20.000	116.280	NR	70-130			TD

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QC Data
Total Metals

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BG31002 - Metals Solid prep										
Reference (BG31002-SRM1)				Prepared: 07/11/13 11:53			Analyzed: 07/17/13 12:04			
Arsenic	155.044	44.4	ug/g	161.00		96	80-120			
Barium	233.311	44.4	"	252.00		93	82-118			
Cadmium	121.062	1.1	"	128.00		95	81-125			
Chromium	64.7080	2.2	"	69.500		93	79-121			
Lead	132.903	11.1	"	142.00		94	80-120			
Selenium	61.1778	44.4	"	64.200		95	76-124			
Silver	120.825	2.2	"	130.00		93	53-147			
Batch BG31503 - Mercury 245.5/7471a Prep										
Blank (BG31503-BLK1)				Prepared: 07/15/13 12:00			Analyzed: 07/15/13 14:58			
Mercury	U	0.1	ug/g							
LCS (BG31503-BS1)				Prepared: 07/15/13 12:00			Analyzed: 07/15/13 15:00			
Mercury	1.04500	0.1	ug/g	1.0000		104	85-115			
Duplicate (BG31503-DUP1)		**Source: 1306003-04**		Prepared: 07/15/13 12:00			Analyzed: 07/15/13 15:34			
Mercury	3.72350	0.2	ug/g		2.82000			28	35	
Matrix Spike (BG31503-MS1)		**Source: 1306003-04**		Prepared: 07/15/13 12:00			Analyzed: 07/15/13 15:08			
Mercury	2.10860	0.09	ug/g	0.90498	2.82000	NR	70-130			A
Reference (BG31503-SRM1)				Prepared: 07/15/13 12:00			Analyzed: 07/15/13 15:29			
Mercury	3.06579	0.1	ug/g	2.8000		109	68-132			

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 3 Environmental Science Center
Office of Analytical Services and Quality Assurance
701 Mapes Road
Fort Meade, Maryland 20755-5350

Site Name: **Super salvage** **Project #:** **NSF 647**

Notes and Definitions

UJ The analyte was not detected at or above the quantitation limit. The quantitation limit is an estimate.

TD Spike concentration is too dilute for accurate quantitation resulting in inaccurate recovery calculations..

T Tentatively Identified Compound. Identified as a result of a library search using the EPA/NIST Mass Spectral Library. Standards were not used to verify the identity and quantity of the compound. The reported value is an estimate.

J The identification of the analyte is acceptable; the reported value is an estimate.

D Source sample result and/or duplicate sample result are below the quantitation limit and the RPD is artificially high. Precision data (RPD value) has no significance for this QC Sample.

A Quality control value is outside acceptance limits.

%REC Percent Recovery

RPD Relative Percent Difference

U Analyte included in the analysis, but not detected at or above the quantitation limit.

Quantitation Limit: The lowest concentration of an analyte that can be reliably measured within specified limits of precision and accuracy for a specific laboratory analytical method and that takes into account analytical adjustments made during sample preparation and analysis.

REPORTING PROTOCOL FOR SOLID SAMPLE RESULTS: Percent Solids (percent dry wt at 105 degrees C) determinations are routinely performed for most organic and inorganic analyses. Consequently, these samples are analyzed wet and converted to a dry weight result for reporting purposes. If metals and mercury analyses are requested, they are routinely prepared for analyses by an initial drying at 60 degrees C, homogenized prior to digestion, and are analyzed and reported on a dry weight basis. Oil-type samples are analyzed and reported on a wet weight basis for all analyses because of the nature of the sample matrix. Any exceptions to this protocol will be noted in the narrative.