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 11:35
Contact	Gerard Crutchley
Report Date	07/29/13 10:58
Project #	NSF 647
Work Order	1306003

DRAFT

Analyses included in this report:

DROs by SW846 8015D

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

DRAFT

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

Report Narrative

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

DRAFT

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

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. So the layers were separated as best as possible and two separate samples were made in the lab. 1306003-05 is the top layer and 1306003-06 is the bottom layer. Separation was not perfect resulting in some of the top layer present in the bottom layer. 1306003-05 was extracted following EPA Method 3580A while 1306003-06 was extracted following EPA Method 8270D.

Present in the sample was a very large broad peak. Cleanup of the sample did not remove the peak and dilution of the sample resulted only in the peak disappearing. 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. A TIC identification of something so broad cannot be precise though it does contain 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.

4,6-dinitro-2-mthylphenol is qualified as estimated (UJ) in 1306003-06 due to outside low limits in the blank spike.

4-nitrophenol is qualified as estimated (UJ) in 1306003-05 due to outside low limits in the blank spike. 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.

Not enough sample was provided to perform matrix spike duplicate.

DRO Analysis Note:
One aqueous sample was received at the ESC on 5/30/13. The sample 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 surrogate failure was qualified with an “A” for each. The DRO results for 1306003-05 and 1306003-06 were qualified as estimates “J” because of this failure.

BF32003-MSD1 was qualified “A” because it 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 of lack of sample volume.

This analysis was performed according to the ESC’s 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

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

DRAFT

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

Report Narrative

Concentration of Oily Layer = 241,000 mg/Kg
Total Weight of DRO in Oily Layer = 23,800 mg

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 result for mercury was qualified as failing with an "A". This failure was due to matrix effects caused by a coating of oil that was present on the entire soil sample. The corresponding source sample result (1306003-04) was qualified as an estimate "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. The sample result should be considered an estimate and was qualified as such with a "J".

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

DRAFT

Site Name: Super salvage	**Project #:** NSF 647
Station ID: SS5	**Lab ID:** 1306003-05
Sample Matrix: Petroleum	**Date Collected:** 05/29/2013

Diesel Range Organics

Targets

Analyte	Result mg/kg	Flags Qualifiers	Quantitation Limit	Dilution	Prepared	Analyzed	Method/SOP#
Diesel Range Organics	241000	J	43200	50	06/04/13	06/25/13 21:38	EPA 8015D/R3QA222

Surrogates

Analyte	Result mg/kg	Flags Qualifiers	**%Recovery**	%Recovery Limits	Prepared	Analyzed	Method/SOP#
Surrogate: n-Triacontane	0.00	*A*	**%**	*50-150*	06/04/13	06/25/13 21:38	*EPA 8015D/R3QA222*

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

DRAFT

Site Name: Super salvage	**Project #:** NSF 647
Station ID: SS5	**Lab ID:** 1306003-06
Sample Matrix: Water	**Date Collected:** 05/29/2013

Diesel Range Organics

Targets

Analyte	Result ug/L	Flags Qualifiers	Quantitation Limit	Dilution	Prepared	Analyzed	Method/SOP#
Diesel Range Organics	398000	J	56800	100	06/04/13	06/25/13 20:39	EPA 8015D/R3QA222

Surrogates

Analyte	Result ug/L	Flags Qualifiers	**%Recovery**	%Recovery Limits	Prepared	Analyzed	Method/SOP#
Surrogate: n-Triacontane	0.00	*A*	**%**	*50-150*	06/04/13	06/25/13 20:39	*EPA 8015D/R3QA222*

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

DRAFT

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

Notes and Definitions

J	The identification of the analyte is acceptable; the reported value is an estimate.
A	Quality control value is outside acceptance limits.
NR	Not Reported
RPD	Relative Percent Difference
U	Analyte included in the analysis, but not detected at or above the quantitation limit.
NR	Not Reported

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.

SOLID SAMPLE RESULTS - REPORTING PROTOCOL: Solid samples where % Solids (percent dry wt at 105 degrees C) has been performed, are analyzed wet and converted to a dry weight result for reporting purposes. This is routine for organics and most inorganic analyses. When metals and mercury analyses are requested, solid samples are routinely analyzed and reported on a dry weight basis. Solid samples for metals/mercury are prepared for analysis by an initial drying at 60 degree C and homogenization before digestion. Oil-type samples will be analyzed and reported on a wet weight basis for all analyses because of the nature of the sample. Any exceptions to the protocol will be noted with a qualifier