HEARTLAND ENVIRONMENTAL SERVICES, INC.
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REGION II ORDNANCE DATA VALIDATION

NAVAL WEAPONS STATION - COLTSNECK

ROY F. WESTON CASE 9103L829

Coltsneck ID	R.F. Weston ID	Coltsneck ID	R.F. Weston ID
	Soil Samples (all)		
11-001-S001	9103L829-001	11-002-S001	9103L829-002
11-003-S001	9103L829-003	11-003-S101	9103L829-004
11-004-S001	9103L829-005	11-004-S001MS	9103L829-005MS
11-004-S001	9103L829-005MSD	11-005-S001	9103L829-006
11-006-S001	9103L829-007	11-007-S001	9103L829-008
11-008-S001	9103L829-009		

PREPARED BY: Eugene M. Watson DATE: 8-29-91

VERIFIED BY: Christoph r D. Scarpellino DATE: 9/5/91

DATA ASSESSMENT AND NARRATIVE

EXPLOSIVES ANALYSIS

General

The organic findings offered in this screening report assumes that all analytical results are correct as reported and is based upon the examination of the reported holding times, blank analysis results, matrix spike recoveries, HPLC performance, blank spike results and calibration results. This report was prepared in compliance relative to the analytical and deliverable requirements specified in the USATHAMA/PMRMA Programs Analytical Method for Explosives in Soil by HPLC and Region II Data Validation Deliverable Guidelines. However, due to the fact this package does not require the submission of true Form Is, Heartland ESI will submit a Target Compound Summary List of qualified data in place of the Form I's in the data validation package. All comments made within this report should be considered when examining the analytical results (Form I's). Please refer the specific findings found in each category to the Summary of Data Qualifications table.

Holding times

All of the extraction (7 days) and analysis (40 days) holding times were met per the USATHAMA/PMRMA protocol.

HPLC performance

The system performance of the HPLC was good. The instrument did not exhibit any major problems.

Initial calibrations

The laboratory did not calibrate the instrument per the USATHAMA/PMRMA protocol in two ways. First and foremost, the laboratory did not analyze all of the calibration points required by the methodology. The low concentration standard (0.2X) was not analyzed which, according to the protocol, reflects the laboratory's ability to achieve the sensitivity needed for the detection limits that are reported. Although this is a deviation from the protocol, Heartland ESI will not qualify the data based upon the good compound responses in the 0.5X standard.

Secondly, the laboratory did not follow the proper procedure for the analysis of the final closing check standard that is analyzed at the end of the sequence. The methodology states that the highest concentration standard (100X) is to be analyzed at the completion of the analyses and its response must agree within:

a) 25% for that concentration from the first sev n calibration curves or

DATA ASSESSMENT AND NARRATIVE

EXPLOSIVES ANALYSIS

Initial calibrations (continued)

b) thereafter, two (2) standard deviations of the mean response for the concentration for the calibrations curves.

The standard analyzed by the laboratory did agree within 25% of the initial calibration. However, the laboratory did not analyze the highest concentration standard, instead the laboratory analyzed the 10X standard. Since all of the sample results were non detects, Heartland ESI will not qualify the data based on the analysis of the wrong standard.

In addition, the laboratory analyzed two (2) samples after the closing standard was analyzed. Heartland ESI must qualify the data associated with these two (2) samples due to the absence of a closing check standard.

Specific Findings:

1. For samples 11-007-S001 and 11-008-S001, the closing check standard was analyzed before the analysis of the samples. All positive results are qualified as estimated (J) and all non detects are qualified as estimated.

Continuing calibrations

No continuing calibrations associated with this sample batch.

M thod blanks

The method blank did not exhibit contamination for the target explosive compounds.

MS/MSD analysis

Heartland ESI had to use good professional judgement to evaluate the MS/MSD results due to the fact that the USATHAMA/PMRMA protocol does not have set QA/QC limits for the recoveries of the spike compounds. The soil MS/MSD did exhibit acceptable recoveries for all the target explosive compounds.

Method specific QA/QC

The laboratory did analyze the correct number of QA/QC samples. The methodology states that two (2) 10X and one (1) 2X spike blanks be analyzed for control charting. However, control charts ar not provided. No qualifications are needed.

DATA ASSESSMENT AND NARRATIVE

EXPLOSIVES ANALYSIS

Compound identification/quantitation

No positive results were reported. The laboratory did not report the soil sample results on a dry weight basis as stated in the case narrative. All results must be considered as is or "wet weight".

Ov rall assessment

The overall quality of the data package is fair. The laboratory deviated from the required protocol in some instances.

GLOSSARY OF DATA QUALIFIERS

QUALIFICATION CODES

U = Not detected

J = Estimated value

UJ = Reported quantitation limit is qualified as estimated

R = Result is rejected and unusable

NJ = Presumptive evidence for the presence of the material at an estimated value

Heartland ESI specific findings will be noted in numerical form on the Form Is in this data validation report. These specific finding footnotes will reflect the conclusions found in the data validation process that resulted in the qualification of the data.

HEARTLAND ENVIRONMENTAL
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SUMMARY OF DATA QUALIFICATIONS

SAMPLE ID	ANALYTE ID	DL	QL	SPECIFIC FINDINGS
11-007-S001, 11-008-S001	all analytes	+/-	J/UJ	1

* DL denotes the Form I qualifier supplied by the laboratory

QL denotes the qualifier used by Heartland ESI

\+ in the DL column d notes a positive result

\- in the DL column denotes a negative result

Roy F. Weston, Inc. - Lionville Laboratory
Explosives in soil by HPLC
Report Date: 04/09/91 10:07

RFW Batch Number: 9103L829 Client: NAVAL WEAPONS/COLTSNECK Work Order: 1771-15-03-0000 Page: 1

	Cust ID:	11-001-S001	11-002-S001	11-003-S001	11-003-S101	11-004-S001	11-004-S001
Sample Information	RFW#:	001	002	003	004	005	005 MS
	Matrix:	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	UG/G	UG/G	UG/G	UG/G	UG/G	UG/G
HMX		1.27 U	1.27 U	1.27 U	1.27 U	1.27 U	112 %
RDX		0.98 U	0.98 U	0.98 U	0.98 U	0.98 U	104 %
1,3,5-TNB		2.09 U	2.09 U	2.09 U	2.09 U	2.09 U	114 %
1,3-DNB		0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	115 %
Tetryl		5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	95 %
2,4,6-TNT		1.92 U	1.92 U	1.92 U	1.92 U	1.92 U	109 %
2,6-DNT		0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	112 %
2,4-DNT		0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	109 %

	Cust ID:	11-004-S001	11-005-S001	11-006-S001	11-007-S001	11-008-S001	BLK
Sample Information	RFW#:	005 MSD	006	007	008	009	91LLC018-MB1
	Matrix:	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SEDIMENT	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	UG/G	UG/G	UG/G	UG/G	UG/G	UG/G
HMX		114 %	1.27 U	1.27 U	1.27 U J	1.27 U J	1.27 U
RDX		109 %	0.98 U	0.98 U	0.98 U	0.98 U	0.98 U
1,3,5-TNB		112 %	2.09 U	2.09 U	2.09 U	2.09 U	2.09 U
1,3-DNB		115 %	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U
Tetryl		105 %	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
2,4,6-TNT		109 %	1.92 U	1.92 U	1.92 U	1.92 U	1.92 U
2,6-DNT		113 %	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
2,4-DNT		111 %	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

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