WHITE SANDS MISSILE RANGE – NEW MEXICO
ELECTRONIC VALIDATION REVIEW REPORT
SDG: 1308287
LC-38 DIESEL SPILL
August 2013

Analytical data was evaluated in accordance with applicable USEPA SW-846 method requirements, "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (October 1999); "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review" (July 2002), site-specific requirements defined in *White Sands Missile Range Site-Wide Quality Assurance Project Plan* (ARCADIS, 2009), and any additional evaluation criteria set forth in the area specific Work Plan. The validation presented in this review was performed at the White Sands defined Level II.

The data review summarized in this report includes a review of all sample collection documentation and the electronic data validation of the analytical data housed in the project database. Sample collection documentation included sample collection logs and chains of custody. The electronic data validation was performed utilizing the EQuIS Data Qualification Module (DQM). DQM checks for the following parameters:

- Holding times and preservation;
- Blank contamination;
  - Method blanks,
  - Trip blanks,
  - Equipment blanks;
- Matrix spike and Duplicate sample recovery;
- Matrix Spike and Matrix Spike Duplicate relative percent differences;
- Laboratory Control Sample and Duplicate recovery;
- Laboratory Control Sample and Duplicate relative percent differences;
- Surrogate recovery (organic analyses only); and
- Field duplicate relative percent difference.

Manually review was performed on the following items:

- Sample dilutions;
- reporting limits and
- Case Narratives.

Reviewed data was generated by DHL Analytical. Data qualifiers were applied electronically to the database with any additional qualifiers added manually. A summary of the data as amended by data qualifiers is included with the original hard copy reports.

The attached table summarizes the data that were qualified due to QC deficiencies. The table indicates compounds/analytes qualified based on electronic and manual validation. Refer to the associated method section of the validation checklist for a detailed explanation of qualification. All other data in this SDG are considered usable as reported.

The following list of data qualifiers and definitions were applied in accordance with qualification criteria defined in the greater than guidance documents:

UB Compound/analyte detected in blank or associated blank, qualified as a non-detect at listed value.

J The analyte was positively identified, but the associated numerical value is the approximate concentration of the analyte in the sample.

UJ The analyte was not detected greater than the reporting limit; however, the reported quantitation limit is approximate and may, or may not represent the actual limit of quantitation necessary to accurately and precisely measure analyte in the sample.

R The sample result is rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria; and the presence or absence of the analyte cannot be verified.

DQM RUN BY:	Rachelle Borne	10/25/13
REVIEW PERFORMED BY:	Rachelle Borne	10/28/13
SIGNATURE:	Rachelle Borne	10/28/13
PEER REVIEW:	Dennis Capria	10/28/13

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The following samples were included in this SDG:

SDG	Sample ID	Sample Date	Parent Sample
1308287	LC38-DSPL-MW-001-0813	08/27/13	
1308287	LC38-DSPL-MW-002-0813	08/27/13	
1308287	LC38-DSPL-RB-001-0813	08/27/13	

ANALYTICAL DATA PACKAGE DOCUMENTATION

GENERAL INFORMATION

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Methods of analysis		X		X	
4. Reporting limits of analysis		X		X	
5. Master tracking list		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preparation/extraction date		X		X	
9. Sample analysis date		X		X	
10. Copy of chain-of-custody form signed by lab sample custodian		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Laboratory Signature		X		X	

QA – quality assurance

The analytical report was complete with the following exceptions or notations.

Comments:

Note: ICV and CCV recoveries were discussed in the case narrative; however, ICVs and CCVs are not included in a Tier II validation. Therefore, the CCVs and ICVs were not evaluated and qualifications were not applied due to ICV and CCV deviations.

TPH – DIESEL RANGE ORGANICS

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment blanks		DQM		DQM
4. Surrogate spike recoveries	DQM		DQM	
5. Laboratory control sample (LCS) A. LCS %R	DQM		DQM	
B. LCS duplicate (LCSD) %R	DQM		DQM	
C. LCS/LCSD RPD	DQM		DQM	
6. Matrix spike (MS)				
A. MS %R	DQM		DQM	
B. MS duplicate (MSD) %R	DQM		DQM	
C. MS/MSD precision (RPD)	DQM		DQM	
7. Field Duplicate precision (RPD)	NA		NA	

M – Manual Review %R - percent recovery RPD - relative percent difference
DQM – Data Qualification Module

Comments:
This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Method M8015D.

3B. DRO was detected in the rinsate blank. The associated field samples were qualified as non-detect for DRO if the sample concentrations were less than five times the blank value.

6. Sample LC38-DSPL-MW-002-0813 was used as the MS/MSD. The recoveries and RPD were acceptable.

METALS

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment blanks	DQM		DQM	
4. Serial Dilutions	M		M	
5. Laboratory control sample (LCS) A. LCS %R	DQM		DQM	
B. LCS duplicate (LCSD) %R	DQM		DQM	
C. LCS/LCSD RPD	DQM		DQM	
6. Matrix spike (MS)				
A. MS %R	DQM		DQM	
B. MS duplicate (MSD) %R	DQM		DQM	
C. MS/MSD precision (RPD)	DQM		DQM	
7. Post Digestion Spikes	M		M	
8. Field Duplicate precision (RPD)	NA		NA	

M – Manual Review %R - percent recovery RPD - relative percent difference
DQM – Data Qualification Module

Comments:
This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Methods 6020.

6. Sample LC38-DSPL-MW-002-0813 was used as the MS/MSD. The recoveries and RPD were acceptable.

GENERAL CHEMISTRY

Items Reviewed	DQM Deficiency		Qualification Applied	
	No	Yes	No	Yes
1. Holding times/Preservation	DQM		DQM	
2. Reporting limits	M		M	
3. Blanks				
A. Method blanks	DQM		DQM	
B. Equipment blanks	DQM		DQM	
4. Laboratory control sample (LCS) A. LCS %R	DQM		DQM	
B. LCS duplicate (LCSD) %R	DQM		DQM	
C. LCS/LCSD RPD	DQM		DQM	
5. Matrix spike (MS)				
A. MS %R	DQM		DQM	
B. MS duplicate (MSD) %R	DQM		DQM	
C. MS/MSD precision (RPD)	DQM		DQM	
6. Field Duplicate precision (RPD)	NA		NA	

M – Manual Review %R - percent recovery RPD - relative percent difference
DQM – Data Qualification Module

Comments:
This section presents a discussion of any additions or changes to the electronic data validation for compounds analyzed by Methods M3500 – Hexavalent/Trivalent Chromium.

5. Sample LC38-DSPL-MW-002-0813 was used as the MS/MSD. The recoveries and RPD were acceptable.

LC-38

Qualification Summary

SDG	Sample ID	Method	Analyte	Result	Units	Qualifier	Reason	Dilution
1308287	LC38-DSPL-MW-001-0813	M8015D	Diesel Range Organics	0.136	mg/l	UB	Blank Contamination	1
1308287	LC38-DSPL-MW-002-0813	M8015D	Diesel Range Organics	0.0619	mg/l	UB	Blank Contamination	1