

Memorandum

Date: 8 November 2010
To: Ruth Custance
Matt Thomas
From: Mary Tyler
CC: J. Caprio
Subject: **Tier IV Data Validation - Level IV Data deliverable –Metals by Methods 40 CFR, Part 50, Appendix G(M)/6010B and Particulate Matter as PM-10 by Method 40 CFR, Part 50, Appendix J – Calscience Work Order 10-08-1901, Supplemental Report 1**

SITE: Ascon Landfill

INTRODUCTION

This report summarizes the findings of the Tier IV data validation of three PM-10 filter samples and one field blank collected on August 23, 2010, as part of the Ascon Landfill sampling event. Calscience, Garden Grove, California, analyzed the samples. The samples were analyzed by the following methods:

- Methods 40 CFR, Part 50, Appendix G(M)/6010B – Selected Metals (arsenic, cadmium, chromium and lead)
- Method 40 CFR, Part 50, Appendix J – Particulate Matter as PM-10

EXECUTIVE SUMMARY

The samples were handled, prepared, and measured in the same manner under similar prescribed conditions.

Overall, based on this Tier IV data validation covering the QC parameters listed below, the data are usable for meeting project objectives.

The data were reviewed based on the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004 (OSWER 9240.1-45, EPA 540-R-04-004), the Interim Removal Measure Air Monitoring Plan, Ascon Landfill Site, Huntington Beach,

California, May 2010, as well as by the pertinent methods referenced by the data package and professional judgment.

The following samples were analyzed in the data set:

Lab ID	Client ID
10-10-1901-01	IRM-AA-02
10-10-1901-02	IRM-AA-05

Lab ID	Client ID
10-10-1901-03	IRM-AA-06
10-10-1901-04	IRM-AA-02 (Field Blank)

The samples were received at the laboratory at ambient temperature. No sample preservation issues were noted by the laboratory.

The original laboratory report was revised to include the raw data; the revised laboratory report was identified by the laboratory as 10-08-1901, Supplemental Report 1.

1.0 METALS

Three PM-10 filter samples and one field blank were analyzed for selected metals (arsenic, cadmium, chromium and lead) by Methods 40 CFR, Part 50, Appendix G (M)/6010B.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Initial Calibration
- ✓ Initial and Continuing Calibration Verification
- ✓ Initial and Continuing Calibration Blanks
- ✓ Blanks
- ✓ Matrix Spike/Matrix Spike Duplicate
- ✓ Laboratory Control Sample
- ✓ Target Compound Quantitations

1.1 Overall Assessment

The metals data reported in this package are considered to be usable for meeting project objectives. The analytical completeness defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for analysis, for the project is 100%.

1.2 Holding Times

The holding time for metals analysis of air filters is 180 days from sample collection to analysis. The holding time was met.

1.3 Initial Calibration

Initial calibration requirements were met for the inductively coupled plasma spectrometer (ICP).

It was noted that the interference check standards (ICSA and ICSAB) assessments were not included in the data package. The raw data were assessed by the data validator and the ICSA and ICSAB recoveries were within the QC acceptance limits.

1.4 Initial and Continuing Calibration Verification (ICV and CCV)

The percent recoveries in the associated ICVs and CCVs were within the QC acceptance limits.

1.5 Initial and Continuing Calibration Blanks (ICB and CCB)

The ICBs and CCBs met the QC acceptance criteria.

1.6 Blanks

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). One method blank was analyzed. Metals were not detected in the method blank above the reporting limits.

Sample IRM-AA-02 (Field Blank) was analyzed; metals were not detected in the field blank above the reporting limits.

1.7 Matrix Spike/Matrix Spike Duplicate

MS/MSD pairs were analyzed at the proper frequency for the samples (one pair per batch of 20 samples). A sample set specific MS/MSD pair, IRM-AA-02, was analyzed. Percent recovery and relative percent difference (RPD) results were within the laboratory specified acceptance criteria.

1.8 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). A LCS/LCS duplicate (LCSD) pair was analyzed. The LCS/LCSD pair had percent recovery and RPD results within the laboratory specified acceptance criteria.

1.9 Target Compound Quantitations

The compound quantitations were within the validation criteria.

2.0 PARTICULATE MATTER AS PM-10

Three PM-10 filter samples and one field blank were analyzed for particulate matter as PM-10 by Method 40 CFR, Part 50, Appendix J.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Times
- ✓ Blanks
- ✓ Target Compound Quantitations

2.1 Overall Assessment

The PM-10 data reported in this package are considered to be usable for meeting project objectives. The results are considered to be valid; the analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for analysis, for the project is 100%.

2.2 Holding Times

A holding time is not listed in the method for the PM-10 analysis.

2.3 **Blanks**

Sample IRM-AA-02 (Field Blank) was analyzed; PM-10 was not detected in the field blank above the reporting limit.

2.4 **Target Compound Quantitations**

The compound quantitations were within the validation criteria.

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ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference.
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference.
- UJ The analyte was not detected above the reported sample quantitation 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 the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.