Date: October 17, 2011

To: Art Smith, EPA On Scene Coordinator

From: Limari Krebs

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Subject: Data Validation
Black Leaf Chemical Removal
Gulf Coast Analytical Laboratory – Baton Rouge, LA
Laboratory Order No.: 211092314

Data validation was performed on the analytical data for 13 soil samples, 2 sediment samples, and one equipment rinsate blank sample collected by Oneida Total Integrated Enterprises (OTIE) at the Black Leaf Chemical site in Louisville, Jefferson County, Kentucky on September 22, 2011. The samples were analyzed under Sample Delivery Group (SDG) No. 211092314 by Gulf Coast Analytical Laboratory (GCAL), of Baton Rouge, Louisiana. Samples were analyzed for organochlorine pesticides (OCP) by SW-846 Method 8081B, and arsenic and lead by SW-846 Method 6010B. This report encompasses the review of the metals data only.

Analytical data was evaluated in general accordance with all applicable data validation guidance documents, including the following: the United States (US) Environmental Protection Agency (EPA) Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Inorganic Superfund Data Review OSWER 9240.1-51 EPA 540-R-10-011 (EPA, January 2010). The analytical methods that were used by the fixed laboratory during this project provide guidance on procedures and method acceptance criteria that, in some areas, differ from that given in the NFGs. Where differences exist between the methods and the NFGs, the data validators followed the acceptance criteria given in the methods. In addition, if the fixed laboratory data package presented laboratory-derived acceptance criteria, then these criteria were used to evaluate the data, unless the criteria were considered inadequate.

SDG No. 211092314 was in the form of summary data package, which included sample results and a summary of select quality control (QC) results. Based on the limited number of QC results provided in the data package, the data validation approach applied to this laboratory report represented an abbreviated assessment of the quality of the data set. This review was not a complete assessment of all possible quality control parameters, nor was this review a complete assessment of each quality control parameter that was reviewed. The review, rather, was intended to identify and present those problems and quality control deficiencies that could be readily identified from the summary data package and the summarized calibration sheets. Raw data including chromatographs were not provided and therefore not reviewed. Data results were not recalculated because the raw data results were not provided. Because of the nature of this approach, some problems and deficiencies may not have been identified; as such, this approach may not support some critical uses and required limits on decision-making uncertainty for the data.

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Data Summary Table 1 summarizes the data results complete with validation qualifiers.

Data evaluation was based on the following parameters:

- Data Completeness
- Chain of Custody (COC) variances
- Holding Times and Preservation
- Method Blank contamination
- Field Blank contamination
- Matrix Spike/Matrix Spike Duplicate Relative Percent Difference (RPD) values
- Laboratory Control Sample recoveries
- Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL)
- Overall Assessment

The following presents the findings of the data evaluation performed.

Data Completeness

The data package was complete.

COC Variances

There were no COC variances associated with this project.

Holding Times and Preservation

Samples were received at the laboratory on 9/23/11 properly preserved and on ice. The temperature of the cooler at receipt was 2.7 degrees Celsius (ºC) within the 4.0 ºC ± 2 ºC limits.

Blanks

Method blanks and the rinsate blank sample did not contain target compounds above associated reporting limits (RL).

Matrix Spike/Matrix Spike Duplicate Samples

Matrix spike/Matrix Spike Duplicate (MS/MSD) analysis was performed on sample BLC-SS-50. The MS and MSD recoveries for arsenic were biased slightly low and outside QC limit. Therefore, the result for arsenic in the parent sample, BLC-SS-50, was qualified as estimated (J) to denote possible low bias associated with matrix interference.

The recovery for lead was also outside QC limits in the MS/MSD samples. However, data qualification was not warranted since the amount used to spike the MS/MSD sample was less than 4x the parent sample concentration.

Laboratory Control Samples

Laboratory Control Sample (LCS) recoveries were within analyte-specific laboratory derived QC limits.

Compound Quantitation and Reported Contract Required Quantitation Limits (CRQL)

The following samples were analyzed at a dilution due to the matrix interference: BLC-SS-44, BLC-SS-51, and BLC-SS-53 at a 2-fold dilution, BLC-SS-49, and BLC-SS-50 at a 5-fold dilution, and BLC-SD-01 and BLC-SD-02 at a 10-fold dilution.

General Assessment

The overall quality of these data packages were acceptable and analytical results can be reported with the associated qualifier, if applicable.

BLACK LEAF CHEMICAL REMOVAL
VALIDATED METALS ANALYTICAL RESULTS
GCAL 211092314

Parameter	BLC-SD-01	BLC-SD-02	BLC-SS-40	BLC-SS-41	BLC-SS-42	BLC-SS-43	BLC-SS-44	BLC-SS-45
Arsenic	40.7	36.1	6.08	29	10.9	53.6	5.4	16
Lead	440	472	78.2	75.8	63.7	80.2	22.3	77.5

Notes:

All results report in milligrams per kilgram (mg/kg)

J - Reported concentration is estimated

BLACK LEAF CHEMICAL REMOVAL
VALIDATED METALS ANALYTICAL RESULTS
GCAL 211092314

Parameter	BLC-SS-46	BLC-SS-47	BLC-SS-48	BLC-SS-49	BLC-SS-50	BLC-SS-51	BLC-SS-53
Arsenic	22.6	54.3	38.1	6.67 J	18	22.7	20.6
Lead	216	768	196	54.4	282	765	576

Notes:

All results report in milligrams per kilgram (mg/kg)

J - Reported concentration is estimated