ADDENDUM 1 TO THE QUALITY ASSURANCE PROJECT PLAN (QAPP) FOR SAMPLING AND ANALYSIS OF PROPERTIES IN THE VICINITY OF THE EXIDE FACILITY (VERNON, CALIFORNIA)

Prepared for:

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EFI Global

Engineering, Fire & Environmental Services

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Prepared for:

California Department of Toxic Substances Control

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Prepared for:

California Department of Toxic Substances Control

Reviewed by:

Melissa Blanchette

12/8/16

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12/8/16

1.0 Introduction

This Addendum 1 has been prepared for the Quality Assurance Project Plan (QAPP) dated November 21, 2016 to support site assessment and clean up activities being conducted for the California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances Control (DTSC) for residential and sensitive-use properties located in the vicinity of the Exide Metals facility (site) in Vernon, California. The purpose of this Addendum is to document supplemental calibration procedures and frequency for field test equipment. Specifically, calibration procedures and frequency of X-Ray Fluorescence (XRF) meters is discussed herein. This procedures detailed herein supersede procedures detailed in *Section 3.2 – Calibration Procedures and Frequency for Field Test Equipment* in the QAPP.

2.0 Calibration Procedures and Frequency for Field Test Equipment

Instruments and equipment used to gather, generate, or measure environmental data will be calibrated according to manufacturer's specifications with sufficient frequency to ensure accuracy and reproducibility of results. At a minimum, monitoring equipment used in the field, including the XRF and dust meters, will be calibrated (cross-checked) daily against a known standard. If the results show that the concentration is within 20 percent of the known standard, the equipment will be considered calibrated. The XRF's calibration will be crosschecked by analyzing Standard Reference materials (SRMs) obtained from the National Institute of Standards and Technology (NIST) for lead.

Prior to conducting the limited lead-based paint survey at each property, the XRF's calibration will be crosschecked in "Quantified Lead Paint" mode against SRM 2570 (lead concentration of approximately <0.01 milligrams per square centimeter [mg/cm^2]), SRM 2574 (lead concentration of approximately 0.71 mg/cm^2), and SRM 2573 (lead concentration of approximately 1.04 mg/cm^2).

Prior to conducting soil screening at each property, the XRF's calibration will be crosschecked in "Soils" mode against SRM Blank (180-428) or equivalent, SRM 2709a, SRM 2586 and SRM 2710a which contain lead in concentrations of approximately <1, 17.3, 432 and 5520 parts per million (ppm), respectively. In order, these are commonly referred to as the "Blank," "Low," "Medium," and "High" Standards. All four SRMs will be analyzed for a minimum of 30 seconds at the beginning of soil screening. Upon completion of soil screening at the property (between approximately 10 and 25 XRF readings), the XRF will again be calibration checked using the Medium Standard and the Blank.

If sampling at an individual property is not completed within one day, the above procedures will be implemented at the start of each subsequent day of sampling, and the closing calibration check in "Soils" mode will be conducted at the end of each day of sampling.

Because the readings from the XRF should be within 20% of the known standard, there should be no need for correction factors to be applied with regards the results of the calibration crosscheck. However, if correction factors were found to be needed for correct interpretation of the XRF field concentration data, the "raw" XRF number from the instrument should be recorded in the field with any correction factors separately noted on field sheets and later applied or referenced in the final report produced per property.