



Matthew Rodriguez
Secretary for
Environmental Protection



Department of Toxic Substances Control

Deborah O. Raphael, Director
8800 Cal Center Drive
Sacramento, California 95826-3200



Edmund G. Brown Jr.
Governor

April 4, 2014

Mr. Frederick Ganster
Exide Technologies
3000 Montrose Avenue
Reading, Pennsylvania 19605

DTSC REVIEW OF "ADDENDUM TO THE NOVEMBER 15, 2013 WORK PLAN FOR THE OFF-SITE SOIL SAMPLING, EXIDE TECHNOLOGIES, VERNON, CA" DATED MARCH 21, 2014, PERSUANT TO STIPULATION AND ORDER, DOCKET HWCA P3-12/13-010, OAH NO. 2013050540, AND CORRECTIVE ACTION CONSENT ORDER, DOCKET NO.:P3-01/02-010

Dear Mr. Ganster:

The Department of Toxic Substances Control (DTSC) has reviewed the "Addendum to the November 15, 2013 Work Plan for Off-Site Soil Sampling (Addendum Work Plan)", dated March 21, 2014. The Addendum Work Plan was prepared by Advanced GeoServices (AGS) on behalf of Exide Technologies (Exide). The Addendum Work Plan describes Exide's proposed additional off-site sampling activities in response to DTSC's March 10, 2014 letter directing Exide to:

- 1) Delineate concentrations of lead above 80 mg/kg (milligrams per kilogram) both vertically and horizontally within the Northern and Southern Assessment Areas, and at Salazar Park School. Obtain discrete sampling at each residence where composite sampling above 80 mg/kg of lead was detected to define the lateral and vertical area of impact. Sample soils at properties where the owners at other properties within the Northern and Southern Assessment Areas request an investigation of their property.
- 2) Delineate concentrations of lead above 80 mg/kg both vertically and horizontally in areas outward to at least double the sample areas of the Northern and Southern Assessment Areas. A work plan for this effort should include, but not be limited to, discrete sampling at a representative number of residences.

While the Addendum Work Plan touches on the basic concepts of DTSC's directive, it falls short of providing a sampling strategy to fully characterize the lateral and vertical extent of Exide's aerially deposited metals at the Northern and Southern Assessment Areas as well as to the surrounding communities.

DTSC's Geological Services Unit (GSU) and Human Health and Ecological Risk Office (HERO) have reviewed the Addendum Work Plan. GSU comments and recommendations are enclosed. HERO comments and recommendations are incorporated herein. A revised work plan is required and shall address the comments and recommendations in the enclosed GSU memorandum and include the following:

- A) Lead-Based Paint Inspection – While a lead-based paint inspection is an important activity designed to provide homeowners with valuable information regarding their home, DTSC believes that the inclusion of such a survey is intrusive and outside the scope of the directives stated above. The decision as to whether a lead-based paint inspection is needed shall be based solely on private conversations between the homeowner and the Los Angeles County Department of Public Health. DTSC supports such an inspection for protection of public health, but it is outside of the scope of this investigation and distracts from real efforts to characterize lead at properties that have been impacted by Exide's emissions. Soil sample data collected in the Background Area (Long Beach, California), as determined by AGS, already accounts for influence, if any, from lead-based paint. The proposed lead-based inspection section(s) is to be removed from the revised work plan.

Given the proximity of the facility to the Northern and Southern Assessment areas, the emission dispersions, the locations of the soil samples taken from the properties, DTSC considers the lead concentrations detected above background levels to be from Exide's historical, and ongoing, emissions. Exide may propose a lead-fingerprinting study of the soils to determine the source of the lead. This study would be in addition to the requirements DTSC has set forth.

- B) Soil Sampling - All soil samples should be collected and analyzed as discrete soil samples for lead. Ten discrete samples should be collected from each residence and each school, to facilitate calculation of the 95% upper confidence level of the mean for lead. This information, in conjunction with other data, will be used to determine whether remediation is warranted for each property. In order to sufficiently compare data and sets with previous sampling efforts, sample depth collection intervals for the upper six inches are to be consistent with the November 15, 2013 work plan at all sample locations.

A minimum of four drip-line samples shall be collected at a maximum of two feet from each structure. The samples should be collected from the midpoint of each side. In cases where this is not possible due to accessibility issues, two samples may be collected from each side. Data from the drip line samples shall be assessed separately from the down-spout and the soil sampling data collected from the rest of the property.

- C) Sample Locations - DTSC requires that the sampling density for the expanded areas be increased to include residences near the nodes (in red)

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as depicted on the attached Exhibit 1. All public and private schools (K-12) and public parks within the expanded assessment areas shall be sampled. Sampling in the expanded assessment areas shall be consistent with the sampling protocol for the Northern and Southern Assessment Areas. In addition, should DTSC be contacted by any resident wishing to have their property soils tested for lead within 2,000 feet of the boundaries of the proposed expanded assessment areas, Exide shall sample and test that residential property in accordance with the approved sampling criteria.

The expedited sampling and laboratory analysis of soils at the two residences with lead concentrations at or above the California Department of Public Health (CDPH) defined hazard level of 400 mg/kg shall be conducted no later than April 11, 2014. The sampling shall be performed in accordance with the March 21, 2014 Work Plan and the recommendations stated above and in the enclosed GSU memorandum.

The revised work plan is due on April 11, 2014. Should you have any questions regarding this letter, please contact me at 916-255-3630 or Peter.Ruttan@dtsc.ca.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Peter Ruttan', with a long horizontal flourish extending to the right.

Peter Ruttan, P.G.
Project Manager
Office of Permitting

Attachment - Exhibit 1
Enclosure

cc:(via e-mail)

Mr. Bud DeSart, Exide
Mr. John Hogarth, Exide
Mr. Ed Mopas, Exide
Mr. Paul Stratman, AGS
Mr. Ed Pupka, SCAQMD
Mr. Jerrick Torres, City of Vernon
Dr. Cyrus Rangan, LACPHD
Mr. Rizgar Ghazi, DTSC
Ms. Nancy Bothwell, DTSC

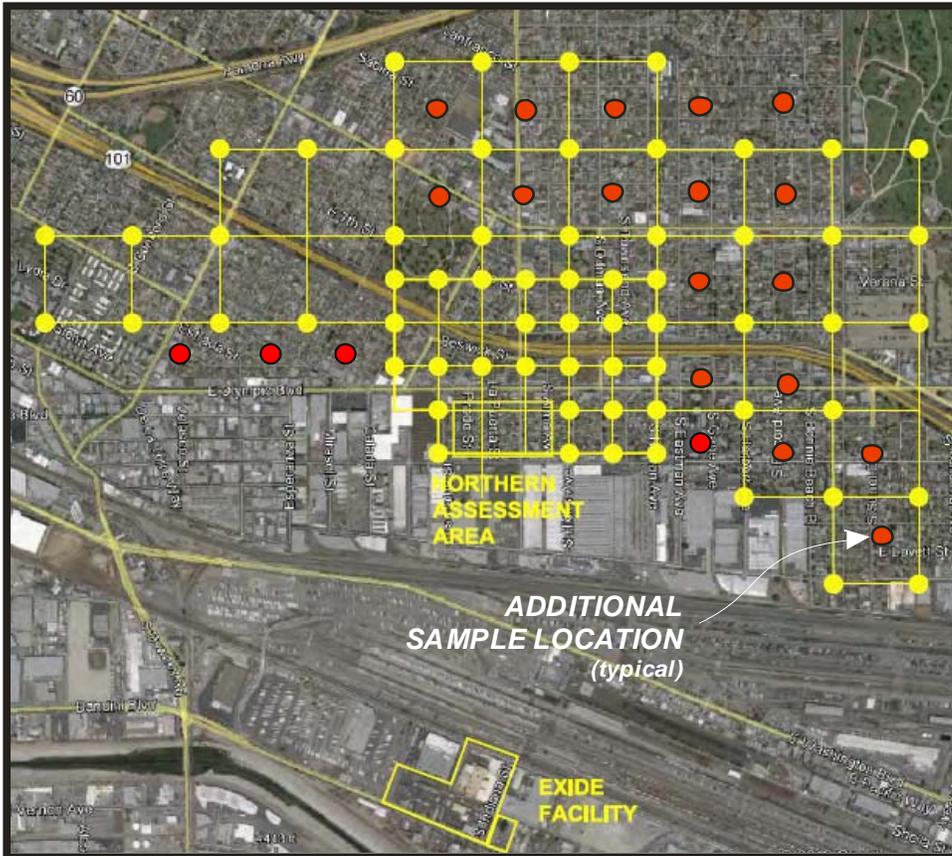


Exhibit 1



Matthew Rodriguez
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Department of Toxic Substances Control

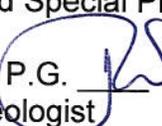
Deborah O. Raphael, Director
9211 Oakdale Avenue
Chatsworth, California 91311

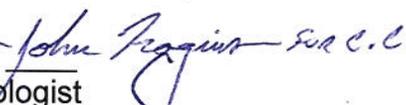


Edmund G. Brown Jr.
Governor

MEMORANDUM

TO: Peter Ruttan, P.G.
Engineering Geologist
Engineering and Special Projects

FROM: Todd Wallbom, P.G. 
Engineering Geologist
Chatsworth Geological Services Unit

CONCUR: Craig Christmann, P.G. 
Senior Engineering Geologist
Chatsworth Geological Services Unit

DATE: April 3, 2014

SUBJECT: Technical Review of Addendum to the November 15, 2013
Work Plan for Off-Site Soil Sampling
Exide Technologies, Inc. Site
2700 South Indiana Street
Vernon, California 90058
Prepared by Advanced GeoServices Corp. (AGC)

PCA: 22120 Site Code: 510410 Phase: 48 Log No: 20022873

As requested, Geological Services Unit (GSU) staff has performed a technical review of the *Addendum to the November 15, 2013 Work Plan for Off-Site Soil Sampling* (Addendum), dated March 21, 2014, for the purposes of Corrective Action (CA) activities. The Report was submitted by AGC on behalf of the Exide Technologies Corporation (Exide) facility ('Facility' or 'Site'), located at the address listed above.

The Exide property in the City of Vernon is an actively operating battery recycling facility. Prior to 1922, a portion of the property was occupied by a meat rendering plant while other areas were quarried for gravel. Since

1922, lead smelting and various metals processing operations have occurred onsite.

Contaminants-of-concern (COCs) at the Site include volatile organic compounds (VOCs); primarily trichloroethene (TCE), and inorganics; primarily antimony, lead, arsenic, cadmium, and zinc. Elevated sulfate, inorganics, VOCs, and low pH (acidic) conditions also continue to occur in groundwater.

GSU staff reviewed Exide's *Work Plan for Off-Site Soil* (Work Plan), dated November 13, 2013, and recommended that the Work Plan be revised. In response to DTSC's comments, the Work Plan was revised and resubmitted to DSTC on November 15, 2013, and approved by DTSC on November 18, 2013.

The objective for this effort was to determine if soils at residential properties and two school sites within the Northern and Southern Assessment Areas contain metals, along with other COCs and constituents-of-potential-concern (COPCs) that exceed background concentrations and/or Residential Soil Screening Levels (SLs). The Assessment Areas were selected based on air dispersion modeling conducted by Environ International Corporation (Environ) to estimate the location of the Maximum Exposed Individual Resident (MEIR).

Exide implemented the Work Plan and submitted their *Off-Site Sampling Report* (Report), dated February 18, 2014. As part of the implementation of the Work Plan, a background study was performed for metals in an area located 14 miles south of the Facility. This Report identified lead above the soil screening level (and background) of 80 mg/kg in most of the yards of the 39 residences sampled in the Northern and Southern Assessment Areas, and at the Head Start School located at Salazar Park (Salazar Park).

Following our review of the Report, DTSC required Exide, in a letter dated March 10, 2014, to conduct additional step-out sampling to determine the lateral extent of soil with lead greater than 80 mg/kg, and to determine the full impact of lead-contaminated soil at the 39 residences and at Salazar Park. DTSC also directed Exide to perform interim measures (IM) to address lead in soil above the California Department of Public Health (CDPH) defined health hazard level of 400 mg/kg at two residential properties located in the Northern Assessment (Boyle Heights) Area.

On March 21, 2014, Exide submitted an Addendum Work Plan, an *Interim Measures Work Plan* (IM Workplan) document and a letter titled *Response to March 10, 2014 Comments* (RTCs) to DTSC. Comments on the IM

Workplan and our responses to Exide's RTCs will be addressed under separate cover.

Based on our review, GSU recommends that the Addendum be revised in accordance with our comments provided below:

COMMENTS:

1. The GSU recommends that the full extent of lead-contaminated soil, both laterally and vertically, be determined as quickly as possible at the two residences with lead concentrations at or above the CDPH defined hazard level of 400 mg/kg prior to implementing an IM. This does not mean, however, that an IM can be delayed for months on end. We recommend that the samples be collected and expedited for laboratory analysis so that a decision can be made by DSTC as how best to proceed with implementing the IM.
2. It is unclear if step-out soil samples will be sieved in a manner following Section 6 of the November 15, 2013 Work Plan. We recommend revising the Addendum so that soil sieving is clearly included as part of this scope-of-work. This includes all of the previously-sampled areas (Northern and Southern Assessment Areas and Salazar Park). Soil samples collected at drip-lines and below downspouts at the residences being sampled should be targeted for sieving.
3. Exide appears to be fixated on attributing lead-based-paint (LBP) as the root cause for lead contamination detected in the soil at the residences located in the Northern and Southern Assessment Areas. This apparent deflection from attributing any responsibility to Exide conflicts with the background data, which should already account for LBP (and other anthropogenic and naturally-occurring lead sources) in soils. What is more, Exide's proposal to conduct LBP inspections at the houses occurring within the sample areas falls outside the scope of this investigation, and therefore should be removed from the Addendum.

The decision as to whether a LBP assessment should be conducted at the properties is not up to DTSC, or Exide, but wholly the decision of the property owner. Instead, as we had recommended in our memorandum on the Report, Exide should conduct a lead-fingerprinting study of the soils to determine the nature of the lead. Without a lead-fingerprinting study, lead concentrations detected above ambient levels are assumed to be from Exide's historical, and ongoing, emissions.

4. All soil samples should be collected and analyzed as discrete soil samples and not homogenized and composited.

5. The Addendum flip-flops between collecting samples at 0-6 inches at the previously sampled properties (39 residences) and 0-1 and 1-3 inches at another previously sampled property; Salazar Park. Collecting samples from 0-6 inches may miss surficial contamination due to potentially on-going aerial deposition.

For the sake of continuity and data comparison, sample depth collection intervals should adhere to the November 15, 2013 Work Plan (0-1, 1-3, 3-6 inches) at all sample locations. The GSU defers to the project toxicologist for the specific number of sample locations per residence at the areas of interest (i.e., yard areas, drip-zones, downspouts). For vertical profiling, sample depth intervals can follow the proposed sample depths stated in the Addendum (6-12 inches, 12-18 inches).

6. For the expanded Southern Assessment Area, we recommend moving the grid northwards to include the residential areas that lie closest to the Facility.
7. The sampling grid as presented on Figure 2A (titled 'Northern Assessment Area, Proposed Sampling Locations') is smaller than is shown on Figure 1 ('Northern and Southern Assessment Areas Location Plan, Off-Site Soil Sampling Work Plan Addendum'). We recommend modifying the Addendum to include the residential area located just to the north of Olympic Blvd (or as shown on Figure 1). The sampling grid should also be tighter in areas downwind of Exide. Figure 2 should be revised as a result.
8. For drip-zone soil sampling, the Addendum should include a contingency for collecting soil samples directly adjacent to paved areas if pavement is encountered next to homes.

Questions regarding the memorandum should be directed to Todd Wallbom at (818) 717-6622.