UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590



REPLY TO THE ATTENTION OF:

**MEMORANDUM**

**SUBJECT:** ACTION MEMORANDUM – Request for Time-Critical Removal Action and Exemption from the 12-Month Statutory Limit at the Exide Battery Site, Frankfort, Clinton County, Indiana (Site ID #B5YX)

**FROM:** Shelly Lam, OSC
Emergency Response Branch 1

**THRU:** Jason H. El-Zein, Chief
Emergency Response Branch 1

**TO:** Richard C. Karl, Director
Superfund Division

## I. PURPOSE

This memorandum requests and documents your approval to expend up to $1,736,200 to conduct a time-critical removal action and for an exemption from the 12-month statutory limit at the Exide Battery Site ("Site" or "Residential Area") in Frankfort, Clinton County, Indiana.

The response actions proposed herein are necessary in order to mitigate threats to public health, welfare, and the environment posed by the presence of uncontrolled hazardous substances at the Site. EPA documented elevated levels of lead and trichloroethene (TCE) at the Site; both of these chemicals are hazardous substances as defined by Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

The time-critical removal action proposed herein is to prepare site plans, including a Work Plan, Quality Assurance Project Plan, site-specific Health and Safety Plan, and Emergency Contingency Plan; conduct sampling and analysis to determine which residential properties require soil removal; excavate soil up to two feet below ground surface (bgs); collect and analyze confirmation samples from the bottom of each excavation; place a visible barrier at the bottom of each excavation; replace excavated soil with clean soil; restore landscaping and grass destroyed during removal actions and repair any damage to property caused by excavation activities; collect samples for disposal analysis; transport and dispose off-site any hazardous substances, pollutants and contaminants at a CERCLA-approved disposal facility in accordance with U.S. Environmental Protection Agency's (EPA's) Off-Site Rule (40 Code of Federal

Regulations [C.F.R.] § 300.440); conduct sub-slab and indoor air sampling at residential properties; perform vapor mitigation at properties where relevant indoor air action levels are exceeded in accordance with current EPA guidance; and perform post-installation proficiency sampling after mitigation system installation.

Response actions will be conducted in accordance with Section 104(a)(1) of CERCLA, 42 U.S. Code (U.S.C.) § 9604(a)(1) and Section 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR.300.415, , to abate or eliminate the immediate threat posed to public health and/or the environment by the presence of the hazardous substances at the site. The uncontrolled conditions of the hazardous substances present at the Site and the potential threats they present require that this action be classified as a time-critical removal action. EPA's actions will require approximately 80 working days to complete.

There are no nationally significant or precedent-setting issues associated with the site. EPA's Land and Chemical Division (LCD) is negotiating a Resource Conservation and Recovery Act (RCRA) § 3008(h) corrective action consent order with Exide Technologies (Exide), which will involve Exide conducting a remedial facility investigation (RFI) of the former Exide facility. The contemplated RCRA RFI order will not address offsite contamination. "Offsite," when used in its RCRA context, means the Residential Area comprising the "Site" described in this Action Memorandum.

## II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID: INN000510504
RCRA ID: IND001647460
Category: Time-Critical Removal Action

### A. Site Description

#### 1. Removal Site Evaluation

The Site is a Residential Area surrounding the former Exide Battery facility at 555 North Hoke Avenue in Frankfort, Clinton County, Indiana. This Residential Area is defined as the area bounded by Washington Avenue to the north, Kelley Avenue to the east, the railroad to the south, and Young Street to the west.

The Exide facility was originally developed by Prest-O-Lite Manufacturing during the World War II era. After General Battery Company purchased the property from Prest-O-Lite Manufacturing, battery manufacturing operations continued at the facility. In 1987, Exide acquired General Battery Corporation and the facility. Exide continued battery manufacturing as a large quantity generator until manufacturing was discontinued in 1998. From February 1999 until 2013, the facility was used to store equipment from other Exide properties. Facility buildings were eventually demolished.

At the request of the Indiana Department of Environmental Management (IDEM), the EPA Emergency Response and Removal Branch conducted a site assessment to evaluate whether

residential areas around the facility had been impacted by historical facility operations. The following sections summarize IDEM's and EPA's site assessment activities and other historical information.

Figure 1 is a Site Location Map and Figure 2 is a Site Layout Map.

### a. Indiana Department of Environmental Management

IDEM evaluated the site and surrounding residential properties as part of the pre-Comprehensive Environmental Response, Compensation, and Liability Information System (pre-CERLIS) screening process (Administrative Record [AR], #5).

IDEM has received numerous complaints against the facility. Past complaints alleged that the facility dumped scrap batteries and acid into a pit on the property, and allowed fugitive dust to leave the property. IDEM issued the facility violations for unpermitted waste storage for creating an unpermitted 30-foot by 30-foot waste pile. Additionally, Exide conducted removal of lead-contaminated soil in July 1989 and November 2000 (AR #5).

In April 2014, Exide removed two unregulated underground storage tanks (UST) from the facility (AR #4). As part of the UST removal, Exide collected soil and groundwater samples. Sample results included high levels of 1,1-dichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, TCE, and vinyl chloride. TCE was detected at a maximum concentration of 8,520 micrograms per liter (µg/L) in groundwater. IDEM noted in their pre-CERCLIS screening report that the "results may indicate a significant vapor intrusion potential in the homes located adjacent to the Exide property boundaries."

In September 2014, IDEM screened nearby residential properties for metals using a x-ray fluorescence (XRF) detector. Lead was detected as high as 1,388 and 762 parts per million (ppm) in residential yards adjacent to the western and northeastern property boundaries (AR #5).

In November 2014, IDEM referred the site to EPA's Removal Program for a site assessment.

### b. EPA

The following sections describe EPA's assessment activities.

In 2013, EPA's LCD contacted Exide Technologies about signing an Administrative Order on Consent under RCRA 3008(h). Exide filed for Chapter 11 bankruptcy protection on June 10, 2013. In April 2014, a consultant for Exide Technologies submitted a preliminary report to LCD summarizing soil sampling at Exide (AR #3). Lead was detected in the 0-2 foot sampling interval as high as 19,300 milligrams per kilogram (mg/kg). In 2015, Exide emerged from bankruptcy and is expected to conduct corrective action of its property under a 3008(h) order.

As detailed in the confidential enforcement addendum, EPA will conduct time-critical removal actions in the Residential Area. The following sections describe EPA's assessment results from the Residential Area, which are documented in a Site Assessment Report (AR #9).

In January 2015, EPA conducted soil gas sampling in the Residential Area to evaluate for vapor intrusion. EPA identified chemical vapors in soil gas including TCE and tetrachloroethene. In March and April 2015, EPA sampled 34 residential properties within two blocks of the site. EPA tested for metals in soil and evaluated homes for potential vapor intrusion.

In accordance with the *Superfund Lead-Contaminated Residential Sites Handbook* (2003), EPA collected five-point composite samples from front yards, back yards, side yards (where applicable), and gardens for metals analysis. Samples were collected away from the influences of drip zones and other painted surfaces to minimize detection of lead from lead-based paint. EPA did not conduct analysis for lead speciation because of lack of access to source material at the site.

At three properties, lead exceeded the January 2015 Removal Management Level (RML) for residential soil of 400 mg/kg, at concentrations ranging from 449 to 497 mg/kg. EPA confirmed that average background in this area is 104.7 mg/kg. The results for these three homes were approximately four times greater than background levels. EPA's sample results corroborated IDEM's findings that elevated lead was detected in residential yards west of the site and adjacent to the northeastern site boundary, and showed a spatial correlation between the facility and lead in the community. Lead is a hazardous substance as defined by section 101(14) of CERCLA.

EPA confirmed that the vapor intrusion pathway was completed, and vapor intrusion was occurring at one property. Exide found high levels of TCE in soil and groundwater at the facility. EPA documented TCE in soil gas in the residential area. Additionally, EPA confirmed the presence of TCE in the crawl space of one home, and detected TCE in indoor air at that home at a concentration of 0.44 parts per billion by volume (ppbv), which was above the June 2015 Vapor Intrusion Screening Level (VISL) of 6.3 micrograms per cubic meter ($\mu g/m^3$) or 0.38 ppbv. The VISL for TCE was calculated using a Target Risk for Carcinogens (TCR) of $1x10^{-4}$ and a Target Hazard Quotient for Non-Carcinogens (THQ) of 1. TCE is a hazardous substance as defined by Section 101(14) of CERCLA.

## 2. Physical Location

The Site is a Residential Area surrounding the former Exide Battery facility, and has been defined by analytical results from the site assessment. The Residential Area includes approximately 36 homes. The area is bounded by Washington Avenue to the north, Kelley Avenue to the east, the railroad to the south, and Young Street the west in Frankfort, Clinton, Indiana (Figure 1).

EPA conducted an Environmental Justice (EJ) analysis for the Site (see Attachment I). Screening of the surrounding area used Region 5's EJ Screen Tool. Region 5 has reviewed environmental and demographic data for the area surrounding the Exide Battery Site, and determined there is high potential for EJ concerns at this location.

## 3. Site Characteristics

The Site is a residential neighborhood, where a maximum of 36 homes may have been impacted by lead deposition or vapor intrusion. Lead has been detected in residential yards above the RML. TCE was detected above the VISL in the indoor air of one home.

**4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant**

EPA documented a release of hazardous substances, pollutants, or contaminants in the soil and indoor air at three residences and in soil gas. Possible exposure routes include dermal contact with lead-contaminated soil; ingestion or inhalation of lead particles in soil; and inhalation of contaminated air that may have migrated through groundwater, i.e. vapor intrusion. Potential human receptors include residents in the Residential Area.

**5. NPL status**

This Site is not on the NPL.

**6. Maps, pictures and other graphic representations**

Maps include:

Figure 1 – Site Location Map
Figure 2 – Site Area Map

**B. Other Actions to Date**

**1. Previous actions**

Previous actions are detailed under Removal Site Evaluation (Section II, A, 1).

**2. Current actions**

No actions are currently being conducted at the Site.

**C. State and Local Authorities' Roles**

On November 19, 2014, Rex Osborn, Federal Programs Section Chief with IDEM requested assistance from EPA (AR #6). Local and state authorities do not have the resources to mitigate the releases and threats of release at the Site.

## III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The conditions at the Exide Battery Site present a threat to the public health or welfare, and the environment, and meet the criteria for a time-critical removal action as provided for in the NCP, 40 CFR 300.415(b)(2). These criteria include, but are not limited to, the following:

**Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;**

EPA documented the presence of lead in soil at concentrations ranging from 449 to 497 mg/kg, above the RML of 400 mg/kg; and TCE in indoor air at a concentration of 0.44 ppbv, above VISL of 0.38 ppbv. Possible exposure routes include dermal contact with lead-contaminated soil; ingestion or inhalation of lead particles in soil; and inhalation of contaminated air that may have migrated through subsurface soil and groundwater, i.e. vapor intrusion. Potential human receptors include residents in the Residential Area.

TCE and lead are hazardous substances, as defined by section 101(14) of CERCLA. The Agency for Toxic Substances and Disease Registry (ATSDR) has studied toxicological effects of these chemicals. Information about each is provided below and referenced in the Administrative Record (Attachment II).

**Lead:** The effects of lead are the same whether it enters the body through breathing or swallowing. Lead can affect almost every organ and system in your body. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults can result in decreased performance in some tests that measure functions of the nervous system. It may also cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people and can cause anemia. Exposure to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death. In pregnant women, high levels of exposure to lead may cause miscarriage. High-level exposure in men can damage the organs responsible for sperm production (AR #2).

**TCE:** Breathing small amounts of TCE may cause headaches, lung irritation, dizziness, poor coordination, and difficulty concentrating. Breathing large amounts of TCE may cause impaired heart function, unconsciousness, and death. Breathing it for long periods may cause nerve, kidney, and liver damage. Some studies of people exposed over long periods to high levels of TCE in drinking water or in workplace air have found evidence of increased cancer (AR # 1).

**High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate;**

EPA identified lead in soil in the top two feet above the RML at three homes. Lead contaminated soil may migrate via airborne particulate matter, surface runoff, percoloation into groundwater, construction activities, by children transporting soil/dust into their homes after playing in contaminated soil, and by tracking in homes via foot traffic into residences.

**The availability of other appropriate federal or state response mechanisms to respond to the release;**

IDEM requested EPA assistance in mitigating the threat of release. On November 19, 2014, Rex Osborn of IDEM sent a letter to EPA formally requesting assistance.

## IV. ENDANGERMENT DETERMINATION

Given the site conditions, the nature of the known and suspected hazardous substances on site, and the potential exposure pathways described in Sections II and III above, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment.

## V. EXEMPTIONS FROM STATUTORY LIMITS

**Emergency Exemption:**

Section 104(c) under CERCLA, as amended by the Superfund Amendments and Reauthorization Act (SARA), limits a Federal response action to 12 months unless three criteria are met. Post-installation proficiency sampling for homes with vapor intrusion may take more than one year. As such, the OSC anticipates that the 12-month statutory limit may be exceeded. The conditions present at the Exide Battery Site warrant the 12-month exemption based on the following criteria:

A. Continued response actions are immediately required to prevent, limit, or mitigate an emergency;

The high concentration of TCE in indoor air constitutes an imminent threat to human health. Response actions are immediately required to mitigate exposure to nearby residents to hazardous substances through the vapor intrusion pathway.

B. There is an immediate risk to public health or welfare or the environment;

Concentrations of hazardous substances in indoor air represent an immediate risk to public health through vapor intrusion. EPA documented TCE in one home at a concentration of 0.44 ppbv, above the VISL.

C. Assistance will not otherwise be provided on a timely basis.

IDEM requested assistance from EPA to address the potential threats posed by Exide Battery. IDEM does not have resources to immediately mitigate the threat of release. Additionally, as detailed in the confidential Enforcement Addendum, Exide will not address off-site contamination.

## VI. PROPOSED ACTIONS

### A. <u>Proposed Actions</u>

#### 1. Proposed action description

The response actions described in this memorandum directly address actual or potential releases of hazardous substances in the Residential Area, which may pose an imminent and substantial endangerment to public health, or welfare, or the environment.

Removal activities will include:

1. Preparing site plans, including a Work Plan, Quality Assurance Project Plan, site-specific Health and Safety Plan, and Emergency Contingency Plan;

2. Conducting sampling and analysis to determine which residential properties require soil removal. EPA identified three homes with lead above the RML. However, EPA did not test all homes in the area so there is potential for additional homes to have been impacted. For the purposes of the action memorandum, EPA estimated that approximately 20 homes would require soil removal;

3. Excavating soil up to two feet bgs at residential properties. For the purposes of the action memorandum, EPA estimated removal of approximately 7,000 tons of contaminated soil;

4. Collecting and analyzing confirmation samples from the bottom of each excavation;

5. Placing a visible barrier at the bottom of each excavation;

6. Replacing excavated soil with clean soil;

7. Restoring landscaping and grass destroyed during removal actions and repairing any damage to property caused by excavation activities;

8. Collecting samples for disposal analysis;

9. Transporting and disposing off-site any hazardous substances, pollutants and contaminants at a CERCLA-approved disposal facility in accordance with U.S. EPA's Off-Site Rule (40 C.F.R. § 300.440).

10. Conducting sub-slab and indoor air sampling at residential properties;

11. Performing vapor mitigation at properties where relevant indoor air action levels are exceeded in accordance with current EPA guidance. EPA estimated that approximately 15 homes might require vapor mitigation; and

12. Performing post-installation proficiency sampling 30 days and six months after mitigation system installation.

13. Take any other response actions to address any release or threatened release of a hazardous substance, pollutant or contaminant that the EPA OSC determines may pose an imminent and substantial endangerment to the public health or the environment.

If vapor mitigation systems are installed at any homes, operation and maintenance (O&M) of the system, along with monthly electrical costs, will be the responsibility of the homeowner, in accordance with the *Region 5 Vapor Intrusion Guidebook* (2010). The property owner must agree to the above provisions in writing prior to EPA installing a vapor mitigation system.

The removal actions will be conducted in a manner not inconsistent with the NCP. EPA will initiate planning for provision of post-removal site control consistent with the provisions of the NCP at § 300.415(l).

The threats posed by uncontrolled substances considered hazardous meet the criteria listed in the NCP at § 300.415(b)(2), and the response actions proposed herein are consistent with any long-term remedial actions which may be required. Elimination of hazardous substances, and pollutants and contaminants that pose a substantial threat of release is expected to minimize substantial requirements for post-removal site controls.

Off-Site Rule

All hazardous substances, pollutants, or contaminants removed off-site pursuant to this removal action for treatment, storage, and disposal shall be treated, stored, or disposed of at a facility in compliance, as determined by EPA, with the EPA Off-Site Rule, 40 C.F.R. § 300.440.

**2. Contribution to remedial performance**

The proposed action should not impede future actions, based on available information.

**3. Engineering Evaluation/Cost Analysis (EE/CA)**

Not Applicable

**4. Applicable or relevant and appropriate requirements (ARARs)**

On June 30, 2015, EPA's On-Scene Coordinator (OSC) sent a letter requesting ARARs to IDEM (AR #7). IDEM identified the following ARARs (AR #8):

Action Specific:

1. Visible fugitive dust must not cross an adjacent property line pursuant to 326 Indiana Administrative Code (IAC) 6-4-2(4).
2. Any vehicle drive on any public right of way must not allow its contents to escape and form fugitive dust (326 IAC 6-4-4).

Chemical Specific:

3. 329 IAC 3.1 regulates the management of hazardous wastes. Indiana Rule 329 IAC 3.1-1-1 adopted RCRA regulations at 40 C.F.R. §§ 260 – 270. More specifically:

a. 40 C.F.R. § 262.11 requires a proper hazardous waste determination must be made on all wastes generated from remedial actions.
b. 40 C.F.R. Part 261, Subpart B requires that all hazardous waste must be properly packaged with labels, markings, and placards prior to transport.
c. Hazardous waste stored onsite in containers for 90 days are less shall be managed in accordance with the standards of 40 C.F.R. Part 265, Subpart I (329 IAC 3.1-10). Hazardous waste stored onsite in containers for greater than 90 days shall be managed in accordance with 40 C.F.R. Part 264, Subpart I (329 IAC 3.1-9).
d. 40 C.F.R. Part 261, Subpart B requires hazardous waste must be manifested as such for transport to a permitted treatment, storage, or disposal facility (TSDF) in accordance with 40 C.F.R. Part 262, Subpart B.
e. For all hazardous waste related equipment, structures and pads, remove or decontaminate all hazardous waste residues, contaminated containment components, contaminated soils, and structures and equipment contaminated with waste and manage them as hazardous waste unless 40 C.F.R. § 261.3(d) applies.
f. Excavated contaminated soils must not be placed back on the ground so as to create a waste pile as defined in 40 C.F.R. Part 264, Subpart L. Covered roll-offs may be used.
g. Hazardous waste destined for land disposal (as defined in 40 C.F.R. § 268.2) must meet the applicable Land Disposal Restrictions of 40 C.F.R. Part 268.

4. 329 IAC 10 regulates the management of solid wastes. 329 IAC 10-7.2-1 requires all wastes to undergo a waste determination and if found to be non-hazardous, disposed for in a permitted solid waste disposal facility.

5. 327 IAC 2-11 regulates groundwater quality impacts and would be relevant if private drinking water wells exist in the area of the removal action. 329 IAC 2-11-2(e) states that no person shall cause the groundwater in a drinking water supply well to have a contaminant concentration that results in an exceedance of numeric criteria contained within the rule for drinking water class groundwater, creates a condition that is injurious to human health, creates an exceedance of specific indicator criteria levels contained within the rule, or renders the well unusable for normal domestic use.

The OSC also identified the following ARARs:

6. Hazardous substances, pollutants or contaminants removed off-site pursuant to this emergency response action for treatment, storage and disposal shall be treated, stored, or disposed at a facility in compliance, as determined by EPA, with the EPA Off-Site Rule, 40 C.F.R. § 300.440.

7. 49 U.S.C. § 5101 *et seq*. regulates the transportation of hazardous waste and hazardous substances by aircraft, railcars, vessels, and motor vehicles to or from a site.

EPA will comply with ARARs to the extent practicable.

**5. Project Schedule**

The time-critical removal actions will require approximately 80 working days to complete.

**B. Removal Project Ceiling Estimate – Extramural Costs:**

| | |
|---|---|
| Regional Removal Allowance Costs: | |
| Total Cleanup Contractor Costs<br>(Includes a 20% contingency) | $1,261,715 |
| Other Extramural Costs Not Funded from the Regional Allowance | |
| Total START, including multiplier costs | $248,024 |
| Subtotal, Extramural Costs | $1,509,739 |
| Extramural Costs Contingency<br>(15% of Subtotal, Extramural Costs) | $226,461 |
| **TOTAL REMOVAL ACTION PROJECT CEILING** | $1,736,200 |

The response actions described in this memorandum directly address the actual or threatened release of hazardous substances, pollutants, or contaminants at the site which may pose an imminent and substantial endangerment to public health or welfare or to the environment. These response actions do not impose a burden on affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

## VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Given the site conditions, the nature of the hazardous substances and pollutants or contaminants documented on site, and the potential exposure pathways to nearby populations described in Section II, III, IV, and V above, actual or threatened releases of hazardous substances and pollutants or contaminants from this Site, if not addressed by implementing or delaying the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment, increasing the potential that hazardous substances will be released, thereby threatening the adjacent population and the environment.

## VIII. OUTSTANDING POLICY ISSUES

The proposed time-critical removal actions will be consistent with the Office of Solid Waste and Emergency Response (OSWER) Publication 9200.2-154, *OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air* and *Superfund Lead-Contaminated Residential Sites Handbook* (2003).

## IX. ENFORCEMENT

For administrative purposes, information concerning the enforcement strategy for this site is contained in the Confidential Enforcement Addendum.

The total EPA costs of this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be $2,828,476[1].

($1,736,200 + $60,000) + (57.47% x $1,796,200) = $2,828,476.

## X. RECOMMENDATION

This decision document represents the selected removal actions for the Exide Battery Site located in Frankfort, Clinton County, Indiana, developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based upon the Administrative Record for the site.

Conditions at the site meet the NCP § 300.415(b)(2) criteria for a time-critical removal action and the CERCLA section 104(c) contingency exemption from the 12-month limitation. The total project ceiling, if approved, will be $1,736,200 of which, as much as $1,488,176 may be used from the Regional removal allowance. I recommend your approval of the proposed removal action and 12-month exemption. You may indicate your decision by signing below.

APPROVE Richard ICE DATE: 6-5-15
Director, Superfund Division

DISAPPROVE _____ DATE: _____
Director, Superfund Division

Attachments:

Figures
I. Environmental Justice Analysis
II. Administrative Record Index
III. Detailed Cleanup Contractor Estimate

[1] Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgement interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States right to cost recovery.

IV. Enforcement Addendum
V. Independent Government Cost Estimate

cc: Brian Schlieger, U.S. EPA, 5104A/B517F **(Schlieger.Brian@epa.gov)**
Lindy Nelson, U.S. DOI, **w/o Enf. Addendum (Lindy_Nelson@ios.doi.gov)**
Rex Osborn, IDEM **w/o Enf. Addendum (rosborn@idem.in.gov)**

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**NOT RELEVANT TO SELECTION**

**OF REMOVAL ACTION**

# FIGURES

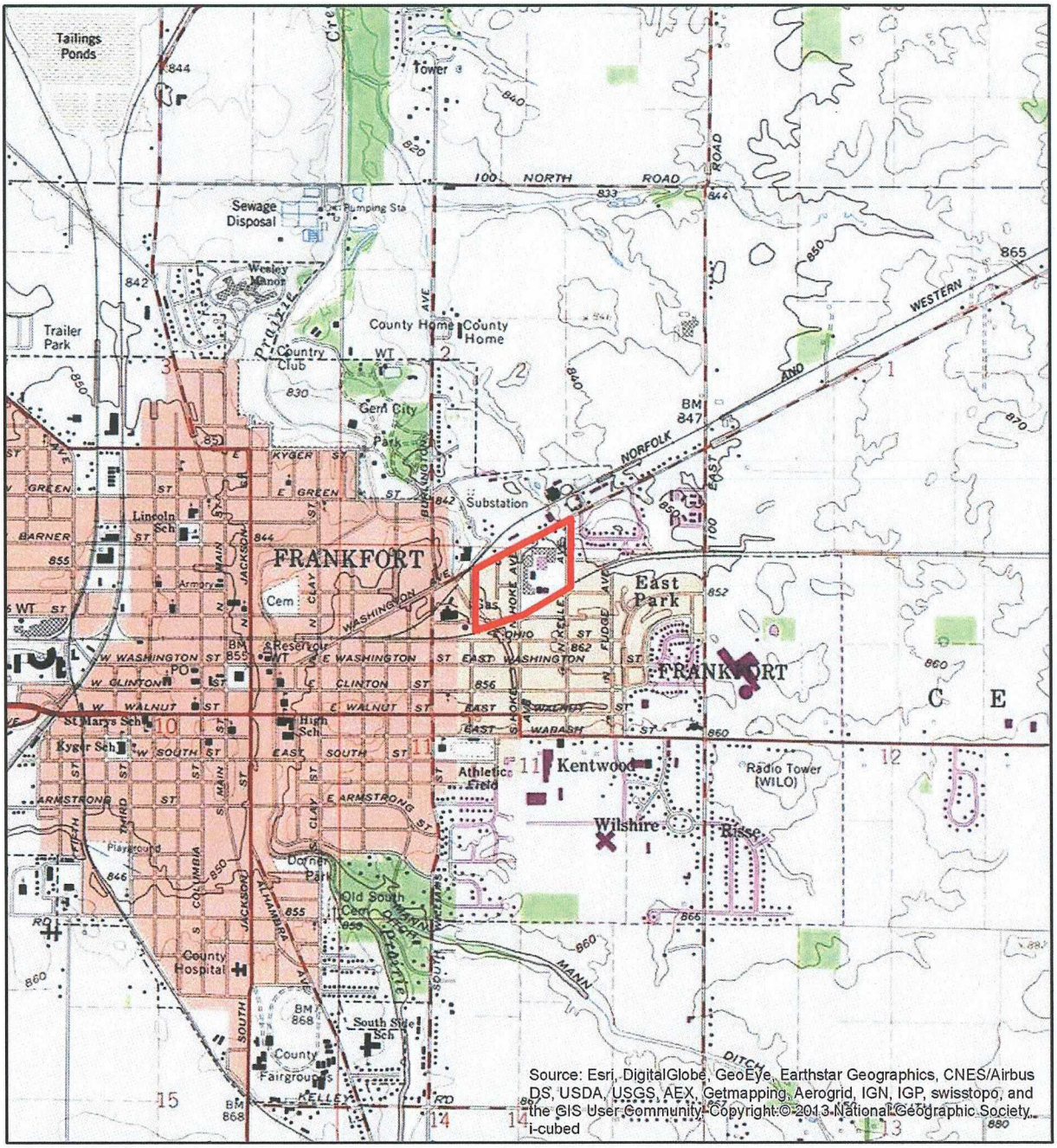



**FIGURE 1**
**SITE LOCATION MAP**
**EXIDE BATTERY SITE**
**FRANKFORT, CLINTON COUNTY, INDIANA**

**Legend**

Time-Critical Removal Area

1:24,000

0 1,000 2,000 3,000 4,000 Feet

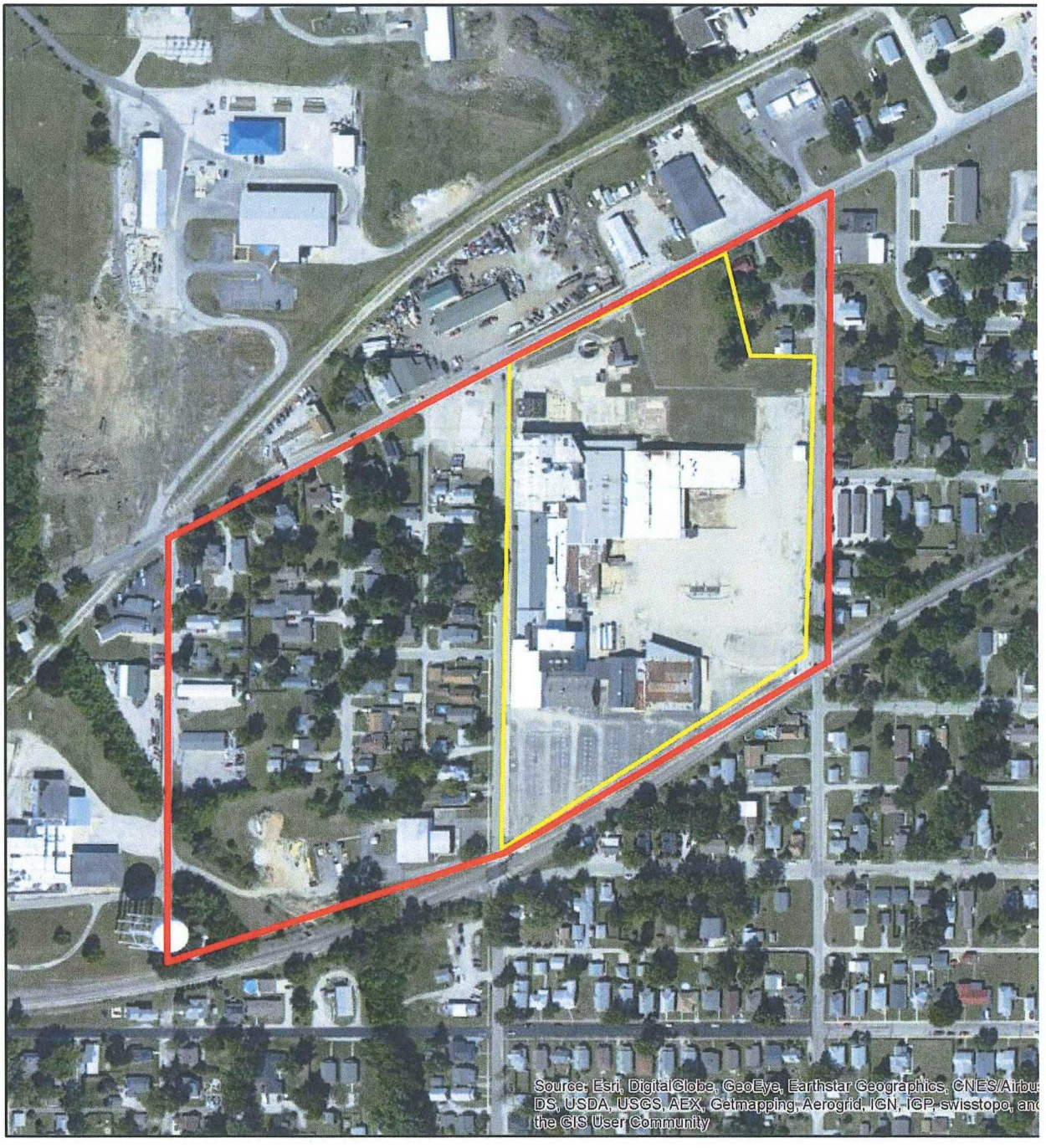



**FIGURE 2**
**SITE LAYOUT MAP**
**EXIDE BATTERY SITE**
**FRANKFORT, CLINTON COUNTY, INDIANA**

**Legend**

- Time-Critical Removal Area
- Exide Battery

1:3,500

0 100 200 300 400 Feet

# ATTACHMENT I

# U.S. ENVIRONMENTAL PROTECTION AGENCY
# REMOVAL ACTION

# ENVIRONMENTAL JUSTICE ANALYSIS
# FOR
# EXIDE BATTERY SITE
# FRANKFORT, CLINTON COUNTY, INDIANA

## AUGUST 2015

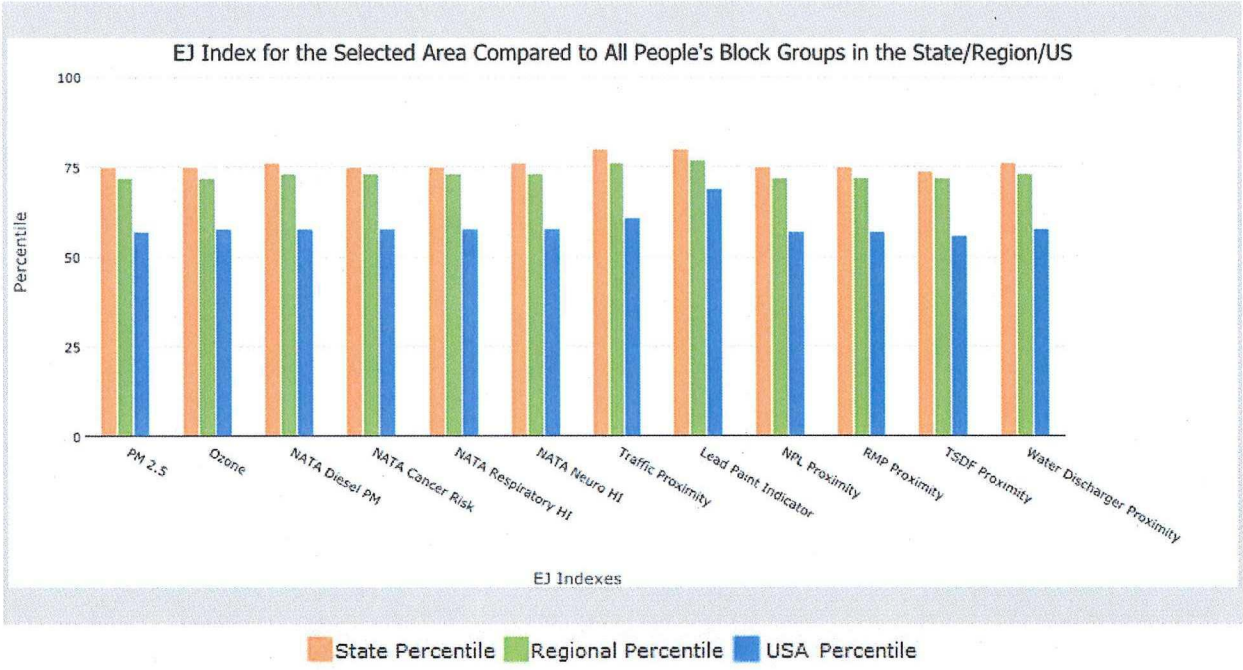
# EJSCREEN Report

**for 1 mile Ring Centered at 40.283931,-86.496636, INDIANA, EPA Region 5**

**Approximate Population: 9011**

**Exide Battery**

| Selected Variables | State Percentile | EPA Region Percentile | USA Percentile |
|---|---|---|---|
| **EJ Indexes** | | | |
| EJ Index for PM2.5 | 75 | 72 | 57 |
| EJ Index for Ozone | 75 | 72 | 58 |
| EJ Index for NATA Diesel PM | 76 | 73 | 58 |
| EJ Index for NATA Air Toxics Cancer Risk | 75 | 73 | 58 |
| EJ Index for NATA Respiratory Hazard Index | 75 | 73 | 58 |
| EJ Index for NATA Neurological Hazard Index | 76 | 73 | 58 |
| EJ Index for Traffic Proximity and Volume | 80 | 76 | 61 |
| EJ Index for Lead Paint Indicator | 80 | 77 | 69 |
| EJ Index for Proximity to NPL sites | 75 | 72 | 57 |
| EJ Index for Proximity to RMP sites | 75 | 72 | 57 |
| EJ Index for Proximity to TSDFs | 74 | 72 | 56 |
| EJ Index for Proximity to Major Direct Dischargers | 76 | 73 | 58 |



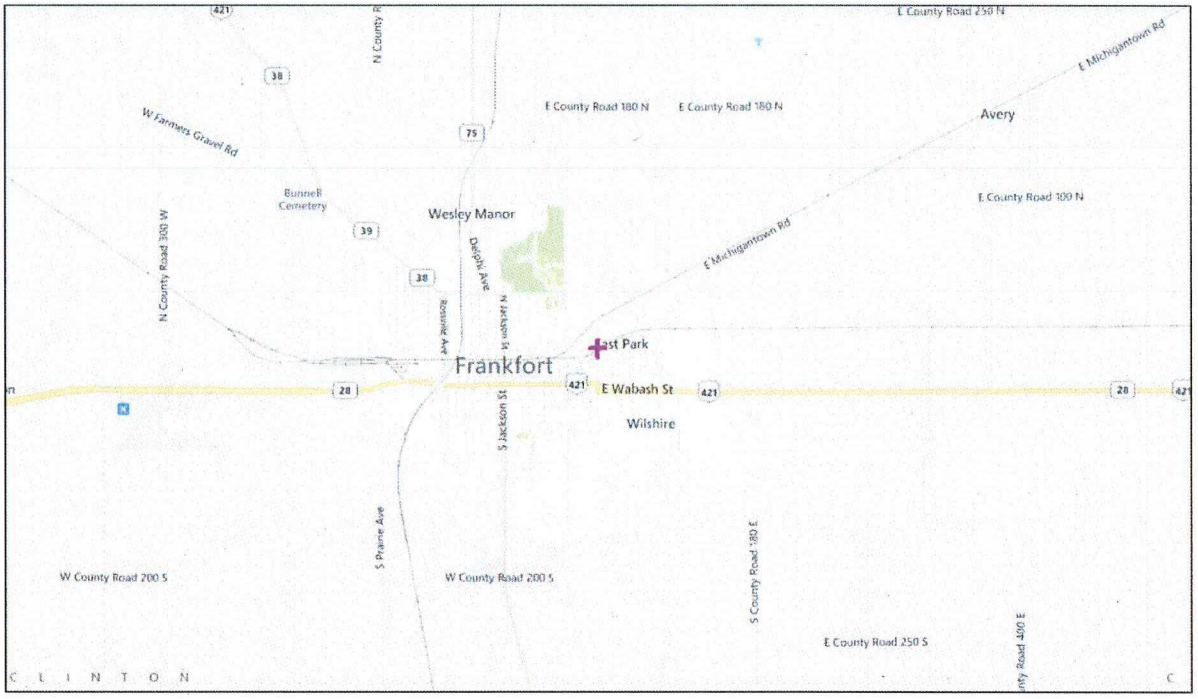

This report shows environmental, demographic, and EJ indicator values. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

# EJSCREEN Report

**for 1 mile Ring Centered at 40.283931,-86.496636, INDIANA, EPA Region 5**

**Approximate Population: 9011**

**Exide Battery**



# EJSCREEN Report

for 1 mile Ring Centered at 40.283931,-86.496636, INDIANA, EPA Region 5

Approximate Population: 9011

Exide Battery

| Selected Variables | Raw Data | State Avg. | %ile in State | EPA Region Avg. | %ile in EPA Region | USA Avg. | %ile in USA |
|---|---|---|---|---|---|---|---|
| **Environmental Indicators** | | | | | | | |
| Particulate Matter (PM 2.5 in µg/m³) | 11 | 11.3 | 44 | 10.8 | 59 | 9.78 | 77 |
| Ozone (ppb) | 45.9 | 46.5 | 31 | 44.4 | 62 | 46.1 | 46 |
| NATA Diesel PM (µg/m³)* | 0.226 | 0.341 | 43 | 0.712 | <50th | 0.824 | <50th |
| NATA Cancer Risk (lifetime risk per million)* | 33 | 36 | 44 | 42 | <50th | 49 | <50th |
| NATA Respiratory Hazard Index* | 0.91 | 1.1 | 42 | 1.5 | <50th | 2.3 | <50th |
| NATA Neurological Hazard Index* | 0.039 | 0.059 | 38 | 0.067 | <50th | 0.063 | <50th |
| Traffic Proximity and Volume (daily traffic count/distance to road) | 56 | 24 | 89 | 69 | 69 | 110 | 61 |
| Lead Paint Indicator (% Pre-1960 Housing) | 0.62 | 0.37 | 79 | 0.4 | 74 | 0.3 | 81 |
| NPL Proximity (site count/km distance) | 0.023 | 0.11 | 18 | 0.086 | 24 | 0.096 | 27 |
| RMP Proximity (facility count/km distance) | 0.39 | 0.35 | 75 | 0.33 | 76 | 0.31 | 79 |
| TSDF Proximity (facility count/km distance) | 0.02 | 0.042 | 49 | 0.051 | 41 | 0.054 | 46 |
| Water Discharger Proximity (facility count/km distance) | 0.4 | 0.26 | 82 | 0.23 | 85 | 0.25 | 85 |
| | | | | | | | |
| **Demographic Indicators** | | | | | | | |
| Demographic Index | 36% | 26% | 77 | 28% | 75 | 35% | 60 |
| Minority Population | 26% | 19% | 78 | 24% | 70 | 36% | 50 |
| Low Income Population | 46% | 34% | 72 | 32% | 75 | 34% | 72 |
| Linguistically Isolated Population | 5% | 2% | 89 | 2% | 85 | 5% | 73 |
| Population With Less Than High School Education | 21% | 13% | 82 | 12% | 85 | 14% | 76 |
| Population Under 5 years of age | 9% | 7% | 73 | 6% | 76 | 7% | 74 |
| Population over 64 years of age | 14% | 13% | 61 | 13% | 59 | 13% | 62 |

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: http://www.epa.gov/ttn/atw/natamain/index.html.

For additional information, see: www.epa.gov/environmentaljustice

## ATTACHMENT II

## U.S. ENVIRONMENTAL PROTECTION AGENCY
## REMOVAL ACTION

## ADMINISTRATIVE RECORD
## FOR THE
# EXIDE BATTERY SITE
# FRANKFORT, CLINTON COUNTY, INDIANA

### ORIGINAL
### JULY, 2015

| NO. | SEMS ID | DATE | AUTHOR | RECIPIENT | TITLE/DESCRIPTION | PAGES |
|---|---|---|---|---|---|---|
| 1 | 919411 | 7/1/03 | ATSDR | Public | ToxFAQs Fact Sheet - Trichloroethylene - CAS #79-01-6 | 2 |
| 2 | 910077 | 8/1/07 | ATSDR | Public | ToxFAQs Fact Sheet - Lead - CAS #7439-92-1 | 2 |
| 3 | 919211 | 4/4/14 | Dobinsky, J., Advanced Geoservices | Ramanauskas, P., U.S. EPA | Summary of Soil Sampling Results | 10 |
| 4 | 919213 | 7/29/14 | Advanced Geoservices | IDEM | Initial Site Characterization Report | 143 |
| 5 | 916385 | 11/5/14 | Praeuner, A., IDEM | U.S. EPA | Pre-CERCLIS Screening Assessment Checklist/Decision Form | 29 |
| 6 | 919212 | 11/19/14 | Osborn, R., IDEM | Gebien, C., U.S. EPA | Email re: Referral of Exide Battery Site to the U.S. EPA Removals Program | 1 |
| 7 | 919209 | 6/30/15 | Lam, S., U.S. EPA | Osborn, R., IDEM | Letter re: Request for ARARs at the Exide Battery Residential Site | 2 |
| 8 | 919210 | 7/2/15 | Petroff, D., IDEM | Lam, S., U.S. EPA | Letter re: ARARs at the Exide Battery Residential Site | 3 |
| 9 | - | - | START | Lam, S., U.S. EPA | Site Assessment Report **(PENDING)** | - |
| 10 | - | - | Lam, S., U.S. EPA | Karl, R., U.S. EPA | Action Memorandum re: Request for a Time-Critical Removal Action at the Exide Battery Site (*PENDING*) | - |

**ATTACHMENT III**

**DETAILED CLEANUP CONTRACTOR ESTIMATE**

**HAS BEEN REDACTED – ONE PAGE**

**ATTACHMENT IV: ENFORCEMENT ADDENDUM**

**HAS BEEN REDACTED – TWO PAGES**

**ENFORCEMENT CONFIDENTIAL**

**NOT SUBJECT TO DISCOVERY**

**FOIA EXEMPT**

**NOT RELEVANT TO SELECTION**

**OF REMOVAL ACTION**

# ATTACHMENT V

**INDEPENDENT GOVERNMENT COST ESTIMATE**

**HAS BEEN REDACTED – THREE PAGES**

**NOT RELEVANT TO SELECTION**

**OF REMOVAL ACTION**