



Environmental Protection Plan

U.S. Smelter and Lead Residential Remediation – Zone 3 Excavation
East Chicago, Indiana

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Prepared For

U.S. Environmental Protection Agency
77 W. Jackson Blvd.
Chicago, IL, 60604

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1.0 Introduction

Development, implementation, and maintenance of the Environmental Protection Plan (EPP) will provide Environmental Restoration, LLC (ER) with the framework for reducing soil erosion, minimizing migration of pollutants during site work activities, and mitigate environmental impact during work associated with the US Smelter Lead Residential Remediation- Zone 3 Site. The methods used include installing storm water and erosion controls, and implementing procedures for management of potentially hazardous materials associated with the removal work.

1.1 Site Location

The US Smelter Lead Residential Remediation Area Site is divided into 3 zones. The remedial site is located in East Chicago, Lake County, Indiana. This plan reflects work being performed in zone 3 of the remediation site. Zone 3 is bordered on the south and by the Elgin Joliet and Eastern Railway right of way. It is bordered on the North by Chicago Ave. and on the east by Parrish Ave. Graselli Ave. borders the site on the West.

ER will transport soil to the Chemours Company property located at 5215 Kennedy Avenue in East Chicago, IN for disposal.

2.0 STORMWATER AND EROSION CONTROL METHODS

The primary objectives are: as follows:

- Eliminate tracking of contaminated soils to non-contaminated areas
- Eliminate any soils from being tracked onto streets
- Eliminate dust during all operations
- Maintain storm water run on/runoff within the project boundary.
- Limit the surface area of material exposed to erosion by excavation, backfill, stockpile activities and install temporary sediment control measures. Measures include, silt fence, straw bales, straw wattles, sand bags, and application of water for dust control.
- Prevent or reduce eroded sediments from reaching surface waters.

A separate Storm Water Pollution Protection Plan has been developed for the site.

2.1 Contractor's Point of Contact

ER's point of contact (POC) for all activities will be the Response Manage (RM), Byron Hartman. The POC can be reached through his cell phone number at 801-209-0368 at all times. The project location phone number will be posted once established. In addition, as a failsafe backup ER's emergency response number (888-814-7477) may be used to initiate response to a site emergency.

2.2 Employee Training

Employees will be trained and educated about the requirements of the EPP. This training program will consist of background on the components and goals of the EPP and hands on training in erosion controls, spill prevention and response, good housekeeping, proper material handling, disposal and control of waste, equipment fueling and proper storage, washing, and inspection procedures. All employees will be trained prior to their first day on site. New employees will be trained as hired and documented through OSHA's 3 day on the job training requirement.

2.3 Excavation and Backfill Activities

ER expects that excavation and backfill operations will vary with individual properties. Prior and during construction QC personnel will inspect properties for necessary implementation of storm water and erosion controls. In any case best management practices will be used to determine proper control of storm water issues.

Materials that may be used for storm water and erosion control include silt fencing, straw bales, sand bags, and straw wattles. Straw wattles will be as the primary erosion control at individual properties.



Plywood and polyethylene (poly) sheeting will be used in excavation areas prevent tracking of soils. When trucks are loaded outside the excavation area, poly sheeting will be placed. Trucks will be inspected when leaving the excavation area and repository. Visible soil will be removed utilizing dry decontamination methods.

ER will determine if additional storm water and erosion control measures beyond the above mentioned work activities are needed. No specific site topographic map is available for this area but particular attention will be given, by field observation, to the surrounding topography to determine high areas, slopes, and drainage swales where higher velocities might occur. Silt fence, straw bales, or other measures will be installed as needed.

During excavation and backfill water trucks, sprinkler and sprinkler systems will be used to eliminate any fugitive dusts. Stockpiled materials will be covered with poly and / or tarps to eliminate runoff and dusts if necessary. It is anticipated that material will not be stockpiled.

2.4 Restrict Public Access

At a minimum, all areas where materials are stored will be fenced off using plastic snow fence or equivalent. Appropriate warning signage will also be posted around the perimeter of the staging area.

Orange snow fence will be temporarily placed around any open excavation areas at the end of each work day.

2.5 Inspection and Maintenance

The RM and/or Foreman shall be responsible for inspection of all dust and water control structures will be performed on a daily basis and immediately after any significant storm event of 0.5-inch or greater. Findings from each inspection shall be documented in the project log book. Storm water controls will be cleaned of sediments as needed or at a minimum of once a month, starting on the first Monday. ER will utilize mechanical means (Loader and/or excavator) when practical to remove sediments or blockages from existing features in order to maintain effectiveness. If necessary, ER will manually remove (i.e. shovels) collected sediments or blockages from features.

Inspection of property will be performed by the RM or his representative prior to installation of Storm Water and Erosion Control Measures. The best management practices will be used.

2.6 Final Restoration Activities

Upon the completion of excavation, backfill, and transport of staged waste material all storm water and erosion controls will be removed manually or mechanically and transported to an approved landfill for disposal.

3.0 TRANSPORTATION AND DISPOSAL

ER will transport soil to the Chemours Company property located at 5215 Kennedy Avenue in East Chicago, IN for disposal.

A separate general haul route map for properties will be created. In addition, a Traffic plan for the Chemours property will be developed.

Additional information concerning other possible waste streams on site such as contaminated storm water, construction debris, spill materials, and trash will be handles as required by federal, state and local ARARs as outlined in the table below.



| Waste stream | Potential Safety / Environmental Issues | Management / Containerization Procedures | Disposal Requirements | Site Controls | Method of Transport | Disposal Facility | Potential Treatment |
|------------------------------------|--|--|--|--|---|----------------------------------|---|
| Non-Haz Soils (Pass TCLP) | Lead / arsenic at levels that pose inhalation and ingestion threat to humans | Soils will be both direct loaded and transported to the designated repository | N/A | See Section 2. Storm water and Erosion Controls | transported by a licensed and insured transporter in single axle dump trucks | Chemours Facility | N/A |
| Storm water from within Excavation | Potential Lead / arsenic at levels that pose threat to humans / environment | Waters will be allowed to absorb into soils or be collected and stored in Poly tanks | Recycled as duct control water during excavation | Site controls will minimize offsite sediment migration | Pumped as dust control from poly tanks or transported in poly tanks to excavation areas | Offsite disposal is not expected | If volumes exceed dust control needs water may be treated via particulate filters, batch sampled, and disposed of in at POTW pending approval |
| Construction Debris - Trash | Nails, sharps, lifting hazards | All materials will be transported to central yard for placement into dumpster | Landfill | Materials cleaned of any soils | Pickup Truck, dump trucks, dumpsters | Local Trash Service Provider | None other than broom cleaning soils |
| Spill Materials Generated | Varies by type of spill / See MSDS | Materials will be containerized and handled in accordance with corresponding MSDS | Analyzed for profile approval | See Section 4. Spill Prevention | transported by a licensed and insured transporter | TBD after analytical review | Solidification with appropriate absorbent materials |

All wastes will be managed using accepted waste management practices.

4.0 SPILL PREVENTION AND PROTECTION

Spill prevention and protection measures will be implemented to prevent any release to the storm water system or adjacent waterways. Measures identified within this section will include potential sources, corrective actions, proper storage, and responsible persons. All employees will be trained on spill prevention and protection measures as well as other training identified in Section 2.2.

4.1 Potential Spill Sources

A spill can be made up of any unplanned and unacceptable release of soils, fuels or other potentially hazardous materials. A spill at the US Smelter Lead Residential Remediation Site- Zone 3 Site could result from a leaking dump truck moving materials, leaking storage tank, ruptured fuel tank on a piece of equipment, blown hydraulic hose or spill resulting from breaching an underground oil tank or petroleum pipe or line (Figure 3-2). All vehicles on site will be routinely inspected for leaks and receive regular and preventative maintenance to reduce the chance of leakage.

It is anticipated 100 gallon diesel tank will be utilized for fueling site equipment. Tanks will be equipped with a 12-volt electric pump and fuel hose w/nozzle for fueling equipment. Fire extinguishers shall be located adjacent to the tanks and will be currently inspected and tagged.

A connex box will be utilized on site for storage of site supplies to prevent exposure to weather. Supplies to be stored include PPE, tools, spill response supplies and other expendable supplies consisting of hydraulic fluid, paint, grease, oil, cleaners, detergents, concrete, etc. All potential spill sources will be properly segregated within the connex box to eliminate the possibility of a reaction. Shelving will be utilized to ensure proper storage and segregation. All liquids will be stored in appropriate containers according the corresponding MSDS sheet. MSDS sheets for chemicals brought on site can be found within the office trailer at the staging area.



Small amounts of gasoline may be stored on site for fueling small engines such as generators, trash pumps, etc. Gasoline will be stored in red 5 gallon steel safety cans and include funnels. Gasoline and any other flammables such as paint thinners, spray paint, etc. will be segregated from other supplies and stored on shelving within the connex box.

4.2 Spill Response

Materials and equipment necessary for spill cleanup will be kept in the storage connex box on site. Equipment will include but not be limited to, brooms, shovels, dust pans, mops, rags, gloves, goggles, oil pads, boom, oil dry, sand, saw dust, and plastic and metal containers. All spills will be cleaned up immediately upon discovery.

ER's RM is an EPA Approved RM under the USEPA ERRS Program, and ER's labor force is trained in spill response, it is assumed that all spill response will be handled internally. It is understood that many of the steps will be occurring simultaneously.

- The Material will be Identified. Relying on knowledge of the excavation, property layout, material data safety sheet (MSDS) information and labeling (if applicable).
- The Spill will be Immediately Reported. The spill will be reported immediately to the USEPA RPM.
- The Spill will be Isolated. Public access will be prohibited. If the spill occurs on a public road traffic will be diverted.
- The Spill will be Contained. Liquids or soils will be contained from spreading through use of berms, clay pillows, spill pads, etc
- The Spill will be Cleaned Up and Properly Disposed. Spilled materials and any impacted soils will be removed and disposed of following all ARARs.
- The Spill and Spill Response will be documented using the Spill Summary Report (attached).

| Spill Source | Potential Impact | Management Control | Spill Reporting Chain | Responsible Responder / Backup |
|--|--|---|--|---------------------------------------|
| Soils leaking from truck or equipment during loading / transportation (contaminated or Non-contaminated soils) | Spread of Contamination, Mud hazard on streets | Visqueen Apron used to protect underlying road during load out activities All Trucks are inspected / broom cleaned prior to leaving | Truck driver / Operator to Foreman. Foreman to Response Manager. RM to EPA | Foreman / Response Manager |
| Fuel Spill During Fueling (Includes lubricant spill during equipment maintenance) | Fuel impacted soils / waterways | Fueling spills reported immediately. Adsorbent boom / pads located in Site Spill Kit. All impacted soils placed in drums and disposed of properly | Fueler to any employee. Employee to Foreman. Foreman to Response Manager. RM to EPA. | Foreman / Response Manager |
| Breaching / Leaking fuel storage tank | Fuel impacted soils / waterways | Tank inspected routinely. Tanks bermed to eliminate offsite migration | Foreman Response Manager. RM to EPA | Foreman / Response Manager |
| Heavy Erosion due to excessive rains | Spread of Contamination. Washout of erosion controls | Sites inspected during heavy precipitation. Re-establishment of washed controls when practical | Foreman to Response Manger. RM to EPA | Foreman / Response Manager |
| Hydraulic Hose Rupture | Leakage of Hydraulic oils onto clean soils | All equipment is maintained, with factory recommended hose changes | Foreman to Response Manager. RM to EPA | Foreman / Response Manager |
| Erosion (water or wind) of stockpiled materials | Spread of Contamination | All stockpiles are covered / sandbagged with 6 mil visqueen. All areas have silt fence / straw bales containment. Areas inspected daily. | Foreman to Response Manager. RM to EPA | Foreman / Response Manager |



| ER SPILL SUMMARY REPORT FORM | | | |
|---|---|-----------------------------------|------------------|
| General Facility Information for Reporting a Spill: | | | |
| Project Name: | US Smelter Lead Residential Remediation Site- Zone 3 Site | Primary Contact: | Byron Hartman |
| Site Address: | | Title: | Response Manager |
| | | Work Phone: | 636-227-7477 |
| Site Telephone: | | Cell / 24-hr Phone: | 801-209-0368 |
| Client: | USEPA Region 5 | Other: | |
| General Spill Information for Reporting a Spill: | | | |
| Type of Material: | | Discharge Date & Time: | |
| Quantity Released: | | Discovery Date & Time: | |
| Quantity Released to a Water Body: | | Discharge Duration: | |
| Location / Source: | | | |
| | | | |
| Actions Taken to Stop, Remove and Mitigate Impacts of the Discharge: | | | |
| | | | |
| Affected Media: Check All That Apply | | | |
| <input type="checkbox"/> Air <input type="checkbox"/> Water <input type="checkbox"/> Soil <input type="checkbox"/> Stormwater <input type="checkbox"/> POTW | | | |
| <input type="checkbox"/> Other: _____ | | | |
| Foreman: | | | |
| Name: | | | |
| Phone Contact Info: | | | |
| Nature of Discharges, Environmental / Health Effects and Damages: Person: | | | |
| | | | |
| Injuries, Fatalities or Evacuation Required: | | | |
| | | | |
| Names of Other Individuals / Organizations Contacted: | | | |
| | | | |
| Other Notes: | | | |
| | | | |
| NOTE: IF THE SPILL RESULTS FROM ACCIDENT YOU MUST COMPLETE ACCIDENT REPORTING PAPERWORK | | | |

Excavation Area Map

