Soil
Air
Water Environmental Services, Inc.

MATERIAL HANDLING PLAN

Site:

Olean Street Revitalization Project
Olean Street and South Plymouth Avenue
City of Rochester
Monroe County, New York
SAW Project # 24197

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1.0 INTRODUCTION

S.A.W. Environmental Services, Inc. (SAW) has developed this Material Handling Plan (MHP) in preparation of the encountering, handling, stabilizing, and transporting of contaminated or potentially contaminated soil during site activities. Site activities include; groundwater investigation, excavation of petroleum contaminated soils prior to site development, excavation of volatile organic compound (VOC) contaminated soils prior to site development; site preparation, installation of subsurface utilities, excavation of basement/foundations of new structures, excavation of C&D materials, excavation of ash/slag containing soils, soils handling during grading of site and capping of site with certified clean cover.

This report is also intended to assist the user in making appropriate decisions regarding the screening, segregation, stockpiling, transportation and disposal of petroleum-impacted soils and ash/slag impacted soils. In addition it is meant to address the health and safety of construction workers when petroleum-impacted and metals impacted soils are encountered. The MHP is designed as a flexible document to accommodate possible changes in site conditions.

David Engert & Jon F. Heerkens, Geologist/Project Managers at SAW, prepared this MHP.

SECTION 1.1 SITE DESCRIPTION

The site is located at Olean Street, Ford Street, and South Plymouth Avenue in the City of Rochester. The site is vacant land formerly occupied by multi-family residential townhouses and apartments. A site location map is included in **Appendix B**. This management plan is designed for the entire site, however the City of Rochester shall conduct separate investigation, remedial and development activities and submit a CAP for the sites labeled in yellow on the map in **Appendix A.**

SECTION 1.2 INTENT

The intent of this plan is to provide guidance for the proper handling of contaminated and potentially contaminated soil encountered during the project and ensures that all personnel follow applicable state and federal rules and regulations.

SECTION 1.3 SCOPE OF WORK

Specific work activities covered by this MHP include:

1. Installation of groundwater monitoring wells (minimum 4 wells), The wells shall be installed in the area of suspect impact. Additional wells may be installed but is dependent upon the initial results, requirements for additional data and unknown conditions that may require investigation during site activities. The groundwater wells shall be utilized to complete an accurate groundwater flow direction, groundwater gradient, and contaminant plume delineation to determine action levels for sub-slab ventilation system activation and potential remediation of impacted groundwater;
2. Sampling, analysis and disposal facility approvals;

3. Excavation, staging and disposal of petroleum & VOC contaminated soils, confirmatory laboratory analysis and the action levels for determination of additional remediation.
4. Excavation, staging and disposal of construction/demolition debris;
5. Excavation, segregation, management and disposal of fly ash and slag;

SECTION 1.4 LOCATION OF CONTAMINATED MATERIAL

Construction/demolition debris, fly ash and slag were observed in test pits and soil borings throughout the site. Petroleum impacted soils were observed in various locations across the site.

2.0 MATERIAL HANDLING

SECTION 2.1 INVESTIGATION DERIVED WASTE

The scope of work for the Olean Street project involves the installation of groundwater monitoring wells. Soil cuttings and development water generated as a result of well installations, the generated material will be placed in 55-gallon drums pending sample analysis and disposal. Drums will be staged in a designated area pending disposal.

SECTION 2.2 CONSTRUCTION/DEMOLITION DEBRIS

Construction/demolition debris encountered on site will be staged in a designated area pending disposal at an acceptable disposal facility. Concrete pads and building footings shall be excavated and staged in a designated area pending determination for reuse or disposal at a concrete recycling plant.

SECTION 2.3 FLY ASH/SLAG

Fly ash and slag will be segregated during excavation and staged on, covered and secured with 6-mil polyethylene sheeting in a designated area on-site. During excavation activities suspect material will be sampled and analyzed with a frequency as suggested in the NYSDEC STARS Guidance Memorandum, sample analysis for metals shall be conducted via EPA Method 6010 with an emphasis of the previously identified metals found in the test pit investigations. The soils will be staged in separate or like areas pending laboratory results. It is the intent of this plan to prevent the mixing of separate plumes prior to sample analysis receipt. Upon completion of excavation activities or if staging space is limited, representative composite soil samples will be collected and submitted to an accredited laboratory for analysis of Target Analyte List (TAL) metals via EPA Method 6010. The results of laboratory analysis will be compared to NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 Recommended Soil Cleanup Objectives (RSCOs) for heavy metal contaminated soils. If concentrations of heavy metals in the fly ash and slag are below TAGM 4046 RSCOs, the material can be utilized as non-structural fill (> 1 feet below grade) on-site.

In the event that concentrations of heavy metals exceed TAGM 4046 RSCOs, and is under any Land Disposal Restriction (LDR) levels the material will be profiled as non-hazardous waste stream into a Subtitle D landfill. Waste characterization is discussed further in Section 2.5 below. Based upon the results of previous investigations, it is not anticipated that the material will require classification as a hazardous waste or exhibit contaminant levels above land disposal restrictions (LDR) regulations.

SECTION 2.4 PETROLEUM & VOC CONTAMINATED SOIL

Petroleum impacted soils will be screened with a calibrated photo-ionization detector (MiniRae® 2000 w/10.2 ev lamp or similar) for the presence of organic vapors. Those soils exhibiting a PID reading of greater than 5 parts per million (ppm) will be excavated and staged in a designated area on-site.

PID Headspace Readings – Monitoring of headspace with the PID shall be conducted with the same technique at each reading (i.e. Soil sample shall be placed in a Ziploc type baggie and filled to 1/2 the capacity, the soils shall be broken and allowed to equilibrate to 70 degrees Fahrenheit, the PID tip shall be inserted through the baggie and measurements taken for both the peak reading and stabilized reading. The measurements shall be written in a field notebook and sketch of excavation.)

Each area will be considered a separate waste stream. Upon completion off the excavation activities each excavated area shall be sampled for confirmatory laboratory analysis via EPA Methods 8260 (plus STARS) & 8270 to ensure an adequate removal and compliance with NYSDEC regulations in TAGM 4046, a minimum of four (4) sidewall and one (1) base sample shall be collected for each excavated area. Additional sample frequency of the excavation shall be dictated by excavation measurements;

Sidewall – One (1) sample every 20 feet of excavation sidewall collected at the area of highest PID measurement or apparent impact.

Base – One (1) sample every 400 square feet of excavation base collected at the area of highest PID measurement or apparent impact

Prior to stockpiling of soils in the staging area, 6-mil polyethylene sheeting will be placed on the ground surface. Care will be taken to ensure that rocks, roots or other debris is removed from the area to prevent damage to the poly sheeting. The soils will be placed on the poly sheeting, covered with 6-mil poly sheeting to prevent contact with precipitation and subsequent impacting of storm water, surface waters and groundwater. The sheeting will be secured on all edges and the area surrounding the soil pile will be sloped so as to provide positive drainage away from the stockpiled material.

If the total quantity of petroleum impacted soil removed is less than 500 tons it will be disposed of at a Subtitle D landfill as described in Section 2.6 below. If the quantity of petroleum-impacted soil removed is greater than 500 tons, the option of biocell construction may be considered, dependent on site conditions, space availability, duration of project and regulatory approval.

If required, a Corrective Action Plan detailing construction/maintenance of a biocell will be completed under separate cover.

SECTION 2.5 PRE-DISPOSAL LABORATORY ANALYSIS

One composite sample will be collected from each stockpile of petroleum-contaminated soil and submitted for analysis required for disposal facility approval. At a minimum each sample will be submitted to an accredited laboratory under standard chain of custody procedures and analyzed for the following:

- Volatile organic compounds via EPA Method 8021 (STARS list compounds) plus MTBE;
- RCRA Metals via EPA Method 6010
- Flashpoint;
- Paint Filter (determination of free liquids); and
- Other appropriate analysis as determined by site conditions or suspect contaminants.

One composite sample will be collected from each stockpile of fly ash/slag and submitted for analysis required for disposal facility approval. Each sample will be submitted to an accredited laboratory under standard chain of custody procedures and analyzed for the following:

- RCRA Metals (TCLP);
- Paint Filter (determination of free liquids); and
- Other appropriate analysis as determined by site conditions or suspect contaminants.

All stockpiled soils remaining on-site must be sampled via laboratory methods and the frequency listed in the NYSDEC STARS Memo.

SECTION 2.6 WASTE DISPOSAL

Non-hazardous petroleum-impacted soils and fly ash/slag meeting non-hazardous classification will be disposed of at a Subtitle D landfill. In the event that soil or fly ash is determined to be a hazardous waste (e.g., characteristic of ignitability, toxicity or land disposal restriction (LDR)), the material will be disposed of at a Subtitle C landfill. Upon receipt of landfill approval, the stockpiled soils will be loaded and transported. The transporter will have a valid NYSDEC Part 364 waste transporter permit. A waste manifest and a copy of the waste profile will accompany each shipment of material.

3.0 HEALTH & SAFETY

A site-specific Health & Safety Plan (HASP) has been developed for the site and is attached to the Corrective Action Plan. The following items are detailed in the HASP:

- Hazard overview/evaluation;
- Project personnel and responsibilities;
- Work plan and personal protective equipment (PPE);
- Excavation safety procedures;
- Site monitoring and action levels;
- Decontamination procedures;
- Medical monitoring;
- Personnel training;
- Emergency response procedures (including directions and map to nearest hospital);