Final
CONTAMINATED MATERIALS HANDLING PLAN
FOR THE
REMEDIAL ACTION AND REMEDIAL DESIGN
AT THE
POPILE, INC. SUPERFUND SITE

Prepared by

Morrison Knudsen Corporation
Englewood, Colorado

Under Contract to:
U.S. Army Corps of Engineers
Tulsa District
Tulsa, Oklahoma

TOTAL ENVIRONMENTAL RESTORATION CONTRACT
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<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>ADPCE</td>
<td>Arkansas Department of Pollution Control and Ecology</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>COR</td>
<td>Contracting Officer’s Representative</td>
</tr>
<tr>
<td>MK</td>
<td>Morrison Knudsen</td>
</tr>
<tr>
<td>PID</td>
<td>Photoionization Detector</td>
</tr>
<tr>
<td>PPE</td>
<td>Personal Protective Equipment</td>
</tr>
<tr>
<td>RCRA</td>
<td>Resource Conservation and Recovery Act</td>
</tr>
<tr>
<td>SVOC</td>
<td>Semi-volatile Organic Compound</td>
</tr>
<tr>
<td>TCLP</td>
<td>Toxicity Characteristic Leaching Procedure</td>
</tr>
<tr>
<td>USACE</td>
<td>U.S. Army Corps of Engineers</td>
</tr>
<tr>
<td>USEPA</td>
<td>U.S. Environmental Protection Agency</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</td>
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</table>
1.0 Introduction

This Contaminated Materials Handling Plan was developed by Morrison Knudsen Corporation (MK) to support the removal action at the Popile Superfund Site. MK is contracted to the U.S. Army Corps of Engineers, Tulsa District (USACE) under the Total Environmental Restoration Contract (TERC), Number DACA56-94-D-0021. The document’s objective is to present management standards and procedures for the waste types expected to be generated during construction and investigation activities at the site, as well as to provide guidance for unexpected or newly generated waste streams.

1.1 Scope

This plan addresses the following issues:

- Description and classification of wastes to be generated
- Field site accumulation requirements
- Segregation strategies
- Characterization and disposition of wastes
- Waste minimization
- Spill control

Two management options are considered under this plan:

- On-site management
- Off-site disposal

Specific limits for the application of this plan are presented below.

- Radioactive wastes or materials are not addressed in this plan
- Temporary decontamination areas for equipment will be set up each time equipment decontamination is required
- MK will contract for all off-site waste disposal services

MK will not apply waste codes to generated wastes, based on the Record of Decision (ROD) which states “EPA has not been able to identify specific sources or specific processes that allow adequate determination for listing of this material due to post-generation commingling of the wood
1.2 Personnel Responsibilities

Compliance with the procedures specified in this plan will be the responsibility of the on-site MK Field Manager. This individual will be responsible for seeing that site personnel identify and segregate waste remediation materials generated at the site. MK will submit the paperwork specified in this plan to the Contracting Officer’s Representative (COR), as required. All waivers and permits will be checked by the MK Field Manager prior to submittal to the USACE.
2.0 Environmental Protection

MK will maintain quality control to ensure environmental protection during construction and field activities. MK will comply with all applicable federal, state, and local regulations concerning environmental pollution control and abatement, as applicable to the site and project objectives. Environmental pollution, defined as the presence of man-made chemical, physical, or biological elements which adversely affect human health or welfare, negatively alter ecological balances, or degrade the utility of the environment, will be controlled as discussed in the following sections.

2.1 Protection of Land Resources

Land resources within the project boundaries will be preserved in their present condition or will be restored to a natural condition after completion of site activities, with the exception of any permanent work performed as required under this delivery order. Clearing, grubbing and stripping will only be performed in areas defined in the Work Plans. If any additional removal of trees, shrubs or grass is required, MK will seek approval from the COR prior to proceeding.

In preparation for clearing trees, trees identified to be removed will be marked with orange flagging or paint. In instances where surrounding trees may be damaged due to construction activities, precautions will be taken to adequately protect these trees. Precautions may include inspecting the area prior to construction activities to determine equipment clearances, flagging the trees, and placement of a physical barrier near the trees. Scars resulting from branch removal will be treated with a tree sealant approved by the COR. Trees or other landscape features damaged by construction activities will be restored to as close as original condition as possible. Trees that are scarred will be painted with tree wound paint. Trees which are damaged beyond restoration will be removed.

Upon completion of all field activities, MK will remove all temporary construction facilities, including haul roads, work areas, structures, and material stockpiles. The areas will be restored to near natural conditions to permit revegetation.

Any items discovered during excavation that have any apparent historical or archeological interest will be left undisturbed. The COR will be notified immediately of any such find so that the proper authorities may be notified.
2.2 Protection of Water Resources
Controls will be maintained to ensure that water sources are not contaminated with any materials that could be harmful to fish, shellfish or wildlife, or that may restrict any water source from recreational use. Surface drainage from cuts and fills within the construction area and from borrow and waste disposal areas will be controlled using temporary erosion and sedimentation control measures. These measures may include berms, dikes, drains, hay bales or silt fences and will be maintained until permanent drainage and erosion control facilities are completed, as required. Waste areas and fill stockpile areas will be placed to minimize surface erosion that would contaminate adjacent water sources. Water used in construction processing procedures will not be allowed to enter the Bayou. All such waste water will be containerized for on-site treatment and disposal.

2.3 Protection of Fish and Wildlife
MK will take all reasonable steps to prevent any interference or disturbance to fish and wildlife. When possible, native habitats critical to fish or wildlife, adjacent to the project site, will not be disturbed by site activities.
3.0 Waste Management

CERCLA Section 121 does not require removal actions to attain all Applicable or Relevant and Appropriate Requirements (ARARs). In contrast, final remedial actions are required to attain all ARARs to the extent practicable. It was CERCLA’s intent to allow progress to be made on removal actions without burdensome and unnecessary permitting and reporting procedures; however, it was CERCLA’s intent that existing regulatory codes could not be bypassed for the final remedy. Therefore, two possible options for management of waste materials during this removal action:

1. On-site management
2. Off-site disposal

On-site management of contaminated environmental media is the option of choice for this site.

3.1 Waste Characterization

Three waste categories are expected to be generated during remediation activities at the site. Waste categories are detailed as follows:

- **Resource Conservation and Recovery Act (RCRA) characteristic hazardous wastes.** Waste will be designated as RCRA hazardous when leachable concentrations of hazardous organic and inorganic constituents exceed RCRA regulatory levels as determined by the Toxicity Characteristic Leaching Procedure (TCLP). If wastes exhibit the characteristic of ignitability, they will also be classified as RCRA hazardous waste. All RCRA regulated hazardous waste will be appropriately containerized, labeled, and transported for ultimate disposal. TCLP regulatory thresholds are presented in Table 3-1.

- **RCRA listed hazardous wastes.** Wastes will be designated as RCRA hazardous if they either contain listed hazardous wastes or are derived from listed hazardous wastes. All RCRA regulated hazardous waste will be appropriately containerized, labeled, and transported for ultimate disposal.

- **Non-hazardous waste.** Any waste that does not meet the above criteria. MK will place non-hazardous waste in on-site solid waste dumpsters for eventual off-site disposal.
TCLP testing will be performed on soils generated from current field activities and existing drummed soil. Waste categories for all other wastes generated will be assumed based on the activity associated with generation of the waste and visual determination, and will be disposed of without testing, as described in Sections 3.2.1 through 3.2.12.

3.2 Types of Wastes Expected from Remediation Activities at Popile
The following wastes may be generated during remediation activities:

- Used personal protective equipment (PPE), plastic sheeting and disposable field equipment
- Excavated materials
- Existing drummed waste
- Decontamination fluids
- Uncontaminated excess excavation soils
- Equipment maintenance wastes
- Sanitary wastes
- Empty containers
- Office wastes
- Cleared and grubbed materials
- Miscellaneous debris

3.2.1 Disposable Personal Protective Equipment (PPE) and Plastic Sheeting/Liners
PPE wastes may consist primarily of disposable coveralls, latex, vinyl, nitrile, and/or leather gloves, bootliners, respirator cartridges, and towel wastes used for wipe down and cleaning. Plastic sheeting will be derived from equipment decontamination and soil sampling activities.

For PPE generated from all locations, waste and plastic sheeting/liner items will be placed in plastic bags. The bags will be sealed by goosenecking and taping or tying and labeling. PPE and plastic sheeting/liner items generated during investigation activities in contaminated areas of the site will be containerized at the sample collection location and moved to a central location. PPE and plastic sheeting/liner items generated activities in uncontaminated areas will be placed in the on-site solid waste dumpster.
3.2.2 Soil Residuals
Soil residuals may be generated from one of the following activities:

- Cut and fill for access roads and parking - this material will be presumed to be non-
  hazardous. Any materials excavated from the access road or parking area will be placed
  and left in an adjacent, non-contaminated area.

- Soil cuttings and excess sample material from drilling activities - These materials will be
  handled as discussed in Section 5.1.

- Soil removed for installation of fence post holes - This material will be presumed to be
  non-hazardous. Soil will be placed, smoothed and left in an area adjacent. If soil is
  visually stained or discolored, it will be handled as discussed in Section 5.1.

- Contaminated soils excavated for USACE biological remediation meso-study - any excess
  material will be stockpiled and backfilled from the area it originated from.

3.2.3 Well Purge and Development Water
All purged groundwater and development water generated from well installation and groundwater
sampling activities will be containerized in a 500 gallon poly tank mounted on the field truck and
then pumped into a fractionation tank located in the facilities area. The liquid will be stored until
treatment and disposal.

3.2.4 Pump Test Water
During pump tests, water will be pumped directly from each well through a carbon filtration unit.
After passing through the carbon unit, the water will be directed into nearby ditches for on-site
disposal.

3.2.5 Decontamination Fluids
All decontamination fluids (water, detergent, etc.) generated from construction and investigation
activities will be pumped into a fractionation tank located in the facilities area, and held for on-
site treatment.
3.2.6 Existing Drummed Waste
Drummed waste from previous site investigations, and currently remaining at the site, will be emptied and mixed with the waste generated from MK field activities. MK believes that existing drummed waste includes soil waste, purge water from monitoring wells and spent PPE. These wastes will be combined with the same class of wastes generated by MK. Once emptied, the drums will be rinsed and the rinsate handled as described in Section 3.2.5 and the drums handled as described in Section 3.2.8.

3.2.7 Sanitary Wastes
Sanitary wastes will be generated in portable toilets stationed in work areas. A service contract will be maintained by MK for pumping and servicing the portable toilets.

3.2.8 Empty Containers
Empty containers may be generated when hazardous materials are used at the site, either for decontamination or equipment maintenance. All containers of hazardous materials brought on site will be emptied to the degree possible using normal means such as pouring, pumping or aspirating. The resulting container shall be considered empty as defined in 40 CFR Part 261.7, if the original hazardous material is acutely hazardous as listed in 40 CFR 261. Empty containers, as defined by the Empty Container Rule found in 40 CFR Part 261.7, can be disposed as non-hazardous waste. MK will dispose of verified empty containers as non-hazardous waste. Empty containers generated for these activities will be limited to containers which held decontamination solutions (hydrocarbon solutions or detergents only), starter fluid, hydraulic fluid, grease, and empty sample containers.

3.2.9 Office Wastes
Office wastes, such as papers, envelopes, aluminum cans, etc. will be disposed of off-site. The disposal option of choice for these materials will be recycling. If recycling options are unavailable, then the materials will be disposed of as solid wastes, subject to RCRA Subtitle D regulations. MK will maintain a dumpster for non-hazardous waste and contract for regular sanitation services.
3.2.10 Groundwater Intersected During Remedial Activities

Intrusive sub-surface remedial activities may intersect existing groundwater. The groundwater may be derived from seepage into an excavation, or may be associated with heavy rains during remediation. These waters may be subject to management as RCRA hazardous wastes when disposed of and will be pumped from the excavation and stored for on-site treatment.

3.2.11 Cleared and Grubbed Materials

All trees and shrubs cleared from the site will be assumed to be uncontaminated. These materials will be removed from the site by the subcontractor. Grubbing will only be performed in uncontaminated areas of the site. Grubbed materials will be subjected to chipping and grinding in place.

3.2.12 Well Construction Materials

Existing monitoring wells subject to abandonment will be addressed by either pulling the casing and/or over-drilling techniques. Casing, protective covers, and concrete pads decontaminated using the extraction technologies of 40 CFR 268.45 Table 1 may be disposed of off-site at Subtitle D, non-hazardous landfill. Environmental media (to include shredded well screens, bentonite, and concrete rubble) generated by over-drilling will be placed in the nearby on-site excavation.

3.2.13 Miscellaneous Debris

During excavation and construction activities, miscellaneous debris, including building materials, empty containers and general rubbish, may be encountered. When this occurs, the MK field manager will inspect the debris to determine handling. The material may be stockpiled on a predetermined area of the site for later hazardous characteristic testing, or disposed of in the on-site solid waste dumpster as non-hazardous waste, as dictated by judgement.
<table>
<thead>
<tr>
<th>EPA HW No.</th>
<th>CONTAMINANT</th>
<th>CAS No.</th>
<th>REGULATORY THRESHOLD (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D004</td>
<td>Arsenic</td>
<td>7440-38-2</td>
<td>5.0</td>
</tr>
<tr>
<td>D005</td>
<td>Barium</td>
<td>7440-39-3</td>
<td>100.0</td>
</tr>
<tr>
<td>D018</td>
<td>Benzene</td>
<td>71-43-2</td>
<td>0.5</td>
</tr>
<tr>
<td>D006</td>
<td>Cadmium</td>
<td>7440-43-9</td>
<td>1.0</td>
</tr>
<tr>
<td>D019</td>
<td>Carbon tetrachloride</td>
<td>56-23-5</td>
<td>0.5</td>
</tr>
<tr>
<td>D020</td>
<td>Chlordane</td>
<td>57-74-9</td>
<td>0.03</td>
</tr>
<tr>
<td>D021</td>
<td>Chlorobenzene</td>
<td>108-90-7</td>
<td>100.0</td>
</tr>
<tr>
<td>D022</td>
<td>Chloroform</td>
<td>67-66-3</td>
<td>6.0</td>
</tr>
<tr>
<td>D007</td>
<td>Chromium</td>
<td>7440-47-3</td>
<td>5.0</td>
</tr>
<tr>
<td>D023</td>
<td>o-Cresol</td>
<td>95-48-7</td>
<td>4200.0</td>
</tr>
<tr>
<td>D024</td>
<td>m-Cresol</td>
<td>108-39-4</td>
<td>4200.0</td>
</tr>
<tr>
<td>D025</td>
<td>p-Cresol</td>
<td>106-44-5</td>
<td>4200.0</td>
</tr>
<tr>
<td>D026</td>
<td>Cresol</td>
<td>4200.0</td>
<td></td>
</tr>
<tr>
<td>D016</td>
<td>2,4-D</td>
<td>94-75-7</td>
<td>10.0</td>
</tr>
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<td>D027</td>
<td>1,4-Dichlorobenzene</td>
<td>106-46-7</td>
<td>7.5</td>
</tr>
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<td>D028</td>
<td>1,2-Dichloroethane</td>
<td>107-06-2</td>
<td>0.5</td>
</tr>
<tr>
<td>D029</td>
<td>1,1-Dichloroethylene</td>
<td>75-35-4</td>
<td>0.7</td>
</tr>
<tr>
<td>D030</td>
<td>2,4-Dinitrotoluene</td>
<td>121-14-2</td>
<td>0.13</td>
</tr>
<tr>
<td>D012</td>
<td>Endrin</td>
<td>72-20-8</td>
<td>0.02</td>
</tr>
<tr>
<td>D031</td>
<td>Heptachlor ( &amp; its epoxide)</td>
<td>76-44-8</td>
<td>0.008</td>
</tr>
<tr>
<td>D032</td>
<td>Hexachlorobenzene</td>
<td>118-74-1</td>
<td>0.13</td>
</tr>
<tr>
<td>D033</td>
<td>Hexachlorobutadiene</td>
<td>87-68-3</td>
<td>0.5</td>
</tr>
<tr>
<td>D034</td>
<td>Hexachloroethane</td>
<td>67-72-1</td>
<td>3.0</td>
</tr>
<tr>
<td>D008</td>
<td>Lead</td>
<td>7439-92-1</td>
<td>5.0</td>
</tr>
<tr>
<td>D013</td>
<td>Lindane</td>
<td>58-89-9</td>
<td>0.4</td>
</tr>
<tr>
<td>D009</td>
<td>Mercury</td>
<td>7439-97-6</td>
<td>0.2</td>
</tr>
<tr>
<td>D014</td>
<td>Methoxychlor</td>
<td>72-43-5</td>
<td>10.0</td>
</tr>
<tr>
<td>D035</td>
<td>Methyl ethyl ketone</td>
<td>78-93-3</td>
<td>200.0</td>
</tr>
<tr>
<td>D036</td>
<td>Nitrobenzene</td>
<td>98-95-3</td>
<td>2.0</td>
</tr>
<tr>
<td>D037</td>
<td>Pentachlorophenol</td>
<td>87-86-5</td>
<td>100.0</td>
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### Table 3-1 (Cont’d)
Maximum Concentration of Contaminants for the Toxicity Characteristics

<table>
<thead>
<tr>
<th>EPA HW No.</th>
<th>CONTAMINANT</th>
<th>CAS No.</th>
<th>REGULATORY THRESHOLD (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D038</td>
<td>Pyridine</td>
<td>110-86-1</td>
<td>5.0</td>
</tr>
<tr>
<td>D010</td>
<td>Selenium</td>
<td>7782-49-2</td>
<td>1.0</td>
</tr>
<tr>
<td>D011</td>
<td>Silver</td>
<td>7440-22-4</td>
<td>5.0</td>
</tr>
<tr>
<td>D039</td>
<td>Tetrachloroethylene</td>
<td>127-18-4</td>
<td>0.7</td>
</tr>
<tr>
<td>D015</td>
<td>Toxaphene</td>
<td>8001-35-2</td>
<td>0.5</td>
</tr>
<tr>
<td>D040</td>
<td>Trichloroethylene</td>
<td>79-01-6</td>
<td>0.5</td>
</tr>
<tr>
<td>D041</td>
<td>2,4,5-Trichlorophenol</td>
<td>95-95-4</td>
<td>400.0</td>
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<tr>
<td>D042</td>
<td>2,4,6-Trichlorophenol</td>
<td>88-06-2</td>
<td>2.0</td>
</tr>
<tr>
<td>D017</td>
<td>2,4,5-TP (Silvex)</td>
<td>93-72-1</td>
<td>1.0</td>
</tr>
<tr>
<td>D043</td>
<td>Vinyl chloride</td>
<td>75-01-4</td>
<td>0.2</td>
</tr>
</tbody>
</table>


1. Hazardous Waste Number
2. Chemical Abstracts Service Number
3. Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.
4. If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/L.
4.0 Waste Segregation and Minimization Strategies

Wastes will be appropriately segregated to reduce the potential mixing of hazardous and nonhazardous materials, and thereby minimize the volume of hazardous wastes generated. Similarly, detailed waste characterization efforts will be conducted so that remediation wastes are properly targeted to the lowest cost, legal, disposal outlet. In addition, MK will strive to minimize the volumes of collateral wastes (such as PPE/plastic sheeting and soil overburdens) generated during removal activities.

4.1 Material Segregation Strategies

Different types of hazardous wastes may not be comingled in the field, unless the comingling is an integral part of the waste collection process. The following materials and wastes may be comingled in the field to minimize the number and complexity of waste streams bound for disposal.

4.1.1 Disposable Personal Protective Equipment

Hazardous PPE and other debris will be kept separate, unless the opportunity to place the PPE and other debris directly into trucks bound for off-site disposal is presented. In these instances, the PPE and other debris may be placed into the trucks along with the original, contaminated source material.

4.1.2 Equipment Maintenance Wastes

Equipment maintenance activities will be performed off-site whenever possible. Wastes from equipment maintenance performed at the on-site staging area will be segregated between petroleum and non-petroleum wastes. Used oil and hydraulic fluid filters will be combined and placed in a drum with secondary containment. Miscellaneous solid wastes (paper sacks, packaging, general rubbish) will be placed in a trash dumpster as designated. Subcontractors will be responsible for removing any such wastes as part of general cleanup prior to or during demobilization.

4.1.3 Empty Containers

Empty containers may be generated when hazardous materials are used at the site, either during field testing or for decontamination and equipment maintenance. Consistent with the Empty
Container Rule found at 40 CFR Part 261.7, empty containers, where the contents have been removed using ordinary means, can be disposed as non-regulated, non-hazardous waste.

All containers of hazardous materials (such as decon solvents) brought on-site will be emptied to the degree possible using normal means such as pouring, pumping or aspirating. The resulting container will be considered empty as defined in 40 CFR Part 261.7. MK will ensure that bungs and lids are in place.

4.2 Waste Minimization Plan
A primary goal of this plan is to minimize, to the extent practical, the volume of wastes which will be generated and stored and the amount of material which will be removed from the site for disposal. In order to minimize the volume of wastes, MK will follow these general rules:

- Plan ahead to reduce the amount of wastes generated
- Avoid contaminating materials unnecessarily
- Decontaminate and reuse material, PPE, and equipment when practical
- Solidly pack waste containers to minimize the number of containers (keeping in mind weight/capacity requirements for containers) and use only the container size needed
- Minimize the amount of water and detergent solution needed to decontaminate sampling and heavy equipment
- Avoid mixing potential or actual RCRA regulated materials with non-RCRA wastes
5.0 Characterization and Disposition of Wastes

Disposition of wastes will be determined by their regulatory classification. Three classifications are possible:

- Materials exhibiting the characteristics of a RCRA hazardous waste
- Materials containing, or derived from, RCRA listed hazardous wastes or RCRA listed hazardous waste constituents
- All other non-hazardous materials

5.1 Solid Wastes

Solid wastes anticipated to be generated during field activities include soil from sampling and drilling and excavation, spent carbon from liquid waste treatment, bag filters, and spent PPE.

5.1.1 Soil

Soil produced from remote locations of the site will be temporarily stored in drums, roll off bins, or other containers. Roll off bins will have steel lids to prevent precipitation from entering the bin and to mitigate emission of vapors from the soils. Soils may be managed on-site or disposed off-site.

On-site Disposal

Soil generated from this field effort, along with any residual soil currently in drums at the site which was generated during past field work, may be placed in the trench created during the site meso/pilot treatability study. When field work is completed, backfill of the trench will be completed with clean cover soil.

Off-site Disposal

For off-site disposal, a composite soil sample will be collected for analysis of TCLP semi-volatile organic compounds (SVOC) and TCLP metals. A single grab sample will be collected for TCLP volatile organic compound (VOC) analysis.

If TCLP analyses report no detectable TCLP VOCs, SVOCs, or metals present in the waste soils, then the soils will be disposed of as non-hazardous waste in a local landfill. Soils which have detectable TCLP VOCs, SVOCs, or metals at concentrations below the regulatory thresholds...
(Table 3-1) will be either sent to a RCRA Subtitle C facility for disposal or will be incinerated. Waste soils that contain TCLP target VOCs, SVOCs, or metals above the regulatory thresholds for toxicity characteristics will be considered hazardous and handled as RCRA hazardous wastes, in accordance with 40 CFR 262, and will be either sent to a RCRA Subtitle C facility for disposal or will be incinerated. This process is outlined in Figure 5-1.

5.1.2 Spent Granular Activated Carbon 
Granular activated carbon (GAC) will be used to treat all waste liquids generated during field activities. Spent GAC will contain hazardous organic compounds, therefore, if sent off-site, they will be managed as hazardous if they exhibit hazardous characteristics. Otherwise, spent GAC will be disposed of with waste soils.

5.1.3 Bag Filters
Bag filters will be used to filter suspended solids from liquid wastes prior to treatment. Spent bag filters may potentially contain hazardous organic compounds, therefore, if sent off-site, they will be managed as hazardous if they exhibit hazardous characteristics. Otherwise, spent filters will be disposed of with waste soils.

5.1.4 Personal Protective Equipment
PPE generated during remediation may be placed directly into any trucks or containers bound for off-site disposal, if such placement is approved by the final receiving facility. PPE and plastic sheeting/liner items generated during remediation of RCRA characteristic hazardous wastes will be disposed of at a RCRA Subtitle D facility.

5.2 Liquid Waste
Liquid wastes generated during field activities will be derived from monitoring well development, well purging, equipment decontamination and surface water accumulation during excavation. All liquid wastes will be treated on-site using by pumping the liquid through GAC prior to on-site discharge. Liquid will be held in a fractionation tank until treatment. The liquid will be pumped through a bag filter prior to passing through the GAC. Effluent from the GAC will be collected in a holding tank and a sample of the effluent collected and analyzed for semi-volatile organic compounds, volatile organic compounds, and metals, and will be shown to meet maximum contaminant levels (MCLs) prior to on-site discharge. Treated liquid waste which meets the above...
criteria will be discharged into the ditch next to the facilities area which leads to the Bayou. MK
anticipates generation of approximately 16,000 gallons of liquid waste.
6.0 Container Management

Waste containers will be provided by MK. Described below are procedures for managing these containers, to include filling and transferring. Large numbers of drums will not be obtained and stockpiled.

6.1 Types of Containers
The following containers, and their uses, are anticipated to be used for generated wastes at the site:

- Dumpsters for non-hazardous waste, including office waste and non-contaminated debris; contaminated soil; and non-contaminated soil
- Drums for soil and PPE
- Fractionation tank for decon water and groundwater

6.2 Empty Containers
Empty drums will be stored either on the back of subcontractor vehicles or in low visibility areas at each work site. Empty drums should be few in number.

6.3 Container Inspection
MK will inspect all containers at the time of receipt to ensure that they are appropriate for the materials to be stored in them. Appropriateness is defined as containers consistent with the Performance Oriented Packaging Standards of 49 CFR 178. The containers must be clean, free of visually obvious defects, and that needed appurtenances are present (lids, bungs, bolts, pallets, labels, etc.). All defective containers will be segregated from the accepted containers and returned to the source. All containers determined acceptable will be added to the MK inventory for use. All metal (if any) containers will be stored off the ground on pallets to deter rust and corrosion and facilitate handling.

6.4 Filling and Transferring of Containers
Waste containers used for accumulation of wastes will be ordered by the MK Field Manager. Empty containers will be staged for use at the work site.
Waste containers will be kept secured at all times. When not being filled, all lids and bungs will be in place and secured on the containers. Filling drums with flammable or combustible liquids requires use of spark proof tools. Accumulation containers will not be filled to capacity due to weight limitations. All liquid containers will be filled to 85 to 90 percent capacity. Should a container develop a leak, MK will immediately overpack the container or transfer its contents into another container that is both in good condition as well as compatible with the waste. When used, the overpack will be properly labeled with all of the appropriate information from the accumulation container label. All overpacks will be reported to the USACE.

MK will complete the labels on the containers containing RCRA regulated wastes per the requirements of 40 CFR 261. Solid wastes which must be containerized will be labeled with information which clearly describe the type of solid waste, the date the container became full, the location where the waste was generated, and the contractor that placed the waste into the accumulation container.

The containers used to bring hazardous materials on site, when empty, shall be prepped for disposal per site facility requirements. This may include breaking or crushing. These containers may be placed in a designated accumulation container, or alternatively prepped for shipment and disposal off-site.

PPE and plastic sheeting/liners will be placed in plastic bags.

6.5 Waste Storage
Wastes will be stored in appropriate accumulation containers until final disposition. Containers will be stored in a central accumulation area. Accumulated waste will not be stored for more than 90 days.
7.0 **Spill Control Plan**

When working around drums or other spillable materials, MK will adhere to the following spill prevention measures:

- Use proper drum handling techniques (observance of weight restrictions, use of forklifts and drum dollies, secondary containment for liquids)
- Secure drum lids/rings properly
- Use caution when placing material in drums
- Place plastic sheeting on ground during sampling activities

A spill clean-up kit will be kept at field sites during these activities:

- Sampling (of soils, drums, tanks, sludges, etc.)
- Excavation
- Handling of chemical products (such as diesel fuels, oils, etc.)

The spill clean-up kit will consist of:

- One non-sparking shovel (only if flammable or combustible materials are present)
- Two absorbent booms (only if liquids are present)
- 50 lbs of absorbent material (only if liquids are present)
- 10-mil plastic sheeting (10' x 40')
- Barricade tape
- Four pairs of nitrile latex gloves with 10" gauntlet
- Overpack drums (as either 5 gallon, 30 gallon, 55 gallon, or 83 gallon)

Possible materials that could be spilled at the field site include:

- PAH/phenol contaminated soil
- PAH/phenol contaminated groundwater
- Decontamination liquid

In the event of a spill of soil or liquid materials, MK will contact the COR and the National Response Center at 1-800-424-8802. As appropriate, MK will immediately begin spill containment and clean-up activities. A description of emergency response procedures for spill
containment is included in Section 14 and 15 of the Site Safety and Health Plan. The MK notification will include, but is not limited to:

- Name of person reporting
- Name of contractor
- Location of the spill
- Quantity estimate
- Material spilled
- Potential hazards (fire, health, environment, etc.)
- Action taken to contain spill
8.0 Recordkeeping

This section provides the procedures for documenting and managing the waste materials generated during field activities. These procedures cover:

- Inspection and storage of empty waste containers
- Accumulation of solid wastes in drums and roll-off bins
- Characterization of soil cuttings and drilling muds
- Waste container transfer and disposition

The MK field representative will be responsible for identifying, segregating and labeling the waste materials generated. All paperwork and forms will be copied and forwarded to MK’s Denver Office as they are completed.

8.1 Waste Containers

Empty drums for waste accumulation will be provided by MK. Roll-off bins will be rented from firms having the capability to transport them to and from the site. On-site drums will be placed on their sides, on pallets which are in good condition. Upon delivery of drums, bins or stock tanks to the site, MK will inspect each container to ensure that it is clean and free of defects (lids, bolts, etc. are intact). MK will then enter the containers into inventory by placing a numbered label on the body (not the lid) of the container.

Container labels will show the following information:

DRUM XX (or BIN or TANK)
For Information Contact:
MK Corporation
(303) 793-5000

where XX = Container ID number

A clear, resealable, adhesive press-on envelope (such as used for packing slips) will also be attached to each drum, bin and stock tank to store later paperwork and shipping instructions.
8.2 Solid Waste Accumulation

Waste accumulation logs (Figure 8-1) will be placed in the clear envelope attached to each drum or roll-off bin and a record of accumulation will be maintained for each waste container. The record will consist of the container ID number, borehole/excavation location, the start date of waste accumulation, the end date of accumulation, the depth interval(s) of soils contained, VOC field screening recordings and an associated TCLP composite sample number.

Drums, if used, will be filled on pallets in numerical sequence. They will be placed on pallets in a secured area in a way as to allow inspection and access by forklift. After drums are filled, they will be relocated to a drum accumulation area to be designated by the onsite MK field representative. Drums will stay at the accumulation area until TCLP analysis is completed and drum disposition is determined. The accumulation area will be inspected weekly by the MK field representative. If a drum is found in poor condition, arrangements will be made to have the contents repackaged.

8.3 Characterization and Disposal

This section pertains to sample ID designation for chain of custody shipment to an offsite laboratory for TCLP analysis, and communicating the TCLP results for each waste container.

8.3.1 TCLP Sample Designation

Samples will be collected of solid wastes from drums, tanks and bins for waste characterization by TCLP analysis. Sample ID numbers associated with waste containers will be recorded on the waste accumulation forms attached to each container. Sample ID numbers will be designated as:

DO18-X-Y-CO

Where:

DO18 identifies the Popile Site (Delivery Order 18)
X = "DRUM", "BIN", or "TANK"
Y = "1-4", or "5-8", etc. for drums, or "1", 2", etc. for bins and tanks
and CO identifies the sample as a composite.

8.3.2 Communicating the TCLP Results on Each Container
When TCLP results are received from the lab, copies of the report of each analysis will be made for as many drums, or bins to which the results apply. The results will be attached on each waste container. Results will also be forwarded to the COR for review and determination of final disposition. MK will complete a Uniform Hazardous Waste Manifest form, and required supplemental paperwork, however, MK will not sign manifests for shipment. All manifests will be signed by the COR prior to shipment for treatment and/or disposal.
FIGURE 8-1

WASTE ACCUMULATION LOG
Popile, Inc. Superfund Site Remedial Design

Contractor: __________________________

Container No: ________________________ Borehole No: ________________________

Container Type: _______________________

Contractor Waste Coordinator: __________ Phone No: ____________________________

Accumulation Start Date: _____________ Accumulation End Date: ________________

Depth Interval(s) Contained: ____________________________

VOC Field Screening Measurements: ________________________________ ppm

TCLP Sample No: __________________________________________

Contractor Signature: _______________________________________

Title: __________________ Date: ___________

8-4
9.0 References

Code of Federal Regulations (CFR), Parts 261 and 262, 264 and 265

## Comments on Draft Contaminated Materials Handling/Storage Plan

**Popile Superfund Site - Groundwater Modeling**  
**El Dorado, Arkansas**

**Reviewer:** Joe Sensebe, New Orleans District, Corps of Engineers  
**Respondent:** MK

1. **Respondent concurs (C), Does not Concur (D), or takes Exception (E).**  
2. **Commentor Agrees (A) with response or Does not Agree (D) with response.**

<table>
<thead>
<tr>
<th>Comment #</th>
<th>Page(s)/Section</th>
<th>Paragraph/Line</th>
<th>Comment</th>
<th>C,D,E</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General</td>
<td></td>
<td>The exceptions to the specifications sheet indicates that the waste hauler and disposal facility will not be identified until samples are obtained and then the required information will be provided. This approach is acceptable, however, final approval required to dispose of the hazardous waste will not be granted until this information is submitted and approved.</td>
<td></td>
<td>MK will seek final approval from USACE prior to off-site disposal of hazardous waste.</td>
</tr>
<tr>
<td>2</td>
<td>Signature Page</td>
<td></td>
<td>It is not required that the USEPA and the ADPCE approve this plan.</td>
<td></td>
<td>The signature lines for USEPA and ADPCE will be removed.</td>
</tr>
<tr>
<td>3</td>
<td>3-2, 3.2.1</td>
<td>2nd Para.</td>
<td>The 2nd paragraph in this section refers to PPE and plastic liners generated during remediation of RCRA hazardous wastes. There is no remediation of any wastes under this task order. The sentence should be rewritten toward an investigation derived RCRA waste in contaminated/hazardous areas of the site. Normal construction activities will occur in non-hazardous/uncontaminated areas.</td>
<td></td>
<td>This paragraph will be revised.</td>
</tr>
<tr>
<td>4</td>
<td>Waste Minimization</td>
<td></td>
<td>In order to minimize the amount of waste that will leave the site, we suggest that soil cuttings should be disposed of in the trench that will be created to obtain soil for the meso/pilot treatability study. Since the soil cutting will be contaminated to the same degree or less, disposal of them in this trench will not be a problem.</td>
<td></td>
<td>The plan will be revised to state that soil cuttings will be disposed of in the trench created from the meso/pilot treatability study.</td>
</tr>
<tr>
<td>5</td>
<td>6.0, Container Management</td>
<td></td>
<td>A paragraph should be added to this section on Waste Storage. It should state that accumulated waste will not be stored on site in excess of 90 days.</td>
<td></td>
<td>A section on waste storage will be added.</td>
</tr>
</tbody>
</table>