

**WASTE MANAGEMENT PLAN**  
**FOR**  
**REMOVAL ACTION CONTRACT**  
**FORMER INDUSTRIAL METAL ALLOY SITE**  
**WINSTON-SALEM, NORTH CAROLINA**

**HEPACO Project No. 7420039**

**Prepared by:**



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## **LIST OF ACRONYMS**

SAP	Sampling and Analysis Plan
CFR	Code of Federal Regulations
DOT	Department of Transportation
NCDENR	North Carolina Department of Environment and Natural Resources
PMP	Project Management Plan
PWP	Project Work Plan
QA/QC	Quality Assurance / Quality Control
SOP	Standard Operating Procedures
SSHP	Site-Specific Safety and Health Plan
USEPA	United States Environmental Protection Agency

## 1.0 PROGRAM DESCRIPTION

This Waste Management Plan (WMP) sets forth the procedures for identifying and characterizing anticipated waste streams, which will be implemented by HEPACO for the remedial activities anticipated for the Removal Action Contract for the Former Industrial Metal Alloy Site located in Winston-Salem, North Carolina. This WPM Plan is part of HEPACO's Project Management Plan (PMP) which consists of the following four subplans:

- Project Work Plan (PWP) - Comprehensive plan addressing the technical approach, controls, resources, and schedule for completing the specified work scope.
- Site-Specific Safety and Health Plan (SSHP) - Detailed plan addressing the safety and health criteria, procedures, controls, practices which will be mandated to protect on-site personnel, the environment, and potential off-site receptors.
- Sampling and Analysis Plan (SAP) - Detailed plan addressing how sampling and analysis to confirm that the project is completed in accordance with all EPA guidelines will be carried out. The SAP to be utilized on the project was prepared by Brown and Caldwell dated March 2007.
- Waste Management Plan (WMP) - Detailed plan addressing the overview of waste generating activities and identification of anticipated waste streams, as well as, identifying the transportation and disposal facilities permitted to accept each waste stream.

This WPM presents HEPACO's management policies, objectives, and specific standard operating procedures (SOPs) for all waste stream characterization and disposal efforts to be conducted as part of this project. The Plan identifies personnel, procedures, control, instructions, test records, and forms to be used.

The work under this contract will be executed and managed by HEPACO, Inc. Various work elements will be performed by selected subcontractors. The requirements of this WPM Plan are mandatory compliance items for all HEPACO project personnel and subcontractors.

## **2.0 WASTE DETERMINATION AND CHARACTERIZATION**

### **2.1 Waste Streams**

There are five distinct waste streams anticipated to be generated during the course of this project. The anticipated waste streams are as follow:

- **Clearing Debris –** Trees, shrubs and other surface vegetation requiring clearing to provide easy access to impacted soils
- **Grubbing Debris –** Subsurface roots and vegetation requiring grubbing to provide easy access to impacted soils.
- **Kettle Bottoms–** The presence of kettle bottoms have been noted from previous assessment activities performed at the site. Each kettle bottom is roughly hemispherical and approximately 1.5 to 2 feet in diameter. The material is solid and stable. site.
- **Lead Impacted Soil–** Previous site assessment activities have identified soils on the property that have elevated levels of lead above USEPA remedial action levels of 400 mg/kg for industrial sites and 280 mg/kg for residential sites. The soil also exhibits characteristics of hazardous waste in excess of the TCLP lead levels of 5 mg/l. These soils will require on-site stabilization prior to transportation and disposal at a subtitle D landfill.
- **Decon Water–** The generation of potentially lead impacted water will occur during the decontamination of personnel and equipment at the site. Additional, potentially lead impacted water may be generated from inclement weather conditions at the site.

### **2.2 Waste Characterization**

It is anticipated that all the waste streams generated on the project will be considered non-hazardous; however, precautions must be taken to ensure that these waste streams are consistent with there physical appearance and properties. Each waste stream that is questionable as to possible contamination from foreign waste other than the specific waste stream shall be characterized by laboratory analysis to ensure proper disposal methods. The following sampling procedures will be followed in order to characterize each waste stream for disposal:

#### **2.2.1 Clearing Debris**

Trees, shrubs and other surface vegetation will be cleared and grubbed to provide easy access to impacted soils. Surface vegetation will be ground, mulched and disposed. A representative sample of the material will be collected and screened with the XRF. If

lead is detected, the material will be analyzed and either disposed of with the treated soil if it is non-hazardous, or mixed with untreated soil if it is hazardous and treated with the soil prior to disposing of as non-hazardous.

#### **2.2.2 Grubbing Debris**

Trees are to be removed and salvaged as much as possible. Non-salvageable material from the trees will be disposed with the non-contaminated surface vegetation. The tree material will not require screening and testing for lead. Grubbed material will be staged in-place or in a designated area on the site. The staged material will be screened with the XRF to determine if any lead is present. If lead is detected above cleanup goals, then samples will be collected and analyzed using TCLP methods to determine if the grubbed material is hazardous. Grubbed material will be managed and disposed of in the same manner as the soil in each respective grid, based on the soil screening and sampling results.

#### **2.2.3 Kettle Bottoms**

It is anticipated that the kettle bottoms can be transported for recycling at a local metals reclamation facility. Final approval can not be achieved until full access to the site is granted and a sample from the kettle bottoms can be delivered to the recycling facility. In the event that the kettle bottoms can not be recycled, then they will be broken down into small manageable pieces with a hydraulic hammer attached to the excavator. The smaller pieces will be mixed and treated with the impacted soils. Characterization sampling will be conducted in the same manner as the soil.

#### **2.2.4 Lead Impacted Soils**

As the soil is treated it will be placed into 250 cubic stockpiles within the treatment area. Six samples will be collected from each stockpile and homogeneously mixed to form one composite sample. The composite sample will be shipped to Prism Laboratories for chemical analysis. Allied Waste's Speedway Landfill's analytical requirements and acceptable levels are as follows:

<b>Characterization Parameters</b>	<b>Landfill Acceptance Criteria</b>
TCLP Metals:	
Arsenic	<5.0 mg/l
Barium	<100.0 mg/l
Cadmium	<1.0 mg/l
Chromium	<5.0 mg/l
Lead	<5.0 mg/l
Mercury	<0.2 mg/l
Selenium	<1.0 mg/l
Silver	<1.4 mg/l
PH	>2.0 and <12.5
Paint Filter	No free liquids

After reviewing the analytical results for each stockpile, HEPACO will either load the soil into dump trucks and transport to Allied Waste's Speedway Landfill or retreat the soil until levels of contaminants are within the acceptable criteria set by the landfill.

#### **2.2.5 Decon Water**

All water generated at the site from personnel and equipment decontamination activities and/or the collection of water generated from inclement weather events will be containerized on site in mobile storage tanks. Once a storage container has reached its holding capacity, a composite sample will be collected from the tank. Individual samples will be collected from the top, middle and bottom of the tank and composited into one sample. The sample will be transported to the testing laboratory following all chain-of-custody procedures for chemical analysis. The sample will be analyzed for total RCRA metals. Decontamination water will either be used as dust suppression on treated and untreated soil stockpiles or transported off site for disposal at a water treatment facility permitted to accept waste with these characteristics.

All sampling, sample handling, documentation, and analytical procedures will be performed in accordance with the details of the SAP, Project Specifications, USEPA and NCDENR regulatory requirements, and other applicable standards and regulations. HEPACO will use a validated and approved laboratory for all analytical testing. All sampling and analysis activities will be documented daily in the bound field notebook; these notes will become part of the controlled project documentation.

#### **2.3 Waste Profiling**

HEPACO will review the analytical data to verify that the waste stream is a hazardous material or non-hazardous waste material and does not meet the criteria for a characteristic hazardous waste as defined by the USEPA.

A waste profile will be completed by HEPACO based on the laboratory data. The profile will require a Generator Certification signature by a NK Holdings representative. The completed profile will be submitted to the appropriate disposal facility for approval prior to any waste being shipped from the project site. A copy of the completed waste profile(s) will be kept in the project file for future reference. Refer to Figure 1 for a sample of a waste profile sheet.

### **3.0 WASTE MANAGEMENT PRACTICES**

Management of waste streams are critical in the minimization of the amount of waste to be disposed of. Certain standard operating procedures (SOP's) will be adhered to during the duration of the project. These procedures are outlined in the following subsection.

#### **3.1 Control of Air Contamination**

Certain project activities could result in the dust and/or waste contamination of air during the execution of work. Such generation sources could include: the generation of dust during the removal, transportation and placement of soils- both contaminated and non-contaminated and, the generation of dust as a result of traffic activities on the site.

During all activities, HEPACO will actively take steps to identify work areas whose medias may have the potential for airborne migration. The media will be identified at each of the respective work locations and steps will be immediately implemented to control the emission of dust and/or waste contamination. HEPACO will use such methods as covering with earthen materials, polyethylene and/or water spraying, to control the generation and dispersion of dust and/or waste from demolition and/or excavation activities. The addition of water, or possibly amended water, will be used when local conditions warrant such incorporation. When needed, water may be added to work surface areas, haul roads or other designated points to minimize dust generation.

The use of sound construction techniques will aid in the avoidance of situations that could promote conditions or situations for airborne contamination. These methods will include the installation of proper soil storage areas, the construction of proper diversionary and run-on/off berms and dikes, and other devices designed to confine waste and materials.

#### **3.2 Control of Water Contamination**

HEPACO is interested in ensuring that the pollution of surface water(s) and groundwater(s) are not impacted as a result of the execution of work at the site. Preliminary information regarding the site has indicated that groundwater will not be encountered. There is an unnamed tributary running along the rear of the IMACO property near the excavation site and HEPACO is aware of the potential that exists with contaminants migrating to surface water bodies if proper controls are not established and maintained.

In addition to the silt fence installed at the beginning of the project, appropriate diversionary trenches, berms and dikes will be used in a manner that will optimize surface and/or groundwater diversion from contacting contaminated or potentially contaminated media. Covering materials, such as the 10-mil polyethylene that will be used in the soil storage areas and the equipment decontamination areas, will also be used to control migration of contaminants to surface and/or groundwater locations.

Open excavation areas will be present at the site. Surface contours in each of these areas will be modified to prevent accumulation of waters, via surface drainage, in these excavations. A sediment control fence will also be available for immediate installation and use.

One phase of the project will require the removal of sediments along the unnamed tributary, which has the potential for release of sediments to down-gradient surface waters. In order to minimize the impact of these sediments, HEPACO will discharge all water being diverted around the excavation area through a



filter bag prior to being discharged back into the unnamed tributary. Rock check dams will also be placed strategically along the unnamed tributary to help control the migration of sediments.

### **3.3 Control of Land Contamination**

Prior to the initiation of site construction activities, the specific work areas, appropriate buffer zones, and the necessary exclusion zones will be identified. Disruption of existing facilities will be kept to a minimum and will occur only where necessary to support construction activities.

It is critical that transportation routes be established and maintained throughout the entirety of the project. Transport vehicles should never transverse from a hot zone through a clean zone in order to reach another hot zone. This could potentially re-impact a zone that has previously had remedial activities completed and/or environmentally impact a clean area of the site that has not been designated for remedial activities. Logical sequencing of excavation activities will help eliminate the need for transport vehicles traversing over clean areas during the course of the work.

### **3.4 Equipment Decontamination**

Construction equipment and support materials used in the execution of work at the project site may come in contact with contaminated media. Prior to removal from the site or to an adjacent work area, equipment that has come in contact with a potentially contaminated media will be relocated to the decontamination pad. Equipment decontamination activities will be performed in accordance with Section 5.5 of the Work Plan.

## **4.0 WASTE TRANSPORTATION**

### **4.1 Motor Carriers**

When a motor carrier is subcontracted by HEPACO to transport hazardous materials, HEPACO will request copies of documentation ensuring the motor carrier is in compliance with Department of Transportation (DOT) requirements. The type of documentation requested, as a minimum, will be as follows:

- Insurance Certificate
- EPA Identification No.
- State Identification No.
- Spill and Emergency Response Plan
- Driver Training Records

Copies of supporting documentation will be kept in the project file for future reference.

### **4.2 Manifest**

All shipments of hazardous and/or special waste will be manifested prior to leaving the project site. The manifest will be completed in accordance with the specific waste profile and all Federal, State and local laws and regulations. The manifest shall be signed by the Generator and the driver prior to leaving the site. A copy of the manifest will be obtained and forwarded to the Generator. Upon acceptance at the disposal facility, the final copy of the manifest will be forwarded to the Generator to be kept in their files. Duplicate copies of all manifests will be kept in the project job file for future reference. Refer to Figure 2 for a representative non-hazardous waste manifest.

### **4.3 Weight Tickets**

Each load of waste material transported for disposal will be weighed by a certified scale before and after unloading. Weight tickets will be forwarded weekly to the Owners onsite representative. Duplicate copies will be kept in the job file for future reference and billing purposes.

### **4.4 Daily Disposal Log**

A daily log shall be kept to track all shipments of waste leaving the site on a daily basis. The log shall include, as a minimum, date of shipment, manifest number, truck identification number, what area of site waste was generated, and volume being shipped. A copy of this log shall be kept in the project file and forwarded to NK Holdings on-site representative on a weekly basis. Refer to Figure 3 for a sample of a Daily Disposal Log.

## 5.0 DISPOSAL FACILITIES

The following facilities have been designated to accept waste materials from the IMACO site located at 20 E. Acadia Ave, Winston-Salem, North Carolina.

<u>Waste Facility</u>	<u>Designated Waste</u>
Allied Waste (Formerly BFI) Charlotte Motor Speedway Landfill 5105 Morehead Road Concord, NC 28027	Treated Lead Soils/Subsurface Grubbed Material
HOH Corporation 1701 Vargrave Street Winston-Salem, NC 27107	Impacted Water
Lowder, Inc 2810 Griffith Rd. Winston-Salem, NC 27103	Clearing Debris
Atlantic Scrap & Processing 3415 N. Glenn Ave Winston-Salem, NC 27105	Kettle Bottoms

## Appendix 1

### Generator's Waste Profile Sheet



# GENERATOR WASTE PROFILE SHEET

Page 1 of 2

Requested Disposal Facility: \_\_\_\_\_

*an Allied Waste Company*

Waste Profile #

AWI Sales Rep:

Date:

## I. Generator Information

Generator Name:			
Generator Site Address:			
City:	County:	State:	Zip:
State ID/Reg No:	State Approval/Waste Code: (if applicable)		SIC Code:
Generator Mailing Address (if different):			
City:	County:	State:	Zip:
Generator Contact Name:			
Phone Number:		Fax Number:	

## IIa. Transporter Information

Transporter Name:		Contact Name:	
Transporter Address:			
City:	County:	State:	Zip:
Phone Number:	Fax Number:	State Transportation Number:	

## IIb. Billing Information

Bill To:		Contact Name:	
Billing Address:			
City:	State:	Zip:	Phone Number:

## III. Waste Stream Information

Name of Waste:	
Process Generating Waste:	
Type of Waste	<input type="checkbox"/> INDUSTRIAL PROCESS WASTE or <input type="checkbox"/> POLLUTION CONTROL WASTE
Physical State:	<input type="checkbox"/> SOLID <input type="checkbox"/> SEMI-SOLID <input type="checkbox"/> POWDER <input type="checkbox"/> LIQUID <input type="checkbox"/> OTHER: _____
Method of Shipment:	<input type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input type="checkbox"/> OTHER: _____
Estimated Annual Volume:	<input type="checkbox"/> CUBIC YARDS: _____ <input type="checkbox"/> TONS: _____ <input type="checkbox"/> GALLONS _____ <input type="checkbox"/> OTHER: _____
Frequency:	<input type="checkbox"/> ONE TIME <input type="checkbox"/> DAILY <input type="checkbox"/> WEEKLY <input type="checkbox"/> MONTHLY <input type="checkbox"/> OTHER: _____
Special Handling Instructions:	

## IV. Representative Sample Certification

☐ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?		<input type="checkbox"/> YES or <input type="checkbox"/> NO
Sample Date:	Type of Sample: <input type="checkbox"/> COMPOSITE SAMPLE <input type="checkbox"/> GRAB SAMPLE	
Laboratory:	Sample ID Numbers:	
Sampler's Employer:		
Sampler's Name (printed):		Signature:

**GENERATOR WASTE PROFILE SHEET (continued)**

Page 2 of 2

Waste Profile #

**V. Physical Characteristics of Waste**

Characteristic Components		% by Weight (range)				
1.						
2.						
3.						
4.						
5.						
Color	Odor (describe)	Free Liquids <input type="checkbox"/> YES or <input type="checkbox"/> NO Content _____%	% Solids	pH:	Flash Point _____ °F	Phenol _____ ppm
<b>Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Required Parameters Provided for this Profile</b>						
Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and it epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?						<input type="checkbox"/> Yes or <input type="checkbox"/> No
Does this waste or generating process cause it to exceed OSHA exposure limits from high levels of Hydrogen Sulfide or Hydrogen Cyanide as defined in 40 CFR 261.23?						<input type="checkbox"/> Yes or <input type="checkbox"/> No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?						<input type="checkbox"/> Yes or <input type="checkbox"/> No
Does this waste contain regulated concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?						<input type="checkbox"/> Yes or <input type="checkbox"/> No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCDD), or any other dioxin as defined in 40 CFR 261.31?						<input type="checkbox"/> Yes or <input type="checkbox"/> No
Is this a regulated Toxic Material as defined by Federal and/or State regulations?						<input type="checkbox"/> Yes or <input type="checkbox"/> No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?						<input type="checkbox"/> Yes or <input type="checkbox"/> No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?						<input type="checkbox"/> Yes or <input type="checkbox"/> No
Is this waste generated at a Federal Superfund Clean Up Site?						<input type="checkbox"/> Yes or <input type="checkbox"/> No

**VI. Generator Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Allied Waste.

\_\_\_\_\_  
Authorized Representative Name And Title (Printed)\_\_\_\_\_  
Company Name\_\_\_\_\_  
Authorized Representative Signature\_\_\_\_\_  
Date**VII. Allied Waste Decision**

<input type="checkbox"/> Approved	<input type="checkbox"/> Rejected	Expiration: _____
Conditions:		
_____ Name, Title	_____ Signature	_____ Date

Appendix 2

Non-hazardous Waste Manifest

Please print or type  
(Form designed for use on elite (12-pitch) typewriter.)

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No.		Manifest Doc. No.		2. Page 1 of				
3. Generator's Name and Mailing Address										
4. Generator's Phone ( )										
5. Transporter 1 Company Name				6. US EPA ID Number		A. Transporter's Phone				
7. Transporter 2 Company Name				8. US EPA ID Number		B. Transporter's Phone				
9. Designated Facility Name and Site Address				10. US EPA ID Number		C. Facility's Phone				
11. Waste Shipping Name and Description						12. Containers		13. Total Quantity	14. Unit Wt/Vol	
						No.	Type			
						a.				
						b.				
						c.				
D. Additional Descriptions for Materials Listed Above						E. Handling Codes for Wastes Listed Above				
15. Special Handling Instructions and Additional Information										
16. <b>GENERATOR'S CERTIFICATION:</b> I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.										
Printed/Typed Name				Signature				Month	Day	Year
17. Transporter 1 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature				Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature				Month	Day	Year
19. Discrepancy Indication Space										
20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.										
Printed/Typed Name				Signature				Month	Day	Year



Appendix 3

Daily Disposal Log

DISPOSAL LOG  
FORMER IMACO SITE  
20 E. ACADIA AVE.  
WINSTON-SALEM, NC  
HEPACO PROJECT NO. 7420039

[illegible]