WASTE HANDLING PLAN
Revision 2

Penta Wood Products Site
Siren, Wisconsin
WA No. 132-LRLR-05WE/ Contract No. EP-S5-06-01

May 2013

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Abbreviations and Acronyms

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	*Code of Federal Regulations*
DOT	Department of Transportation
HAZWOPER	Hazardous Waste Operations and Emergency Response
HSE	Health, Safety, & Environment
LGAC	liquid-phase granular activated carbon
LNAPL	light nonaqueous phase liquid
LQG	Large Quantity Generator
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NR	Natural Resources
OSHA	Occupational Safety and Health Administration
OWS	oil-water separator
PCP	pentachlorophenol
PPE	personal protective equipment
PWP	Penta Wood Products
RCRA	Resource Conservation and Recovery Act
RDVF	rotary drum vacuum filter
TSD	treatment, storage, and disposal
UN	United Nations
WDNR	Wisconsin Department of Natural Resources
WPDES	Wisconsin Pollutant Discharge Elimination System
USEPA	U.S. Environmental Protection Agency

1 Introduction

The Penta Wood Products (PWP) Site is located on Daniels 70 (formerly State Route 70) in the Town of Daniels, Wisconsin. The 82-acre site is located in a rural agricultural and residential setting, and is bordered to the east, west, and north by forested areas, some of which are classified by the State of Wisconsin as wetlands. With the exception of an 8-acre parcel, Daniels 70 forms the southern property boundary.

1.1 Project Background

PWP operated from 1953 to 1992. Raw timber was cut into posts and telephone poles and treated with either a 5 to 7 percent pentachlorophenol (PCP) solution in a No. 2 fuel oil carrier, or with a waterborne salt treatment called Chemonite consisting of ammonia, copper II oxide, zinc, and arsenate.

During its 39 years of operation, PWP discharged wastewater from an oil-water separator (OWS) down a gully into a lagoon on the northeast corner of the property. Process wastes were discharged onto a wood chip pile in the northwestern portion of the property.

A dissolved-phase PCP plume exists in the groundwater and appears to be stable. The No. 2 fuel oil carrier is present on the water table as a light nonaqueous phase liquid (LNAPL). A treatment system has been designed and installed to extract groundwater and LNAPL and to treat the dissolved PCP and other organic contaminants to the required discharge standards as identified in Wisconsin Pollutant Discharge Elimination System (WPDES) Substantive Requirements Permit No. WI-0061531-01-0.

The PWP Site is undergoing a remedial action pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and in accordance with the Record of Decision, EPA R05-R98/094, dated September 29, 1998.

The following items of the selected remedy were completed in 2000:

- Segregation, select solidification, and placement of arsenic-contaminated soils in an onsite corrective action management unit
- Consolidation of PCP fuel oil soils and wood chips in the corrective action management unit under a soil cover

The following items of the selected remedy are ongoing and are covered by this waste management plan:

- Bioventing PCP/fuel-oil-contaminated material
- Removal of LNAPL

- Containment, collection, treatment, and discharge of grossly contaminated groundwater (exceeding 1,000 micrograms per liter PCP) in accordance with the February 2005 quality assurance project plan
- Monitored natural attenuation of groundwater contamination

Proper handling, documentation, and disposal of waste products during the long-term remediation activities at the site are extremely important. The purpose of this waste handling plan is to describe the handling and disposal procedures to be followed for waste generated during the site remediation activities, including operation and maintenance of the groundwater treatment system and sampling activities. If a waste generated onsite is not addressed in this document, contact the site manager, Michael Niebauer/CH2M HILL, at (414) 847-0254, the environmental manager, Terri Gerrish/CH2M HILL, at (973) 316-3516, or the waste coordinator, Lisa Schwan/CH2M HILL, at 404-414-2505 to determine the proper handling, management, and disposal of the waste.

1.2 Waste Classification

The U.S. Environmental Protection Agency (USEPA) and the Wisconsin Department of Natural Resources (WDNR) have determined that the PCP-contaminated groundwater is considered a listed hazardous waste carrying the federal waste code of F032. The waste also carries a secondary designation in Wisconsin of F027 as a result of the stricter state listing criteria by the state of Wisconsin.

Per the *Federal Register* Natural Resources (NR) 661.35, F032 waste is defined as:

> Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with NR 661.35 or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (i.e., F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.

Per NR 661.31, F027 waste is defined as:

> Discarded, used or unused formulations containing tri–, tetra-, or pentachlorophenol or discarded used or unused formulations containing compounds derived from these chlorophenols. This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5–trichlorophenol as the sole component.

Generally, other wastes derived from the treatment of the groundwater would be considered listed hazardous waste under the "derived from" rule and will carry the same waste codes according to NR 661.03(1)(b)4. Therefore, the filter cake, bag filters, spent liquid granular activated carbon (LGAC), and water associated with these wastes are considered hazardous waste. However, the treated groundwater discharge is exempt from hazardous waste per the

NR 661.04 (1)(b) exclusion (industrial wastewater discharges that are point source discharges subject to regulation under ss. 283.31 and 283.33, Stats).

The following sections provide detailed information in the proper handling and management of waste streams generated at the PWP Site:

- Section 2—Regulatory requirements for the generator classifications
- Section 3—General guidelines for accumulation standards and the storage of waste
- Section 4—Guidelines for documenting the generation, storage, and disposal of waste
- Section 5—Detailed instructions for the management of waste streams currently identified for the site
- Section 6—Regulatory requirements and guidelines for personnel involved with the handling and management of hazardous waste
- Section 7—Regulatory requirements for preparedness and prevention in case of an emergency involving hazardous waste
- Section 8—General response guidelines for personnel in case of an emergency involving hazardous waste

The appendixes provide example manifests, profiles, and other documentation required for the waste streams currently identified for the site.

1.3 Modifications to System

Modifications or improvements to the system or changes in operating procedures may require revisions to selected portions of this waste handling plan. Sections, tables, drawings, or appendixes in which changes are made will be revised and reissued for insertion into the existing document. The revisions will be numbered sequentially, with the original document numbered as Revision 0. The revision number will be indicated in the header on every other page. The section, table, drawing, or appendix being revised and the revision number will be described in the Master Revision Index and Summary (Table 1-1).

TABLE 1-1
Master Revision Index and Summary
Penta Wood Products Site

Revision Number	Date	Applicable Sections, Tables, Drawings or Appendices
0	June 2005	Original Document
1	March 2012	All

2	May 2013	Various

2 Generator Status Classifications

Per NR 661.02, it must be determined if solid waste that is generated is a hazardous waste. The regulation also provides the outline of the hazardous waste determination process. The extent of regulations to which hazardous waste generators are subject depends on the volume of hazardous waste produced.

Generators fall into one of three general groups according to the amount of waste generated in a calendar month. Due to the amount of hazardous waste generated, the PWP Site is classified as a Large Quantity Generator, as described in Table 2-1.

TABLE 2-1
Definition of Generator Classifications
Penta Wood Products Site

Generator	Quantity	Applicable Regulations[a]
Large Quantity Generator (LQG)	> 1,000 kg/month (approx. 2,200 lb) > 1 kg/month acute[b] (approx. 2.2 lb) > 100 kg acute[b] residue or contaminated soil	All NR 662, NR 664, NR 665

[a]Acute hazardous wastes are those listed wastes identified in NR 661
[b] kg = kilograms, lb = pounds

Generators must record the quantity of hazardous waste generated each month in order to determine their generator status. The regulations stating which hazardous wastes are counted in a generator's monthly quantity determination are found in NR 662. Of the wastes generated onsite to date, the following wastes do not require counting

1. The volume of groundwater treated in the onsite treatment system and discharged to the onsite infiltration basin does not need to be tracked and reported. First, the discharge (but not any resulting sludge or waste product) is exempt from being solid waste (and therefore hazardous waste) per NR 661.04(1)(b). Second, per NR 662, hazardous waste managed immediately upon generation in a wastewater treatment unit is not included in the quantity of hazardous waste. Owners/operators of wastewater treatment units are exempt from the requirements of NR 662 for generators of hazardous waste.
2. The volume of material collected for samples that are sent to the laboratory for analysis (NR 662) does not need to be tracked and reported.

The operation of the PWP groundwater treatment system is expected to generate various hazardous waste streams as described in Section 5. The volume of hazardous waste to be generated is anticipated to be greater than 1,000 kilograms per month; therefore, PWP will be considered a large-quantity generator (LQG). The various waste streams and estimated amount to be generated are provided in Section 5.

LQGs are subject to regulations contained in NR 662 as outlined in Table 2-2. The summary is based on the electronic *Code of Federal Regulations* (CFR) data as of September 2011.

A generator who treats, stores, or disposes of hazardous waste on-site must only comply with the following sections of this part with respect to that waste: NR 662.011 for determining whether or not he has a hazardous waste, NR 662.012 for obtaining a USEPA identification number, NR 662.034 for accumulation of hazardous waste, NR 662.040 for record keeping, NR 662.043 for additional reporting, and if applicable, NR 662.70 for farmers. The provisions of §262.34 are applicable to the onsite accumulation of hazardous waste by generators; therefore, they only apply to owners or operators who are shipping hazardous waste that they generated at that facility.

TABLE 2-2
Wisconsin Requirements for Hazardous Waste Generators
Penta Wood Products Site

Requirement	LQG
Receive a USEPA Identification Number	Required [NR 662.012]
Preparing hazardous waste manifests[b]	Required [NR 662.020]
Waste minimization	Required [NR 662.027]
Pack hazardous waste according to U.S. Department of Transportation (DOT) standards	Required [NR 662.030]
Label hazardous waste containers and tanks according to DOT standards	Required [NR 662.031]
Mark each container according to DOT standards	Required [NR 662.032]
Mark each container with the words “Hazardous Waste,” with the date accumulation begins, and marked with verbiage in 40 CFR 262.32(b)[a]	Required [NR 662. 034]
Appropriate placards for transportation vehicles according to DOT standards	Required [NR 662.033]
Storage requirements	Full compliance for management of tanks, containers, drip pads, or containment buildings [NR 662.034]
Recordkeeping and reporting[c]	Required [NR 662.040]
Comply with preparedness and prevention requirements according to Part 265, Subpart C	Required [NR 662.034]
Comply with contingency plan and emergency procedure requirements according to Part 265, Subpart D	Required [NR 662.034]
Comply with the personnel training requirements of 40 CFR 265.16	Required [NR 662.034]
Comply with closure requirements for the accumulation units per 40 CFR 265.111 and 40 CFR 265.114	Required [NR 662.034]

[a] The verbiage found in NR 662.032 is generally included on a “Hazardous Waste Label.”
[b] The requirements of Subpart B—Manifest and NR 662.032 do not apply to the transport of hazardous wastes on a public or private right-of-way within or along the border of contiguous property under the control of the same person, even if such contiguous property is divided by a public or private right-of-way. Notwithstanding NR 662.010, the generator or transporter must comply with the requirements for transporters set forth in NR 662.030 and 662.031 in the event of a discharge of hazardous waste on a public or private right-of-way.
[c] Recordkeeping requirements for onsite management of RCRA waste are waived at CERCLA sites; recordkeeping and reporting related to offsite transportation and disposal must be complied with.

3 Accumulation Standards

Storage of hazardous waste generally requires a permit under the Resource Conservation and Recovery Act (RCRA) regulations. Under CERCLA, substantive requirements of RCRA must be met. There are RCRA provisions, however, that allow a generator to accumulate hazardous waste onsite without a permit as long as the accumulation units and the facility comply with specific regulations as described in the following subsections. Generators accumulating hazardous waste must comply with the regulations applicable to the accumulation unit (containers, tanks, etc.) based on the generator status classification. The regulations pertaining to accumulation of hazardous wastes onsite are found in NR 662.034.

The PWP Site has three designated Central Accumulation Areas (Areas 1, 2, and 4), one designated Satellite Accumulation Area (Area 3), and one LNAPL storage area, as shown in Figure 1. The first Central Accumulation Area (Area 1) is north of the rotary drum vacuum filter (RDVF) room in the field just off the driveway and is used to store lined filter cake roll-off bin containers. The second Central Accumulation Area (Area 2) is located inside of the pretreatment building and is used for storage of carbon supersacks. The third Central Accumulation Area (Area 4), is where the filter cake produced by the RDVF is collected in a roll-off bin. At the Satellite Accumulation Area (Area 3), which is in the treatment building, bag filters are drained so they can be transferred to Area 4. The LNAPL storage tank is part of the groundwater treatment system and is exempt from RCRA; it is located outside of the pretreatment building.

3.1 Central Accumulation Areas.

For an LQG, accumulated hazardous waste is allowed to accumulate onsite for up to 90 days in a Central Accumulation Area without obtaining a storage permit or interim status, provided the LQG is in compliance with NR 662.034.

Generators may receive a 30-day extension to their 90-day accumulation period if uncontrollable and unforeseen circumstances cause them to accumulate waste onsite for longer than the allowed time period. Such an extension may be granted by a regional administrator or authorized state on a case-by-case basis (NR 662.034).

3.2 Satellite Accumulation Area

Generators are allowed to accumulate up to 55 gallons of hazardous waste at or near the point where it is initially generated and collected during daily operations. These are referred to as Satellite Accumulation Areas.

Per NR 662.034, Satellite Accumulation Areas do not require a permit or interim status, provided the following:

- The container holding the hazardous waste is in good condition and does not leak. If the container holding the hazardous waste is not in good condition, or if it begins to leak, the owner or operator must transfer the hazardous waste from this container to a

container that is in good condition, or manage the waste in some other way that complies with NR 662.034.

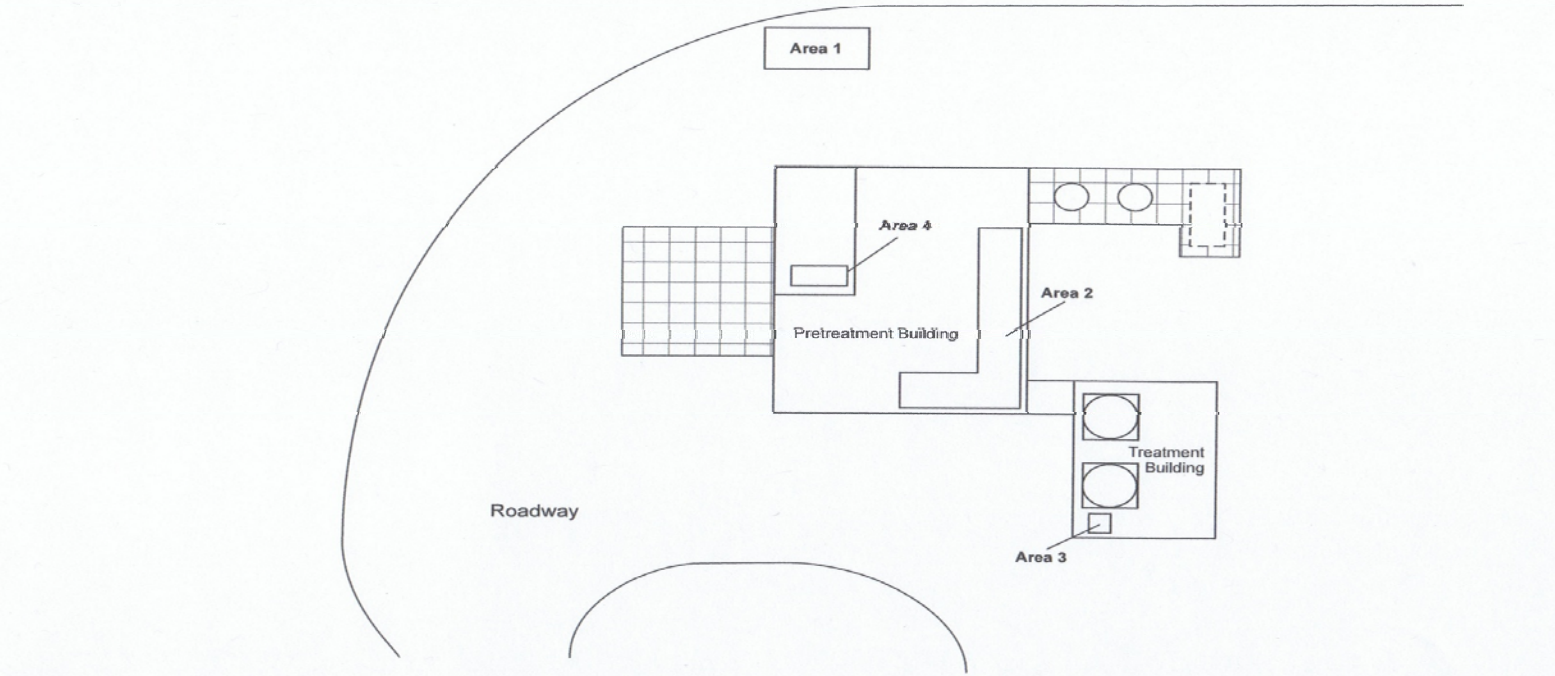
- The owner or operator must use a container made of or lined with materials that will not react with and are otherwise compatible with the hazardous waste to be stored, so the ability of the container to contain the waste is not limited.
- The container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste. The container must not be opened, handled, or stored in a manner that may rupture the container or cause it to leak.
- The container must be marked with the words "Hazardous Waste" or with other words that identify the contents of the container.
- Per NR 664.0174, the owner or operator shall inspect areas where containers are stored, looking for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors. This should be done at least weekly.

Accordingly, once the 55-gallon of hazardous waste limit is reached in the Satellite Accumulation Area, the 55-gallon drum will be sealed, the date will be noted on the container, and the drum will be moved within three days.

The PWP Site has one Satellite Accumulation Area (Area 3) as shown in Figure 1.This area is used for accumulation of spent bag filters and small quantities of spent carbon, all within the same 55-gallon container. Area 3 is also used for accumulation of hazardous personnel protective equipment (PPE) and related sampling supplies, within a separate 55-gallon container. Area 3 is located in the treatment building adjacent to the carbon vessels and is equipped with a spill pad for four 55-gallon drums; a maximum of 55 gallons of hazardous waste will be stored in this area. The site practice is to move the waste materials (usually spent bag filters) directly from the bag filter assemblage or from the 55-gallon drum located in the Satellite Accumulation Area to the Central Accumulation Area (Area 4) within the pretreatment building, where the waste materials are placed into the filter cake roll-off bin. The empty drum is then either brought back to the Satellite Accumulation Area or stored outside. Refer to Section 5.9 Waste Handling Procedures for management of the bag filters, and Section 5.13.2 for management of the PPE.

3.2.1 Accumulation Start Date and Labels

The satellite drums must be labeled as "Hazardous Waste." There are no time limits on filling a 55-gallon drum in a Satellite Accumulation Area. However, once 55-gallons has accumulated in a satellite area, there are three days in which to move the waste to the Central Accumulation Area. The accumulation start date is added to a label once 55 gallons has accumulated. If the drum contents are immediately emptied into the roll-off in Central Accumulation Area 4, and the drum is not immediately re-used, it will be marked "Empty" until reuse begins. If the waste is transferred to a roll-off bin, it may be accumulated for 90 days or less (if the 90-day clock had already been started). The accumulation date does not restart if the hazardous waste is transferred to another container. Refer also to Section 4.2 Markings and Labels.



LEGEND
Area 1 - Central Accumulation Area for Filter Cake and Bag Filters
Area 2 - Central Accumulation Area for Carbon Supersacks
Area 3 - Satellite Accumulation Area for Bag Filters
Area 4 - Central Accumulation Area for Filter Cake

FIGURE 1
Satellite and Central Accumulation Areas
Waste Handling Plan
Penta Wood Products Site

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4 Documentation

Providing and maintaining the necessary records are essential to properly manage the waste streams generated onsite. The following provide guidelines for documenting the generation and storage of hazardous waste. Additional information may be required to complete the documentation necessary for properly handling and managing various waste streams.

4.1 General

The following general information is needed for completing most waste handling documentation:

Facility Name and Address:

USEPA
Former Penta Wood Products, Inc.
8682 Daniels 70
Siren, WI 54872
(715) 349-8357

USEPA Identification Number:

WID006176945

Facility Operator:

Shawn Broughman/CH2M HILL

USEPA Work Assignment Manager:

USEPA
Linda Martin
SR-6J
77 West Jackson Blvd.
Chicago, IL 60604-3507
312-886-3854

CH2M HILL Site Manager:

Michael Niebauer
Project Manager
CH2M HILL
135 South 84th Street, Suite 400
Milwaukee, WI 53214-1456
(414) 847-0254

4.2 Markings and Labels

All waste containers, including those in the Central Accumulation Areas, and the drums in Satellite Accumulation Area must be labeled and labels must be visible, in accordance with NR 662 RCRA regulations. Also, the facility operator must properly package, label, and mark each container in each the Central Accumulation Area in accordance with applicable DOT regulations (49 CFR, 172, 173, and 178), prior to transport of hazardous waste offsite. Labels will include the location from which the waste was generated, the accumulation start date, and the type of waste (filter cake, bag filters, PPE, etc.).

The wastes in each Central Accumulation Area (including supersacks) are hazardous and will be labeled as follows:

- **"Hazardous Waste":** Preprinted or handwritten labels with the following information:
  - Accumulation start date

- Generator name, address and phone number
- USEPA identification (ID) number
- RCRA waste code(s)
- Proper USDOT shipping name
- Prior to transport, the manifest number must be added (for containers of less than 110-gallon capacity)

Wastes in the Satellite Accumulation Area are hazardous, and the container will be prepared as follows:

The Satellite Accumulation Area drainage drums will be prepared for labeling by wiping material from the outer wall surfaces and drum lids that may prevent legible and permanent labeling. The side of the drum will be properly marked with the following:

- **"Hazardous Waste":** Preprinted or handwritten labels with the following information:
  - A description of the material identifying the contents of the container (that is, LNAPL, soil cuttings, etc.)

The general description of the source of the material (that is, from treatment system or PPE)

When the container is full, either (a) the contents will be transferred immediately into the roll-off bin in Central Accumulation Area 4, the container will be returned to the Satellite Accumulation Area 3 or other storage area, and it will be marked "Empty" or (b) the container will be sealed, marked as described in Section 4.2, including adding the accumulation start date, and moved within three days to a Central Accumulation Area. The site practice is that once the container is brought to the Central Accumulation Area, it is immediately emptied into the roll-off bin, returned to the Satellite Accumulation Area 3 or outside, and marked "Empty" until it is re-used.

Appendix A contains an example of a blank hazardous waste label that must be placed on containers used for the storage and transportation of hazardous waste. Labels must be completed before placing onto containers. Do not place blank labels on containers.

4.3 Manifests

Per Wisconsin Administrative Code NR 662, generators of hazardous waste transported to an offsite treatment, storage, and disposal (TSD) facility require that shipments of hazardous waste be accompanied by a Hazardous Waste Manifest. Hazardous waste is usually handled by three parties: generators, transporters, and the designated TSD facility. All three parties are responsible for completing certain parts of the hazardous waste manifest. The manifest remains with the hazardous waste until it is delivered to the TSD.

The USEPA Uniform Hazardous Waste Manifest will be used. Each manifest form contains multiple copies of a single form. When the manifest is completed, WDNR requires that F032 be listed on the manifest as the primary hazardous waste code and "F027 in Wisconsin Only" be added to the manifest comment section. At a minimum, the waste manifest form will include the following information (required for hazardous waste manifests):

- Generator information including name, address, contact, and phone number, USEPA ID number

- Transporter information including name, address, contact and phone number, USEPA ID number
- Designated facility information including name, address, phone number, USEPA ID number
- Site name including street/mailing address
- USDOT Proper Shipping Name
- Type and number of container
- Quantity of waste (volumetric estimate)
- Task order or job number
- Profile number
- 24-hour Emergency phone number

The completed manifest contains information on the type and quantity of the waste being transported, instructions for handling the waste, and signature lines for all parties involved in the disposal process.

The generator (USEPA) and the transporter must sign the manifest prior to the load of waste leaving the site. The original facility-signed manifest will be returned to the address of the generator.

The life cycle of the manifest is as follows:

1. When the transporter picks up the waste at the PWP Site, the facility operator and the transporter will sign the manifest. CH2M HILL is the facility operator. Under our contract with the USEPA, we have authorization to sign manifests, with the requirement that the words "as agent for the USEPA" accompany our signature. The facility operator will send Copy 1 and 2 to the project manager.
   - Copy 1 (Designated Facility to Generator's State)—Project manager sends the copy to the WDNR within 30 working days of the shipment's initiation.
     - Per NR 662.023(3): For shipments of hazardous waste outside of Wisconsin, the generator shall submit a copy of each manifest to the department within 30 days of receiving the signed copy from the designated facility. Note: Send copies of manifests to the WDNR, Bureau of Waste and Materials Management, Box 8094, Madison, WI 53708.
   - Copy 2 (Generator's Initial Copy)—Project manager keeps the copy in the project files.
2. The remaining copies accompany the waste throughout the transport to the final TSD facility. When the transporter delivers the waste to the facility, the facility signs the manifest.
   - Copy 3 (Designated Facility to Destination State)—(Uniform Hazardous Waste Manifest)—TSD facility sends this copy to WDNR.
   - Copy 4 (Designated Facility to Destination State)—TSD facility keeps this copy.

- Copy 5 (Designated Facility to Generator)—TSD facility sends this copy to the generator.
- Copy 6 (Transporter's Copy)—Transporter keeps this copy.

3. As a reference, Appendix C includes an example of a blank USEPA Uniform Hazardous Waste Manifest; the general instructions for correctly completing the manifest; and, abbreviations for container types needed to complete Item No. 12 on the manifest.

4.4 Certificates of Disposal or Destruction

The TSD will send the project manager a Certificate of Disposal or Destruction for each hazardous waste stream once final destruction or treatment has occurred. Once the final signed copy of the manifest has been received from the designated facility a copy must be submitted to the State of Wisconsin within 30 days. The copies are sent to this address:

Department of Natural Resources
Bureau of Waste and Materials management
P.O. Box 8094
Madison, WI 53708

The project manager will keep the Certificates of Disposal or Destruction in the project files for a minimum of three years. If the estimated weight is greater than 10% different than the actual weight, a corrected copy is sent to the WDNR.

4.5 Waste Minimization

RCRA 3002(b) requires LQGs to establish a waste minimization plan to reduce the volume or quantity and toxicity of generated hazardous waste to the extent economically practicable. Section 1003 (b), 42 U.S.C. 6902 (b) further states:

> The Congress hereby declares it to be the national policy of the United States that, wherever feasible, the generation of hazardous waste is to be reduced or eliminated as expeditiously as possible. Waste that is nevertheless generated should be treated, stored, or disposed of so as to minimize the present and future threat to human health and the environment.

The goal of this remedial action, which is described in the Record of Decision, is to reduce contamination of soil and groundwater at the site in order to protect human health and the environment. The waste being generated at the site is remediation waste and is not manufactured onsite or the byproduct of any process currently being conducted onsite. The volume of material in the subsurface is finite and does not have a continuing source. Therefore, a waste minimization plan will not be required for the remediation waste generated at the site.

4.6 Facility Operating Inspections

As part of routine operation and maintenance activities, the facility operator will inspect the hazardous waste containers, tanks, Satellite Accumulation Areas, and storage areas weekly (required for hazardous waste in the Central Accumulation Areas).

The inspections and the facility operator's observations will be recorded in the operation and maintenance tracking database. The accumulation containers including drum, roll-off bins, supersacks, and containers, will be inspected for proper labeling, leaks, deterioration, corrosion, or structural fatigue. The LNAPL tank is exempt from RCRA, however, the same inspection will be performed, as a best management practice. The facility operator's observations will be recorded on the inspection log found in Appendix D. The electronic inspection records are maintained for a minimum of 3 years.

Any observations requiring corrective action will be brought to the attention of the project manager and the environmental manager and will be addressed in a timely manner.

4.7 External Agency Inspections

Upon learning of an external agency inspection of the project site or project files, CH2M HILL HSE-201 will be followed. This standard operating procedure (SOP) describes the procedures associated with project and office inspections conducted by external regulatory agencies, the communications for informing key individuals, and the process for tracking and resolving enforcement actions. HSE-201 describes the procedures associated with project and office inspections conducted by external regulatory agencies, the communications for informing key individuals, and the process for tracking and resolving enforcement actions. Regulatory agencies that may review files or may inspect the site include OSHA and the WDNR, therefore, this policy is applicable to this project.

Refer to HSE-201. At a minimum, the following notifications will occur:

1. The site safety coordinator will notify the project manager
2. The project manager will notify the health and safety manager
3. The health and safety manager will notify the business group HSE lead for health and safety (H&S) agency inspections and the responsible environmental manager for environmental agency inspections.
4. The environmental manager notifies the business group HSE lead
5. The health and safety manager must immediately notify the legal department of agency inspections conducted pursuant to a warrant.
6. The health and safety manager coordinates H&S agency inspections with the site safety coordinator, facilities services staff, project manager and/or area manager
7. The environmental manager notifies the federal sector environmental director of environmental agency office inspections.
8. The office safety coordinator or site safety coordinator, with assistance from the health and safety manager and environmental manager, must coordinate and implement the inspection procedures in this SOP.
9. The health and safety manager and/or environmental manager must notify the business group HSE Lead of all agency inspections, who notifies the HSE operations director and environmental director.

4.8 Pre-Transport and Disposal Facility Requirements

Shipment of hazardous waste will be performed by a licensed hazardous waste transporter, which will be verified prior to shipping waste.

Per NR 662.033, the generator is required to offer the licensed hazardous waste transporter the required placards for the material being shipped, unless the vehicle is already properly placarded. Therefore, before the transporter leaves the site with the hazardous waste for disposal, the vehicle is inspected to ensure the proper placards are displayed. If the proper placards are not present, four of the required placards will be provided to the transporter.

Disposal facilities will be approved by USEPA under the OSR, as set forth in the National Contingency Plan, at NR 664 Subchapter B.

4.9 Reporting

Per Wisconsin Administrative Code NR 662.041 and 662.193 and 610.08, LQG are required to submit an annual report for summarizing hazardous waste activities for the previous year. The project manager will prepare the report and submit to WDNR by March 1 of each year. The report is required for LQGs.

5 Waste Handling Procedures

5.1 Carbon

The groundwater treatment system uses two 10,000-pound liquid granular activated carbon (LGAC) vessels, connected in series, as the primary treatment process for groundwater. In addition, the groundwater treatment system uses a smaller vessel (2,500-pound) filled with LGAC to provide filtration of solids. Since the carbon in these three vessels has been in contact with a listed hazardous waste (that is, constituents in the groundwater), the spent carbon is considered to be a listed hazardous waste.

Carbon is considered spent when it no longer serves the purpose for which it was produced without processing (that is, ability to effectively remove organic compounds). Analytical data collected from the primary LGAC vessel effluent determines the need for replacing the treatment system's primary LGAC vessel. The carbon in the LGAC vessels will be handled in the following manner:

1. After an LGAC vessel is taken out of service, it will be drained. The free liquid from the vessel will be gravity-drained, collected in the 2,500-gallon containment tank, and pumped into the groundwater manifold immediately after the treatment system is restarted.
2. The LGAC will be removed and placed in United Nation (UN) approved, lined supersacks.
3. The UN-approved, lined supersacks will be sealed and appropriately labeled and placed in a designated Central Accumulation Area (Figure 1) until it is shipped offsite.

The DOT-approved, lined supersacks will be labeled with a completed hazardous waste label and a Class 9 label, as described in Section 4.2 Markings and Labelings. An example of the proper way to complete the hazardous waste label for LGAC can be found in Appendix E.

The spent carbon that is taken out of service is sent to the appropriate TSD facility for disposal by a licensed hazardous waste transporter within the 90-day allowable accumulation time limit for the site. The accumulation start date is considered to be the day when the spent LGAC is placed in the DOT-approved, lined supersacks.

The receiving TSD facility must have approval for acceptance of CERCLA waste under the OSR, and must approve the waste profile prior to the disposal of the spent carbon. The profile information for this waste stream can be found in Appendix E. The profiles are valid through the date on the existing profile, and must be updated or renewed prior to expiration.

In addition, it is required that a completed manifest and a copy of the "Notification of Waste Subject to Land Disposal Restriction" form accompany the shipment to the TSD facility. An example of the proper way to complete a manifest form can be found in Appendix E.

5.2 Bag Filters and Drainage Drum

Bag filters are used inline prior to the LGAC vessels to collect particulate matter. The bag filters are considered spent and require replacement when there is a reduction of flow indicated by elevated pressure readings. Since the filters have been in contact with a listed hazardous waste (that is, constituents in the groundwater), the spent bag filters are considered to be a listed hazardous waste. The procedure for replacing and disposing of the spent bag filters is described below.

1. Isolate the bag filters and allow the water in the housing to drain via hose into the sump (where it will be transported to the 2,500 gallon filtrate containment tank). Remove the spent bag filter from its housing and allow it to drip dry into the sump.
2. Place the spent bag filter into the filter cake roll-off waste containers located in the Central Accumulation Area (Area 4) for filter cake or into the 55-gallon drainage drum equipped with a lockable open-head funnel screen lid (replaces regular drum lid) which is located in the Satellite Accumulation Area (Area 3). The drainage drum is kept on a spill containment pad and is labeled with "Drainage Drum" and "Hazardous Waste." The funnel screen lid on the drainage drum will remain closed except while adding or removing bag filters or pumping water to the headworks of the groundwater treatment system.
3. The roll-off waste container in Central Accumulation Area 4 will be labeled with "Hazardous Waste". When it is full, it is moved to the Central Accumulation Area for filter cake (Area 1), where roll-off bins are stored awaiting pickup for off-site disposal within 90 days of generation. The disposal procedure for the filter cake is in Section 5.5.
4. The drainage drum can accumulate bag filters until the total amount of hazardous waste in the Satellite Accumulation Area (Area 3) reaches 55 gallons. This includes waste materials such as spent bag filters, drainage water from the bag filters, and used hazardous PPE that may also be stored in Satellite Accumulation Area 3. When 55 gallons total has accumulated, the bag filters and other hazardous waste materials will be brought to the Central Accumulation Area 4 and placed into the filter cake roll-off bin. The water collected in the drainage drum equipped with the lockable open-head funnel screen lid will be pumped into the groundwater manifold sump, as needed, using a small submersible pump.

If a drum of miscellaneous hazardous materials is intended to be shipped offsite, it must be labeled with a completed hazardous waste label and a Class 9 label prior to transport. An example of the proper way to complete a hazardous waste label for spent bag filters can be found in Appendix F.

The drums will be shipped by a licensed hazardous waste transporter from the Central Accumulation Area to the TSD facility within the allowable 90 day accumulation time limit.

The receiving TSD facility must be approved under the OSR and is required to approve the waste profile prior to disposing of the bag filters. The profile information for this waste stream can be found in Appendix F. The profiles are valid through the date indicated on the existing profile, and must be updated or renewed prior to expiration.

In addition, it is required that a completed manifest and a copy of the "Land Restriction Notification" form accompany the shipment to the TSD facility. An example of the proper way to complete a manifest form can be found in Appendix F.

5.3 Liquid Nonaqueous Phase Liquid Tank

Recovery of LNAPL from the subsurface is one component of the groundwater treatment system. The recovered F032 and F027 LNAPL is a No.2 fuel oil with 5 to 7 percent PCP and a flash point greater than 200°F. The National Fire Protection Association (NFPA) defines the recovered free product from the site as Class IIIB combustible liquid.

LNAPL is pumped from the extraction wells using pneumatic pumps directly into an 8,000-gallon, double-walled, aboveground, steel tank. The tank is equipped with an ultrasonic level sensor to monitor the level in the tank and a leak detection system to detect a release of LNAPL from the inner tank (that is, it monitors the interstitial space). In addition, piping to the storage tank has secondary containment (that is, a double-walled pipe). The tank is not considered a hazardous waste tank, because it is part of the wastewater treatment system. Therefore, its contents are not considered waste until the tank is full and transportation and disposal arrangements are made. The treatment system is excluded from RCRA per 40 CFR 270.1(c)(2) because owners or operators of totally enclosed treatment facilities (as defined in 40 CFR 260.10) are exempt and owners or operators of elementary neutralization units or wastewater treatment units (as defined in 40 CFR 260.10) are exempt. As a best management practice (BMP), the tank is labeled with a hazardous waste label as shown in Appendix A.

When the tank is nearly full, the TSD facility will be contacted to empty the tank. The LNAPL is transferred directly to a vacuum truck by the transporter. Tank transport vehicles shall not be left unattended during loading and unloading of the LNAPL.

The receiving TSD facility must have approval for acceptance of CERCLA waste, and is required to approve the waste profile prior to disposing of the LNAPL. The profile information for this waste stream can be found in Appendix G. The profiles are valid through the date indicated on the existing profile, and must be updated or renewed prior to expiration.

In addition, it is required that a completed manifest and a copy of the "Land Restriction Notification" form accompany the shipment to the TSD facility. An example of the proper way to complete a Wisconsin manifest form can be found in Appendix G.

5.4 Groundwater

Extracted groundwater is regulated by the site's Substantive Requirements of a WPDES discharge permit (per s. 289.01(33) Stats.); the discharge is therefore exempt from being a solid waste and a hazardous waste. Permit number WI-0061531-01-0 allows the site to discharge treated water to the onsite infiltration basin. All water from process units within the groundwater treatment system must be managed as a hazardous waste . This includes water from the oil/water separator, dissolved air flotation unit, bag filter vessels and carbon vessels, drums, buckets, etc. Water from these sources will be pumped back into the groundwater manifold for treatment.

5.5 Filter Cake

The groundwater treatment system influent (that is, extracted groundwater and subnatant of the OWS) is pretreated to remove emulsified oil prior to treatment with the activated carbon. The pretreatment consists of the addition of a coagulant (ferric sulfate) and flocculent (anionic polymer) prior to treatment with a dissolved air flotation unit. The material floated to the water surface in the dissolved air flotation unit is skimmed off and dewatered using an RDVF. The drum of the RDVF is coated with filter aid media (diatomaceous earth) and is rotated through the float material. A vacuum is applied to the drum to draw water through the filter aid media and into the drum and solids accumulate on the surface of the diatomaceous earth. A variable-speed knife advances inward to the drum and removes the solids from the drum's surface. The solids (filter cake) fall down a shoot and into a lined roll-off container. The roll-off container is labeled with a magnetic hazardous waste label as shown in Appendix A.

The accumulation start date is considered to be the day when the first drop of filter cake is added to the roll-off container. The roll-off container is to be emptied within the allowable accumulation time limit. As a LQG, the maximum onsite accumulation time is 90 days.

The roll-off bin in the RDVF room is typically filled with filter cake within two rounds of operation of the RDVF. The bin is then moved outside, with the original label indicating the start of the accumulation time. Before the accumulation time runs out, the TSD facility will be contacted to come to the site to remove the waste materials in the roll-off. A cover will be placed over the roll-off except while operating the RDVF and when filter cake is being added to the roll-off.

The receiving TSD facility must have OSR approval for acceptance of CERCLA waste, and is required to approve the waste profile prior to disposing of the filter cake. The profile information for this waste stream can be found in Appendix H. The profiles are valid through the date indicated on the existing profile and must be updated or renewed prior to expiration.

In addition, it is required that a completed manifest and a copy of the "Land Restriction Notification" form accompany the shipment to the TSD facility. An example of the proper way to complete a manifest form can be found in Appendix H.

5.6 Tank Bottoms

As part of routine maintenance, the carbon is backwashed, and waste material accumulates at the bottom of the various process tanks. When tanks require cleaning, the free liquids are pumped out of the tank and re-introduced into the head end of the groundwater treatment system. A subcontractor is called in to pump out the tank bottoms. A lined roll-off bin is prepared with sawdust or diatomaceous earth, and the tank bottoms are stabilized to remove all free liquids. The roll-off bin is brought to Central Accumulation Area 1, labeled and managed in accordance with Sections 3 and 4, and removed within 90 days of generation of the waste.

5.7 Investigation Derived Waste

The waste materials generated during sampling events are referred to as investigation derived waste. This investigaton-derived waste results from field activities including sampling and decontamination processes. Some of the waste materials may be classified as hazardous waste and must be properly disposed of in accordance with USEPA regulations. Handling shall be performed in accordance with USEPA's *Guide to Management of Investigative-Derived Wastes* (Office of Solid Waste and Emergency Response Directive 9345.3-03FS) (USEPA 1992). All drums and portable tanks (containers) used for containerization of wastewaters will be UN-approved as specified in NR 664. Refer to the Waste Management: Hazardous Waste, Standard Operating Procedure #409 on the Health, Safety, & Environment (HSE) area of CH2M HILL's Virtual Office.

The handling procedures for the investigaton-derived waste materials generated at the site are described in the following subsections.

5.7.1 Samples

The proper disposal of unused portions of the samples shall be the responsibility of the laboratory. Unused portions of the sample shall not be returned to the site, USEPA, WDNR, or CH2M HILL.

5.7.2 Personal Protective Equipment and Disposable Equipment

PPE includes disposable coveralls, gloves, booties, respirator canisters, etc. Disposable equipment includes plastic ground and equipment covers, bailers, broken or unused sample containers, sample container boxes, tape, disposable towels, etc. PPE or disposable equipment will require decontamination. Following decontamination, the decontaminated PPE or disposable equipment will be disposed of with the other solid waste from the facility. Handling and storage requirements for decontamination fluids are presented in this document.

Any PPE or disposable equipment that has come in direct contact with the nonaqueous phase liquid and that cannot be adequately decontaminated will be placed either (a) in a separate drum in the Satellite Accumulation Area 3, or (b) in the Satellite Accumulation Area drainage drum along with the bag filters. If placed in a separate drum, such drum will be managed in accordance with Section 3 and will be marked and labeled following the procedures described in Section 4. At no time will the total amount of hazardous waste stored in the Satellite Accumulation Area exceed 55 gallons.

Any PPE or disposable equipment that has not come in direct contact with the untreated groundwater will be disposed of as solid waste into the facility dumpster.

5.7.3 Purge Water

All purge water will be added to the purge water drum to be pumped into the groundwater treatment system.

All investigaton-derived waste will be contained in the appropriate device (drums, tanks, etc.) and will be segregated according to waste type (solid or liquid, corrosive or flammable, etc.). Waste containers will be labeled for onsite storage and offsite disposal, as appropriate (49 CFR

172). Per WDNR guidance for purging monitoring wells, clean water does not need to be managed as investigaton-derived waste. Therefore, purge water from wells that are upgradient of the contamination plume and historically uncontaminated does not need to be treated as investigaton-derived waste and can be disposed of well-side. At the PWP Site, the historically clean wells are far outside of the contamination area. Other generally clean wells that have purge water disposed of well-side are located in the corrective action management units, so all of the groundwater is contained.

5.7.4 Oil

As specified in 40 CFR Part 279 and NR 679, Wisconsin Administrative Code Used Oil Management Standards, used oil that will be recycled is not subject to the hazardous waste regulatory program. Used oil generated at PWP as part of the routine maintenance procedures must be collected and stored in a portable container until it can be taken to an appropriate recycling facility. In addition, used oil from PWP's system equipment is not considered a hazardous waste since it does not come in contact with any of the constituents considered to be a listed hazardous waste. The words "Used Oil" will be clearly written on the outside of the container. Refer to the Petroleum Storage Standard Operating Procedure #406 on the HSE page on CH2M HILL's Virtual Office for guidance on used oil storage.

6 Personnel Training Plan

6.1 Overview and General Requirements

As required by NR 664 and per 40 CFR 262.34(a)(4) and 265.16, this training plan has been developed to provide personnel with the information needed to perform tasks involving the storage, management, and handling of hazardous wastes at the site, and to effectively respond to an emergency situation. This training plan was developed in accordance with the RCRA training requirements for large quantity generators. Also refer to Standard Operating Procedure #110 on the HSE page on CH2M HILL's Virtual Office for personnel training plan guidance.

The training plan provides the following:

- The job titles for each position at the facility related to hazardous waste management and the name of the employee filling each job (Appendix J—Roster)
- A written description of the type and amount of both introductory and continuing training that will be given to each person filling a relevant position
- Records that document that the training or job experience required has been completed by the personnel. Training records must be kept on current personnel until closure of the facility for current personnel and 3 years for former employees.

All personnel involved in handling or managing hazardous waste at the site will receive training as specified in this plan. All employees with responsibilities for emergency response must be knowledgeable of the procedures detailed in Section 7—Preparedness and Prevention and Section 8—Contingency Plan.

6.2 Personnel Responsibilities

This section provides written job descriptions for each position related to hazardous waste management at the site. All personnel should be familiar with Section 7—Preparedness and Prevention and Section 8—Contingency Plan and be able to identify emergency situations and respond properly. For the purpose of this plan, the categories of job descriptions and functions of site personnel are as described in the following subsections.

6.2.1 Facility Operator

The facility operator directly handles hazardous waste and is directly involved in hazardous waste management. The facility operator is required to have successfully completed the 40-hour Occupational Safety and Health Administration (OSHA) hazardous waste operations and emergency response (HAZWOPER) training in accordance with 29 CFR 1910.120 and maintained compliance with the 8-hour annual refresher requirement. For compliance with HSE-110, the facility operator will meet CH2M HILL requirements for Safety Coordinator-Hazardous Waste and Facility Operations and Maintenance Worker.

Safety Coordinator-Hazardous Waste employees manage the safety of HAZWOPER-regulated projects. Core training for this worker includes the following:

- New Employee Safety Orientation (includes general Hazard Communication, general office safety, and ergonomics)—HSE module on the Virtual Office
- Hazardous waste and emergency response operations (HAZWOPER) training (40-hour, including annual 8-hour refresher)
- Annual respirator training (may be included in HAZWOPER refresher)
- Blood-borne pathogens (may be included in first-aid class)—HSE module on the Virtual Office
- First-aid/automated external defibrillator/CPR
- Fire extinguishers—HSE module on the Virtual Office
- Initial safety coordinator—HSE module on the Virtual Office
- Environmental awareness—HSE module on the Virtual Office
- Remediation Waste training —HSE module in the HAZWOPER refresher training or available on the Virtual Office
- Dangerous goods (DOT) shipping— HSE module on the Virtual Office
- Safety coordinator—Hazardous waste
- Additional safety training such as fall protection, confined space entry, lead awareness, trenching/excavation safety, lockout/tagout, ladder safety, scaffolding safety, etc., may also be required depending on project- or facility-specific hazards

Facility Operations and Maintenance Workers are employees who could be potentially exposed to hazards (that is, moving machine parts, toxic gases, exposed energized electrical equipment, hot liquids, chemicals, etc.) while performing work activities in an operating facility (that is, chemical plant, oil/gas/petroleum facilities, paper mill, process facility, etc.). This category also includes water and waste water treatment plant workers. Core training for this worker includes the following:

- New employee safety orientation (includes general hazard communication, general office safety, and ergonomics)—HSE module on the Virtual Office
- Field Awareness Safety Training—HSE module on the Virtual Office (Note: this module is not required if employee has completed OSHA 10-hour Construction Awareness or General Industry Awareness course)
- Additional safety training such as fall protection, confined space entry, lead awareness, trenching/excavation safety, energized electrical, lockout/tagout, ladder safety, scaffolding safety, behavior based safety, OSHA 10-hour or 30-hour Construction Awareness or General Industry Awareness, etc., as required by the business group, project-, or facility-specific hazards
- Generally, the facility operator is responsible for the following:
  - Operating the LNAPL recovery system and the bioventing system

- The containment, collection, treatment, and discharge of grossly contaminated groundwater (exceeding 1,000 micrograms per liter PCP) in accordance with the February 2005 quality assurance project plan and the LNAPL recovery system
- Activities required as part of the monitored natural attenuation of groundwater contamination
- Understanding the RCRA requirements and specific hazardous waste management procedures for the waste onsite as described in this waste handling plan
- Performing and maintaining documentation of the inventory and inspection of waste and containers by completing the operation logs found in Appendix D
- Completing the necessary documentation (that is, manifesting, labeling, etc.) and packaging of the waste for disposal per the procedures outlined in this waste handling plan
- Selecting and using the appropriate PPE
- Ensuring the proper use, maintenance, and inspection of the emergency response equipment
- Ensuring the proper use, maintenance, and inspection of the spill control equipment
- Ensuring that all training is documented and that documentation is available at the site for review

6.2.2 Site-sampling Personnel

The site sample personnel directly handles hazardous waste and are directly involved in hazardous waste management. The site sampling personnel are required to have successfully completed the 40-hour OSHA HAZWOPER training in accordance with 29 CFR 1910.120 and maintained compliance with the 8-hour annual refresher requirement.

Core training for site sampling personnel includes the following:

- New employee safety orientation (includes general hazard communication, general office safety, and ergonomics)—HSE module on the Virtual Office
- HAZWOPER training (40-hour, including annual 8-hour refresher)
- Annual respirator training (may be included in HAZWOPER refresher)
- Blood-borne pathogens (may be included in first-aid class)—HSE module on the Virtual Office
- First-aid/AED/CPR
- Remediation Waste training —HSE module in the HAZWOPER refresher training or available on the Virtual Office
- Dangerous Goods (DOT) Shipping training—HSE module on the Virtual Office
- Environmental Awareness training—HSE module on the Virtual Office

The site-sampling personnel are responsible for the following:

- Activities required as part of the monitored natural attenuation of groundwater contamination such as low-flow groundwater sampling
- Activities required as part of the groundwater extraction remediation action such as taking groundwater level readings, LNAPL depth readings, and low-flow groundwater sampling

6.2.3 Generator

The owner or its chosen representative is responsible for the following:

- Reviewing and giving approval of all waste handling activities
- Monitoring compliance of all waste handling activities
- Confirming that the site roster is maintained onsite
- Ensuring that offsite waste handling records are reviewed and maintained
- Ensuring that onsite contractors' training records meet site requirements
- Reviewing and approving the updated information in the waste handling plan, as needed

6.2.4 Project Manager

The project manager is responsible for managing the facility operators and is required to have successfully completed the 40-hour OSHA HAZWOPER training in accordance with 29 CFR 1910.120 and maintained compliance with the 8-hour annual refresher requirement. Generally, the project manager is responsible for the following:

- Providing the necessary initial and annual training to personnel as outlined in this section
- Ensuring facility operators and other site personnel have completed the personnel training and the necessary documentation is completed
- Reviewing and maintaining offsite operation and maintenance records
- Providing updates to the waste handling plan for the owner's review and approval as needed
- Maintaining site roster for owner's review and approval

6.3 Implementation of the Training Program

All personnel performing activities at the site involving the handling and/or management of hazardous waste will be required to participate in the personnel training, to have successfully completed the 40-hour OSHA HAZWOPER training, and to have maintained compliance with the 8-hour annual refresher requirement. Personnel will comply with the training requirements set forth in CH2M HILL HSE Training Program Enterprise Standard Operating Procedure HSE-110.Personnel training at the site consists of an Initial Training and Annual Review Training.

6.3.1 Initial Training

Personnel must complete the initial training within 30 days of starting hazardous waste handling-related activities. As part of the initial training, personnel are required to read, in

its entirety, the waste handling plan and the site-specific health and safety plan. The initial training will familiarize personnel with emergency procedures, emergency equipment, and emergency systems. The training will include the following, as appropriate:

- Identify operations that generate hazardous waste and the chemical characteristics of the waste
- Identify location of the emergency response equipment (that is, fire extinguishers)
- Identify location of the spill control equipment
- Identify location of the map to the hospital
- Identify location of the material safety data sheets (MSDSs)
- Review emergency equipment as presented in Section 7—Preparedness and Prevention
- Review emergency procedures as presented in Section 8—Contingency Plan
- Review procedures for shutdown of the system presented in the operation and maintenance manual
- Review proper container packaging, marking, labeling, and documentation for waste as presented in the waste handling plan
- Review procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment
- Review key parameters for automatic waste feed cut-off systems
- Identify communications or alarm systems
- Respond to fires or explosions
- Respond to groundwater contamination incidents
- Shutdown operations

6.3.2 Annual Review Training

Facility personnel must take part in an annual review of the topics covered during the initial training program; this is satisfied by the HAZWOPER, which includes a module on environmental compliance and waste management training documentation

The most current version of this training plan will be maintained onsite. Updates of this plan may be required as a result of the changes involving regulation, waste type, operations, techniques, equipment, or the facility-specific emergency contingency plan procedures.

The project manager is required to document the training upon completion of the initial training and the annual review. The project manager will complete the training records in Appendix I, which include the following:

- Job title for each position at the facility related to hazardous waste management, and the name of the employee filling each position

- Written job description for each position at the facility related to hazardous waste management, including requisite skill, education or other qualifications, and duties of facility personnel assigned to each position
- Written description of the type and amount of introductory and continuing training that will be given to each person filling a job related to hazardous waste management
- Records that document the training or job experience has been given to and completed by required personnel

Individuals who are not involved in handling hazardous waste are not required to complete the training outlined in this plan. When such individuals visit the site, these personnel shall not be involved in the handling of hazardous waste unless they have completed the training outlined in this plan.

7 Preparedness and Prevention Plan

Large quantity generators must meet the preparedness and prevention requirements in NR 665 Subchapter C. The facility must be maintained and operated to minimize the possibility of a fire, explosion, and unplanned sudden or non-sudden release of hazardous waste. This plan outlines the available emergency equipment located onsite and management procedures for fire prevention.

NR 664.0032, a communications device is required to be available for contacting outside agencies for emergency assistance. In addition, NR 664.0340, requires that if just one employee is on the premises, the employee must have immediate access to a device capable of summoning outside help. A telephone in the control room has direct dial numbers to contact local emergency assistance from offsite in case of emergencies.

Per NR 664.0351, a facility is required to maintain sufficient aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to areas of the facility during an emergency. Aisle space in each area is sufficient for unobstructed movement of emergency personnel and equipment.

7.1 Prevention Procedures, Structures, and Equipment

Proper management and precautions are necessary to prevent the ignition of waste onsite. Ignitable waste at the facility includes free product recovered from the subsurface and used oil. The NFPA defines the recovered free product from the site as shown in Table 7-1.

TABLE 7-1
NFPA Classification of Recovered Free Product
Penta Wood Products Site

Recovery Area	Flashpoint	NFPA Class
Corrective Action Management Unit	>200°F	Class IIIB combustible liquid

Note: Classifications are based upon NFPA 30 Section 1.7 and can be found at http://publicecodes.citation.com/icod/ifc/2006f2/icod_ifc_2006f2_27_sec003.htm

Additional information on the characteristics of the recovered free product is provided in Section 5.3 of this waste handling plan. The recovered free product is stored outside in a double-walled 8,000-gallon tank. The tank is equipped with heat tracing and insulation to prevent the LNAPL and any water from freezing.

No sources of ignition will be allowed near the storage tank or within the building when ignitable items are stored. Potential sources of ignition to be prohibited include open flames, smoking, cutting and welding, hot surfaces, frictional heat, and sparks (static, electrical, or mechanical). “No Smoking” signs are placed throughout the building.

International Fire Code Chapter 27 requirements are satisfied as follows:

1. Tank, piping, valves, and fittings materials are compatible with the F032/F027 LNAPL waste
2. The LNAPL tank is properly labeled to show tank/piping contents and hazard identification
3. The LNAPL tank has a readily accessible and labeled manual shutoff valves and an auto-shutoff system installed at the point of use and at the tank
4. The LNAPL tank has a liquid level limit control (that is, overfill protection) since it is over 500 gallons
5. Annual testing (or testing in accordance with a*pproved* manufacturer's requirements or a*pproved* recognized industry standard) is performed on the tank
6. Characterization data (in lieu of an material data safety sheets) is provided in this waste handling plan, which is kept onsite and readily available
7. Personnel are appropriately trained and written response procedures are provided in this waste handling plan
8. The facility operator is a trained site safety coordinator-hazardous waste (SSC) and is identified as the responsible person to provide information/assistance to fire department in an emergency
9. The tank is in a secure location and is protected from vehicles by use of guardrails
10. The tank has spill control and is double-walled, providing secondary containment
11. Inspections are performed to detect leaks in the secondary containment (can be visual inspections)
12. The tank is located outside; therefore, a ventilation system is not required

Free product/water recovered from the subsurface is pumped directly into a closed lid, oil-water separator located in the treatment building. Oil is skimmed off, stored in an internal collection chamber and the water flows over a weir and pumped to the equalization tank. Once filled, the oil collection chamber is automatically emptied by a pump, which sends the free product to the outside 8,000-gallon double-walled storage tank. The free product is pumped out of the storage tank into bulk transport trucks for disposal. Buckets and spill pads are available, and the hoses are connected with camlocks. All containers holding ignitable wastes will be located at least 50 feet from the facility property line.

To prevent overflow, the process controls for the free-product recovery system are designed and operated to perform shutdown of the free-product recovery pumps when the storage tank is full or there is a high-water alarm in the OWS tank. If a high-level alarm is triggered, the product recovery pumps are shut down.

7.1.1 Fire Control Equipment

Both the pretreatment and treatment buildings are equipped with 10-pound, Class ABC portable fire extinguishers located at every exit. The fire extinguishers are inspected annually and maintained per the manufacturer's instructions.

Water is supplied from a well to the building. The primary function of the facility water system is to supply water for process use. The domestic water is available during a fire; however, there are no fire hose connections within the building.

7.1.2 Spill Control Equipment

Spill response equipment including absorbent pads, socks and booms, loose absorbent material, drums and other containers, as well as personal protective equipment, are located in the treatment room. Fire extinguishers are also located throughout the facility.

7.1.3 Personal Protective Equipment

In addition, a supply of PPE, including Tyvek coveralls, booties, and gloves, is available in the treatment room.

7.1.4 First-aid

A fully stocked first-aid kit is provided in the control room for minor injuries.

8 Contingency Plan

The contingency plan, prepared in accordance with the RCRA requirements, describes how site personnel will respond to a fire, explosion, or any unplanned sudden or other release of the hazardous waste stored onsite as well as for incidental releases or spills. The contingency plan will be reviewed and amended if changes occur in the design, construction, operation, maintenance, or other areas of the system or building in a way that increases the potential for fires, explosions, or releases of hazardous waste, or changes the response necessary in an emergency.

8.1 Response Personnel

An emergency coordinator is responsible for coordinating emergency response measures and being familiar with the following:

- This contingency plan
- The hazardous waste operations and activities at the site
- The location of hazardous waste records within the building
- The facility layout
- The locations of hazardous waste activities and characteristics of hazardous waste handled at the site

In addition, persons qualified to act as the emergency coordinator have the authority to commit the necessary resources to implement this contingency plan. Persons qualified to act as the emergency coordinator, as required by NR 664.0055, and contact information are provided in Table 8-1 and posted next to the telephone in the control room. The site operator (Shawn Broughman) should call the site manager (Michael Niebauer) and the Environmental Manager (Terri Gerrish) first in the event that the contingency plan needs to be implemented. The site manager and environmental manager will then contact the client.

TABLE 8-1
Emergency Coordinator Contact Information
Penta Wood Products Site

Shawn Broughman/CH2M HILL 8682 Daniels 70 Siren, WI 54872 Office: (715) 349-8357 Cell: (916) 759-9389	Michael Niebauer/CH2M HILL 135 South 84th Street, Suite 400 Milwaukee, WI 53214 Office: (414) 272-1052 x40561 Cell: (917) 647-6461
Terri Gerrish, Environmental Manager 119 Cherry Hill Road, Suite 300 Parsippany, NJ 07054 Office: (973) 316-3516 Cell: (973) 632-0238	Mark Orman, Health & Safety/CH2M HILL 135 South 84th Street, Suite 400 Milwaukee, WI 53214 Office: (414) 847-0597 Cell: (414) 712-4138

8.2 Implementation

The provisions of this contingency plan will be implemented immediately whenever there is an emergency event (for example, a fire, an explosion, or a natural occurrence that involves

or threatens the hazardous waste stored onsite) that could threaten human health or the environment. A description of emergency and spill response equipment in the building is provided in Section 7—Preparedness and Prevention Plan of this waste handling plan.

8.2.1 Fire and Explosions

In the event of a fire or explosion, the first person to become aware of an incident shall assess the incident. Both fire fighting and evacuation are possible options in an emergency situation. If the fire involves an explosion or if the fire is so large that it cannot be extinguished with the equipment at hand, the personnel involved shall evacuate the building through the closest exit and proceed outside immediately to an upwind assembly point.

The local fire department, emergency coordinator, project manager, and owner representative should be summoned immediately. If any emergency appears to involve hazardous materials, the hazardous materials response team will be called to the scene. The Webster Fire Department will respond as the hazardous materials response team for Burnett County and can respond, identify, and contain releases. If additional support is needed, the Webster Fire Department will call in the Superior Fire Department.

8.2.2 Spills

In the event of a spill, the first person to become aware of an incident shall assess the incident and contact the environmental manager and the project manager/site manager. The environmental manager or project manager/site manager will contact the HSE manager and determine the reporting needs.

The following actions will be taken in the event of spills:

1. Stop or contain the spill immediately (if possible) or note source. Shut off the source (for example, pump, treatment system) if possible. If unsafe conditions exist, then leave the area, call emergency services, inform nearby personnel, notify the site supervisors, and initiate incident reporting process. The site coordinator shall be notified immediately.
2. Extinguish sources of ignition (flames, sparks, hot surfaces, cigarettes).
3. Clear personnel from the spill location and barricade the area.
4. Use available spill control equipment in an effort to ensure that fires, explosions, and releases do not occur, recur, or spread.
5. Use sorbent materials to control the spill at the source.
6. Construct a temporary containment dike of sorbent materials, cinder blocks, bricks, or other suitable materials to help contain the spill.
7. Attempt to identify the character, exact source, amount, and extent of the released materials. Identification of the spilled material should be made as soon as possible so that the appropriate cleanup procedure can be identified.
8. Assess possible hazards to human health or the environment as a result of the release, fire or explosion.
9. Follow incident notification, reporting, and investigation section of this plan.

10. For container spills, container contents will be removed, if necessary, and material transferred to a new container. Material released to the secondary containment systems will be either pumped out of the containment system into new containers or absorbed using compatible absorbent materials such as pillows, socks, or granules.
11. Equipment and clothing will be decontaminated as directed by the site health and safety plan, as applicable.
12. Decontamination solutions will be containerized and treated in the system.
13. Absorbent material will be placed into UN-approved containers, labeled appropriately, and stored in the accumulation storage area pending shipment offsite to the proper disposal facility.
14. As part of routine treatment system operations, small releases of partially treated groundwater occur within the treatment building. For example, valves or pump seals occasionally leak and require replacement. The entire treatment room drains back into the head end of the groundwater treatment system, therefore, these are not discharges that would trigger state or federal reporting.

8.3 Coordination Agreements

The emergency response agencies that may be contacted for emergency response actions were notified of activities at the PWP Site and provided information as appropriate. Site tours were offered and completed, if requested by the agency. The following agencies were contacted:

1. Siren Police Department
2. Siren Volunteer Fire Department
3. Burnett County Sheriff
4. Burnett Medical Center
5. Burnett County Emergency Coordinator
6. North Ambulance
7. WDNR Webster Ranger Station
8. Webster Fire Department
9. Superior Fire Department

8.4 Notification and Reporting Obligations

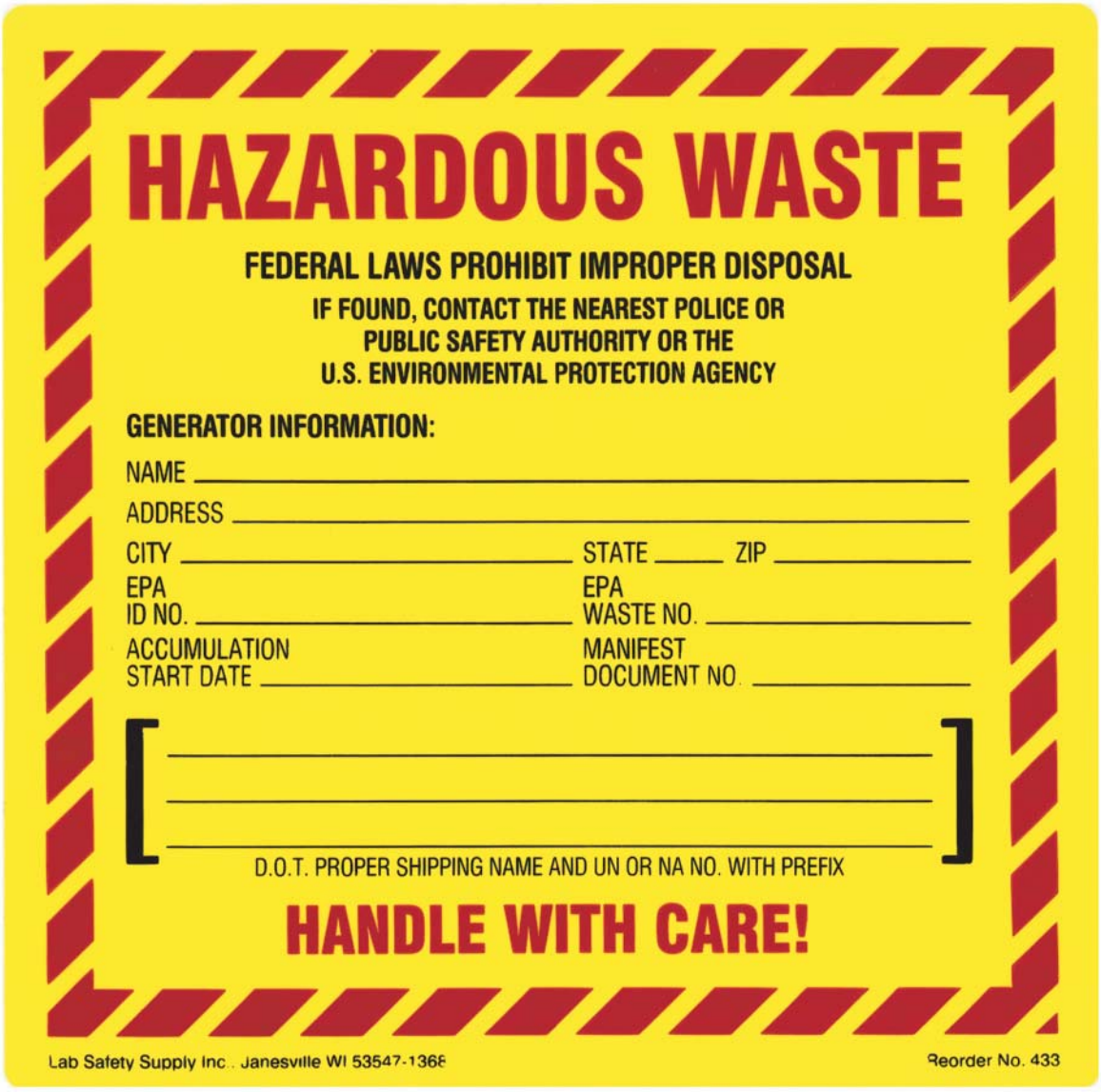
The spill law, Chapter 292.11, Wis. Stats., requires that a person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance shall notify the department *immediately* of any discharge not exempted by the statute**.** See Section 8.1 and Table 8-1 for appropriate response personnel. WDNR has a 24-hour toll-free number for reporting spills: 1-800-943-0003. De minimis exemptions in Chapter NR 706, Wis. Adm. Code (effective 3/1/97**)** applicable to this site include discharges below the Federal Reportable Quantity amount of 1 pound for F032 waste or F027 wastes in Wisconsin, discharges that have evaporated or been cleaned up in accordance with NR 700 – 726; gasoline or another petroleum product completely contained on an impervious surface; 1 gallon of gasoline onto a pervious surface or runs off an impervious surface; 5 gallons of other petroleum products onto a pervious surface or runs off an impervious surface.

Within 15 days after an incident requiring implementation of the contingency plan, the owner or operator must submit a written report on the incident to the WDNR, which includes the following:

- Name, address, and telephone number of owner/operator
- Name, address, and telephone number of the facility
- Date, time, and type of incident, such as fire or explosion
- Name and quantity of materials involved
- Extent of injuries, if any
- An assessment of actual or potential hazards to human health or the environment, where this is applicable
- Estimated quantity and disposition of recovered material that resulted from the incident
- A narrative describing the known or suspected causes of the incident and a statement describing the measures taken to investigate the cause. The narrative shall also describe any necessary measures that have been or shall be taken to prevent incidents in the future
- Any amendments to the contingency plan as required by NR 630.22 (1) (b) and (c)

The project manager/site manager and environmental manager shall communicate with the client and notify the department and appropriate local authorities that in the affected areas of the facility, no waste that may be incompatible with the discharged material is treated, stored, or disposed of until cleanup procedures are completed, and all emergency equipment listed in the contingency plan is clean and fit for its intended use before operations are resumed.

Appendix A
Blank Hazardous Waste Label



Example of Blank Hazardous Waste Label

Appendix B
Blank Nonhazardous Waste Label

Example of Non-Hazardous Waste Label

Appendix C
Blank Uniform Hazardous Waste Manifest Forms and Instructions

TABLE C-1
Types of Containers

Abbreviation	Description
DM	Metal drums, barrels, kegs
DW	Wooden drums, barrels, kegs
DF	Fiberboard or plastic drums, barrels, kegs
TP	Tanks portable
TT	Cargo tanks (tank trucks)
TC	Tank cars
DT	Dump truck
CY	Cylinders
CM	Metal boxes, cartons, cases (including roll-offs)
CW	Wooden boxes, cartons, cases
CF	Fiber or plastic boxes, cartons, cases
BA	Burlap, cloth, paper, or plastic bag

SEE INSTRUCTIONS ON REVERSE SIDE OF COPY 6.

STATE OF WISCONSIN

Chapter 291, Wis. Stats.
Form 4400-66P Rev. 1-99

ALL COPIES MUST BE LEGIBLE, PLEASE TYPE

State of Wisconsin
Department of Natural Resources
Bureau of Waste Management
Box 8094
Madison, WI 53708

FOR DNR USE ONLY

Form designed for use on elite (12-pitch) typewriter.

Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of	Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address / Site Location If Different	A. State Manifest Document Number: WI K363452
4. Generator's Phone ( )	B. State Generator's ID
5. Transporter 1 Company Name / 6. US EPA ID Number	C. State Transporter's ID / D. Transporter's Phone
7. Transporter 2 Company Name / 8. US EPA ID Number	E. State Transporter's ID / F. Transporter's Phone
9. Designated Facility Name and Site Address / 10. US EPA ID Number	G. State Facility's ID / H. Facility's Phone

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.					
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above	K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations and according to the requirements of the Wisconsin Department of Natural Resources. If I am a large quantity generator, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment;

OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name & Position Title	Signature	Date (Month Day Year)

GENERATOR

TRANSPORTER

17. TRANSPORTER 1 Acknowledgement of Receipt of Materials

Printed/Typed Name & Position Title	Signature	Date (Month Day Year)

18. TRANSPORTER 2 Acknowledgement of Receipt of Materials

Printed/Typed Name & Position Title	Signature	Date (Month Day Year)

FACILITY

19. Discrepancy Indication Space

20. FACILITY OWNER OR OPERATOR: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name & Position Title	Signature	Date (Month Day Year)

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

Copy Distribution: 1 — Generator send to Wis. DNR; 2 — Generator retain; 3 — Facility send to Wis. DNR; 4 — Facility retain; 5 — Facility send to Generator; 6 — Transporter retain

Copies 1 & 3 mail to Wis. DNR at above address.

Emergency 24 Hour Assistance and Spill Reporting
Telephone Number: (800) 943-0003

COPY 1 - GENERATOR SEND TO WI DNR

Example of Blank Wisconsin Uniform Hazardous Waste Manifest

Use of this form is mandatory underss. 291.21, 291.23 and 291.25, Wis.Stats. Penalty for failure to comply: up to $25,000 forfeiture. Penalty for making intentional false statements or representations: up to $25,000 fine or one year in jail, or both. Higher penalties apply to second and subsequent violations. Personally identifiable information requests in this form is not intended to be used for any other purposes other than those for which it is originally collected.

I. INSTRUCTIONS FOR COMPLETION BY GENERATOR (SHIPPER)

A. General Responsibilities

1. Complete items 1-16, as well as D, F, H, and I in Shaded Area. Items J and K are optional.
2. Sign and date item 16 prior to shipment of waste.
3. Remove Copies 1 and 2 after items 15 and 17 are completed by carrier/driver.
4. Mail Copy 1 to address indicated on top of manifest form, within five (5) working days, and retain Copy 2 for company records.

B. Specific Instructions

Item 1 — Enter the company's US EPA (12-digit) ID number and an unique 5-digit number assigned to this manifest (e.g., 00001).

Item 2 — This will always read Page 1 of 1.

Item 3 — Enter company's name and address where manifests will be held/filed. You may also enter location where shipment originated.

Item 4 — Telephone number where an authorized agent of the company may be contacted.

Item 5 — Enter the company name of the first transporter of the waste shipment.

Item 6 — Enter US EPA (12-digit) ID number of first transporter identified in item 5.

Item 7 — If applicable, enter company name of the second transporter of waste. If more than two transporters are used, you must use a second manifest Form 4400-66.

Item 8 — If applicable, enter US EPA (12-digit) ID number of second transporter identified in item 7.

Item 9 — Enter company name and site address of the facility designated to receive the waste listed on this manifest.

Item 10 — Enter US EPA (12-digit) ID number of facility in item 9.

Item 11 — Enter the US DOT Proper Shipping Name, Hazard Class, and ID number (UN/NA) for each waste as identified in 49-CFR 171-177. "**Note:** If additional space is needed (e.g., more than 4 wastes) you must/shall use another (second) manifest Form 4400-66."

Item 12 — Enter the number of containers for each waste and the appropriate abbreviation from the table (below) for Type of Container.

DM — Metal drums, barrels, kegs.
DW — Wooden drums, barrels, kegs.
DF — Fiberboard or plastic drums, barrels, kegs.
TP — Tanks portable.
TT — Cargo tanks (tank trucks).
TC — Tank cars.
DT — Dump truck.
CY — Cylinders.
CM — Metal boxes, cartons, cases (including roll-offs).
CW — Wooden boxes, cartons, cases.
CF — Fiber or plastic boxes, cartons, cases.
BA — Burlap, cloth, paper or plastic bags.

Item 13 — Enter the total quantity of waste described on each line (one per line only).

Item 14 — Enter the appropriate abbreviation from the table (below) for the Unit of Measure. Use only one unit of measure for each waste amount.

G — Gallons (liquids only)	L — Liters (liquids only)
P — Pounds	K — Kilograms
T — Tons (2,000 lbs.)	M — Metric tons (1,000 kg)
Y — Cubic yards	N — Cubic meters

Item I — WASTE NUMBER — Enter the appropriate Hazardous Waste number for each separate waste shipped as identified in EPA regulations 40 CFR Part 261 or Chapter NR 605, Wis. Adm. Code. Additional waste numbers may be listed in Box J.

Item 15 — If applicable, generators must provide Alternate TSD Facility information including: US EPA ID number, company name, address, and provide space for the signature and date of acceptance of the waste.

Item 16 — A generator representative must read, sign and date the Certification Statement.

II. INSTRUCTIONS FOR COMPLETION BY TRANSPORTER/CARRIER

A. General Responsibilities

1. Sign item 17.
2. If the load is to be transferred to another carrier, ensure items 7, 8 and 18 are completed at the time of the transfer.
3. Deliver all manifested waste to the specified destination.
4. Obtain the signature and information required in item 19 and 20, upon delivery to the waste facility.
5. Retain Copy 6 for your records and give Copies 3-5 to the facility operator.

B. Specific Instructions

Item 17 — Enter the name and title of the person accepting the waste on behalf of the first transporter. That person must acknowledge acceptance of the waste described on the manifest by signing and entering the date of receipt.

Item 18 — Transporter 2 — If applicable, enter the name and title of the person accepting the waste on behalf of the second transporter. That person must acknowledge acceptance of the waste described on the manifest by signing and entering the date of receipt.

III. INSTRUCTIONS FOR COMPLETION BY THE HAZARDOUS WASTE FACILITY

A. General Responsibilities

1. Verify the waste and quantities listed on the manifest.
2. Complete items 19 and 20 upon acceptance of waste shipment and give Copy 6 to carrier.
3. Mail Copy 3 to address indicated on top of manifest form, within five (5) working days.
4. Mail Copy 5 and any attachments to the generator address (Item 3 given on the manifest), within 30 days.
5. Retain Copy 4 for your company records.

B. Specific Instructions

Item 19 — The authorized representative of the designated (or alternative) facility's owner or operator must note in this space any significant discrepancy between the waste described on the manifest and the waste actually received at the facility.

Item 20 — Facility owner or operator must print the name of the person and title accepting the waste on behalf of the facility. That person must acknowledge acceptance of waste described on the manifest by signing and entering the date of receipt.

Example of Instructions For Wisconsin
Uniform Hazardous Waste Manifest

Appendix D
Manifest and Inspection Logs

INSPECTION LOG—FREE PRODUCT STORAGE TANK
Penta Wood Products Site
Siren, Wisconsin
EPA # WID006176945

Date	Time	Inspector	Comments	Correction Action Taken	Date of Corrective Action

Note:

1. Inspect weekly.
2. Items to check for:
   - Check for proper labels, material weight, and storage date
   - Check for leakage or ballooning
   - Check for signs of corrosion on drums
   - Check for sufficient aisle space and clearance
3. Retain this form on file for three years.

INSPECTION LOG—HAZARDOUS WASTE DRUM STORAGE
Penta Wood Products Site
Siren, WI
EPA # WID006176945

Date	Time	Inspector	Comments	Correction Action Taken	Date of Corrective Action

Note:

1. Inspect weekly.
2. Items to check for:
   - Check for proper labels, material weight, and storage date
   - Check for leakage or ballooning
   - Check for signs of corrosion on drums
   - Check for sufficient aisle space and clearance
3. Retain this form on file for three years.

MANIFEST LOG
Penta Wood Products Site
Siren, Wisconsin
EPA # WID006176945

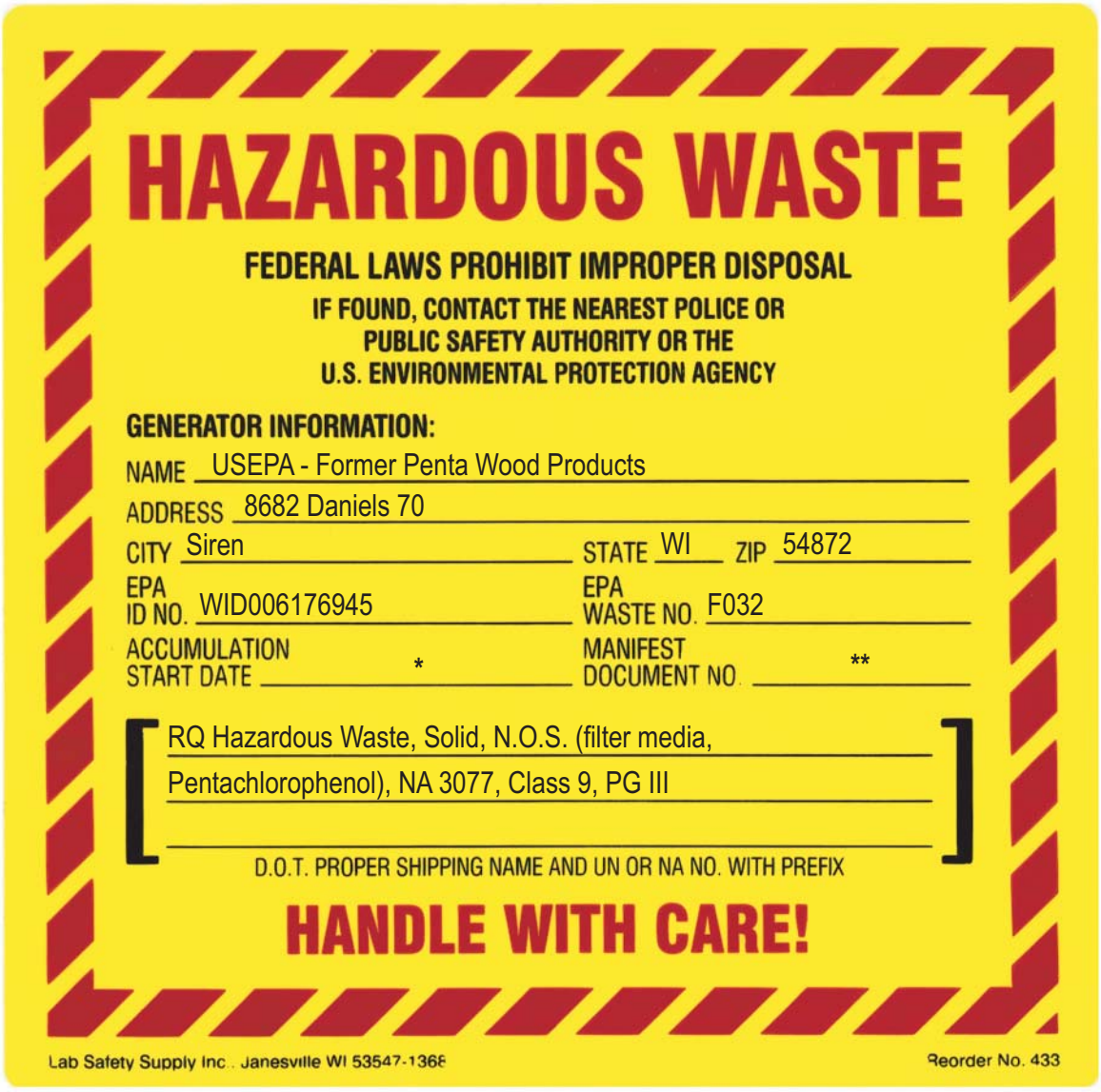
Accumulation Start Date	Shipping Date	Manifest Document Number	State Manifest Document Number	Receipt Date of TSD Signed Manifest	Waste Stream

Appendix E
Label, Profile Information, and Manifest for Carbon

APPENDIX E

Carbon Profile Information

Generator Information	USEPA - Former Penta Wood Products Site 8682 Daniels 70 Siren, WI 54872
Generator USEPA/Federal ID #	WID006176945
Name of the Waste	Spent Carbon
Waste Code	F032
Process Generating Waste	Spent carbon from remediation of pentachlorophenol contaminated site
Constituents	Carbon 100% Pentachlorophenol 0 to 5%
Physical State	Solid, no free liquids
Number of Phases	1
Odor	None
Flash Point	
pH	4.0 to 10.0
Specific Gravity	
DOT Shipping Name	Hazardous Waste, Solid, N.O.S.
DOT Hazard Class	9
UN/NA #	NA 3077
Packing Group	III
Container Description	1.6 yard supersack



* Accumulation start date is the date the carbon is placed in the super sack.

** Manifest Document No. is found in Item 1 on the corresponding completed manifest.

Example of Hazardous Waste Label for Carbon

SEE INSTRUCTIONS ON REVERSE SIDE OF COPY 6.

STATE OF WISCONSIN

Chapter 291, Wis. Stats.
Form 4400-66P Rev. 1-99

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State of Wisconsin
Department of Natural Resources
Bureau of Waste Management
Box 8094
Madison, WI 53708

FOR DNR USE ONLY

Form designed for use on elite (12-pitch) typewriter.

Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: WID006176945
Manifest Document No.:
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
USEPA - Former Penta Wood Products c/o CH2M HILL
135 S 84th St, Milwaukee, WI 53214

Site Location If Different
8682 Daniels 70
Siren, WI 54872

4. Generator's Phone (414) 272-2426

A. State Manifest Document Number: WI K363452
B. State Generator's ID: N/A

5. Transporter 1 Company Name
6. US EPA ID Number
C. State Transporter's ID
D. Transporter's Phone

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
10. US EPA ID Number
G. State Facility's ID
H. Facility's Phone

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ Hazardous Waste, Solid, N.O.S. (filter media, Pentachlorophenol) NA 3077, Class 9, PG III, (F032)		B A			F 0 3 2
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above: F027 in Wisconsin only

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations and according to the requirements of the Wisconsin Department of Natural Resources. If I am a large quantity generator, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment;

OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name & Position Title | Signature | Date (Month Day Year)

TRANSPORTER

17. TRANSPORTER 1 Acknowledgement of Receipt of Materials
Printed/Typed Name & Position Title | Signature | Date (Month Day Year)

18. TRANSPORTER 2 Acknowledgement of Receipt of Materials
Printed/Typed Name & Position Title | Signature | Date (Month Day Year)

FACILITY

19. Discrepancy Indication Space

20. FACILITY OWNER OR OPERATOR: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name & Position Title | Signature | Date (Month Day Year)

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

Copy Distribution:
1 — Generator send to Wis. DNR
2 — Generator retain
3 — Facility send to Wis. DNR
4 — Facility retain
5 — Facility send to Generator
6 — Transporter retain
Copies 1 & 3 mail to Wis. DNR at above address.

Emergency 24 Hour Assistance and Spill Reporting
Telephone Number: (800) 943-0003

COPY 1 - GENERATOR SEND TO WI DNR

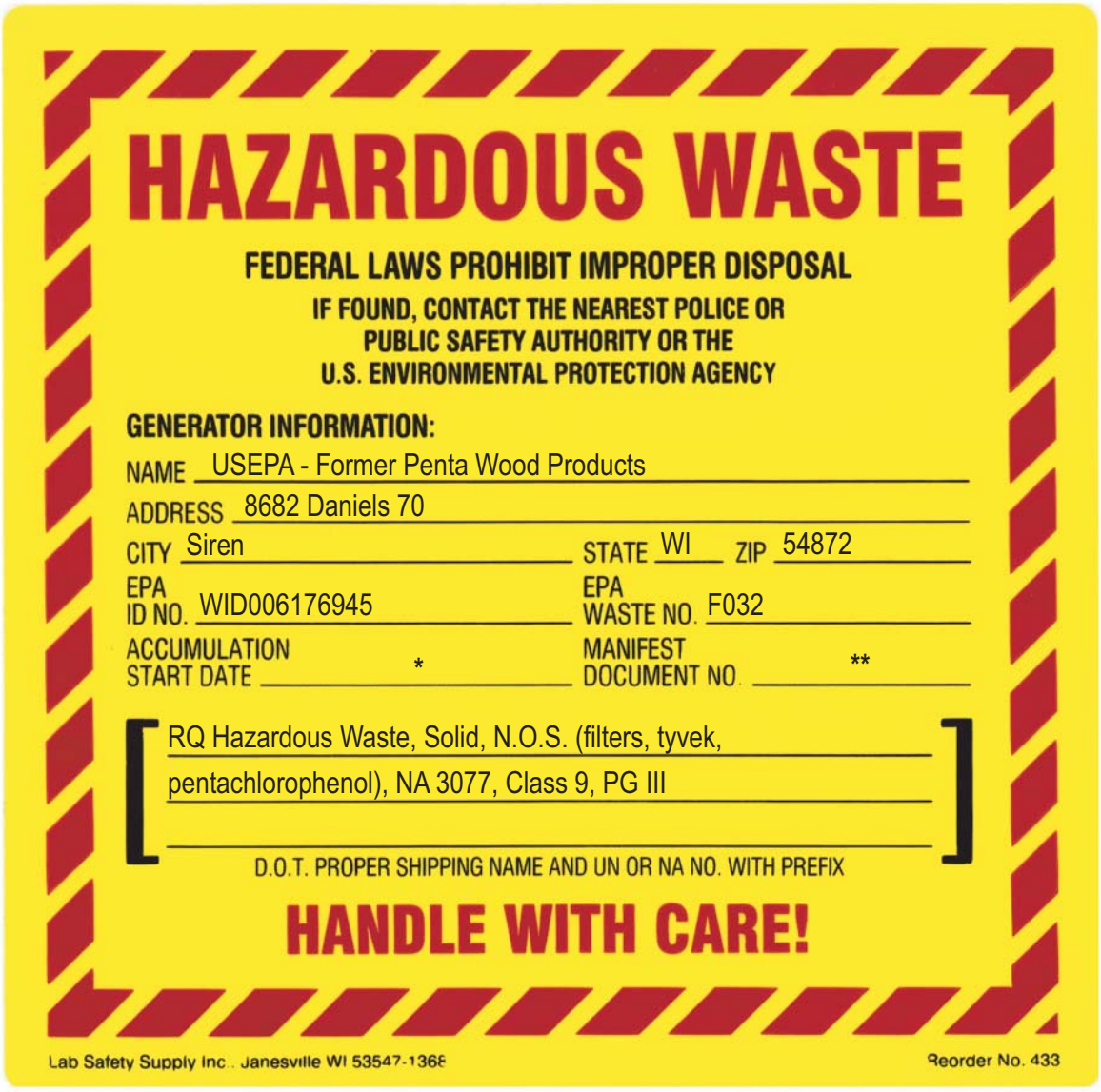
Example of Wisconsin Manifest for Carbon

Appendix F
Label, Profile Information, and Manifest for Miscellaneous Debris

APPENDIX F

Miscellaneous Debris Profile Information

Generator Information	USEPA - Former Penta Wood Products Site 8682 Daniels 70 Siren, WI 54872
Generator USEPA/Federal ID #	WID006176945
Name of the Waste	Debris
Process Generating Waste	PPE, tape, wood and debris generated during remediation of pentachlorophenol contaminated site
Constituents	PPE, gloves, tape, wood, debris (100%)
Physical State	Solid, no free liquids
Number of Phases	1
Odor	None
Flash Point	
pH	
Specific Gravity	
DOT Shipping Name	Hazardous Waste, Solid, N.O.S.
DOT Hazard Class	9
UN/NA #	NA 3077
Packing Group	III
Container Description	55-gallon steel drum



* Accumulation start date is the date when the satellite accumulation drum is full or sealed and taken out of service.

** Manifest Document No. is found in Item 1 on the corresponding completed manifest.

Example of Hazardous Waste Label
for Miscellaneous Debris

SEE INSTRUCTIONS ON REVERSE SIDE OF COPY 6.

STATE OF WISCONSIN

Chapter 291, Wis. Stats.
Form 4400-66P Rev. 1-99

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State of Wisconsin
Department of Natural Resources
Bureau of Waste Management
Box 8094
Madison, WI 53708

FOR DNR USE ONLY

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Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: WID006176945
Manifest Document No.:
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
USEPA - Former Penta Wood Products c/o CH2M HILL
135 S 84th St, Milwaukee, WI 53214
4. Generator's Phone (414) 272-2426

Site Location If Different
8682 Daniels 70
Siren, WI 54872

A. State Manifest Document Number: WI K363452
B. State Generator's ID: N/A

5. Transporter 1 Company Name
6. US EPA ID Number
C. State Transporter's ID
D. Transporter's Phone

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
10. US EPA ID Number
G. State Facility's ID
H. Facility's Phone

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ Hazardous Waste Solid, N.O.S. (filters, tyvek, Pentachlorophenol) NA 3077, Class 9, PG III		DM			F 0 3 2
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above: F027 in Wisconsin only

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations and according to the requirements of the Wisconsin Department of Natural Resources. If I am a large quantity generator, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment;

OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name & Position Title | Signature | Date (Month Day Year)

TRANSPORTER

17. TRANSPORTER 1 Acknowledgement of Receipt of Materials
Printed/Typed Name & Position Title | Signature | Date (Month Day Year)

18. TRANSPORTER 2 Acknowledgement of Receipt of Materials
Printed/Typed Name & Position Title | Signature | Date (Month Day Year)

FACILITY

19. Discrepancy Indication Space

20. FACILITY OWNER OR OPERATOR: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name & Position Title | Signature | Date (Month Day Year)

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

Copy Distribution:
1 — Generator send to Wis. DNR
2 — Generator retain
3 — Facility send to Wis. DNR
4 — Facility retain
5 — Facility send to Generator
6 — Transporter retain
Copies 1 & 3 mail to Wis. DNR at above address.

Emergency 24 Hour Assistance and Spill Reporting
Telephone Number: (800) 943-0003

COPY 1 - GENERATOR SEND TO WI DNR

Example of Wisconsin Manifest for Miscelleanous Debris

Appendix G
Profile Information and Manifest for LNAPL

APPENDIX G

LNAPL Profile Information

Generator Information	USEPA - Former Penta Wood Products Site 8682 Daniels 70 Siren, WI 54872
Generator USEPA/Federal ID #	WID006176945
Name of the Waste	Recovered LNAPL
Waste Code	F032, D037
Process Generating Waste	Recovered No. 2 fuel oil recovered from remediation of pentachlorophenol contaminated site
Constituents	#2 Fuel Oil 90 to 95% Pentachlorophenol 5 to 7% Water 0 to 2%
Physical State	Liquids, no solids
Number of Phases	2
Odor	Mild
Flash Point	>200^{o} F
pH	4.0 to 10.0
Specific Gravity	0.8 – 1.0
DOT Shipping Name	Hazardous Waste, Liquid, N.O.S.
DOT Hazard Class	9
UN/NA #	NA 3082
Packing Group	III
Container Description	Bulk liquid in vacuum truck from storage tank onsite

SEE INSTRUCTIONS ON REVERSE SIDE OF COPY 6.

STATE OF WISCONSIN

Chapter 291, Wis. Stats.
Form 4400-66P Rev. 1-99

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Bureau of Waste Management
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Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: WID006176945
Manifest Document No.:
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
USEPA - Former Penta Wood Products c/o CH2M HILL
135 S 84th St, Milwaukee, WI 53214

Site Location If Different
8682 Daniels 70
Siren, WI 54872

4. Generator's Phone (414) 272-2426

A. State Manifest Document Number: WI K363452
B. State Generator's ID: N/A

5. Transporter 1 Company Name
6. US EPA ID Number
C. State Transporter's ID
D. Transporter's Phone

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
10. US EPA ID Number
G. State Facility's ID
H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ Hazardous Waste, Liquid, N.O.S. (Fuel Oil, pentachlorophenol) NA 3082, Class 9, PG III (F032)					F 0 3 2
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above: F027 in Wisconsin only

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations and according to the requirements of the Wisconsin Department of Natural Resources. If I am a large quantity generator, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment;

OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name & Position Title	Signature	Date (Month Day Year)

17. TRANSPORTER 1 Acknowledgement of Receipt of Materials

Printed/Typed Name & Position Title	Signature	Date (Month Day Year)

18. TRANSPORTER 2 Acknowledgement of Receipt of Materials

Printed/Typed Name & Position Title	Signature	Date (Month Day Year)

TRANSPORTER

19. Discrepancy Indication Space

20. FACILITY OWNER OR OPERATOR: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name & Position Title	Signature	Date (Month Day Year)

FACILITY

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

Copy Distribution:
1 — Generator send to Wis. DNR
2 — Generator retain
3 — Facility send to Wis. DNR
4 — Facility retain
5 — Facility send to Generator
6 — Transporter retain
Copies 1 & 3 mail to Wis. DNR at above address.

Emergency 24 Hour Assistance and Spill Reporting
Telephone Number: (800) 943-0003

COPY 1 - GENERATOR SEND TO WI DNR

Example of Wisconsin Manifest for LNAPL

Appendix H
Profile Information and Manifest for Filter Cake

APPENDIX H

Filter Cake Profile Information

Generator Information	USEPA - Former Penta Wood Products Site 8682 Daniels 70 Siren, WI 54872
Generator USEPA/Federal ID #	WID006176945
Name of the Waste	Filter Cake
Waste Code	F032 (F027 in Wisconsin only – not required anymore)
Process Generating Waste	Dewatered sludge from wastewater treatment system for remediation of pentachlorophenol contaminated site
Constituents	Water 60 - 65% Sludge with up to 5% pentachlorophenol 35 to 40%
Physical State	Sludge
Number of Phases	1
Odor	Mild
Flash Point	None
pH	4.0 to 10.0
Specific Gravity	
DOT Shipping Name	Hazardous Waste, Solid, N.O.S.
DOT Hazard Class	9
UN/NA #	NA 3077
Packing Group	III
Container Description	Cubic yard or modified roll-off boxes

SEE INSTRUCTIONS ON REVERSE SIDE OF COPY 6.

STATE OF WISCONSIN

Chapter 291, Wis. Stats.
Form 4400-66P Rev. 1-99

ALL COPIES MUST BE LEGIBLE, PLEASE TYPE

State of Wisconsin
Department of Natural Resources
Bureau of Waste Management
Box 8094
Madison, WI 53708

FOR DNR USE ONLY

Form designed for use on elite (12-pitch) typewriter.

Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: WID006176945
Manifest Document No.:
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
USEPA - Former Penta Wood Products c/o CH2M HILL
135 S 84th St, Milwaukee, WI 53214
4. Generator's Phone (414) 272-2426

Site Location If Different
8682 Daniels 70
Siren, WI 54872

A. State Manifest Document Number: WI K363452
B. State Generator's ID: N/A

5. Transporter 1 Company Name
6. US EPA ID Number
C. State Transporter's ID
D. Transporter's Phone

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
10. US EPA ID Number
G. State Facility's ID
H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ Hazardous Waste Solid, N.O.S. (Diatomaceous Earth, Pentachlorophenol) NA 3077, Class 9, PG III (F032)					F 0 3 2
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
F027 in Wisconsin only

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

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OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name & Position Title	Signature	Date (Month Day Year)

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Printed/Typed Name & Position Title	Signature	Date (Month Day Year)

18. TRANSPORTER 2 Acknowledgement of Receipt of Materials

Printed/Typed Name & Position Title	Signature	Date (Month Day Year)

TRANSPORTER

19. Discrepancy Indication Space

20. FACILITY OWNER OR OPERATOR: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name & Position Title	Signature	Date (Month Day Year)

FACILITY

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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5 — Facility send to Generator
6 — Transporter retain
Copies 1 & 3 mail to Wis. DNR at above address.

Emergency 24 Hour Assistance and Spill Reporting
Telephone Number: (800) 943-0003

COPY 1 - GENERATOR SEND TO WI DNR

Example of Wisconsin Manifest for Filter Cake

Appendix I
Training Records

Initial Training
Facility Personnel Signoff Form

- Facility personnel listed below have received the Initial Training.
- Facility personnel were provided with a copy of this *Waste Handling Plan*, have read and understood it, and agree to abide by its provisions.

Project Name: Penta Woods Products Site **Project Number:** 184202

PERSONNEL NAME (Please print)	**PERSONNEL SIGNATURE**	**COMPANY**	**INITIAL TRAINING COMPLETION DATE**

Annual Review Training
Facility Personnel Signoff Form

- Facility personnel listed below have completed the Annual Review Training
- Facility personnel were provided with a copy of this *Waste Handling Plan*, have read and understood it, and agree to abide by its provisions.

Project Name: Penta Woods Products Site **Project Number:** 184202

PERSONNEL NAME (Please print)	**PERSONNEL SIGNATURE**	**COMPANY**	**ANNUAL REVIEW COMPLETION DATE**

Appendix J
Roster

APPENDIX J

Roster

Position	Name	Address
Owner's Representative	Tom Williams	U.S. EPA Region 5 SR-6J 77 West Jackson Blvd. Chicago, IL 60604-3507 (312) 886-6157
Project Manager	Bill Andrae	CH2M HILL 135 South 84th Street, Suite 325 Milwaukee, WI 53214-1456 (414)847-0341
Facility Operator	Mary Wicklund	CH2M HILL 8682 Daniels 70 Siren, WI 54872 (715) 349-8357