SITE MANAGEMENT PLAN
Remedial Investigation/Feasibility Study

Penta Wood Products
Town of Daniels, Wisconsin
Prepared by: CH2M HILL
WA No. 001-RICO-05WE/Contract No. 68-W6-0025
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The Penta Wood Products Site Management Plan consists of two plans: the Pollution Control and Mitigation Plan and the Transportation and Disposal Plan. Collectively these two plans are called the Site Management Plan.

These plans are supporting plans and have been prepared in conjunction with the following documents that have been prepared under separate cover:

- Penta Wood Products Site Sampling and Analysis Plan (SAP), which contains the Quality Assurance Project Plan, the Field Sampling Plan, and the Data Management Plan
- Penta Wood Products Site Remedial Investigation/Feasibility Study Work Plan

The Work Plan describes the site background, physical characteristics, project approach, and details of the tasks to be completed for the Remedial Investigation/Feasibility Study (RI/FS). The Site Sampling and Analysis Plan presents, in specific terms, the policies, organization, objectives, functional activities and procedures, and specific quality assurance (QA) and quality control (QC) activities associated with the collection and analysis of samples during the RI.

A Penta Wood Products Site Treatability Study Work Plan will be prepared as a separate document to present treatability studies that will be performed to support the Feasibility Study. Sampling activities associated with the treatability studies will be described in an amendment to the SAP.

Pollution Control and Mitigation Plan

Pollution Control and Mitigation Plan

Introduction

This support plan describes the process procedures and safeguards that will be used to prevent contaminants or pollutants from being released offsite due to activities performed during the RI/FS. Control of site access and security procedures that will be followed during the RI/FS are also described.

Remedial Investigation Tasks

Tasks to be conducted during the field investigation are specified in detail in the RI/FS Work Plan. The main tasks are:

- Monitoring well sampling
- Residential well sampling
- Surveying
- Sediment and surface water sampling
- Surficial soil sampling
- Cone penetrometer /laser-induced fluorescence subsurface soil characterization
- Groundwater grab and subsurface soil sampling
- Ecological survey
- Onsite analysis of soil and groundwater samples with PCP immunoassay kit

It is estimated these tasks will be completed in a 3- to 4-week time frame. At the site it will be the responsibility of the RI Field Task Leader to assure the tasks are conducted according to specified procedures. Dong-Son Pham is the Field Task Leader for the RI. For the complete Penta Wood Products Site organization structure and management responsibilities description refer to the RI/FS Work Plan, or the Quality Assurance Project Plan in the SAP.

Site Access

The 120-acre Penta Wood Products (PWP) site is located in a rural area, two miles west of the Town of Siren, population 910 (1990 census). The southern border of the main portion of the site is former State Route 70. A 6-acre portion of the site is located south of former State Route 70. Two residents are located south of the main portion of the site on former State Road 70. Residents are also located to the east and west of the site.

The USEPA installed a chain-link fence along the southern boundary of the main portion of the site, with a locked gate at the site driveway. Access by foot can be gained by walking

around the edges of the fence, or accessing the site through woods on the western, eastern, or northern boundaries. The southern 6-acre portion of the site is freely accessible by a driveway.

CH2M HILL conducted two site visits in the spring/early summer of 1997. During these visits no signs of human trespassing were observed. The site buildings, and miscellaneous supplies left by the USEPA Emergency Response Branch contractors in 1996 appeared intact. The office building was locked. A sign saying "Honk if you require assistance" was in place on the front gate.

During the approximately 1-month RI field effort, the number of people expected to be on the site will vary from seven to eight in the first week (includes surveyor subcontractor), with visits by suppliers (dumpster, PortaJohn, water), and potentially WDNR representatives; to two to four people for the remaining weeks during the subsurface soil and groundwater investigation (includes cone penetrometer subcontractor). During the first few days of site setup a CH2M HILL representative will work in the office area located near the front gate and will control access to the site. After site setup is complete and deliveries are finished site control will be maintained by keeping the front gate in the closed position when not in use. During non-working hours the front gate and buildings containing equipment or supplies will be locked.

Site Contaminants

Previous site investigations and removal actions performed by the USEPA and others have defined that the contaminants of concern at the site are pentachlorophenol (PCP), arsenic, zinc, and copper. Trace dioxins/furans are also present. During the removal action remaining liquid product, waste and sludge left in vats, drums, and tanks was removed from the site, along with asbestos-containing insulation from the boilerhouse. Most, if not all, of the upper five feet of site soil contaminated with arsenic, copper, and zinc were excavated and incorporated into a 3.5 acre onsite concrete pad, called the "Biopad". The concrete pad slopes to the northeast, and a sedimentation/infiltration basin was constructed at the northeast toe of the pad. The main sources of remaining site contaminants is a corridor of PCP/oil-contaminated soil that stretches from the treatment building and oil/water separator down the gully to the wastewater lagoon, in which the soil is contaminated from the surface down to the water table; and PCP/oil contamination within the woodchip pile on the northwestern corner of the site. A LNAPL layer has been observed on the water table underneath the gully to the lagoon.

Offsite Contaminant Migration—Overland Flow Pathway

Current Conditions

Site contaminants have been documented offsite in the wetlands northeast of the site. A steep, eroded gully leads from the wastewater lagoon to a lobe of a wetland. Butt ends from wood poles are strewn along the drainageway. Sediment sampling conducted by the

WDNR in 1993 detected 13 mg/kg of PCP in the wetland, as well as copper and arsenic. In response to a collapse of the northern wall of the wastewater lagoon in June 1995 after heavy rains, the emergency response personnel created check dams across site gullies that lead to the lagoon in an attempt to minimize further erosion and site runoff.

A noticeable difference between the condition of the lagoon wall/ gully from the CH2M HILL site visit on May 1, 1997, to the site visit on June 11, 1997, was not apparent. However, it was noted that the original pad drainage outlet to the sedimentation/ infiltration basin (constructed to catch runoff from the concrete Biopad) had been altered by piles of soil and rock. As a result, runoff from the Biopad is currently draining north, and then east along a side gully perpendicular to the main gully from the lagoon to the wetlands, and is undercutting the north wall of the lagoon. Also during a site visit, it was noted that a saturated layer of oil-covered woodchips exists along the contaminated corridor between the oil/water separator building and the lagoon. The wood chips appear to be creating perched water/contamination conditions in some areas. The presence of the saturated localized woodchips, and the observation that the Biopad runoff is causing erosion of the northern lagoon wall helps to explain the continuing erosion despite the high permeability of the site's sandy soils.

Sediment/Surface Water Control

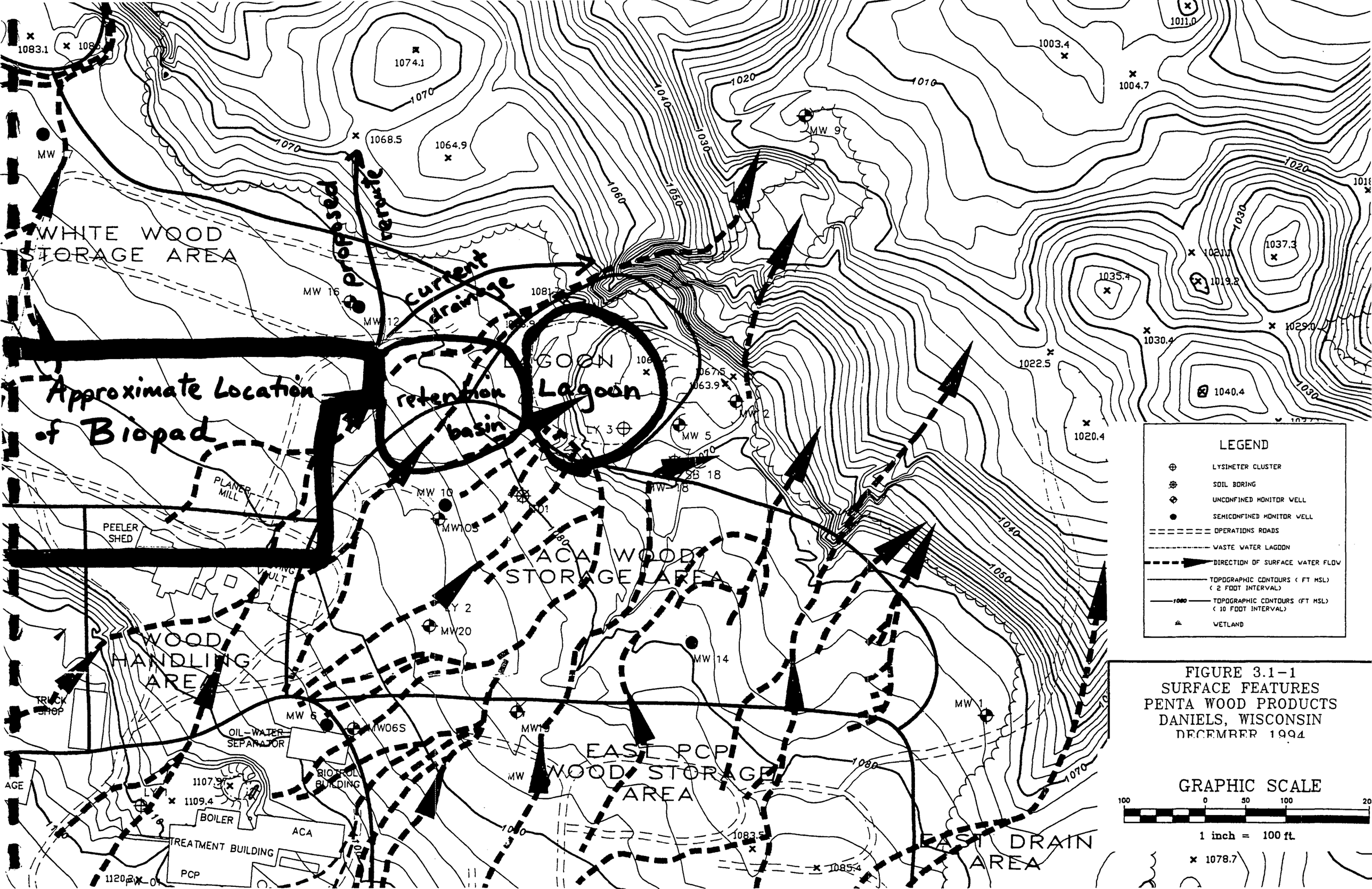
During the RI, the northern wall of the lagoon and the steep walls of the gully will be avoided, for safety reasons and to assure RI activities do not cause further collapse of the lagoon wall or gully walls. If a rainfall event happens during the course of the RI fieldwork, personnel will observe runoff patterns and volume. If runoff from the site is observed flowing offsite towards the wetlands, the possibility of installing a silt fence near the site boundary will be discussed with the USEPA WAM if the amount of runoff is such that a silt fence would provide some benefit.

In addition, CH2M HILL proposes to alter the drainage from the Biopad so it drains into the woods north of the site, and ceases to undercut the northern lagoon wall. Precipitation running off the concrete Biopad should not be contaminated. TCLP tests for metals conducted after the Biopad was constructed showed the arsenic, copper, and zinc are solidified in the pad. CH2M HILL will verify the Biopad is not leaching arsenic by collecting samples the first week of the RI. If sample results show no contamination, a bulldozer could be obtained for minimal cost to alter the drainage path from the Biopad. The attached figure is a hand-sketch of the proposed Biopad drainage reroute.

Groundwater Pathway

Current Conditions

Currently it is unknown if groundwater contamination has migrated offsite. Monitoring well samples collected in 1994 indicate pentachlorophenol concentrations in the groundwater at the northeastern corner of the property, and the southern 6-acre parcel,



LEGEND

- LYSIMETER CLUSTER
- SOIL BORING
- UNCONFINED MONITOR WELL
- SEMICONFINED MONITOR WELL
- OPERATIONS ROADS
- WASTE WATER LAGOON
- DIRECTION OF SURFACE WATER FLOW
- TOPOGRAPHIC CONTOURS (FT MSL) (2 FOOT INTERVAL)
- 1060 TOPOGRAPHIC CONTOURS (FT MSL) (10 FOOT INTERVAL)
- WETLAND

FIGURE 3.1-1
SURFACE FEATURES
PENTA WOOD PRODUCTS
DANIELS, WISCONSIN
DECEMBER 1994

GRAPHIC SCALE

100 0 50 100 200

1 inch = 100 ft.

exceed the federal Maximum Contaminant Level (MCL). Residential well samples collected in 1993 by the WDNR did not contain pentachlorophenol.

Groundwater Pollution Control

During the RI and treatability studies proper care will be exercised to prevent cross-contamination in monitoring wells and boreholes, and to containerize purge water and decontamination fluids.

Dedicated submersible pumps will be installed in the existing monitoring wells. This will eliminate the need to decontaminate sample equipment between wells, and eliminate the possibility of contaminating a well from residual contamination from another well.

Water and solvents, such as methanol, that are used to decontaminate sampling equipment prior to its first use, or in between sampling locations, will be collected in buckets, and transferred to the existing poly holding tanks onsite. The tanks will be stored in the existing truck shop building, which has a concrete floor, floor drain, and sump pump. Purge water generated during the monitoring well sampling will also be containerized in the poly tanks. The tanks will not be filled more than three-fourths full to allow for freezing during the winter. The stored water may be treated as part of the treatability testing. If not, the water will be treated during the remedial action.

The cone penetrometer equipment will be decontaminated between sampling locations within a decon area established in the truck shop building. Decon water will collect in the sump within the floor drain, and be pumped into the poly holding tanks. Specific decontamination procedures are presented in Section 6 of the Field Sampling Plan.

Air Pathway

Current Conditions

Approximately two-thirds of the 120-acre site has no to little vegetation. Reportedly most, if not all, of the metals-contaminated soil has been excavated and solidified within the concrete pad. Soils surficially contaminated with PCP have the potential to become air-borne during windy conditions, especially under dry, dusty conditions. Trace dioxins detected around the treatment building in surficial soils also have the potential to become airborne.

PCP is a semi-volatile compound with a moderate Henry's Law Constant of 0.00018. Some volatilization of PCP from contaminated soil to the air can occur, with such factors as temperature, wind speed, and exposed surface area affecting the rate of volatilization.

Air Pollution Control

It is not expected that RI activities will create more opportunities for air pollution than those that already exist. The cone penetrometer testing is an in-situ characterization procedure that uses direct-push technology to access the subsurface. There is no generation of soil cuttings to potentially expose additional contaminated soil to the air. The RI will be

conducted in late fall, which is typically a wet season in Wisconsin, so dusty conditions will not likely be a problem. By late fall snow, or frozen ground is a real possibility.

For site worker health and safety reasons a photoionization detector and a dust monitor will be used during intrusive activities. The Penta Wood RI/FS Health and Safety Plan specifies action levels for dust. If dust action levels are exceeded in a specific area due to site activities the feasibility of wetting the area down with clean water will be explored.

Transportation and Disposal Plan

Transportation and Disposal Plan

This support plan describes how wastes generated during the Remedial Investigation/ Feasibility Study (RI/FS), and wastes generated during previous site investigations by others, will be managed and ultimately treated or disposed. The purpose of this plan is to broadly define potential treatment and/or disposal options for the various site wastes, as the investigation-derived wastes (IDW) will be stored onsite for 1) use in treatability studies, or 2) future remediation during the overall site remediation.

IDW Identification and Management

Table 1 lists the IDW currently onsite that were generated during the emergency response action/investigation; IDW that will be generated during the RI; and an estimate of the IDW that may be generated during treatability studies for the FS. The Treatability Study Work Plan and associated SAP amendments being prepared at a later date will definitively identify IDW generated from the treatability studies. Table 1 also presents the source of the wastes, their storage location onsite, how the wastes will be treated/disposed, and their waste code if the wastes are to be transported offsite.

Field Lab Chemicals

Miscellaneous unused chemicals and solvents remaining from the ERT investigation are currently stored onsite in the office building and the building used as a field laboratory. An inventory will be made of these chemicals and solvents during the RI. It is proposed that the chemicals be sorted and packaged for offsite disposal during the Remedial Action (RA). Waste solvents generated during PCP immunoassay analyses performed by CH2M HILL during the RI/FS will be stored in a carboy for ultimate offsite disposal during the RA.

Soil Sampling Leftovers and Decon Sediments

The field analysis of soils using the PCP immunoassay kits will generate jars of leftover soils. The soil will be emptied from the jars onto an area of the site with similar contaminant concentration for later remediation during the RA. The empty jars will be disposed with the general site refuse. Any sediments generated during the decontamination of the CPT rods will also be collected, and spread on a contaminated area onsite for later remediation.

Wastewater

Three streams of wastewater will be generated during the RI/FS; purge water from monitoring well sampling, decontamination water, and extraneous groundwater from the onsite analysis of groundwater grab samples with PCP immunoassay kits. All wastewater will be transferred to the poly holding tanks within the decontamination building (former truck shop). There are three empty 1500-gallon tanks and one 850-gallon tank currently

Table 1
Investigation-Derived Wastestreams
Penta Wood Products Site RI/FS
Waste Disposal and Transportation Plan

Waste Type	Source	Storage Location	Waste Code	Expected Treatment/Disposal
Field laboratory solvents and chemicals (unused)	USEPA Emergency Response Team investigation	Miscellaneous jars and bottles currently in former garage building and office building	unknown[a]	Disposed offsite in a laboratory pack during remedial action[b]
PCP immunoassay field kit waste solvents	RI/FS	Will be stored in carboy in field laboratory building	To be determined	Disposed offsite in a laboratory pack during remedial action
Jars with soil samples remaining after PCP field test	RI/FS	Empty soil onto area of site with known PCP contamination, jars disposed in general refuse	NA	Soil will be remediated during RA
Decontamination sediments	RI/FS	Spread onto area of site with known PCP contamination	NA	Soils will be remediated during RA
Waste water from onsite groundwater analysis, purge water, and decontamination water	RI/FS	All wastewater will be stored onsite in existing frac tanks in the decon building (former truck shop)[c]	NA	Water may be treated during FS treatability testing, or will remain onsite until RA
Spent carbon from carbon polishing of wastewater/ groundwater	FS treatability testing	Kept in units in building for vendor pickup	F032, possibly F035, D004	Picked up from site by vendor for regeneration or disposal; Hazardous waste regulations will be followed
Personal protective equipment, including tyveks, booties, APR cartridges	RI/FS	Place in drums to be located in decon building	Special waste	Disposed offsite during RA with RA-generated PPE wastes

[a] An inventory of the solvents and chemicals left at the site after the ERT investigation will be performed.
[b] Organic and inorganic chemicals will be kept separate. Acids and bases will not be mixed.
[c] Trace amount of solvents used during decon of equipment will be included in the wastewater stream.

onsite. The tanks will not be filled more than three-fourths full to allow for expansion during winter months. The wastewater may be treated during treatability testing studies, or it will be stored onsite until the RA for treatment and disposal.

PPE

Tyveks, booties, gloves, and respirator cartridges consumed during the RI/FS will be placed in drums that will be obtained through the CPT subcontractor. The drums will be stored in the decon building. The PPE will be tested as appropriate, and disposed offsite during the RA.

Spent Carbon

Carbon vessels may be employed during treatability testing to polish contaminated water. If carbon is used, the details on determining when the carbon is spent will be provided in the treatability testing work plan or QAPP/FSP amendment. Spent carbon will be transferred offsite by the vendor for regeneration or disposal.