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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

September 3, 2014

Mr. Phil Richard
Wisconsin Department of Natural Resources
875 South 4th Ave
Park Falls, WI 54552

RE: Operation and Maintenance transfer for the Penta Wood Superfund Site, Siren Wisconsin

Dear Mr. Richards,

This letter is being written to document the transfer of all operation and maintenance of the Remedial Action associated with the Penta Wood Superfund Site located in Siren Wisconsin from USEPA to the WDNR. The current remedial activities at the Site include the groundwater extraction and treatment system, the LNAPL recovery system, bioventing system, and biannual groundwater and residential well sampling. The transfer occurred on September 1, 2014. It is USEPA's understanding that the transition went smoothly and that WDNR's remedial contractor is now operating the system.

An updated Transition Plan dated August 19, 2014 outlines transition activates that took place at the Site along with a punch list used to facilitate the final inspection that took place on August 21, 2014. A copy of this updated Transition plan and punch list is attached. All of the punch list items for the physical transfer of the site are completed. There are a few ongoing administrative items that are being addressed and should be completed in the near future.

An Inventory list of equipment being transferred to the WDNR as part of the operation and maintenance of the remedial action systems currently running at the Penta Wood Site also attached. This list was prepared by CH2MHill in May 2014.

As noted during our transition calls and during our final inspection, CH2MHill is tasked by the EPA to provide operation support during the transition to WDNR control. CH2MHill support is limited to 120 hours in September 2014, 30 hours in October 2014 and 30 hours in November 2014.

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We look forward to continuing to work with WDNR as the transition is fully completed. Please feel free to contact me if you have any questions. Thank you.

Sincerely,

Linda Martin

Linda Martin
Remedial Project Manger
USEPA Region 5

Attachments

Cc: Terry Stanuch, R5 ORC
Mike Niebauer, CH2MHill

Richard, Philip E - DNR

From: Martin, Linda <martin.lindab@epa.gov>
Sent: Wednesday, September 03, 2014 10:04 AM
To: Richard, Philip E - DNR
Cc: Stanuch, Terry; Mike Niebauer; Bruce, Donald
Subject: O&M Transfer letter
Attachments: O&M Transfer letter to DNR.pdf; O&M transfer letter attachments.pdf

Hi Phil, Attached is a copy of the transfer letter and its attachments that I just sent out. If you have any questions please feel free to contact me. Thanks for your help with everything. I think the transition went well. LM

Linda Martin
Remedial Project Manager
US EPA
77 West Jackson (SR-6J)
Chicago Il 60601
312-886-3854
Fax: 312-692-2411

Penta Wood Products Site Transition Plan—UPDATE

Penta Wood Products Superfund Site, Town of Daniels, Wisconsin
Work Assignment No. 132-LRLR-05WE, Contract No. EP-S5-06-01

PREPARED FOR:	U.S. Environmental Protection Agency
COPIES:	Wisconsin Department of Natural Resources
PREPARED BY:	CH2M HILL
DATE:	August 19, 2014

Purpose

The operation of the extraction and treatment systems at the Penta Wood Products Superfund Site will be transferred from the U.S. Environmental Protection Agency (EPA) to the Wisconsin Department of Natural Resources (WDNR) on September 1, 2014. CH2M HILL designed and constructed the facility and then performed the long-term remedial actions under contract to EPA. The treatment system was designated as operational and functional on August 12, 2004, and has been operating for almost 10 years.
The Comprehensive Environmental Response, Compensation, and Liability Act prescribes 10 years of long-term remedial action (LTRA) operation by EPA before transfer to the controlling state agency.

Table 1 of this updated transition plan presents the preliminary punch list items and other tasks remaining to be completed before the transfer to state control to facilitate a smooth and efficient transition of the site from EPA to WDNR. This punch list will be used to facilitate the final inspection which is tentatively scheduled for August 6th.

Since the summer of 2013, EPA, WDNR, and CH2M HILL have conducted regularly scheduled coordinating teleconferences to discuss transition activities. A variety of activities were identified for completion before the transition to state control. This memorandum presents the transition activities briefly and notes them in a punch list format in Table 1 for tracking status under the following categories:

- Operational
- Administrative Transfer
- Training
- Reports
- Property Transfer

Remedial Objectives

In September 1998, the Record of Decision was finalized specifying remedies to address environmental issues associated with soil and sediment, surface water, light nonaqueous phase liquid (LNAPL), and groundwater. The following are the specific remedial action objectives for this site:

- Reduce or eliminate the potential risk to human health and ecological receptors associated with exposure to pentachlorophenol (PCP) and fuel oil components in surface water and groundwater, and PCP/fuel oil components and metals in the soil and sediment.
- Reduce or control the source of contaminants.
- Meet the applicable or relevant and appropriate requirements, including reducing contaminant concentrations in the groundwater beneath the site to below WDNR's Preventative Action Limits.

The remedial action for the contaminated soil was completed in 2000 and included the construction and consolidation of material in an onsite Corrective Action Management Unit (CAMU). The material placed in the CAMU is a mixture of soil and wood chips that have concentrations exceeding the remediation goal of 1.2 parts per million for arsenic and 2.1 milligrams per kilogram for PCP.

The remedial action to address LNAPL and contaminated groundwater is ongoing and includes the following:

- Extraction and treatment of the groundwater with discharge to the infiltration basin
- Monitored natural attenuation
- LNAPL recovery
- Bioventing

The current system configuration has been running continuously since 2004, except for downtime during routine maintenance and repairs. The biovent system, first started in September 2007, operates during the summer and is turned off for the winter.

The performance goals for the extraction and treatment system are as follows:

- Remove LNAPL, to the extent practicable, to reduce the source of PCP to the groundwater.
- Lower the water table, to the extent practicable, to allow bioventing to promote natural degradation of the residual diesel fuel petroleum hydrocarbons and PCP in the LNAPL smear zone.
- Contain, collect, and treat the most concentrated portions (exceeding 1,000 micrograms per liter) of the PCP in the groundwater, and reduce concentrations to a level that allows natural attenuation to achieve the NR 140 standards within a reasonable time period.
- Comply with the WPDES discharge permit.

Transition Activities

The extraction and treatment system will be operated by CH2M HILL under contract with the USEPA through August 31, 2014, and will transfer to WDNR on September 1, 2014. The categories of activity summarized in the following subsections are listed in Table 1 and represent the identified list of items that will be completed for the transition.

Operational Activities

Punch list items that fall under the operational activities category include efforts to inspect, repair, and prepare the operations building for transfer to WDNR. Annual inspections are performed on the pumping, treatment, and building systems to keep them running efficiently. Several of the inspections have already been completed while several more are planned for June, July, and August. Two key activities are planned to start in July with the first being the service of the extraction pumps in the wells (2 will be replaced, and 4 will be serviced). The second being repair of the vessels that contain granular activated carbon (GAC). Service on one of the vessels in February 2014 showed some corrosion through the vessel lining. This work will make repairs to the diffuser in one of the vessels and will repair corrosion in each of the three vessels. The GAC will also be replaced so that the listed material generated by USEPA operations is removed prior to the transition.

A fresh limited supply of materials used in the operation will also be delivered. At a minimum one month's supply of diatomaceous earth, plus caustic soda and ferric sulfate will be available at the site. The items are included in the punch list in Table 1.

Removal of residual material from the plant is also noted as an operational activity. This involves removing material generated by USEPA so it is removed prior to the transition. This will simplify the process of disposal and reporting after WDNR has control of the operation. Proof of completion will come from the manifest.

CH2M HILL will also prepare the plant computer for transfer to WDNR, which will involve transferring data from a CH2M HILL-owned computer to the plant system, as well as removing CH2M HILL-specific information from the plant computer before the transition.

Administrative Transfer

Activities identified for administrative transfer relate to closing the utility accounts and permits currently under CH2M HILL control. CH2M HILL has accounts for electricity, Internet, telephone, and propane. The accounts will be closed before transfer on September 1. Wastewater is currently discharged on behalf of EPA to the infiltration pond under a Wisconsin Pollutant Discharge Elimination System (WPDES) permit. The permit will also be terminated. WDNR (or representative) will be responsible for acquiring new accounts with utilities and suppliers.

CH2M HILL understands that WDNR is also responsible for completing a remedial action plan (RAP) for operating the facility and submitting that document to EPA.

Training

CH2M HILL is tasked to provide training support to the WDNR-selected operations contractor before and after transfer of the site to WDNR control (if CH2M HILL is not selected). CH2M HILL recommended that the WDNR subcontractor be onsite to shadow the current plant operator for 30 days before the transfer date if possible. Onsite training will be provided by having the WDNR staff/subcontractor observe actual site operations prior to the transfer. Due to liability concerns, the WDNR staff and subcontractor will not be allowed to operate the plant equipment. The WDNR staff/WDNR subcontractor will be instructed by the current site operator on the following:

- System equipment and process flow
- Standard operating procedures and process control
- Daily and weekly maintenance and equipment checks
- Onsite chemistry management (pH and turbidity)
- Compliance sampling for the current WPDES discharge permit
- Operations of manual system components, including the following:
  - 2,500-pound GAC vessel backwash
  - Rotary Drum Vacuum Filter (RDVF)
- Power outage procedures
- Shutdown/startup procedures
- Groundwater sampling procedures
- Review of the operating manuals and other plans that have been provided to WDNR.

The following documents have been provided or will be provided to WDNR:

- O&M manual, including manufacturer's literature for equipment and standard operating procedures
- Current waste handling plan
- Quality assurance project plan and addendums for sampling
- Field sampling plan
- WPDES discharge permit and current sampling schedule
- Daily operating logs
- List of current subcontractor and contact information
- O&M Tracking Tool Database
- Logic and backup copy of programming

Ch2M HILL is also tasked by USEPA to provide support for questions and to help resolve issues after the site is transitioned to WDNR control. CH2M HILL's support is limited to telephone consultations and site visits for instruction/guidance only. CH2M HILL is not authorized to perform hands-on work in the plant after August 31, 2014.

A total of 220 hours has been approved for post-transition support, distributed as follows:

- September: 160 hours
- October: 30 hours
- November: 30 hours

CH2M HILL will work with EPA and WDNR to determine protocol for scheduling support activities as the date for transition nears.

Reports

As of the date of this update, two more reports will be prepared and submitted to EPA by CH2M HILL before the work assignment is completed. One report will describe the mobility and recoverability of the NAPL located beneath the site. The other report will be the LTRA report, which will describe the work performed over the past 10 years. Draft versions of the reports will be submitted to EPA for review on the date presented in Table 1. CH2M HILL anticipates that EPA will complete a review and provide consolidated comments within 30 calendar days of the submittal date.

Property Transfer

Once the operation of the plant is successfully transitioned to WDNR, the treatment plant property will need to be transferred off of CH2M HILL's contract and to the WDNR. CH2M HILL's property coordinator will work closely with EPA's property coordinator during this transition period.

Final Punch List

Table 1 presents the final punch list items that will be completed in advance of the transition to State Control.

TABLE 1
Penta Wood Products: Final Tasks Punch List And Status
Transition Plan
Penta Wood Products

Task Category	Item	Activity	Responsible Entity	When is activity scheduled for completion?	Actual Completion Date	Status
Operational	1	Inspect backflow preventer and complete cross-connection performance test.	CH2M HILL	December 1, 2013	December 2013	Completed
	2	Inspect dissolved air flotation system. To be completed by the system manufacturer, with maintenance performed as necessary.	CH2M HILL	February 1, 2014	February 2014	Completed
	3	Inspect polymer system. To be completed by the system manufacturer, and maintenance will be performed as necessary.	CH2M HILL	February 1, 2014	February 2014	Completed
	4	Inspect and repair heating, ventilation, and air-conditioning system.	CH2M HILL	June 14, 2014	June 2014	Completed

TABLE 1
Penta Wood Products: Final Tasks Punch List And Status
Transition Plan
Penta Wood Products

Task Category	Item	Activity	Responsible Entity	When is activity scheduled for completion?	Actual Completion Date	Status
	5	Inspect RDVF system. To be completed by the system manufacturer, and maintenance will be performed as necessary.	CH2M HILL	August 26, 2014		Completed
	6	Replace two and service four groundwater extraction pumps.	CH2M HILL	July 21, 2014		Completed
	7	Empty GAC vessels, inspect laterals, and replace the diffuser plates in the second carbon vessel. The first was completed in February 2014.	CH2M HILL	July 28, 2014		Completed
	8	Complete spot repairs of surface coatings in the carbon vessels. The coatings will require a curing time of approximately 10 days before fresh GAC can be added and operations resumed.	CH2M HILL	July 28, 2014		Completed
	9	Drain underground storage container, and remove/dispose of sludge.	CH2M HILL	August 4, 2014		Completed
	10	Site visit for final punch list inspection (EPA/WDNR/CH2M HILL participating)	All	August 21, 2014		Completed
	11	Replace GAC in the three GAC vessels.	CH2M HILL	August 19, 2014		Completed
	12	Fill chemical storage tanks (caustic soda and ferric sulfate).	CH2M HILL	August 25, 2014		Completed
	13	Provide supply of diatomaceous earth material and polymer sufficient to last to October 1.	CH2M HILL	August 25, 2014		Completed
	14	Purge CH2M HILL company-specific information and the Netscreen (connection to CH2M HILL internal servers) from site computer.	CH2M HILL	August 25, 2014		Completed
	15	Copy O&M tracking database onto the site computer.	CH2M HILL	August 25, 2014		Completed

TABLE 1
Penta Wood Products: Final Tasks Punch List And Status
Transition Plan
Penta Wood Products

Task Category	Item	Activity	Responsible Entity	When is activity scheduled for completion?	Actual Completion Date	Status
	16	Dispose of hazardous waste generated by the site activities.	CH2M HILL	August 25, 2014		Completed
Administrative Transfer	17	Work with utilities, including electric, Internet, telephone, and propane so that accounts can be closed at end of the day August 31.	CH2M HILL	August 15		Completed
		Tell utilities our close date.	CH2M HILL	August 15		Completed
		Provide description and information to WDNR so they can set up new accounts.	CH2M HILL	August 15		Completed
		Set up new WDNR accounts.	WDNR	September 1		Completed
	18	Work with WDNR to assist transfer of the WPDES permit and others (if any). (Generator number, discharge, extraction volume? Dept. of health?)				
		Contact permit agency and learn process to cancel/transfer responsibility.	CH2M HILL	July 15		Completed
		Provide description and information to WDNR so it can set up new accounts.	CH2M HILL	July 15th		Completed
		WDNR sets up new permits.	WDNR	September 1st		Pending
		WDNR acquires approval of Hazardous Waste Disposal Profile.	WDNR	September 1st		Pending
		Transfer generator number.	WDNR	September 1st		Pending

TABLE 1
Penta Wood Products: Final Tasks Punch List And Status
Transition Plan
Penta Wood Products

Task Category	Item	Activity	Responsible Entity	When is activity scheduled for completion?	Actual Completion Date	Status
	19	WDNR prepares RAP for EPA	WDNR			
Training	20	Host new contractor representative onsite to observe operations prior to transition (if not CH2M HILL).				
		Receive and check to see that they have a health and safety plan of their own.	WDNR	July 15		Completed
		Provide CH2M HILL's health and safety plan for their review.	CH2M HILL	July 15		Completed
		Demonstrate operations activities through August.	CH2M HILL	August 31		Ongoing
		Provide and discuss updated O&M manuals.	CH2M HILL	August 31		Ongoing
		Provide and discuss shut down instructions and operation optimization memorandum.	CH2M HILL	August 31		Ongoing
	21	Provide post-transition instruction to support plant operations.				
		Document agreement on how post-transition support from CH2M HILL will be managed.	WDNR/EPA	August 1		Completed
		CH2M HILL operator to be onsite up to 160 hours in September.	WDNR/EPA	August 1		Ongoing
		CH2M HILL operator to be onsite up to 30 hours in October.	WDNR/EPA	Sept 1		Ongoing
		CH2M HILL operator to be onsite up to 30 hours in November.	WDNR/EPA	Oct 15		Ongoing
Reports	22	NAPL mobility memorandum				
		Deliver draft	CH2M HILL	August 19		Completed
		30-day agency review	EPA	September 19		Scheduled

TABLE 1
Penta Wood Products: Final Tasks Punch List And Status
Transition Plan
Penta Wood Products

Task Category	Item	Activity	Responsible Entity	When is activity scheduled for completion?	Actual Completion Date	Status
		Final	CH2M HILL	October 10		Scheduled
	23	LTRA report				
		Deliver draft	CH2M HILL	August 19		Completed
		30-day agency review	EPA	September 19		Scheduled
		Final	CH2M HILL	October 10		Scheduled
Property Transfer	24	EPA transfers property from CH2M HILL to WDNR.	EPA			
		Agency and CH2M HILL define process we need to follow.	CH2M HILL	July 1		Completed
		Complete equipment audit to identify equipment that will be transferred for items with EPA Property Number.	CH2M HILL	August 1		Completed
		Submit request to remove property from our contract; need CO approval.	CH2M HILL	August 15		Completed
		EPA completes the transfer process.	EPA	September 1		Completed

Schedule

The following table documents the key activities and milestones required to meet the transition date of September 1, 2014.

TABLE 2
Transition Tasks and Status
Transition Plan
Penta Wood Products

Date	Description of Activity	Status
June 2013	EPA, WDNR, and CH2M HILL begin monthly transition calls.	Calls are ongoing.
Fall 2013	CH2M HILL submits initial transition plan, adjusts to track progress, and incorporate comments.	Completed; plan being updated to track progress.
Fall 2013	WDNR requests memorandum describing LNAPL recoverability and mobility.	Report is being finalized.
Fall 2013	WDNR requests delisting of the spent GAC.	EPA agreed.

TABLE 2
Transition Tasks and Status
Transition Plan
Penta Wood Products

Date	Description of Activity	Status
Winter 2013/2014	WDNR requests a document presenting cost evaluation for various operation models.	EPA agreed.
Winter 2013/2014	EPA directs CH2M HILL to prepare a Work Plan Revision Request (WPRR) to add scope and budget for transition-related activities and post-transition support requested by WDNR.	WPRR approved by EPA January 2014.
Winter 2014	Samples of spent GAC were collected and analyzed. Elevated concentrations of dioxin were found.	Work to delist GAC terminated.
March 2014	Final optimization plan was submitted to EPA and WDNR in March 2014.	Completed
June 2014	WDNR approves punch list in updated transition plan,	Completed
August 2014	Team completes punch list activities.	Ongoing.
August 2014	Final site walk August 21, 2014.	Planned
September 2014	Final site transition September 1, 2014.	Planned
Fall 2014	Post-transition support.	Planned

Penta Wood Site Equipment List
Siren, Wisconsin
Last Updated: May 21, 2014

System	Equipment	Make	Model	S/N	Size	Capacity	Quantity Ordered	Spare Quantity	Date Last Replaced	Date Installed	Company Purchased From	Date Purchased	Price	Notes: Replacement, Repairs, Lifetime
Blower System	Blower - Motor	New York Blower Co	2612ALUM or 2612 SWSI	U11211-100			1		Mar-14	Sep-07	Kruger Diversified	Mar-14	$4,115.00	replaced in March 2014; 10 year lifespan.
Groundwater Extraction	GW Extraction Pumps	Grundfos	16S20-18		2 hp		9		Jun-13				$ 1,402.00	replaced GW well #2 in 2013; variable lifespan.
	Dedicated MW pumps	Grundfos	Redi Flo 2				1					4/15/2011	$ 4,588.00	approx 10 year lifetime
	Flow meters													have not replaced
	PLC Card	Allen Bradley-SLC 500	1746-NO4I				1		2010		Holt Electrics	2/21/2012	$ 788.26	very expensive, 24 in use at site, no spares on site
Free Product Recovery	Free Product Pumps	HammerHead	EW-10 (4-in.; H43SET) EW-04, EW-05, EW-06 (2-in., H24SET) EW-12 and EW-14 (4-in., AP4+ TL) EW-13 (2-in., AP2C-42372)											
	Free Product Pump Diaphram	Wilden	01-1010-58				6				Anderson Pump and Process	12/17/2010	$ 18.80	approx 10 year lifetime
	Free Product Pump Balls	Wilden	01-1080-58				8				Anderson Pump and Process	12/17/2010	$ 4.50	approx 10 year lifetime
	Free Product Pump O-Rings	Wilden	00-1260-58				8				Anderson Pump and Process	12/17/2010	$ 1.80	approx 10 year lifetime
Oil Water Seperator	Oil Water Seperator													have not replaced unit - have replaced small pieces of the equipment
	Level Switches													have not replaced
	Oil Water Seperator	Carbonair	COWS-30											have not replaced
	Oil Pump	Wilden	P1/APPP/WF/WF/AWF	2004821										approx 10 year lifetime
	Water Pump - Motor	Leeson	08T34F05D or Myers CT-10	Cat # 110192							Anderson Pump and Process	9/22/2011	$ 251.47	approx 10 year lifetime, replaced pump in 2012
	Level Sensor Tree and Sight Glass							1			Carbonaire	11/14/2011	$ 851.39	approx 10 year lifetime
Free Product Storage	Free Product Storage Tank	Kennedy Tank & Manufacturing Co, Inc	8000-gal F-921											have not replaced
	Level Indicator													have not replaced
	Level Swich													have not replaced
	Temperature Sensor													have not replaced
Equalization System	Equalization Tank	Viatec, Inc.	OVF-120-8225-P		10' dia x 14' tall	7500 gal								have not replaced
	Mixer	Braun	3BTO-2 or 3BT02-45	30418										have not replaced
	Equalization Pump	Goulds - Centrifugal	3642		1/2 hp	20 GPM	1				Grainger	9/29/2011	$ 654.75	approx 10 year lifetime
	Swing Check Valve for Pump		Swing Check Valve,1 In,FNPT,PVC				1	1			Grainger	9/29/2011	$ 11.03	approx 10 year lifetime
	Coupler for Pump	Tarby						1						have not replaced

Penta Wood Site Equipment List
Siren, Wisconsin
Last Updated: May 21, 2014

System	Equipment	Make	Model	S/N	Size	Capacity	Quantity Ordered	Spare Quantity	Date Last Replaced	Date Installed	Company Purchased From	Date Purchased	Price	Notes: Replacement, Repairs, Lifetime
	Level Indicater													have not replaced
	HI/HI Level Switch													have not replaced
	EQ Pump VFD													have not replaced
	EQ Flow Meter													have not replaced
Coagulation System	Coagulant Reaction Tank	Viatec, Inc.	OVF-72-1895-P		6' dia x 9' tall	1250 gal								have not replaced
	Ferric Feed Pump	Watson Marlow	620DU or 624DU/R				1				Watson Marlow	4/19/2010	$ 6,388.00	approx 10 year lifetime
	Mixer VFD													have not replaced
	Mixer	Braun	TX02 56J40	706496100					Apr-14			Apr-14		replaced mixer motor
	pH Probes	Foxboro	873 PH-AIWCGZ transmitter/871 PH-2A1A-7 probe				2		11/3/2008		Invensys Process Systems	9/15/2011	$ 752.84	3 year lifetime, with bulb replacement every year.
	pH Ceramic Replacement Parts	Foxboro	22703				2	2	3/30/2009		Invensys Process Systems	6/3/2010	$ 95.00	1 year lifetime
	pH Electrode Protective Sleeves	Foxboro	0051189				3	3			Invensys Process Systems	2/15/2008	$ 58.00	approx 10 year lifetime
Flocculation System	Flocculent Reaction Tank	Viatec, Inc.	OVF-60-1175-P		5' dia x 8' tall	900 gal								have not replaced
	Mixer	Braun	TX02 56J40	7064961003										have not replaced
	Mixer VFD													have not replaced
Polymer System	Polymer System	Nijhuis	NMA 1000L						12/19/2007		Nijhuis Water Technology, Inc.			approx 10 year lifetime
	Polymer Feed Pump ("make up pump")	Allweiller AG	ADBPD4.3EX1PO1	7620586			1				Nijhuis Water Technology, Inc.	11/14/2011	$ 3,945.00	approx 10 year lifetime
	Poly Feed Pump Stator	Allweiller AG	HPS P1 G000					1			Nijhuis Water Technology, Inc.	11/14/2011	$ 475.00	approx 10 year lifetime
	Dosing Pump ("neat bucket pump")	Moyno	B2A5SQ31AAA57602903FL	31004401					Jul-12		Peacock			approx 10 year lifetime
	Dosing Pump Sensor						1				Pumping Solutions	8/1/2011	$ 924.95	
	Neat Tank													have not replaced
	Mix Tank													have not replaced
	Level Sensors													have not replaced
	Stator	Allweiller AG	HPS P1G000			7 gal			9/25/2008		Nijhuis Water Technology, Inc.	11/14/2011	$ 475.00	3 year lifetime
DAF System	Control Panel CPU	Allen Bradley-SLC 500	1746P1				1		Jan-14		Holt Electrics	8/18/2008	$ 358.15	approx 10 year lifetime, replaced main power supply unit due to electrical storm
	DAF System	Nijhuis	IPF045E											have not replaced
	Recirculation Pump	Flowserve	MK3STD size 1K1 SX1-82/700RV						11/30/2007					have not replaced
	Skimmer Motor	Nord	NL-2180AC HILLEGOM 1003403996 00	SK 02050AZBD-RV10871L			1		Apr-14		Power Mation	2/13/2008	$ 2,064.96	replaced motor and oiler
	DAF Starter for Polymer Mixer	SPRECHER and SCHUH	KTA7-25S-1.6A				1				Power Mation	8/27/2008	$ 154.00	approx 10 year lifetime
	DAF Sump Pump	Hydromatic Sewage Pump	SK50M1			0.5 hp	1				R.C Worst Company	8/9/2011	$ 415.00	approx 10 year lifetime
	DAF Pump Tank	Viatec, Inc.	OVF-60-1028-P											have not replaced
	Level Sensor								Oct-13					replaced HI/LOW level sensor in hopper
	HI/HI Level Switch													have not replaced
	Turbidity Meter	Tuthill	DDS.38EET2NM-71	0103100246674/001					2012					approximate 10 year lifetime
	Turbidity Meter Lamp	Hach	1895000				1		5/10/2010		Hach	8/12/2010	$ 36.34	approx 10 year lifetime
	Turbidity Meter Closure Drain	Hach	4411600								Hach	8/12/2010	$ 10.38	approx 10 year lifetime
	GAC Feed Pump	Gusher Pump	PC L 1.5 x36SEHCBM-C or PCL1.5X365EHCBM-C	1303-605					5/1/2011		Anderson Pump and Process	5/18/2011	$ 4,289.00	
	GAC Feed Pump VFD													have not replaced
	Turbidity Glass Tube Flowmeter	Brooks	1110DG51C4EAA				1				Controls Plus	1/25/2008	$ 870.00	approx 10 year lifetime
	Turbidity Flowmeter R-6-25-B Glass Tube	Brooks	S925G380WAA				1		1/25/2008		Controls Plus	8/14/2008	$ 175.00	needs replacement often

Penta Wood Site Equipment List
Siren, Wisconsin
Last Updated: May 21, 2014

System	Equipment	Make	Model	S/N	Size	Capacity	Quantity Ordered	Spare Quantity	Date Last Replaced	Date Installed	Company Purchased From	Date Purchased	Price	Notes: Replacement, Repairs, Lifetime
	Turbidity Flowmeter Inlet Packing	Brooks	589B082TDA				1				Controls Plus	1/25/2008	$ 75.00	approx 10 year lifetime
	Turbidity Flowmeter Outlet Packing	Brooks	589B083TDA				1				Controls Plus	1/25/2008	$ 75.00	approx 10 year lifetime
	Turbidity FlowmeterTube Seat Gasket	Brooks	375C087VAA				2				Controls Plus	1/25/2008	$ 35.00	approx 10 year lifetime
	Turbidity Meter Masterflex Tubing		06404-70				1				Cole Parmer	12/1/2009	$ 160.00	approx 10 year lifetime
	Turbidity Flowmeter Oring	Brooks	375B015SUA				2				Controls Plus	1/25/2008	$ 5.00	approx 10 year lifetime
	Friction Disk for Skimmer Motor	Nord	7911 90 20				1				Power Mation	5/13/2008	$ 260.00	approx 10 year lifetime
	Friction Ring Carrier for Skimmer Motor	Nord	791902200				1				Power Mation	6/10/2008	$ 180.00	approx 10 year lifetime
	Couplers		FIG 00808B/FIO 00808B/GSP 00806N				10				Global Wastewater Solutions	10/12/2009	$ 216.60	approx 10 year lifetime
	Solenoid Valve	Burkert	456414J			120 Volt	1	1			Durable Controls	10/26/2009	$ 52.87	approx 10 year lifetime
GAC System	Bag Filters	Krystil Klear Filtration	50 micron Particulate Filters								Anderson Pump and Process		$ 382.00	approx 10 year lifetime, have old spares on site, have spare gaskets on site.
	2,500 lb vessel	Carbonair	PC-20											have not replaced, reline one a year
	Bag filter gasket	Krystil Klear	88LV Viton Lid Gasket, 88BV Viton Basket Gasket				8		11/3/2008		KTH SALES, INC.	11/3/2008	$ 224.28	approx 10 year lifetime
	10,000 vessel	Carbonair	PC-50											have not replaced
	Laterals	Carbonair	PC-20				16				Carbonair	10/14/2009	$ 38.00	have not replaced
	Poly Sheets	Quick Solid Pad 4 X 500									Cetco	9/21/2009	$ 585.00	approx 10 year lifetime
	Backwash pump	Flowserve Durco Markiii		0305-5772		200 GPM	1		5/16/2011		PSI Engineering LLC	5/16/2011	$ 5,091.00	
	Shaft Coupler Insert for Backwash pump	Grainger	6JE Sleeve	1L805			4	3	12/17/2008		Grainger	1/19/2009	$ 17.28	approx 10 year lifetime
	Viton Lid Gasket	Krystil Klear Filtration	88LV				4				KTH Sales	11/3/2008	$ 30.89	approx 10 year lifetime
	Viton Basket Gasket	Krystil Klear Filtration	88BV				4				KTH Sales	11/3/2008	$ 23.17	approx 10 year lifetime
	Butterfly Valve	Asahi	3730040						see notes		Indelco	9/22/2009	$ 193.45	replaced on GAC1 and prefilter in March 2014 and will replace on GAC2 in July 2014
	L/O T/O Valves		30560				2				LSS	5/28/2009	$ 9.78	approx 10 year lifetime
	Manway yokes, bolts and nuts	Carbonair	PC-50				2	1			Carbonair	6/25/2010	$ 1,492.00	approx 10 year lifetime
	Lateral Supports and Clamps	Carbonair	PC-50				set of 18		3/1/2014		Carbonair	1/12/2012	$ 2,175.00	replaced in lead, lag and prefilter (as needed during carbon changeout), put a new diffuser on GAC1 in March 2014
	Lateral Supports and Clamps	Carbonair	PC-20				set of 16		3/1/2014		Carbonair	1/12/2012	$ 40.00	replaced in lead, lag and prefilter (as needed during carbon changeout), put a new diffuser on GAC1 in March 2014
	Manway 12 x 16 Gasket	Carbonair					6		7/5/2013		Carbonair	1/12/2012	$ 450.00	replaced all manways (6) in 2013
	Drain	Carbonair	PC-50				2				Carbonair	9/10/2010	$ 57.50	approx 10 year lifetime
	Differential Pressure Gauge	Moore	7MF4433-1HB22-1NC6-Z+A01+B21				1		1/28/2011		Siemens	11/30/2010	$ 1,783.00	approx 10 year lifetime
Neutralization System	Neutralization Tank	Viatec, Inc.	OVF-72-1895-P		6' x 9'	1260 gal								have not replaced
	Caustic Feed Pump	Watson Marlow	624U or 624U/R								Drydon			approx 10 year lifetime
	Mixer	Braun	BGMF-200	30420	2 hp; 230/460 v; 60 hz		1			2/11/2012	Liquid Process Equipment	2/10/2012	$ 4,180.00	replaced mixer motor (April 2014)
	pH Probes	Foxboro	873 PH-AIWCGZ transmitter/871 PH-2A1A-7 probe				1		4/8/2008	12/5/2008	Invensys Process Systems	10/21/2009	$ 732.33	1 year lifetime
	pH Probe Electrode	Foxboro	22510				2	1	9/24/2009		Invensys Process Systems	6/7/2010	$ 140.00	1 year lifetime
	pH Probe Sensor	Foxboro	871 PH-2A1A-7 probe				6			11/18/2010	Invensys Process Systems	11/17/2010	$ 154.00	approx 10 year lifetime
	pH Probe Reference Kit	Foxboro	871 PH-2A1A-7 probe				6			11/18/2010	Invensys Process Systems	11/17/2010	$ 81.00	approx 10 year lifetime
	pH Electrode Protective Sleeves	Foxboro	0051189				3	4			Invensys Process Systems	2/15/2008	$ 58.00	approx 10 year lifetime

Penta Wood Site Equipment List
Siren, Wisconsin
Last Updated: May 21, 2014

System	Equipment	Make	Model	S/N	Size	Capacity	Quantity Ordered	Spare Quantity	Date Last Replaced	Date Installed	Company Purchased From	Date Purchased	Price	Notes: Replacement, Repairs, Lifetime
Compressor Air System	Old Bldg Air Compressor	Curtis Toledo	E-71 or 7HT12	A50040106	6' x 9'	1260 gal								have not replaced, no longer in service
	Old Bldg Air Dryer	Hankison	HHL-90											have not replaced, no longer in service
	Air Compressor	ALMIG	Combi 16/20		31"x 78"	81 cfm at 125 psi	1		Jan-12		Applied Air Systems	1/17/2012	$ 13,510.00	
	Service Kit for Air Compressor							1		6/28/2009	Clayhill	6/28/2009	$ 548.96	approx 10 year lifetime
	Air Dryer	Hankison	DH-25											have not replaced
	Air Mufflers	4110 Element	1 01056 X 02706				3	1			Motion Industries	8/27/2008	$ 17.13	approx 10 year lifetime
	Desicant	1/8" Activated Alumina	3146257		50 pound		4				Applied Air Systems	7/26/2011	$ 107.00	Applied Air changes desicant every 3 years
	Solenoids for Air Dryer	1/2" 2-way N/C, w/ junction box, spade 21778	JSF8210G094 AC 120/60, 110/50				2	1			Lesman Instrument	8/21/2008	$ 137.00	approx 10 year lifetime
Float Management	Float Storage Tank	Viatec, Inc.	OVF-120-8462-P		6' x 9'	1260 gal								have not replaced
	Mixer	Braun	3BTO-5 or 3BTO5-70	30418										have not replaced
	Level Sensor													have not replaced
	HI/HI Level Switch													have not replaced
	RDVF Feed Pump	Wilden	P2/SPPP/TS/TF/STF	SN0020474027					Oct-13					replaced in October 2013
Filtrate System	Filtrate Storage Tank	Viatec, Inc.	OVF-120-7050-P		10' dia x 12' tall	4200 gal								have not replaced
	Mixer	Braun	3BTO-2 or 3BTO2-70	30419										Mixer not in use, going to pull out of tank for use in other tanks as spare
	Level Sensor	Hydroranger	7ML50341AA01				1				Siemens	12/27/2011	$ 1,352.00	approx 10 year lifetime
	HI/HI Level Switch					1 gpm								have not replaced
	Filtrate Pump	Continental	CP33-CSQMP	CP3056			1	1	2008	8/14/2010	Liquid Process Equipment	8/16/2010	$ 885.00	replaced in 2012 and have a spare onsite from Anderson Pump and Process
	Coupler Inserts for Pump	Tarby	68514436384 (Item # 4WTW1)				2	1	1/28/2009		Grainger (Rob Orders)	10/12/2010	$ 7.90	2 year lifetime
	Stator for Pump	Continental	U5-33Q				2	1	10/22/2010	7/30/2011	Anderson Pump and Process/Liquid Process	7/27/2011	$ 31.00	appear to replace filtrate pump parts every 1-2 years
	Rotor for Pump	Continental	U5-33PTS				1		10/22/2010	7/30/2011	Anderson Pump and Process/Liquid Process	7/27/2011	$ 131.00	1 year lifetime
	Shaft for Pump						1			10/22/2010	Liquid Process Equipment	10/22/2010	$ 77.00	approx 10 year lifetime
	Bearings for Pump						2			10/22/2010	Liquid Process Equipment	10/22/2010	$ 15.00	approx 10 year lifetime
	Mechanical Seal Assembly for Pump	Tarby	S200-0024				1		3/24/2010	10/22/2010	Anderson Pump and Process/Liquid Process	10/22/2010	$ 20.00	0.5 year lifetime
	Flexible Joint-Buna for Pump	Tarby	S200-0023				1		3/24/2010	10/22/2010	Anderson Pump and Process/Liquid Process	10/22/2010	$ 175.00	0.5 year lifetime
	Filtrate Pump VFD													approx 10 year lifetime
	Filtrate Pump Pin		320-4069-002				6				Liquid Process	12/23/2010	$ 2.90	approx 10 year lifetime
	Filtrate Flow Meter													have not replaced
	Filtrate Pump Y Strainer													have not replaced, has never gone bad, but needs to be cleaned often
	Control Panel CPU	Allen Bradley-SLC 500	1746P2						1		Holt Electrics	8/18/2008	$ 494.00	approx 10 year lifetime
	RDVF 3-way valve										DR Tech	5/9/2011	$ 766.73	approx 10 year lifetime
	RDVF System	Alar	Model 360											have not replaced
	RDVF Furnance Blower Belt	Gates	HI-Power II A47				2	1			Motion Industries	10/21/2009	$ 6.46	approx 10 year lifetime
	Vaccuum Pump, RDVF	Travaini	TRVA-65-300/G	1706					10/1/2013					approx 10 year lifetime
	DAF Float Pump	ARO/ Ingersol Rand	6661BF-344-C	Jo243419					Jun-12					replaced in 2012 (pump for the sump)
	Washdown Pump (RDVF)	ARO/ Ingersol Rand	66615X-X-C						2012					replaced washdown valve in 2012.
	Filter Aid Mixer	Lightnin	33S/T1	G917117										have not replaced
	Recirculation Pump	Teel	1P852	598				1	11/30/2007					spare onsite, have not replaced

Penta Wood Site Equipment List
Siren, Wisconsin
Last Updated: May 21, 2014

System	Equipment	Make	Model	S/N	Size	Capacity	Quantity Ordered	Spare Quantity	Date Last Replaced	Date Installed	Company Purchased From	Date Purchased	Price	Notes: Replacement, Repairs, Lifetime
RDVF	Valve Seats	Wilden	02-1120-03				8		10/13/2008		Anderson Pump and Process	11/4/2009	$ 24.90	1 year lifetime
	Valve Teflon Balls	Wilden	02-1080-55				4		12/22/2008		Anderson Pump and Process	12/22/2008	$ 16.50	
	Valve Stainless Steel Balls	Wilden	02-1-80-55		1"		8		12/22/2008		Anderson Pump and Process	11/4/2009	$ 27.07	
	Valve Seals	Wilden	02-1200-55				8		10/13/2008		Anderson Pump and Process	11/4/2009	$ 3.30	1 year lifetime
	Roller Screen	Alar							10/1/2013		Alar			Replaced October 2013
	Float Pump Chamber	Wilden	02-5000-03				2		11/11/2008		Anderson Pump and Process	11/4/2009	$ 551.90	1 year lifetime
	Float Pump Diaphraghm	Wilden	02-1010-52				6		2009	1/11/2010	Anderson Pump and Process	1/11/2010	$ 33.30	1 year lifetime
	Float Pump Inlet House	Wilden	02-5080-03								Anderson Pump and Process			have not replaced
	Float Pump Disk Manifold	Wilden	02-5020-03								Anderson Pump and Process			have not replaced
	Float Pump Air Valve	Wilden	01-2010-20				1				Anderson Pump and Process	12/8/2009	$ 143.50	approx 10 year lifetime
	Float Pump A/V Gasket	Wilden	01-2615-52				1				Anderson Pump and Process	12/8/2009	$ 3.30	approx 10 year lifetime
	Float Pump Ring	Wilden	02-3210-55-225				2				Anderson Pump and Process	12/8/2009	$ 8.00	approx 10 year lifetime
	Float Pump Gasket	Wilden	01-3505-52				1				Anderson Pump and Process	12/8/2009	$ 4.20	approx 10 year lifetime
	Float Pump Washer	Wilden	02-6802-08				2				Anderson Pump and Process	12/8/2009	$ 1.20	approx 10 year lifetime
	Float Pump Inner Piston	Wilden	02-3701-01				2				Anderson Pump and Process	12/8/2009	$ 18.20	approx 10 year lifetime
	Float Pump Piston	Wilden	02-4550-01				2				Anderson Pump and Process	12/8/2009	$ 20.20	approx 10 year lifetime
	Float Pump Muffler	Wilden	01-3181-20				1				Anderson Pump and Process	11/24/2009	$ 16.00	approx 10 year lifetime
	Float Pump Center Section	Wilden	02-3145-20				1				Anderson Pump and Process	11/24/2009	$ 253.10	approx 10 year lifetime
	Float Pump Pilot Assembly	Wilden	02-3880-99				1				Anderson Pump and Process	12/8/2009	$ 95.50	approx 10 year lifetime
	Float Pump O-Ring	Wilden	01-2395-52				1				Anderson Pump and Process	12/8/2009	$ 1.10	approx 10 year lifetime
	Float Pump End Cap	Wilden	01-2332-20				1		12/23/2009		Anderson Pump and Process	12/23/2009	$ 4.50	approx 10 year lifetime
	Float Pump Snap Ring	Wilden	00-2650-03				2				Anderson Pump and Process	12/8/2009	$ 7.80	approx 10 year lifetime
	Float Pump Shaft	Wilden	02-3810-03				1				Anderson Pump and Process	12/8/2009	$ 78.00	approx 10 year lifetime
	Tilt Float Switch in Recirc. Tank	ATT006	24453/000001				2				Global Water	10/27/2008	$ 45.00	approx 10 year lifetime
Chemical Storage	Ferric Sulfate Storage Tank	Safe-Tank	8700-gallon								Poly Processing Co.			approx 10 year lifetime
	Caustic Storage Tank	Safe-Tank	8700-gallon								Poly Processing Co.			approx 10 year lifetime
	Level Sensor													have not replaced
	HI/HI Level Switch													have not replaced
	Temperature Sensor													have not replaced
	Leak Detection													have not replaced
	Heating Pads													have not replaced
	Ferric Tank Diaphram Valve		1-2521-TM-903				1				Swanson Flo-Systems	8/21/2009	$ 453.00	approx 10 year lifetime
	Heat Tracer								Jan-13				$400	replaced winter 2012

Penta Wood Site Equipment List
Siren, Wisconsin
Last Updated: May 21, 2014

System	Equipment	Make	Model	S/N	Size	Capacity	Quantity Ordered	Spare Quantity	Date Last Replaced	Date Installed	Company Purchased From	Date Purchased	Price	Notes: Replacement, Repairs, Lifetime
HVAC	Odorous Air Fans						2	2						replaced motors as needed (usually once every 2 years, 2 motors are spares on site), belts are replaced as needed (2 times per year)
	Make Air Units (Main Process Room)	Reznor	RDF-2-80											belts are replaced as needed. Motor drive was replaced in 2013.
	Make Air Units (RDVF Room)	Reznor	RDF-1-40											not operational
	Electric Unit Heater	Trane	UHEC-IM-7A				5		2013					Wall units, there are 5 onsite. RDVF room unit replaced in 2013. Replace heating coils as needed.
	Exhaust fan													
	Odorous Air Belts (long)							5		9/29/2011				have not replaced
	Odorous Air Belts (medium)							3		9/29/2011				approx 10 year lifetime
	Odorous Air Belts (short)							3		9/29/2011				approx 10 year lifetime
Building Misc	Old Bldg Sump Level													approx 10 year lifetime
	Plant Drain Sump Pumps						1		2012					have not replaced
	Plant Drain Sump Level Sensors													Replaced in 2012
	Gas Regulator on Propane Tank													have not replaced
	Monitoring Well Name Plates		42285				1		2011		Daniels Plumbing	9/29/2011	$ 1,137.52	Replaced in winter 2011
	Propane Pilot Light						50				Seton	6/4/2008	$ 168.10	approx 10 year lifetime
	Furnace Pilot Light							1						Yearly inspection. Was replaced 2011.
	Furnace Power Light Bulbs							1						Replaced in 2010.
	Thermostat							6						Replaced as needed - every couple of years.
	Generator	Generac Power Systems						1						Replaced in 2014.
	Hydropneumatic Tank						1		Aug-09		North Country Plumbing and Heating		$3,100	New battery put in 2013. Inspected every year.
	Temper Tank	Amtrol	WX-457-C											have not replaced
	Safety Showers													have not replaced
	Backflow preventor	Watts	919QTS											have not replaced, tested every month.
	Outside Light Bulbs						1		2/18/2010		C3D Testing Company	2/18/2010	$ 1,004.59	approx 10 year lifetime, inspected every December
	Sanitary Holding Tank Level Switch							8						Replaced as needed - every couple of years.
	Reignitor Kit (40/40H & 80/40H) for propane tank		3-8683											have not replaced
	NAPL Socks	Soakease	TB2-110		2 inch		2		5/1/2012		LPG & NH3 Supply	10/16/2008	$ 251.37	3 year lifetime, replaced 2012
	NAPL Canisters	Soakease	TB2-101		2 inch		12	8			Durham Geo Slope Indicator	4/19/2010	$ 111.00	
							4				Durham Geo Slope Indicator	4/19/2010	$ 152.50	approx 10 year lifetime

Notes:
All level switches/sensors/trees are the Hydroranger 2000 which is very expensive; replace as needed, no spares on site.
For all pH probes/turbidity meter - have extra bulbs and sensors on site.
Air Compressor Systems: On warrenty and service with Applied Air Systems in MN. Service every 2000 hours.
Entire RDVF System is supplied/replaced/maintained via Alar.

Rec 10/16/13 10/23/13 put on Boats (99)

Richard, Philip E - DNR

From: Mike.Niebauer@CH2M.com
Sent: Wednesday, October 16, 2013 1:46 PM
To: Endsley, Erin A - DNR; Richard, Philip E - DNR; Martin.LindaB@epamail.epa.gov
Cc: Robinson, John H - DNR
Subject: Transition Memo and Schedule
Attachments: PW Transition Memo 2013.pdf

Hi Penta Wood transition team, please see the attached transition memo and schedule. Please let me know if you have questions or concerns about anything in the memo.

Michael Niebauer, P.G.
Consultant/Hydrogeologist

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Solutions Without Boundaries

Penta Wood Products Site Transition Plan

Penta Wood Products Site, Town of Daniels, Wisconsin
Work Assignment No. 132-LRLR-05WE, Contract No. EP-S5-06-01

PREPARED FOR:	U.S. Environmental Protection Agency
COPIES:	Wisconsin Department of Natural Resources
PREPARED BY:	CH2M HILL
DATE:	October 16th, 2013

Purpose

The operation of the extraction and treatment systems at the Penta Wood Products Superfund Site will be transferred from the U.S. Environmental Protection Agency (USEPA) to the Wisconsin Department of Natural Resources (WDNR) on September 1, 2014. CH2M HILL has been performing the operations and maintenance (O&M) of systems for approximately 9 years under contract to the USEPA. USEPA certified the treatment plant operational and functional on August 12, 2004; therefore, the State of Wisconsin is scheduled to take over the O&M in August 2014. This technical memorandum is designed to layout tasks and deadlines for all parties so a smooth and efficient transition of the site can be achieved from the USEPA to the WDNR by September 1, 2014. Specific activities include training, coordinating site activities, optimization cost analysis and providing up to date O&M manuals and other documentation that will be useful to operate the extraction and treatment plant.

Background

Remedial Objectives

In September 1998, the Record of Decision was finalized specifying remedies to address environmental issues associated with soil and sediment, surface water, light nonaqueous phase liquid (LNAPL), and groundwater. The following are the specific remedial action objectives:

- Reduce or eliminate the potential risk to human health and ecological receptors associated with exposure to pentachlorophenol (PCP) and fuel oil components in surface water and groundwater, and PCP/fuel oil components and metals in the soil and sediment.
- Reduce or control the source of contaminants.
- Meet the applicable or relevant and appropriate requirements, including reducing contaminant concentrations in the groundwater beneath the site to below the WDNR's Preventative Action Limits.

The remedial action for the contaminated soil was completed in 2000 and included the construction and consolidation of material in an onsite Corrective Action Management Unit. The remedial action to address LNAPL and contaminated groundwater is ongoing and includes the following:

- Extraction and treatment of the groundwater with discharge to the infiltration basin.
- Monitored natural attenuation
- LNAPL recovery
- Bioventing

The current system configuration has been running continuously since 2004, except for scheduled downtime for routine maintenance and repairs. The biovent system, first started in September 2007, operates during the summer and is turned off for the winter.

The performance goals for extraction and treatment system are as follows:

- Remove LNAPL, to the extent practicable, to reduce the source of PCP to the groundwater.
- Lower the water table, to the extent practicable, to allow bioventing to promote natural degradation of the residual diesel fuel petroleum hydrocarbons and PCP in the LNAPL smear zone.
- Contain, collect, and treat the most concentrated portions (exceeding 1,000 micrograms per liter) of the PCP in the groundwater and reduce concentrations to a level that allows natural attenuation to achieve the NR 140 standards in a reasonable period of time.
- Comply with discharge standards.

LNAPL and Delisting Sampling

LNAPL samples will be collected from the subsurface to determine mobility of the remaining LNAPL at the site. These samples will allow the WDNR to make decision relating to future operation at the site.

Delisting Samples will be collected from the spent carbon at the site to determine if this waste stream can be disposed of as non-hazardous waste. Preliminary samples have shown that filter cake is not able to be delisted as hazardous waste at this time.

Optimization Plan

In 2010, the USEPA and WDNR agreed to an optimization plan to accelerate cleanup activities and reduce the long-term O&M costs associated with continued operation. CH2M HILL is working with the USEPA to complete a new optimization cost analysis for the operation of the treatment plant by the WDNR at Penta Wood after August of 2014. Approval for this work has not been received from the USEPA so the work has not begun yet. The additional optimization activities included evaluation of the following:

- Cycle year-round – suggest a cycling frequency, week-on/week-off, month-on/month-off, etc., based on plume containment and minimizing wear and tear on the system
- Cycle in summer, run in winter (based on recommendation from site operator that the system operates better in the winter)
- Shutdown in summer, run in winter
- Full-time system operation, but cycle which wells are operational, or operate certain wells with reduced pumping rates in order to reduce waste stream, but minimize wear and tear potentially associated with cycling of system
- CAMU option – evaluate permitting and construction costs associated with establishing an on-site storage facility for wastes generated by the treatment system and the construction of a CAMU at a later date

Transition Activities

The extraction and treatment system will be operated by CH2M HILL through August 31, 2014, and transferred to WDNR on September 1, 2014.

CH2M HILL recommends the following activities be performed to facilitate the transfer of the system to WDNR on September 1, 2014:

- Documentation of site documents – CH2MHILL has submitted the updated O&M plan and a shutdown plan.
- Community interest meeting – WDNR will set up a public meeting for anyone interested in re-use of the site once the site is transitioned to the state.
- Long Term Remedial Action Report – CH2MHILL will submit the LTRA report of the site documenting the work completed through the past 12 years of work at the site.
- Remedial Action Plan – The WDNR will submit a RAP to allow for the legal transfer of the site from the USEPA to the WDNR including implementation of the institutional controls.

- Plant operations training for WDNR (including subcontractors) - CH2MHILL recommends training of the new operators for a minimum of one month prior to transition of the plant on September 1st, 2014.
- Final transfer activities will be completed including removal of all waste from the site and transfer of all critical subcontracts.

Training

CH2M Hill recommends the WDNR subcontractor be on site to shadow the current plant operator for a minimum of 30 days before the transfer date and preferably longer. During that time, the WDNR subcontractor will observe activities. Onsite training will be provided by CH2M HILL by having the WDNR staff/subcontractor participate in actual site operations prior to the transfer. WDNR staff/WDNR subcontractor will be trained by the current site operator on the following:

- System equipment and process flow
- Standard operating procedures and process control
- Daily and weekly maintenance and equipment checks
- Onsite chemistry (pH and turbidity)
- Compliance sampling for the discharge permit
- Operations of manual system components including:
  - 2,500-pound granular activated carbon vessel backwash
  - Rotary Drum Vacuum Filter (RDVF)
- Power outage procedures
- Winter shutdown/summer startup procedures
- Groundwater sampling procedures

Documenting

The following documents will be provided to WDNR prior to the onsite training:

- O&M manual including manufacturer's literature for equipment and standard operating procedures
- Waste Handling Plan
- QAPP and addendums
- Field Sampling Plan
- WPDES discharge permit and current sampling schedule
- Daily operating logs
- List of current subcontractor and contact information
- O&M Tracking Tool Database
- Logic and backup copy of programming

CH2M HILL Final Transfer Activities

During the last month that CH2M HILL will be performing the O&M, the following actions will be completed in preparation for the transition to WDNR:

- The dissolved air flotation system will be inspected by the system manufacturer, and maintenance will be performed
- The polymer system will be inspected by the system manufacturer, and maintenance will be performed
- The RDVF system will be inspected by the system manufacturer, and maintenance will be performed
- The activated carbon in the three granular activated carbon vessels will be changed out including the required inspection of the laterals in each vessel
- Annual backflow preventer inspection and cross-connection performance test will be conducted
- Underground storage container will be drained and decontaminated

- Chemical storage tanks (caustic soda and ferric sulfate) will be filled.
- The two propane tanks will be filled.
- A one-month supply of diatomaceous earth material and polymer will be delivered
- The heating, ventilation, and air conditioning system will be inspected, and maintenance will be performed
- Spare parts will be restocked
- The site computer will be purged of company-specific information and the Netscreen (connection to CH2M HILL internal servers) removed
- The O&M tracking database will be copied onto the site computer
- An equipment audit will be performed
- Utilities, including electric, Internet, and phone, will be transferred to WDNR
- Hazardous waste generated from the activities described above will be disposed of
- Work with WDNR to assist transfer of permits.

Conclusion

The implementation of the proposed coordination and training activities are intended to result in a smooth transfer of the extraction and treatment system to WDNR. Per CH2M HILL's contract with USEPA, CH2M HILL's onsite involvement and support in the O&M activities will terminate on September 1, 2014. Subsequent CH2M HILL support requested by WDNR will need to be coordinated through USEPA.

Schedule

August 6, 2013 – CH2M HILL submitted final updated O&M plan.

September 13, 2013 – CH2M HILL has submitted the QAPP and FSP for delisting sampling and LNAPL sampling.

October, 2013 – CH2M HILL will be completing the Fall Groundwater Sampling and LNAPL sampling event.

November 2013 – WDNR will set up a community interest meeting.

January 2014 – CH2M HILL will submit the revised optimization plan for comment.

Spring/2014 – CH2M HILL will submit the Draft Long Term Remedial (LTRA) Report.

March/2014 – WDNR issues RFP to secure an O&M subcontractor for the site.

May/2014 – WDNR issues a contract to an O&M subcontractor for operating the site after September 1st 2014.

Summer/2014 – CH2M HILL will submit the Final LTRA Report.

June and July/2014 – CH2M HILL will begin onsite training of incoming subcontractor on Penta Wood operations.

July/August 2014 - accounts ie... propane, phone, electricity will be transferred or closed.

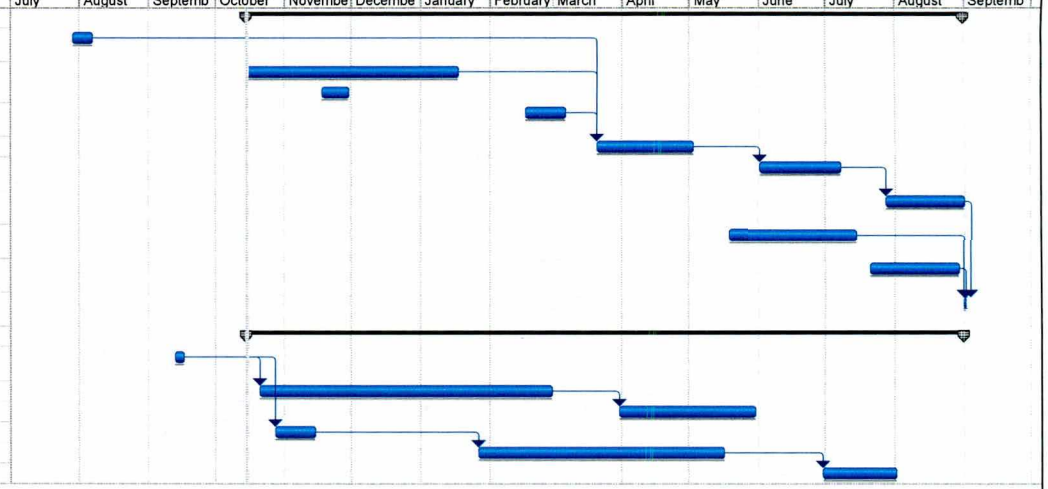
July/August 2014 – CH2M HILL completes removal of hazardous waste and other transfer activities at the site before handover.

July/August 2014 – RAP will be issued to implement the institutional controls at the site.

September 1st, 2014 – Penta Wood Products Superfund Site will be transferred from the USEPA to the WDNR.

Transition Schedule
Penta Wood Products Superfund Site
Siren Wisconsin

ID	Task Name	Duration	Start	Finish	Predecessors
1	Penta Wood Site Transfer	230 days	Tue 10/15/13	Sun 8/31/14	
2	Updated O&M plan submitted for Penta Wood (CH2MHILL)	7 days	Mon 7/29/13	Tue 8/6/13	
3	Optimization Plan (CH2MHILL)	69 days	Tue 10/15/13	Fri 1/17/14	
4	Community Interest Meeting (WDNR)	10 days	Mon 11/18/13	Fri 11/29/13	
5	Request for Qualifications Issued (WDNR)	14 days	Mon 2/17/14	Thu 3/6/14	
6	Request for proposal Issued (WDNR)	31 days	Fri 3/21/14	Fri 5/2/14	3,5,2
7	O&M Contract for Penta Wood Issued (WDNR)	26 days	Mon 6/2/14	Mon 7/7/14	6
8	Onsite training for incoming subcontractor (CH2MHILL)	26 days	Mon 7/28/14	Sun 8/31/14	7
9	RAP Issued to Implement Instituational Controls (WDNR)	41 days	Mon 5/19/14	Mon 7/14/14	
10	Final Disposal of Waste and Transfer of Accounts (CH2MHILL)	30 days?	Mon 7/21/14	Fri 8/29/14	
11	Penta Wood transfers from USEPA to WDNR	1 day	Mon 9/1/14	Mon 9/1/14	10,9,8
12	Field Work and Final Reporting	230 days?	Tue 10/15/13	Sun 8/31/14	
13	Revised QAPP and FSP Submitted (CH2MHILL)	2 days	Fri 9/13/13	Mon 9/16/13	
14	Delisting Sampling (CH2MHILL)	95 days	Mon 10/21/13	Fri 2/28/14	13
15	Delisting Petition Submitted (CH2MHILL)	45 days	Mon 3/31/14	Fri 5/30/14	14
16	LNAPL sampling (CH2MHILL)	14 days	Mon 10/28/13	Thu 11/14/13	13
17	Draft LTRA Report (CH2MHILL)	80 days	Mon 1/27/14	Fri 5/16/14	16
18	Final LTRA Report (CH2MHILL)	25 days	Mon 6/30/14	Fri 8/1/14	17



Project: Project1
Date: Tue 10/15/13

Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External Milestone

CH2M HILL
134 South 84th Street
Suite 400
Milwaukee, WI
53022
Tel 414.272.2426

October 31, 2011

419801

Denise Boone
Mail Code: SR-6J
77 West Jackson Boulevard
Chicago, IL 60604-3507

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

Dear Ms. Boone:

CH2M HILL is pleased to submit the Penta Wood Products Site Transition Plan for your review.

If you have any questions, please do not hesitate to contact me at 414-847-0561.

Sincerely,

CH2M HILL

Keli McKenna

Keli McKenna
Site Manager

Enclosures
c: Rhonda Flynn, CO/USEPA Region 5 (w/o enclosure)
Ike Johnson, PM/CH2M HILL, Milwaukee
Dan Plomb, DPM/CH2M HILL, Milwaukee
Phil Smith, RTL/CH2M HILL, Milwaukee
Cherie Wilson, AA/CH2M HILL, Milwaukee

Penta Wood Products Site Transition Plan

Penta Wood Products Site, Town of Daniels, Wisconsin
Work Assignment No. 132-LRLR-05WE, Contract No. EP-S5-06-01

PREPARED FOR:	U.S. Environmental Protection Agency
COPIES:	Wisconsin Department of Natural Resources
PREPARED BY:	CH2M HILL
DATE:	October 31, 2011

Purpose

The operation of the extraction and treatment systems at the Penta Wood Products Superfund Site will be transferred from the U.S. Environmental Protection Agency (USEPA) to the Wisconsin Department of Natural Resources (WDNR) on August 1, 2014. CH2M HILL has been performing the operations and maintenance (O&M) of systems for approximately 7 years under contract to the USEPA. USEPA certified the treatment plant operational and functional on August 12, 2004; therefore, the State of Wisconsin is scheduled to take over the O&M in August 2014. This technical memorandum outlines CH2M HILL's proposed plan to effectively transfer the fully operational system to the WDNR by August 1, 2014. Specific activities include training, coordinating site activities, and providing O&M documents and other documentation that will be useful to operate the extraction and treatment plant.

Background

Remedial Objectives

In September 1998, the Record of Decision was finalized specifying remedies to address contamination associated with soil and sediment, surface water, light nonaqueous phase liquid (LNAPL), and groundwater. The following are the specific remedial action objectives:

- Reduce or eliminate the potential risk to human health and ecological receptors associated with exposure to pentachlorophenol (PCP) and fuel oil components in surface water and groundwater, and PCP/fuel oil components and metals in the soil and sediment.
- Reduce or control the source of contaminants.
- Meet the applicable or relevant and appropriate requirements, including reducing contaminant concentrations in the groundwater beneath the site to below the WDNR's Preventative Action Limits.

The remedial action for the contaminated soil was completed in 2000 and included the construction and consolidation of material in an onsite Corrective Action Management Unit. The remedial action to address LNAPL and contaminated groundwater is ongoing and includes the following:

- Extraction and treatment of the highly contaminated groundwater
- Monitored natural attenuation
- LNAPL recovery
- Bioventing

The current system configuration has been running continuously since 2004, except for scheduled downtime for routine maintenance and repairs. The biovent system, first started in September 2007, operates during the summer and is turned off for the winter.

The performance goals for extraction and treatment system are as follows:

- Remove LNAPL, to the extent practicable, to reduce a source of PCP to the groundwater.
- Lower the water table, to the extent practicable, to allow bioventing to promote natural degradation of the residual diesel fuel petroleum hydrocarbons and PCP in the LNAPL smear zone.
- Contain, collect, and treat the most concentrated portions (exceeding 1,000 micrograms per liter) of the PCP in the groundwater and reduce concentrations to a level that allows natural attenuation to achieve the NR 140 standards in a reasonable period of time.
- Comply with discharge standards.

Optimization Plan

In 2010, the USEPA and WDNR agreed to an optimization plan to accelerate cleanup activities and reduce the long-term O&M costs associated with continued operation. The optimization activities included the following:

- Install three new recovery wells to remove additional LNAPL.
- Continue operation of LNAPL and groundwater recovery and treatment system at full capacity for approximately 2 years.
- Reduced operation to the 4 to 6 warm-weather months after approximately 2 years of full operation.
- Shutdown the extraction and treatment system when the amount of LNAPL recovered over time becomes asymptotic. The system would be restarted if monitoring shows the plume migrating offsite.
- Perform semiannual groundwater monitoring until long-term shutdown occurs, and monitor annually thereafter,
- Continue biovent operations during the warm-weather months.

The installation of the three new recovery wells was completed in March 2011, and the new wells were integrated into the extraction and treatment system. The extraction and treatment system operations will continue full-time operations through the October 2012 to maximize LNAPL recovery from three new extraction wells.

Transition Activities

Based on the approved optimization plan, the extraction and treatment system operations will be reduced to warm–weather months starting in 2013. System operations will be systematically shut down, and the plant will be winterized in November 2012. The system will be restarted in May 2013 following completion of the semiannual groundwater sampling event. A second winter shutdown will occur in November 2013, and the system will be restarted in May 2014 following the semiannual groundwater sampling event. The extraction and treatment system will be operated by CH2M HILL through July 31, 2014, and transferred to WDNR on August 1, 2014.

CH2M HILL recommends the following activities be performed to facilitate the transfer of the system to WDNR on August 1, 2014:

1. Establish regular teleconferences to be attended by USEPA, CH2M HILL, and WDNR
2. CH2M HILL will train WDNR staff onsite on the system operations
3. CH2M HILL will submit an O&M manual and other site documentation
4. CH2M HILL will perform final transfer activities

Coordination with WDNR

As a first step in the transition, an initial kickoff teleconference will be scheduled with representatives from CH2M HILL, USEPA, and WDNR. The general expectations and approach for the transition will be discussed, including the following:

- Who will be operating the Penta Wood Products Site for WDNR? Will WDNR contract the work out?
- At what level does WDNR want to participate in the transition process?

- How much overlap with CH2M HILL does WDNR want for training purposes?
- How much funding does WDNR have available for O&M each year?

CH2M HILL also recommends a site visit prior to this teleconference to allow WDNR to become familiar with the site operations. The teleconference will be an opportunity for open dialogue discussion and questions between agencies.

Following the initial teleconference, quarterly teleconferences will be scheduled throughout 2012 and 2013 to maintain communications between CH2M HILL, USEPA, and WDNR. The anticipated participants of quarterly teleconferences include the current operator, the future operator, the CH2M HILL site manager, USEPA, and the WDNR project manager. During the calls, CH2M HILL will update the participants on schedule and progress of the transition and provide WDNR the opportunity to ask questions on transition logistics and O&M issues.

Onsite Training

Onsite training will be provided by CH2M HILL by having the WDNR representatives participate in actual site operations prior to the transfer. CH2M HILL recommends that the WDNR operator and project manager participate in the winter shutdown in November 2013 and the 2014 summer operations beginning with startup and continuing through August 1, 2014. WDNR staff will be trained by the current site operator on the following:

- System equipment and process flow
- Standard operating procedures and process control
- Daily and weekly maintenance and equipment checks
- Onsite chemistry (pH and turbidity)
- Compliance sampling for the discharge permit
- Operations of manual system components including:
  - 2,500-pound granular activated carbon vessel backwash
  - Rotary Drum Vacuum Filter (RDVF)
- Power outage procedures
- Winter shutdown/summer startup procedures
- Groundwater sampling procedures

Site Documentation

The following documents will be provided to WDNR prior to the onsite training:

- O&M manual including manufacturer's literature for equipment and standard operating procedures
- Waste Handling Plan
- QAPP and addendums
- Field Sampling Plan
- WPDES discharge permit and current sampling schedule
- Daily operating logs
- List of current subcontractor and contact information
- O&M Tracking Tool Database
- Ladder logic and backup copy of programming

CH2M HILL Final Transfer Activities

During the last month that CH2M HILL will be performing the O&M, the following actions will be completed in preparation for the transition to WDNR:

- The dissolved air flotation system will be inspected by the system manufacturer, and maintenance will be performed
- The polymer system will be inspected by the system manufacturer, and maintenance will be performed
- The RDVF system will be inspected by the system manufacturer, and maintenance will be performed