

EXPLANATION OF SIGNIFICANT DIFFERENCES

**ASHLAND/NORTHERN STATES POWER LAKEFRONT SUPERFUND SITE
ASHLAND, WISCONSIN**

Ashland
Ashland County, Wisconsin

December 2016

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List of Acronyms

AOC	Administrative Order on Consent
AR	Administrative Record
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
C.F.R.	Code of Federal Regulations
COCs	Contaminants of Concern
ESD	Explanation of Significant Differences
EPA	U.S. Environmental Protection Agency
DNAPL	Dense Non-Aqueous Phase Liquid
LNAPL	Light Non-Aqueous Phase Liquid
MGP	Manufactured Gas Plant
NAPL	Non-Aqueous Phase Liquid
NCP	National Contingency Plan
NPL	National Priorities List
NSPW	Northern States Power Wisconsin
OC	organic carbon
PAHs	polynuclear aromatic hydrocarbons
RAL	Remedial Action Level
RI/FS	Remedial Investigation/ Feasibility Study
ROD	Record of Decision
STWTS	Short Term Water Treatment System
SVOCs	Semi-volatile organic compounds
SWAC	Surface Weighted Average Concentration
UAO	Unilateral Administrative Order
VOCs	Volatile Organic Compounds
WDNR	Wisconsin Department of Natural Resources
WPDES	Wisconsin Pollutant Discharge Elimination System
WWTP	Waste Water Treatment Plant

1.0 INTRODUCTION TO THE SITE

The Ashland/Northern States Power Lakefront Site (CERCLIS # WISFN0507952) is located in Ashland, Ashland County, Wisconsin. The Site consists of land and groundwater located along the shore of Lake Superior, and approximately 16 acres of sediments within Chequamegon Bay. The Site includes: (i) property owned by Northern States Power Company, a Wisconsin corporation (d.b.a. Xcel Energy, a subsidiary of Xcel Energy Inc. (NSPW)); (ii) a portion of Kreher Park that includes the former location of the municipal waste water treatment plant (WWTP); (iii) an inlet of Chequamegon Bay containing contaminated sediment directly offshore from the former location of the WWTP; (iv) a railroad right-of-way owned by the Wisconsin Central Ltd., and formerly owned by the Soo Line Railroad; and (v) groundwater underneath NSPW's property, Our Lady of the Lake Church/School, and nearby private residences. The Site is bounded by US Highway 2 (Lake Shore Drive) to the south, Ellis Avenue and its extension to the City marina to the west, Prentice Avenue and its extension to a boat launch to the east, and a breakwater, constructed in 2015, to the north.

The U.S. Environmental Protection Agency (EPA) is the lead agency for Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) enforcement at the Site and the Wisconsin Department of Natural Resources (WDNR) is the support agency.

1.1 STATEMENT OF PURPOSE

EPA is issuing this Explanation of Significant Differences (ESD) in accordance with Section 117(c) of CERCLA as amended, 42 U.S.C. § 9617(c), and Section 300.435(c)(2)(i) of the National Contingency Plan (NCP), 40 C.F.R. § 300.435(c)(2)(i). CERCLA Section 117(c) and Section 300.435(c)(2)(i) of the NCP require an ESD when EPA determines that a remedial action differs significantly in scope, performance, or cost from the remedy originally selected for a Superfund site, but the change to the remedial action does not fundamentally alter the selected remedy.

EPA selected a remedy for the Site that is documented in a Record of Decision (ROD) dated September 30, 2010. The purpose of this ESD is to modify one of the remedy components addressing contaminated sediments. The modified sediment remedy will achieve the cleanup goals and performance standards set forth in the ROD. Notice of this ESD was published in a local newspaper on October 29, 2016, and the ESD will become part of the Administrative Record (AR) for the Site, as required by the NCP at 40 C.F.R. 300.825(a)(2).

When the ROD was issued EPA was concerned that wet dredging the nearshore sediments would not successfully achieve the cleanup goals and performance standards due to significant amounts of wood waste and debris commingled with tar and oil in the form of non-aqueous phase liquid (NAPL) in the nearshore sediments. At that time EPA selected a combination remedy of dry excavation for the nearshore sediments and wet dredging of offshore sediments (Alternative SED-6), but allowed for performance of a pre-design pilot test to determine if wet dredging could achieve the cleanup goals and performance standards in the nearshore area. A pilot test was successfully performed in 2016 and EPA, in consultation with WDNR, will allow wet dredging as the alternative remedy for the nearshore area. The pilot test demonstrated that wet

dredging of nearshore sediments can achieve the cleanup goals and performance standards in a manner protective of human health and the environment.

1.2 SITE ADMINISTRATIVE RECORD AND SITE REPOSITORY

The Administrative Record (AR) (Appendix C) is available for review at the information repositories for the Ashland/NSP Lakefront Site found at:

EPA Region 5 Records Center
77 West Jackson Boulevard
Chicago, Illinois

Vaughn Public Library
502 W. Main Street
Ashland, Wisconsin

Bad River Public Library
100 Maple Street
Odanah, Wisconsin

Red Cliff EPA Office
88385 Pike Road, Highway 13
Bayfield, Wisconsin

2.0 SITE HISTORY

The Site is located in Ashland, Ashland County, Wisconsin (see Figure 1-1). The Site includes property owned by NSPW, Our Lady of the Lake Church/School, City of Ashland and private residences; a railroad corridor; a portion of Kreher Park; and sediments in an area of Chequamegon Bay adjacent to Kreher Park. The Site is located in S 33, T 48 N, R 4W in Ashland County, Wisconsin. Site features prior to completion of Phase I cleanup and the boundaries of the Site are shown on Figure 1-2. Figure 1-3 shows the location and features of the former manufactured gas plant (MGP) facility. Figure F-2 shows the current Site features.

A former MGP facility was located on NSPW's property located on top of a bluff that overlooks Kreher Park and Chequamegon Bay. The former MGP operated between 1885 and 1947 predominantly as a manufacturer of water gas and carbureted water gas for street and home lighting and other uses. After 1947 the carbureted water gas process was retired in favor of liquid petroleum (propane). During the time gas was manufactured, coal tars were produced as a normal by-product. An open ravine ran south/north through the MGP facility, under the current buildings, emptying out by the historic Lake Superior shoreline near what is now the railroad corridor. The ravine was filled by the early 1900s. A 12-inch clay tile pipe was buried in the ravine and ran south to north from the former MGP facility to an area north of the railroad right of way in Kreher Park. In 1951, the City of Ashland constructed the former waste water treatment plant (WWTP) at the Site (currently Kreher Park). The WWTP operated until 1992. Drawings for construction of the former WWTP show a 2-inch "Tar to Abandon Tar Dump" pipe running in the approximate location of the historic ravine from the MGP to Kreher Park).

2.1 SITE CONTAMINATION

The primary source of the Site contaminants of concern (COCs) are manufactured gas plant wastes in the form of coal tars, and include volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAH) compounds. Additionally, some free-phase hydrocarbons product (free product) derived from the coal tars is present as NAPL, and has impacted soils,

groundwater, and sediments. The NAPL referenced in this document includes both light non-aqueous phase liquid (LNAPL) and dense non-aqueous phase liquid (DNAPL).

The most commonly occurring VOC is benzene and the most commonly occurring PAH is naphthalene. Metals (e.g., lead and arsenic) have been detected at varying concentrations and are associated with natural conditions, fill, and former MGP process wastes. The VOCs and PAHs were derived from the former MGP operations located on the Upper Bluff portion of the Site.

2.2 INITIAL RESPONSE

In 1989, during exploratory work to expand the WWTP, contaminated soil and groundwater were encountered by the City of Ashland. The City notified the WDNR, subsequently closed the WWTP, and built a new WWTP facility a few miles away to the northeast. In 1994, WDNR initiated an investigation and evaluation to characterize the extent of contamination around the former WWTP, determining that contaminants had migrated from the former MGP to Kreher Park, including the location of the former WWTP.

In 2002, EPA added the Site to the National Priorities List (NPL) of federal Superfund sites. EPA and WDNR subsequently entered into an administrative order on consent (AOC) with NSPW dated November 14, 2003. Under the AOC, NSPW conducted a Remedial Investigation and Feasibility Study (RI/FS) to determine the nature and extent of contamination and any threat to the public health or the environment at the Site and to determine and evaluate alternatives for remedial action. NSPW conducted the RI/FS under EPA oversight. EPA approved the final Feasibility Study on December 4, 2008. EPA's Preferred Alternative presented in the Proposed Plan came from the remedial alternatives evaluated in the Feasibility Study.

2.3 SELECTED REMEDY

The Site is being addressed under the framework set forth in CERCLA. The selected remedy specified in the September 2010 ROD serves as the final action for soil, groundwater, and sediment contamination at the Site and includes the following response actions:

- removal and treatment or off-site disposal of contaminated soil, groundwater and sediment, including all NAPL;
- engineered surface and vertical barriers to contain contaminated groundwater;
- groundwater extraction as hydraulic control, restoration, and possible in-situ treatment of groundwater;
- long-term groundwater and sediment monitoring; and
- institutional controls such as land use controls, to limit future site use to prevent exposure to hazardous substances that will remain at the Site after the remedy is complete.

The Site is divided into four main areas of concern: 1) sediments in Chequamegon Bay; 2) soil and shallow groundwater under Kreher Park; 3) soil and shallow groundwater under the Upper Bluff/Filled Ravine; and 4) deep groundwater in the Copper Falls Aquifer. This ESD addresses only the selected remedy for sediments in Chequamegon Bay (Phase II).

The originally-selected remedy for sediments in Chequamegon Bay includes dry excavation of all near-shore sediment and wood debris, and wet dredging of the remaining contaminated sediment and wood debris that exceeds the Remedial Action Level (RAL) of 2,295 micrograms (ug) total PAH (tPAH)/gram (g) organic carbon (OC) [which is equivalent to 9.5 parts per million (ppm) of tPAH dry weight (dwt) at 0.415% OC]. The selected remedy requires on-site thermal treatment of sediments or on-site stabilization of sediments for off-site disposal to a NR 500 licensed landfill. If thermal treatment is determined to be more difficult (due to the wood debris) and not cost effective, then off-site disposal of sediment at a NR 500 licensed landfill will be the alternate remedy.

EPA previously had concerns about the effectiveness of wet dredging the nearshore area of sediments due to significant wood waste/wood debris and the presence of NAPL in the nearshore sediments. The 2010 ROD allowed for a pre-design pilot test to determine if wet dredging could achieve the performance standards in the nearshore area.

The selected remedy for soil in Kreher Park and the Upper Bluff/Filled Ravine was largely completed by June 2016 (see below) and consisted of limited soil removal with ex-situ thermal soil treatment. The remedy for shallow groundwater in Kreher Park and the Upper Bluff/Filled Ravine was also largely completed by June 2016 and consists of groundwater containment using engineered surface and vertical barriers with groundwater extraction as hydraulic control. Shallow groundwater extracted from the contained areas is treated onsite and discharged to the lake. The remedy for shallow groundwater achieves the dual objectives of containment and restoration.

The selected remedy for the Copper Falls Aquifer consists of a groundwater extraction system and was also largely completed by June 2016. Before the selected remedy was implemented there was a limited groundwater extraction system in place. The implemented remedy includes additional extraction wells. The groundwater remedy for the Copper Falls Aquifer, Kreher Park and the Upper Bluff/Filled Ravine also includes engineered surface and vertical barriers to prevent further groundwater contamination migration.

The groundwater remedy for Kreher Park, the Upper Bluff/Filled Ravine, and the Copper Falls Aquifer includes long-term groundwater monitoring and institutional controls, such as restrictive covenants, to restrict future site use and to restrict the use of site groundwater for potable purposes until such time as groundwater cleanup standards are achieved. In addition, if found to be advantageous in the future, in-situ chemical oxidation treatment can be added to groundwater treatment systems.

2.4 PHASE I REMEDIAL ACTION

A consent decree signed by EPA, WDNR and NSPW for the cleanup of the on-land soil and groundwater contamination (Phase I) was entered by the United States District Court for the Western District of Wisconsin on October 18, 2012. The Phase 1 work started in May 2014 and was largely completed in June 2016. There is ongoing groundwater treatment and the final cover in Kreher Park will be installed following completion of the sediment cleanup.

2.5 BREAKWATER AND PILOT STUDY

On May 9, 2014, EPA, WDNR, and NSPW entered into an agreement to complete a wet dredge pilot study.

During its evaluation and design of the wave attenuation system for the pilot study, NSPW determined that a breakwater would be the most cost effective and beneficial for conducting the pilot study and final sediment remedy. On February 27, 2015, EPA granted NSPW an extension to complete the pilot study in 2016, to allow it time to design and construct a breakwater. On July 15, 2015, EPA, WDNR, and NSPW entered into an agreement for construction of a 900 ft long, rubble-mounded permanent breakwater at the northern edge of the Site for attenuating the waves. The permanent breakwater was also designed with input from the public and the City of Ashland to provide long-term benefits to the community following completion of the Superfund cleanup. The permanent breakwater was completed in November 2015.

On January 30, 2016, NSPW submitted the final Design Package for Wet Dredge Pilot Study utilizing the newly installed breakwater with a containment system consisting of a series of silt curtains, including partial and full-length barriers as well as several layers of oil booms. EPA granted conditional approval of the final Design Package for Wet Dredge Pilot Study on February 19, 2016. EPA approved the wet dredge pilot study design in May 2016, and NSPW started the pilot on May 31, 2016. Dredging of the pilot study area was completed in July 2016, and NSPW submitted a Pilot Study Data Report for EPA and WDNR review on August 10, 2016.

3.0 BASIS FOR THE DOCUMENT

CERCLA Section 117(c) and 40 C.F.R. § 300.435(c)(2)(i) of the NCP authorize the publishing of an ESD when EPA determines that a remedial action differs significantly in scope, performance, or cost from the remedy originally selected for a Superfund site, but the change to the remedial action does not fundamentally alter the selected remedy. As noted above, the ROD documenting the choice of final remedial actions for the Site was finalized and signed by EPA on September 30, 2010.

The ROD provided for a pre-design pilot study to determine if wet dredging can achieve the cleanup goals and performance standards (Appendix A) in the nearshore area. Under the framework in the ROD, if the pre-design pilot study demonstrates that wet dredging within the nearshore area will attain the established cleanup goals and performance standards then EPA, in consultation with WDNR, will change the sediment remedy to wet dredging and publish its decision in an ESD.

Based on the Pilot Study Data Report submitted by NSPW, wet dredging of the nearshore sediments will achieve the cleanup goals and performance standards established in the ROD; therefore, EPA, in consultation with WDNR, is publishing this ESD to document that implementation of wet dredging remedy for the nearshore sediments is protective of human health and the environment and is part of the selected remedial action.

3.1 REVIEW OF SITE DATA

The pilot study was performed to evaluate whether wet dredging could effectively remove targeted contaminated sediments at the Site while achieving the ROD cleanup goals and performance standards. Various sediment removal and water handling, processing, and treatment methods were also assessed as part of the pilot study. In addition the pilot study evaluated the effectiveness of the barrier containment system in controlling the movement of re-suspended sediment and COCs that had a potential for release during the dredging operation.

The Pilot Study Data Report provides the data from the dredging and sediment processing pilot activities including surface water monitoring, wastewater effluent, sediment core, noise, and air monitoring data. The pilot study assessed the performance of a full-scale wet dredge remedy for both nearshore and offshore sediments at the Site.

Results of the pilot study are as follows:

- A surface-weighted average concentration (SWAC) of 1.6 parts per million (ppm) total PAH (tPAH) was achieved through wet dredging (the ROD performance standard is 9.5 ppm). Additionally, no single post-dredge confirmation sample was above 22 ppm tPAH. The ROD set a single-sample upper limit of 22 ppm tPAH.
- Results from the containment intra-system monitoring demonstrate that the barrier curtain system provided significant reduction in COC and turbidity concentrations, as measured outside of the primary curtain, with consistent measurements showing reductions of greater than 95% in tPAH concentrations and 85% in turbidity concentrations.
- There were no exceedances of project noise standards and no public complaints related to noise during the dredging period.
- Five odor complaints from the public were received early in the pilot study dredging and sediment handling processes and immediate steps were taken to control the odors. Odor generating sources were primarily at the off-loading area, the barge dewatering operation (geobags), and the sediment stabilization/processing building. Due to the odor complaints and concerns raised during the public meeting in Ashland on November 3, 2016, additional odor control measures will be developed during the remedial design process and implemented during the full-scale remedy.

Based on the Pilot Study Data Report and oversight of pilot dredging activities in the field, EPA, in consultation with WDNR, has determined that wet dredging operations conducted in the Pilot Study Area achieved the cleanup goals and were in compliance with the performance standards set forth in the ROD.

4.0 DESCRIPTION OF SIGNIFICANT DIFFERENCES

The significant difference between the selected remedy in the ROD and the modification described in this ESD is that the sediment in the Chequamegon Bay will be wet dredged in the nearshore area instead of utilizing dry excavation.

5.0 SUPPORT AGENCY COMMENTS

WDNR was consulted regarding the change to the selected remedy and has reviewed this ESD. WDNR supports this change to the Site remedy. WDNR concurred on this ESD in a letter dated December 15, 2016 (see Appendix D).

6.0 STATUTORY DETERMINATIONS

EPA believes that the modified remedy described in this ESD is protective of human health and the environment, complies with federal and state requirements that are applicable or relevant and appropriate to this remedial action, and is cost effective. In addition, the remedy utilizes permanent solutions to the maximum extent practicable for this Site. The revised remedy complies with the public participation portions of both the NCP at 40 C.F.R. Section 300.435(c)(2)(i) and the statutory requirements of CERCLA Section 117(c), and satisfies the requirements of Section 121 of CERCLA.

7.0 PUBLIC PARTICIPATION COMPLIANCE


EPA, in coordination with WDNR, will make this ESD and supporting information available to the public via the Administrative Record, the information repositories (noted elsewhere in this document), and EPA's web page for the Ashland/NSP Lakefront Superfund Site, <http://www.epa.gov/superfund/ashland-northernpower>.

EPA published a notice on October 29, 2016 that briefly summarized the ESD in the Ashland Daily Press (see Appendix B). By doing so, EPA met the public participation requirements of the NCP, 40 C.F.R. Section 300.435(c)(2)(i).

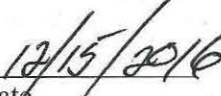
In addition, EPA and WDNR held a public information meeting in Ashland on November 3, 2016 to explain the results of the pilot study and the ESD, and to address community questions and concerns.

8.0 APPROVAL

Approved by:

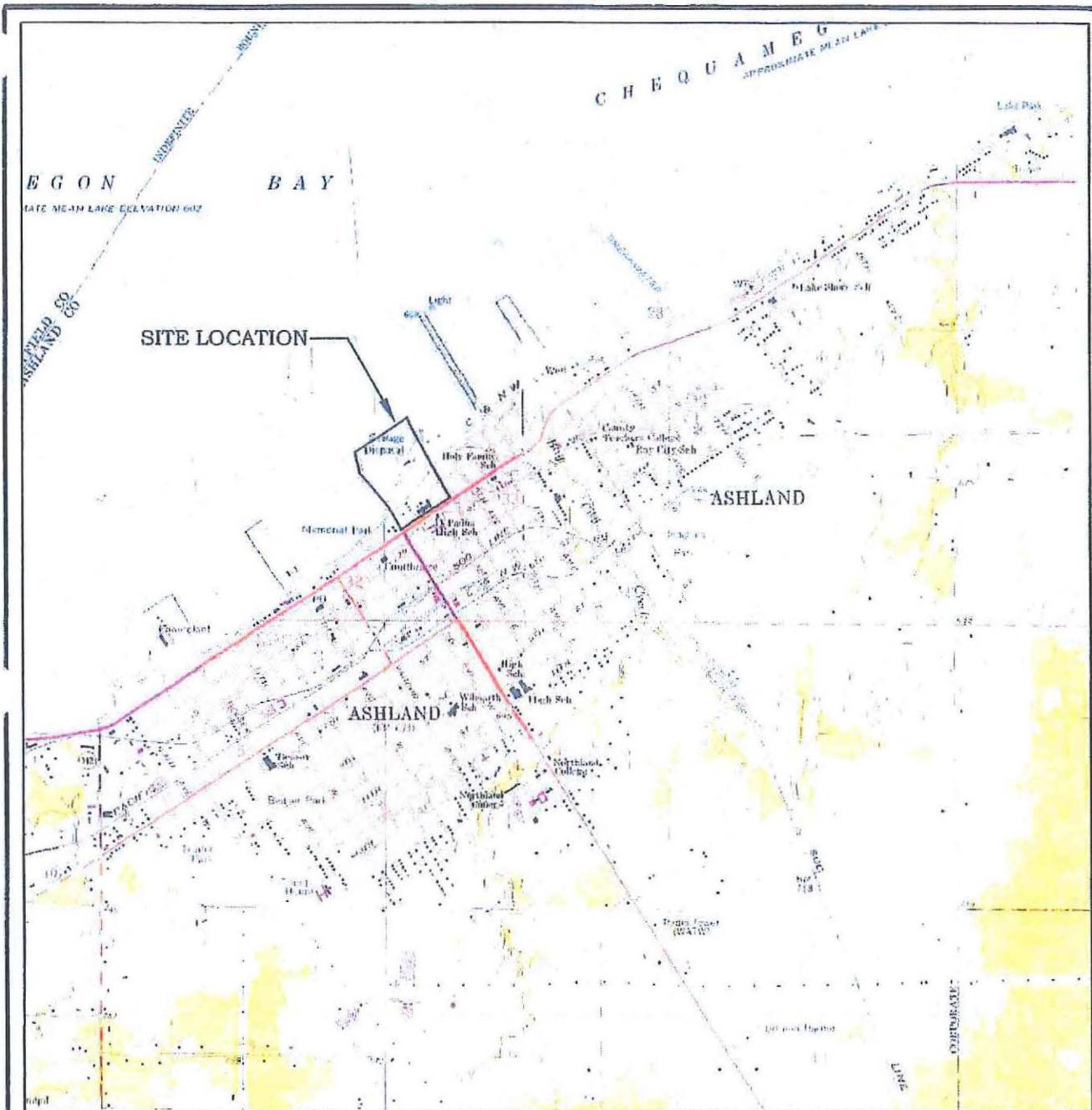


Douglas Ballotti, Acting Director
Superfund Division
EPA Region 5



Date

FIGURES



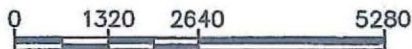
BASE MAP SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE, ASHLAND, WISCONSIN, DATED 1964, PHOTOREVISED 1975.



QUADRANGLE LOCATION

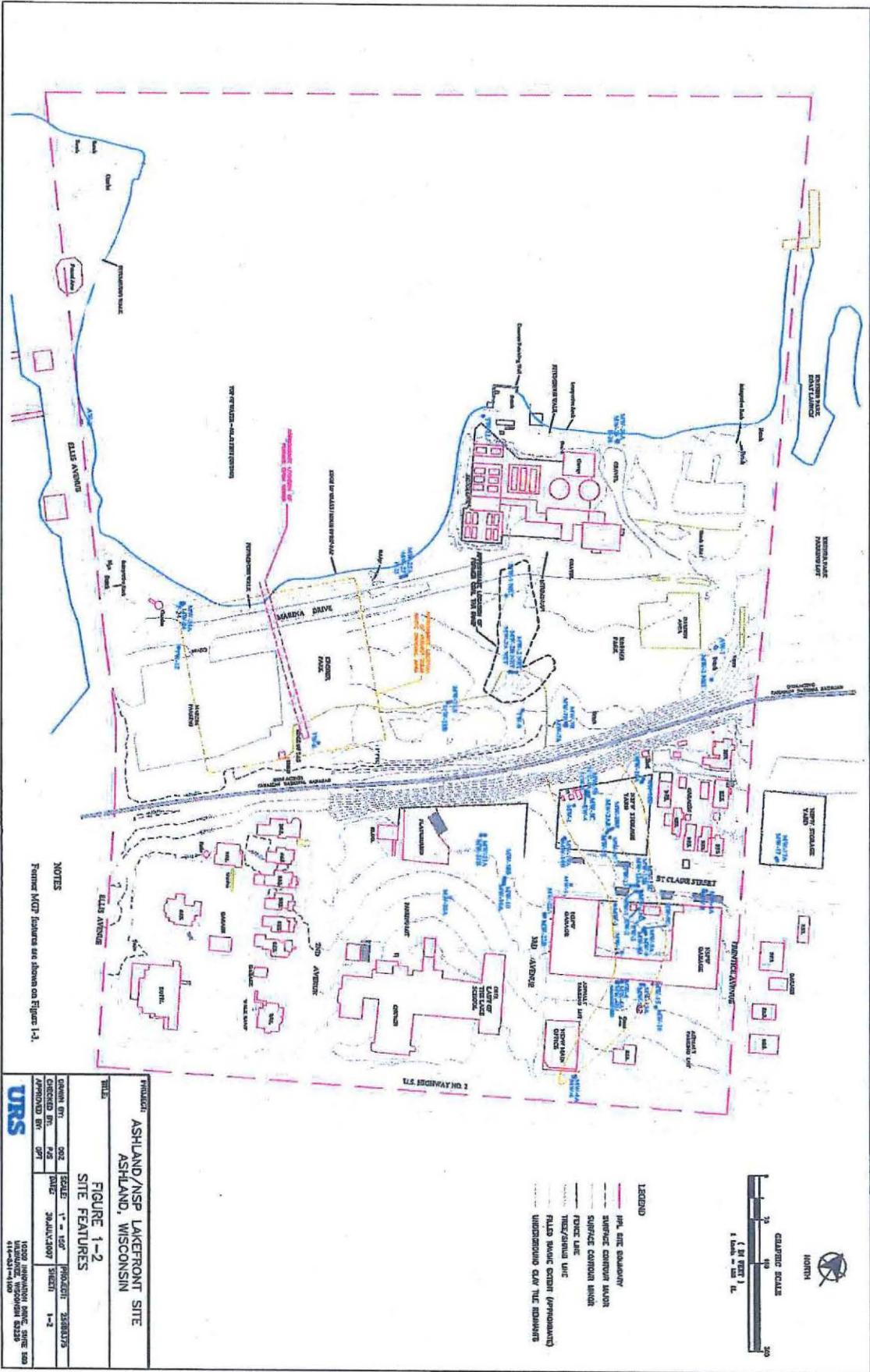


NORTH

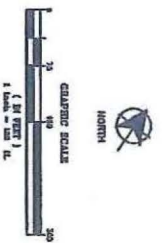


SCALE IN FEET

PROJECT: ASHLAND/NSP LAKEFRONT SITE ASHLAND, WISCONSIN		
TITLE: FIGURE 1-1 SITE LOCATION		
DRAWN BY: DDZ	SCALE: 1" = 2640'	PROJ. NO. 25688375
CHECKED BY: FJS	DATE: 30.JULY.2007	SHEET: 1-1
APPROVED BY: DPT		
URS		10200 INNOVATION DRIVE, SUITE 500 MILWAUKEE, WISCONSIN 53226 414-831-4100

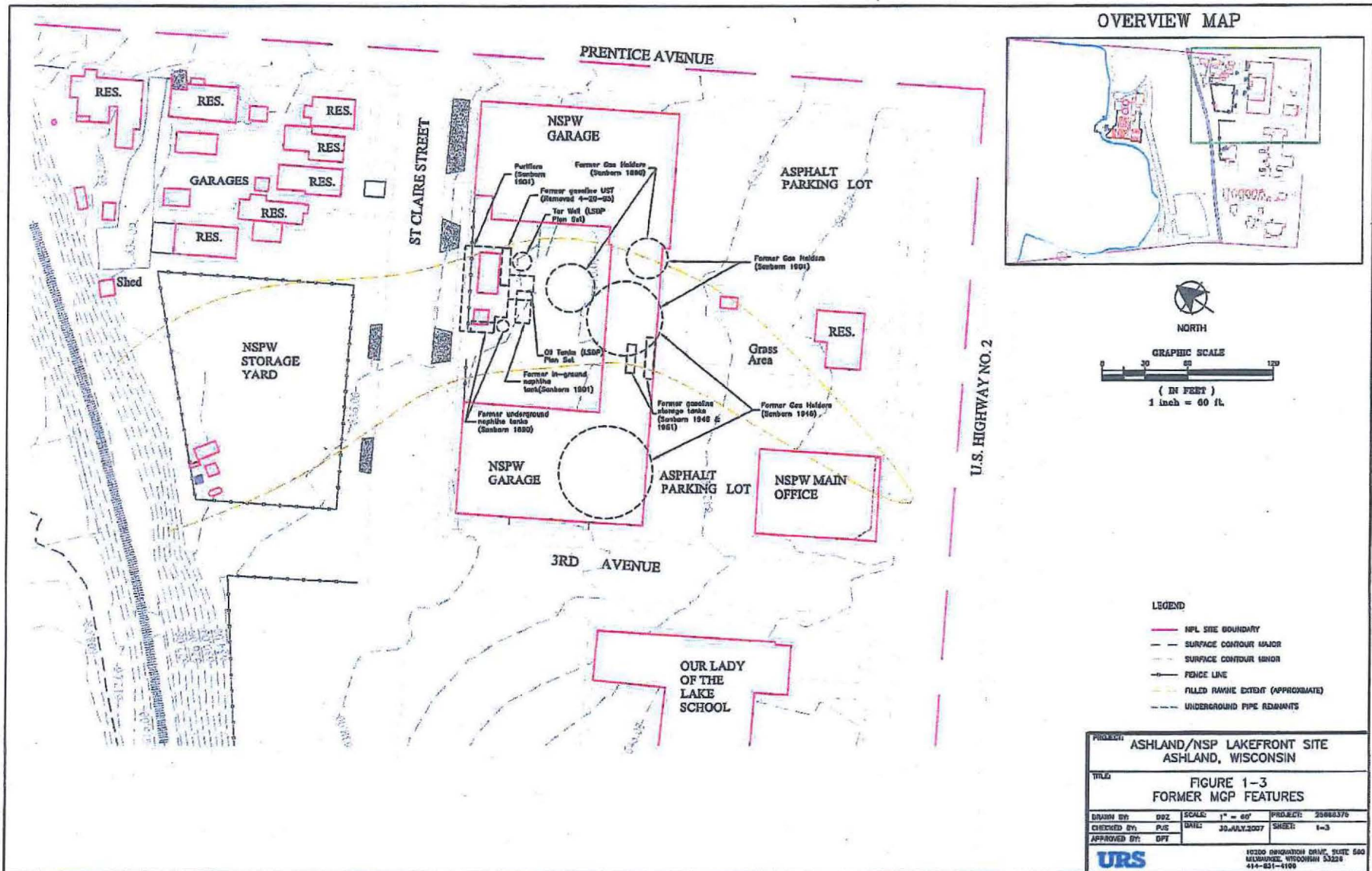


NOTES
Former MGP features are shown on Figures 1-1.



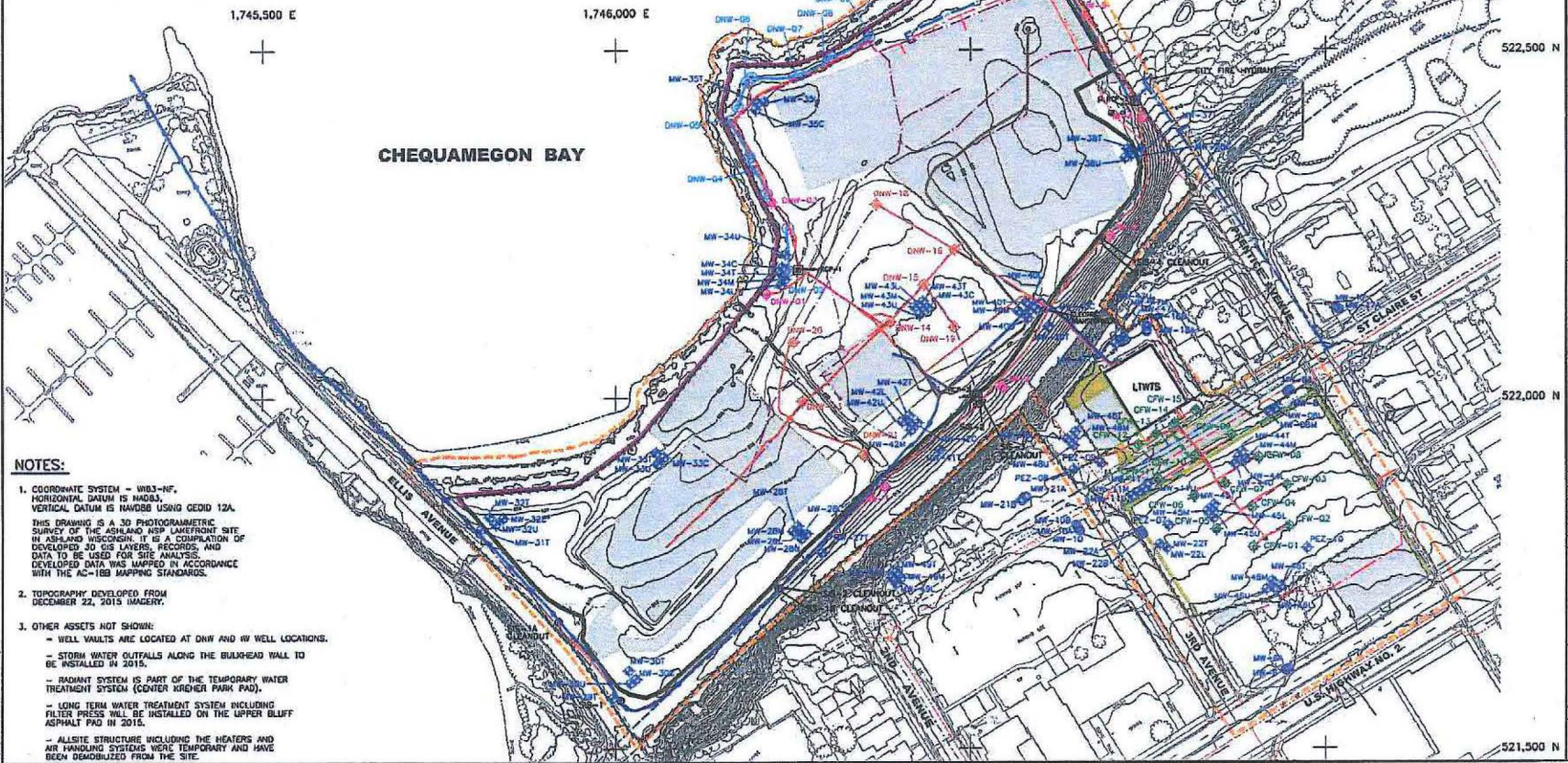
- LEGEND**
- HP, UIC, GASOLINE
 - SURFACE COMMON MAIN
 - SURFACE COMMON MAIN
 - FENCE LINE
 - TRUCKING/HAUL LINE
 - FLOOD HAZARD CONTROL (PERMANENT)
 - UNDERGROUND C&I TIE IN/POWERS

PROJECT		ASHLAND/NSP LAKEFRONT SITE	
TITLE		ASHLAND, WISCONSIN	
FIGURE 1-2			
SITE FEATURES			
DESIGN NO.	002	SCALE	1" = 100'
DESIGNED BY	SK	DATE	3/24/2009
APPROVED BY	CPY	PROJECT	330000705
		SHEET	1-2
1000 UNIVERSITY AVE, SUITE 200 MILWAUKEE, WISCONSIN 53233 414-931-1100			



LEGEND

- PRE-EXISTING BUILDING
- PRE-EXISTING ROADWAY
- PRE-EXISTING SHORELINE/DRAINAGE
- PRE-EXISTING CULVERT
- PRE-EXISTING TREE/BRUSH
- PRE-EXISTING WATER LINE
- PRE-EXISTING OVERHEAD ELECTRIC LINE
- PRE-EXISTING TELEPHONE LINE
- PRE-EXISTING SANITARY LINE
- PHASE 1 PROJECT AREA
- PERIMETER FENCE WITH SILT FENCE ATTACHED
- DNAPL TRENCH AND WATER COLLECTION SUMP AND COLLECTION PIPE
- BULKHEAD WALL LOCATION
- CUTOFF WALL LOCATION
- GROUNDWATER AND DNAPL DISCHARGE PIPE
- PIEZOMETER WELL NUMBER AND LOCATION
- VERTICAL DNAPL COLLECTION WELL NUMBER AND LOCATION
- SHALLOW GROUNDWATER INTERCEPTOR TRENCH, SUMP AND CLEANOUT
- 2015 MONITORING WELL NUMBER AND LOCATION
- PRE-EXISTING 2015 MONITORING WELL NUMBER AND LOCATION
- COPPER FALLS EXTRACTION WELL NUMBER AND LOCATION
- HOT BOX LOCATION
- COLLECTION SUMP
- CULVERT
- PAVED ASPHALT AREA
- CONCRETE AREA
- SUMP COLLECTION PIPE
- ELECTRIC LINE
- WATER LINE
- GAS LINE
- WATER TREATMENT DISCHARGE PIPE



- NOTES:**
1. COORDINATE SYSTEM - NAD83-NF, HORIZONTAL DATUM IS NAD83, VERTICAL DATUM IS NAVD83 USING GEOID 12A. THIS DRAWING IS A 3D PHOTOGRAMMETRIC SURVEY OF THE ASHLAND/NSP LAKEFRONT SITE IN ASHLAND WISCONSIN. IT IS A COMPILATION OF DEVELOPED 3D GCS LAYERS, RECORDS, AND DATA TO BE USED FOR SITE ANALYSIS. DEVELOPED DATA WAS MAPPED IN ACCORDANCE WITH THE AC-108 MAPPING STANDARDS.
 2. TOPOGRAPHY DEVELOPED FROM DECEMBER 22, 2015 IMAGERY.
 3. OTHER ASSETS NOT SHOWN:
 - WELL VAULTS ARE LOCATED AT DNW AND MW WELL LOCATIONS.
 - STORM WATER OUTFALLS ALONG THE BULKHEAD WALL TO BE INSTALLED IN 2016.
 - RADIAN SYSTEM IS PART OF THE TEMPORARY WATER TREATMENT SYSTEM (CENTER KREHER PARK PAD).
 - LONG TERM WATER TREATMENT SYSTEM INCLUDING FILTER PRESS WILL BE INSTALLED ON THE UPPER BLUFF ASPHALT PAD IN 2016.
 - ALLESTE STRUCTURE INCLUDING THE HEATERS AND AIR HANDLING SYSTEMS WERE TEMPORARY AND HAVE BEEN DEMOLISHED FROM THE SITE.

Foth Joint Ventures
Envirocon
 Foth Infrastructure & Environment, LLC
 207, Elm St., 5th Fl., Ashland, WI 54806
 Phone: 715-681-2500 Fax: 715-681-4816

CONSTRUCTION AS-BUILT DRAWINGS FOR ASHLAND/NSP LAKEFRONT SITE PHASE 1 REMEDIAL ACTION
 NORTHERN STATES POWER COMPANY
 WISCONSIN
 ASHLAND COUNTY

NO.	BY	DATE	REVISION

DATE OF PREPARATION: _____ BY: _____

DATE: _____

SITE FACILITIES DRAWING

HORIZONTAL SCALE:
 0 75' 150'

PROJECT ID: 12X001.14

F-2

APPENDIX

APPENDIX A

Pilot Test Performance Standards from ROD

The following table shows the relationship between the RAL and the pilot test average concentration cleanup level.

Relationship Between Remedial Action Level and Cleanup Level for Pilot Test

	Concentration	Concentration Based on Organic Carbon Content of 0.415%*	Requirement
Remedial Action Level (RAL)	2,295 ug tPAH/g OC	9.5 ppm	Dredge all sediments in pilot test area exceeding the RAL, as determined by the characterization data collected during the RI and/or additional pre-design sampling.
Pilot Test Cleanup Level	<p>2,295 ug tPAH/g OC surface weighted average concentration over dredged pilot test area</p> <p>No sample to exceed 5,324 ug tPAH/g OC (also known as the "not-to-exceed threshold")</p>	<p>9.5 ppm surface weighted average concentration over dredged pilot test area</p> <p>No sample to exceed 22 ppm (also known as the "not-to-exceed threshold")</p>	Concentration to be measured following dredging activities in pilot test area

* Based on the data collected during the RI, 0.415% OC was determined to be the best representation of the OC content of the existing sandy-type sediments at the site. The sediments that will be present at the site following completion of the excavation/dredging actions is anticipated to be similar to those upon which the 0.415% OC determination was based, but will need to be evaluated. If the OC content of the top layer of sediments is lower than 0.415%, then a cleanup level of 9.5 ppm for those sediments would not be protective. If necessary, the 9.5 ppm cleanup level will be adjusted based on the OC content of the sediments so that the 2,295 ug/g OC cleanup level is achieved.

The following performance standards, or other equivalent standards approved by EPA, would need to be met in order for the pre-design pilot test to be judged a success.

- o All NAPL source material shall be removed.

- All targeted sediments with PAH concentrations exceeding the RAL, as determined by the characterization data collected during the RI and/or additional pre-design sampling, shall be dredged.
- Upon completion of dredging activities, post-dredging confirmatory sampling results must show that the cleanup level (including the “not-to-exceed threshold”) identified in the table above has been achieved.
- Surface water quality standards, as identified as ARARs, shall not be exceeded outside the containment area(s) including releases of NAPL sheens and/or turbidity.
- Surface water quality standards, as identified as ARARs, shall be achieved within and throughout the containment area(s) prior to any water within the containment area(s) being released to the larger water body.
- Air quality standards, as identified as ARARs, shall not be exceeded outside the exclusion zone (work/handling) or during the transport of contaminated media.
- All local, state and federal permitting requirements, if necessary, shall be followed.
- Sediment, wood debris, NAPL, carriage and contact water, and waste generated by the project shall be managed to prevent the release of contaminants and potential contamination off-site to land and waters.
- Any waste that is to be discharged to a publicly-owned treatment system shall meet all requirements set forth in that facility’s permit including pretreatment standards.
- Appropriate measures to control airborne particulate matter shall be taken during all dredging and materials handling activities.
- Local, state, and federal noise pollution requirements shall be met.
- All investigation derived waste shall be handled in accordance with EPA guidance and EPA’s offsite rule.

APPENDIX B



EPA Announces Change for the
Ashland/Northern States Power Lakefront Superfund Site
Ashland, Wisconsin

U.S. Environmental Protection Agency (EPA), in consultation with the Wisconsin Department of Natural Resources (WDNR), is changing the method used for the source cleanup of sediment in the Chequamegon Bay at the Ashland/Northern States Power Lakefront site (Site).

EPA selected a cleanup for the Site that is documented in a Record of Decision (ROD) dated September 30, 2010. EPA selected in the ROD a combination cleanup of dry excavation for the nearshore sediments and wet dredging of offshore sediments (Alternative SED-6) as the cleanup, but also allowed for performance of a study (pilot test) to determine if wet dredging could achieve the cleanup goal and performance standards in the nearshore area. A pilot test was successfully performed in 2016 and demonstrated that wet dredging of nearshore sediments can achieve the cleanup goal and performance standards set forth in the ROD in a manner protective of human health and the environment. EPA, in consultation with WDNR, will therefore allow wet dredging as an alternative cleanup for the nearshore area. The purpose of this change is to modify one of the remedy components in the ROD. This change does not alter the cleanup goals selected in the ROD, but modifies one component of the selected sediment cleanup allowing the use of wet dredging for all of the contaminated sediment. EPA is publishing its decision in an Explanation of Significant Differences (ESD).

An informational meeting will be held at 6:30 p.m. on Thursday November 3, 2016 at the Great Lakes Visitor Center 29270 County Hwy G, Ashland.

More information is available at the Vaughn Public Library, 502 West Main St. Ashland and at <http://www.epa.gov/superfund/ashland-northernpower>. If you have questions or need further information, contact:

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You may call EPA Region 5 toll-free at 800-621-8431, 8:30 a.m. to 4:30 p.m. weekdays.

APPENDIX C

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMEDIAL ACTION

ADMINISTRATIVE RECORD
FOR THE
ASHLAND/NORTHERN STATES POWER LAKEFRONT SITE
ASHLAND, ASHLAND COUNTY, WISCONSIN

UPDATE 3
NOVEMBER, 2016
SEMS ID: 928450

<u>NO.</u>	<u>SEMS ID</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	443695	8/8/12	United States of America	Northern States Power Co.	Consent Decree (CD) Between the United States, the State of Wisconsin, Northern States Power Co. & the Bad River & Red Cliff Bands of the Lake Superior Tribe of Chippewa Indians (Signed)	547
2	443694	10/18/12	United States of America	Northern States Power Co.	Opinion & Order (Signed), US V. Northern States Power Co. - 12-CV-565-BBC	6
3	460377	7/31/13	Karl, R., U.S. EPA	Northern States Power - Wisconsin	Administrative Settlement Agreement & Order on Consent for Offshore Sampling of Chequamegon Bay at Ashland Lakefront Superfund Site (Signed) - V-W-13C-017	33
4	928451	5/23/14	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: EPA Comments to Final Design for Phase I Remedy Ashland/NSP lakefront Superfund Site	6
5	928447	7/1/15	Foth Infrastructure and Environment/ Envirocon Joint Venture	Northern States Power - Wisconsin	Remedial Action - Quality Assurance Project Plan (QAPP) - Revision 1	45
6	928448	7/1/15	Foth Infrastructure and Environment/ Envirocon Joint Venture	Northern States Power - Wisconsin	Final Design for Ashland Breakwater	743

7	928455	7/15/15	Karl, R., U.S. EPA	Northern States Power - Wisconsin	Administrative Settlement Agreement & Order on Consent (AOC) for Construction of Breakwater in Chequamegon Bay at the Ashland/Northern States Power Lakefront Superfund Site (Signed) V-W-15-C-023	37
8	928453	8/4/15	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: EPA Approval of the Breakwater Design Ashland/NSP Lakefront Superfund Site	1
9	928812	9/1/15	Foth Infrastructure and Environment	Xcel Energy, Inc.	Final Design for Phase I, Remedial Action	3481
10	928454	9/29/15	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: EPA Approval of Final Design for Phase I Remedial Action Ashland/NSP Lakefront Superfund Site	1
11	928456	3/18/16	Karl, R., U.S. EPA	Northern States Power - Wisconsin	Amended and Restated Administrative Settlement and Order on Consent (AOC) for Wet Dredge Pilot Study of Chequamegon Bay at the Ashland/Northern States Power Lakefront Superfund Site (Signed) V-W-14-C-006	48
12	928449	4/1/16	Foth Infrastructure and Environment/ Envirocon Joint Venture	Northern States Power - Wisconsin	Final Design for Phase 2 Wet Dredge Pilot Study	2531
13	928452	5/16/16	Hansen, S., U.S. EPA	Ealy, E., Xcel Energy	Letter re: EPA Approval of the Design for Phase 2 Wet Dredge Pilot Study Ashland/NSP Lakefront Superfund Site	1
14	928408	8/10/16	Foth Infrastructure and Environment/ Envirocon Joint Venture	Xcel Energy, Inc.	Pilot Study Data Report	7840
15	516167	11/1/16	Lewis, D., City of Ashland Mayor	Dunn, J., WDNR & Hansen, S., U.S. EPA	Letter re: Ashland Superfund Remediation Process	2

371007



U.S. ENVIRONMENTAL PROTECTION AGENCY
REMEDIAL ACTION

ADMINISTRATIVE RECORD
FOR
ASHLAND/NORTHERN STATES POWER LAKEFRONT SUPERFUND SITE
ASHLAND, WISCONSIN

ORIGINAL
JUNE 12, 2009
(SDMS ID: 371007)

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	08/00/94	Short Elliott Hendrickson, Inc.	WDNR	Remedial Investigation Interim Report for the Ashland Lakefront Property (SDMS ID: 311804)	133
2	05/00/97	Short Elliott Hendrickson, Inc.	WDNR	Comprehensive Environmental Investigation Report for the Ashland Lakefront Property (SDMS ID: 311802)	67
3	10/00/98	Short Elliott Hendrickson, Inc.	WDNR	Ecological Risk Assessment for the Coal-Tar Contaminated Sediments and Surface Waters Off the Ashland Lakefront Property in Ashland Harbor (SDMS ID: 311806)	23
4	12/00/98	Short Elliott Hendrickson, Inc.	WDNR	Remedial Actions Options Feasibility Study for the Ashland Lakefront Property and Contaminated Sediments (SDMS ID: 311803)	147
5	09/03/02	Ells, S., U.S. EPA/CSTAG	Peterson, J., U.S. EPA	Memorandum re: CSTAG Recommendations on the Ashland/NSP Lakefront Site (SDMS ID: 311813)	4
6	10/16/02	Dunn, J., WDNR	Peterson, J., U.S. EPA	Letter re: WDNR Comments on CSTAG Recommendations for the Ashland/NSP Lakefront Site (SDMS ID: 311814)	11
7	10/22/02	Xcel Energy	U.S. EPA	U.S. EPA Responses to Selected CSTAG Recommendations on the Ashland/NSP Lakefront Site (SDMS ID: 311812)	7
8	02/25/03	Short Elliott Hendrickson, Inc.	WDNR	Quality Assurance Project Plan Task Specific OU4 Winter 2003 Sediment Sampling (SDMS ID: 278366)	694

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9	02/27/03	Trainer, D., URS	Dunn, J., WDNR	Letter re: Quality Assurance Project Plan Addendum Task Specific OU4 Winter Sediment Split Sample Collection (SDMS ID: 278365)	229
10	09/25/03	ATSDR	U.S. EPA	Public Health Assessment (SDMS ID: 311805)	34
11	11/14/03	U.S. EPA	Respondent	Administrative Order on Consent for Remedial Investigation/Feasibility Study (SDMS ID: 203048)	34
12	07/26/04	Jaffess, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: U.S. EPA Comments on the February 18, 2004 Draft RI/FS Work Plan (SDMS ID: 311807)	167
13	10/00/04	URS	U.S. EPA	Field Sampling Plan (Revision 1) (SDMS ID: 278371)	248
14	01/00/05	WDNR	U.S. EPA	Community Involvement Plan (SDMS ID: 311807)	49
15	02/00/05	URS	U.S. EPA	Remedial Investigation/Feasibility Study Work-Plan (Revision 2) (SDMS ID: 311769)	639
16	02/22/06	Winslow, J., Xcel Energy	Hansen, S., U.S. EPA	Letter re: Revised Schedule and Proposed Table of Contents for the Remedial Investigation (SDMS ID: 313807)	14
17	03/21/06	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Approval of Revised RI Submittal Schedule w/Attachment (SDMS ID: 313774)	3
18	08/15/06	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Comments on the Draft Human Health Risk Assessment (SDMS ID: 313767)	8
19	08/29/06	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Comments on the Draft Remedial Investigation (SDMS ID: 313766)	14

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20	09/01/06	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Comments on the Draft Baseline Eco- logical Risk Assessment (SDMS ID: 313768)	18
21	09/12/06	Winslow, J., Xcel Energy	Hansen, S., U.S. EPA	Letter re: RI/FS Schedule Modification (SDMS ID: 313806)	5
22	10/18/06	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Response to RI/FS Schedule Modifi- cations Request (SDMS ID: 313773)	3
23	10/25/06	Winslow, J., Xcel Energy	Hansen, S., U.S. EPA	Letter re: Response to October 18, 2006 Letter Regarding RI/FS Schedule Modification Request (SDMS ID: 313805)	4
24	10/27/06	Northern States Power Company	U.S. EPA	NSPW Responses to Agency Comments to the Baseline Ecological Risk Assessment Draft RI Report (SDMS ID: 313799)	59
25	10/27/06	Northern States Power Company	U.S. EPA	NSPW Responses to Agency Comments On the Draft RI Report (SDMS ID: 313800)	40
26	10/27/06	Northern States Power Company	U.S. EPA	NSPW Responses to Agency Comments to the Human Health Risk Assessment Draft RI Report (SDMS ID: 313801)	16
27	10/30/06	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Additional Responses to the RI/FS Schedule Modifications Request (SDMS ID: 313776)	3
28	12/22/06	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Comments on Xcel's Response to EPA's Comments on the Draft BERA (SDMS ID: 313764)	8
29	12/22/06	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Comments on Xcel's Response to EPA's Draft RI Comments (SDMS ID: 313763)	12
30	12/22/06	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Comments on Xcel's Response to EPA's Comments on the Draft HHRA (SDMS ID: 313762)	4

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31	03/15/07	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Comments to Alternatives Screening Technical Memorandum (SDMS ID: 313770)	12
32	03/15/07	Northern States Power Company	U.S. EPA	NSPW Responses to Agency Comments Dated March 15, 2007 to the Draft Alter- natives Screening Tech- nical Memorandum (SDMS ID: 313802)	25
33	04/05/07	U.S. EPA	File	Technical Memorandum on the Derivation of Sediment Preliminary Remediation Goal (PRG) for the Ashland Lake- front Site (SDMS ID: 311768)	37
34	04/25/07	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Final Re- visions to the Remedial Action Objectives w/ Attachment (SDMS ID: 313760)	73
35	05/14/07	Hurst, P., URS Corp.	Nehls-Lowe, H., WI Dept. of Health & Family Services	Technical Memorandum: Comments on Human Health Risk Assessment (SDMS ID: 313811)	6
36	05/18/07	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Final Re- visions to the Revised Remedial Investigation Report w/Attached Report (SDMS ID: 313781)	237
37	05/29/07	Hurst, P., URS Corp.	Nehls-Lowe, H., WI Dept. of Health & Family Services	Technical Memorandum: Comments on Human Health Risk Assessment (SDMS ID: 313812)	20
38	06/06/07	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Final Re- medial Action Objectives Technical Memorandum w/Attachment (SDMS ID: 313761)	30
39	07/09/07	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Final Re- visions to the Revised Remedial Investigation w/Attached Report (SDMS ID: 313782)	237

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40	07/09/07	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Final Revisions to Alternatives Screening Technical Memorandum w/Attachment (SDMS ID: 313780)	90
41	07/10/07	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Final Revisions to the Revised BERA w/Attached Report (SDMS ID: 313778)	178
42	07/10/07	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Final Revisions to the Revised HHRA w/Attached Report (SDMS ID: 313783)	92
43	08/17/07	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Final Revisions to the Revised Remedial Investigation w/Attached Report (SDMS ID: 313784)	237
44	08/17/07	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Report: Final Revisions to Alternatives Screening Technical Memorandum w/ Attached Cover Letter (SDMS ID: 313786)	94
45	08/23/07	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Final Revisions to the HHRA w/Attached Report (SDMS ID: 313779)	109
46	08/23/07	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Final Revisions to the BERA w/Attached Report (SDMS ID: 313785)	181
47	08/31/07	URS	Northern States Power Company	Final Report: Remedial Investigation Report Volume 1 of 12 (Text, tables, Figures) (SDMS ID: 311770)	614
48	08/31/07	URS	Northern States Power Company	Final Report: Remedial Investigation Report Volume 2 of 12 (Appendices A-D) (SDMS ID: 311771)	1185
49	08/31/07	URS	Northern States Power Company	Final Report: Remedial Investigation Report Volume 3 of 12 (Appendix E) (SDMS ID: 311773)	1520

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50	08/31/07	URS	Northern States Power Company	Final Report: Remedial Investigation Report Volume 4 of 12 (Appendix E) (SDMS ID: 311774)	1396
51	08/31/07	URS	Northern States Power Company	Final Report: Remedial Investigation Report Volume 5 of 12 (Appendix E) (SDMS ID: 311775)	1317
52	08/31/07	URS	Northern States Power Company	Final Report: Remedial Investigation Report Volume 6 of 12 (Appendices E-F) (SDMS ID: 311776)	994
53	08/31/07	URS	Northern States Power Company	Final Report: Remedial Investigation Report Volume 7 of 12 (Appendix G) (SDMS ID: 311777)	1466
54	08/31/07	URS	Northern States Power Company	Final Report: Remedial Investigation Report Volume 8 of 12 (Appendix G) (SDMS ID: 311778)	1511
55	08/31/07	URS	Northern States Power Company	Final Report: Remedial Investigation Report Volume 9 of 12 (Appendix G) (SDMS ID: 311779)	942
56	08/31/07	URS	Northern States Power Company	Final Report: Remedial Investigation Report Volume 10 of 12 (Human Health Risk Assessment Part 1 of 2) (SDMS ID: 311780)	1097
57	08/31/07	URS	Northern States Power Company	Final Report: Remedial Investigation Report Volume 11 of 12 (Human Health Risk Assessment Part 2 of 2) (SDMS ID: 311781)	1289
58	08/31/07	URS	Northern States Power Company	Final Report: Remedial Investigation Report Volume 12 of 12 (Baseline Ecological Risk) (SDMS ID: 311782)	927
59	08/31/07	Trainor, D., NewFields	Hansen, S., U.S. EPA	Letter re: Final Remedial Investigation Report (SDMS ID: 313809)	4

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60	09/07/07	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Comments/Sug- gested Changes to Draft Comparative Analysis of Alternatives Technical Memorandum (SDMS ID: 313795)	135
61	09/19/07	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Additional Comments to Remedial In- vestigation and HHRA (SDMS ID: 313777)	4
62	09/24/07	Winslow, J., Xcel Energy	Hansen, S., U.S. EPA	Letter re: Response to to U.S. EPA's Required Changes to the Baseline Ecological Risk Asses- sment (SDMS ID: 313804)	8
63	09/26/07	Traylor, D., NewFields	Hansen, S., U.S. EPA	Letter re: Errata for Remedial Investigation Report - Final Human Health Risk Assessment (SDMS ID: 313810)	16
64	10/00/07	U.S. EPA	Public	Fact Sheet: Cleanup Investigation Complete; Identifying Options is Next Step (SDMS ID: 311808)	8
65	02/05/08	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Required Changes to the Baseline Ecological Risk Assessment (SDMS ID: 313759)	5
66	02/05/08	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Approval of Remedial Investigation Report (SDMS ID: 313772)	1
67	02/15/08	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Comments to the Draft Feasibility Study (SDMS ID: 313769)	39
68	05/15/08	Northern States Power Company	U.S. EPA	NSPW Responses to Agency Comments Dated Feb. 15, 2008 on the FS Report Dated Oct. 29, 2007 (SDMS ID: 313797)	70
69	05/15/08	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Revised Draft Report: Feasibility Study (SDMS ID: 313788)	298
70	05/27/08	Traylor, D., NewFields	Hansen, S., U.S. EPA	Errata for the Revised Draft Feasibility Study Report (SDMS ID: 313813)	1

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71	06/17/08	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Comments on the Groundwater Sampling Plan (SDMS ID: 313765)	4
72	07/03/08	Winslow, J., Xcel Energy	Hansen, S., U.S. EPA	Letter re: Response to Comments on Groundwater Sampling Plan w/Attach- ments (SDMS ID: 311803)	72
73	07/31/08	URS	Northern States Power Company	Groundwater Sampling Plan (SDMS ID: 311809)	64
74	08/01/08	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Approval of Groundwater Sampling Plan (SDMS ID: 313771)	1
75	08/01/08	Winslow, J., Xcel Energy	Hansen, S., U.S. EPA	Letter re: Final Ground- water Sampling Plan (SDMS ID: 313808)	2
76	09/25/08	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Final Revisions and Comments to the Revised Feasibility Study (SDMS ID: 313787)	18
77	10/24/08	Northern States Power Company	U.S. EPA	NSPW Responses to Agency Comments Dated Sept. 25, 2008 on Revised Draft FS Report Dated May 15, 2008 (SDMS ID: 313798)	50
78	11/00/08	U.S. EPA	Public	Information Sheet: Review of Cleanup Options Done; Selection of Plan is Next Step (SDMS ID: 313792)	4
79	11/21/08	Northern States Power Company	U.S. EPA	NSPW Responses to Agency Comments Dated Nov. 13, 2008 on the Revised Final Draft FS Dated Oct. 24, 2008 (SDMS ID: 313796)	4
80	12/04/08	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Approval of Final Feasibility Study (SDMS ID: 313775)	2
81	12/05/08	URS	Northern States Power Company	Final Report: Feasibility Study Volume 1 of 2 (Text, Figures, Appendix A) (SDMS ID: 311783)	685
82	12/05/08	URS	Northern States Power Company	Final Report: Feasibility Study Volume 2 of 2 (Appendices B-H) (SDMS ID: 311784)	1000

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83	12/10/98	U.S. EPA	File	Presentation Slides: Ashland NSP Lakefront Superfund Site: Cleanup Options Information Meeting December 10, 2008 (SDMS ID: 313789)	58
84	06/01/09	U.S. EPA	Public	Fact Sheet: EPA Proposes Cleanup Plan (SDMS ID: 311816)	14
85	06/01/09	U.S. EPA	Public	U.S. EPA Proposed Plan (SDMS ID: 311815)	31
86	06/04/09	U.S. EPA	Public	NPL Fact Sheet: Ashland/ Northern States Power Lakefront Site (SDMS ID: 313790)	3
87	06/17/09	U.S. EPA	Public	Public Announcement for June 17, 2009 Information Session and June 29, 2009 Public Hearing (SDMS ID: 313793)	2
<u>UPDATE #1</u>					
JANUARY 11, 2010					
1	00/00/02	Smith Group, JJR	City of Ashland	Waterfront Development Plan (SDMS ID: 349946)	2
2	10/00/08	U.S. EPA/ Region 5	U.S. EPA/ NRRB	National Remedy Review Board Consideration for the Ashland/NSP Lakefront Superfund Site (SDMS ID: 349949)	100
3	05/21/09	Karl, R., U.S. EPA	Garrahan, K., U.S. EPA	Letter re: Region 5 Response to National Remedy Review Board Recommendations for Ashland/NSP Lakefront Site (SDMS ID: 349939)	8
4	06/29/09	Edwards Court Reporting	U.S. EPA	Transcript of the June 29, 2009 Proposed Plan Public Meeting for the Ashland/NSP Lakefront Site (SDMS ID: 349945)	60
5	07/09/09	Gurnoe-Soulier, R., Red Cliff Band of Lake Superior Chippewas	Krause, P., U.S. EPA	Letter re: Red Cliff Band Comments on the Proposed Cleanup Plan for the Ashland/NSP Lakefront Site (SDMS ID: 349938)	1

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6	07/14/09	Warzecha, C., Wisconsin Department of Health Services	Hansen, S., U.S. EPA	Letter re: DHS Comments on the Proposed Plan for Remediation of the Ash- land/NSP Lakefront Site (SDMS ID: 349942)	1
7	08/11/09	Monroe, E. & R. Peterson, City of Ashland	Krause, P., U.S. EPA	Letter re: City of Ashland Comments on the Proposed Plan for the Ashland/NSP Lakefront Site (SDMS ID: 349940)	2
8	08/14/09	Giesfeldt, M., WDNR	Karl, R., U.S. EPA	Letter re: WDNR Concur- rence with the Proposed Plan for the Ashland/ NSP Lakefront Site (SDMS ID: 349941)	2
9	08/17/09	Burns & McDonnell, DCI Environ- mental and Sevenson Environmental	Northern States Power Wisconsin	Constructability Review re: EPA Proposed Plan (June 2009) for the Ashland/NSP Lakefront Site (SDMS ID: 349944)	82
10	08/17/09	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Performance Standards for Pilot Test at the Ashland/NSP Lake- front Site (SDMS ID: 349947)	2
11	08/17/09	Winslow, J., Xcel Energy	Krause, P., U.S. EPA	Letter re: Xcel Comments on the Proposed Plan for The Ashland/NSP Lakefront Site (SDMS ID: 349943)	152
12	08/18/09	Concerned Citizens	Krause, P., U.S. EPA	Comments from Concerned Citizens on the Proposed Cleanup Plan for the Ashland/NSP Lakefront Site Received June 29- August 18, 2009 (PORTIONS OF THIS DOCUMENT HAVE BEEN REDACTED) (SDMS ID: 349951)	17
13	10/21/09	Hansen, S., U.S. EPA	Winslow, J., Xcel Energy	Letter re: Performance Standards for Wet Dredging Scenario for the Ashland/ NSP Lakefront Site (SDMS ID: 349948)	6

UPDATE #2
SEPTEMBER 30, 2010

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	10/00/85	Long, E., U.S. NOAA and P. Chapman, EVS Consultants	File	Journal Article: "A Sediment Quality Triad: Measures of Sediment Con- tamination, Toxicity and Infaunal Community Compo- sition in Puget Sound (Marine Pollution Bulletin Volume 16, Number 10) (SDMS ID: 371004)	11
2	00/00/90	U.S. NOAA	File	The Potential for Bio- logical Effects of Sedi- ment-Sorbed Contaminants Tested in the National Status and Trends Program (NOAA Technical Memorandum NOS OMA 52) (SDMS ID: 371006)	227
3	08/00/93	Environment Canada	File	Guidelines for the Pro- tection and Management of Aquatic Sediment Quality in Ontario (92-2309-067) (SDMS ID: 371003)	33
4	03/02/98	Trainor, D., Dames & Moore	Dunn, J., WDNR	Letter re: Coal Tar Production Calculations and Response to WDNR February 20, 1998 Letter and February 24 1998 Amendment (SDMS ID: 370807)	6
5	03/24/98	McColloch, M. & D. Trainor, Dames & Moore	Musso, J., Northern States Power Company	Letter re: Exploration Trench Activities and Findings for the Northern States Power Ashland Facility (SDMS ID: 371001)	23
6	12/04/98	Trainor, D., Dames & Moore	Crass, D., Michael Best & Friedrich	Letter re: Gas and Tar Production and Release Estimates at the Former MGP-NSP Ashland Facility. (SDMS ID: 370806)	7
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8	02/19/02	Trainor, D., URS	Winslow, J., Xcel Energy	Letter re: NSP Ashland Lakefront Sediment-Clay Tile Investigation Report	38

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APPENDIX D

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
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December 15, 2016

Douglas Ballotti
Acting Director, Superfund Division
US Environmental Protection Agency, Region 5
77 West Jackson Blvd.
Chicago IL 60604

Subject: Concurrence on the Explanation of Significant Differences
Ashland Northern State Power Lakefront Superfund Site, Ashland, Wisconsin CERCLIS #:
WISFN0507952 BRRTS #: 02-02-000013

Dear Mr. Ballotti:

Doug

The Department of Natural Resources has received the EPA Superfund Explanation of Significant Differences, dated December 2016, associated with the Ashland Northern State Power Lakefront Superfund Site, CERCLIS # WISFN0507952, located in Ashland Wisconsin. The Department concurs in the findings and supports the modifications described in the Explanation of Significant Differences to the original Record of Decision and believes these are consistent with the requirements of Wisconsin statutes and administrative rules.

On September 30, 2010 EPA issued the Record of Decision (ROD) relating to the cleanup at the Ashland Northern States Power Lakefront Superfund Site (Site). As you are aware, the ROD addressed the cleanup of four operable units or areas of concern: (1) soil and shallow groundwater under Kreher Park; (2) soil and shallow groundwater under the Upper Bluff and the Filled Ravine; (3) groundwater at depth in the Copper Falls Aquifer; and (4) sediment in Chequamegon Bay. This ESD addresses only the sediment portion of the cleanup.

The remedy selected for the sediments in the ROD called for the dry excavation of all near-shore sediment and wood debris and dredging the remaining contaminated material above the Remedial Action Levels or clean-up goal of 2,295 micrograms total PAH/gram organic carbon or 9.5 parts per million of tPAH dry weight at 0.415% organic carbon. Both DNR and EPA had concerns over the ability to achieve the cleanup goal and other performance standards using wet dredge technology. However in response to concerns raised by Northern States Power of Wisconsin (NSPW) the ROD allowed a pre-design wet dredge pilot study to be conducted to determine if the clean-up goals and performance standards could be achieved.

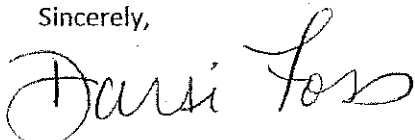
NSP obtained approval to conduct a wet dredge pilot project and in 2014 EPA entered into an Administrative Order of Consent with NSPW relating to the Wet Dredge Pilot Study. In September 2014, the initial wet dredge pilot project containment system failed prior to start of dredging and NSPW was given an extension until 2015 to complete pilot. During the summer of 2015 NSPW installed a permanent breakwater and was given an extension until December 2016 to complete Wet Dredge Pilot. An Amended Administrative Order of Consent was signed on March 14, 2016 authorizing the Wet Dredge Pilot Study work to begin in May 2016.

The pilot project which was completed in July 2016 demonstrated the ability to meet cleanup goals and performance standards using a combination of mechanical and hydraulic dredging technologies. Based upon the success of the pilot project NSPW has requested that they be allowed to move to a full scale remedy using dredging technologies to address contaminated sediment at the site.

DNR has reviewed the technical documents related to this operable unit and is in support of the wet dredge project. Proceeding with wet dredge remedial option will require an Explanation of Significant Differences (ESD) justifying the change in the ROD. The Department concurs with this modification to the selected remedy at the Ashland Northern State Power Lakefront Superfund Site, as described above and in the attached ESD, to allow sediment in Chequamegon Bay to be wet dredged in the near shore area instead of utilizing dry excavation.

Thank you for your support and cooperation in addressing the contamination at the Superfund site. Please feel free to contact either John Robinson at 715-359-8932 or Jamie Dunn at 715-635-4049 if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Darsi Foss".

Darsi Foss, Program Director
Bureau for Remediation and Redevelopment

cc: Judy L. Fassbender, Section Chief, Policy and Technical Resource Section RR/5
Jamie Dunn, Remediation and Redevelopment Program, NOR/Spooner
John Robinson, Remediation and Redevelopment Program, NOR/Wausau
Jessica Kramer, Bureau of Legal Services, LS/8
Scott Hansen, U.S. EPA Region 5
Craig Melodia, U.S. EPA Region 5