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Mr. Phil Richard
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**USEPA/WDNR Cooperative Agreement Work Plan - Revised
Wetland Excavation and Surface Debris Mitigation
Penta Wood Products Superfund Site, Siren, Wisconsin
WDNR BRRTS Activity #02-07-000532**

Dear Phil:

1. Introduction

GHD Services Inc. (GHD) has prepared this letter presenting a work plan intended to be included with a cooperative agreement between the Wisconsin Department of Natural Resources (WDNR) and United States Environmental Protection Agency (USEPA) for wetland excavation and surface debris mitigation at the Penta Wood Products Superfund Site (Site) located in Siren, Wisconsin. The objectives of this work plan are to excavate and remove impacted soil and sediment from the wetland at properties located adjacent to the Site, place this impacted material within an expanded corrective action management unit (CAMU) on the Site property, and cover impacted surface debris.

2. Background

2.1 Background

The Site is an inactive wood-treating facility located on Daniels 70 (former State Route 70) in Burnett County, Wisconsin. It is located approximately 78 miles northeast of Minneapolis, Minnesota, and 60 miles south of Duluth, Minnesota (Figure 1.1). The Village of Siren, Wisconsin, is approximately 2 miles east of the Site. The Site plan is shown on Figure 1.2.

The Site property currently consists of approximately 82 acres that were actively used for wood-treating activities. Forty undeveloped, forested acres were sold after the facility closed. The property is located in a rural agricultural and residential setting and is bordered to the east, west, and north by forested areas. Some of these areas are classified by the State of Wisconsin as wetlands. With the exception of an 8-acre parcel, Daniels 70 forms the southern property boundary.

The Site is situated on a hill with an 110-foot drop in elevation from the southern boundary to the northern boundary. The Site stratigraphy consists of three layers: an upper sand layer, a silt and clay layer that is not continuous throughout the Site, and a lower sand layer. The depth to groundwater is typically 100 feet or more from the ground surface. Groundwater occurs both in a thin, unconfined aquifer, and within the semi-confined aquifer. The regional groundwater flow direction is to the north, although local groundwater flows radially away from the Site.

A number of surface water bodies are present north and east of the Site. Doctor Lake and an unnamed lake are located 2,000 feet east and northeast of the Site, respectively. Approximately 2,140 acres of lakes, 94 acres of bogs, and 7,500 acres of wetland are located within a 4-mile radius of the Site. A wetland is located within 130 feet of the northern property boundary.

2.2 Previous Remedial Actions

In September 1998, the ROD was finalized specifying remedies to address contamination associated with soil and sediment, surface water, 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 ARARs, including reducing contaminant concentrations in the groundwater beneath the Site to below WDNR's Preventive Action Limits.
- The remedial action for the contaminated soil was completed in 2000 and included the construction and consolidation of material into an onsite CAMU. The remedial action to address LNAPL and contaminated groundwater is ongoing and includes the following:
 - Groundwater extraction and treatment
 - LNAPL recovery
 - Bioventing
 - Monitored natural attenuation

A remediation system operated continuously from March 2004 through November 2015.

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

- Remove LNAPL, to the extent practicable, to reduce a source of PCP to the groundwater.
- Extract and treat the most concentrated portions (exceeding 1,000 µg/L) of 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.
- 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.
- Comply with discharge standards.

As of November 2015, the groundwater extraction and biovent systems ceased operations and were decommissioned to initiate the remediation system shutdown pilot study as conditionally approved by the USEPA in a letter dated November 17, 2015.

During 1999 and 2000, soil excavation work and associated sampling was conducted by CH2M HILL on behalf of the USEPA. As documented in the Remedial Action Report (December 2000, CH2M HILL), the Area 29 wetland excavation was completed and confirmation soil samples were collected. However, following sample collection, a storm washed impacted material back into the wetland. The material was re-excavated, but

confirmation samples were not collected. The impacted portion of the wetland is located on two separate parcels located adjacent to the Penta Wood Site. Parcels are identified and the former wetland excavation location is shown on drawings in the Final Remedial Design Report (GHD; October 27, 2021).

As of September 1, 2014, the WDNR assumed responsibility from the USEPA for continuing the remedial action at the Penta Wood Products Superfund Site. WDNR retained GHD to conduct the remedial action. WDNR directed GHD to collect soil/sediment samples from the Area 29 wetland to confirm the results of the previous USEPA sampling and delineate the extent of the impacted area.

A total of 39 soil samples were collected in 2017 from 15 soil boring locations. Samples were collected from the borings at depths ranging from the ground surface to 6 feet below the ground surface. The samples were submitted for laboratory analysis of PCP. The soil sample locations and results are provided in the Final Remedial Design Report (GHD; October 27, 2021).

PCP was detected above the USEPA criteria of 900 micrograms per kilogram ($\mu\text{g}/\text{kg}$) in eight of the soil samples. These soil sample results were generally consistent with the results previously reported by USEPA. However, a statistical evaluation of these results indicates that the soil/sediment within the sampling area requires additional measures to meet the cleanup objectives for the Site and surrounding properties.

During Site walks by GHD, surface debris was observed in three areas. One of the areas is located west-southwest of well MW7. In this area, a sawdust like material was observed. A second area of surface debris consisting primarily of treated wood is located north of wells MW17 and MW16. A third area included a small amount of drum debris west of well MW8. Samples were collected from the surface debris and submitted for laboratory analysis of volatile organic compounds (VOC), semivolatile organic compounds (SVOC), metals, PAHs, and PCP. Surface debris sample locations and results are provided in the Final Remedial Design Report (GHD; October 27, 2021).

Analysis of the debris samples show detections above Residual Contaminant Levels (RCLs) for Arsenic, PCP, and other SVOCs for direct contact and groundwater protection. Subsequent soil sampling under the surface debris confirmed that contamination levels meet the groundwater protection RCLs.

WDNR has requested that USEPA provide written approval of the Final Remedial Design Report (GHD; October 27, 2021) before implementing the remedial action.

3. Outcomes and Objectives

The objectives of this work plan are to remove impacted soil/sediment located in a wetland adjacent to the Penta Wood Site and covering impacted surface debris at the Penta Wood property to reduce long-term environmental concerns associated with these materials. The primary remedial action objectives include:

- Excavating and removing impacted soil/sediment from the wetland and placing this excavated material within an expanded corrective action management unit (CAMU) on the Site property
- Mitigating and covering impacted surface debris in place with clean borrow soil from the Site

4. Remedial Action Work Tasks

A detailed description of the remedial design is included in the Final Remedial Design Report (GHD; October 27, 2021) presenting a general project approach and strategy with a discussion of the following work tasks:

- Safety, security, decontamination, and work zones
- Access agreements

- Applicable or relevant and appropriate requirements
- Site preparation
- Wetland excavation
- Surface debris mitigation
- Restoration and vegetation establishment
- Surveying
- Bidding, contracting, and contract administration
- Reporting

5. Cost Estimate

Currently, WDNR lacks funding necessary to complete the remedial action. Based on the Final Remedial Design Report (GHD; October 27, 2021), the estimated cost to complete the remedial action is \$1,315,092, which includes a 30-percent contingency. Should contractor bids or differing Site conditions indicate that total project costs would exceed the estimated costs, WDNR would notify USEPA before proceeding with the work.

6. Schedule

The remedial action schedule is dependent on the timing of USEPA funding and bidding/contracting.

6.1 Surface Debris Mitigation

Surface debris mitigation is anticipated to start in the summer of 2022 with completion by late fall of 2022. Restoration and vegetation establishment would be completed by the fall of 2023. A report would be submitted within three months after completion of all remedial action work

6.2 Wetland Excavation

Prior to starting the wetland excavation, installation of erosion control measures and other Site preparation work would be completed in the fall of 2022. The wetland excavation would be completed during the winter of 2023. Grading and covering the excavated wetland soil and sediments would occur in spring of 2023. Restoration and vegetation establishment would be completed by the fall of 2023. A report would be submitted within three months after completion of all remedial action work. Please contact us if you have any questions.

Regards,

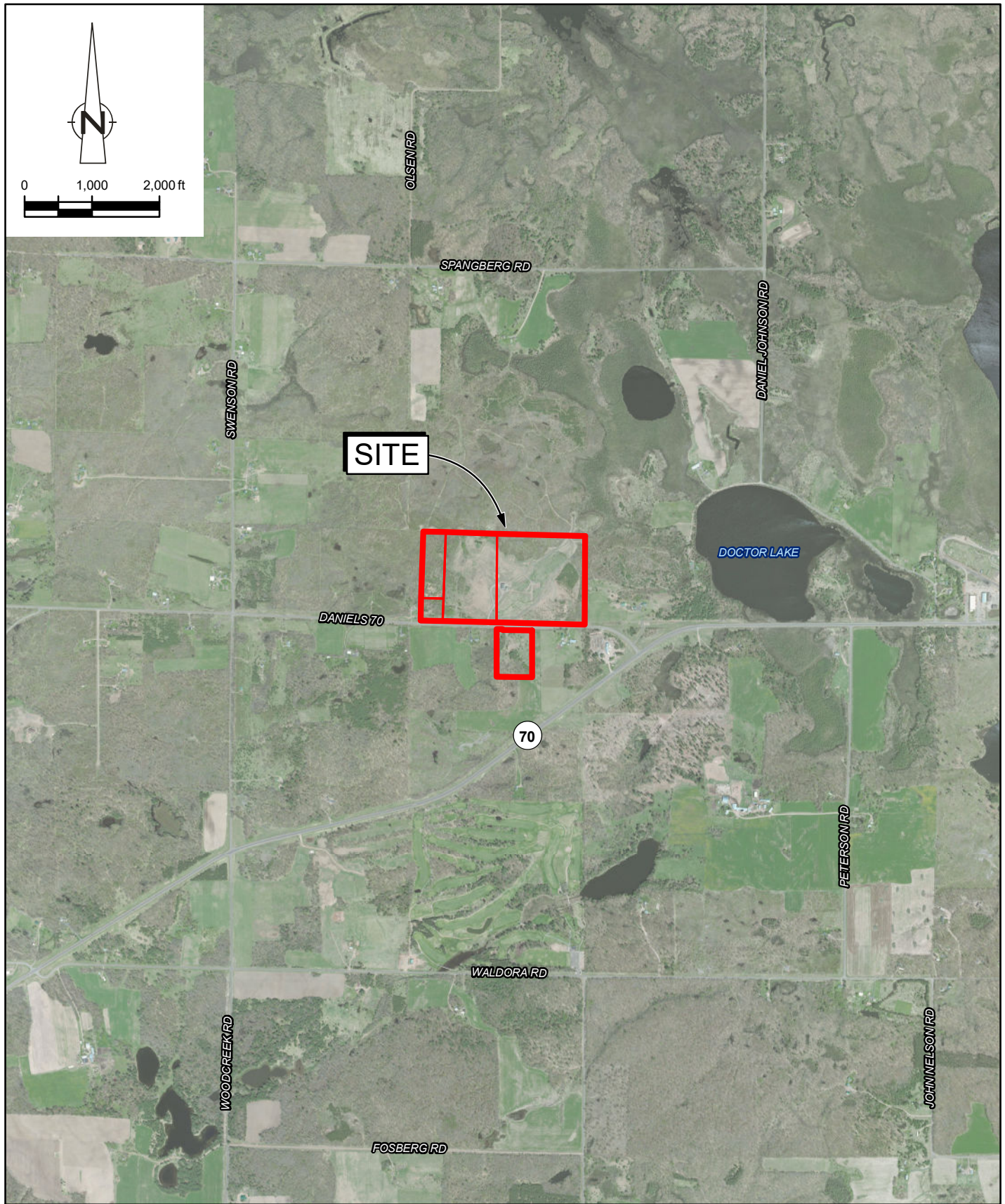


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Encl.



Source: Microsoft Corporation; Burnett County

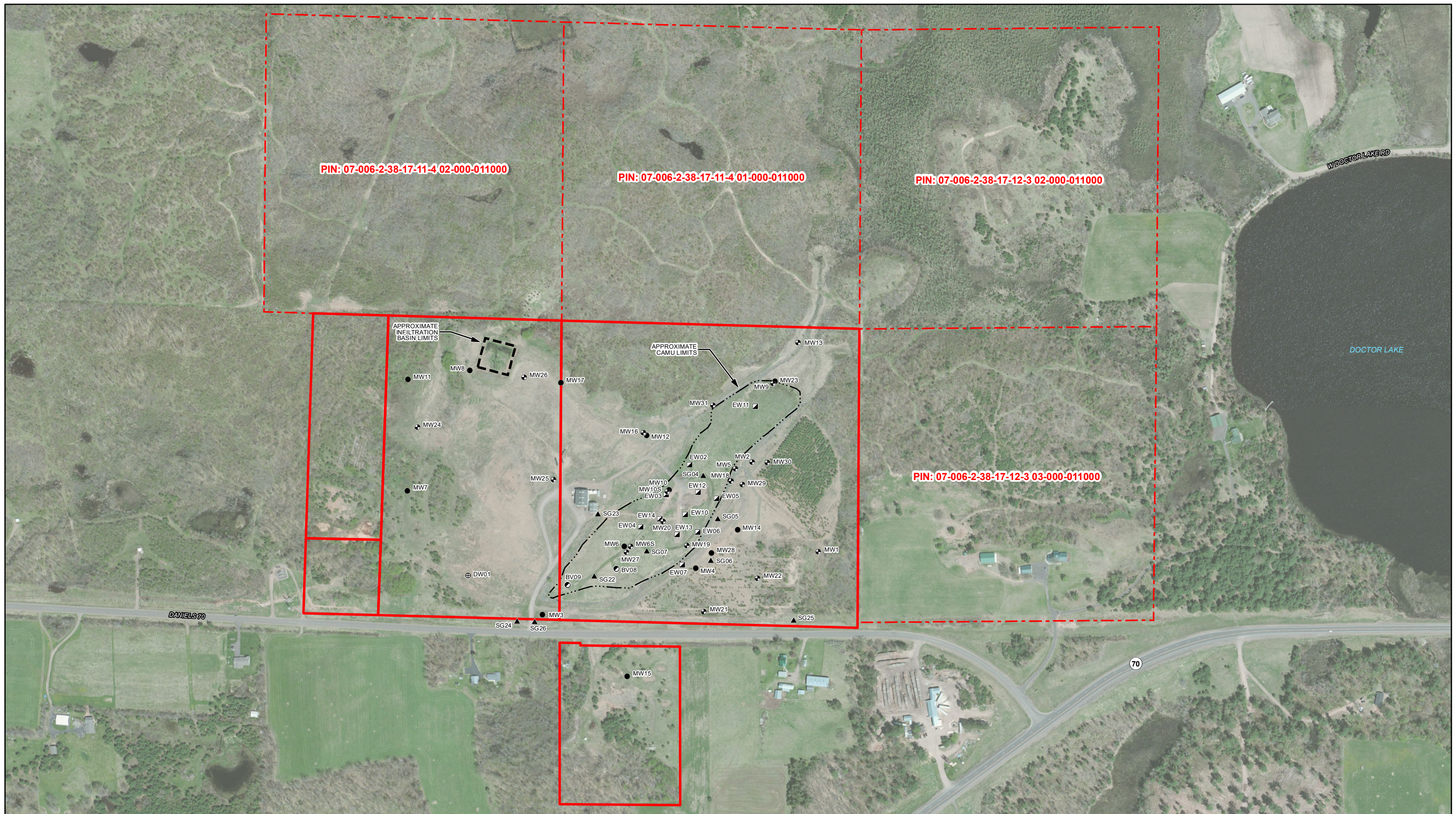


PENTA WOOD PRODUCTS SUPERFUND SITE
 SIREN, WISCONSIN
 WORK PLAN - WETLAND EXCAVATION AND SURFACE DEBRIS MITIGATION

086165-06-13
 Jun 28, 2019

SITE LOCATION

FIGURE 1.1



Source: DigitalGlobe 2011



LEGEND

- ▲ EXTRACTION WELL NEST
- UNCONFINED MONITORING WELL
- SEMICONFINED MONITORING WELL
- ⊕ WATER SUPPLY WELL
- BIOVENTING WELL
- ▲ SOIL GAS WELL NEST
- APPROXIMATE CAMU LIMIT
- SITE PARCEL BOUNDARY
- - - ADJACENT PARCEL BOUNDARY



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SITE PLAN

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FIGURE 1.2