



**Updated Materials Management Plan  
and Chapter NR 718 Exemption, C.  
Reiss Coal Dock Property**

**Superior, Wisconsin**

**WDNR BRRTS # 02-16-589248  
Facility ID # 816130810**

**October 14, 2022**

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**UPDATED MATERIALS MANAGEMENT PLAN AND CHAPTER NR 718 EXEMPTION, C. REISS COAL DOCK PROPERTY, SUPERIOR, WISCONSIN**

October 14, 2022


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October 14, 2022

## **TABLE OF CONTENTS**

<b>1.0 OVERVIEW .....</b>	<b>1</b>
<b>2.0 MATERIAL MANAGEMENT PLAN .....</b>	<b>3</b>
2.1 SOIL AND SEDIMENT QUALITY .....	3
2.2 MATERIAL MOVEMENT AND MANAGEMENT .....	3
2.3 GRADING PLAN .....	<u>665</u>
2.4 SEDIMENT DEWATERING & CONTROLS .....	<u>776</u>
2.5 OFFSITE DISPOSAL OF CONTAMINATED MATERIALS.....	<u>786</u>
2.6 EXCAVATION BACKFILL .....	<u>886</u>
2.7 CONSTRUCTION OBSERVATION.....	<u>886</u>
2.9 ENGINEERED SURFACE BARRIER.....	<u>887</u>
2.10 CONSTRUCTION DOCUMENTATION REPORT .....	<u>997</u>
2.11 CONTINUING OBLIGATIONS .....	<u>10407</u>
<b>3.0 NR 718 EXEMPTION REQUEST .....</b>	<b><u>11119</u></b>
3.1 PURPOSE OF REQUEST.....	<u>11119</u>
3.2 – APPLICABLE FEES.....	<u>11119</u>
3.3 – PROPERTY AND CONTACT INFORMATION .....	<u>11119</u>
3.4 WASTE CHARACTERISTICS.....	<u>121210</u>
3.5 PROJECT DESCRIPTION/MATERIAL MANAGEMENT PLAN.....	<u>191815</u>
3.6 RECEIVING SITE OR FACILITY INFORMATION.....	<u>222218</u>
3.7 LOCATIONAL CRITERIA .....	<u>222219</u>
3.8 ADDITIONAL INFORMATION FOR NON-METALLIC MINE RECEIVING SITES OR FACILITIES.....	<u>242420</u>
3.9 CONTINUING OBLIGATIONS.....	<u>242420</u>
3.10 FIGURES .....	<u>252521</u>
3.11 ADDITIONAL ATTACHMENTS .....	<u>262622</u>
3.12 CERTIFICATION STATEMENTS.....	<u>272623</u>
<b>4.0 REFERENCES .....</b>	<b><u>292824</u></b>

October 14, 2022

## **LIST OF FIGURES**

Figure 1 – Site Location and Local Topography

Figure 2 – Site Layout and Borehole Locations

Figures 3a,b,c – Cut Extent

Figures 3c,e,f – Final Surface Cut Fill Extent

Figure 4 – Proposed Site Cover System

Figure 5 – Berm Construction Details

Figure 6 – Proposed Pond Detail

Figure 7 – Groundwater Plan View

Figure 8 – Groundwater Cross Section Details

Figure 9 – Petroleum Pipeline Abandonment Detail

Figure 10 – Soil Quality – Plan View

Figure 11 – Soil Quality – Profile View

Figure 12 – Grading Plan

## **LIST OF TABLES**

Table 1 – Soil Analytical Results, December 2021

Table 2 – Soil Analytical Results, May 2022

Table 3 – Sediment Analytical Results, ch. NR720 WAC, December 2021

Table 4 – Sediment Analytical Results, RR-088, December 2021

Table 5 – Site Water and Data Quality Sample Summary, December 2021

Table 6 – Elutriate Sample Summary, December 2021

Table 7 – Waste Characterization Analytical Results, May 2022

## **LIST OF APPENDICES**

Attachment A – Site Redevelopment Plans

Attachment B – City of Superior/Douglas County Online Parcel Map

Attachment C – BNSF Notifications

Attachment D – Draft Cap Maintenance Plan

Attachment E – Wetland Hydrologic Modeling Memo

Attachment F – AET (2022) Report of Geotechnical Exploration

Attachment G – Compiled Sediment Data (2015 – 2021)

Attachment H – Property Deeds

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October 14, 2022

## 1.0 OVERVIEW

This document was prepared by Stantec Consulting Services Inc. (Stantec) on behalf of C. Reiss Company, LLC (“C. Reiss” also referenced as the Developer) and presents an updated Materials Management Plan (MMP) and a Chapter NR 718 Wisconsin Administrative Code (WAC) Exemption request (Section 3.0) for future soil and sediment management activities to be completed as part of redevelopment activities on the C. Reiss Coal Dock property in Superior, Wisconsin (herein referred to as the “Site” or “Property”). This document serves as an update to the Stantec (2022d) “Materials Management Plan and Chapter NR 718 Exemption” dated July 6, 2022 (herein referred to as the Stantec [2022d] Materials Management Plan) and incorporates clarifications and additional information requested by the Wisconsin Department of Natural Resources (WDNR) on August 12, 2022 via letter correspondence entitled “Additional Information Requested for DNR Review and Determination on Materials Management Plan and Ch. NR 718 Exemption Request for C. Reiss Coal Dock Property” (WDNR, 2022a). This document was prepared to outline proposed redevelopment of the Property for industrial reuse. The general Property location is illustrated on **Figure 1**. Site layout and investigative features are illustrated on **Figure 2**.

The Property, currently owned by C. Reiss, consists of a vacant, former industrial dock parcel (Parcel Identification Number 048040101400). In addition, a small parcel (parcel No. 04-804-01003-00) currently owned by the BNSF Railway Company is present within the Property and will be subject to continuing obligations (cap maintenance over residual soil contamination; refer to Sections 2.0 and 3.0 for additional details). Stantec provided notifications to Ms. Cathy Clune, JLL Rail Practice Group, on August 13, 2022 via certified mail pursuant to ch. NR 725.07 requirements, with additional notification to Mr. Mark Gjevre, BNSF Railway, on August 15, 2022 to alert them of intended redevelopment plans. It should be stated that the C. Reiss is currently in negotiations with BNSF Railway Company to purchase the parcel. It is anticipated that the parcel would transfer ownership prior to property redevelopment activities. Copies of these notifications are provided as Attachment C. Copies of these notifications are provided as **Attachment C**.

No buildings currently exist on the Property. The northern portion of the Property serves as access to the west-adjointing dock slip and is primarily surfaced with concrete panels that are approximately four inches thick, eight feet long and eight feet wide. The metal remnants of a former aboveground oil-water separator tank enclosed within a chain link fence along with two, eight-inch buried/inactive petroleum pipelines are present east of the south end of the dock slip. The pipelines travel from this area to the east-adjointing property. The southern portion of the Property generally consists of wooded areas and wetlands, with a deteriorating access road along the western Property boundary. Former dock operations included petroleum product and open-air coal storage and transloading, and coal briquet manufacturing from the late 19<sup>th</sup> Century through the late 20<sup>th</sup> Century. Surrounding properties are mainly industrial in use.

Soil contamination resulting from past petroleum release(s) and the presence of industrial fill in surficial soils is documented at an existing, open Bureau for Remediation and Redevelopment Tracking System (BRRTS) case on the Property (03-16-000320 MURPHY MARINE TERMINAL), with multiple BRRTS cases present at the east-adjointing property that have been documented as impacting soil and/or groundwater at the Property. These include:

- 02-16-297977 AMOCO OIL BARGE DOCK - FMR BARGE DOCK (closed),
- 02-16-297979 AMOCO BARGE DOCK - OW SEPARATOR & LOAD RACK (open), and
- 02-16-117873 AMOCO BARGE DOCK - MANIFOLD & AST AREA (open).

Stantec conducted sediment characterization and limited soil investigation activities at the Property in December 2021 to evaluate soil quality in a small area of future Property development. Soil investigation results were documented in a letter titled “*Summary of Limited Soil Investigation, C. Reiss Coal dock Property, Superior, Wisconsin*” dated February 15, 2022 (Stantec, 2022a) and submitted to the Wisconsin Department of Natural Resources (WDNR). Following receipt of the soil investigation results, the WDNR assigned the current BRRTS case to the Property (02-16-589248 C REISS COAL DOCK PROPERTY). Stantec conducted additional soil investigation and waste characterization activities at the Property in May 2022. The results of the May 2022 investigation are summarized in Section 3.0 and detailed further in the “*May 2022 Site*

October 14, 2022

*Investigation*” report (Stantec, 2022b). Historical environmental investigation data for the Property along with the data generated during the December 2021 and May 2022 investigation activities will be used to guide the management, redeposition, disposal of, and/or capping of excavated soil and other materials during redevelopment activities at the Property. A map illustrating the sample locations and main features of the Property is provided as **Figure 2**. Tabulated December 2021 and May 2022 data are provided in **Table 1** through **Table 7**.

~~C. Reiss~~~~The Developer~~ plans to reestablish industrial bulk material handling operations at the Property by installing infrastructure for shipments by truck and rail as well as dock wall rehabilitation and sediment dredging. The redevelopment will consist of constructing an office building, storage and maintenance building, parking lot, truck scale, railroad, rail yard, rail scale, access roads, a large soil berms, drainage swale, temporary diversion berm, stormwater retention pond, and a perimeter security fence. The project is anticipated to start in September 2022 and be completed in July 2023. Site redevelopment plans are included as **Attachment A**.

In order to facilitate overall redevelopment of the Site, onsite management of contaminated dredged sediment containing polynuclear aromatic hydrocarbons (PAHs) and soils containing PAHs, Resource Conservation and Recovery Act (RCRA) metals, and/or low levels of petroleum volatile organic compounds (PVOCs) is proposed in compliance with Chapter NR 718 WAC (NR 718) requirements. Although not anticipated, any excavated soil not re-used onsite will be disposed of at a licensed solid waste disposal facility. To address a potential direct contact concern, a cap will be placed over those portions of the Property that contain contaminated soil and/or sediment to protect public health and the environment using WDNR RR-709 “Guidance for Cover Systems as Soil Performance Standard Remedies”. Further information regarding the contaminants identified at the Site and the proposed MMP is provided in Section 2.0.

October 14, 2022

## 2.0 MATERIAL MANAGEMENT PLAN

This MMP has been developed to manage soil and sediment within the Property boundaries in a manner that does not expand the current limits of contamination, exacerbate existing groundwater contamination risks, or create new risks such as a direct contact risk. Proposed material handling and placement procedures will meet environmental closure requirements of Chapter NR 726.13(b) WAC and shall not pose an unacceptable threat to public health, safety, welfare or the environment.

### 2.1 SOIL AND SEDIMENT QUALITY

Black granular fill material was encountered across the entire Property and was identified to contain RCRA metals and/or PAHs at concentrations exceeding their respective Chapter NR720 WAC (NR720) industrial direct contact (IDC) residual contaminant levels (RCLs). The depth of the identified black granular fill varies across the Property but extends from the ground surface to approximately three (3) feet below grade (fbg) on average with a maximum depth exceeding twelve (12) fbg in the area of soil boring STN5 (refer to **Figure 2**). Fill consisting of red sandy soils was identified to underlie the black granular fill on the northern portion of the Property in the footprint of the dock. Native clay soils underlie the black granular fill on the southern portion of the Property. Native fine sand soils underlie the red sandy fill on the northern portion of the Property. Based on the results of samples collected during the December 2021 and May 2022 investigation activities, native clay soils were not identified as being impacted with contaminant concentrations exceeding NR720 RCLs (Stantec, 2022a,b).

No VOC constituents were detected in fill or native soils as part of the December 2021 sampling event. PVOC constituents were detected at concentrations greater than their respective NR720 groundwater protection (GW) RCLs in two samples at the Property (STN2 and STN16; **Figure 2**) collected in May 2022. No other fill or native soils screened/sampled elsewhere on the Property were detected to have VOC impacts exceeding a RCL in May 2022. PVOC impacts to soil are limited in extent and are attributed to documented petroleum releases associated with the east-adjointing property. The lateral and vertical extents of soil contamination onsite are depicted on Figures 10 and 11, respectively.

Historical groundwater investigation activities associated with the Amoco BRRS cases listed in Section 1.0 identified PVOC-impacted groundwater exceeding the ch. NR140 WAC (NR140) Enforcement Standard (ES) and petroleum light non-aqueous phase liquid (LNAPL) extending in what has been termed a “finger plume” onto the southern and central portions of the Property. The most recent groundwater and LNAPL monitoring events performed in 2021 in association with the Amoco BRRS cases and illustrations of impact extents can be found in the Antea® Group (Antea) “2021 Progress Report” (Antea, 2022).

Sediment samples were collected from the southern and eastern portions of the slip during previous site investigation activities performed by others between 2015 and 2020. The sediment was identified to be impacted with PAHs exceeding the threshold effect concentration (TEC), midpoint effects concentration (MEC) and/or probable effects concentration (PEC) as defined in the Recommended Sediment Quality Guidelines provided in Table 2 and Table 4 of the “Consensus-Based Sediment Quality Guidelines, Recommendations for Use and Application” Publication RR-088 (WDNR, 2003). In addition, the sediment was identified to be toxic for benthic organisms and contributing to beneficial use impairments (BUIs) for the slip. Stantec collected nine sediment samples in December 2021 which were consistent with historical sediment sample results and were reported to have low to moderate levels of PAHs exceeding the TEC, MEC, and/or PEC. Sediment collected from sediment core SED3 (**Figure 2**) identified select PAHs at concentrations exceeding their respective NR720 GW and/or non-industrial direct contact (NIDC) RCLs. A summary of sediment sampling performed to date on the east and southern portions of the slip are documented in the WDNR “Beneficial Use Impairments Related to Sediment Contamination in the Hallet Dock No. 8 / C. Reiss Coal Slip, St Louis River Area of Concern (AOC), Superior, Wisconsin” memorandum dated February 23, 2022 (WDNR, 2022b).

### 2.2 MATERIAL MOVEMENT AND MANAGEMENT

No hauling or offsite disposal of material for this Site is anticipated, and there are no materials onsite that have



October 14, 2022

~~been identified as being unsuitable for onsite reuse with the current materials management/cover strategy. All excavated material will either be planned to remain onsite and be covered with an engineered surface barrier. Although not anticipated, excess impacted soil not suitable for reuse will be disposed of offsite at a licensed landfill. or transported offsite for proper disposal at a licensed landfill if needed.~~ Planned excavation and/or dredging activities are anticipated to be ongoing during the redevelopment between September 2022 and July 2023. ~~MMU1 and the three smaller soil berms are~~The large soil berm in the center of the Property (herein referred to as Material Management Unit 1 “MMU 1”) is planned to be capped concurrently as the soil/sediment is added and the grading plan specifications are met to prevent leaching of contaminations to the underlying groundwater. Consolidating the contaminated materials into a single, large berm (MMU1), will reduce the total area subject to erosion control measures and associated maintenance, preserve existing topography surrounding wetlands on the southern portion of the Site, and reduce the number of areas that will need to be maintained long term post-construction. The current grading plan is included in **Attachment A**. A map illustrating the proposed extent of the post-construction Site cover system is provided as **Figure 4**.

Excavation activities associated with redevelopment will include, but are not limited to, sitewide grading, building foundations, utility trenches, railroad corridors, a stormwater retention pond, and a drainage swale. A total of approximately 99,000 cubic yards (CY) of soil/fill is anticipated to be excavated. Based on the identified extent of contamination, approximately 44,000 CY of PAH and/or RCRA metal impacted fill/soil is anticipated to be excavated and managed on the Property. The depth of excavation will generally range between one and eight feet across the Property. The excavated depth will be deeper in specific locations to facilitate the construction and/or the installation of the utility trenches, proposed railroad, and stormwater retention pond. The maximum excavation depth is anticipated to be 20.9 feet on the Property associated with the stormwater retention pond. A map illustrating the anticipated depth and extent of excavation is provided as **Figures 3a through 3c**.

A total of approximately ~~28,000~~42,500 CY of contaminated sediment is anticipated to be dredged from the adjoining dock slip. ~~Based on the depth of contamination provided by the WDNR and identified by the sediment sampling activities (0 to 6 feet), the total amount of contaminated sediment contributing to BUIs proposed to be dredged from the dock slip is approximately 21,250 CY (WDNR, 2022). The remaining 21,250 CY of sediment planned to be dredged is located deeper than the identified contaminated interval and is not considered to be contributing to the BUIs. Dredging the additional 17,500 CY of sediment is necessary to facilitate the industrial bulk material handling operations development of the dock slip for industrial bulk material handling operations.~~ Dredging activities will primarily take place along the entire length of the eastern portion of the dock slip. The depth of dredging will generally range between 0 and 12 feet beneath the current sediment surface, to achieve a navigational depth of 27 feet throughout the dock slip. A map illustrating the anticipated depth and extent of dredging is provided in **Attachment A**.

RCRA metal and PAH-impacted fill above direct contact standards is anticipated to be excavated during construction activities across the entire Property. The LNAPL “finger plume” present on the southern portion of the Property was generally encountered 12 feet or deeper and was measured to range in thickness from 0.02 and 7.27 feet in 2021. The depth of excavation in the area of the LNAPL plume is not anticipated to extend to the measured depth of the LNAPL plume. Therefore, LNAPL is not anticipated to be encountered during excavation activities. Plan and profile views for the proposed excavations associated with the stormwater pond and railroad cut in relationship to the groundwater table are included as **Figures 7 and 8**, respectively. Benzene concentrations in groundwater, along with areas of free product, are also represented on these figures. As illustrated on **Figure 8**, the maximum depth of cut is above the groundwater table for the majority of the Site. Exceptions to this are for the stormwater pond, and for the portion of the railroad cut just east of the stormwater pond (refer to Stations 15+10 through 18+05; **Figures 7 and 8**), where approximately 0.5 to 3 feet of water is expected to be encountered. Groundwater in these areas has not been identified to be contaminated and no areas of free product are anticipated to be disturbed.

The remnants of the former aboveground oil-water separator tank, chain link fence, and the two, eight-inch buried/inactive petroleum pipelines will be properly abandoned and transported offsite for proper disposal during development activities. The two, eight-inch buried/inactive petroleum pipelines will be entirely closed via removal. The alignment of these pipelines is illustrated on **Figure 9**. Abandonment and appropriate DATCP notifications will be coordinated by the civil Contractor per ATCP 93.560 WAC requirements. Pipeline closure will additionally be documented in the construction documentation report as discussed in Section 2.10.



October 14, 2022

Dredged sediments and excavated contaminated soils associated with the stormwater pond, building foundations, and utility trenches will generally be placed within ~~MMU 1, the large soil berm in the center of the Property (herein referred to as Material Management Unit 1 "MMU 1").~~ Excavated soils associated with the railroad cut are planned to be reused within the proposed railroad line and placed no deeper than the depth they were excavated from. ~~The location and extent of the proposed MMU 1 and railroad cut are illustrated on Excess impacted soils associated with the redevelopment unable to be reused within the proposed railroad line or MMU1 are planned to be placed within the three smaller soil berms proposed on the southern portion of the Property (refer to Figures 3 and 4).~~ A table and cross-section depicting the volumes and material origin(s) for materials to be placed in MMU1 is included on Berm Construction Detail **Figure 5** and discussed further in Section 2.3.

The clay used in the construction of the stormwater retention pond liner will be sourced from clean native soils encountered during onsite excavation activities. The stormwater pond liner will be constructed by the Contractor to meet the technical requirements of a Type B clay liner per the *Wet Detention Pond* WDNR Technical Standard (1001). Further information regarding the stormwater retention pond liner details is provided on **Figure 6**. Water management during pond liner construction will be performed by the Contractor per the *Dewatering Practices for Sediment Control* WDNR Technical Standard (1061). Details related to exact sump locations, etc. will be based on the selected Contractor's means and methods, which will not be dictated as part of bid documentation and/or this updated MMP.

Significant dewatering is not anticipated at this time. Excess water associated with the ~~dredged sediment and~~ the formation of MMU1 ~~is planned to would~~ be dewatered via gravity and routed to the stormwater pond onsite through the construction of a temporary diversion berm ~~and pumping if needed~~. ~~Contaminated materials are not proposed to be introduced to the pond; all discharges to the pond from Site activities will involve filtration to prevent accumulation of discharged (treated) sediment and eroded (non-contaminated) solids within the pond. Prior to being transitioned into final use as a stormwater pond for the Site, accumulated solids (if any) will be collected from the pond floor and placed on an open portion of MMU1 and capped as one of the final steps of development. Materials collected by the temporary diversion berms will be associated with run-off/erosion from the berm wall (constructed from non-impacted clay materials) and will not be related to contaminated dredged sediment. Runoff collected by the temporary diversion berms will be dewatered via sediment bags and discharged into the stormwater pond via pumping. Residual sediment bag solids would then be placed at the top of MMU1 just before the completion of final cover installation. The phasing of the material placement, run-off management, and final capping of the berm will be iterative (ex. working from one end of the berm to the other). The phasing of this approach will allow for timely collection and management of material run-off and for final capping as the project progresses.~~

Berms will be constructed in conformance with Wisconsin Department of Transportation (2022) *Standard Compaction Earthwork/Embankment Specification 207.3.6.2*, which dictates material placement in approximately eight-inch compacted lifts and compacted until no further significant consolidation is achieved. Quality control measures to be employed during berm construction are listed in the Erosion Control Plan provided on Sheets C1.00 – C1.06 of **Attachment A**, and include installation of a tracking pad, silt fence, interim manufactured perimeter control (IMPC) and diversion berm construction prior to any land disturbance, establishing haul routes prior to any construction activities, weekly erosion control measure inspections and within 24 hours of half-inch or greater rain events, and timely maintenance and repairs.

Appropriate erosion control measures will be put in place and appropriate permits obtained prior to site activities. The current erosion control plan is included in **Attachment A** (Sheets C1.00 through C1.06). As practicable, the weather forecast shall be used to schedule activities to minimize the potential for significant stormwater accumulation. ~~No contaminated groundwater is expected to be encountered as part of project construction, and offsite disposal is not anticipated at this time. As contaminated groundwater is not expected to be encountered, groundwater will not contribute additional contamination (i.e., benzene or free product) to excavated soils encountered as part of construction. Unimpacted groundwater that is encountered in the deepest cuts onsite will be managed by the stormwater pond. However, Although not anticipated, potentially impacted groundwater~~

October 14, 2022

and/or stormwater may accumulate in areas requiring removal. Removal and disposal requirements will be determined in the future but may include discharge to the sanitary sewer after approval from the City of Superior or removal via vacuum truck and offsite disposal at an approved treatment facility.

Construction contractors will be responsible to implement and use best management practices for minimizing tracking of soil offsite in compliance with the erosion control plan developed as part of the design specifications. Dust suppression methods will also be utilized as required by the erosion control plan. Site-specific health and safety plans will be developed by each contractor and consulting firm working at the Site, as applicable to protect Site workers.

Though not anticipated, material excavated from the Site that cannot be reused onsite will be transported offsite for appropriate disposal upon acceptance by a landfill. Excavated materials will be monitored for the presence of:

- Strong or unusual odors;
- Unusual soil discoloration not previously noted;
- Change in soil conditions not previously noted; and
- Other solid waste (e.g. debris, tires, etc.).

If any of the above or other suspect materials are unexpectedly identified during excavation operations, excavation in this area will be suspended until the materials encountered are evaluated for proper management methods. The Site representative or designee of the developer will evaluate unusual situations on a case-by-case basis to determine the appropriate alternative response required. In each situation, the Site representative or designee of the Developer will direct the contractor on proper disposal or relocation of the regulated material. The protocol when such unusual or changed conditions arise is as follows:

1. If the material encountered is unplanned or unexpected, stop work immediately within the general area of the discovery until directed otherwise by the Site representative or designee. The contractors may continue working in a different area if one is available.
2. Notify Stu Gross, Senior Project Manager - Stantec, immediately at ~~(262414)~~ [643-9159526-3794](tel:643-9159526-3794), or [stu.gross@stantec.com](mailto:stu.gross@stantec.com).
3. The Site representative or designee will document the location where the discovery was made, the waste material type, volume, and characteristics.
4. As directed by the Site representative or designee, the contractor shall temporarily stockpile the waste material. Depending on the materials encountered, special precautions such as encapsulation of stockpiled materials in plastic may be required.
5. Stantec will develop a plan for more permanent remediation or management of the newly discovered waste material including materials handling alternatives, staging requirements, additional sampling and analyses, and additional waste characterization profiling for disposal and/or reuse. The contractors shall have, and understand, the plan prior to continuing work in the affected area.
6. Stantec or its designee will complete the required additional notifications to WDNR, if warranted, and direct contractors in the loading, manifesting, and transport if offsite disposal is required.

These records will be accumulated throughout the duration of the construction project and will be incorporated into the post-construction documentation.

### **2.3 GRADING PLAN**

Dredged sediment and soil originating from excavation activities associated with installation of utilities, construction of the building foundation system, proposed railroad, stormwater pond, drainage swale, and overall Site cuts will be excavated and beneficially reused onsite. The grading plan presented ~~on in~~ **Attachment A Figure 12** illustrates the redistribution of soil and sediment onsite.

Dredged sediment following the initial gravity dewatering process and fill material with identified RCRA metal

October 14, 2022

and/or PAH contamination will be preferentially placed underneath the site cover system to be installed and maintained as part of redevelopment activities. Specifically, the contaminated sediment and soil/fill will preferentially be placed beneath MMU1 and the contaminated fill associated with the railroad cut be placed within the proposed railroad line. A total of approximately 28,000 CY yards of contaminated sediment is proposed to be dredged and placed within MMU1. Approximately 19,000 CY and 25,000 CY of contaminated soil are proposed to be excavated associated with the construction of the stormwater pond and railroad line, respectively. The slopes of MMU1 will be constructed with a maximum run to rise ratio of 3:1 so mowing can be performed to maintain cover integrity. A table and cross-section depicting the volumes and material origin(s) for materials to be placed in MMU1 is included on Berm Construction Detail Figure 5. Excavated material associated with the railroad cut may be reused within the proposed rail alignment but will not be placed deeper than the depth it was excavated from. ~~Once MMU1 is at capacity, excess soil/fill will be placed within the three smaller soil berms on the southern portion of the Property (Figure 4).~~

Although not anticipated, excess contaminated soil/fill unable to be placed within MMU1 ~~or, the railroad, or the three smaller soil berms~~ may be placed beneath areas of the proposed buildings, parking lots, and other landscaped portions of the Site to ultimately be managed beneath the engineered barrier. A map illustrating the anticipated depth and extent of excavation and the planned placement of excavated soils is provided as **Figures 3a through 3f**. Residual contaminated soil and dredged sediment on the Property will be capped by pavement/impermeable surfaces or a minimum 18-inch soil cap. The clay used in the construction of the cover systems and the stormwater retention pond liner will be sourced from clean native soils encountered during onsite excavation activities. Engineered barrier features are discussed in Section 2.9 and illustrated on **Figure 4**. Positive drainage and storm water controls will minimize surface water infiltration and erosion, maintaining the integrity of the engineered barrier.

## **2.4 SEDIMENT DEWATERING & CONTROLS**

Dredged sediment from the west-adjointing dock slip will be offloaded onto the Property and staged in an area north of the planned stormwater pond and allowed to gravity dewater prior to being placed within MMU1 (refer to **Attachment A**). As illustrated on the details provided on Sheets C-501 and C-502 of the Dredge Plan provided in Attachment A, oil boom controls will be placed alongside the barge during sediment dredging activities to isolate the area from the rest of the dock slip, along with a turbidity curtain at the entrance to the slip. Dredged sediment will be placed within a sealed/lined barge, then transported to the area outlined on Sheet C1.02 of the Erosion Control Plan (Attachment A) for dewatering prior to placement in MMU1. Once placed, the water from the dredged sediment will be treated via a sand/activated carbon system and pumped to the proposed stormwater pond. A temporary diversion berm will be constructed in accordance with WDNR technical standard 1066 around MMU1 to prevent the migration of contaminated runoff water to the existing wetlands onsite. The runoff water originating from MMU1 and the water generated from the gravity dewatering of the dredged sediment will be routed to the stormwater pond onsite via gravity and/or pumping. The grading plan, erosion control plan, and other pertinent redevelopment plans for the Site are provided in **Attachment A**.

On August 24<sup>th</sup>, 2022, a teleconference was held between Stantec and WDNR (including Ms. Leila Jenkins and Mr. Jason Knutson) and confirmed the need for a WPDES Discharge Permit for the handling and treatment of water sourced from sediment dewatering onsite, which is anticipated to represent a timeframe of approximately six weeks.

As a result of this conversation, the C REISS SLIP GLLA RA PROJECT Construction Specification documents (Attachment A) have been updated to indicate that an approved WPDES Discharge Permit for the discharge of water sourced from sediment dewatering processes to the proposed pond prior to its conversion to stormwater management is required and will be the responsibility of the selected dredging Contractor. Based on the presence of known sediment impacts (ex. PAHs), the water is proposed to be treated via a sand/activated carbon treatment system prior to discharge.

## **2.5 OFFSITE DISPOSAL OF CONTAMINATED MATERIALS**

No hauling or offsite disposal of material for this Site is anticipated, and there are no materials onsite that have

October 14, 2022

been identified as being unsuitable for onsite reuse from a contaminant perspective with the current materials management/cover strategy. Non-impacted materials that are found to be structurally unsuitable for reuse from a geotechnical standpoint would be handled onsite in areas outside of proposed structural features (ex. Within the proposed berm, outside of proposed building/transportation infrastructure). Although not anticipated, excess impacted soil not suitable for reuse will be disposed of offsite at a licensed landfill. Two composited waste characterization samples were collected in May 2022 to profile the material for potential offsite disposal (Stantec, 2022b). Tabulated waste characterization results are included on **Table 7**. Laboratory analytical results indicate that the waste characterization samples did not have constituents at concentrations exceeding EPA toxicity characteristic leaching procedure (TCLP) regulatory limits. No excavated soil will be transported on or across any roadways unless being transported under manifest to a licensed landfill or other WDNR-approved disposal facility. Although not anticipated to be encountered, LNAPL and/or PVOC impacted groundwater exceeding the NR140 ES will be pumped via vacuum truck and transported offsite for proper treatment.

## 2.6 EXCAVATION BACKFILL

Excavations will generally be filled with soil currently on the Property. Soil beneficially reused as backfill will not be placed deeper than the depth of which it was excavated from. Construction observation will be performed by a qualified environmental engineer/consultant which will include monitoring the placement of impacted material such that it is not placed deeper than its original depth. Gravel soils will be transported from an offsite source to meet the proposed road design specifications. Utility trenches underneath the proposed roadway will be filled with washed stone sourced from an offsite source per design specifications. Sub ballast and ballast stone will be transported from an offsite source as part of the proposed railroad construction.

## 2.7 CONSTRUCTION OBSERVATION

During active excavation, a representative of the Developer will be onsite and monitor site activities. Stantec personnel may be present to monitor grading activities as they occur and would observe these activities to document that contaminated soil and dredged sediment are being handled and moved as proposed in the material management plan. Construction observation will be performed by a qualified environmental engineer/consultant and will focus on specific remedial objectives. These objectives include documenting approved on-site management ~~Construction observation and documentation of approved onsite management~~ of contaminated soil and dredged sediment, proper handling and soil movement (including monitoring the placement of impacted material such that it is not placed deeper than its original depth), disposal of solid wastes, and engineered surface barrier construction. ~~will be conducted.~~ Stantec will prepare a construction documentation report that documents soil management and construction activities associated with this redevelopment (refer to Section 2.10). The construction documentation report will include as-built drawings for the Site including topographic elevations as measured during a post-development topographic survey. In addition, the construction documentation report will include as-built calculated volumes of removed soil/sediment and berm construction. Any differences between the final Site conditions following redevelopment and the proposed plans provided as part of the updated MMP will be documented in figure(s) provided as part of the construction documentation report.

## 2.8 ENVIRONMENTAL MONITORING

Existing groundwater monitoring wells within the footprint of development on the Property will be abandoned by Antea in accordance with Chapter NR 141 WAC prior to construction. Since all existing soil is planned to remain onsite, no additional sampling is planned during redevelopment activities. Excavated soil at the Property will be monitored for strong or unusual odors, unusual soil discoloration not previously noted, change in soil conditions not previously noted, and other solid waste (e.g. debris, tires, etc.).

## 2.9 ENGINEERED SURFACE BARRIER

Redevelopment of the Site will require permanent engineering controls in the form of building slabs, paved areas, railroad ballast, gravel access roads, and/or clean soil cap (including native grass seeding) on the



October 14, 2022

southern portion of the Property that will remain in place following redevelopment. The proposed railroad will be capped with at least 12 inches of impermeable compacted sub-ballast stone topped by nine inches of ballast stone. Gravel access roads, MMU1 embankment, and rail spur subgrade material compaction requirements are dictated in the civil Contractor Construction Specifications. The goal of the Site cover system is to prevent direct contact with contaminated soil and prevent migration of contaminants to groundwater via infiltration. Therefore, the cap will be placed on top of materials with residual contamination exceeding NR720 RCLs and will not extend onto the existing wetlands on the Property.

In landscaped areas on the southern portion of the Property including MMU1, ~~and the three small soil berms,~~ the cap will consist of a minimum of 15 inches of clay topped by at least 3 inches of imported topsoil for planting with a native grass seed mix (WisDot No. 75 mix). The clay will be sourced from the native clay soils on the Property encountered during excavation activities as part of redevelopment, which have been demonstrated to have no VOC, PAH or RCRA metal detections at concentrations exceeding NR720 RCLs (Stantec, 2022a,b). The clay will conform to the Borrow Wisconsin Department of Transportation (WisDOT) Standard Specification (208) and shall be capable of attaining specified compaction levels, excluding organics, as outlined in the Construction Specifications. Topsoil will be seeded with a native ~~tall grass prairie~~ mix to reinforce and maintain the soil cap in these areas.

The anticipated use of the northern area is for industrial bulk material handling operations to be conducted by a minimal number of employees. Arsenic and/or benzo(a)pyrene were detected in select soil samples on the northern portion of the Property at concentrations exceeding their respective NR720 IDC RCLs. The extent of these contaminated soils is limited and excavation activities are not currently planned to occur on the northern portion of the Property. The northern portion of the Property is currently covered with concrete panels that are approximately four inches thick, eight feet long and eight feet wide; these panels will remain in place during and after redevelopment. The existing concrete panels along with the proposed gravel access road will prevent direct contact with contaminated soils exceeding the IDC RCL. The area indicated in green on the north end of the Property as illustrated on Figure 4 requires an 18-inch clean soil cap and native grass seeding, as this area will be disturbed as part of access road construction and will require (re)capping. A gated fence is proposed to be installed spanning the perimeter of the Site to further restrict access to the Property with exception to the proposed railroad spur. Due to the limited extent of contamination exceeding the IDC RCL, minimal occupancy, restricted access, and current surface covering, additional engineered surface barriers are not proposed to be installed on the northern portion of the Property.

The lateral and vertical extents of soil contamination onsite are depicted on Figures 10 and 11, respectively. The components and extents of the proposed Site cover system are illustrated on **Figure 4**.

## **2.10 CONSTRUCTION DOCUMENTATION REPORT**

A report will be submitted following the completion of construction at the Property. Following construction activities, a Chapter NR 724 WAC construction documentation report that documents soil management and construction activities associated with this redevelopment. Documentation will be submitted to the WDNR after completion of grading activities and may include, but not necessarily limited to:

- As-built drawings for the Site including topographic elevations;
- As-built calculated volumes of removed soil/sediment and berm construction;
- Figure(s) depicting any deviation from the proposed development plans and final Site conditions;
- Documentation of any contaminated soils encountered including tabulated soil contaminant data and figures depicting the location where the soil was found and where it was placed on-site underneath the site cover system;
- Abandonment documentation of the two, eight-inch buried/inactive petroleum pipelines;
- Physical description of the waste(s) encountered;
- The general location of the waste within a specific excavation and/or throughout the project area;
- A description of the time and date when the discovery of an unusual or unsuspected waste was made;

October 14, 2022

and

- An estimate of the amount of unusual waste removed and the interim and/or final disposition of the waste.

## 2.11 CONTINUING OBLIGATIONS

Institutional controls will provide future control of the direct contact pathway and provide a mechanism to maintain the integrity of the engineered barrier. Cover maintenance will be conducted as necessary post-construction. ~~Following construction, Stantec will develop a~~ Cover System Maintenance Plan(s) ~~that outlines~~ outlining the responsibilities associated with inspecting, maintaining, or disturbing the caps for the Site ~~is drafted and included as Attachment D. In addition to the items specified in ch. NR 724.13, the draft Cover Maintenance Plan includes details regarding the protection of the cover system integrity, mowing frequency, and disposal berm slopes. and submit for WDNR approval prior to case closure. Cover maintenance will be conducted as necessary post construction.~~

The Site will be placed on the WDNR online GIS Registry for sites with residual soil and groundwater contamination and will have an approved cap maintenance plan which describes requirements for annual cap inspection and timely repair of any damaged/deteriorated areas.

October 14, 2022

### 3.0 NR 718 EXEMPTION REQUEST

#### 3.1 PURPOSE OF REQUEST

The purpose of this NR 718 exemption request is to manage contaminated soil and sediment as part of redevelopment activities on the same response action site from which it was generated.

Note: This exemption request follows the format outlined in the WDNR “*Recommended Template for Request to Manage Materials under Wis. Admin. Code NR718.12 or NR718.15*” (WDNR Form 4400-315).

#### 3.2 – APPLICABLE FEES

The review fee for the MMP submittal under NR 718 is \$1000 for the Property. A \$1000 check accompanies this submittal.

#### 3.3 – PROPERTY AND CONTACT INFORMATION

Site Name:	C REISS COAL DOCK PROPERTY
BRRTS #s	#02-16-589248
FID #	#816130810
Address:	City of Superior, Douglas County, Wisconsin
Location:	East ½ of the Northeast ¼ of Section 16, and the East ½ of the Southeast ¼ of Section 09, Township 49 North, Range 14 West
Parcel ID:	048040101400
WTM Coordinates (center of parcel)	X Coordinate (WTM91): 357936.1 Y Coordinate (WTM91): 697633.7
Latitude/Longitude (center of parcel)	Latitude: 46.7325921 Longitude: -92.1211715
Current Zoning	W1 - Waterfront
Current Land Use	Vacant lot with wetlands and a concrete paneled dock

#### CONTACT INFORMATION

Contact information for entities associated with the Property are provided below:

**RESPONSIBLE PARTY/DEVELOPER:**

C. Reiss Company, LLC  
111 West Mason Street  
Green Bay, Wisconsin 54303  
c/o Christian Zuidmulder, General Manager  
Phone: (920) 436-7600  
Email: [Christian.Zuidmulder@Thecreiss.com](mailto:Christian.Zuidmulder@Thecreiss.com)

**CONSULTANT:**

Stantec Consulting Services Inc.  
12075 Corporate Parkway, Suite 200  
Mequon, Wisconsin 53092  
Brian Lennie, Project Manager  
Phone: (262) 643-9061  
Email:

**WDNR:**

Wisconsin Department of Natural Resources  
810 West Maple Street  
Spooner, Wisconsin 54802-1255  
Joseph Graham, Contaminated Sediments Specialist  
Phone: (715) 292-4925  
Email: [Joseph.Graham@wisconsin.gov](mailto:Joseph.Graham@wisconsin.gov)



October 14, 2022

### 3.4 WASTE CHARACTERISTICS

**A. Enter the total volume of contaminated soil and/or other solid waste to be managed (cubic yards):**

The total volume of approximately 99,000 CY of soil/fill and ~~42,500~~28,000 CY of contaminated sediment is anticipated to be excavated/dredged and managed within the Property. Approximately 44,000 CY of the soil/fill anticipated to be excavated and managed within the Property is contaminated with RCRA metals and/or PAHs. The remaining 55,000 CY of soil/fill to be managed was not identified to be significantly contaminated during site investigation activities. ~~Approximately 21,250 CY of the~~The approximately 28,000 CY of sediment anticipated to be dredged and managed on the Property is contaminated with PAHs and contributing to the BUIs in the adjoining dock slip. ~~The remaining 21,250 CY of sediment planned to be dredged is located deeper than the identified contaminated interval and is not considered to be contributing to the BUIs. Dredging the additional 21,250 CY of sediment is necessary to facilitate the development of the dock slip for industrial bulk material handling operations.~~Materials will be managed in accordance with Section 2.0 of this submittal. The grading plan and other pertinent redevelopment plans are provided in **Attachment A** and **Figure 1 through Figure 4**.

**B. Describe the characteristics of the material proposed to be managed, which may include general makeup, physical characteristics, the homogeneity of the material, the proportion of soil to other solid waste, and any other pertinent descriptors.**

Fill containing sands, gravels, and/or black granular pieces of anthropogenic materials (i.e. coal pieces) was identified to underlie surface materials (i.e. concrete/topsoil/gravel) across the Property. The thickness of this fill unit ranged from 0.25 to 12 feet thick with an average thickness of 2.5 feet. Beneath this fill unit on the northern portion of the Property was a red-brown, non-native uniform sand, which was presumably used as the base of the imported material to the Property to construct the dock in 1907. Apparent native silts/sands were encountered between eight fbg on the southern end of the dock, to 12 fbg on the northern end of the dock. Native soils generally comprised of red-brown clay (and, to a lesser extent, silt and sand lenses) were identified to underlie the black anthropogenic fill on the southern portion of the Property. The native clay soils were encountered near the surface on the southernmost end of the Property and graded to a depth of eight fbg to the north in the area of the original shoreline prior to 1907. Further information pertaining to soil quality can be found in the Stantec reports summarizing the 2021 and 2022 sampling activities (Stantec, 2022a,b).

Approximately ~~0 to~~4 feet of sandy fill containing coal pieces, wood, and organics was identified overlaying the sediment on the southern and eastern portions of the dock slip. Native sediment consisting of fine to coarse sand, silt, and clayey silt was observed underlying the fill from depths of three to eight feet (the maximum depth explored). Further information related to recent and historical sediment sampling is summarized in the WDNR 2022 memorandum (WDNR, 2022b).

**C. Describe the historic and current land use of the generating site or facility where the contaminated soil or other solid waste originates, including how this site or facility is zoned.**

The Property is located in the east half of the northeast quarter of Section 16, and the east half of the southeast quarter of Section 09; Township 49 North, Range 14 West, Douglas County, Superior, Wisconsin and consists of one parcel (Parcel ID 048040101400), zoned "W1-Waterfront", comprising approximately 53 acres. It is currently vacant and owned by C Reiss. The northern portion of the Property provides access to the west-adjointing dock slip and is primarily surfaced with concrete panels that previously supported historical dock shipping, handling and storage operations. The southern portion of the Property generally consists of forested land and wetlands, with a deteriorating access road along the western Property boundary. No buildings currently exist on the Property. The Property is bordered by the St Louis Bay to the north, active industrial dock properties to the west and east, and the Burlington Northern Santa Fe (BNSF) Railway right-of-way to the south. Further surrounding land uses are primarily industrial in nature.

The Property historically operated as an industrial dock with operations including petroleum product and open-air coal storage and transloading, and coal briquet manufacturing from the late 19<sup>th</sup> Century through the late 20<sup>th</sup> Century. The northern portion of the Property was originally part of the St Louis Bay and was subsequently filled in the early 1900's to construct the present-day dock. The location of the historic Property shoreline is illustrated on **Figure 2**. The dock was used for open air coal storage and/or dry bulk goods receipt from 1907

October 14, 2022

through at least 2000. A building was constructed at the southern end of the dock slip in the late 1800's, and was used for a variety of industrial uses (charcoal plant, blast furnace, twine manufacturing) through the early 1900's. By 1912, the building was converted to a coal briquet manufacturing plant and operated through the 1960's. The plant was demolished sometime in the early 1970's. The southern portion of the Property was used for rail access/loading and for access to the coal briquet and petroleum/coal dock operations on the north end of the Property.

The Developer plans to reestablish industrial bulk material handling operations at the Property by installing infrastructure for shipments by truck and rail as well as dock wall rehabilitation and dredging. The redevelopment will consist of constructing an office building, storage and maintenance building, parking lot, truck scale, railroad, rail yard, rail scale, access roads, soil berms, and a stormwater retention pond.

***D. Describe identified contaminants and the source(s). Indicate whether contaminant concentrations exceed Wis. Admin. Code § NR 720 Residual Contaminant Levels.***

Identified contaminants and exposure routes were evaluated for the Property relative to NR 720 RCLs for soil and NR140 Preventive Action Limits (PALs) and ESs for groundwater quality. Soil contaminant concentrations were compared to NR720 GW RCLs, NIDC RCLs, and IDC RCLs. RCRA metal constituents were additionally compared to background threshold values (BTVs) in soil. If measured levels of arsenic or lead were less than their respective BTVs, these levels were attributed to natural occurrence. Sediment samples were compared to Recommended Sediment Quality Guidelines provided in Table 2 and Table 4 of the "Consensus-Based Sediment Quality Guidelines, Recommendations for Use and Application" Publication RR-088 (WDNR, 2003) in addition to NR720 RCLs. Laboratory result summary tables are included in **Tables 1 through 7**.

Identified Contaminants in Soil/Fill at the Property

As summarized in the Stantec SIR (Stantec, 2022b), PAHs and RCRA metals are present in fill at concentrations greater than direct contact standards in surficial soils across the Property. Native clays present beneath this unit were found to have no PAH or RCRA metal constituent detections at concentrations greater than NR720 RCLs. Therefore, the source of these impacts is attributed to the ubiquitous black granular fill unit, which is present at the surface of the Property to an average depth of three ft bgs. PVOc constituents were detected in soil at concentrations greater than the NR 720 GW RCL in two sample locations (STN2 and STN16). These PVOc detections in soil are attributed to previously documented petroleum releases, which are currently being investigated in association with open east- and south-adjointing Amoco BRRTS cases (02-16-297979, 02-16-117873 and 02-16-000331). There were no other VOC contributions to anthropogenic fill or native soils screened/sampled elsewhere on the Property. Select RCRA metals and PAHs were detected at concentrations exceeding their respective IDC RCLs and select PVOcs were detected exceeding their respective NR720 GW RCLs at the Property during the Stantec 2021 and 2022 soil sampling events. These results are discussed in greater detail below.

**PAHs**

As summarized in *Table A* below, seven PAHs were detected at concentrations exceeding their respective NR720 GW RCLs, nine PAHs were detected at concentrations exceeding their respective NIDC RCLs, and six PAHs were detected at concentrations exceeding their respective IDC RCLs in near surface fill materials at the Property. Samples collected from the underlying native soils did not detect PAH constituents exceeding their respective RCLs. Therefore, the elevated PAH concentrations exceeding their RCLs are attributed to the black granular fill unit present across the Property and have not been identified to have leached into the underlying native soils.

**Table A:** PAH constituent detections exceeding exposure pathways in 2021 and/or 2022 sampling events.

October 14, 2022

PAH Constituent	Exposure Pathway Exceeded in One or More Soil Samples?		
	Non-Industrial Direct Contact RCL	Industrial Direct Contact RCL	Groundwater Protection RCL
Benzo(a)anthracene	<u>Yes</u>	<u>Yes</u>	Not Established
Benzo(a)pyrene	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
Benzo(b)fluoranthene	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
Benzo(k)fluoranthene	<u>Yes</u>	No	Not Established
Chrysene	<u>Yes</u>	No	<u>Yes</u>
Dibenzo(a,h)anthracene	<u>Yes</u>	<u>Yes</u>	Not Established
Fluoranthene	No	No	<u>Yes</u>
Fluorene	No	No	<u>Yes</u>
Indeno(1,2,3-cd)pyrene	<u>Yes</u>	<u>Yes</u>	Not Established
Methylnaphthalene, 1-	<u>Yes</u>	No	Not Established
Naphthalene	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
Pyrene	No	No	<u>Yes</u>

These results are consistent with the soil information gathered from previous soil sampling events performed at the Property. Areas identified to have select PAH concentrations greater than IDC RCLs include the proposed access road (STN2, STN5, and STN11), railroad spur (STN13 and STN15), stormwater pond (STN9, STN10, and STN12), and southern portion of the existing concrete dock paneling (STN14).

#### **RCRA Metals**

As illustrated on *Table B* below, six RCRA metal constituents were detected at concentrations exceeding their BTV and/or NR720 GW RCL. Arsenic and/or lead were the only RCRA metals detected at concentrations greater than their respective IDC RCLs. Each sample identified to have concentrations of arsenic and/or lead at concentrations exceeding their respective direct contact RCLs and BTV was obtained from the near surface black granular fill unit with the exception of STN14 and STN20. Samples obtained from STN14 and STN20 identified arsenic at concentrations exceeding its IDC RCL and BTV in the near surface non-native sand fill associated with the 1907 dock construction. Only one soil sample collected from the native clay soil (STN7 4 to 6 fbg) detected silver at a concentration exceeding the GW RCL. No other sample collected from the native clay soils detected metal constituents exceeding their RCL and/or BTV. Therefore, the elevated RCRA metal concentrations exceeding their RCLs are likely attributed to the black granular fill unit present across the Property and have not been identified to have significantly leached into the underlying native soils.

**Table B:** RCRA metal constituent detections in soil exceeding exposure pathways in 2021 and/or 2022 sampling events.

Metal Constituent	Exposure Pathway Exceeded in One or More Soil Samples?		
	Non-Industrial Direct Contact RCL + BTV	Industrial Direct Contact RCL + BTV	Groundwater Protection RCL and/or BTV
Arsenic	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
Lead	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
Cadmium	No	No	<u>Yes</u>

October 14, 2022

Metal Constituent	Exposure Pathway Exceeded in One or More Soil Samples?		
	Non-Industrial Direct Contact RCL + BTV	Industrial Direct Contact RCL + BTV	Groundwater Protection RCL and/or BTV
Mercury	No	No	<u>Yes</u>
Selenium	No	No	<u>Yes</u>
Silver	No	No	<u>Yes</u>

These results are consistent with the soil information gathered from previous soil sampling events performed at the Property. Areas identified to have arsenic and/or lead at concentrations exceeding their IDC RCLs include the proposed access road (STN5 and STN8), railroad spur (STN18 and STN20), stormwater pond (STN10), and existing concrete dock paneling (STN14).

### VOCs

No chlorinated VOCs were detected in soil samples collected by Stantec during the 2021 and 2022 sampling events. PVOOC constituents were detected at concentrations greater than their respective NR720 GW RCLs in samples collected from STN2 and STN16 at the Property in May 2022. Benzene at concentrations exceeding the GW RCL was detected in the black, granular fill present in surficial soils at STN2 from 0 to 2.5 fbg and STN16 from 0 to 1.5 fbg. In addition, total trimethylbenzenes were detected in STN16 exceeding the GW RCL in a saturated soil sample with the highest PID measurement from 3.5 to 5 fbg. Underlying native soils at both locations were visually and/or olfactorily unimpacted. STN2 is located in an area of known petroleum impacts and LNAPL to groundwater in the southwest portion of the Property. STN16 is located in an area of a former product seep documented at the Property and removed in 2003. No other fill or native soils screened/sampled elsewhere on the Property were detected to have VOC impacts exceeding a RCL in May 2022. No VOC constituents were detected in fill or native soils as part of the December 2021 sampling event. The identified low level of PVOOC contamination is attributed to historical petroleum releases associated with the east-adjointing property.

### Identified Contaminants in Groundwater at the Property

No groundwater sampling was performed by Stantec during the 2021 and 2022 site investigation activities. However, historic groundwater sampling has been performed by others at the Property between 2002 and as recent as October 2021 in connection with the Amoco and/or Murphy Marine Terminal BRRTS cases (Antea, 2022). These historical groundwater investigation and sampling events have identified the following:

- Groundwater is generally encountered at approximately 15 fbg on the southern end of the Property and becomes shallower towards the dock slip on the northern portion of the Property;
- LNAPL extends onto the southern portion of the Property (as most recently detected in MW-32, RW-8, RW-9, MRW-5, MRW-6, MRW-7, MRW-8, MWM-3, LRMW-4, MRW-10, MWASt-4, MWM-6, and MWOW-1) and ranges in thickness from 0.02 to 7.27 feet;
- PVOOCs (namely benzene) are present at concentrations exceeding the NR140 ES extending across the southern portion of the Property (near LNAPL impacts as most recently detected in MW-30D, MW-30S and MWT-2D) and central portions of the Property (near the Murphy Marine Terminal LUST as most recently detected in MWRR-1D and MWBD-1D);
- PVOOCs and PAHs in the area of the Murphy Marine Terminal Investigation (temporary wells GP-1 and GP-4) and in the area of the former petroleum 500-gallon UST associated with the east adjoining property (temporary well TWBD-2) were not detected at concentrations exceeding the NR140 PAL and/or ES (Barr, 2022; Delta, 2003) indicating that groundwater was not significantly impacted by the former petroleum releases or presence of black granular fill with elevated levels of PAHs in these areas.

The historic groundwater sampling results indicate that groundwater contamination at the Property exceeding NR140 standards is likely attributed to the former petroleum releases associated with the east adjoining Amoco BRRTS cases (02-16-297979, 02-16-117873 and 02-16-000331). Impacted groundwater is not anticipated to

| October 14, 2022

be encountered during redevelopment due to the anticipated depth of the planned excavation and the historical depth of groundwater at the Property.

Identified Contaminants in Sediment to be Managed on the Property

Stantec completed three soil cores (SED1 through SED3) and collected nine sediment samples from the adjoining dock slip during December 2021 in accordance with the requirements detailed in the WDNR correspondence/memorandum titled “*NR 347 Sediment Sampling Requirements for C. Reiss Coal Dock, Superior, WI*” dated February 26, 2021 (WDNR, 2021).

Various PAHs at concentrations exceeding the TEC were detected in each of the three sediment cores between 0 and 6 feet. The concentration of 2-methylnaphthalene exceeded the MEC in SED 2 (0-3 feet). The concentrations of 2-methylnaphthalene and acenaphthene exceeded the PEC in SED3 (0-3 feet) and the concentration of 2-methylnaphthalene exceeded the PEC in SED (3-6 feet). Various other PAHs were detected at concentrations exceeding the TEC and/or MEC in samples collected from SED3 (0-3 feet) and SED3 (3-6 feet). In addition, benzo(a)pyrene was detected at a concentration exceeding the NIDC RCL in SED (3-6 feet). Various PAHs were identified to exceed the NR720 GW RCL for the PAL in SED3 (0-3 feet) and SED (3-6 feet).

The results are consistent with historical sediment sampling activities performed by others between 2015 and 2020. The recent and historical results indicate that sediment in the southern eastern dock slip between 0 and 6 feet is impacted with low to moderate levels of PAHs exceeding the TEC, MEC, and/or PEC and the NR720 GW RCL. Impacted sediment is likely attributed to former adjoining dock filling activities between the late 1800’s and early 1900’s and historic bulk handling activities of coal and/or petroleum associated with the adjoining dock operations. Further information related to the recent and historical sediment sampling is summarized in the WDNR 2022 memorandum (WDNR, 2022**b**).

***E. Describe the sampling activities conducted to characterize the material including where the samples were collected, how sample locations were chosen, the sampling methods used, and when sampling activities were conducted.***

Between December 2021 and May 2022, Stantec performed site investigation activities at the Property (Stantec, 2022a,b). Site investigation activities included the collection of soil and sediment samples from the Property and west-adjointing dock slip respectively. Soil borings were primarily chosen to be located within the main areas proposed to be excavated at the Property as part of redevelopment activities in order to adequately characterize the material to be managed. Notably, soil borings were located within the excavation extents of the railroad, stormwater pond, and road/utility trenches. In addition, select soil borings were advanced on the northern portion of the Property to further characterize soil/fill quality in the area where previous investigation activities were limited. Sediment core locations and sample analysis were conducted in accordance with the WDNR required sampling and analysis to facilitate dredging and management activities as detailed in the WDNR 2021 memorandum (WDNR, 2021). Soil boring and sediment core locations completed by Stantec between 2021 and 2022 are illustrated on **Figure 2**.

On December 8, 2021, Soils and Engineering Services, Inc. (SES) advanced three sediment cores (SED1 through SED3) to eight fbg in the dock slip adjoining the Property using barge mounted direct push Geoprobe® drilling methods. The sediment cores were advanced to further define sediment quality along the eastern and southern portions of the dock slip where previous investigation activities were sparse. A total of nine sediment samples were collected from the cores and submitted to an analytical laboratory for 2,4-dimethylphenol, PAH, oil and grease, and grain size analysis. The results of the sediment sampling were consistent with previous sediment sampling activities performed by others and detected low to moderate levels of PAHs exceeding the TEC, MEC, and/or PEC and NR720 RCLs. Further information related to the recent and historical sediment sampling is summarized in the WDNR 2022 memorandum (WDNR, 2022**b**).

On December 9, 2021, SES advanced five soil borings (SB1 through SB5) to a depth of 10 fb at the Property using direct-push dual-tube Geoprobe® drilling methods. These soil borings were advanced to evaluate soil quality in the area formerly proposed for the stormwater retention pond and the currently the proposed railroad. Soil samples were collected from the boreholes and submitted to an analytical laboratory for RCRA metals, PAH, and VOC analysis. The results of the soil sampling were summarized in the Stantec report entitled “*Limited Site Investigation*” and indicated that fill materials present in shallow soils (zero to three feet below



October 14, 2022

grade) contained RCRA metal and PAH constituents at concentrations above NR720 RCLs (Stantec, 2022a).

Ahead of proposed redevelopment activities at the Property, the Stantec prepared a report titled “*Workplan for Additional Soil Investigation*” and submitted it to WDNR on April 27, 2022, to outline a sampling plan to further evaluate the lateral/vertical extents and environmental quality of identified fill and underlying native soils (Stantec, 2022c).

On May 4 and 5, 2022, SES advanced 20 soil borings (STN1 through STN20) from the ground surface to a typical depth of 12 fbg (with a maximum depth of 16 fbg) using direct-push Geoprobe® drilling techniques in accordance with the “*Workplan for Additional Soil Investigation*” (Stantec, 2022c). These soil borings were advanced across the Property to assess surficial/fill and underlying native soil quality across the Property, as well as to determine future options for onsite soil management for excavated/displaced soils in areas of proposed development (ex. Access road, rail spur, future stormwater retention pond). Soil samples were collected from the boreholes and submitted to an analytical laboratory for RCRA metals, PAH, and VOC analysis. The results of the soil sampling indicated that anthropogenic fill materials impacted with RCRA metal and PAH concentrations above the NR720 IDC RCL are present in shallow soils across the Property. The results of the May 2022 investigation are detailed further in the “*May 2022 Site Investigation*” report (Stantec, 2022b).

-As documented in the Report of Geotechnical Exploration for the C. Reiss Coal Dock Development prepared by AET on August 22, 2022 (AET, 2022) and included as Attachment F, ten (10) additional borings (B-01 through B-10) were advanced at the Property in July 2022 ranging from 21.5 to 51.5 feet below current grade. Boring B-05 was advanced within the proposed stormwater pond footprint to a depth of 21.5 feet below current grade and borings B-03 and B-06 were advanced in the area of deepest proposed rail alignment cut to maximum depths of 31.5 and 21.5 feet, respectively. As illustrated in the subsurface boring logs presented in AET (2022), fill materials containing coal pieces and brick/concrete debris were present in the upper two to four feet of the soil column across the Site. On the south end of the Site these fill materials were underlain by native alluvium (dominantly clays and silts). On the north end of the Site where historic filling occurred as part of dock construction, deeper fill materials comprised of fine-to-medium grained fill sands were present to depths of approximately 10 feet below grade or deeper and were underlain by native alluvium (dominantly silts and sands).

***F. Explain how the sampling activities adequately characterized the contaminated soil or other solid waste proposed to be managed. Indicate whether the samples were analyzed for all contaminants previously identified at the generating site or facility and analyzed for all contaminants potentially present at the site or facility considering current and historic land use. Discuss how samples were collected from areas most likely to be contaminated and from material that will be managed under this exemption.***

F.

The typical depth of cut across the Site ranges from 0 to 9 feet below current ground surface, within the maximum depth of 10 to 12 feet explored as part of Stantec (2022b). The exceptions to this total-cut depth are the proposed stormwater pond (where the maximum depth of cut is approximately 21 feet below current ground surface) and a portion of the railroad alignment east of the proposed stormwater pond (approximately 15 feet of maximum cut depth). Additional deeper borings representative of this maximum cut were advanced as part of a geotechnical subsurface exploration program by American Engineering Testing (AET) in July 2022. Soils logged as part of the AET (2022) geotechnical investigation are consistent with environmental borings performed previously by others. As outlined in the Stantec (2022b) SIR for this Site, PAH and RCRA metal impacts were limited to the coal-containing fill unit present across the Site to an average depth of 2.5 feet below current ground surface; no NR720 direct-contact standards were exceeded for any sample taken from the underlying native silts and clays present across the Site beneath this fill unit (Stantec, 2022b). Historical site investigation activities conducted at the Property associated with the Murphy Marine Terminal and Amoco BRRS cases were focused on defining the degree and extent of contamination associated with petroleum releases and other likely sources of contamination. If contamination was identified, additional sampling occurred in that area to define the extent of that contamination. The lateral and vertical extents of soil contamination onsite are depicted on Figures 10 and 11, respectively. Additional information regarding the

October 14, 2022

delineation of soil contamination onsite is presented in the Stantec Site Investigation Report (Stantec, 2022b).

Historical sediment sampling activities in the dock slip have been conducted since 2015 and have sufficiently identified the source and extent of impacted sediment contributing to the BUIs for the dock slip. Site investigation activities conducted by Stantec in 2021 and 2022 associated with BRRTS case #02-16-589248 were focused on adequately characterizing the materials proposed to be managed during redevelopment in areas not well covered by previous investigations (Stantec, 2022a,b). Sediment sampling was generally conducted in accordance with requirements outlined in the WDNR 2021 memorandum (WDNR, 2021). Stantec acknowledges that the sediment samples collected from three sediment cores completed in December 2021 (SED-1 through SED-3) were collected in three-foot intervals rather than the two-foot intervals specified in the WDNR 2021 memorandum dated February 26, 2021 (WDNR, 2021). As discussed in the teleconference with WDNR on January 20, 2022 following this sampling event, three-foot intervals were ultimately performed due to icy field conditions creating difficult access conditions, limited sediment core recovery, and prioritization of quality control sample collection. However, the December 2021 sediment samples met the analytical requirements outlined in WDNR (2021). Available sediment sampling data tables with data collected by Stantec and by others from 2015 through 2021 have been compiled pursuant to this request and are included as Attachment G. ~~Based on this information, site investigation activities adequately characterized contaminated soil/fill and sediment proposed to be managed, analyzed the soil and groundwater for all potentially present contaminants considering current and historic land use, and collected samples from areas most likely to be contaminated from the material to be managed under the exemption. No additional soil or sediment sampling activities are planned during the movement/management of materials associated with redevelopment.~~

Based on this information, site investigation activities adequately characterized contaminated soil/fill and sediment proposed to be managed, analyzed the soil and groundwater for all potentially present contaminants considering current and historic land use, and collected samples from areas most likely to be contaminated from the material to be managed under the exemption. No additional soil or sediment sampling activities are planned during the movement/management of materials associated with redevelopment.

***G. Enter the total number of samples collected from this material and analyzed for contaminants of concern.***

Stantec collected a total of 45 soil samples during site investigation activities associated with BRRTS case #02-16-589248 and submitted them for analysis of RCRA metals, PAHs, and/or VOCs. In addition, Stantec collected a total of nine sediment samples during recent investigation activities and submitted them for analysis of 2,4-dimethylphenol, PAH, oil and grease, and grain size analysis per the WDNR requirements outlined in their correspondence/memorandum titled "NR 347 Sediment Sampling Requirements for C. Reiss Coal Dock, Superior, WI" dated February 26, 2021. Stantec acknowledges that the sediment samples collected from three sediment cores completed in December 2021 (SED-1 through SED-3) were collected in three-foot intervals rather than the two-foot intervals specified in the WDNR 2021 memorandum due to icy field conditions creating difficult access conditions, limited sediment core recovery, and prioritization of quality control sample collection. A total of 44 sediment samples were collected by others on the eastern and southern portions of the slip between 2015 and 2020 and submitted for analysis of PAHs, metals, and/or biological toxicity.

***H. Enter the rate of sample collection per volume.***

Stantec collected one sample per 978 CY of contaminated soil/fill. Based on the sitewide extent of RCRA metal and PAH impacted soil/fill and the ubiquitous nature of the black anthropogenic fill material on the Property, no further sampling is needed to characterize or define the extent of the impacted soil/fill.

Stantec collected one sample per ~~3,1112,364~~ CY of contaminated sediment contributing to the BUIs of the dock slip. Including the 44 sediment samples collected by others in the project area between 2015 and 2020, the rate of sampling becomes one per ~~549404~~ CY of contaminated sediment. Based on the homogeneous nature of the sediment, historic sediment sampling events, and the fulfillment of sampling and analysis requirements outlined in the WDNR 2021 memorandum, no further sampling is needed to characterize or define the extent of impacted sediment (WDNR, 2021).

Stantec acknowledges that the total number of samples collected across the Property does not meet the minimum sample density outlined in Wis. Admin. Code § NR 718.12 (1)(e). However, in consideration of the



October 14, 2022

information presented within the Stantec SIR (Stantec, 2022b) and further described above in Section 3.4, Stantec requests concurrence from WDNR that Property soils have been adequately characterized for proposed development based on the following:

- The consistency of PAH and RCRA metal impacts being confined to surficial anthropogenic fill soils (generally representing the upper three feet of the soil column and visually distinct);
- The demonstrated site-wide absence of these constituents in underlying native silts and clays;
- The historical, continued, and proposed industrial use of the Property; and
- The proposed engineered barriers to be installed post-construction designed to be protective of human and environmental health (Section 2.9; Attachment D).

### 3.5 PROJECT DESCRIPTION/MATERIAL MANAGEMENT PLAN

*The following information is necessary for the DNR to review the request for compliance with Wis. Admin. Code §§ NR 718.12 (2) (b) (5), (7) and (8). In this section, describe how the contaminated material will be managed, the proposed schedule for managing the material, and provide sufficient information to justify that the placement of the contaminated materials will meet the requirements of Wis. Admin. Code §§ NR 726.13 (1) (b) 1. To 5. Narrative boxes have a limit of 2500 characters. Please attach additional pages if necessary, clearly labeling the section of the form to which you are responding.*

**A. Describe the material management activities to take place. Provide details on how and where the material will be generated, transported and placed. Describe the depth of the proposed excavation of contaminated soil or other solid waste, and the depth that it will be placed at the receiving site or facility. Describe any response actions proposed for the receiving site or facility to address the relocated contaminated material (such as the construction of a cap). Discuss how material management activities will fit in with the overall property remediation and/or redevelopment plans.**

Please refer to Section 1.0 and 2.0 of this submittal for details related to this request.

**B. Summarize the proposed schedule for implementation of the material management plan including anticipated start and end dates.**

Site mobilization is anticipated to begin in ~~September 2022~~ January 2023. Approximately 10 months are anticipated to be required to complete the redevelopment associated with the reestablishment of the industrial bulk material handling operations at the Property.

**C. Confirm the proposed material management will comply with Wis. Admin. Code § NR 726.13 (1) (b) 1. Through 5.**

The proposed material management will comply with Wis. Admin. Code § NR 726.13 (1) (b) 1. Through 5.

**D. Describe any procedures that have been established, or methods that will be used, to identify previously undocumented contamination during the completion of this project (such as instrument field screening, visual inspections, etc.). Also describe any contingency procedures that have been established to address unexpected contamination.**

Please refer to Section 2.1 of this submittal for details related to this request.

**E. Summarize how the proposed management activities will prevent or minimize adverse environmental impacts and potential threats to human health and welfare, including worker safety, by assessing how all potential exposure and migration pathways of concern, including direct contact exposure, vapor intrusion, ground water, surface water, sediment and any other relevant pathway will be addressed by the proposed management.**

The proposed redevelopment plan is intended to manage environmental risk and establish a constructible and cost-effective approach to facilitate construction.

October 14, 2022

Stantec considered the following factors when planning soil management activities in conjunction with development. In general, excavated soil can be moved from one area of a site to another if it does not cause:

- A vapor risk to occupied structures;
- Exceedance of surface water or air quality standards;
- A direct contact risk to inhabitants or users of a site;
- Exceedance of a NR140 groundwater quality ES at any applicable point of standards application; or
- Expansion of a groundwater contamination plume.

The proposed management activities will prevent or minimize adverse environmental impacts and potential threats to human health and welfare, including worker safety. Each potential exposure and migration pathway of concern is addressed below.

### **Public Health, Safety, or Welfare or The Environment**

The proposed soil handling and placement procedures meet environmental closure requirements of Chapter NR 726.13(b) WAC and do not pose an unacceptable threat to public health, safety, welfare, or the environment.

### **Vapor Intrusion**

The term “vapor intrusion pathway” generally refers to subsurface contamination that can move through the air-filled pores of vadose zone soils and enter the breathing space of buildings. WDNR notes that due to their high volatility and health risk, VOCs, particularly chlorinated VOCs, are the contaminants that most commonly trigger assessment of the vapor intrusion pathway. Current WDNR guidance notes that vapor intrusion of benzene and other PVOCs occurs most often when free phase product is located near building foundations, where petroleum contaminated groundwater has entered a building, or where contaminated groundwater is in contact with the building foundation.

Identified contamination associated with the black granular anthropogenic fill consists of RCRA metals and PAHs. RCRA metals and PAH constituents are not considered to pose a threat to human health or safety from a vapor migration standpoint in underlying soils. LNAPL and PVOC impacted groundwater exceeding the NR140 ES were identified on the southern and/or central portions of the Property associated with the historical releases of petroleum at the east-adjointing property.

There are currently no structures on the Site; therefore, the vapor intrusion pathway is not currently a pathway of concern. However, a future building is planned to be constructed on the south central portion of the Property as part of redevelopment. The vapor intrusion pathway will be assessed following the construction of any building on-site. Due to the nature and degree of identified soil/fill contamination, it is unlikely vapor intrusion would result from the movement of contaminated soil/fill within the confines of the Property.

### **Sediment/Surface Water**

Wetlands are present on the southern portion of the Property and a dock slip connected to the St Louis Bay borders the northern portion of the Property to the west. Sediment samples collected from the eastern and southern portions of the slip during were identified to be impacted with PAHs, toxic for benthic organisms, and contributing to BUIs for the slip. Redevelopment is planned to improve sediment and surface water quality in the dock slip by dredging approximately 42,500~~28,000~~ CY of sediment (21,250~~CY~~approximately half of which is estimated to be contributing to the dock slip BUIs) and capping it on the Property with an impermeable surface.

Significant dewatering is not anticipated at this time. Dredged sediment will be offloaded onto the Property and staged in an area north of the planned stormwater pond and allowed to gravity dewater prior to being placed within MMU1. A temporary diversion berm will be constructed in accordance with WDNR technical standard 1066 around MMU1 to prevent the migration of contaminated runoff water to the existing wetlands onsite. The runoff water originating from MMU1 and the water generated from the gravity dewatering of the dredged sediment will be routed to the stormwater pond onsite via gravity and/or pumping.

October 14, 2022

Appropriate stormwater and erosion control measures will be put in place and appropriate permits obtained prior to Site activities to minimize erosion and Site stormwater runoff. The erosion control plans are included in **Attachment A** (Sheets C1.00 through C1.06). As practicable, the weather forecast shall be used to schedule Site activities to minimize the potential for significant stormwater accumulation. However, stormwater may accumulate in areas requiring removal. Stormwater and other fluids that may come in contact with contaminated soil are unlikely to become impacted due to the low solubility of the known compounds. However, if any sheen or odors are noticed on the water, samples should be collected from the water to confirm the presence or absence of contaminants prior to discharging.

Stantec prepared a *Wetland Hydrogeologic Modeling* memo dated September 21, 2022 (Stantec, 2022e) to compare wetland hydrologic calculations for existing conditions, temporary construction conditions, and final proposed conditions for the Site. A copy of this memo is included as **Attachment E** which describes the construction sequencing that will be implemented to further minimize impacts to the existing wetland hydrology during construction. The majority of drainage area for each wetland is the footprint of the wetland itself; therefore, the hydrologic impacts related to the placement of MMU1 and surrounding temporary diversion berms external to these wetlands are minimal in comparison to the existing surface area of the wetlands themselves.

Consolidating the contaminated materials into a single, large berm (MMU1), will reduce the total area subject to erosion control measures and associated maintenance, preserve existing topography surrounding wetlands on the southern portion of the Site, and reduce the number of areas that will need to be maintained long term post-construction. Erosion control best management practices (BMPs) have been designed to ensure that the proposed temporary diversion berms have sufficient storage and would not result in illicit discharge to onsite wetlands. Associated specific calculations and cross-sections illustrating this point are discussed in **Attachment E**. Moreover, the materials collected by the temporary diversion berms will be associated with run-off/erosion from the berm wall (constructed from non-impacted clay materials) and will not be related to contaminated dredge/sediment material.

### **Air Quality**

Contamination will be capped with building slabs, paved areas, and/or an 18-inch clean soil cap, limiting volatilization of the low level of residual VOCs associated with the offsite contamination. Construction methods will include best management practices to limit particulate emissions. Contractors will be required to adequately wet soil during dry periods to prevent visible emissions.

### **Direct Contact Exposure**

The direct contact pathway on the southern portion of the Property will be protected by engineering controls in the form of building slabs, paved areas, railroad ballast, gravel access roads, and/or a clean soil cap (including landscaping) that will remain in place following redevelopment. The goal of the site cover system is to prevent direct contact with contaminated soil exceeding the IDC RCL and prevent migration of contaminants to groundwater.

In landscaped areas on the southern portion of the Property ~~and MMU 1, and the three small soil berms,~~ the cap will consist of a minimum of 15 inches of clay topped by 3 inches of imported topsoil for planting. The clay will be sourced from the native clay soils on the Property encountered during excavation activities as part of redevelopment, which have been demonstrated to have no VOC, PAH or RCRA metal detections at concentrations exceeding NR720 RCLs (Stantec, 2022a,b). Topsoil will be seeded with a native ~~tall~~ grass ~~prairie~~ mix to reinforce and maintain the soil cap in these areas. The proposed railroad will be capped with at least 12 inches of impermeable compacted sub-ballast stone topped by nine inches of ballast stone to prevent direct contact with the materials underneath. The extent of the Site cover system is illustrated on **Figure 4**.

The anticipated use of the northern area is for industrial bulk material handling operations to be conducted by a minimal number of employees. Arsenic and/or benzo(a)pyrene were detected in select soil samples on the northern portion of the Property at concentrations exceeding the IDC RCL. The extent of these contaminated soils is limited and excavation activities are not currently planned to occur on the northern portion of the Property. The majority of the area is currently covered with concrete panels that are approximately four inches thick, eight feet long and eight feet wide. The existing concrete panels along with the proposed gravel access road will serve to prevent direct contact with contaminated soils exceeding the IDC RCL. A gated fence is

| October 14, 2022

proposed to be installed spanning the perimeter of the Site to further restrict access to the Property with exception to the proposed railroad spur. Due to the limited extent of contamination exceeding the IDC RCL, minimal occupancy, restricted access, and current surface covering, additional engineered surface barriers are not proposed to be installed on the northern portion of the Property.

The components and extents of the proposed Site cover system are illustrated on **Figure 4**.

### **Groundwater Quality/Water Supply**

Historical groundwater sampling events identified LNAPL and PVOC impacted groundwater at concentrations exceeding the ES extending onto the southern and/or central portions of the Property associated with the east adjoining Amoco BRRS cases (02-16-297979, 02-16-117873 and 02-16-000331). Ongoing groundwater monitoring and remedial activities are ongoing to address the identified PVOC contaminated groundwater associated with the Amoco BRRS cases (Antea, 2022). Groundwater samples collected beneath areas containing the black granular anthropogenic fill impacted with select PAH constituents exceeding their applicable GW and/or direct contact RCLs did not detect the PAH constituents at concentrations exceeding their applicable NR140 PAL and/or ES (Barr, 2022; Delta, 2003). Therefore, it is not likely that the presence of black granular fill with elevated levels of PAH constituents significantly impacts groundwater quality at the Property.

The historic groundwater sampling results indicate that groundwater contamination at the Property exceeding NR140 standards is likely attributed to the former petroleum releases associated with the former Amoco BRRS cases and not the presence of anthropogenic fill. Significantly impacted groundwater is not anticipated to be encountered during redevelopment due to the anticipated depth of the planned excavation and the historical depth of groundwater at the Property.

Management of the soil/fill onsite is not likely to create any further adverse impacts to groundwater quality. The excavated soil/fill to be managed onsite will be placed at a depth no greater than which it was excavated. The planned stormwater pond will have a clay liner installed on the bottom to prevent leaching of potentially contaminated stormwater/runoff collected in the pond to the underlying groundwater. There are no onsite water supply wells and the Property is not within 300 feet of any known water supply well. Based on the above information, the migration potential of contaminants associated with the Site due to redevelopment activities to groundwater or water supply wells is not likely.

## **3.6 RECEIVING SITE OR FACILITY INFORMATION**

***The following information is necessary for the DNR to review the request for compliance with Wis. Admin. Code §§ NR 718.12 (2) (c) 3. In this section, describe the site or facility receiving the material by addressing the following items. Narrative boxes have a limit of 2500 characters. Please attach additional pages if necessary, clearly labeling the section of the form to which you are responding.***

Current grading plans and cut/fill estimates indicate that all material is planned to be beneficially reused onsite. All dredged sediment and soil reported to have been impacted with RCRA metals, PAHs, and/or VOCs will be capped as part of the redevelopment. Additional details regarding the movement, management and capping of impacted materials onsite are provided in Sections 2.0 and 3.0 of this submittal.

## **3.7 LOCATIONAL CRITERIA**

Within a floodplain: **No**

Within 100 feet of any wetland or critical habitat area: **Yes**

Within 300 feet of any navigable river, stream, lake, pond, or flowage: **Yes**

Within 100 feet of any onsite water supply well or 300 feet of any offsite water supply well: **No**

Within 3 feet of the high groundwater level: **Yes**

At a depth greater than the depth of the original excavation from which the contaminated soil was removed: **No**

***Include an explanation of why granting an exemption to the Wis. Admin. Code § NR 718.12 (1) (c) locational criteria will not cause a threat to public health, safety, or welfare or the environment by assessing how all potential exposure and migration pathways of concern,***

October 14, 2022

***including direct contact exposure, vapor intrusion, ground water, surface water, sediment and any other relevant pathway will be addressed by the proposed management. Consider the quantity and characteristics of the material being managed, the geologic and hydrogeological characteristics of the receiving site or facility, the unavailability of other environmentally suitable alternatives, and whether the activities will comply with other state and federal regulations including other portions of Wis. Admin. Code chs. NR 700 to NR 754.***

Since all the locational criteria will not be met, Stantec requests an exemption be issued for the proposed material management activities. The following information is provided in support of the exemption.

### **Waste Characteristics and Quantities**

Soil excavation activities are anticipated within areas where RCRA metal, PAH, and/or low-level VOC-impacted soil will be encountered. Impacted material observed at the Site primarily consists of black granular anthropogenic fill containing sands, gravels, and/or black granular pieces (i.e. coal pieces). The thickness of this fill unit ranged in thickness from 0.25 to 12 feet thick with an average thickness of 2.5 feet. Fill consisting of red sandy soils was identified to underlie the black granular fill on the northern portion of the Property. Native clay soils underlie the black granular fill on the southern portion of the Property and native fine sand soils underlie the red sandy fill on the northern portion of the Property. Native clay soils were not identified to be impacted with contaminant concentrations exceeding NR720 RCLs during the December 2021 and May 2022 investigation activities. Excavation activities associated with redevelopment will include, but are not limited to, sitewide grading, building foundations, utility trenches, railroad corridors, and a stormwater retention pond. RCRA metal and PAH-impacted soil above direct contact standards is anticipated to be encountered during excavation and grading activities.

All dredged sediment and impacted soil requiring excavation is planned to be reused on-site. Specifically, the sediment and the soil/fill will preferentially be placed underneath pavement/impermeable surfaces, buildings, or on landscaped portions of the Site. Impacted soils will then be capped in place as part of the redevelopment to address potential direct contact concerns. All excavated soil is anticipated to be reused onsite. Redevelopment plans including anticipated grading plans are provided in **Attachment A**. Although not anticipated, excess impacted soil not suitable for reuse will be transported offsite for proper disposal at a licensed landfill.

### **Geologic and Hydrogeologic Characteristics**

Groundwater, when encountered at the Site, was present between 1.5 fbg (on the northern end) and 15 fbg (on the southern end). LNAPL and PVOC impacted groundwater exceeding the ES were identified extending onto the southern and/or central portions of the Property from the east-adjointing property. Ongoing groundwater monitoring and remedial activities are being conducted to address this identified contamination. The LNAPL plume and PVOC impacted groundwater are not likely to be encountered based on the proposed depth of excavation in those areas. Based on groundwater samples collected during previous site investigation activities (Barr, 2022; Delta, 2003), it does not appear that RCRA metal and PAH impacted fill is having a significant impact on groundwater quality on the Site. Impacted fill material will not be placed deeper than the elevation it was excavated from. Therefore, based on the reasons provided above, management of impacted fill is not likely to create any further adverse impacts to groundwater quality. As discussed in Section 2.9, the Site cover system to be installed as part of redevelopment is designed to prevent migration of contaminants to groundwater via infiltration.

### **Unavailability of Environmentally Suitable Alternatives**

The redevelopment will turn an underutilized area into a beneficial industrial development. In comparing the reuse alternative to other options such as complete offsite landfill disposal, it was determined that the project would not be economically feasible to construct due to the added financial burden. ~~Given that the dredged sediment and excavated soil is of "like" character to in situ soil in the placement area, onsite management appears to be a practical and environmentally suitable option.~~ The costs associated with transporting material offsite, either as fill for another project in the City of Superior or to a licensed landfill, are sufficiently high such that this project would not move forward if incurred. Additionally, the floodway of the C. Reiss Dock property in Duluth, Minnesota is not permitted to be raised as part of that project and is therefore unable to use this material.



October 14, 2022

Fill materials and dredged sediments to be handled onsite are not suitable for offsite reuse due to associated PAH and/or RCRA metal impacts above NR720 direct contact standards and are most efficiently managed onsite as proposed beneath the engineered barrier. This approach saves on transportation costs, carbon emissions, and landfill space, while also being protective of human and environmental health with the implementation of proposed controls.

The transport or disposal of excess material offsite is not anticipated. The current cut and fill estimates indicate that all material generated during redevelopment activities will be able to be redistributed and reused onsite. The native unimpacted clay soils disturbed as part of construction will be segregated from onsite fill soils and dredged sediment and be used as Site capping material and/or liner for the proposed stormwater pond. Given that the dredged sediment and excavated soil is of "like" character to in-situ soil in the placement area, onsite management appears to be a practical and environmentally suitable option.

### **Compliance with Other State and Federal Regulations**

Soil and sediment management will follow other state and federal regulations and additional permits and approvals obtained as needed. The entire area will be managed as a construction site with proper erosion control and the soil and sediment will be managed per approved material management and capping plans for the Site designed to be protective of human health and the environment. All remaining contamination, including VOC, RCRA metals, and PAH-impacted soils will be capped with paved/impermeable surfaces or an 18-inch soil cap consisting of a minimum of 15 inches of clay topped by at least three inches of imported topsoil upon final placement. As mentioned previously, erosion control measures will be taken to prevent the potential runoff or surface migration of contaminants during construction per any necessary permits.

## **3.8 ADDITIONAL INFORMATION FOR NON-METALLIC MINE RECEIVING SITES OR FACILITIES**

This section is not applicable. The Property is not currently a non-metallic mine site.

## **3.9 CONTINUING OBLIGATIONS**

The following information is necessary for the DNR to review the request for compliance with Wis. Admin. Code §§ NR 718.12 (2) (d) and (e). Check the applicable boxes to indicate which continuing obligations will be specifically required to address the material being managed on the receiving site or facility. The associated language will appear in the Wis. Admin. Code ch. NR 718 Approval Letter.

No Continuing Obligations

Residual Soil Contamination:

If contaminated soil managed under this material management plan is excavated in the future, the property owner at the time of excavation will be responsible for the following:

- determine if contamination is present,
- determine whether the material would be considered solid or hazardous waste,
- ensure that any storage, treatment or disposal follows applicable statutes and rules.

Contaminated soil may be managed in accordance with NR 718, with prior WDNR approval. In addition, all current and future property owners and occupants of the property and right-of-way holders need to be aware that excavation of the contaminated soil may pose a hazard and as a result special precautions may need to be taken during excavation activities to prevent a health threat to humans. A historic fill exemption is required prior to construction of any structures over fill materials.

Depending on site-specific conditions, construction over contaminated soils or groundwater may also result in vapor migration of contaminants into enclosed structures or migration along underground utility lines. The potential for vapor intrusion and means of mitigation should be evaluated when planning any future redevelopment, and measures should be taken to ensure the continued protection of public health, safety, welfare and the environment at the Site.

Maintenance of a cover:

October 14, 2022

A soil cover/engineered cover/other has been placed over remaining contamination and this cover must be maintained. Inspections will be required, and submittal of inspection reports may be required. Certain activities which would disturb the cover or barrier will be prohibited. If the cover is approved for industrial land use, notification of the WDNR is required before changing to a non-industrial use, to determine if the cover will be protective for that use. A maintenance plan is attached, which describes the maintenance activities to be required. If the WDNR requires changes to the maintenance plan, an updated maintenance plan must be provided at the completion of the soil disposal action. A map is attached which shows the location of the extent of contaminated materials and the extent of the cover.

Use of Industrial Land Use Soil Standards:

Industrial soil standards have been applied for the site receiving the contaminated materials. The WDNR must be notified if the property land use will change from industrial use to a non-industrial land use. Additional investigation and remediation may be required prior to the change in land use to ensure the site conditions are protective for the planned land use.

Vapor: Future Actions to Address Vapor Intrusion:

While vapor intrusion does not currently exist, if a building is constructed on this property, or reconstructed, or if use of a building is changed to a non-industrial use, vapor intrusion may be a concern. The WDNR must be notified before construction of a building or changing the use of an existing building to non-industrial use. The use of vapor control technologies or an assessment of the potential for vapor intrusion will be required at that time.

Site Specific Condition:

Describe the site-specific condition: N/A

### 3.10 FIGURES

***Providing figures as part of the material management plan will allow DNR staff to more quickly evaluate the compliance of the request with the requirements of Wis. Admin. Code §§ NR 718.12 (1) and (2) and NR 718.15. The following are recommended figures to be submitted with this request.***

***The DNR recommends that all maps are drawn to scale not larger than 1 inch equal to 100 feet and labeled with the site or facility name and address. The location of the property and the specific disposal area should be provided in enough detail to allow DNR personnel to inspect these areas in the future. Providing a "cut/fill" map that clearly depicts how much material will be removed or added to different areas of the involved property(ies) and depicting how material will be moved across the site is also highly recommended. Providing cross sections that depict site conditions before and after material management activities is also recommended.***

***Attach appropriate figures to this form. Use the following checklist to ensure recommended items are included in the attached figures.***

***The boundaries of each property involved in the project as well as named and unnamed roads or access points, buildings and other surface features, underground utilities, land uses on adjacent properties, and known and potential sources of hazardous substances.***

Pertinent information related to this request can be found on **Figures 1 and 2.**

***The location of wetlands, critical habitat areas, floodplains, surface water bodies, water supply wells, or other possible receptors located near or within the area where material will be managed.***

Pertinent information related to this request can be found in **Attachment A** and on **Figure 2.** No floodplains or water supply wells are located near or within the area where material will be managed.



October 14, 2022

***The lateral extent and depth of planned excavation, grading, or otherwise disturbed areas. The lateral extent and thickness of excavated material placement locations.***

Pertinent information related to this request can be found in **Attachment A, Figures 3a through 3f, and ~~Figure 44, 5, and 12.~~**

***Soil sample locations at the response action site and receiving site(s) or facility(ies). Depict applicable soil contaminant concentration data and sample depths. Indicate the extent of contamination exceeding a RCL.***

Pertinent information related to this request can be found on **Figures 2, 10, and 11** and Tables 1 through 7.

***Depth to groundwater.***

Pertinent information related to this request can be found in **Figures 7 and 8** and the Amoco BRRTS case files.

***The extent of any performance standards (such as a barrier or cap) that will be required at the completion of management activities.***

Pertinent information related to this request can be found on **Figures 4 and 5.**

### **3.11 ADDITIONAL ATTACHMENTS**

***The following documents are recommended for inclusion with a Wis. Admin. Code § NR 718.12 or a Wis. Admin. Code § 718.15 request. Indicate which of these documents are included in this request by checking the boxes below.***

***A table summarizing the analytical results of all soil/waste samples collected at the generating site or facility that meets the requirements of Wis. Admin. Code § 716.15 (4) (e). Clearly indicate which of these samples were collected from material that is proposed to be managed.***

Tables summarizing soil and sediment sample analytical results for the Site are provided as **Tables 1 through 7 and Attachment G.**

***The analytical package for all samples listed on the above table. The package should include the sample results, chain of custody, sampling methods, and QA/QC data.***

Complete laboratory analytical results for the Stantec December 2021 and May 2022 events can be found in the “*Summary of Limited Soil Investigation, C. Reiss Coal dock Property, Superior, Wisconsin*” and “*May 2022 Site Investigation*” reports (Stantec, 2022a,b).

***A maintenance plan for any performance standard needed to address the material proposed to be managed. The plan should follow the format found in DNR Form 4400-202, Attachment D.***

A plan for maintenance of the engineered cap ~~is included as Attachment D. will be submitted to the WDNR at a future date.~~

***A copy of the reclamation plan for the receiving site or facility if it is a nonmetallic mine. Confirm the plan allows for acceptance of contaminated soil by marking relevant plan sections.***

Not applicable.

***Power of Attorney (if applicable, see Section 12).***

Not applicable.

***Deed for the property receiving the contaminated material. If a certified survey map or plat map is referenced by this deed then also include those documents.***

A copy of the deed(s) for the Property are included as **Attachment H.** ~~site receiving the contaminated material~~

October 14, 2022

~~is not applicable as soil generated during redevelopment is planned to remain onsite.~~

**Provide a copy of a parcel map depicting the property(ies) boundaries.**

A parcel map identifying the Property attained from the City of Superior/Douglas County WI interactive online GIS map accessed on June 10, 2022 is included as **Attachment B**.

### 3.12 CERTIFICATION STATEMENTS

***Wis. Admin. Code ch. NR 712, entitled “Personnel Qualifications for Conducting Environmental Response Actions,” establishes minimum standards for experience and professional qualifications for persons who perform certain environmental services. All exemption requests submitted to manage contaminated soil or other solid waste as an interim action or remedial action under Wis. Admin. Code chs. NR 708 or NR 722 must be prepared by, or prepared under, the supervision of a professional engineer per Wis. Admin. Code ch. NR 712. The professional engineer who prepared or supervised this exemption request should complete the following section. This law applies to work conducted under Wis. Admin. Code ch. NR 718, unless specifically exempted.***

This document has been prepared and certified by the following Wisconsin licensed professionals:

I, Stuart J. Gross, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.



Stuart J. Gross, P.G.

~~07/06~~10/12/2022

Senior Associate

Phone: (262) 643-9159

Email: [Stu.Gross@stantec.com](mailto:Stu.Gross@stantec.com)

Date:

I, Hiedi A. Waller, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.



Hiedi A. Waller, P.E.

~~07/06~~10/12/2022

Senior Associate

Phone: (262) 643-9025

Email: [Hiedi.Waller@stantec.com](mailto:Hiedi.Waller@stantec.com)

Date:





**UPDATED MATERIALS MANAGEMENT PLAN AND CHAPTER NR 718 EXEMPTION, C. REISS COAL DOCK  
PROPERTY, SUPERIOR, WISCONSIN**

October 14, 2022

October 14, 2022

## 4.0 REFERENCES

Antea, 2022. 2021 Progress Report, January – December 2021, Former Amoco Terminal, 2904 Winter Street, Superior, WI, February 8, 2022.

Barr, 2022. 2021 Status Report for the Murphy Marine Terminal Site, Superior, Wisconsin, WDNR BRRTS No. 03-16-000320, January 6, 2022.

Delta, 2003. Case Summary and Closeout Form, Barge Dock Area, Barge Dock Property – North of Winter Street/Maryland Avenue Intersection, Superior, Wisconsin, BRRTS No. 02-16-297977 – Barge Dock Area, July 7, 2003.

Stantec, 2022a. Summary of Limited Soil Investigation, C. Reiss Coal Dock Property, Superior, Wisconsin, February 15, 2022.

Stantec, 2022b. Site Investigation, C. Reiss Coal Dock Property, Superior, Wisconsin, WDNR BRRTS Number: 02-16-589248 C Reiss Coal Dock Property, June 2022.

Stantec, 2022c. Workplan for Additional Soil Investigation, C. Reiss Coal Dock Property, Superior, Wisconsin, April 27, 2022.

[Stantec 2022d. Material Management Plan and NR 718 Exemption, C. Reiss Coal Dock Property, Superior, Wisconsin, July 6, 2022.](#)

[Stantec, 2022e. Additional Information Requested for DNR Review and Determination on Materials Management Plan, and Ch. NR 718 Exemption Request for C. Reiss Coal Dock Property, Superior, Wisconsin, BRRTS Case No. 02-16-589248 - Wetland Hydrologic Modeling, September 28, 2022.](#)

WDNR, 2003. Consensus-Based Sediment Quality Guidelines, Recommendations for Use & Application, Interim Guidance RR-088, December 2003.

WDNR, 2021. NR 347 Sediment Sampling Requirements for C. Reiss Coal Dock, Superior, WI, February 26, 2021.

[WDNR, 2022a. Additional Information Requested for DNR Review and Determination on Materials Management Plan and Ch. NR 718 Exemption Request for C. Reiss Coal Dock Property, Superior, Wisconsin, BRRTS Case No. 02-16-589248, August 12, 2022.](#)

WDNR, 2022b. Beneficial Use Impairments Related to Sediment Contamination in the Hallet Dock No. 8 / C. Reiss Coal Slip, St Louis River Area of Concern (AOC), Superior, Wisconsin, February 23, 2022.

# FIGURES



# TABLES

# ATTACHMENTS

# **ATTACHMENT A**

## **Site Redevelopment Plans**

# ATTACHMENT B

## City of Superior/Douglas County Online Parcel Map



**ATTACHMENT C**  
**BNSF Notifications**



**ATTACHMENT D**  
**Draft Cap Maintenance Plan**

**ATTACHMENT E**  
**Wetland Hydrologic Modeling Memo**

**ATTACHMENT F**  
**AET (2022) Report of Geotechnical Exploration**

**ATTACHMENT G**  
**Compiled Sediment Data (2015 – 2021)**

# ATTACHMENT H

## Property Deeds