



January 22, 2016

MR TOM CURELLI
FRASER SHIPYARDS INC
1 CLOUGH AVE
SUPERIOR WI 54880

KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS

SUBJECT: Final Case Closure with Continuing Obligations
Fraser Shipyard AOC #5, 1 Clough Avenue, Superior, Wisconsin
DNR BRRTS Activity #02-16-120590
FID #816047210

Dear Mr. Curelli:

The Department of Natural Resources (DNR) considers the Fraser Shipyard AOC #5 site closed, with continuing obligations. No further investigation or remediation is required at this time. However, you, future property owners, and occupants of the property must comply with the continuing obligations as explained in the conditions of closure in this letter. Please read over this letter closely to ensure that you comply with all conditions and other on-going requirements. Provide this letter and any attachments listed at the end of this letter to anyone who purchases, rents or leases this property from you. Certain continuing obligations also apply to affected property owners or rights-of-way holders. These are identified within each continuing obligation.

This final closure decision is based on the correspondence and data provided, and is issued under chs. NR 726 and 727, Wis. Adm. Code. The DNR Northern Region Closure Committee most recently reviewed the request for closure on March 3, 2000. The DNR Closure Committee reviewed this environmental remediation case for compliance with state laws and standards to maintain consistency in the closure of these cases. A determination of conditional closure was made at that time, but the recording of a deed restriction for continued industrial use of the property was required as a condition of closure. Our closure process has since changed, and the closure condition will now be addressed via a continuing obligation described in this letter. Your consultant submitted the necessary documentation to meet the closure requirements on August 27, 2015, the appropriate database fee under s. NR 749.04, Wis. Adm. Code, on September 29, 2015 and an updated map on January 22, 2016.

This paint waste staging area had lead and chromium contamination in soil from past releases. Contaminated soil was excavated and transported off-site for disposal, but some residual contamination remained. The conditions of closure and continuing obligations required were based on the property being used for industrial purposes.

Continuing Obligations

The continuing obligations for this site are summarized below. Further details on actions required are found in the section Closure Conditions.

- Residual soil contamination exists that must be properly managed should it be excavated or removed.
- Industrial soil standards were applied for closure, and industrial zoning is required. Before the land use may be changed from industrial to non-industrial, additional environmental work must be completed.

The DNR fact sheet "Continuing Obligations for Environmental Protection," RR-819, helps to explain a property owner's responsibility for continuing obligations on their property. The fact sheet is attached and may also be obtained at <http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf>.

GIS Registry

This site will be included on the Bureau for Remediation and Redevelopment Tracking System (BRRTS on the Web) at <http://dnr.wi.gov/topic/Brownfields/clean.html>, to provide public notice of residual contamination and of any continuing obligations. The site can also be viewed on the Remediation and Redevelopment Sites Map (RRSM), a map view, under the Geographic Information System (GIS) Registry layer, at the same web address.

DNR approval prior to well construction or reconstruction is required for all sites shown on the GIS Registry, in accordance with s. NR 812.09 (4) (w), Wis. Adm. Code. This requirement applies to private drinking water wells and high capacity wells. To obtain approval, complete and submit Form 3300-254 to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line at <http://dnr.wi.gov/topic/wells/documents/3300254.pdf>.

All site information is also on file at the Northern Regional DNR office, at 107 Sutliff Avenue in Rhinelander. This letter and information that was submitted with your closure request application, including any maintenance plan and maps, can be found as a Portable Document Format (PDF) in BRRTS on the Web.

Closure Conditions

Compliance with the requirements of this letter is a responsibility to which Fraser Shipyards, Inc. and any subsequent property owners must adhere. DNR staff will conduct periodic prearranged inspections to ensure that the conditions included in this letter and the attached maintenance plan are met. If these requirements are not followed, the DNR may take enforcement action under § 292.11, Wis. Stats., to ensure compliance with the specified requirements, limitations or other conditions related to the property.

Please send written notifications in accordance with the following requirements to:

Department of Natural Resources
Attn: Remediation and Redevelopment Program Environmental Program Associate
107 Sutliff Ave.
Rhinelander, WI 54501

Residual Soil Contamination (ch. NR 718, chs. 500 to 536, Wis. Adm. Code or ch. 289, Wis. Stats.)

Soil contamination remains near the cranes adjacent to the No. 5 Slab as indicated on the attached Figure 2 Site Plan – Existing Conditions, prepared by SEH and dated June 7, 2000, and more specifically on Figure 3 Hydraulic Probe Sampling Location, prepared by SEH and dated August 27, 1997 (modified by Environmental Troubleshooters, Inc. for the GIS Registry package) as set within the property boundaries on Figure 2 Property Site Map prepared by Environmental Troubleshooters on January 14, 2016. If soil in the specific locations described above is excavated in the future, the property owner or right-of-way holder at the time of excavation must sample and analyze the excavated soil to determine if contamination remains. If sampling confirms that contamination is present, the property owner or right-of-way holder at the time of excavation will need to determine whether the material is considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable standards and rules. Contaminated soil may be managed in accordance with ch. NR 718, Wis. Adm. Code, with prior DNR approval.

In addition, all current and future owners and occupants of the property and right-of-way holders need to be aware that excavation of the contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken to prevent a direct contact health threat to humans.

Industrial Soil Standards (s. NR 726.15, s. NR 727.07, Wis. Adm. Code)

Soil contamination remains as described in the Residual Soil Contamination section above. Samples contained lead and chromium in concentrations that met the residual contaminant levels (RCLs) for direct contact under industrial exposure assumptions, but exceeded non-industrial RCLs.

This property may not be used or developed for a residential, commercial, agricultural or other non-industrial use, unless prior written approval has been obtained from the DNR. The property owner shall notify the DNR at least 45 days before changing the use. An investigation and remedial action to meet applicable soil cleanup standards may be required at that time.

In Closing

Please be aware that the case may be reopened pursuant to s. NR 727.13, Wis. Adm. Code, for any of the following situations:

- if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, or welfare or to the environment,
- if the property owner does not comply with the conditions of closure, with any deed restrictions applied to the property, or with a certificate of completion issued under s. 292.15, Wis. Stats., or
- a property owner fails to maintain or comply with a continuing obligation (imposed under this closure approval letter).

The DNR appreciates your efforts to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact project manager Chris Saari at 715-685-2920, or by email at Christopher.Saari@Wisconsin.gov.

Sincerely,



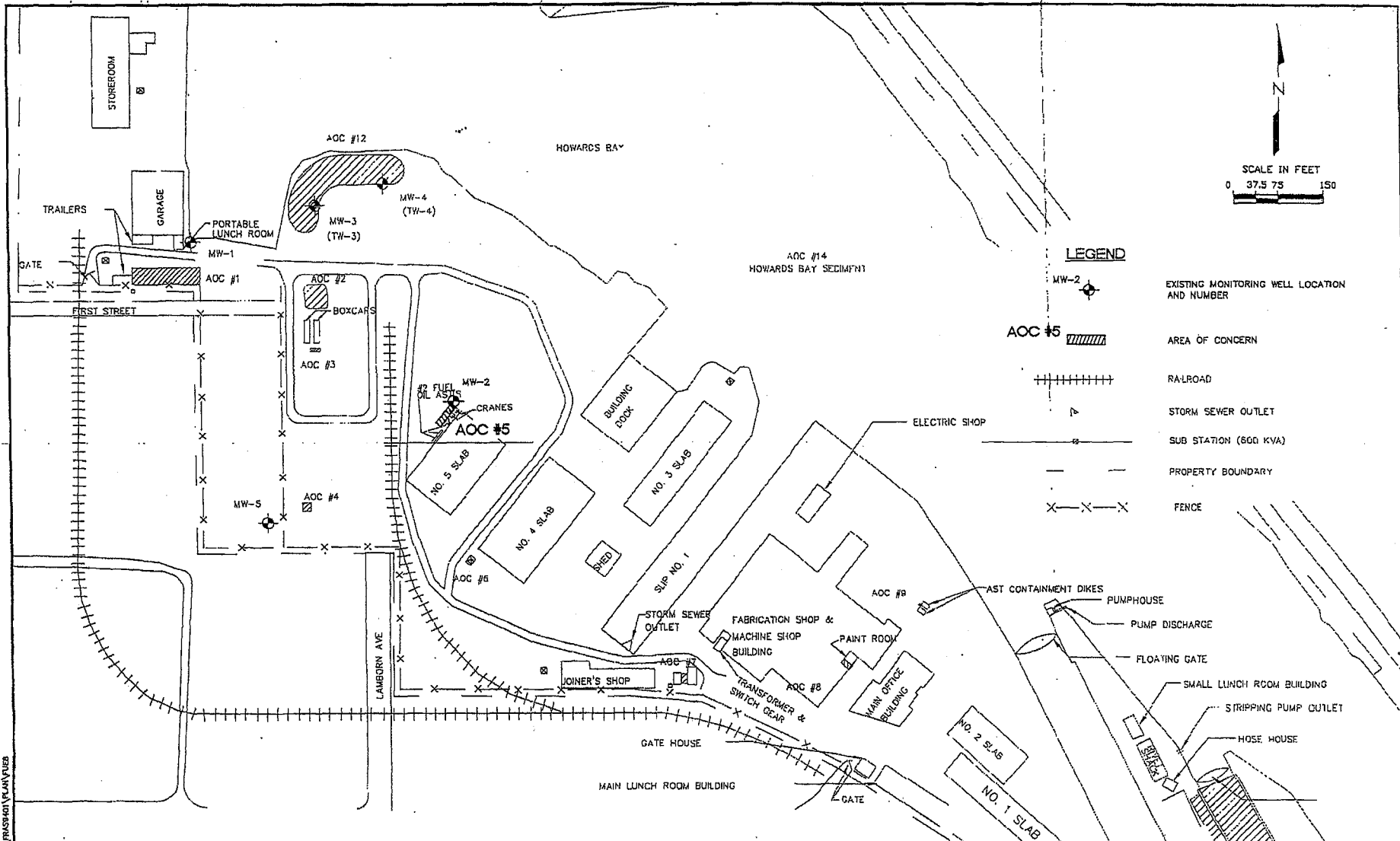
John Robinson
Northern Region Supervisor
Remediation & Redevelopment Program

Attachments:

- Figure 2 Site Plan – Existing Conditions, prepared by SEH and dated June 7, 2000
- Figure 3 Hydraulic Probe Sampling Location, prepared by SEH and dated August 27, 1997 (modified by Environmental Troubleshooters, Inc.)
- Figure 2 Property Site Map, prepared by Environmental Troubleshooters on January 14, 2016
- RR 819, Continuing Obligations for Environmental Protection

cc: John McCarthy
Environmental Troubleshooters, Inc.
3825 Grand Ave.
Duluth, MN 55807

Chris, Saari, DNR Ashland



| | | | | | | | | | | |
|-----|----------|-----------------|----------|--------|--------------|----------|--|--|-----|-----|
| 1 | 06/07/00 | | JLF | 06/00 | BLK | 06/00 | | | REV | 1/1 |
| NO. | DATE | ISSUE/REVISIONS | DRAWN BY | DESIGN | FIELD REVIEW | QC CHECK | | | | |

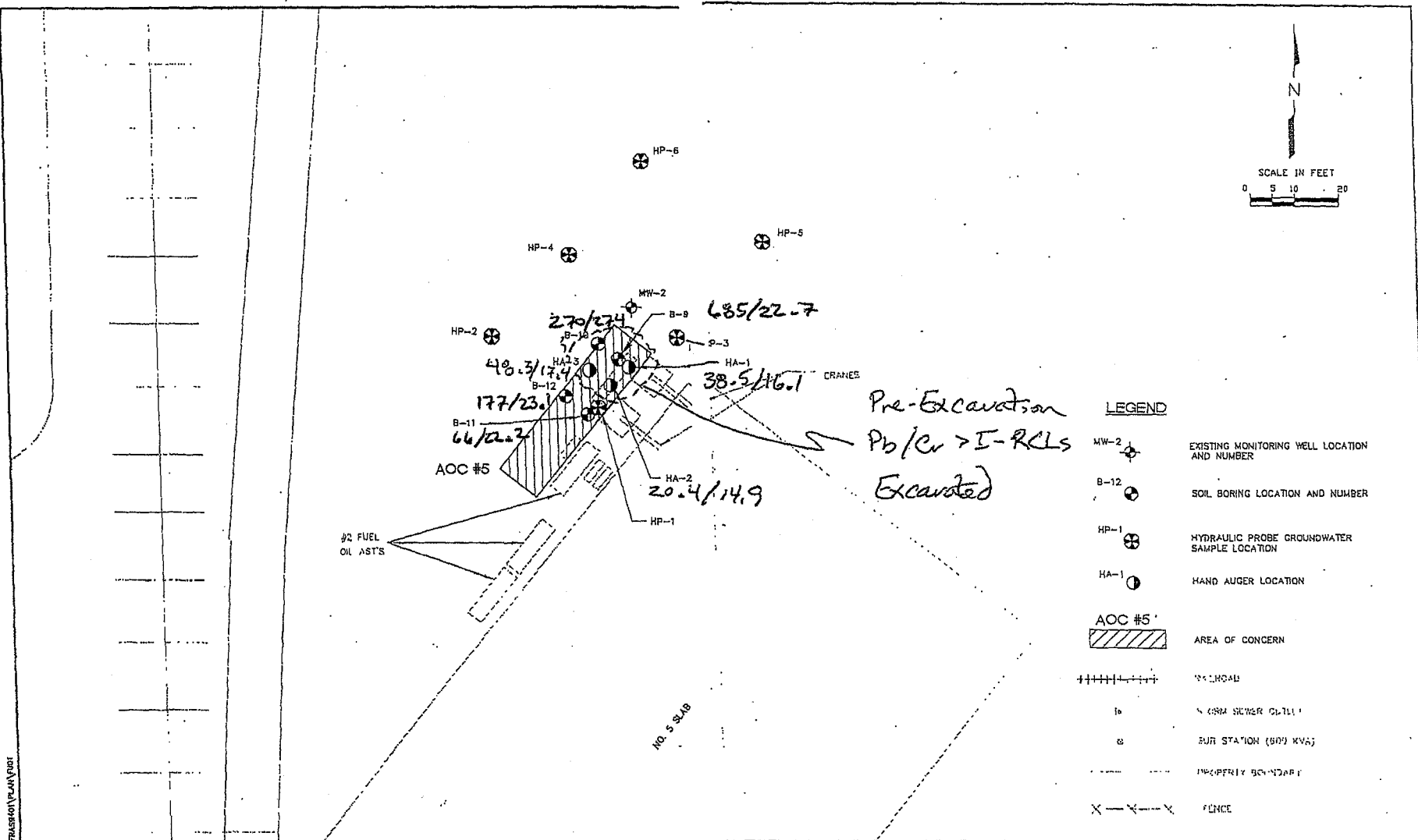


FRASER SHIPYARDS, INC.
CLOSURE REQUEST
AOC #5

FIGURE 2
SITE PLAN-
EXISTING CONDITIONS

| | |
|-----------------------|---|
| PROJ. NO. FRAS9401 | 2 |
| DATE 06/07/00 | 4 |

E:\WATER\FRAS9401\PLAN\FIG 2



- LEGEND**
- MW-2 EXISTING MONITORING WELL LOCATION AND NUMBER
 - B-12 SOIL BORING LOCATION AND NUMBER
 - HP-1 HYDRAULIC PROBE GROUNDWATER SAMPLE LOCATION
 - HA-1 HAND AUGER LOCATION
 - AOC #5 AREA OF CONCERN
 - ELECTRICAL
 - STORM SEWER CHUTE
 - CUR STATION (50% KVA)
 - PROPERTY BOUNDARY
 - FENCE

FRASER SHIPYARDS, INC. PLAN #101

| NO. | DATE | ISSUE/REVISIONS | DRAWN BY | DESIGN | FIELD REVIEW | QC CHECK |
|-----|----------|-----------------|----------|--------|--------------|----------|
| 1 | 08/27/97 | | JLE | 08/97 | JEG | 08/97 |
| | | | | | | |
| | | | | | | |

| | | | | |
|--|----------------------------------|--|----------------------|---|
| | FRASER SHIPYARDS, INC. AOC #5 | FIGURE 3 HYDRAULIC PROBE SAMPLING LOCATION | PROJ. NO. FRAS401 | 3 |
| | | | DATE 08/27/97 | 4 |

685/22.7 Pb/Cr. in soil mg/kg



Legend




-  Approximate Property Line
-  AOC
-  Railroads



FIGURE 2
Property Site Map

**RJS Fraser Shipyard
Superior, Wisconsin**

PROJECT #: 14-1004

DATE: 01/14/2016

CGIS

**FILE NAME: //GIS/2014 Projects/14-1004
/Projects/Figure2**





Continuing Obligations for Environmental Protection

Responsibilities of Wisconsin Property Owners

PUB-RR-819

November 2013

This fact sheet is intended to help property owners understand their legal requirements under s. 292.12, Wis. Stats., regarding continuing obligations that arise due to the environmental condition of their property.

The term “continuing obligations” refers to certain actions for which property owners are responsible following a completed environmental cleanup. They are sometimes called environmental land use controls or institutional controls. These legal obligations, such as a requirement to maintain pavement over contaminated soil, are most often found in a cleanup approval letter from the state.

Less commonly, a continuing obligation may apply where a cleanup is not yet completed but a cleanup plan has been approved, or at a property owned by a local government that is exempt from certain cleanup requirements.

What Are Continuing Obligations?

Continuing obligations are legal requirements designed to protect public health and the environment in regard to contamination that remains on a property.

Continuing obligations still apply after a property is sold. Each new owner is responsible for complying with the continuing obligations.

Background

Wisconsin, like most states, allows some contamination to remain after cleanup of soil or groundwater contamination (residual contamination). This minimizes the transportation of contamination and reduces cleanup costs while still ensuring that public health and the environment are protected.

The Department of Natural Resources (DNR), through its Remediation and Redevelopment (RR) Program, places sites or properties with residual contamination on a public database in order to provide notice to interested parties about the residual contamination and any associated continuing obligations. Please see the “Public Information” section on page 3 to learn more about the database. (Prior to June 3, 2006, the state used deed restrictions recorded at county courthouses to establish continuing obligations, and those deed restrictions have also been added into the database.)



Wisconsin Department of Natural Resources
P.O. Box 7921, Madison, WI 53707
dnr.wi.gov, search “brownfield”



Types of Continuing Obligations

1. Manage Contaminated Soil that is Excavated

If the property owner intends to dig up an area with contaminated soil, the owner must ensure that proper soil sampling, followed by appropriate treatment or disposal, takes place. Managing contaminated soil must be done in compliance with state law and is usually done under the guidance of a private environmental professional.

2. Manage Construction of Water Supply Wells

If there is soil or groundwater contamination and the property owner plans to construct or reconstruct a water supply well, the owner must obtain prior DNR approval to ensure that well construction is designed to protect the water supply from contamination.

Other Types of Continuing Obligations

Some continuing obligations are designed specifically for conditions on individual properties. Examples include:

- keeping clean soil and vegetation over contaminated soil;
- keeping an asphalt “cover” over contaminated soil or groundwater;
- maintaining a vapor venting system; and
- notifying the state if a structural impediment (e.g. building) that restricted the cleanup is removed. The owner may then need to conduct additional state-approved environmental work.

It is common for properties with approved cleanups to have continuing obligations because the DNR generally does not require removal of all contamination.

Property owners with the types of continuing obligations described above will find these requirements described in the state’s cleanup approval letter or cleanup plan approval, and *must*:

- comply with these property-specific requirements; and
- obtain the state’s permission before changing portions of the property where these requirements apply.

The requirements apply whether or not the person owned the property at the time that the continuing obligations were placed on the property.

Changing a Continuing Obligation

A property owner has the option to modify a continuing obligation if environmental conditions change. For example, petroleum contamination can degrade over time and property owners may collect new samples showing that residual contamination is gone. They may then request that DNR modify or remove a continuing obligation. Fees are required for DNR’s review of this request and for processing the change to the database (\$1050 review fee, \$300/\$350 database fee). Fees are subject to change; current fees are found in Chapter NR 749, Wis. Adm. Code, on the web at www.legis.state.wi.us/rsb/code/nr/nr749.pdf.

Public Information

The DNR provides public information about continuing obligations on the Internet. This information helps property owners, purchasers, lessees and lenders understand legal requirements that apply to a property. DNR has a comprehensive database of contaminated and cleaned up sites, *BRRTS on the Web*. This database shows all contamination activities known to DNR. Site specific documents are found under the *Documents* section. The information includes maps, deeds, contaminant data and the state's closure letter. The closure letter states that no additional environmental cleanup is needed for past contamination and includes information on property-specific continuing obligations. If a cleanup has not been completed, the state's approval of the remedial action plan will contain the information about continuing obligations.

Properties with continuing obligations can generally be located in DNR's *GIS Registry*, part of the *RR Sites Map*. RR Sites Map provides a map view of contaminated and cleaned up sites, and links to BRRTS on the Web.

If a completed cleanup is shown in *BRRTS on the Web* but the site documents cannot be found in the Documents section, DNR's closure letter can still be obtained from a regional office. For assistance, please contact a DNR Environmental Program Associate (see the RR Program's Staff Contact web page at dnr.wi.gov/topic/Brownfields/Contact.html).

BRRTS on the Web and
RR Sites Map are part of
CLEAN
(the Contaminated Lands
Environmental Action Network) at
dnr.wi.gov/topic/Brownfields/clean.html

Off-Site Contamination: When Continuing Obligations Cross the Property Line

An off-site property owner is someone who owns property that has been affected by contamination that moved through soil, sediment or groundwater from another property. Wisconsin law, s. 292.13, Wis. Stats., provides an exemption from environmental cleanup requirements for owners of "off-site" properties. The DNR will generally not ask off-site property owners to investigate or clean up contamination that came from a different property, as long as the property owner allows access to his or her property so that others who are responsible for the contamination may complete the cleanup.

However, off-site property owners are legally obligated to comply with continuing obligations on their property, even though they did not cause the contamination. For example, if the state approved a cleanup where the person responsible for the contamination placed clean soil over contamination on an off-site property, the owner of the off-site property must either keep that soil in place or obtain state approval before disturbing it.

Property owners and others should check the *Public Information* section above if they need to:

- determine whether and where continuing obligations exist on a property;
- review the inspection, maintenance and reporting requirements, and
- contact the DNR regarding changing that portion of the property. The person to contact is the person that approved the closure or remedial action plan.

Option for an Off-Site Liability Exemption Letter

In general, owners of off-site properties have a legal exemption from environmental cleanup requirements. This exemption does not require a state approval letter. Nonetheless, they may request a property-specific liability exemption letter from DNR if they have enough information to show that the source of the contamination is not on their property. This letter may be helpful in real estate transactions. The fee for this letter is \$700 under Chapter NR 749, Wis. Adm. Code. For more information about this option, please see the RR Program's Liability web page at dnr.wi.gov/topic/Brownfields/Liability.html.

Legal Obligations of Off-Site Property Owners

- Allow access so the person cleaning up the contamination may work on the off-site property (unless the off-site owner completes the cleanup independently).
- Comply with any required continuing obligations on the off-site property.

Required Notifications to Off-Site Property Owners

1. The person responsible for cleaning up contamination must notify affected property owners of any proposed continuing obligations on their off-site property **before** asking the DNR to approve the cleanup. This is required by law and allows the off-site owners to provide the DNR with any technical information that may be relevant to the cleanup approval.

When circumstances are appropriate, an off-site neighbor and the person responsible for the cleanup may enter into a "legally enforceable agreement" (i.e. a contract). Under this type of private agreement, the person responsible for the contamination may also take responsibility for maintaining a continuing obligation on an off-site property. This agreement would not automatically transfer to future owners of the off-site property. The state is not a party to the agreement and can not enforce it.

2. If a cleanup proposal that includes off-site continuing obligations is approved, DNR will send a letter to the off-site owners detailing the continuing obligations that are required for their property. Property owners should inform anyone interested in buying their property about maintaining these continuing obligations. For residential property, this would be part of the real estate disclosure obligation.

More Information

For more information, please visit the RR Program's Continuing Obligations web site at dnr.wi.gov/topic/Brownfields/Residual.html.

For more information about DNR's Remediation and Redevelopment Program, see our web site at dnr.wi.gov/org/aw/rr/. This document contains information about certain state statutes and administrative rules but does not include all of the details found in the statutes and rules. Readers should consult the actual language of the statutes and rules to answer specific questions.

The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240. This publication is available in alternative format upon request. Please call 608-267-3543 for more information.

Saari, Christopher A - DNR

From: DNRRNR700Reporting@wisconsin.gov
Sent: Wednesday, July 08, 2015 7:24 AM
To: tcurelli@frasershipyards.com
Cc: Saari, Christopher A - DNR
Subject: WDNR NR700 Semi-Annual Report Confirmation

Thank you for submitting your NR700 semi-annual progress report. The DNR Project Manager for this site has been notified of your report submittal. If final case closure has not been granted for this Activity before the next reporting period, you will receive a system-generated email reminder and link to report for the next period.

The contents of your report is included below for your records:

Report ID: 150712059095004

BRRTS No.: 02-16-120590

PECFA No: --

Activity Name: FRASER SHIPYARDS - AOC #5

Address: 1 CLOUGH AVE (3RD ST & CLOUGH), SUPERIOR Reporting Period: 1/1/2015 - 6/30/2015

Submitted On: 07/08/2015

Submitter Role: RP Contact

Status: Conditionally Closed

Comments:

ET compiling GIS registries for WDNR submittal by end of July 2015.

PECFA Eligible? No



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Scott Walker, Governor
Cathy Stepp, Secretary

Ashland Service Center
2501 Golf Course Road
Ashland, Wisconsin 54806
Telephone 715-685-2900
FAX 715-685-2909

March 9, 2015

MR TOM CURELLI
DIRECTOR OF OPERATIONS
FRASER INDUSTRIES
1 CLOUGH AVE
SUPERIOR WI 54880

FILE COPY

Subject: Change in Project Management
Fraser Shipyard Sites AOCs #1 and AOC #5, and Warehouse Expansion
WDNR BRRTS #02-16-120589, 02-16-120590 and 02-16-562899

Dear Mr. Curelli:

As you are likely aware, former WDNR project manager Erin Endsley has moved on to a new position with the State of Minnesota. With Erin's departure, project management duties for the above named cases have been assigned to me.

I understand that you have retained Environmental Troubleshooters to complete the remaining closure requirements for AOCs #1 and #5, and to conduct the investigation and any necessary cleanup of the Punch Shed Building Addition Spill/Warehouse Expansion site. Please note that all future questions and correspondence regarding these sites can be directed to me.

If you have any questions concerning this letter or these projects in general, please do not hesitate to write or call me at 715-685-2920. I can also be reached by e-mail at Christopher.Saari@Wisconsin.gov.

Sincerely,

Christopher A. Saari
Hydrogeologist

cc: John McCarthy – Environmental Troubleshooters

Endsley, Erin A - DNR

From: DNRRNR700Reporting@wisconsin.gov
Sent: Thursday, January 29, 2015 3:06 PM
To: tcurelli@frasershipyards.com
Cc: Endsley, Erin A - DNR
Subject: WDNR NR700 Semi-Annual Report Confirmation

Thank you for submitting your NR700 semi-annual progress report. The DNR Project Manager for this site has been notified of your report submittal. If final case closure has not been granted for this Activity before the next reporting period, you will receive a system-generated email reminder and link to report for the next period.

The contents of your report is included below for your records:

Report ID: 150112059073032

BRRTS No.: 02-16-120590

PECFA No: --

Activity Name: FRASER SHIPYARDS - AOC #5

Address: 1 CLOUGH AVE (3RD ST & CLOUGH), SUPERIOR Reporting Period: 7/1/2014 - 12/31/2014

Submitted On: 01/29/2015

Status: Conditionally Closed

Comments:

Information for entry into BRRTS and GIS Registry is required. SEH (Short Elliot Hendrickson, Inc. has historical records and data and will be fulfilling BRRTS requirements.

PECFA Eligible? No

RECEIVED
AUG 16 2013
DNR - SUPERIOR



1 Clough Ave.
Superior, WI 54880
(715) 394-7787 ext. 101
tcurelli@frasershipyards.com

Erin Endsley
Hydro Geologist
Bureau for Remediation and Redevelopment
State of Wisconsin
Department of Natural Resources
1701 No 4th ST
Superior, WI. 54880

16 August, 2013

Subj: Case Closure, Fraser Shipyards AOC#1 and AOC#5

Ref: WDNR letter of 26 June, 2013, New Project Manager and Remaining Case Closure Requirements

Dear Erin,

In response to your request for GIS registry packages for AOC#1 and AOC#5, a record search was conducted at our facility. There is an "abundance" of documentation for investigation and mediation action for Fraser Shipyards. I am at a lost to independently assemble your required information and intend to engage the consulting services of SEH (Shot Elliot Hendrickson, Inc) of Superior, WI.

I will request a delivery date of no later than 31 December, 2013 from SEH, and therefore request as acceptable a delivery to WDNR of 01 February, 2014 to allow for internal review and approval.

Please be assured that your request is a priority for Fraser Shipyards and we will apply due diligence in completing the required GIS Registry Packets.

Please feel free to contact me directly with any questions or concerns.

Respectfully,

A handwritten signature in black ink, appearing to read 'Thomas M. Curelli'.

Thomas M. Curelli
Director of Operations



COPY

June 26, 2013

Mr. Tom Curelli
Director of Operations
Fraser Industries
1 Clough Avenue
Superior, WI 54880

Subject: New Project Manager and Remaining Case Closure Requirements
Fraser Shipyards Sites AOC #1 and AOC #5
WDNR BRRTS Activities #02-16-120589 and 02-16-120590

Dear Mr. Curelli:

There has been a transition in the project management for these sites. Previously, Christopher Saari had been the project manager for the Fraser Shipyards sites. These sites have recently been transferred to me. I would like to assist you in moving these sites toward closure, so please contact me with any questions or concerns you have.

Currently, both of these sites are conditionally closed, meaning that cleanup is complete, but there are some remaining administrative requirements. The following remaining requirements will need to be met in order for these sites to be granted final case closure.

Fraser Shipyards – AOC #1, 02-16-120589 (Waste Oil Contamination)

This site was issued a conditional closure on October 15, 1997, pending monitoring well abandonment. A review of the site file in 2009 revealed that the monitoring well abandonment forms had never been received, and that a continuing obligation exists at the site. Specifically, the presence of a concrete slab and a high-voltage cable prevented complete investigation and/or cleanup of the contaminated soil at the site. The well abandonment forms were later received in 2010.

In order for this site to meet the closure requirements in ch. NR 726, Wis. Adm. Code, and to obtain final closure for this site, you will need to submit a soil GIS Registry packet for the site. The Registry packet must include the information outlined in s. NR 726.05(2)(a)3. A checklist of these items can also be found on our website at <http://dnr.wi.gov/files/PDF/forms/4400/4400-245.pdf>. The Registry packet will also need to be submitted with the appropriate fee. This fee is currently \$200 but is expected to increase to \$300 when the NR 700 rule revisions are finalized later this year.

Once we receive the GIS Registry packet and fee, the site can be issued final closure. There will be continuing obligations on the property for management of residual soil contamination and for further investigation of the soil contamination, if the structural impediment is ever removed.

Fraser Shipyards – AOC #5, 02-16-120590 (Paint Treatment Area)

This site was issued a conditional closure on August 17, 2000, pending the recording of a deed restriction for soil contamination in exceedance of non-industrial levels, and monitoring well abandonment documentation for MW-2. In 2010, monitoring well abandonment forms were received. Due to changes in Chapter 292 of the Wisconsin Statutes, the Department no longer requires recording of deed restrictions to insure that the requirements of certain continuing obligations are met. In place of a deed restriction, a GIS Registry packet for soil contamination can be used to meet the remaining closure requirements.

Once we receive the GIS Registry packet and fee, the site can be issued final closure. There will be continuing obligations on the property for management of residual soil contamination and for further cleanup of the soil contamination, if the site use changes from industrial to non-industrial.

The Department is therefore requesting that within 45 days, by **August 16, 2013**, you provide a proposed timeline for completing the remaining actions that are needed to bring this case to closure. This summary should be submitted in writing to me at the above address.

If you have any questions about this letter or about the site, please contact me at 715-392-3126, or via email at erin.endsley@wisconsin.gov. Thank you for your attention to this matter.

Sincerely,



Erin Endsley
Hydrogeologist
Bureau for Remediation and Redevelopment

Activity Detail Report

Please Note: Sections of this report include Flags, Actions, Impacts, Risk, Exceedences, Substances, Who. If an Activity does not contain records in a section, that section will not display. Please be aware of this when viewing this report.

BRRTS Number: 02-16-120590**Type:** ERP**Start Date:** 04/23/1993**End Date:** 08/17/2000**FID:** 816047210**EPA ID:** WID988639597**DCOM Number:****Activity Name:** FRASER SHIPYARDS - AOC #5**Transferred to:** DCOM DATCP Solid Waste**Location Name:** FRASER SHIPYARDS INC**Address:** 3RD ST & CLOUGH AVE**Plot Size (Acres):** None Found**Addn'l Address:****Priority:** Unknown**Municipality:** SUPERIOR**EPA Cerclis Number:****Region:** Northern Region**County:** Douglas**Project Manager:****Legal Desc:** SW 1/4 of SE 1/4 of Section 11, Township 49N Range 14W**LUST Trust:** N/A**Latitude:** None Found**Longitude:** None Found**Comment:** PAINT WASTE

Flags

- | | | | | |
|---|--|---|---|--|
| <input type="checkbox"/> PECFA Eligible | <input type="checkbox"/> PECFA 80k Failure | <input type="checkbox"/> Co-Contamination | <input type="checkbox"/> General Property Codes | <input type="checkbox"/> ERP Superfund |
| <input type="checkbox"/> PECFA 80k | <input type="checkbox"/> AST | <input type="checkbox"/> DCOM Tracked | <input type="checkbox"/> VPLE | <input type="checkbox"/> EPA NPL Site |

Actions

| Action Date | Code | Action Name / Comment | Audit |
|-------------|------|--|----------------------------|
| 04/23/1993 | 1 | Notification | Added 05/28/1997 by SUTTOS |
| 03/15/1999 | 179 | Closure Review Req Received (no fee required) RESUBMITTAL. NO FEE. HOSCH | Added 03/29/1999 by KAZDAJ |
| 06/03/1999 | 80 | Closure Not Approved | Added 06/04/1999 by KAZDAJ |
| 01/10/2000 | 99 | Miscellaneous DENIAL LETTER WRITTEN BY LAVALLEY | Added 01/18/2000 by KAZDAJ |
| 06/08/2000 | 179 | Closure Review Req Received (no fee required) RESUBMITTAL. NO FEE. LAVALLEY/HOSCH | Added 06/19/2000 by KAZDAJ |
| 07/06/2000 | 84 | Conditional Closure DEED RESTRICTION, SOIL DISPOSAL DOCUMENTS, MAINTAINENCE AGREEMENT REQUIRED. | Added 07/06/2000 by KAZDAJ |
| 07/07/2000 | 99 | Miscellaneous/2 LAVALLEY WILL WRITE CONDITIONAL CLOSURE LETTER | Added 07/10/2000 by KAZDAJ |
| 07/10/2000 | 99 | Miscellaneous/3 HOSCH SENT FILE MATERIALS. | Added 07/10/2000 by KAZDAJ |
| 08/17/2000 | 11 | Activity Closed LAVALLEY LETTER | Added 08/21/2000 by KAZDAJ |
| 06/13/2003 | 99 | Miscellaneous/4 SEE PARTIAL CLOSURE REPT IN 02-16-120589 | Added 06/13/2003 by BELLIC |

Impacts

Soil Contamination

Added 05/28/1997 by SUTTOS

Activity Detail Report

Please Note: Sections of this report include Flags, Actions, Impacts, Risk, Exceedences, Substances, Who. If an Activity does not contain records in a section, that section will not display. Please be aware of this when viewing this report.

Impacts

Groundwater Contamination

Added 05/28/1997 by SUTTOS

Risk

Unknown

Assigned: 12/01/1999

Added 12/22/1999 by S71584

Substances

Category: Industrial Chem

Paint

Added 05/28/1997 by SUTTOS

Category: Metals

Metals

Added 05/28/1997 by SUTTOS

Category: VOC

VOC

Added 05/28/1997 by SUTTOS

Who

Responsible Party is FRASER SHIPYARDS INC

Title:

Phone: () -

Address:

Fax: () -

E-Mail:

SUPERIOR WI 54880

Former Project Manager is JAMES HOSCH

Title: HYDROGEOLOGIST

Phone: (715) 392-0802

Address: 1401 TOWER AVE

Fax: (715) 392-7993

E-Mail: james.hosch@wisconsin.gov

SUPERIOR WI 54880

Contact/Agent is RON PETERSON

Title:

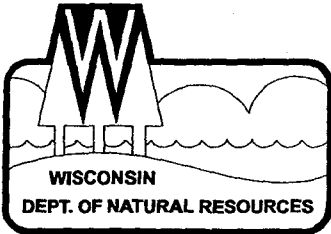
Phone: () -

Address:

Fax: () -

E-Mail:

SUPERIOR WI 54880



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William H. Smith, Regional Director

Wisconsin Department of Natural
Resources
1401 Tower Avenue
Superior, Wisconsin 54880
Telephone 715-392-7831
FAX 715-392-7993
TDD 000-000-0000

August 17, 2000

Mr. Ron Peterson
Fraser Shipyards Inc.
P.O. Box 997
Superior, WI 54880

FID# 816047210
HW/CORR
Douglas County
Case # NWD-93-11
WID 988639597

Subject: No Further Action at Area of Concern #5 Paint Treatment Area.

Dear Mr. Peterson:

On June 8, 2000 the Department received a report and request to close-out Area of Concern #5 at Fraser Shipyards in Superior, Wisconsin. Open tanks contained paint waste which tests showed to be hazardous were observed during an April 1993 inspection. The report and request were submitted to the regional close-out committee for review which took place July 17, 2000.

Based on the investigation and remedial documentation provided to the Department, it appears that the lead and chromium contamination in Area of Concern #5 at Fraser Shipyards has been remediated to the extent practical. Therefore, the Department considers the case "conditionally closed" since soil contamination that exceeded industrial soil cleanup standards has been removed. However, due to presence of lead residual contamination above residential standards at the site, a condition of close-out of this case is that the owner sign and record a deed restriction for the property to prohibit non-industrial use. To document that this condition has been complied with, the property owner must submit to the Department a copy of the recorded deed restriction, with the recording information stamped on it.

Based on the June 8, 2000 report and the fact that the Fraser Shipyards is an industrial site, the committee has approved Area of Concern #5 for closure, conditioned upon the recording of a deed restriction. Fraser excavated and disposed of lead contaminated soil beneath the paint storage area and resampled. This notification of a conditional closure decision requires Fraser to submit a final report to DNR for AOC#5, 8, and 11, which will be used as the basis for a public notice for the closure of a hazardous waste site. The report is required under paragraph # 9 of the January 9, 1998 Stipulation and Judgment.

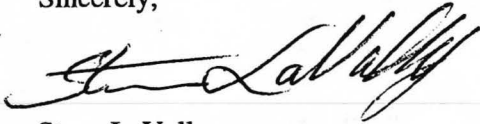
You should note that this letter does not constitute Department "certification" under s. 292.15, Wis. Stats. Persons who meet the definition of "voluntary party" in s. 292.15 must receive Department pre-approval prior to conducting a site investigation in order to be eligible for the liability exemption under s. 292.15, Wis. Stats. For more information regarding the Voluntary Party Liability Exemption Statute, call (800) 367-6076.

Mr. Ron Peterson, August 17, 2000

page 2

If you have question regarding this letter please contact Steve LaValley at 715-392-7831

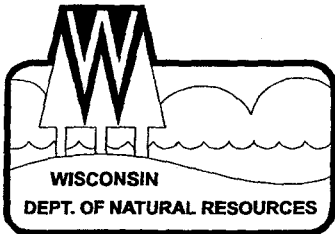
Sincerely,

A handwritten signature in cursive script, appearing to read "Steve LaValley".

Steve LaValley
Waste Management Specialist

SAL:

- C: Gary LeRoy, Dave Kafura - Spooner
- Michael Michaelsen - Spooner
- Lorraine Stoltzfus - DOJ
- Jim Hosch - Superior
- Peter Flaherty- LS/5
- Linda Meyer - LS/5
- Janet Kazda - RR Files Rhinelander
- SEH - 421 Frenette Drive, Chippewa Falls, Wisconsin 54729



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William H. Smith, Regional Director

Wisconsin Department of Natural
Resources
1401 Tower Avenue
Superior, Wisconsin 54880
Telephone 715-392-7831
FAX 715-392-7993
TDD 000-000-0000

August 17, 2000

00-16-120590

Mr. Ron Peterson
Fraser Shipyards Inc.
P.O. Box 997
Superior, WI 54880

FID# 816047210
HW/CORR
Douglas County
Case # NWD-93-11
WID 988639597

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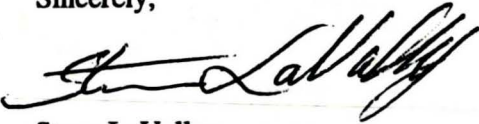
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Mr. Ron Peterson, August 17, 2000

page 2

If you have question regarding this letter please contact Steve LaValley at 715-392-7831

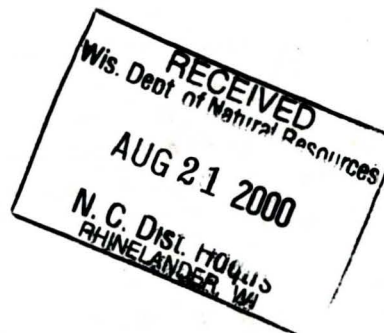
Sincerely,



Steve LaValley
Waste Management Specialist

SAL:

C: Gary LeRoy, Dave Kafura - Spooner
Michael Michaelsen - Spooner
Lorraine Stoltzfus - DOJ
Jim Hosch - Superior
Peter Flaherty- LS/5
Linda Meyer - LS/5
Janet Kazda - RR Files Rhinelander
SEH - 421 Frenette Drive, Chippewa Falls, Wisconsin 54729



FOR DEPARTMENT USE ONLY

AOC #5
02-16-120590

FIRST REVIEW DATE: 6-12-00

Approved [] Denied

[Signature]
(Signature)

[Signature]
(Signature)
6/15/00

(Signature)

(Signature)

SECOND REVIEW DATE: _____

[] Approved [] Denied

(Signature)

(Signature)

(Signature)

(Signature)

COMMITTEE RECOMMENDATION:

Closure Approved Per:

- No Restrictions
- Groundwater Use Restriction
- Zoning Verification
- Deed Restriction
- Deed Affidavit
- Site Specific Close Out Letter Necessary
- Well Abandonment Documentation
- Soil Disposal Documentation 18 yd³ of excavated soil
- Public Notice Needed
- NR 140 Exemption For: _____

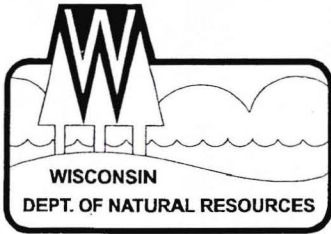
→ Specific Comments: SITE NEEDS TO BE MAINTAINED AS AN INDUSTRIAL PROPERTY, per NR 720.11(1)

Closure
Conditions

Closure Denied, Needs More:

- Investigation
- Groundwater Monitoring
- Soil Remediation
- Groundwater Remediation
- Documentation Of Soil Landspreading Or Biopile Destiny

Specific Comments: _____



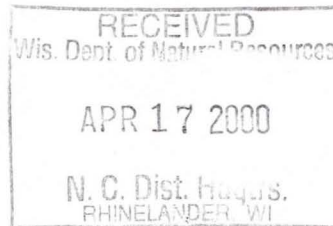
State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William H. Smith, Regional Director

Wisconsin Department of Natural
Resources
1705 Tower Avenue
Superior, Wisconsin 54880
Telephone 715-392-7831
FAX 715-392-7993
TDD 000-000-0000

April 11, 2000

Ron Peterson
Fraser Shipyards, Inc.
P.O. Box 997
Superior, WI 54880



FID# 816047210
HW/RESP
Douglas County
WID 988639597

Subject: Fraser Shipyards Remedial Excavation Work Plan at AOC #5

Mr. Peterson:

On April 3, 2000, the Department of Natural Resources (DNR) received a work plan from SEH for the removal of lead and chromium contaminated soil in AOC #5 at Fraser Shipyards in Superior, WI. The DNR has reviewed the proposed plan to remove the impacted soil, collect confirmation samples, and conduct additional soil removal as necessary to meet the criteria for generic direct contact or site specific residual contaminant levels as prescribed in NR 720, Wis. Admin. Code. It is the DNR's understanding that this removal will occur in April/May 2000.

Before final closure can be granted the DNR is required to public notice the intent to close (the final closure report) an unlicensed hazardous waste facility and allow adequate time for public review and comment. A closure report is expected to be submitted by Fraser no later than June 15, 2000. The Department will respond within 30 days of the Close-Out Committee concurrence with the closure report submittal. If the June 15, 2000, date is not feasible, or if you have other questions regarding this letter, please contact me at 715-392-7831.

Sincerely,

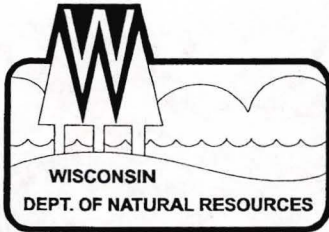
Steve LaValley
Waste Management Specialist

C: Lorraine Stoltzfus - DOJ
Dave Kafura, Gary LeRoy - Spooner
Mick Michaelsen - Spooner
Jim Hosch - Superior
Pete Flaherty - LS/5

Jamie Dunn - RR and Rhinelanders File
HW-WA/3

SEH-421 Frenette Dr. Chippewa Falls, Wisconsin 54729

Timm Speerschneider- 2 Mifflin Street, Suite 600, Madison, Wisconsin 53703-2865



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William H. Smith, Regional Director

RECEIVED
DNR SPOONER

'00 APR 17 AM 8 37

Wisconsin Department of Natural
Resources
1705 Tower Avenue
Superior, Wisconsin 54880
Telephone 715-392-7831
FAX 715-392-7993
TDD 000-000-0000

April 11, 2000

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Fraser Shipyards, Inc.
P.O. Box 997
Superior, WI 54880

FID# 816047210
HW/RESP
Douglas County
WID 988639597

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Steve LaValley
Waste Management Specialist

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SEH-421 Frenette Dr. Chippewa Falls, Wisconsin 54729

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421 FRENETTE DRIVE, CHIPPEWA FALLS, WI 54729 715 720-6200 800 472-5881 FAX 715 720-6300
ARCHITECTURE • ENGINEERING • ENVIRONMENTAL • TRANSPORTATION

March 31, 2000

RE: Fraser Shipyards, Inc.
Remedial Excavation Work Plan
SEH No. FRASE9401.00 14.00

Mr. Steven LaValley, Hazardous Waste Specialist
Wisconsin Department of Natural Resources
1705 Tower Avenue
Superior, WI 54880

Dear Mr. LaValley:

On behalf of Fraser Shipyards, Inc. (Fraser), Short Elliott Hendrickson Inc. (SEH) is submitting this Remedial Excavation Work Plan to the Wisconsin Department of Natural Resources (WDNR) for Area of Concern (AOC) #5 at Fraser Shipyards in Superior, Wisconsin. Lead and chromium contaminated soils were identified in an isolated area at AOC #5, the Paint Waste Staging Area, at concentrations exceeding the ch. NR 720 Wisconsin Administrative Code soil cleanup standards. The concentrations of lead and chromium in the soil exceed the Table 2, ch. NR 720 Residual Contaminant Level (RCL) for industrial sites and remediation of the soil is warranted.

The purpose of this plan is to provide details of the remedial alternative chosen for AOC #5, a schedule and other pertinent project information to the WDNR, Fraser, and SEH personnel involved with this project. The Fraser Shipyards, Inc. Site Investigation Work Plan dated November 1993 and Site Investigation and Closure Plan dated May 1994 provide detailed history, waste handling procedures, and other pertinent project information, including a Site Health and Safety Plan.

Project Contacts

1. Ron Peterson, Superintendent
Fraser Shipyards, Inc.
Third Street and Clough Avenue
Superior, WI 54880
(715) 394-7787
2. Cyrus Ingraham, P.E., Project Manager
Gloria Chojnacki, Sr. Environmental Scientist
Short Elliott Hendrickson Inc.
421 Frenette Drive
Chippewa Falls, WI 54729
(715) 720-6231
(608) 270-5368

3. Steve LaValley, Hazardous Waste Specialist
Wisconsin Department of Natural Resources
1705 Tower Avenue
Superior, WI 54880
(715) 392-7988

Site Location

Fraser is located at Third Street and Clough Avenue in Superior, Wisconsin as shown in Figure 1, "Site Location Map." Fraser operates a steel shipbuilding and repair facility located on approximately 65 acres. The property contains various shops, offices and warehouse space and two dry-docks for ship repair. The site is located on Howard's Bay in the Superior, Wisconsin harbor on Lake Superior. The general site layout is shown on Figure 2, "Site Plan."

Background – Site Investigation

As part of the activities conducted to obtain closure of an unlicensed hazardous waste facility SEH performed site investigation activities at Fraser during the time period 1994 through 1999. SEH collected seven surface soil samples ranging in depth from 0.5 to 2.5 feet below ground surface (bgs) and analyzed these samples for select metals. Of these samples, one sample, (B-9) at the 2.0 to 2.5 depth interval, contained 685 mg/kg of lead. This sample exceeded the ch. NR 720 Table 2, RCL based on human health risk from direct contact for lead of 500 mg/kg. One other soil sample from the same depth (B-10) contained 274 mg/kg of total chromium. This sample exceeds the ch. NR 720 RCL for hexavalent chromium of 200 mg/kg. The land use basis for the stated RCL values is that of an industrial site. Table 1, "Soil Analytical Results," summarizes the soil sample laboratory results of the site investigation to date.

Groundwater samples at AOC #5 were collected from one monitoring well and six hydraulic probes and analyzed for both total and dissolved lead and dissolved chromium. Dissolved Chromium was not detected above laboratory detection limits in two samples. Dissolved lead ranged from below laboratory detection limits to 48.8 µg/l with the last four rounds of groundwater sampling in the monitoring well below the ch. NR 140 Enforcement Standard (ES) of 15 µg/l for dissolved lead. Three monitoring well samples for total lead indicated concentrations ranging from below laboratory detection levels to 8.38 µg/l. Table 2, "Groundwater Analytical Results," summarizes the groundwater sample laboratory results of the site investigation to date.

Remedial Excavation

SEH proposes to excavate the AOC #5 area of soil contamination at B-9 and B-10 as identified by the Site Investigation. The vertical and horizontal extent of impacted soil will be defined in the field with confirmation soil sampling. At a minimum, the vertical extent of excavation will be 3.0 feet bgs and the horizontal extent will be 10 feet by 15 feet. The approximate area of excavation is shown on Figure 3, "AOC #5." Contaminated soil will be excavated with a backhoe and temporarily placed on plastic sheeting prior to disposal. The temporary soil pile will also be adequately covered with plastic. Soil excavation will progress horizontally outward and downward pending confirmatory soil sampling results. Appropriate landfill disposal will occur upon completion of excavation. On completion of excavation activities, the excavation will be lined with plastic sheeting and backfilled with clean fill material.

Mr. Steven LaValley

March 31, 2000

Page 3

Post Excavation Sampling


Confirmatory soils samples will be collected from the walls and floor of the final excavation at AOC #5 on 25 foot grid intervals as specified in the WDNR Guidance for Conducting Environmental Response Actions. Sample collection will be performed in accordance with SEH standard protocol that is included as an attachment to this plan. Post excavation samples will be maintained at a temperature of less than four degrees Celsius in ice filled coolers and shipped to a WDNR approved laboratory using one day delivery service under chain of custody procedures. A minimum of five laboratory verification samples, one from each wall and one from the base of the excavation will be collected from AOC #5. Confirmatory soil samples will be analyzed for the following parameters:

| <u>Parameter</u> | <u>Method</u> |
|------------------|-----------------|
| Lead | EPA SW 846-6010 |
| Chromium | EPA SW 846-6010 |

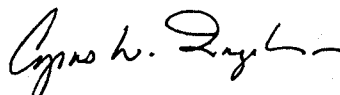
Laboratory analysis will be conducted with a rapid turn around time in order to identify the limits of excavation in a timely manner. U.S. Filter of Rothschild, Wisconsin has been selected to perform the laboratory analysis for the Fraser project. U.S. Filter's Wisconsin certified laboratory number is 737053130. Specific documentation and QA/QC procedures that will be followed are included in the Fraser Shipyards, Inc. Site Investigation Work Plan (November 1993.)

SEH anticipates excavation of approximately 18 to 25 cubic yards of contaminated soils. Fraser intends to commence excavation activities by April 17 and therefore respectfully requests WDNR approval of this Remedial Excavation Work Plan. Closure documentation of AOC #5 is anticipated within six weeks of excavation completion. If you have any questions or comments regarding this Remedial Excavation Work Plan, please feel free to contact us.

Sincerely,
Short Elliott Hendrickson Inc.



Gloria Chojnacki
Sr. Environmental Scientist



Cyrus Ingraham, P.E.
Principal

GGC/ggc/CWI

Attachments

c: Ron Peterson, Superintendent - Fraser Shipyards, Inc.

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**Table 1
Soil Analytical Results**

| Analytical Parameters | ch. NR 720 soil industrial cleanup standards | Boring No./Depth (ft)/Date | | | | | | | | |
|---|--|----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| | | B-9 | B-10 | | B-11 | B-12 | | HA-1 | HA-2 | HA-3 |
| | | 2-2.5 | 0-0.6 | 2-2.5 | 0-0.5 | 0-0.5 | 2-2.5 | 0-0.5 | 0-0.5 | 0-0.5 |
| | | 1-11-94 | 1-11-94 | 1-11-94 | 1-11-94 | 1-11-94 | 1-11-94 | 8-16-96 | 8-16-96 | 8-16-96 |
| AOC #5 - Paint Waste Staging Area | | | | | | | | | | |
| FID (units) | NSE | 1000+ | 0 | -- | 0 | 1.4 | 1000+ | -- | -- | -- |
| PID (units) | NSE | 42 | 36 | -- | 34 | 34 | 50 | -- | -- | -- |
| VOCs (8010/8020 or 8021) mg/kg | various | BDL | -- | BDL | -- | -- | BDL | -- | -- | -- |
| Metals (mg/kg) | | | | | | | | | | |
| Lead (6010) | 500 | 685* | -- | 270 | 66.1 | -- | 177 | 38.5 | 20.4 | 48.3 |
| Cadmium (6010) | 510 | 0.18 | -- | 0.28 | 0.64 | -- | 0.38 | -- | -- | -- |
| Chromium (6010) | 200 | 22.7 | -- | 274** | 22.2 | -- | 23.1 | 16.1 | 14.9 | 17.4 |
| Mercury (7471) | NSE | 0.083 | -- | 0.25 | BDL | -- | BDL | -- | -- | -- |
| BDL = Below laboratory detection limits -- = Not analyzed * = Exceeds ch. NR 720 soil cleanup standards NSE = No standard established * = TCLP - Lead, B-9 = BDL ASTM - Lead, B-9 = BDL ** = TCLP - Chromium, B-10 (2-2.5') = BDL Compiled by: <u>GGC</u> Checked by: <u>JJT</u> | | | | | | | | | | |

**Table 2
Groundwater Analytical Results**

| Analytical Parameters | NR 140 Standards | | Well No./Sampling Date | | | | | | | | | | | | | |
|-------------------------------|------------------|-----|------------------------|-------------|------|------|-------------|------|------|------|------|------|------|------|--|--|
| | ES | PAL | MW-2 | | | | | | HP-1 | HP-2 | HP-3 | HP-4 | HP-5 | HP-6 | | |
| | | | 1996 | | 1997 | | 1998 | | 1999 | | 1997 | | | | | |
| | | | 8/29 | 11/21 | 10/1 | 8/25 | 10/2 | 1/19 | 10/1 | 10/1 | 10/1 | 10/1 | 10/1 | 10/1 | | |
| Total Dissolved Metals | | | | | | | | | | | | | | | | |
| Chromium ($\mu\text{g/l}$) | 100 | 10 | BDL | BDL | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Lead ($\mu\text{g/l}$) | 15.0 | 1.5 | 48.8 | 34.2 | BDL | BDL | <u>3.08</u> | BDL | BDL | 1.06 | BDL | BDL | BDL | BDL | | |
| Total Metals | | | | | | | | | | | | | | | | |
| Lead ($\mu\text{g/l}$) | NSE | NSE | -- | -- | -- | BDL | 8.38 | 1.49 | -- | -- | -- | -- | -- | -- | | |

NSE = No standard established
 BDL = Below laboratory detection limits
 -- = Not analyzed
 = Exceeds ch. NR 140 Enforcement Standard (ES)
0.0 = Exceeds ch. NR 140 Preventive Action Limit (PAL)
 Compiled by: GGC Checked by: JEG

Protocol for Excavation Sampling and Investigation of Subsurface Soils - Backhoe

A backhoe is used at the site for excavating surface and subsurface soils from specific locations. This provides for visual observation of subsurface conditions, and allows for collection of soil samples at depth. Excavated soils are loaded directly onto trucks for transport to a landfill or treatment facility. When possible, "clean" soils are kept separate from contaminated soils and all "clean" soils are used as backfill for the final excavation. Clean offsite granular soils are used as backfill for the excavation after sampling is performed.

Soil samples are generally collected from varying depths to obtain representative samples. A grab sample of soil is extracted from the excavation using the backhoe bucket, and the bucket is then placed on the ground surface next to the excavation. A sample is collected from the bucket using decontaminated stainless steel sampling equipment. Visual observations are made of the test pits during excavation activities, and soil samples are classified in the field by SEH's Site Representative. Sample lithology is recorded using the Unified Soil Classification System. Soil test pit logs, documenting soil types and subsurface conditions, are completed by the Site Representative.

During excavation and sampling activities, soils are screened for the presence of volatile organic compounds (VOCs) using a photoionization detector (PID) or flame ionization detector (FID). VOCs are common components of a variety of environmental contaminants, including industrial solvents, petroleum products and wide range of other industrial compounds. The PID and FID are also used to monitor ambient air concentrations at the excavation and within the work zone during the soil excavation, in accordance with SEH's Site Health and Safety Plan. Personal protective equipment is utilized by sampling personnel during sampling, as specified in the Site Health and Safety Plan.

Soil samples are obtained from the central portion of each bucket, and not from areas near the bucket surface. Stainless steel sampling equipment used to collect the soil sample from the bucket is decontaminated between samples using a soap and water wash followed by a distilled water rinse.

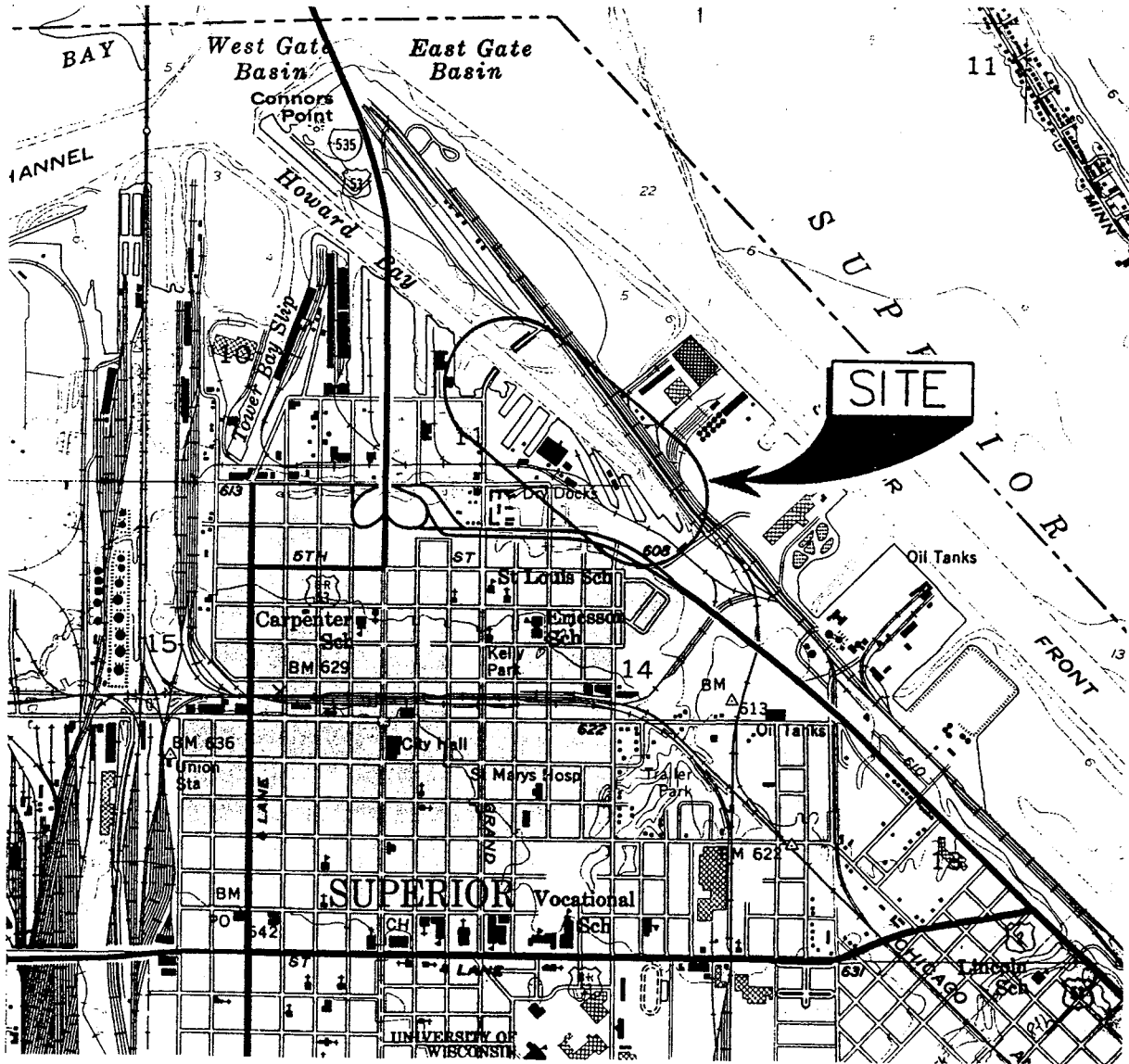
Soil samples are collected in laboratory-clean glass sample jars. These are labeled with the sample designation, location, date, time and sampler. Sample collection and preservation procedures will follow the latest WDNR LUST Guidance protocol. Collected samples are preserved on ice and shipped to the contracted analytical laboratory. SEH standard chain of custody procedures are followed regarding the shipment and receipt of samples.

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USGS SUPERIOR QUADRANGLE

WISCONSIN - DOUGLAS CO. 7.5 MINUTE SERIES



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| 1 | 03/28/00 | - | JLE | 03/00 | GC | 03/00 | | | 3120/00 |
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| NO. | DATE | ISSUE/REVISIONS | DRAWN BY | DESIGN | FIELD REVIEW | QC CHECK | | | |



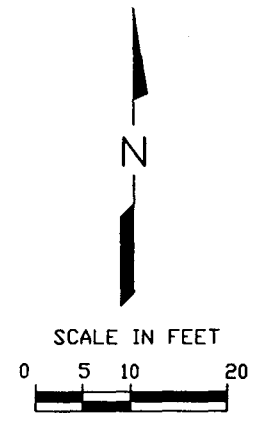
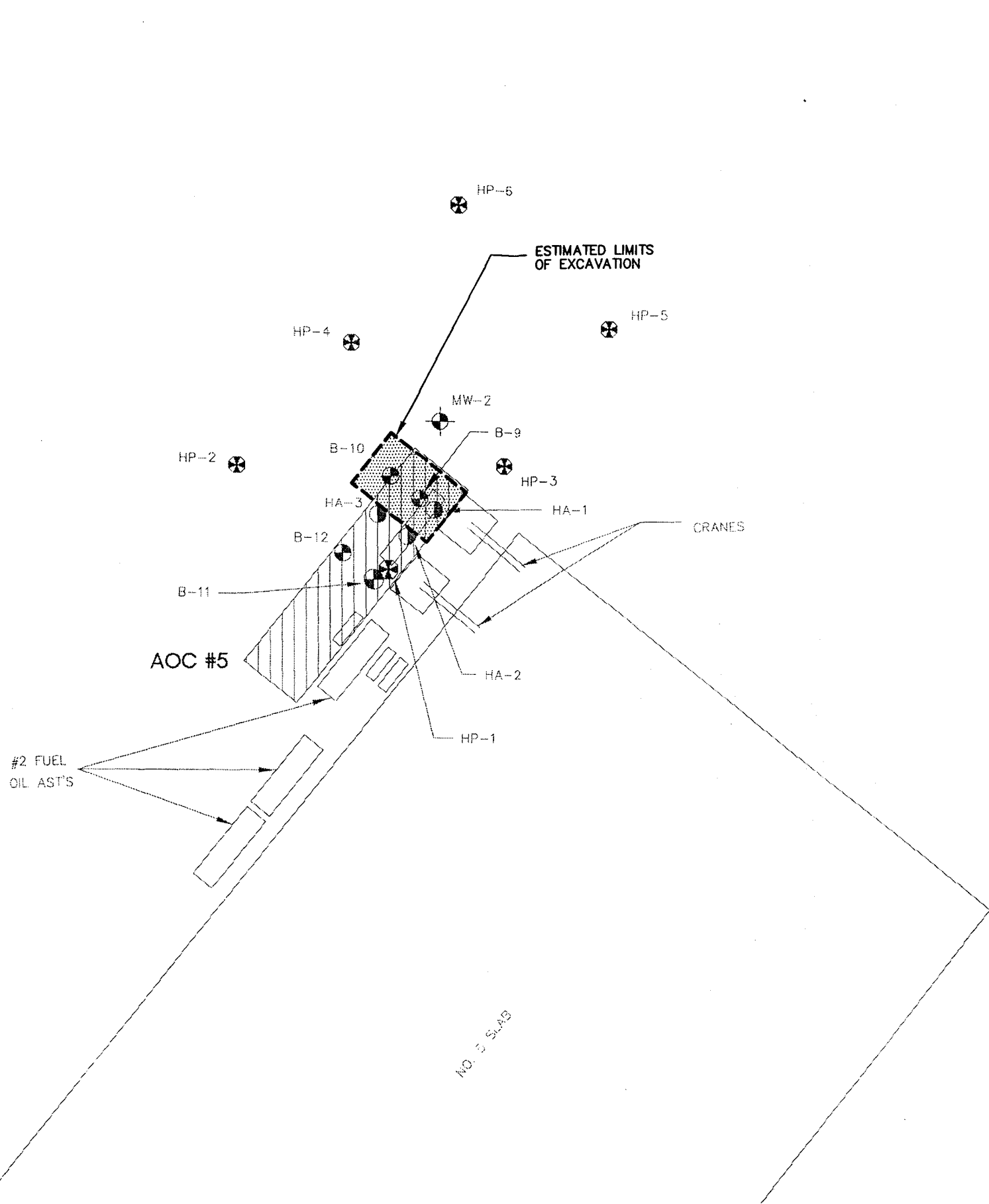
FRASER SHIPYARDS, INC.
AOC #5 WORKPLAN

FIGURE 1
SITE LOCATION









PROJ. NO.
 FRAS9401
 DATE
 03/28/00

1
3

E:\WASTE\FRAS9401\PLAN\FUD2



LEGEND

- MW-2  EXISTING MONITORING WELL LOCATION AND NUMBER
- B-12  SOIL BORING LOCATION AND NUMBER
- HP-1  HYDRAULIC PROBE GROUNDWATER SAMPLE LOCATION
- HA-1  HAND AUGER LOCATION
- AOC #5  AREA OF CONCERN
-  RAILROAD
-  STORM SEWER OUTLET
-  SUB STATION (600 KVA)

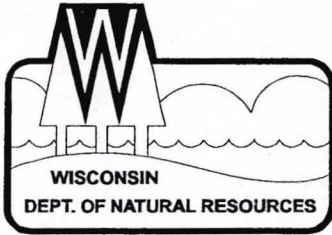
| | | | | | | | | | | |
|-----|----------|-----------------|----------|--------|--------------|----------|--|--|--|--|
| 1 | 03/28/00 | ----- | JJE | 03/00 | JEG | 03/00 | | | | |
| NO. | DATE | ISSUE/REVISIONS | DRAWN BY | DESIGN | FIELD REVIEW | QC CHECK | | | | |



FRASER SHIPYARDS, INC.
AOC #5 WORKPLAN

FIGURE 3
ESTIMATED LIMITS
OF EXCAVATION

| | | |
|-----------|----------|----------|
| PROJ. NO. | FRAS9401 | 3 |
| DATE | 03/28/00 | |



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William H. Smith, Regional Director

RECEIVED
DNR SPOONER

00 MAR 20 AM 8 58

Wisconsin Department of Natural
Resources
1705 Tower Avenue
Superior, Wisconsin 54880
Telephone 715-392-7831
FAX 715-392-7993
TDD 000-000-0000

March 16, 2000

Ron Peterson
Fraser Shipyards Inc.
P.O. Box 997
Superior, WI 54880

FID# 816047210
HW/ CORR
Douglas Co.
Case NWD-93-11

Subject: Denial of Fraser Shipyards request to Close AOC #5

Dear Mr. Peterson:

The Department has received and reviewed Short Elliott and Hendrickson, Inc's. February 17, 2000 letter regarding AOC # 5, the Paint Storage Area, at Fraser Shipyard's facility in Superior, Wisconsin. The committee has reviewed the documentation submitted and the case files to determine whether the case meets the criteria for closure under ch. NR 726. The determination is that the area of concern does not meet criteria and closure must be denied.

SEH collected four surface soil samples, which contained 20-66 ppm lead and 14-22 ppm chromium. Three samples of soil were collected 2 to 2.5 feet below grade and analyzed for metals. These samples contained 177 - 685ppm total lead and 22-274 ppm Chromium. Groundwater samples were collected from one well and six hydropunches. Analysis of filtered groundwater samples for dissolved lead ranged from no detection to 1.06 ppm. Lead was found in unfiltered samples of groundwater indicating undissolved lead at the water table. Fraser has requested the use of 500 ppm lead in soil be used for its RCL residual contaminate levels. The 500 ppm lead level comes from NR 720.11(5), table 2, for human health risks from direct contact for an industrial site. The direct contact concentrations for hexavalent Chromium is 200 ppm. Com. 46.06(2)(c), Wis. Adm. Code states that no contaminants can exist above direct contact for human health in the upper 4 feet of soil.

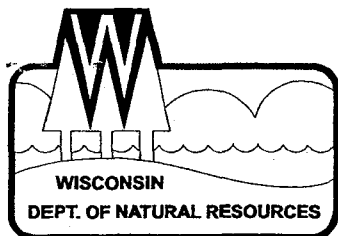
Contaminant levels for lead and chromium exist at this AOC above the generic residual contamination levels. Therefore the Department can not close the site. Fraser Shipyard has several options. 1. The contamination can be removed and the excavation sampled so that this Area of Concern can be clean-closed. This would require an approved work plan. 2. An engineering control to prevent exposure could be proposed. This would require an approval from the Department for the design of the engineering control and operation and maintenance plan. 3. Site specific RCLs that are protective of human health direct contact could be calculated. If the site specific RCLs are higher than the contamination in place the site could be closed. Fraser Shipyards' closure request does not meet requirements in NR 720 through 722, Wis Adm. Code and therefore fails to comply with item #6 in the January 8, 1999 stipulated court agreement. Fraser needs to propose work that would demonstrate that it is being protective of human health and the environment as outlined in NR 720, Wis. Adm. Code or the Department can not close the site.

The delay in responding to last year's closure request was unfortunate but does not negate Fraser's responsibility to comply with laws governing site investigation and remediation of environmental contamination or its court agreement. If you have any additional information which was not formerly provided to the Department, and which you feel would significantly impact this closure decision, you may submit that information for our re-evaluation of case closure. In any event, please submit the requested information and/ or work plan by May 1, 2000. If you have question, you may contact me at 715-392-7831.

Sincerely

Steve LaValley
Waste Management Specialist

C: Lorraine Stoltzfus - DOJ
Dave Kafura/ Gary LeRoy - Spooner
Michael Michaelsen - Spooner
Jim Hosch - Superior
Janet Kazda - Rhinelander
Pete Flaherty - LS/5
SEH - 421 Frennette Dr., Chippewa Falls, WI 54729
Timm Speerschneider- 2 Mifflin St., Suite 600, Madison, WI 53703-2865



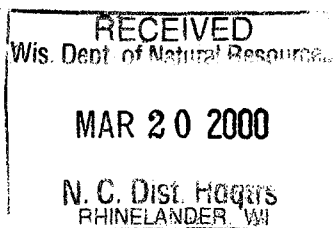
State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William H. Smith, Regional Director

Wisconsin Department of Natural
Resources
1705 Tower Avenue
Superior, Wisconsin 54880
Telephone 715-392-7831
FAX 715-392-7993
TDD 000-000-0000

March 16, 2000

Ron Peterson
Fraser Shipyards Inc.
P.O. Box 997
Superior, WI 54880



FID# 816047210
HW/ CORR
Douglas Co.
Case NWD-93-11

Subject: Denial of Fraser Shipyards request to Close AOC #5

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Contaminant levels for lead and chromium exist at this AOC above the generic residual contamination levels. Therefore the Department can not close the site. Fraser Shipyard has several options. 1. The contamination can be removed and the excavation sampled so that this Area of Concern can be clean-closed. This would require an approved work plan. 2. An engineering control to prevent exposure could be proposed. This would require an approval from the Department for the design of the engineering control and operation and maintenance plan. 3. Site specific RCLs that are protective of human health direct contact could be calculated. If the site specific RCLs are higher than the contamination in place the site could be closed. Fraser Shipyards' closure request does not meet requirements in NR 720 through 722, Wis Adm. Code and therefore fails to comply with item #6 in the January 8, 1999 stipulated court agreement. Fraser needs to propose work that would demonstrate that it is being protective of human health and the environment as outlined in NR 720, Wis. Adm. Code or the Department can not close the site.

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Sincerely

Steve LaValley
Waste Management Specialist

C: Lorraine Stoltzfus - DOJ
Dave Kafura/ Gary LeRoy - Spooner
Michael Michaelsen - Spooner
Jim Hosch - Superior
Janet Kazda - Rhinelander
Pete Flaherty - LS/5
SEH - 421 Frennette Dr., Chippewa Falls, WI 54729
Timm Speerschneider- 2 Mifflin St., Suite 600, Madison, WI 53703-2865

Kazda, Janet L

From: Kazda, Janet L
Sent: Friday, June 04, 1999 3:28 PM
To: LaValley, Steven A
Cc: Hosch, James A; Kazda, Janet L
Subject: Fraser Shipyards AOC #5

Hi, Steve.

Jim Hosch has reviewed AOC #5, and the Committee has agreed that their closure request should be denied. Jim writes a big note on the back of the closure slip: "Steve LaValley needs to write the letter because of the enforcement. Jim."

Are you aware of this? Do you need the file material? Please let me know.

When you have written the letter, I need the file and a copy of the letter sent to me.

Janet

DATE: March 8, 2000

TO: Chuck Weister, Rhinelander
Chris Saari, Brule
Ken Markart, Rhinelander

Bill Schultz, Rhinelander
John Prohaska, Spooner

FROM: Janet Kazda, Rhinelander

Janet 3/8/00

SUBJECT: Closeout Committee Meeting, March 3, 2000

RECEIVED
MAR 13 2000
DNR-SUPERIOR

The Northern Region Closeout Committee met at the US Forest Service Offices in Park Falls on March 3, 2000. Present were Ken Markart, Bill Schultz, Steve LaValley, Chris Saari, Janet Kazda. John Prohaska and Chuck Weister attended by conference phone.

The Committee discussed attendance by members at the Committee meetings. The group reaffirmed that meetings will always be scheduled for the first Thursday in each month, and if a member is unable to attend the meeting, that member will be responsible for appointing someone to vote in their place at the meeting.

Steve and the Committee discussed the Auto Scrappers/Ermark case, an old foundry that is currently and auto salvage yard. Steve gave the Committee details of the site history and contamination problems. The Committee suggested that the RP should find out where the floor drains go - to the City sewer or a holding tank or simply to the ground. For the contamination in the soil, the Committee suggested either capping or digging it out. This site was not reviewed for closure at this time, only for discussion.

The Committee reviewed the following cases for closure:

Chris presented the **Kennedy Service Station (BRRTS # 03-04-000162)** case. Groundwater is now below ES. The Committee agreed to close with **PAL Exemptions**.

Steve summarized the **Fraser Shipyard AOC #5 (BRRTS # 02-16-120590)** case. We denied this closure previously because of mercury in soils, and the consultant is now appealing that decision in a letter. Lead is > 685 ppm in the upper 2.5 feet of soil (Industrial standard for lead is 500 ppm.) Chromium is > ES direct contact Industrial standard. The consultant is proposing a deed restriction for the direct contact; however, there is a stipulated agreement with Fraser that they will investigate and remediate. The Committee offered Steve these options for closure: 1. Calculate site-specific RCLs. 2. Cap the site and close with a deed restriction for maintenance of the cap. 3. Dig up the contaminated soil and dispose of it properly. Steve will write the **denial** letter, which will be reviewed by the Committee and legal services.

Chris presented the **Ashland County Highway Department - Glidden (BRRTS # 03-02-000696)** case, where a diesel and a gas tank were removed in 1993. Seven monitoring wells and a piezometer have been installed, and they have been sampled since 1994. Over 1400 tons of soil were removed. There is a municipal well approximately 70 feet from the tank bed, but there has never been a detect at the well back to 1993. Chris is also concerned that the contamination may have gone off-site to the West. The Committee agreed to **closure with a Groundwater Use Restriction**. A copy of the letter

will be send to the Glidden Sanitary District.

The following cases were fast-tracked during the month:

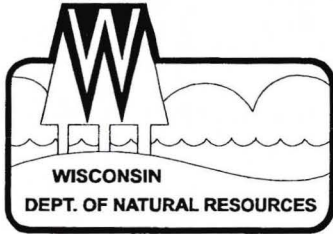
| | | |
|-------------------------------|---------------------|--|
| WDOT - STH 47 & 51 | 02-44-189531 | Closed |
| Ray's North Star | 03-61-000681 | Closed |
| Rhineland-Oneida Co | 03-44-150666 | Transferred to Commerce |
| Former SuperAmerica | 03-44-000131 | Denied (ASR, DOC) |
| Midwest Energy | 03-16-205568 | Closed with Pub Notice |
| Baker Service Station | 03-49-000048 | Denied (SI-DE, ASR, DOC, US, NAT) |
| Twin Ports, Inc. | 02-16-000481 | NFA 708.09 Closure |
| Halvor Lines | 04-16-243624 | NFA 708.09 Closure |

Monthly Totals

Annual Totals

| | | | |
|--------------|---|--------------|----|
| Closed | 7 | Closed | 24 |
| Non-Approved | 2 | Non-Approved | 13 |

c: Norm Dunbar, Rhineland
Jim Hosch, Superior
Tom Kendzierski, Spooner
Sally Kefer, RR/3
Mark Stokstad, Rhineland
Michelle Owens, Rhineland
Bill Smith, Spooner
Jim Hansen, Park Falls
Steve Karklins, DG/2
Jamie Dunn, Spooner
Danielle Lancour, Rhineland
Dale Ziege, RR/3
Mark Stokstad, Rhineland
Nancy Larson, Spooner



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1401 Tower Avenue
Superior, Wisconsin 54880
Telephone 715-392-7831
FAX 715-392-7993
TDD 000-000-0000

February 28, 2000

Ron Peterson
Fraser Shipyards
P.O. Box 997
Superior, WI 54880

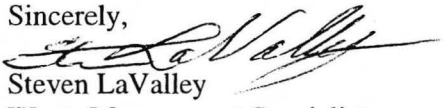
Subject: Acknowledgment of February 17, 2000 letter regarding AOC#5

Dear Mr. Peterson:

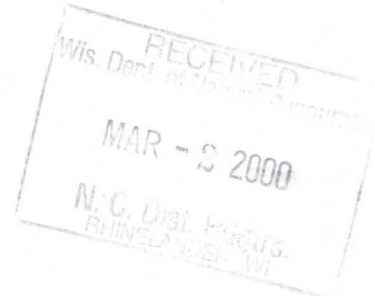
The Department received a letter on February 18, 2000, from SEH, Fraser Shipyards consultant, asking the Department to reconsider the decision not to close AOC#5 (Paint Waste Treatment and Storage Area).

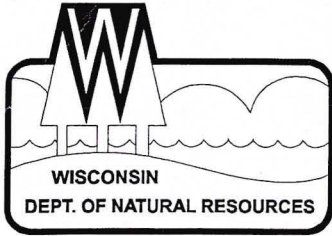
The Department will review and respond to this request within 30 days of the next Closure Review Committee.

Sincerely,


Steven LaValley
Waste Management Specialist

C: Lorraine Stoltzfus - DOJ
Gary LeRoy/ Dave Kafura/ Mick Michaelsen - Spooner
Pete Flaherty, Linda Meyer - LS/5
Jim Hosch - Superior
Janet Kazda - Rhinelander
Cyrus Ingraham - SEH
Tim Speerschneider - DeWitt, Ross & Stevens





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Wisconsin Department of Natural
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1705 Tower Avenue
Superior, Wisconsin 54880
Telephone 715-392-7831
FAX 715-392-7993
TDD 000-000-0000

January 10, 2000

02-16-120590

Ron Peterson
Fraser Shipyards, Inc.
P.O. Box 997
Superior, WI 54880

FID# 816047210
HW/RESP
Douglas County
WID 988639597

Subject: Denial of Closure Request for AOC#5

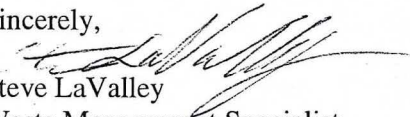
Dear Mr. Peterson:

Fraser Shipyards request to close out further work at Area of Concern # 5 "the Paint Storage Area " is denied. The request was reviewed by the close out committee. The following are the committee's comments on the denial to close.

1. Samples from two borings at the 2 to 2.5 feet below the surface exceed standards for soils found in NR 720, Wis. Adm. Code. There was no site specific RCL or engineering controls proposed.
2. Mercury was detected in B-9 and B-10 and was not addressed in the submittal.

For the site to meet the requirements in NR 726, Wis. Adm. Code Fraser Shipyards would have to submit a site specific RCL, an engineering control, or appropriate institutional controls which meet the requirements of NR 720, Wis. Adm. Code. The Partial Closure Documentation AOC#5 and Additional Investigative Report MW-5 was submitted by SEH for Fraser on February 26, 1999 to meet requirements in a January 29, 1999 court stipulated agreement. Fraser needs to respond to the above requirement by March 31, 2000. If you have questions or comments you may contact me at the above address.

Sincerely,

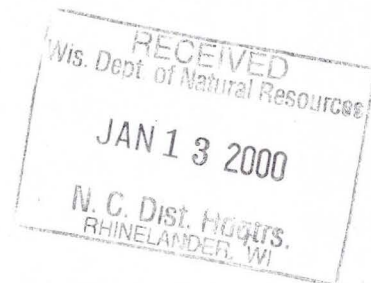

Steve LaValley
Waste Management Specialist

C: Lorraine Stoltzfus - DOJ
Dave Kafura, Gary LeRoy - Spooner
Mick Michaelsen - Spooner
Jim Hosch - Superior
Pete Flaherty - LS/5

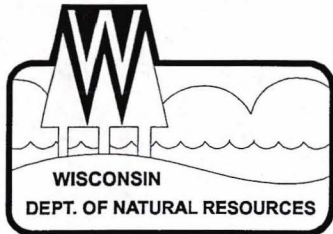
Gary Kulibert - Rhineland
HW-WA/3

SEH-421 Frenette Dr. Chippewa Falls, Wisconsin 54729

Timm Speerschneider, - 2 Mifflin Street, Suite 600, Madison, Wisconsin 53703-2865



120590



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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January 10, 2000

Ron Peterson
Fraser Shipyards, Inc.
P.O. Box 997
Superior, WI 54880

FID# 816047210
HW/RESP
Douglas County
WID 988639597

Subject: Denial of Closure Request for AOC#5

Dear Mr. Peterson:

Fraser Shipyards request to close out further work at Area of Concern # 5 "the Paint Storage Area " is denied. The request was reviewed by the close out committee. The following are the committee's comments on the denial to close.

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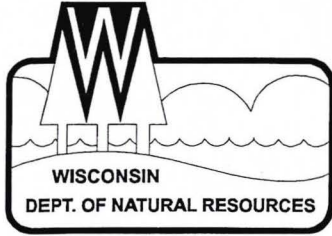
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Steve LaValley
Waste Management Specialist

- C: Lorraine Stoltzfus - DOJ
Dave Kafura, Gary LeRoy - Spooner
Mick Michaelsen - Spooner
Jim Hosch - Superior
Pete Flaherty - LS/5
Gary Kulibert - Rhinelander
HW-WA/3
SEH-421 Frenette Dr. Chippewa Falls, Wisconsin 54729
Timm Speerschneider,- 2 Mifflin Street, Suite 600, Madison, Wisconsin 53703-2865





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January 10, 2000

Ron Peterson
Fraser Shipyards, Inc.
P.O. Box 997
Superior, WI 54880

FID# 816047210
HW/RESP
Douglas County
WID 988639597

Subject: Denial of Closure Request for AOC#5

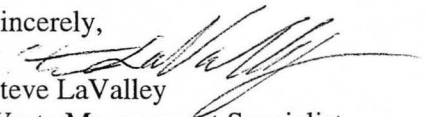
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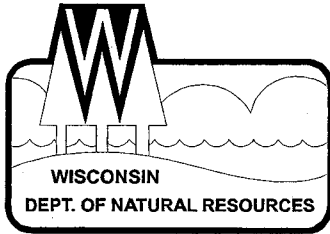
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Steve LaValley
Waste Management Specialist

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Dave Kafura, Gary LeRoy - Spooner
Mick Michaelsen - Spooner
Jim Hosch - Superior
Pete Flaherty - LS/5
Gary Kulibert - Rhinelander
HW-WA/3
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State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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FAX 715-392-7993
TDD 000-000-0000

July 2, 1999

Ron Peterson
Fraser Shipyards, Inc.
P.O. Box 997
Superior, WI 54880

FID# 816047210
HW/RESP
Douglas County
WID 988639597

Subject: Denial of Closure Request for AOC#5

Dear Mr. Peterson:

Fraser Shipyards request to close out further work at Area of Concern # 5 "the Paint Storage Area " is denied. The request was reviewed by the close out committee. The following are the committee's r comments on the denial to close.

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Sincerely,

Steve LaValley
Waste Management Specialist

C: Lorraine Stoltzfus - DOJ
Dave Kafura, Gary LeRoy - Spooner
Mary Bell Pratt - Spooner
Jim Hosch - Superior
Pete Flaherty - LS/5
Gary Kulibert - Rhinelander
HW-WA/3
SHE-421 Frenette Dr. Chippewa Falls, Wisconsin 54729
Timm Speerschneider, - 2 Mifflin Street, Suite 600, Madison, Wisconsin 53703-2865

*7/26:
Not yet sent?*

Kazda, Janet L

From: Kazda, Janet L
Sent: Friday, June 04, 1999 3:28 PM
To: LaValley, Steven A
Cc: Hosch, James A; Kazda, Janet L
Subject: Fraser Shipyards AOC #5


Hi, Steve.

Jim Hosch has reviewed AOC #5, and the Committee has agreed that their closure request should be denied. Jim writes a big note on the back of the closure slip: "Steve LaValley needs to write the letter because of the enforcement. Jim."

Are you aware of this? Do you need the file material? Please let me know.

When you have written the letter, I need the file and a copy of the letter sent to me.

Janet

DATE: May 8, 1999
TO: Steve LaValley - Superior
FROM: Jim Hosch 
SUBJECT: Fraser Shipyard AOC #5

FILE REF: 02-16-120590

Chris and I reviewed the closure document here is a summary of our comments. Please forward these onto the company.

Soil

A deed restriction for soil was proposed. Soil is above NR 720 Wis. Adm. Code standards in two boring samples at 2 to 2.5 foot below surface, no sites specific RCL or engineering control has been proposed. Also, an NR 720.19 Site specific standard has not been proposed. Thus, the site does not meet NR 726 Wis. Adm. Code requirements. Additionally, mercury was detected in B-9 and B-10, this was not addressed in the submittal.

Groundwater

A single round of groundwater data shows the site is below NR 140 Wis. Adm. Code standards. Previous rounds indicate a decreasing trend in monitoring wells and nearby geoprobes.

Recommendation


Fraser should submit a site specific RCL, an engineering control, or appropriate institutional control which meets the requirements of NR 720, Wis. Admin. Code.

Cc: Janet Kazda - Rhinelander

DATE: April 23, 1999

FILE REF: 02-16-120590

TO: Chris Saari - Brule

FROM: Jim Hosch 

SUBJECT: Fraser Shipyard AOC #5

Soil

A deed restriction for soil was proposed. Soil is above NR 720 Wis. Adm. Code standards in two boring samples at 2 to 2.5 foot below surface, no sites specific RCL or engineering control has been proposed. Also, an NR 720.19 Site specific standard has not been proposed. Thus, the site does not meet NR 726 Wis. Adm. Code requirements.

Groundwater

A single round of groundwater data shows the site is below NR 140 Wis. Adm. Code standards. Previous rounds indicate a decreasing trend in monitoring wells and nearby geoprobes.

Recommendation

A request should be made by Project Manager Steve LaValley, to Fraser for further actions which could include a site specific RCL, an engineering or appropriate institutional control.

Cc: Steve LaValley - Superior

I concur. Without SSRCL or engineering control, they haven't complied with NR 720.

I also noticed that mercury was detected in B-9 and B-10. I didn't see this addressed in the submittal either.

One final thing - I assume they've already looked for paint wastes/solvents, and didn't find any?

*CAS
5/4/99*

Kazda, Janet L

From: Kazda, Janet L
Sent: Friday, March 12, 1999 10:25 AM
To: Weister, Charles L; Saari, Christopher A
Cc: Hosch, James A; Kazda, Janet L
Subject: Fraser Shipyards Closure Review

Closure Committee:

Jim is on vacation for 10 days, and I need your help:

A consultant, Gloria Chojnacki of SEH called today. They had submitted a closure request for Fraser Shipyards AOC #5, and I had sent them a letter asking for the \$750 fee. Gloria says that they originally submitted this for closure in February of 1997 - prior to the fee rule. It was denied, and we asked for four additional rounds of sampling.

The question: Does four additional rounds of sampling constitute a "substantial amount of work?"

Thanks for your quick response.

Janet

Chris and Chuck both agree: No fee required.

3/12/99

JK

FROM: Fraser Shipyards
3rd + Clough Ave
Superior, WI 54880

TO: Janet Kazda

SUBJECT-MESSAGE

Re: 02-16-120590

In consultation with your environmental professional, the Department believes that a fee is not required for the review you have requested.

Attached is your check for \$750⁰⁰.

REPLY

SIGNED

Janet Kazda

DATE

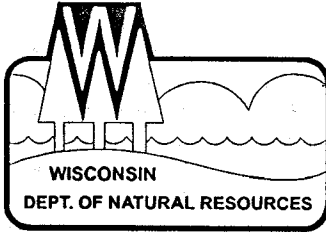
3/15/99

C: Gloria Chojnarki
SELL, Inc
421 Frenette Dr.
Chippewa Falls, WI 54729

RETURN THIS COPY TO SENDER

SIGNED

DATE



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William H. Smith, Regional Director

Northern Region Headquarters
107 Sutliff Ave.
Rhinelander, Wisconsin 54501-0818
Telephone 715-365-8900
FAX 715-365-8932
TDD 715-365-8957

March 5, 1999

Fraser Shipyards
Third St & Clough Ave
Superior, WI 54880

Subject: Fraser Shipyards, Inc, AOC #5, Third St & Clough Ave, Superior, WI
BRRTS # 02-16-120590

Dear Fraser Shipyards:

You should be aware that on August 26, 1998 the Natural Resources Board adopted an emergency rule (NR 749, Wis. Adm. Code) which establishes fees for certain actions taken by staff in the Remediation and Redevelopment Program. This emergency rule became effective on September 8, 1998.

We have received a request from your consultant for review of a Case Summary and Closeout. This review now requires a fee in order for its review and response from the Department. The fee is \$750.00. Please make check payable to the State of Wisconsin, Department of Natural Resources and return it to me at the above address.

Normally we will return incomplete submittals. Since this rule is so new, we will hold your submittal (*for up to a month*) until a check is received or until you notify us that this review is not being requested. If we don't hear from you after one month, we will return your submittal. Once we receive your check, we will log the submittal in, and it will then be reviewed on a modified first-in, first-out basis. Please be aware that we will not log in your submittal until we receive the appropriate fee.

Your submittal did not include the name of a contact person at your organization. Please ask your consultant to include the name of a contact person on all future submittals. Your request was submitted on a outdated Case Summary and Closeout form. Please ask your consultant to use the revised form, #4400-202, dated 5/98 on all future submittals. This form is available at our web site, www.dnr.state.wi.us.

Sincerely,
NORTHERN REGION

Janet Kazda
Remediation & Redevelopment

→ C: File

Gloria Chojnacki
Short Elliott Hendrickson Inc
421 Frenette Dr
Chippewa Falls, WI 54729



Quality Natural Resources Management
Through Excellent Customer Service



Fraser Shipyards, Inc.

***Partial Closure Documentation AOC #5 and
Additional Investigation Report MW-5***

Superior, Wisconsin

SEH No. FRASE9401.00

February 1999

SHORT ELLIOTT MENDRICKSON INC.



MULTIDISCIPLINED.
SINGLE SOURCE.

Partial Closure Documentation AOC #5 and Additional Investigation Report MW-5

Fraser Shipyards, Inc.

Prepared for Fraser Shipyards, Inc.

1.0 Introduction

On behalf of Fraser Shipyards Inc. (Fraser), Short Elliott Hendrickson, Inc. (SEH) has completed a site investigation to address polynuclear aromatic hydrocarbon (PAH) contamination identified in groundwater monitoring well MW-5. In addition, groundwater sampling was conducted at area of concern (AOC) #5 where past dissolved lead was identified in groundwater samples.

This report was developed to meet the requirements for site investigation reporting in general accordance with ch. NR 716 Wisconsin Administrative Code. The required site investigation activities for defining degree and extent of contamination in monitoring well MW-5 and to provide additional lead analytical data from AOC #5 have been performed in accordance with the Wisconsin Department of Natural Resource's (WDNRs) approved "Additional Investigation Work Plan - Monitoring Well MW-5 and AOC #5" (March 1998).

A Site Investigation Work Plan (November 1993) which contained general and specific site information regarding history, waste materials, handling procedures, SEH standard operating protocols (SOPs), and other pertinent project information was submitted by Fraser to the WDNR.

1.1 Scope of Work

SEH performed the following activities in order to assess groundwater contaminants identified at the Fraser facility:

- Groundwater sampling and analysis of monitoring well, MW-5, and three hydraulic probe borings placed in the immediate area surrounding MW-5.
- Laboratory analysis of groundwater collected from the monitoring well located at AOC #5.
- Report preparation.

1.2 Project Contacts

1. Ron Peterson, Superintendent
Fraser Shipyards, Inc.
Third Street and Clough Avenue
Superior, WI 54880
(715) 394-7787
2. Steve LaValley
Hazardous Waste Specialist
Wisconsin Department of Natural Resources
1401 Tower Avenue
Superior, WI 54880
(715) 392-7988
3. Cyrus Ingraham, P.E., Sr. Project Manager
Gloria Chojnacki, CHMM, Environmental Scientist
Short Elliott Hendrickson Inc.
421 Frenette Drive
Chippewa Falls, WI 54729
(715) 720-6231

2.0 Background Information

The Fraser facility is located at Third Street and Clough Avenue in Superior, Wisconsin as depicted on Figure 1, "Site Location." The site is located on Howard's Bay in Section 11, T49N, R14W, Douglas County, Wisconsin.

Monitoring well, MW-5, was installed at Fraser on August 16, 1996 to provide up gradient data for several AOCs at the facility. PAHs were identified in groundwater samples collected from monitoring well MW-5, including concentrations of benzo(a)pyrene and benzo(b)fluoranthene exceeding the ch. NR 140 groundwater quality Enforcement Standards (ES). Consequently, the WDNR required additional investigation of the area around MW-5 to define the degree and extent of PAH contamination. The location of monitoring well MW-5 is depicted on Figure 2, "Site Plan."

AOC #5 is one of 14 AOCs identified at the Fraser facility by WDNR in 1993. The AOC #5 area was historically used to temporarily stage waste materials from Fraser's painting operations prior to disposal. The wastes were staged in two portable aboveground containers. The wastes included paint wastes potentially mixed with dirty solvents. The two storage containers have been cleaned, cut up, and recycled. Paint waste materials are no longer staged in AOC #5. The location of AOC #5 is depicted on Figure 2.

Six soil samples were collected from AOC #5 in January 1994 and were analyzed for volatile organic compounds (VOCs), and total lead, cadmium, chromium, and mercury. No VOCs were detected in the soil samples; however, elevated concentrations of total lead and total chromium were detected. Toxicity characteristic leaching procedure (TCLP) analysis of the most elevated concentration of total lead and total chromium yielded no detectable concentrations of these two parameters. This indicates the lead and chromium detected in the soil sample is not significantly leachable.

One groundwater monitoring well (MW-2) was installed on the down gradient side of AOC #5 on August 16, 1996. Two rounds of groundwater samples have been collected and analyzed for concentrations of total dissolved lead and total dissolved chromium. Initial groundwater analytical results indicated concentrations of dissolved lead which exceeded the ES for lead (15 µg/l). Dissolved lead concentrations of 48.8 µg/l to 34.2 µg/l were present in samples collected from well MW-2 in 1996. Chromium was not detected in the groundwater samples collected from well MW-2.

A total of six hydraulic probe borings were used to collect additional groundwater data in the vicinity of AOC #5 in September 1997. Groundwater samples collected from the six hydraulic probe borings as well as from existing monitoring well MW-2 were analyzed for concentrations of total dissolved lead. Lead was not detected in concentrations exceeding ch. NR 140, Preventative Action Limits during this round of sampling. Based on the review of the groundwater data for AOC #5, additional rounds of groundwater monitoring including both dissolved and total lead groundwater analysis at this location was required by WDNR.

3.0 Geology, Hydrogeology, and Topography

3.1 Geology

Preliminary soil survey information was provided by the USDA Soil Conservation Survey located in Ashland, Wisconsin. Soils on the Fraser Shipyard property are classified as Udorthents which form 1 to 6 percent slopes. Udorthents occur in areas where the original soil

profile has been altered by the addition or removal of more than about a foot of soil materials.

Soils adjacent to the south side of the property area classified within the Ontonagon-Rudyard complex. This soil type occurs as an intermix of moderately well drained Ontonagon soil and somewhat poorly drained Rudyard soil. Rudyard soils form in clayey lacustrine deposits.

Ontonagon silty clay loams occur adjacent to the southeast corner of the property. These are well drained, highly erodible soils which occur on 6 to 12 percent slopes and form in clayey lacustrine deposits.

Groundwater in the Ontonagon-Rudyard soil series is generally found at depths less than six feet from the surface and can be perched. Depth to groundwater in the Ontonagon silty clay loams is typically greater than six feet from surface.

Underlying the surface soils in the vicinity of the site are glacial till deposits belonging to the Douglas Creek Member of the Miller Creek Formation. The Douglas Creek till is comprised of fine textured glacial till averaging 10 percent sand, 26 percent silt and 64 percent clay in the less-than-2 mm fraction. It is typically reddish-brown in color and averages 54 percent illite in the less-than-2 mm fraction. The Douglas Member is generally the surface unit throughout most of the Lake Superior bluffs, but in a few places is overlain by fluvial or lacustrine sand and gravel deposits or offshore silt and clay deposits of the Miller Creek Formation or younger fluvial, lacustrine, and organic deposits. Most of the Douglas Member is till deposited by ice of the Superior Lobe.

The Miller Creek Formation soils are generally underlain by sand and gravel soils of the Copper Falls Formation in the vicinity of Superior. The Copper Falls Formation consists of glacial sand and gravel tills and fluvial deposits.

Subsurface investigation of MW-5 indicates the presence of approximately five feet of earthen fill materials underlain by a three foot thick layer of silty sand at MW-5. A black peat-like material was also observed in the three hydraulic probe boring locations performed around MW-5. Lean clay soils of the Miller Creek Formation are present beneath the silty sand layer and black peat-like material.

Subsurface investigation of AOC #5 indicated the presence of 8.5 feet of fill materials, consisting of layers of sand and clay. A thin layer of organic clay separates the fill materials from the underlying clay soils of the Miller Creek Formation. The underlying Copper Falls Formation, and subsequent bedrock units were not encountered during site investigation at MW-5 and AOC #5.

3.2 Hydrogeology

Two major aquifers are present in the vicinity of Superior; the sand and gravel aquifer and the sandstone aquifer. The sand and gravel aquifer either occurs in recent surficial deposits (e.g., sand deposits on Wisconsin Point), or in buried Pleistocene sand and gravel deposits (e.g., the Copper Falls Formation). The sandstone aquifer is comprised of the Cambrian to Precambrian sandstone and shale deposits of the Bayfield and Oronto groups. Regional direction of groundwater flow in the Superior area is generally to the north (toward Lake Superior).

The shallow groundwater surface occurs at approximately 3.5 feet to 4.5 feet below ground surface (bgs) in the vicinity of MW-5 and AOC #5. Direction of shallow groundwater flow is generally to the north, with a horizontal hydraulic gradient of approximately 0.006 ft/ft in these areas based on site monitoring well observations.

3.3 Topography

The site vicinity lies in the Lake Superior lowland physiographic province, which consists of a glacial lake plain sloping gently to the north. Elevation of the property ranges from approximately 601 to 610 feet mean sea level (MSL). Surface water from the site drains overland to Lake Superior.

4.0 Additional Investigation

Additional investigation was performed at the facility by SEH on August 25, 1998. Two additional rounds of groundwater were collected at quarterly intervals on October 2, 1998 and January 19, 1999. The investigation was performed in accordance with SEHs March 1998 Additional Investigation Workplan - Monitoring well MW-5 and AOC #5.

4.1 Groundwater Sampling

Three hydraulic probe borings were performed on August 25, 1998 at the facility by Matrix Technologies Corp. (subcontractor to SEH) to define the degree and extent of groundwater contamination in the immediate vicinity of existing well, MW-5. A truck-mounted hydraulic probe sampler was mobilized to the site for the collection of groundwater samples to be used as a screening process for the identification of potential groundwater contamination. The hydraulic probes were placed around MW-5 in the locations depicted on Figure 2.

The probes were advanced to a depth of eight feet bgs where a screened section of the probe was then exposed from the four to eight foot depth interval within saturated fill soils. Soil boring logs were completed for each boring and are presented in Appendix A, "Soil Boring Documentation."

Dedicated disposable polyethylene tubing was inserted into the screened interval of each boring and groundwater was brought to the surface using a peristaltic pump. Existing wells, MW-5 and MW-2 (located at AOC #5), were also sampled during each sampling event using disposable polyethylene tubing and a peristaltic pump after four times the volume of water standing in the well casings were removed.

Groundwater samples collected from the three hydraulic probe borings and MW-5 were placed in one liter amber bottles and analyzed for PAHs (EPA Method 8310). Filtered and an unfiltered groundwater samples were collected from MW-2 (AOC #5) for lead analyses (EPA Method 7421). Dissolved lead samples were filtered with 0.45 micron filters and unfiltered samples were analyzed for total lead. Samples collected for both lead analyses were placed in polyethylene bottles at the time of collection and preserved with nitric acid to a pH of less than 2.

All water samples were immediately placed on ice for shipment via overnight courier. Samples were delivered to U.S. Filter (formerly Enviroscan Corp.) of Rothschild, Wisconsin (Wisconsin Certification No. 737053130) utilizing standard chain of custody documentation.

Upon completion of sampling activities, the hydraulic probe boreholes were abandoned in accordance with ch. NR 141 Wisconsin Administrative Code guidelines. Borehole abandonment forms are presented in Appendix A.

4.2 Groundwater Analytical Results

4.2.1 MW-5 and Hydraulic Probe Samples

Groundwater samples collected from monitoring well, MW-5 and hydraulic probes, HP-1A, HP-2A, HP-3A were analyzed for PAHs. Groundwater collected from MW-5 appeared clear during each sampling event after well purging and indicated one minor detection of naphthalene (0.193 µg/l) during the first round of groundwater collection on August 25, 1998. The concentration of naphthalene is well below the ch. NR 140 Preventive Action Limit (PAL) for naphthalene of 8 g/l. Two subsequent rounds of groundwater sampling at MW-5 (October 20, 1998 and January 29, 1999) did not indicate the presence of any PAHs above the detection limit.

Groundwater collected from the three hydraulic probe borings (August 25, 1998) appeared turbid. Numerous detections of PAHs were indicated in all three water samples including exceedance of the ch. NR 140 ES for benzo(a)pyrene, benzo(b)fluoranthene, and chrysene. The Preventive Action Limit (PAL) was exceeded for fluoranthene and pyrene as well. Purging of the hydraulic probe borings was not possible and the groundwater samples contained a

considerable amount of suspended organic solids. The PAHs detected are likely associated with suspended organic solids within the groundwater samples. Comparison of the hydraulic probe sample results to the ch. NR 140 standards is for screening purposes only since purging of the borings could not be performed.

Total PAH concentrations ranged from 30.8 µg/l at HP-1A to 538 µg/l at HP-3A. A summary of current and historical analytical results at MW-5 is found on Table 1, "Groundwater Analytical Results." A copy of the laboratory results is located in Appendix B, "Laboratory Results."

4.2.2 MW-2 (AOC #5) Samples

Groundwater samples collected from monitoring well, MW-2, were analyzed for both dissolved lead (filtered samples) and total lead (unfiltered samples). Groundwater samples collected from MW-2 appeared clear after well purging during each sampling event. Samples collected during the current additional investigation were analyzed using EPA Method 7421. Prior analyses of dissolved lead conducted at this AOC were analyzed using EPA Method 239.2. According to the laboratory performing the analysis, the two methods are nearly identical and therefore comparable.

Groundwater results from samples collected during the August 1998 and January 1999 sampling events indicated no detections of dissolved lead. The October 1998 sampling event indicated a total dissolved lead concentration of 3.08 µg/l, which exceeds the PAL for lead (1.5 µg/l). No ES exceedances for dissolved lead were identified in MW-2 during the August 1998, October 1998, and January 1999 sampling rounds.

Total lead concentrations were not detected in groundwater samples collected during the August 1998 sampling event. Subsequent quarterly sampling (October 1998 and January 1999) indicated a total lead concentration of 8.38 µg/l and 1.49 µg/l, respectively. A summary of current and historical analytical results at MW-2 is found on Table 1. A copy of the laboratory results is located in Appendix B.

5.0 Conclusions and Recommendations

5.1 MW-5 and Hydraulic Probe Samples

Soil analytical results from the 2.5 foot to 4.5 foot depth interval at MW-5 collected on August 16, 1996 indicate the presence of diesel range organic (DRO) compounds and two volatile organic compounds (VOCs). Soil DRO concentration is 75.4 mg/kg, total xylene concentration is 0.041 mg/kg and the toluene concentration is 0.037 mg/kg indicating compliance with ch. NR 720 generic residual contaminant levels (RCLs) based on protection of groundwater (DRO = 100 mg/kg; total xylenes = 4.1 mg/kg; toluene = 1.5 mg/kg).

Groundwater monitoring events at MW-5 prior to the current additional investigation indicated benzo(a)pyrene and benzo(b)fluoranthene concentrations which appear to be in excess of the ch. NR 140 ES. Current investigation of the area surrounding MW-5 to define the degree and extent of PAH contamination indicates no detection of PAHs in MW-5 after purging with a low flow peristaltic pump for the purpose of producing a sediment-free sample. Therefore, the previous PAH concentrations appear to be associated with sampling technique and particulate turbidity. The PAHs are likely bound to the soil particulates and are not impacting the groundwater as demonstrated by this investigation. Three successive quarterly rounds of groundwater have been collected at MW-5 which have demonstrated compliance with the requirements of ch. NR 140.

Groundwater collected from hydraulic probe samples surrounding MW-5 indicates detections of PAH compounds. Total PAH concentrations ranged from 30.8 µg/l at HP-1A to 538 µg/l at HP-3A. Collection of a sediment-free hydraulic probe groundwater sample was not possible at this site. Therefore, based on the absence of PAH detections with reduction of turbidity in samples as seen at MW-5 above, it is likely that PAH concentrations in the surrounding hydraulic probe samples are also associated with soil particulates and are not impacting the groundwater. No further investigation appears warranted in the vicinity of MW-5 at this time.

5.2 MW-2 (AOC #5) Samples

Groundwater samples collected from MW-2 (AOC #5 - former Paint Waste Staging Area) indicate no detections above the ch. NR 140 ES for dissolved lead. Four successive quarterly rounds of groundwater have been collected which have demonstrated compliance with the requirements of ch. NR 140 (lead concentrations less than ES of 15 µg/l) and ch. NR 726.05(3). Accordingly, Fraser requests formal closure of AOC #5 with a Deed Restriction to allow soils exceeding the residential RCL for lead based on human health risk from direct contact related to land use to remain in place. WDNR Case Summary, Closeout Forms, and supporting documentation have been prepared and submitted along with this report.

6.0 Standard of Care

The conclusions and recommendations contained in this report were arrived at in accordance with generally accepted professional engineering practice at this time and location. Other than this, no warranty is implied or intended.

GGC/ls/CWI/JEG



**DEWITT
ROSS & STEVENS**
LAW FIRM

Capitol Square Office
Two East Millin Street
Suite 600
Madison, WI 53703-2865
Fax 608-252-9243
Tel 608-255-8891

West Office
Firststar Financial Centre
8000 Excelsior Drive, Suite 401
Madison, WI 53717-1914
Fax 608-831-2106
Tel 608-831-2100

CONFIDENTIAL

Please respond to: Capitol Square Office

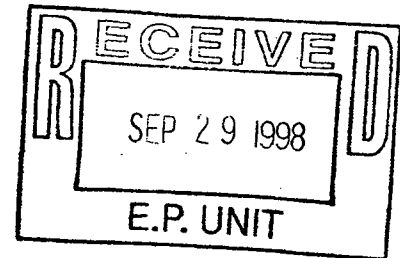
September 29, 1998

Lorraine C. Stoltzfus, AAG
WI Department of Justice
123 W. Washington Avenue
Madison, WI 53702

RECEIVED

001 7 1998

DNR SUPERIOR



Re: Fraser Shipyard
Case No. 95-CV-263

Dear Lorraine:

Attached is a draft stipulation regarding the Fraser Shipyards matter. It is substantially simpler than the draft you presented because a number of issues have since been resolved. In that regard, Fraser has submitted a workplan for AOC #5 and DNR has approved it. Fraser has already begun to implement the plan. Additionally, Fraser has submitted a Storm Water Prevention Plan, a copy of which is also attached.

Unfortunately, two compliance issues remain. First, we have not been able to reach an agreement on AOC 11. Fraser feels strongly that it is unnecessary to breach the two foot "concrete cap" in dry dock #1. This a non-negotiable issue.

The second compliance issue concerns sand blasting. Fraser is aware of the requirements of NR 415.04 regarding fugitive dust. It has "...taken precautions to prevent particulate matter from becoming airborne", including utilizing a baghouse when sandblasting and watering roadways during dry conditions. It also explored the use of water blasting which proved to be infeasible. Your proposed stipulation required full enclosure and five day notification; neither of which is required by NR 415. Fraser would be pleased to have further discussions with DNR regarding this issue, so that a common understanding of compliance can be achieved.

Finally, I believe the forfeiture issues can be worked out.

**DEWITT
ROSS & STEVENS.**
LAW FIRM

Lorraine C. Stoltzfus, AAG
September 29, 1998
Page 2

Please give me a call to discuss.

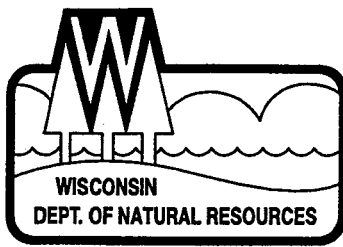
Very truly yours,

DEWITT ROSS & STEVENS s.c.



Timm P. Speerschneider

TPS:tls
Enclosures



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary

1705 Tower Avenue
Superior, Wisconsin 54880
TELEPHONE 715-392-7831
FAX 715-392-7993

February 16, 1998

Mr. Ron Peterson
Fraser Shipyards, Inc.
P.O. Box 997
Superior, Wisconsin 54880

FID# 816047210
HW/RESP
Douglas County
WID 988639597

RE: Area of Concern #5 at Fraser Shipyards Facility in Superior.

Dear Mr. Peterson:

I am writing in response to Mr. Ingraham's letter to James Hosch dated December 9, 1997 regarding AOC #5. A separate letter will be sent in response to Fraser's request for closure of AOC #11. In Mr. Ingraham's letter, he raised a number of issues regarding AOC#5. As a preliminary matter, I want to make it clear that AOC#5 has always been and indeed remains a managed site from the very beginning of the work which was required by the State after the Department's inspection of Fraser in April of 1993. After SEH submitted an "Additional Investigation Work Plan" to the Department in August of 1997, a postcard was mistakenly sent which stated that the site was unmanaged. This error was made because of new lines of responsibility due to the split of the Solid Waste Program into two separate programs (Remediation and Waste Management). However, any internal misunderstandings about the site's management have been corrected. As has been the case for a number of years now, I remain the project manager for the entire facility, and all correspondence, reports and questions should be directed to me. Department responses to reports and close-out requests will come from the Department under my signature.

In Mr. Ingraham's letter of December 9, 1997, he disagrees with the Department's request that water samples from the hydraulic probe and from monitoring well #2 be analyzed for lead using test method EPA SW846-7421 rather than method 239.2, and states that method 239.2 has been used consistently for groundwater analysis of lead on this project. We must point out, however, that the work plans submitted by SEH prior to the August 1997 work plan, all proposed that method 7421 be used. See work plans dated November 13, 1995 table 2 and March 15, 1996 table 3 and the Department's approval letters dated December 9, 1995 and May 26, 1996. Apparently, SEH then changed to method 239.2 instead.

The Department will not require that SEH redo the sampling and testing using method (SW846-7421), which was approved. However, SEH must provide an explanation as to why test methods were switched, without notice to or approval from the Department. In addition, because method 239.2 is a test method better suited to wastewater testing than hazardous waste, method 7421 should be used in the future for the analysis of dissolved lead in groundwater at this site.

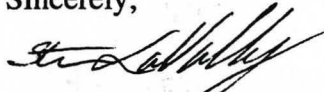
Mr. Ingraham's letter also stated that the groundwater samples which were taken at AOC #5 were filtered samples. In the future, metals must be analyzed in both filtered and unfiltered samples of groundwater. USEPA requires groundwater samples for metal to be unfiltered, while the Department prefers filtered samples. Therefore, the Department requires both filtered and unfiltered samples at solid and hazardous waste sites (solid waste guidance document 920004). If you need a copy of this memo, contact me at 715-392-7831 and I will provide you with a copy.

Next, Mr. Ingraham's letter stated that the enforcement standards exceedances for benzo (a) pyrene should not be addressed because it was identified at a background well rather than at AOC #5. However, the well is located on the Fraser property, and Fraser has not demonstrated that they are not responsible for the contamination. Pursuant to the remediation rules found in the NR 700, Wis. Adm. Code, Fraser is required in NR 716.11(4), Wis. Adm. Code to extend the investigation beyond their property boundaries to fully define the extent of contamination. Fraser must address the enforcement standard exceedances for benzo (a) pyrene at their up-gradient well.

AOC#5 is not yet ready to be closed-out. Pursuant to s. NR 726.05(3)(a)3, Wis. Adm. Code, Fraser must perform four successive rounds of quarterly groundwater sampling which demonstrate compliance with the requirements of NR 140, Wis. Adm. Code. If such a demonstration cannot be made, then a remedial action work plan will be necessary.

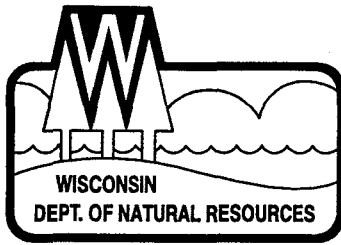
Please submit a workplan to address the up-gradient well by April 1, 1998.

Sincerely,



Steve LaValley
Solid and Hazardous Waste Specialist.

C: Lorraine Stoltzfus - DOJ
Dave Kafura, Gary LeRoy - Spooner
May Bell Pratt - Spooner
Jim Hosch - Superior
Pete Flaherty - LS/5
Gary Kulibert - Rhinelander
HW-WA/3
SEH - 421 Frenette Drive, Chippewa Falls, Wisconsin 54729
Timm Speerschnieder, 2 Mifflin Street, Suite 600, Madison, Wisconsin 53703-2865



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary

1705 Tower Avenue
Superior, Wisconsin 54880
TELEPHONE 715-392-7831
FAX 715-392-7993

December 12, 1997

Mr. Ron Peterson
Fraser Shipyards, Inc.
P.O. Box 997
Superior, Wisconsin 54880

FID# 816047210
HW/CORR
Douglas County
Case No. NWD-93-1
WID988639597

SUBJECT: Fraser Shipyards AOC #11 (Dry Dock #1) and AOC#5.

Dear Mr. Peterson:

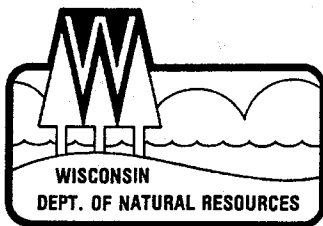
In March of 1997, a case close-out form was submitted to the Department requesting that AOC #11 be closed. Additional information was requested by the Department, and provided by your consultant. On October 1, 1997, the Northern Region Close-Out Committee reviewed AOC #11 to determine whether it qualified for close-out under Wis. Admin. Code ch.NR 726, as requested by you and your consultant. However, because of the complex nature of the issues at AOC #11, we are not yet able to respond to your request. The DNR personnel who are involved with this AOC will be meeting as soon as possible to discuss the issues involved at AOC #11, so that we may get back to you with a clear and definitive response. I expect that this response will be sent by the end of January, 1998, and possibly sooner.

Department of Natural Resources personnel will also be discussing the issues raised by Cyrus Ingraham in his December 9, 1997, letter to Jim Hosch, and will respond to that letter at the same time. If you have any questions, you may call me at 715-392-7831.

Sincerely,

Steve LaValley
Solid and Hazardous Waste Specialist.

C: Lorraine Stoltzfus - DOJ
Dave Kafura, Gary LeRoy - Spooner
May Bell Pratt - Spooner
Jim Hosch - Superior
Pete Flaherty - LS/5



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William H. Smith, District Director

Superior Office
1705 Tower Avenue
Superior, WI 54880
TELEPHONE 715-392-7988
FAX 715-392-7993

November 28, 1997

Ron Peterson
Fraser Shipyards
Third Street and Clough Avenue
Superior, Wisconsin 54880

FID# 816047210
HW/CORR
Douglas County
NOR UID# 02-16-120588
WID 988639597

RE: Additional Investigation Work Plan - AOC#5

Dear Mr. Peterson;

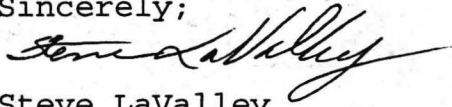
On August 29, 1997, the Department received a report titled "Additional Investigation Work Plan-AOC#5." Area of Concern #5 contained above ground tanks that held waste paints and solvents. The covers of tanks were propped open. The work plan calls for the collection of six water samples using a hydraulic probe. The work plan states that the samples from the hydraulic probe and monitoring well #2 will be analyzed for lead using method SW846-239.2. EPA method 7421 was used to analyze past ground water samples for lead on the site. A review of the test methods shows little difference other than that method 7421 gives more direction regarding the analysis. It is recommended that Fraser use method 7421. The SHE work plan appears to be analyzing water samples only for lead. The department also recommends you address the exceedances of enforcement standards for benzo(a)pyrene.

Fraser requested guidance on closure of this Area of Concern with exceedances of enforcement standards found in NR 140.10 table 1 Public Health Groundwater Quality Standards. The Department's guidance was that Fraser needed to submit a remedial work plan for this AOC. To date a remedial action plan has not been submitted, although Fraser Shipyard has submitted a plan for additional investigation. This is not sufficient to meet the need for remediation. Fraser and their consultant must submit a remedial action work plan to the Department within 30 days. The Department considers this Area of Concern to be an unlicensed hazardous waste treatment facility which must therefore comply with chapter NR 685, Wis. Adm. Code unless the site can be "clean closed" under the NR 700, Wis. Adm. Codes.

The department will not review investigation work plans for AOC#5 but will review the remediation work plan. Fraser can proceed with what ever investigation they feel necessary to develop the remediation work plan. A remediation work plan should be submitted to the Department within 30 days. The Department reserves its right to require additional investigations if needed.

If you have any questions regarding this letter or hazardous waste regulation please contact Steve LaValley at 715-392-7831

Sincerely;



Steve LaValley
Solid and Hazardous Waste Specialist

c: Gary LeRoy/ Dave Kafura/ Mary Bell Pratt- Spooner
Lorraine Stoltzfus- DOJ
Jim Hosch - Superior
Gary Kulibert/Mark Stockstad - Rhinelander
Pete Flarity - LE/5
Cyrus Ingraham - SEH, 421 Frenette Drive, Chippewa Falls, WI 54729
Files - WA/3, RR/3

Fraser Shipyards, Inc.

Additional Investigation Work Plan – AOC #5

Superior, Wisconsin

SEH No. FRASE9401.00

August 1997

RECEIVED
AUG 27 1997
DNR SUPERIOR





421 FRENETTE DRIVE, CHIPPEWA FALLS, WI 54729 715 720-6200 800 472-5881 FAX 715 720-6300
ARCHITECTURE • ENGINEERING • ENVIRONMENTAL • TRANSPORTATION

August 28, 1997

RE: Fraser Shipyards, Inc.
Additional Investigation Work Plan –
AOC #5
Superior, Wisconsin
SEH No. FRASE9401.00

Mr. Steve LaValley, Hazardous Waste Specialist
Wisconsin Department of Natural Resources
1705 Tower Avenue
Superior, WI 54880

Dear Mr. LaValley:

On behalf of Fraser Shipyards, Inc. (Fraser), Short Elliott Hendrickson Inc. (SEH) is submitting this Additional Investigation Work Plan for area of concern (AOC) #5 at the Fraser facility located in Superior, Wisconsin. This work plan describes proposed investigation activities to further identify degree and extent of land contamination at this location.

We respectfully request the Wisconsin Department of Natural Resources (WDNR) to review this document and provide comments. If you have any questions regarding the submittal of Additional Investigation Work Plan – AOC #5, please call Ron Peterson at (715) 394-7787 or Cy Ingraham at (715) 720-6231.

Sincerely,

Cyrus W. Ingraham, P.E.
Senior Project Manager

JEG/lS/CWI

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Additional Investigation Work Plan – AOC #5

Fraser Shipyards, Inc.

Prepared for Fraser Shipyards, Inc.

1.0 Introduction

Fraser Shipyards, Inc. (Fraser) is submitting this Additional Investigation Work Plan for area of concern (AOC) #5, prepared by Short Elliott Hendrickson Inc. (SEH), to the Wisconsin Department of Natural Resources (WDNR). This work plan was prepared in general accordance with ch. NR 716 Wisconsin Administrative Code. The work plan was prepared in response to WDNR's request for additional investigation as a result of dissolved lead identified in groundwater samples collected from this location. The tasks outlined in this work plan have been selected to identify degree and extent of lead groundwater contamination in the vicinity of AOC #5.

1.1 Project Contacts

1. Ron Peterson, Superintendent
Fraser Shipyards, Inc.
Third Street and Clough Avenue
Superior, WI 54880
(715) 394-7787
2. Steve LaValley, Hazardous Waste Specialist
Wisconsin Department of Natural Resources
1705 Tower Avenue
Superior, WI 54880
(715) 392-7988

-
3. Cyrus W. Ingraham, P.E., Senior Project Manager
Short Elliott Hendrickson Inc.
421 Frenette Drive
Chippewa Falls, WI 54729
(715) 720-6231

2.0 Background Information

The Fraser Shipyard facility is located at Third Street and Clough Avenue in Superior, Wisconsin as depicted on Figure 1, "Site Location." The site is located on Howard's Bay in Section 11, T49N, R14W, Douglas County, Wisconsin.

AOC #5 is one of 14 AOCs identified at the Fraser facility by WDNR in 1993. The AOC #5 area was historically used to temporarily stage waste materials from Fraser's painting operations prior to disposal. The wastes were staged in two portable aboveground containers. The wastes included paint wastes potentially mixed with dirty solvents. The two storage containers have been cleaned up, cut up, and recycled. Paint waste materials are no longer staged in AOC #5.

Six soil samples were collected from AOC #5 in January 1994 and were analyzed for volatile organic compounds (VOCs), and total lead, cadmium, chromium, and mercury. No VOCs were detected in the soils samples; however, elevated concentrations of total lead and total chromium were detected. However, toxicity characteristic leaching procedure (TCLP) analysis of the most elevated concentration of total lead and total chromium yielded no detectable concentrations of these two parameters. This indicates the lead and chromium detected in the soil sample is not very leachable.

One groundwater monitoring well (MW-2) was installed on the downgradient side of AOC #5 on August 16, 1996. Two rounds of groundwater samples have been collected and analyzed for concentrations of total dissolved lead and total dissolved chromium. Groundwater analytical results indicate concentrations of dissolved lead which exceed the ch. NR 140 groundwater quality Enforcement Standard (ES). Dissolved lead concentrations of 48.8 $\mu\text{g/l}$ to 34.2 $\mu\text{g/l}$ were present in samples collected from well MW-2. Chromium was not detected in the groundwater samples collected from well MW-2. The location of AOC #5 is depicted on Figure 2, "Site Plan."

3.0 Geology, Hydrogeology, and Topography

3.1 Geology

Preliminary soil survey information was provided by the USDA Soil Conservation Survey located in Ashland, Wisconsin. Soils on the Fraser Shipyard property are classified as Udorthents which form 1 to 6 percent slopes. Udorthents occur in areas where the original soil profile has been altered by the addition or removal of more than about a foot of soil materials.

Soils adjacent to the south side of the property area classified within the Ontonagon-Rudyard complex. This soil type occurs as an intermix of moderately well drained Ontonagon soil and somewhat poorly drained Rudyard soil. Rudyard soils form in clayey lacustrine deposits.

Ontonagon silty clay loams occur adjacent to the southeast corner of the property. These are well drained, highly erodible soils which occur on 6 to 12 percent slopes and form in clayey lacustrine deposits.

Groundwater in the Ontonagon-Rudyard soil series is generally found at depths less than six feet from the surface and can be perched. Depth to groundwater in the Ontonagon silty clay loams is typically greater than six feet from surface.

Underlying the surface soils in the vicinity of the site are glacial till deposits belonging to the Douglas Creek Member of the Miller Creek Formation. The Douglas Creek till is comprised of fine textured glacial till averaging 10 percent sand, 26 percent silt and 64 percent clay in the less-than-2 mm fraction. It is typically reddish-brown in color and averages 54 percent illite in the less-than-2 mm fraction. The Douglas Member is generally the surface unit throughout most of the Lake Superior bluffs, but in a few places is overlain by fluvial or lacustrine sand and gravel deposits or offshore silt and clay deposits of the Miller Creek Formation or younger fluvial, lacustrine, and organic deposits. Most of the Douglas Member is till deposited by ice of the Superior Lobe.

Surface investigation of AOC #5 indicated the presence of 8.5 feet of fill materials, consisting of layers of sand and clay. A thin layer of organic clay separates the fill materials from the underlying clay soils of the Miller Creek Formation. The underlying Copper Falls Formation, and subsequent bedrock units were not encountered during site investigation.

3.2 Hydrogeology

Two major aquifers are present in the vicinity of Superior; the sand and gravel aquifer and the sandstone aquifer. The sand and gravel aquifer either occurs in recent surficial deposits (e.g., sand deposits on Wisconsin Point), or in buried Pleistocene sand and gravel deposits (e.g., the Copper

Falls Formation). The sandstone aquifer is comprised of the Cambrian to Precambrian sandstone and shale deposits of the Bayfield and Oronto groups. Regional direction of groundwater flow in the Superior area is generally to the north (toward Lake Superior).

The shallow groundwater surface in the vicinity of AOC #5 occurs approximately 3.5 feet below ground surface. A total of 4.5 feet of saturated fill soils are present overlying the natural cohesive soils at this location. Direction of groundwater flow in the AOC #5 area is generally to the north, with a horizontal hydraulic gradient of approximately 0.006 ft/ft.

3.3 Topography

The site vicinity lies in the Lake Superior lowland physiographic province, which consists of a glacial lake plain sloping gently to the north. Elevation of the property ranges from approximately 601 to 610 feet mean sea level (MSL). Surface water from the site drains overland to Lake Superior.

4.0 Proposed Additional Investigation Activities

Based on elevated concentrations of dissolved lead identified in AOC #5 groundwater samples, additional investigation is recommended to identify the degree and extent of groundwater contamination. Because of the presence of the Miller Creek Formation, which limits downward movement of groundwater, SEH will limit the additional investigation to shallow groundwater in the vicinity of AOC #5.

4.1 Hydraulic Probe Sampling

SEH proposes to mobilize a truck-mounted hydraulic probe sampler to the site for collection of groundwater samples. The hydraulic probe groundwater samples will be collected from six locations within the saturated fill soils, approximately seven feet below ground surface on a grid pattern. The proposed sampling locations are depicted on Figure 3, "Hydraulic Probe Sampling Location Plan."

The samples will be collected using decontaminated downhole tools and dedicated disposable polyethylene tubing.

The groundwater samples will be filtered through a 0.45mm filter, preserved with nitric acid to a pH of less than 2 and chilled to 4 degrees Celsius for shipment by overnight courier. Analysis for concentrations of dissolved lead (U.S. EPA Method SW846 239.2) will be performed by U.S. Filter/Enviroscan of Rothschild, Wisconsin (Wisconsin Lab Certification Number 737053130).

4.2 Existing Well Sampling

SEH proposes to collect a groundwater sample from existing well MW-2 concurrently with hydraulic probe sample collection. A minimum of four well casing volumes of water will be removed from well MW-2 prior to sampling. The groundwater sample will be filtered, preserved, transported, and analyzed as described in Section 4.1.

4.3 Investigative Wastes

Investigative wastes generated during the additional site investigation are expected to include small volumes of decontamination water, purge water, and disposable personal protective equipment (PPE). The decontamination water and purge water will be disposed within AOC #5 unless observable contamination is noted. If observable contamination is noted, the water will be containerized for offsite disposal. Disposable PPE will be disposed as solid waste.

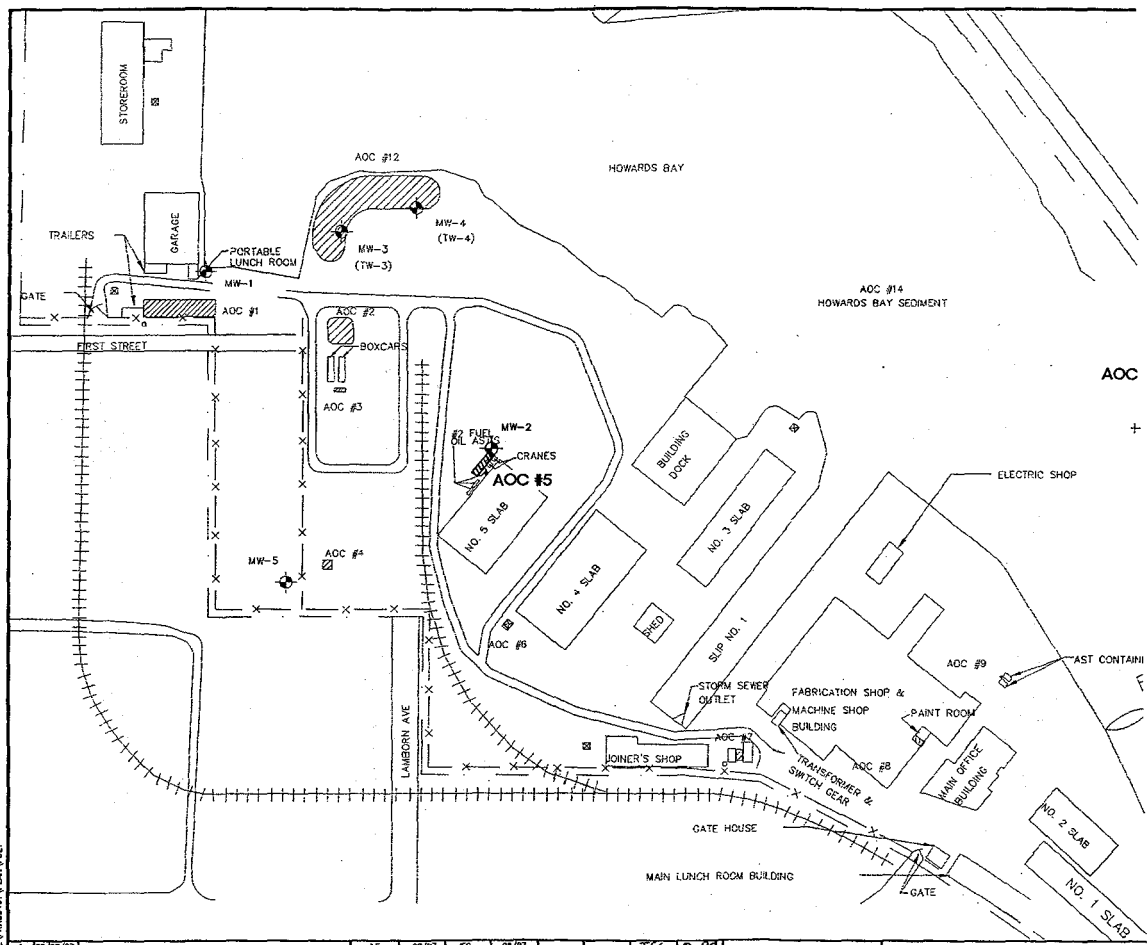
5.0 Documentation and Quality Assurance/Quality Control (QA/QC)

Specific documentation and QA/QC procedures will be followed during the investigative activities at Fraser to ensure that accurate and representative data are collected. This section describes the procedures to be followed during field activities only. The laboratory QA/QC procedures will be performed in accordance with specific method requirements and laboratory standard operating procedures. The following section outlines the field documentation and QA/QC procedures.

5.1 Field Documentation

A written log will be used to document field procedures and conditions. The written log will be kept in a bound field book with pre-numbered pages. Field notes will be entered daily when activities occur. The field notes will include at least the following information:

- Date
- Field personnel (including owner, consultants, subcontractors, regulatory agency)
- Weather (temperature, cloud cover, wind, precipitation)
- Equipment (including screening, sampling, subcontractor equipment)
- Calibrations performed, calibration curves or standards
- Results and techniques used for field screening
- Sampling locations (this requires an accurate map)
- Methods and/or devices used in sampling.

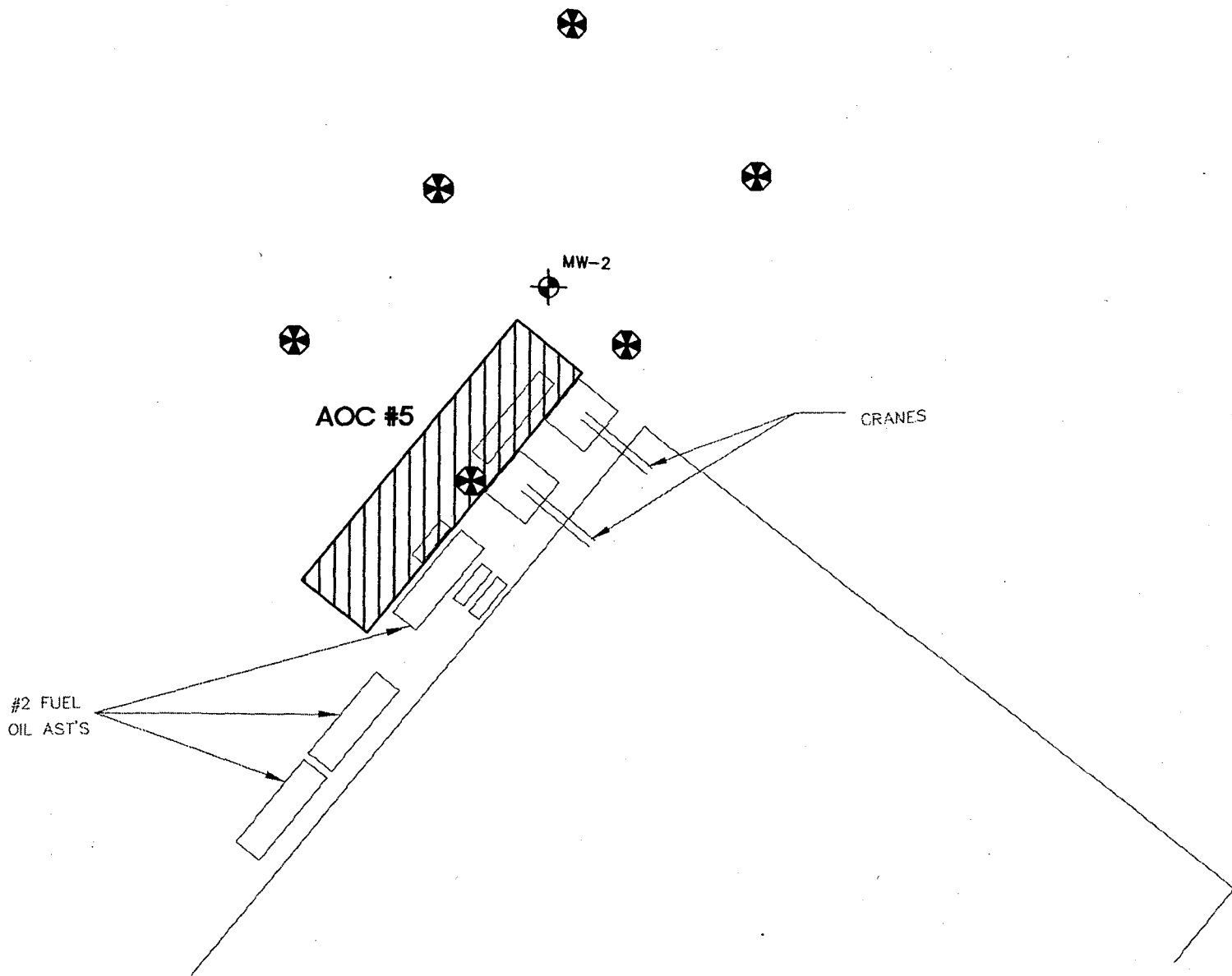
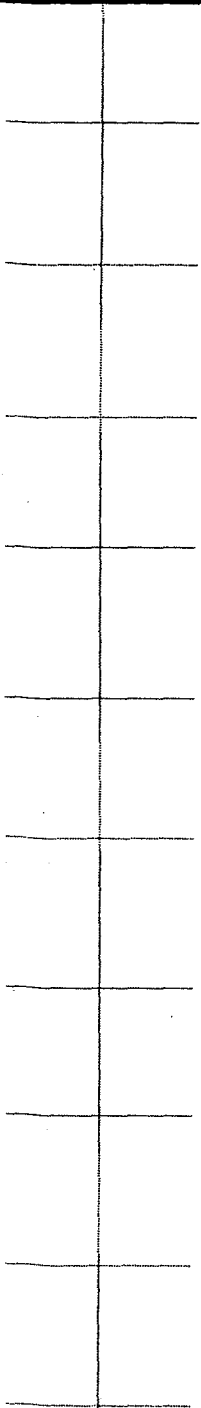


F:\MISC\FRASER\WORK\PLAN\AOC

| NO. | DATE | ISSUE/REVISIONS | DRAWN BY | DESIGN | FIELD REVIEW | QC CHECK |
|-----|----------|-----------------|----------|--------|--------------|----------|
| 1 | 09/27/97 | | JL | 09/97 | EG | 09/97 |
| | | | | | | |
| | | | | | | |



FRASER SHIPYARDS, INC.
ADDITIONAL INVESTIGATION
WORK PLAN - AOC #5



done 5/27/97 JH

CORRESPONDENCE/MEMORANDUM

DATE: April 3, 1997

TO: Judy Freeman, Park Falls

FROM: Janet Kazda, Rhinelander *Janet*

SUBJECT: Fraser Shipyards, Superior

Judy, attached are copies of the front pages of two closure requests that were recently submitted to our program by Steve LaValley in the Hazardous Waste program. As you can see, the two sites are both at the Fraser Shipyards in Superior. However, they are for two separate "Areas of Concern," or AOCs.

Currently, our tracking system lists only one site for Fraser, that is UID# 02-16-000079. However, I've been told that there are fourteen separate AOCs on the Fraser property. Ten of those AOCs are already closed. The attached closure requests are for two of the remaining four sites.

Would you please set up in BRRTS four additional activities at the Fraser location. Two of those new activities should be AOC #11 and AOC#1 (to cover the attached requests). Then, please contact Steve LaValley to set up the two remaining AOCs. Also, work with Steve to determine which areas of concern are already closed and ask him for copies of letters, etc to document this for our files. Finally, enter a closed date in the Fraser activity (#79) listed above. We will let this activity represent the ten AOCs that are already closed. Please note in that activity which AOCs the closure covers.

Thanks, Judy.

file: AOC #5 = 02-16-120590 ✓
 AOC #14 = 02-16-120591 ✓

c: Steve LaValley
 Closure File

*Closure date for 02-16-000079 = used 12/3/96
 need notification date for 02-16-120590 =
 591 = 4/23/97*



The classification of waste previously handled at AOC #3 potentially included F003 series. Soil impacted by a release of F003 wastes are classified as hazardous wastes if they are excavated. Therefore, further evaluation of regulatory requirements and options for treatment of these soils is warranted.

4.3.2 Recommendations

A Remedial Closure Plan should be prepared for AOC #3 in accordance with chs. NR 685 Wis. Admin. Code, and the proposed chs. NR 720 and NR 722 Wis. Admin. Code. The extent of contamination should be further defined. The waste classification of impacted soil should be determined with an emphasis on delisting or reclassification as petroleum impacted soil. The Remedial Closure Plan should also include an evaluation of remedial options, proposed soil cleanup standards, confirmatory sampling and documentation requirements.

4.4 AOC #4 – Bilge Water Staging Area

4.4.1 Discussions

The investigation of AOC #4 included the collection and analysis of shallow soil samples from two test pits. The samples were collected from fill material above the zone of saturation and analyzed for DRO. The concentrations of DRO were below the most restrictive interim soil clean-up standards of 100 mg/kg and, therefore, remediation does not appear warranted.

4.4.2 Recommendations

Based on the results of the investigation at AOC #4, No Further Action is recommended. The AOC should be closed in accordance with provisions of chs. NR 685 and NR 720 Wis. Admin. Code.

4.5 AOC #5 – Paint Waste Staging Area

4.5.1 Discussions

The investigation of AOC #5 included the collection and analysis of shallow soil samples from four borings. The samples were collected from fill material above the zone of saturation and analyzed for VOCs and select total metals. VOCs were not found above the laboratory detection limit. The presence of lead and chromium slightly above the interim soil clean-up standards of 500 mg/kg and 200 mg/kg, respectively, for an industrial site. Because the valence number of the chromium on site is not known, the more conservative hexavalent chromium values were used. The concentrations of cadmium and mercury were within ranges typically found in natural soils in Wisconsin as listed in a June 20, 1980 WDNR internal correspondence from Bob Schafer regarding heavy metals in soils.

Although the concentrations of lead and chromium do exceed the proposed interim soil clean-up standards, TCLP results indicate that the soil would not be classified as a characteristic hazardous waste for metals. In addition, the ASTM water leach procedure used to investigate the potential for groundwater impact from soil containing residual metals resulted in nondetectable levels of leachable lead. The nondetectable VOC concentrations also indicate that the soil would not be classified as a characteristic or listed hazardous waste (as a result of releases of F003 wastes).

4.5.2 Recommendations

The historical hazardous waste (paint and solvent wastes) handling activities in AOC #5 have not impacted the shallow soil and, therefore, No Further Action is recommended for this area. However, former site activities may have introduced metals during fill placement. The further evaluation of site specific soil clean-up standards for the total metal concentrations does not appear warranted due to the low total concentrations (Table 2 ch. NR 720 Wis. Admin. Code values were only slightly exceeded) and nonleachable nature of lead and chromium in the fill.

4.6 AOC #6 – 600KVA Substation

4.6.1 Discussions

The investigation of AOC #6 included the collection and analysis of one shallow soil sample from a backhoe test pit. The sample was collected from fill material above the zone of saturation and analyzed for DRO. A field screen for PCBs was also performed. Neither DRO nor PCBs were above laboratory or field kit detection limits, therefore, remediation does not appear warranted.

4.6.2 Recommendations

Based on the results of the investigation at AOC #6, No Further Action is recommended. The AOC should be closed in accordance with provisions of chs. NR 685 and NR 700 Wis. Admin. Code.

4.7 AOC #7 – Transformer Staging Area

4.7.1 Discussions

The investigation of AOC #7 included the collection and analysis of shallow soil samples from a backhoe test pit. The samples were collected from fill material above the zone of saturation and analyzed for DRO and PCBs. The concentration of DRO exceed the proposed interim soil clean-up standards of 100 to 250 mg/kg (range dependent on soil permeability), therefore remediation of petroleum contaminated soil appears warranted. PCB concentrations of 1.0 µg/g

Based on the apparent low volume of contaminated soil, excavation and treatment techniques will likely be utilized for these AOCs. A Remedial Action Plan will be developed following an evaluation of the potential onsite and offsite treatment alternatives for the petroleum contaminated soil. Fraser intends to perform the remediation at these AOCs during the summer of 1994. Accordingly, a Remedial Action Plan will be prepared for WDNR approval within two weeks of approval of this Closure Plan.

5.3 Remedial Closure Plan

Development of a Remedial Closure Plan is recommended for AOC #3 Dirty Solvent Staging Area, due to the low concentration of benzene and 1,2-dichlorobenzene in soil samples. The soil impacted by benzene and 1,2-dichlorobenzene may potentially be classified as a listed hazardous waste (F003) through the mixture rule (s. NR 605.04(2b Wis. Admin. Code) if excavated. Therefore, consideration will need to be given to the regulatory constraints during the evaluation of remedial alternatives for this impacted soil. The Remedial Closure Plan will include an evaluation of potential remedial alternatives, a discussion of regulatory consideration, soil clean-up standards, recommended remedial action and implementation schedule. The Remedial Closure Plan will be developed within four weeks of approval of this Closure Plan.