REVISED
11:48 am, Mar 27, 2009

GIS REGISTRY
Cover Sheet

POST CLOSURE

July, 2008
(RR 5367)

Source Property Information

CLOSURE DATE: Mar 28, 2000

BRRTS #: 02-05-108061

FID #: 405031660

ACTIVITY NAME: Fort James Corporation (Former Shell Terminal)

DATCP #:

PROPERTY ADDRESS: 1505 State St

COMM #: 54304353605

MUNICIPALITY: Green Bay

PARCEL ID #: 1-1407-5

***WTM COORDINATES:**

X: **676523** Y: **449018**

** Coordinates are in WTM83, NAD83 (1991)*

WTM COORDINATES REPRESENT:

- (•) Approximate Center Of Contaminant Source
- ( ) Approximate Source Parcel Center

Please check as appropriate: (BRRTS Action Code)

Contaminated Media:

- [X] Groundwater Contamination > ES *(236)*
  - [ ] Contamination in ROW
  - [ ] Off-Source Contamination

  (***note:*** *for list of off-source properties see "Impacted Off-Source Property")*
- [X] Soil Contamination > *RCL or **SSRCL *(232)*
  - [ ] Contamination in ROW
  - [ ] Off-Source Contamination

  (***note:*** *for list of off-source properties see "Impacted Off-Source Property")*

Land Use Controls:

- [ ] Soil: maintain industrial zoning *(220)*

  (***note:*** *soil contamination concentrations between residential and industrial levels)*
- [ ] Structural Impediment *(224)*
- [ ] Site Specific Condition *(228)*
- [ ] Cover or Barrier *(222)*

  (***note:*** *maintenance plan for groundwater or direct contact)*
- [ ] Vapor Mitigation *(226)*
- [ ] Maintain Liability Exemption *(230)*

  (***note:*** *local government or economic development corporation)*

Monitoring wells properly abandoned? *(234)*

(•) Yes ( ) No ( ) N/A

** Residual Contaminant Level*
***Site Specific Residual Contaminant Level*

State of Wisconsin
Department of Natural Resources
http://dnr.wi.gov

GIS Registry Checklist

Form 4400-245 (R 4/08)

This Adobe Fillable form is intended to provide a list of information that is required for evaluation for case closure. It is to be used in conjunction with Form 4400-202, Case Closure Request. The closure of a case means that the Department has determined that no further response is required at that time based on the information that has been submitted to the Department.

NOTICE: Completion of this form is mandatory for applications for case closure pursuant to ch. 292, Wis. Stats. and ch. NR 726, Wis. Adm. Code, including cases closed under ch. NR 746 and ch. NR 726. The Department will not consider, or act upon your application, unless all applicable sections are completed on this form and the closure fee and any other applicable fees, required under ch. NR 749, Wis. Adm. Code, Table 1 are included. It is not the Department's intention to use any personally identifiable information from this form for any purpose other than reviewing closure requests and determining the need for additional response action. The Department may provide this information to requesters as required by Wisconsin's Open Records law [ss. 19.31 - 19.39, Wis. Stats.].

BRRTS #: 02-05-108061 PARCEL ID #: 1-1407-5

ACTIVITY NAME: Fort James Operating Co WTM COORDINATES: X: 676523 Y: 449018

CLOSURE DOCUMENTS (the Department adds these items to the final GIS packet for posting on the Registry)

- [X] **Closure Letter**
- [ ] **Maintenance Plan** (*if activity is closed with a land use limitation or condition (land use control) under s. 292.12, Wis. Stats.*)
- [X] **Conditional Closure Letter**
- [ ] **Certificate of Completion (COC)** for VPLE sites

SOURCE LEGAL DOCUMENTS

- [X] **Deed:** The most recent deed as well as legal descriptions, for the **Source Property** (where the contamination originated). Deeds for other, off-source (off-site) properties are located in the **Notification** section.
  Note: *If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.*
- [X] **Certified Survey Map:** A copy of the certified survey map or the relevant section of the recorded plat map *for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map.* (lots on subdivided or platted property (e.g. lot 2 of xyz subdivision)).

  Figure #: 6 **Title: Parcel Legal Information**
- [X] **Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes that the attached legal description accurately describes the correct contaminated property.

MAPS (meeting the visual aid requirements of s. NR 716.15(2)(h))

Maps must be no larger than 8.5 x 14 inches unless the map is submitted electronically.

- [X] **Location Map:** A map outlining all properties within the contaminated site boundaries on a U.S.G.S. topographic map or plat map in sufficient detail to permit easy location of all parcels. If groundwater standards are exceeded, include the location of all potable wells within 1200 feet of the site.
  Note: *Due to security reasons municipal wells are not identified on GIS Packet maps. However, the locations of these municipal wells must be identified on Case Closure Request maps.*

  Figure #: 1 **Title: Site Location Diagram**
- [X] **Detailed Site Map:** A map that shows all relevant features (buildings, roads, individual property boundaries, contaminant sources, utility lines, monitoring wells and potable wells) within the contaminated area. This map is to show the location of all contaminated public streets, and highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination exceeding a ch. NR 140 Enforcement Standard (ES), and/or in relation to the boundaries of soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Levels (SSRCL) as determined under s. NR 720.09, 720.11 and 720.19.

  Figure #: 1, 2 **Title: Soil Management Diagram, UST Location Diagram**
- [X] **Soil Contamination Contour Map:** For sites closing with residual soil contamination, this map is to show the location of all contaminated soil and a single contour showing the horizontal extent of each area of contiguous residual soil contamination that exceeds a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL)as determined under s. NR 720.09, 720.11 and 720.19.

  Figure #: 4 **Title: Soil Concentration Map**

BRRTS #: 02-05-108061 ACTIVITY NAME: Fort James Operating Co

MAPS (continued)

☒ **Geologic Cross-Section Map:** A map showing the source location and vertical extent of residual soil contamination exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL). If groundwater contamination exceeds a ch. NR 140 Enforcement Standard (ES) when closure is requested, show the source location and vertical extent, water table and piezometric elevations, and locations and elevations of geologic units, bedrock and confining units, if any.

Figure #: **Title: Geologic Cross Sections A-A' & B-B'**

Figure #: **Title:**

☒ **Groundwater Isoconcentration Map:** For sites closing with residual groundwater contamination, this map shows the horizontal extent of all groundwater contamination exceeding a ch. NR140 Preventive Action Limit (PAL) and an Enforcement Standard (ES). Indicate the direction and date of groundwater flow, based on the most recent sampling data.
Note: *This is intended to show the total area of contaminated groundwater.*

Figure #: 5 **Title: Groundwater Concentration Map**

☒ **Groundwater Flow Direction Map:** A map that represents groundwater movement at the site. If the flow direction varies by more then 20° over the history of the site, submit 2 groundwater flow maps showing the maximum variation in flow direction.

Figure #: **Title: Groundwater Contour (05-08-97)**

Figure #: **Title:**

TABLES (meeting the requirements of s. NR 716.15(2)(h)(3))

Tables must be no larger than 8.5 x 14 inches unless the table is submitted electronically. Tables must not contain shading and/or cross-hatching. The use of **BOLD** or *ITALICS* is acceptable.

☒ **Soil Analytical Table:** A table showing remaining soil contamination with analytical results and collection dates.
Note: This is one table of results for the contaminants of concern. Contaminants of concern are those that were found during the site investigation, that remain after remediation. It may be necessary to create a new table to meet this requirement.

Table #: 1,3, 2,1 **Title: Sum Soil Anal Res, SB Anal Res, TP Anal Res, Soil Anal Res (Det Anal), Soil Anal Res, Sum of S**

☒ **Groundwater Analytical Table:** Table(s) that show the most recent analytical results and collection dates, for all monitoring wells and any potable wells for which samples have been collected.

Table #: 2, 5 **Title: Test Pit Analytical Results, Groundwater Analytical Results**

☒ **Water Level Elevations:** Table(s) that show the previous four (at minimum) water level elevation measurements/dates from all monitoring wells. If present, free product is to be noted on the table.

Table #: 5 **Title: Field Groundwater Sampling Summary**

IMPROPERLY ABANDONED MONITORING WELLS

For each monitoring well not properly abandoned according to requirements of s. NR 141.25 include the following documents.
Note: *If the site is being listed on the GIS Registry for only an improperly abandoned monitoring well you will only need to submit the documents in this section for the GIS Registry Packet.*

☒ **Not Applicable**

☐ **Site Location Map:** A map showing all surveyed monitoring wells with specific identification of the monitoring wells which have not been properly abandoned.
Note: *If the applicable monitoring wells are distinctly identified on the Detailed Site Map this Site Location Map is not needed.*

Figure #: **Title:**

☐ **Well Construction Report:** Form 4440-113A for the applicable monitoring wells.

☐ **Deed:** The most recent deed as well as legal descriptions for each property where a monitoring well was not properly abandoned.

☐ **Notification Letter:** Copy of the notification letter to the affected property owner(s).

BRRTS #: 02-05-108061 ACTIVITY NAME: Fort James Operating Co

NOTIFICATIONS

Source Property

- ☐ **Letter To Current Source Property Owner:** If the source property is owned by someone other than the person who is applying for case closure, include a copy of the letter notifying the current owner of the source property that case closure has been requested.
- ☐ **Return Receipt/Signature Confirmation:** Written proof of date on which confirmation was received for notifying current source property owner.

Off-Source Property

Group the following information per individual property and label each group according to alphabetic listing on the "Impacted Off-Source Property" attachment.

- ☐ **Letter To "Off-Source" Property Owners:** Copies of all letters sent by the Responsible Party (RP) to owners of properties with groundwater exceeding an Enforcement Standard (ES), and to owners of properties that will be affected by a land use control under s. 292.12, Wis. Stats.
  Note: *Letters sent to off-source properties regarding residual contamination must contain standard provisions in Appendix A of ch. NR 726.*

  Number of "Off-Source" Letters:
- ☐ **Return Receipt/Signature Confirmation:** Written proof of date on which confirmation was received for notifying any off-source property owner.
- ☐ **Deed of "Off-Source" Property:** The most recent deed(s) as well as legal descriptions, for all affected deeded **off-source property(ies).** This does not apply to right-of-ways.
  Note: *If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.*
- ☐ **Letter To "Governmental Unit/Right-Of-Way" Owners:** Copies of all letters sent by the Responsible Party (RP) to a city, village, municipality, state agency or any other entity responsible for maintenance of a public street, highway, or railroad right-of-way, within or partially within the contaminated area, for contamination exceeding a groundwater Enforcement Standard (ES) and/or soil exceeding a Residual Contaminant Level (RCL) or a Site Specific Residual Contaminant Level (SSRCL).

  Number of "Governmental Unit/Right-Of-Way Owner" Letters:

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Matthew J. Frank, Secretary
Ronald W. Kazmierczak, Regional Director

Northeast Region Headquarters
2984 Shawano Ave., P.O. Box 10448
Green Bay, Wisconsin 54307-0448
Telephone 920-662-5100
FAX 920-662-5413
TTY Access via relay - 711

March 18, 2009

POST CLOSURE

Mr. Roger Kaminiski
Georgia-Pacific Corporation
P.O. Box 19130
Green Bay, WI 54307-9130

SUBJECT: Fort James Corporation – Former Shell Terminal
1505 State Street, Green Bay, Wisconsin
WDNR BRRTS # 02-05-108061

Dear Mr. Kaminski:

On March 6, 2009, the Wisconsin Department of Natural Resources (Department) received AECOM's report titled *Additional Information Requested Regarding UST Decommissioning and Soil Management.* This submittal satisfies the Department's request to document the 2008 development activities on the Fort James Corporation – Former Shell Terminal site.

GIS Registry

As you are aware, the Fort James Corporation – Former Shell Terminal site will be listed on the Remediation and Redevelopment Program's GIS Registry. The specific reasons are summarized below:

- Residual soil contamination exists that must be properly managed should it be excavated or removed.
- Groundwater contamination is present above Chapter NR 140 enforcement standards.

Information that was submitted with your most recent submittal will be included on the GIS Registry. To review the sites on the GIS Registry web page, visit the RR Sites Map page at http://dnr.wi.gov/org/aw/rr/gis/index.htm. If your property is listed on the GIS Registry because of remaining contamination and you intend to construct or reconstruct a well, you will need prior Department approval in accordance with s. NR 812.09(4)(w), Wis. Adm. Code. To obtain approval, Form 3300-254 needs to be completed and submitted to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line http://dnr.wi.gov/org/water/dwg/3300254.pdf or at the web address listed above for the GIS Registry.

On-going Closure Conditions

Please be aware that pursuant to s. 292.12 Wisconsin Statutes, compliance with the requirements of this letter is a responsibility to which the Georgia-Pacific Corporation and any subsequent property owners must adhere. If these requirements are not followed or if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, welfare, or the environment, the Department may take enforcement action under s. 292.11 Wisconsin

POST CLOSURE

Statutes to ensure compliance with the specified requirements, limitations or other conditions related to the property or this case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code. It is the Department's intent to conduct inspections in the future to ensure that the conditions included in this letter are met.

Remaining Residual Soil Contamination

Residual soil contamination remains at MW-2, TP-4, TP-5, TP-22, TP-26, TP-28A, TP-28B, B-2, B-7B, B-26, tp-2, tp-3, tp-8, USF-CS1, USF-CS2, S-1 and HA-1 as indicated in the information submitted to the Department of Natural Resources. If soil in the specific locations described above is excavated in the future, then pursuant to ch. NR 718 or, if applicable, ch. 289, Stats., and chs. 500 to 536, the property owner at the time of excavation must sample and analyze the excavated soil to determine if residual contamination remains. If sampling confirms that contamination is present the property owner at the time of excavation will need to determine whether the material would be considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable standards and rules. In addition, all current and future owners and occupants of the property 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.

Remaining Residual Groundwater Contamination

Groundwater impacted by petroleum-related contamination greater than enforcement standards set forth in ch. NR140, Wis. Adm. Code, are still believed to be present on the contaminated property. For more detailed information regarding the locations where groundwater samples have been collected (i.e., monitoring well locations) and the associated contaminant concentrations, refer to the Remediation and Redevelopment Program's GIS Registry at the RR Sites Map page at http://dnr.wi.gov/org/aw/rr/gis/index.htm.

Vapor Migration

In addition, depending on site-specific conditions, construction over contaminated materials may result in vapor migration into enclosed structures or migration along newly placed underground utility lines. The potential for vapor inhalation and mitigation should be evaluated when planning any future redevelopment, and measures should be taken to ensure the continued protection of public health, safety, welfare and the environment at the site.

The Department appreciates your efforts to continue to restore the environment at this site. If you have any questions, please feel free to contact me at 920-662-5443.

Sincerely,

Kristin DuFresne

Kristin DuFresne
Hydrogeologist
Bureau for Remediation & Redevelopment

ec: Paul Garvey, AECOM
Gary Kincaid, DNR – NERH
Jim Zellmer, DNR - NERH

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State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
Ronald W. Kazmierczak, Regional Director

Remediation and Redevelopment
1125 North Military Avenue
P.O. Box 10448
Green Bay, Wisconsin 54307-0448
Telephone 920-492-5916
FAX 920-492-5859
TTY 920-492-5812

March 28, 2000

Mr. Mark Reimer
Fort James Corporation
P.O. Box 89
Deefield, IL 60015-0089

SUBJECT: Fort James Corporation (Former Shell Terminal), 1505 State Street, Green Bay, Wisconsin
WDNR BRRTS # 02-05-108061

Dear Mr. Reimer:

On August 26, 1996, the Wisconsin Department of Natural Resources provided a notice to you that the degree and extent of the petroleum contamination at the above named site was required to be investigated and remediated. We have since been informed that the required investigation and remediation has been accomplished.

On August 24, 1999, the above named site was reviewed by the Remediation and Redevelopment's Northeast Region Closure Committee for a determination as to whether or not the case qualified for closeout under ch. NR 726, Wis. Adm. Code.

The Department has received a copy of the completed groundwater use restriction for the above referenced site and proof of filing this record with the Brown County Register of Deeds. Based on the investigative and remedial documentation provided to the Department, it appears that the petroleum contamination at the above named site has been remediated to the extent practicable under current site conditions. Therefore, conditional closure of this site has been granted and no further action is necessary at this time. In the future, this groundwater use restriction may be amended with approval from the Department if conditions change at the site and the residual contamination has been remediated. If you have any additional relevant information concerning this matter which was not formerly provided to the Department, you should submit this information to the Department for reevaluation.

The Department's records will reflect final "closure." If you have any questions regarding this determination, please contact me in Green Bay at (920) 492-5943.

Sincerely,

Kristin Nell
Hydrogeologist
Bureau for Remediation & Redevelopment

cc: Roger Miller, STS Consultants Ltd.
1035 Kepler Drive, Green Bay, WI 54311

1742551

Document Number

GROUNDWATER USE RESTRICTION

BROWN COUNTY
REGISTER OF DEEDS
CATHY WILLIQUETTE

2005 MAR -6 A 8:59

Declaration of Restrictions

In Re:

Beginning at the intersection of the south line of Private Claim 11 with the east line of State Street; thence running northerly along the east line of State Street; 660 ft.; thence in an easterly direction on a line parallel to the south line of Private Claim 11 to the Fox River; thence southerly along the west bank of the Fox River to the south line of Private Claim 11; thence westerly along the south line of Private Claim 11 to the point of beginning, together with all rights, including riparian rights, privileges and appurtenances, including riparian rights, thereto, and all building and land improvements thereon, but subject to all easements, rights of way, reservations, restrictions and encumbrances of record, and to all zoning laws and ordinances;

Recording Area

Name and Return Address
Mr. Mark S. Reimer
Fort James Corporation
1650 Lake Cook Road, 257
Deerfield, IL 60015

Parcel Identification Number (PIN)

STATE OF WISCONSIN)
) ss
COUNTY OF BROWN)

WHEREAS, on December 29, 1997, Fort Howard Corporation merged into Fort James Operating Company, a Virginia corporation;

WHEREAS, Fort James Operating Company, a Virginia corporation, is the owner of the above-described property.

WHEREAS, one or more petroleum discharges have occurred on this property. On December 31, 1997, Benzene contaminated groundwater above the ch. NR 140, Wis. Adm. Code, enforcement standard existed on this property at the former location of groundwater monitoring wells MW-2 and MW-4 at concentrations 3,200 parts per billion (ppb) and 94 ppb which are above the ch. NR 140, Wis. Adm. Code, enforcement standard of 5 ppb for Benzene. On December 31, 1997, Naphthalene contaminated groundwater above the ch. NR 140, Wis. Adm. Code, enforcement standard existed on this property at the former location of groundwater monitoring well MW-2 at a concentration of 190 ppb which is above the ch. NR 140, Wis. Adm. Code, enforcement standard of 40 ppb for Naphthalene. On December 31, 1997, Total Trimethylbenzene contaminated groundwater above the ch. NR 140, Wis. Adm. Code, enforcement standard

existed on this property at the former location of groundwater monitoring well MW-2 at a concentration of 1,260 ppb which is above the ch. NR 140, Wis. Adm. Code, enforcement standard of 480 ppb for Total Trimethylbezene. On December 2 and 3, 1996, Benzene contaminated groundwater above the ch. NR 140, Wis. Adm. Code, enforcement standard existed on this property at the former location of test pits TP-4, TP-8 and TP-27, at concentrations of 54 ppb, 14 ppb and 885 ppb, respectively, which is above the ch. NR 140, Wis. Adm. Code, enforcement standard of 5 ppb for Benzene. On December 3, 1996, Ethylbenzene contaminated groundwater above the ch. NR 140, Wis. Adm. Code, enforcement standard existed on this property at the former location of test pit TP-27 at a concentration of 1,800 ppb which is above the ch. NR 140, Wis. Adm. Code, enforcement standard of 700 ppb for Ethylbenzene. On December 3, 1996, Total Trimethylbenzene contaminated groundwater above the ch. NR 140, Wis. Adm. Code, enforcement standard existed on this property at the former location of test pit TP-27 at a concentration of 4,503 ppb which is above the ch. NR 140, Wis. Adm. Code, enforcement standard of 480 ppb for Total Trimethylbeznene. On December 3, 1996, Total Xylene contaminated groundwater above the ch. NR 140, Wis. Adm. Code, enforcement standard existed on this property at the former location of test pit TP-27 at a concentration of 4,170 ppb which is above the ch. NR 140, Wis. Adm. Code, enforcement standard of 620 ppb for Total Xylene. On December 2 and 3, 1996, Benzene contaminated soil above the ch. NR 720, Wis. Adm. Code, soil standard existed on this property at the former location of test pits TP-22, TP-26 and TP-28, at concentrations of 206 ppb, 42 ppb, and 39 ppb, respectively, which is above the ch. NR 720, Wis. Adm. Code, soil standard of 5.5 ppb for Benzene. In the Site Investigation Report dated October 6, 1997 and the Closure Report submitted by Fort James Operating Company to the Department of Natural Resources, Fort James Operating Company calculated a site specific residual contaminant level for Benzene of 240 ppb for the groundwater pathway. On December 2 and 3, 1996, Lead contaminated soil above the ch. NR 720, Wis. Adm. Code, non-industrial soil standard existed on this property at the former location of test pits TP-4, TP-5, TP-26, TP-28 and TP-28B, at concentrations of 90 parts per million (ppm), 62 ppm, 65 ppm, 51 ppm and 51 ppm, respectively, which is above the ch. NR 720, Wis. Adm. Code, non-industrial soil standard of 50 ppm for Lead. The locations of the monitoring wells and test pits are provided on Figure 1 attached and made part of this restriction.

WHEREAS, it is the desire and intention of the property owner to impose on the property restrictions which will make it unnecessary to conduct further groundwater or soil remediation activities on the property at the present time.

WHEREAS, natural attenuation has been approved by the Department of Natural Resources to remediate groundwater contamination exceeding ch. NR 140, Wis. Adm. Code, groundwater standards within the boundaries of this property.

WHEREAS, construction of wells where the water quality does not comply with drinking water standards in ch. NR 809, Wis. Adm. Code, is restricted by chs. NR 811and NR 812, Wis. Adm. Code. Special well construction standards or water treatment requirements, or both, or well construction prohibitions may apply.

NOW THEREFORE, the owner hereby declares that all of the property described above is held and shall be held, conveyed or encumbered, leased, rented, used, occupied and improved subject to the following limitation and restrictions:

> Anyone who proposes to construct or reconstruct a well on this property is required to contact the Department of Natural Resources' Bureau of Drinking Water and Groundwater, or it successor agency, to determine what specific requirements are applicable, prior to constructing or reconstructing a well on this property. No well may be constructed on this property unless applicable requirements are met.
>
> If construction is proposed on this property that will require dewatering, or if groundwater is to be otherwise extracted from this property, while this groundwater use restriction is in effect, the groundwater shall be sampled and analyzed for contaminants that were previously detected on the property and any extracted groundwater shall be managed in compliance with applicable statutes and rules.

This restriction is hereby declared to be a covenant running with the land and shall be fully binding upon all persons acquiring the above-described property whether by descent, devise, purchase or otherwise. This restriction benefits and is enforceable by the Wisconsin Department of Natural Resources, its successors or assigns. The Department, its successors or assigns, may initiate proceedings at law or in equity against any person or persons who violate or are proposing to violate this covenant, to prevent the proposed violation or to recover damages for such violation.

Any person who is or becomes owner of the property described above may request that the Wisconsin Department of Natural Resources or its successor issue a determination that one or more of the restrictions set forth in this covenant is no longer required. Upon the receipt of such a request, the Wisconsin Department of Natural Resources shall determine whether or not the restrictions contained herein can be extinguished. If the Department determines that the restrictions can be extinguished, an affidavit, attached to a copy of the Department's written determination, may be recorded to give notice that this deed restriction, or portions of this deed restriction, are no longer binding.

By signing this document, MARK S. REIMER asserts that he/she is duly authorized to sign this document on behalf of Fort James Operating Company, a Virginia Corporation.

IN WITNESS WHEREOF, the owner of the property has executed this Declaration of Restrictions, this 1st day of March, 2000.

Signature: Mark S. Reimer
Printed Name: MARK S. REIMER
Title: SENIOR COUNSEL

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
Ronald W. Kazmierczak, Regional Director

Remediation and Redevelopment
1125 North Military Avenue
P.O. Box 10448
Green Bay, Wisconsin 54307-0448
Telephone 920-492-5916
FAX 920-492-5859
TDD 920-492-5812

September 8, 1999

Mr. Mark Reimer
Fort James Corporation
1919 South Broadway
P.O. Box 19130
Green Bay, WI 54304

SUBJECT: Soil Deed and Groundwater Use Restriction for Fort James Corporation (Former Shell Oil Terminal), 1505 State Street, Green Bay, Wisconsin
WDNR ERP Case # 02-05-108061

Dear Mr. Reimer:

On August 24, 1999, the Northeast Region Closeout Committee met to discuss various sites. The committee has agreed to close this site pending a soil deed and groundwater use restriction. This soil deed and groundwater use restriction will state that inaccessible soil and groundwater contamination may remain at this site and that additional remedial action is not feasible at this time. The document would be placed in the file with the deed running with the property.

Only when the soil deed and groundwater use restriction has been finalized and filed with Brown County can this site be closed. To expedite the completion of the soil deed and groundwater use restriction and closure process, the Department requests that you submit the following:

- a complete (unabbreviated) legal description of the property
- a copy of the deed
- available maps, such as a survey map, showing the property boundaries, building outlines, areas of remaining contamination, monitoring well/piezometer locations

These documents are to be obtained from the Brown County Register of Deeds. Once these items have been submitted, the Department will send you a draft copy of the soil deed and groundwater use restriction containing language regarding the remaining petroleum contamination. If it is acceptable, please sign it and return a signed copy with proof of filing for our records. At that time, the site may be closed.

This soil deed and groundwater use restriction is an option that the Department can offer in order to close this site. If you choose not to accept this option, you may perform additional investigation and cleanup of the remaining contamination. Within **14 days** please submit a letter to the Department documenting your intentions.

If you have any additional relevant information that was not formerly provided to the Department, you should submit this information to the Department for reevaluation.

If you have any questions, please contact me in Green Bay at (920) 492-5943.

Sincerely,

Kristin Nell
Hyrogeologist
Remediation & Redevelopment Program

cc: Roger Miller, STS Consultants Ltd.
1035 Kepler Drive, Green Bay, WI 54311

LEGAL DESCRIPTION

That part of Private Claims 10 and 11, West side of Fox River, in the City of Green Bay, Brown County, Wisconsin, described as follows: Beginning at the intersection of the South line of Private Claim 11 with the East line of State Street; thence running Northerly along the East line of State Street, 660 feet; thence in an Easterly direction on a line parallel to the South line of Private Claim 11 to the Fox River; thence Southerly along the West bank of the Fox River, to the South line of Private Claim 11; thence Westerly along the South line of Private Claim 11 to the point of beginning.

970848 ✓

J 5158 I 43

WARRANTY DEED

THIS INDENTURE, made by Shell Oil Company, with offices at Two Shell Plaza, Houston, Texas 77001, a corporation duly organized and existing under and by virtue of the laws of the State of Delaware, grantor, hereby conveys and warrants to Fort Howard Paper Company, a Delaware corporation, with offices at P. O. Box 130, 1919 South Broadway, Green Bay, grantee, of Brown County, Wisconsin, for the sum of One Dollar and other good and valuable consideration receipt of which is hereby acknowledged, the following tract of land in Brown County, State of Wisconsin; to-wit:

That part of Private Claims 10 & 11, West side of Fox River, City of Green Bay, Brown County, Wisconsin, described as follows:

Beginning at the intersection of the south line of Private Claim 11 with the east line of State Street; thence running northerly along the east line of State Street, 660 ft.; thence in an easterly direction on a line parallel to the south line of Private Claim 11 to the Fox River; thence southerly along the west bank of the Fox River to the south line of Private Claim 11; thence westerly along the south line of Private Claim 11 to the point of beginning, together with all rights, including riparian rights, privileges and appurtenances, including riparian rights, thereto, and all building and land improvements thereon, but subject to all easements, rights of way, reservations, restrictions and encumbrances of record, and to all zoning laws and ordinances; J.W.S.

TRANSFER
$ 5400.00
FEE

IN WITNESS WHEREOF, the said grantor has caused these presents to be signed by T. L. Clements, its Manager Real Estate Services, and countersigned by KIM JENSEN CLIFFORD, its Assistant Secretary, at Houston, Texas, and its corporate seal to be hereunto affixed, this 15th day of December, A.D., 1981.

SIGNED AND SEALED IN PRESENCE OF

William H. Matteson
WILLIAM H. MATTESON

R. C. WINTERHOFF

SHELL OIL COMPANY

By T. L. Clements
T. L. Clements
Manager Real Estate Services
Corporate Real Estate

J.W.S.

Attest Kim Jensen Clifford
KIM JENSEN CLIFFORD Assistant Secretary

970848 J 5158 I 44

STATE OF TEXAS)
) SS:
COUNTY OF HARRIS)

Personally came before me, this 15th day of December, A.D., 1981, T. L. Clements, Manager Real Estate Services, and KIM JENSEN CLIFFORD, Assistant Secretary of the above named corporation, to me known to be the persons who executed the foregoing instrument, and to me known to be such Manager Real Estate Services and Assistant Secretary of said corporation, and acknowledged that they executed the foregoing instrument as such officers as the deed of said corporation, by its authority.

Notary Public

Notary Public in and for the State of Texas
My Commission Expires November 30, 1984

This instrument drafted by
Gary F. Centrich
Attorney
P. O. Box 130
Green Bay, Wisconsin 54305

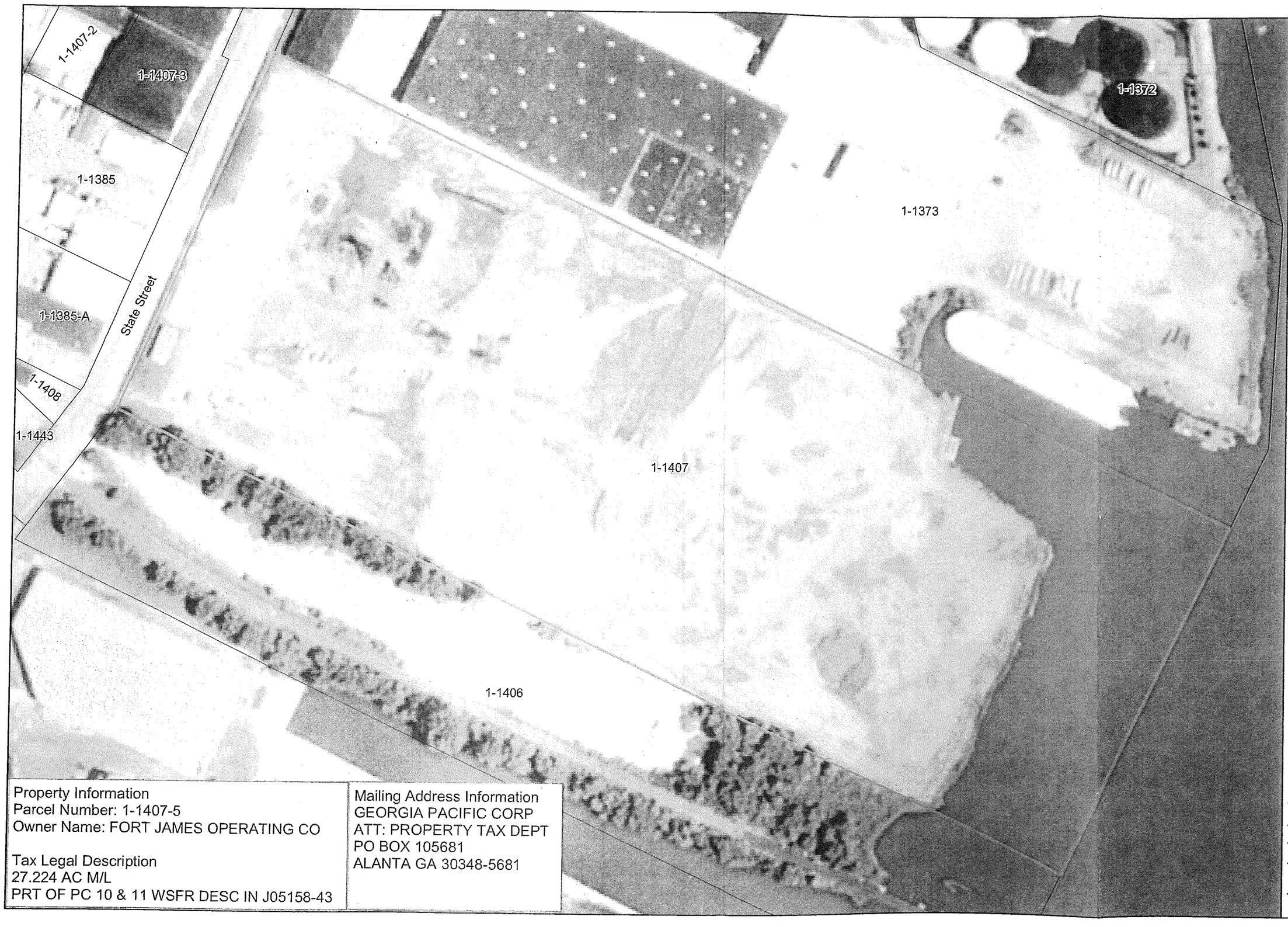
REGISTER OF DEEDS
BROWN COUNTY

DEC 21 1981

AT 11:58 O'CLOCK A M.

REGISTER OF DEEDS

3.00



Property Information
Parcel Number: 1-1407-5
Owner Name: FORT JAMES OPERATING CO

Tax Legal Description
27.224 AC M/L
PRT OF PC 10 & 11 WSFR DESC IN J05158-43

Mailing Address Information
GEORGIA PACIFIC CORP
ATT: PROPERTY TAX DEPT
PO BOX 105681
ALANTA GA 30348-5681

AECOM
AECOM
1035 Kepler Drive
Green Bay, WI 54311
920.468.1978
www.aecom.com
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Parcel Legal Information
Fox River Processing Plant
1611 State Street
Green Bay, Wisconsin

POST CLOSURE

Legend

Property Tax Parcel

This information is for reference only.
Data sources:
Brown County Planning Department and
NAIP 2008 Aerial Photo.

N

0 37.5 75 150
Feet

Drawn:	ATV	02/05/09
Approved:	ATV	02/05/09
Scale:	AS SHOWN	
PROJECT NUMBER	60095226 - 200801978	
FIGURE NUMBER	6	

Received 02-04-09

Georgia-Pacific

POST CLOSURE

Georgia-Pacific Corporation
Consumer Products Division

1919 South Broadway
P.O. Box 19130
Green Bay, WI 54307-9130
(920) 435-8821
(920) 438-2364 fax
www.gp.com

February 2, 2009

Kristin Dufresne
Wisconsin Department of Natural Resources
P. O. Box 10448
Green Bay, WI 54307-0448

Dear Kristin:

Thank you for taking time to meet with us on January 30 to discuss the situation with respect to our State Street property (more commonly referred to as the Shell Oil property). During that meeting, we provided you with a copy of the Warranty Deed to the property dated December 15, 1981. Please be advised that the property description contained in the deed remains accurate.

Please do not hesitate contacting us if you have further questions. We greatly appreciate your assistance.

Sincerely,

GEORGIA-PACIFIC, LLC

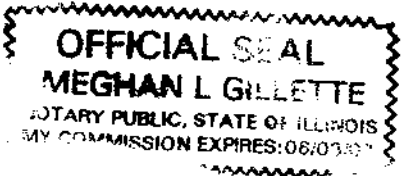
Albert H. Toma, III
Regional Manager
Governmental Affairs

cc: Ken Graves
Jackie Powell
Roger Kaminski
Dave Devroy
Gary Kincaid – WDNR

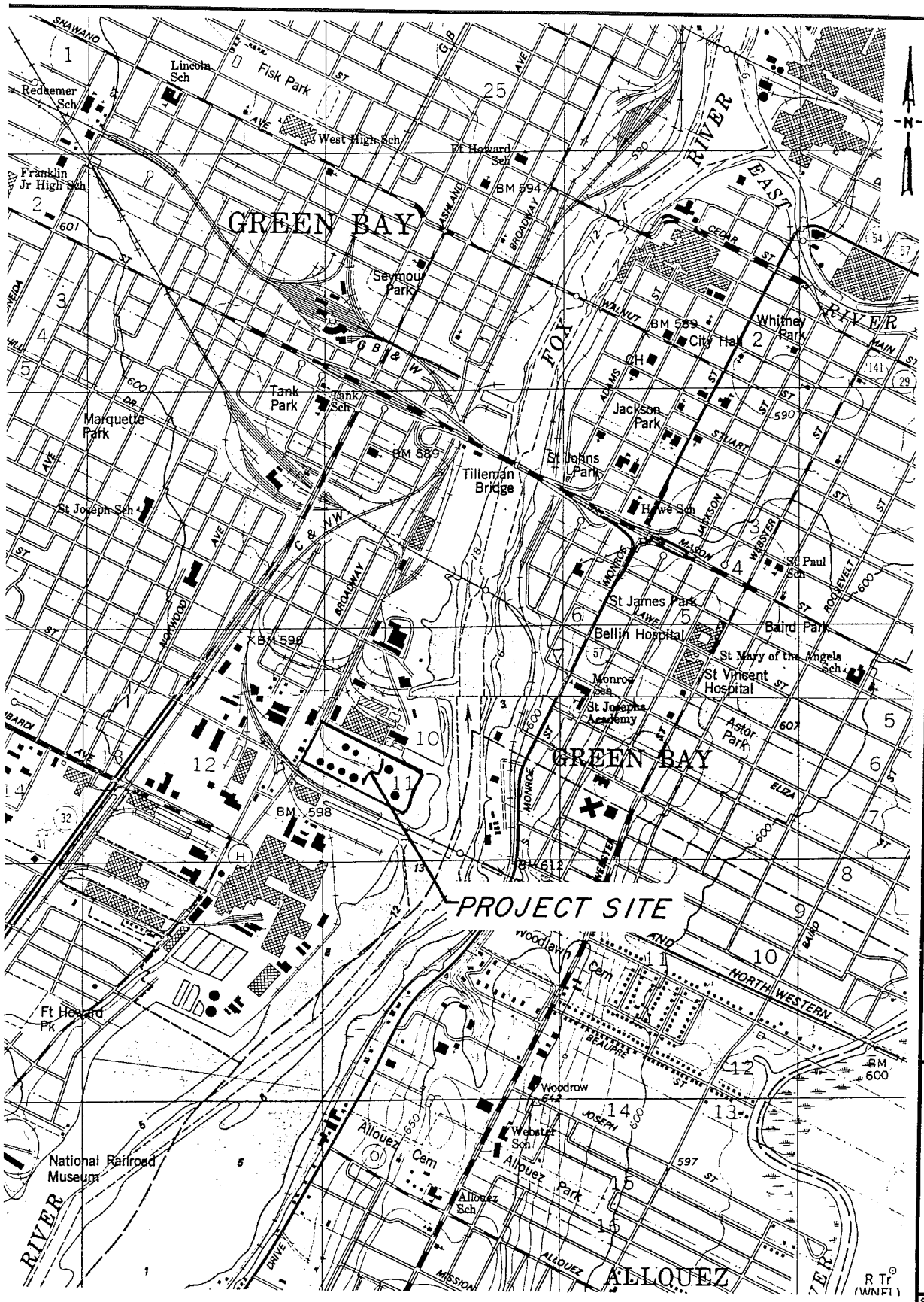
mls

Subscribed and sworn to before me
This 1 day of March, 2000.

Meghan L. Gillette
Notary Public, State of Illinois
My commission expires 6-3-00



This document was drafted by Fort James Corporation with assistance from the Department of Natural Resources.



MAP SOURCE: MODIFIED FROM DE PERE & GREEN BAY WEST, WIS. U.S.G.S. QUADRANGLES BOTH DATED 1982.

DRAWN BY	P.D.P.	DATE 8-26-96
CHECKED BY	R.A.M.	DATE 8-26-96
APPROVED BY	PRB	DATE 10-3-96
CADFILE		

FORT HOWARD CORPORATION
FORMER SHELL BULK TERMINAL
GREEN BAY, WISCONSIN

SITE LOCATION DIAGRAM

STS Consultants Ltd.
Consulting Engineers

STS PROJECT NO.	22176WA
STS PROJECT FILE	
SCALE	1"=2000'
	Fig. No. 1

POST CLOSURE

BENCHMARK
BM-1 INTERSECTION OF LIBERTY STREET AND STATE STREET NGS DISK ON THE TOP OF A COPPER COATED STEEL ROD AT GROUND LEVEL ELEVATION = 598.21 (NAVD 88)

EXISTING SITE INFORMATION DATA
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EXISTING WOODED AREA = 320,985 SQ. FT. (7.369 ACRES)
EXISTING GREENSPACE = 459,203 SQ. FT. (11.231 ACRES)

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PROPOSED ROOF AREA = 247,209 SQ. FT. (5.675 ACRES)
PROPOSED GREENSPACE = 502,543 SQ. FT.(11.537 ACRES)
PROPOSED POND AREA = 14,005 SQ. FT. (0.324 ACRES)
TOTAL AREA OF DISTURBANCE = 762,300 SQ. FT. (17.5 ACRES)

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE

50 0 50 100
1" = 50'

"THE INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO."

LEGEND

- SUBJECT APPROXIMATE PROPERTY LINE
- SECTION LINE
- LOT LINE
- ROAD RIGHT-OF-WAY LINE
- ROAD RIGHT-OF-WAY CENTERLINE
- EASEMENT LINE
- EDGE OF WATER
- 2' CONTOUR
- 10' CONTOUR
- FENCE LINE
- TREE LINE
- SANITARY SEWER LINE
- STORM SEWER LINE
- UNDERGROUND PHONE LINE
- WATER LINE
- UNDERGROUND GAS LINE
- UNDERGROUND ELECTRIC LINE
- OVERHEAD ELECTRIC LINE
- WETLAND BOUNDARY
- ASPHALT
- CONCRETE
- GRAVEL

- SPOT ELEVATION
- SANITARY MANHOLE
- STORM MANHOLE
- ROUND CATCH BASIN
- CURB INLET
- UNKNOWN MANHOLE
- FIRE HYDRANT
- WATER VALVE UNDERGROUND
- LIGHT POLE
- POWER POLE
- POWER & LIGHT POLE
- GUY WIRE
- ELECTRIC MANHOLE
- TRAFFIC SIGNAL
- ELECTRIC BOX / PEDESTAL
- TRAFFIC SIGNAL BOX
- TELEPHONE PEDESTAL
- GAS METER
- SIGN
- BOLLARD
- WHEEL STOP
- FOUND IRON PIPE
- SET IRON PIPE
- TREE & APPROXIMATE SIZE
- BUSH / SHRUB

PROPOSED
- 601 — 1' CONTOUR
- 600 — 5' CONTOUR
- NON-CHANNEL EROSION MAT (SEE DETAIL A, SHEET C5.0)
- CHANNEL EROSION MAT (SEE DETAIL B, SHEET C5.0)
- EROSION BALES (DITCH CHECK) (SEE DETAIL H, SHEET C5.0)
- ASPHALT
- GRAVEL
- BUILDING
- EROSION TRACK PAD (SEE DETAIL C, SHEET C 5.0)
- INLET PROTECTION
- SF — SILT FENCE (SEE DETAIL F, SHEET C5.0)
- MW-3 — MONITORING WELL (1997)
- TP-9 — TEST PIT (1996)
- S-1 — SOIL SAMPLE LOCATION (2008) (EAST WALL OF EXCAVATION)
- B-38 — SOIL BORING LOCATION (2008)
- HA-1 — HAND AUGER (2008)

- tp-1 — SOIL SAMPLE LOCATION (8/12/2008)
- TOPSOIL AND OVERBURDEN STRIPPED AND REUSED ON SITE
- PLACEMENT AREA FOR STRIPPED TOPSOIL AND OVERBURDEN
- 5,000 C.Y. TOPSOIL STRIPPED AND USED AT C-P PROPERTY SOUTH OF SITE
- EXCAVATION AREA SPOILS WERE STOCKPILED AND HAULED TO VEOLIA'S FACILITY IN HILBERT, WISCONSIN

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Green Bay, Wisconsin
920.468.1978
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SOIL MANAGEMENT DIAGRAM
FOX RIVER SEDIMENT PROCESSING PLANT
1611 STATE STREET
GREEN BAY, WISCONSIN

Issued		
Rev	Date	Description
3	8/4/2009	State Review
2	6/18/2008	Issued for Construction
1	5/27/2008	Revised per City Comments

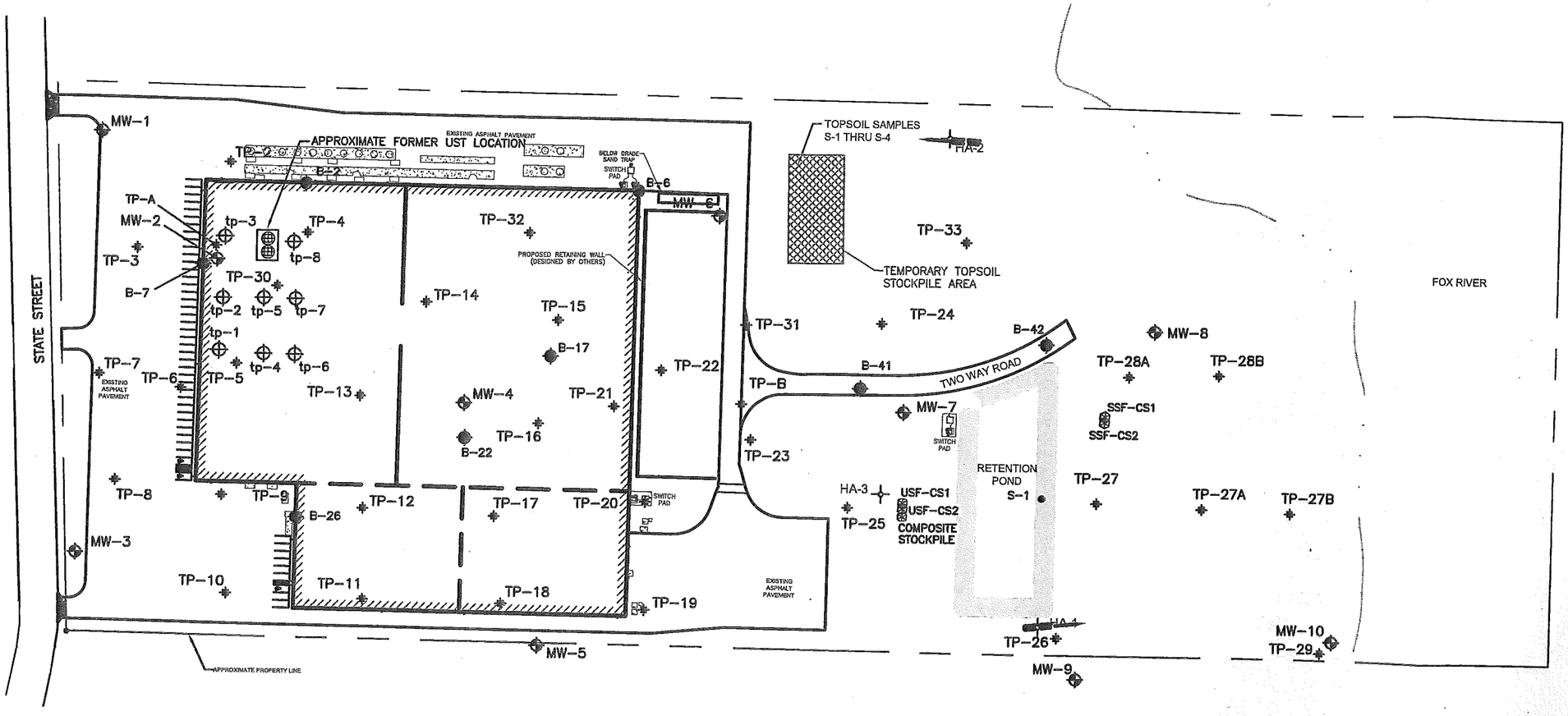
Designed:
Drawn: RLD 2/12/2009
Checked: MJC 2/12/2009
Approved:

PROJECT NUMBER
200801978

SHEET REFERENCE NUMBER
Figure 1

\\Usaashfp05\T\Zcad\Projects\200801978\Work\Paul Conroy Exhibits\200801978_Insects_REVS_1-05-09.dwg, 2/12/2009 10:35:14 AM, DUQUET, RYAN, STS.stb

POST CLOSURE



LEGEND

MW-9	MONITORING WELL (1997)	HA-1	HAND AUGER (2008)
TP-26	TEST PIT (1997)	tp-1	SOIL SAMPLE LOCATION (8/2008)
S-1	SOIL SAMPLE LOCATION (2008) (EAST WALL OF EXCAVATION)		COMPOSITE STOCKPILE SAMPLE LOCATION (2008)
B-1	SOIL BORING LOCATION (2008)		UST SLUDGE/WATER SAMPLES

NOTE:
PROCESSING PLANT FACILITY AND ASSOCIATED STRUCTURES AND CONSTRUCTION LAYOUT OBTAINED FROM DRAWINGS PREPARED BY OTHERS.

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UST LOCATION DIAGRAM
FOX RIVER SEDIMENT PROCESSING PLANT
1611 STATE STREET
GREEN BAY, WISCONSIN

Drawn :	RLD	2/12/2009
Checked:	MJC	2/12/2009
Approved:		
PROJECT NUMBER	200801978	
FIGURE NUMBER	Figure 2	

POST CLOSURE

SOIL CONCENTRATION MAP

FOX RIVER SEDIMENT PROCESSING PLANT
1611 STATE STREET
GREEN BAY, WISCONSIN

STS | AECOM

1035 Kepler Drive
Green Bay, Wisconsin
920.468.1978
www.sts.aecom.com

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S64°09'22"E 1819.15 NORTH LINE

N64°09'22"W 1788.80 SOUTH LINE

S25°38'W 659.19 ESTABLISHED BULKHEAD LINE BY U.S. GOVERNMENT EAST LINE

N22°50'54"E 660.00 WEST LINE

STATE STREET

APPROXIMATE UNDERGROUND PETROLEUM LINE

CONCRETE DISPOSAL AREA

CNAR

BENCHMARK
BM-1 INTERSECTION OF LIBERTY STREET AND STATE STREET NGS DISK ON THE TOP OF A COPPER COATED STEEL ROD AT GROUND LEVEL ELEVATION = 598.21 (NAVD 88)

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EXISTING WOODED AREA = 320,985 SQ. FT. (7.369 ACRES)
EXISTING GREENSPACE = 489,203 SQ. FT. (11.231 ACRES)

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE

WIS STATUTE 182.0175(1974)
REQUIRES NOT LESS 3 WORK DAYS
NOTICE BEFORE YOU EXCAVATE

"THE INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO."

50 0 50 100
1" = 50'

NOTES:

IN AUGUST AND SEPTEMBER 2008, 14,549.61 TONS OF PETROLEUM AND/OR LEAD-IMPACTED SOIL WERE EXCAVATED AND REMOVED FOR DISPOSAL FROM THE BUILDING AND DETENTION POND AREAS. ACCORDINGLY, THE SOIL CONCENTRATIONS DEPICTED ON THIS FIGURE ARE LIKELY LOWER IN THESE AREAS.

HIGHER DRO/GRO CONCENTRATION IS SHOWN.

RCL EXCEEDANCES FOR LEAD ARE BELOW NON-INDUSTRIAL STANDARDS.

LEGEND

- SUBJECT APPROXIMATE PROPERTY LINE
- SECTION LINE
- LOT LINE
- ROAD RIGHT-OF-WAY LINE
- ROAD RIGHT-OF-WAY CENTERLINE
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- 10' CONTOUR
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- WATER LINE
- UNDERGROUND GAS LINE
- UNDERGROUND ELECTRIC LINE
- OVERHEAD ELECTRIC LINE
- WETLAND BOUNDARY
- ASPHALT
- CONCRETE
- GRAVEL

- SPOT ELEVATION
- SANITARY MANHOLE
- STORM MANHOLE
- ROUND CATCH BASIN
- CURB INLET
- UNKNOWN MANHOLE
- FIRE HYDRANT
- WATER VALVE UNDERGROUND
- LIGHT POLE
- POWER POLE
- POWER & LIGHT POLE
- GUY WIRE
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- TRAFFIC SIGNAL BOX
- TELEPHONE PEDESTAL
- GAS METER
- SIGN
- BOLLARD
- WHEEL STOP
- FOUND IRON PIPE
- SET IRON PIPE
- TREE & APPROXIMATE SIZE
- BUSH / SHRUB

- BUILDING
- MW-3 MONITORING WELL (1997)
- TP-9 TEST PIT (1996)
- S-1 SOIL SAMPLE LOCATION (2008) (EAST WALL OF EXCAVATION)
- B-38 SOIL BORING LOCATION (2008)
- HA-1 HAND AUGER (2008)
- (3) DRO CONCENTRATION (mg/kg)
- (21) GRO CONCENTRATION (mg/kg)
- (10) TOTAL BENZENE CONCENTRATION (mg/kg)
- (10) TOTAL LEAD CONCENTRATION (mg/kg)
- tp-1 SOIL SAMPLE LOCATION (8/12/2008)
- EXCAVATION AREA SPOILS WERE STOCKPILED AND HAULED TO VEOLIA'S FACILITY IN HILBERT, WISCONSIN
- ESTIMATED SOIL WITH PETROLEUM AND/OR LEAD CONCENTRATIONS ABOVE NON INDUSTRIAL GENERIC RESIDUAL CONTAMINANT LEVELS AS ESTABLISHED BY WISCONSIN ADMINISTRATIVE CODE CHAPTER NR 720

Issued

Rev	Date	Description
3	8/4/2008	State Review
2	6/18/2008	Issued for Construction
1	5/21/2008	Revised per City Comments

Designed:
Drawn: RLD 2/12/2009
Checked: MJC 2/12/2009
Approved:

PROJECT NUMBER
200801978

SHEET REFERENCE NUMBER

Figure 4

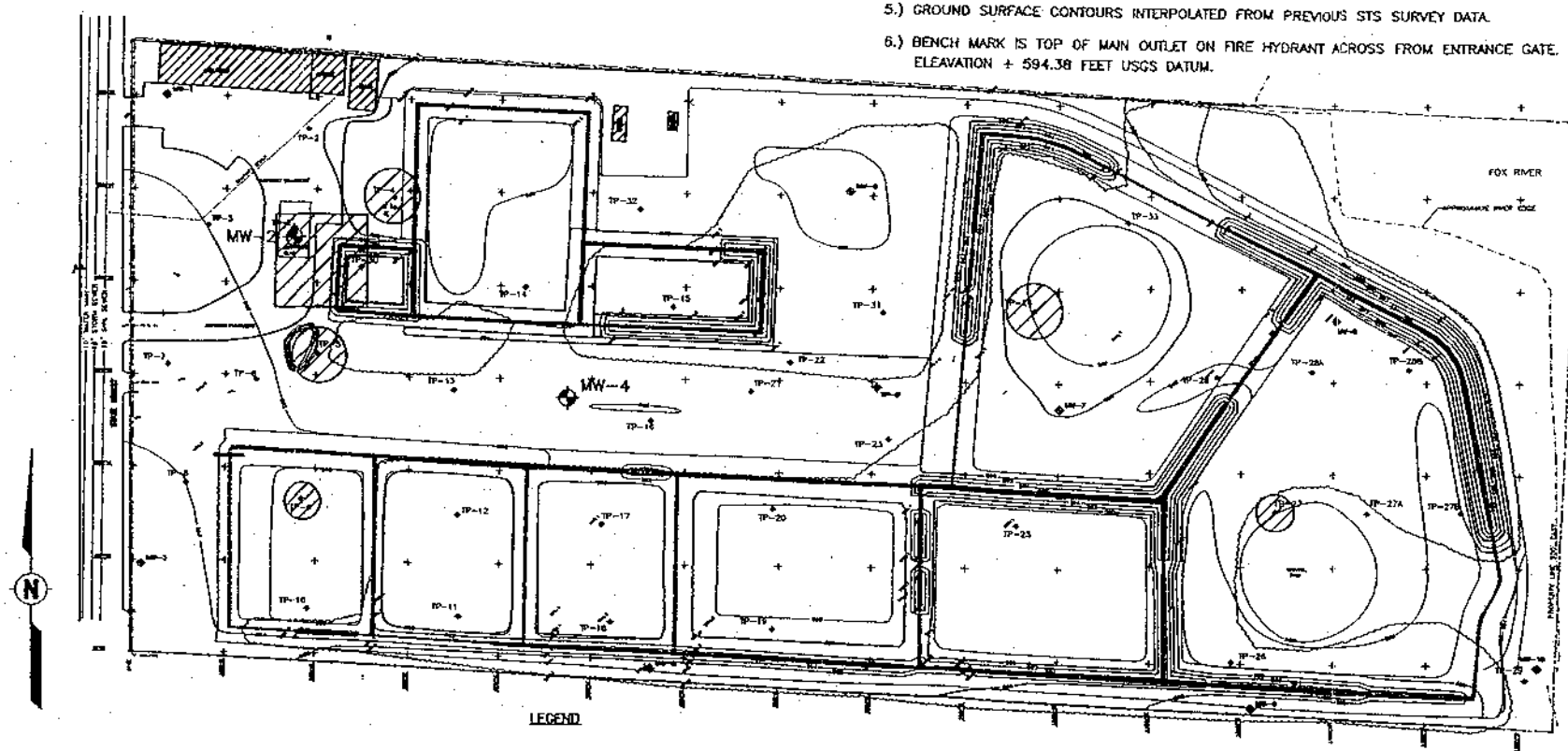
\\Wasen1fp001\12corp\Projects\200801978\Civil\Plot Survey Exhibit\G200801978_Projects_R10_1-05-08.dwg, 2/25/2009 4:20:44 PM, DUCKERT, RYAN, STS.stb

1742551

Petroleum contaminated groundwater remains on this property at the former location of groundwater monitoring well MW-4 and test pits TP-4, TP-8 and TP-27. Petroleum and/or lead contaminated soil remains on this property at the former location of test pits TP-4, TP-5, TP-22, TP-26, TP-28 and TP-28B.

NOTES:

1.) SURVEYED BY STS PERSONNEL ON 8-16-96 AND 7-17-89.
2.) MAP MODIFIED FROM 9/19/81 SITE SURVEY BY ROBERT D. HALL AND HISTORICAL AERIAL PHOTOGRAPHS.
3.) SHELL DISCONTINUED TERMINAL OPERATIONS IN 1981 AND SOLD PROPERTY TO FORT HOWARD CORP.
4.) TERMINAL WAS DISMANTLED IN 1988-1989.
5.) GROUND SURFACE CONTOURS INTERPOLATED FROM PREVIOUS STS SURVEY DATA.
6.) BENCH MARK IS TOP OF MAIN OUTLET ON FIRE HYDRANT ACROSS FROM ENTRANCE GATE. ELEAVATION ± 594.38 FEET USGS DATUM.



LEGEND

- FENCE LINE
- APPROXIMATE PROPERTY LINE
- MONITORING WELL LOCATION
- SPOT ELEVATION
- GROUNDSURFACE CONTOUR
- TOP OF EXISTING BERM
- APPROXIMATE BRUSH LINE
- TEST PIT
- APPROXIMATE AREA CONTAINIG CONCENTRATIONS OF RESIDUAL PETROLEUM HYDROCARBONS ABOVE NR720 GENERIC RESIDUAL CONTAMINANT LEVELS.
- MW-4 GROUNDWATER MONITORING WELL CONTAINING CONCENTRATIONS OF RESIDUAL DISSOLVED PETROLEUM HYDROCARBONS ABOVE NR140 ENFORCEMENT STANDARDS.

140 0 140
SCALE FEET
1"= 140'

DRAWN BY	D.T.B.	DATE 9-29-99
CHECKED BY	R.A.M.	DATE 9-29-99
APPROVED BY	R.A.M.	DATE 9-29-99
CADFILE		

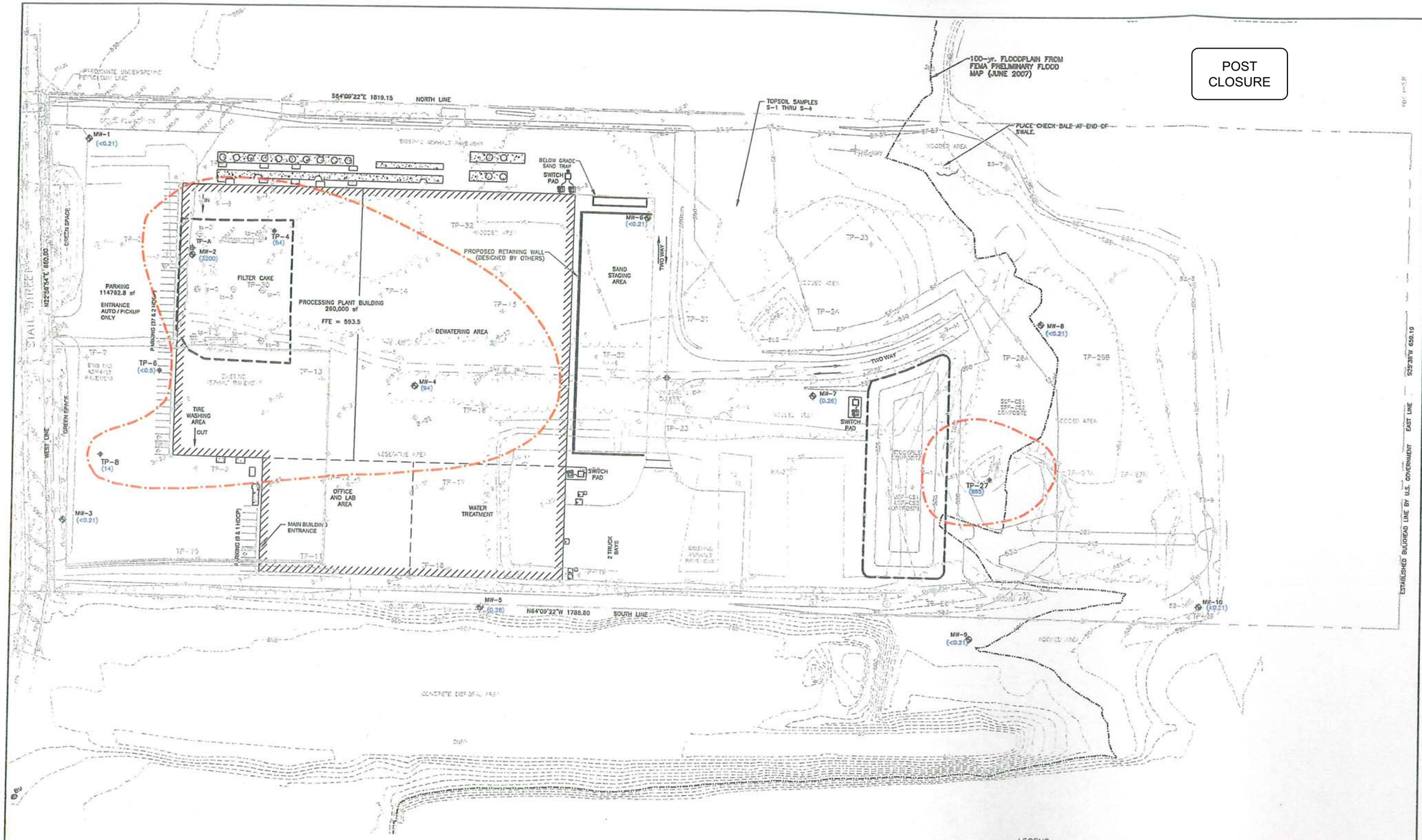
FORMER SHELL OIL TERMINAL
FORT JAMES OPERATING COMPANY
1505 STATE STREET
GREEN BAY, WISCONSIN

APPROXIMATE LOCATIONS OF RESIDUAL IMPACTS

STS Consultants Ltd.
Consulting Engineers

STS PROJECT NO. 22176WA
STS PROJECT FILE 22176
SCALE 1"=140'±
FIGURE NO.

POST CLOSURE



BENCHMARK
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50 0 50 100
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- SANITARY MANHOLE
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- TELEPHONE PEDESTAL
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- BOLLARD
- WHEEL STOP
- FOUND IRON PIPE
- SET IRON PIPE
- TREE & APPROXIMATE SIZE
- BUSH / SHRUB

- BUILDING
- MW-3 MONITORING WELL (1997)
- TP-9 TEST PIT (1996)
- S-1 SOIL SAMPLE LOCATION (2008) (EAST WALL OF EXCAVATION)
- B-30 SOIL BORING LOCATION (2008)
- HA-1 HAND AUGER (2008)
- SS-1 SOIL SAMPLE LOCATION (8/12/2008)
- EXCAVATION SPOILS STOCKPILED AND HAULED TO VEOLIA'S FACILITY IN HILBERT, WISCONSIN
- (1900) ESTIMATED GROUNDWATER BENZENE CONCENTRATION IN EXCEEDANCE OF WISCONSIN ADMINISTRATIVE CODE CHAPTER NR 140 ENFORCEMENT STANDARD OF 5.0 micrograms per liter.

GROUNDWATER BENZENE CONCENTRATIONS IN MICROGRAMS PER LITER.

STS | AECOM

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Green Bay, Wisconsin
920.469.1978
www.sts.aecom.com

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GROUNDWATER CONCENTRATION MAP

FOX RIVER SEDIMENT PROCESSING PLANT
1611 STATE STREET
GREEN BAY, WISCONSIN

Issued

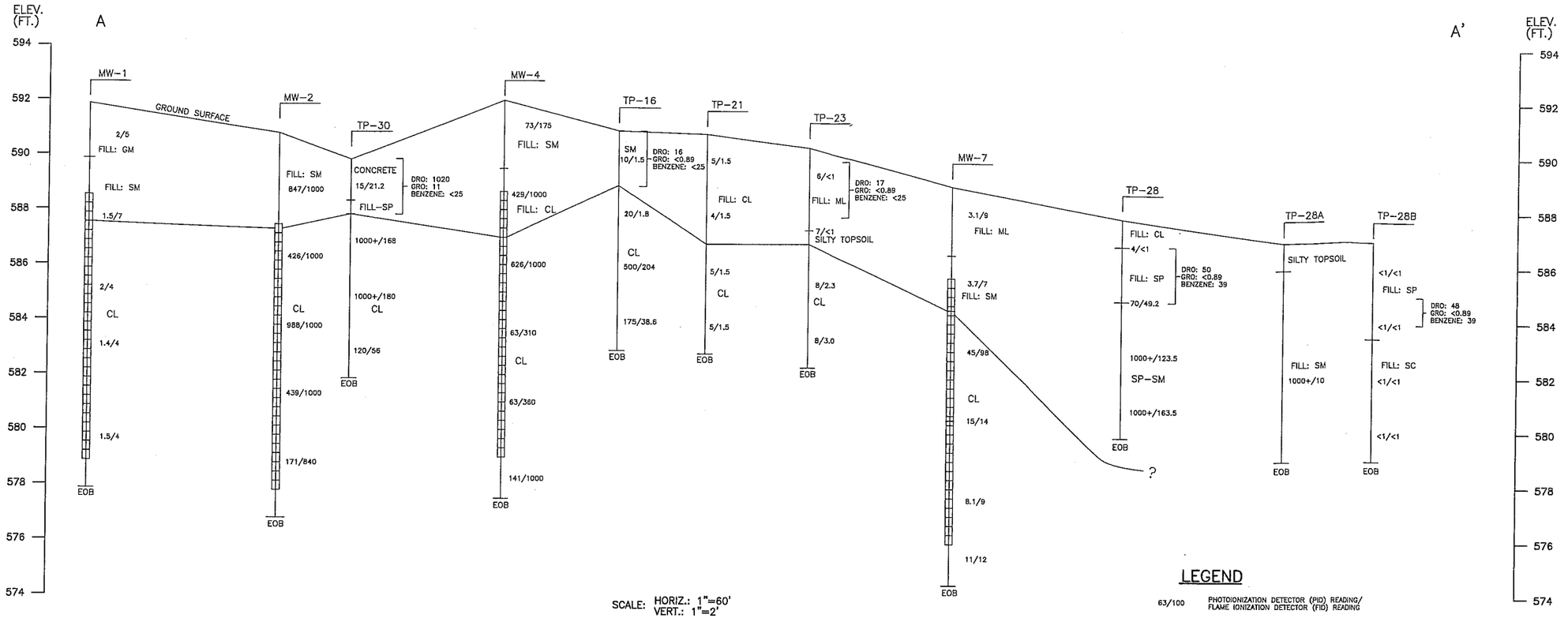
Rev	Date	Description
3	8/4/2008	State Review
2	8/18/2008	Issued for Construction
1	5/21/2008	Revised per City Comments

Designed:
Drawn: RLD 2/12/2009
Checked: MJC 2/12/2009
Approved:

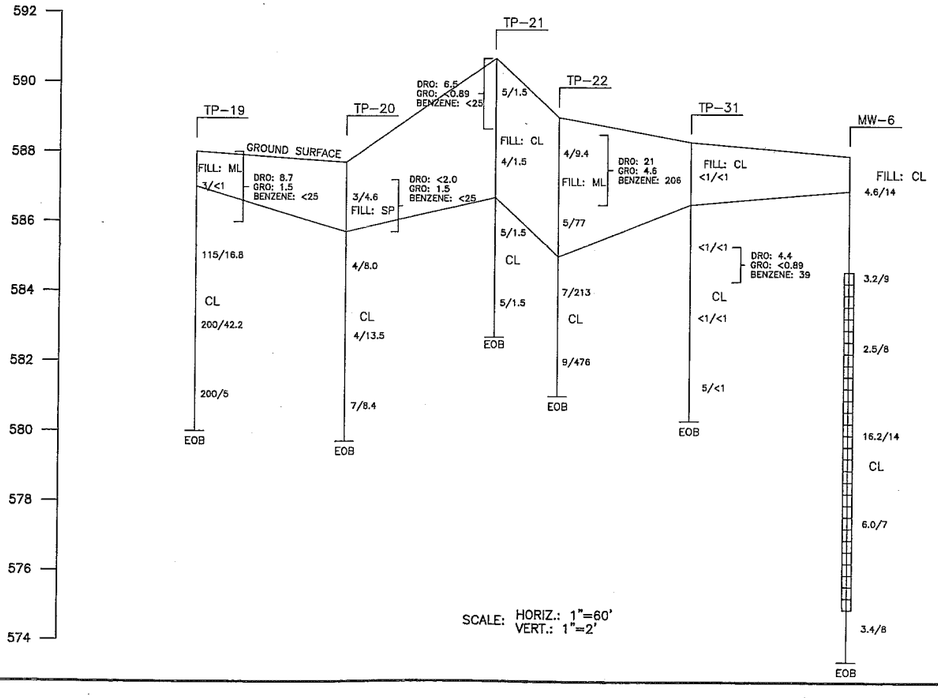
PROJECT NUMBER
200801978

SHEET REFERENCE NUMBER
Figure 5

\\Uteam1\p051\ISeaP\Projects\200801978\GIS\Final Survey Exhibits\200801978_Impacts_Figure_5.dwg, 2/12/2009 10:28:09 AM, BUCKART, RYAN, STS-WI



SCALE: HORIZ.: 1"=60'
VERT.: 1"=2'



SCALE: HORIZ.: 1"=60'
VERT.: 1"=2'

LEGEND

63/100 PHOTOIONIZATION DETECTOR (PID) READING/ FLAME IONIZATION DETECTOR (FID) READING

DRO: 21 DIESEL RANGE ORGANICS SOIL CONCENTRATION (mg/kg)
GRO: 4.6 GASOLINE RANGE ORGANICS SOIL CONCENTRATION (mg/kg)
BENZENE: 206 BENZENE SOIL CONCENTRATION (mg/kg)

SOIL STRATA CHANGE

WELL SCREEN

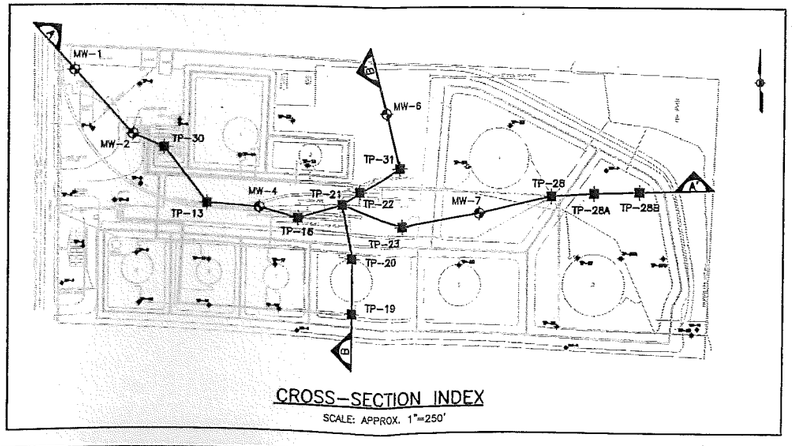
EOB END OF BORING

SP - SAND
SM - SILTY SAND
GM - SILTY SAND GRAVEL
ML - SANDY SILT
CL - SILTY CLAY

NOTES:

1) TEST PITS (TP) PERFORMED DECEMBER 2-4,1996; MONITORING WELLS (MW) INSTALLED MARCH 4 & 5, 1997.

2) ELEVATIONS RELATIVE TO USGS DATUM.



CROSS-SECTION INDEX

SCALE: APPROX. 1"=250'

BY	DATE	DESCRIPTION	REVISION NO.

DRAWN BY P.D.P. DATE 6-18-97
CHECKED BY R.A.M. DATE 10-3-97
APPROVED BY DATE
CADFILE X:\PROJECTS\2008801976\GA776A104.dwg

FORMER SHELL OIL TERMINAL
FORT HOWARD CORPORATION
1505 STATE STREET
GREEN BAY, WISCONSIN

GEOLOGICAL CROSS-SECTIONS A-A' & B-B'

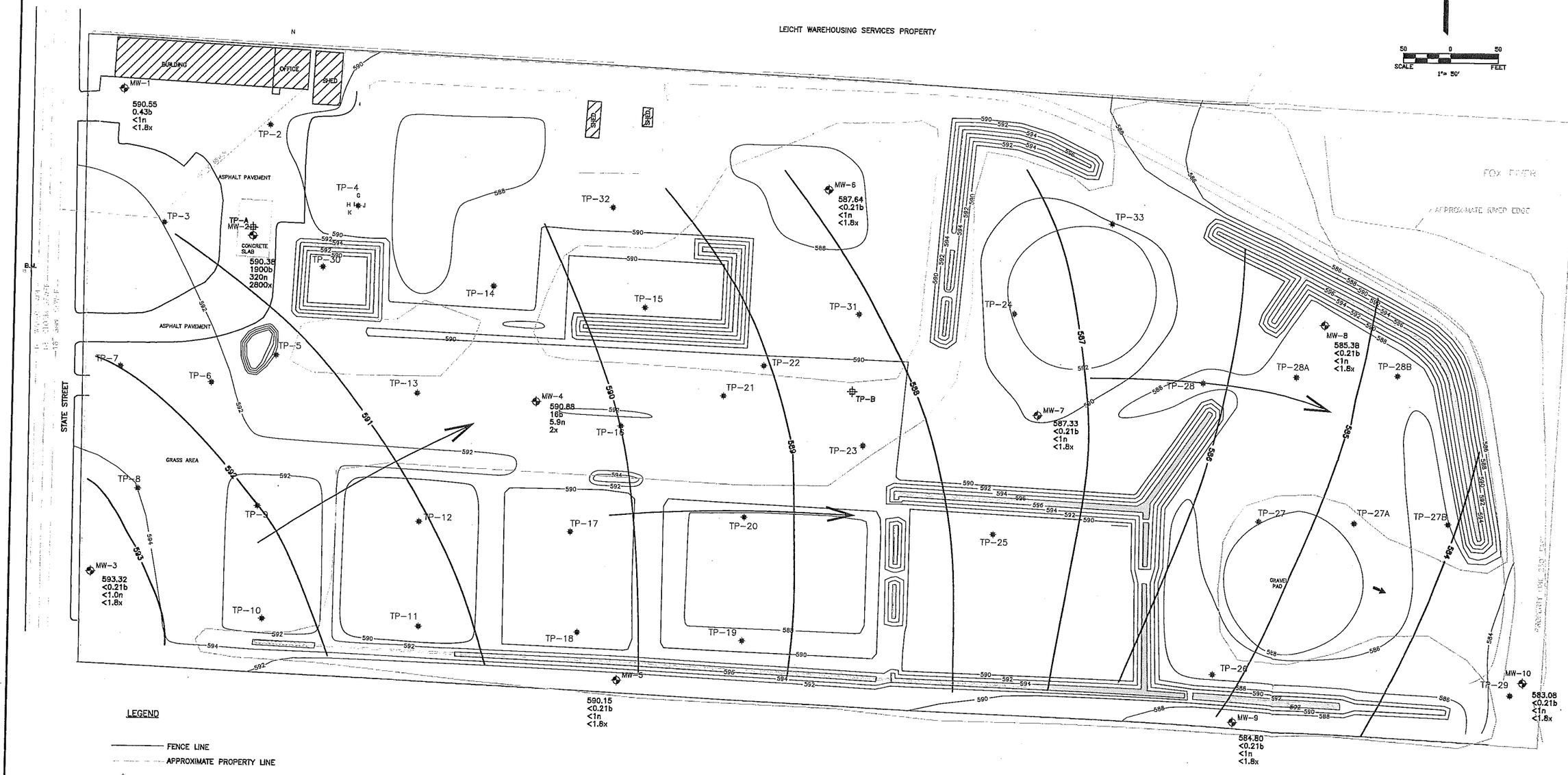
STS Consultants Ltd.
Consulting Engineers

STS PROJECT NUMBER
22176WA

STS PROJECT FILE

SCALE
AS SHOWN

SHEET NUMBER
22176WA-104



LEGEND

- FENCE LINE
- APPROXIMATE PROPERTY LINE
- MW-3 MONITORING WELL LOCATION
- 592 GROUNDSURFACE CONTOUR
- TOP OF EXISTING BERM
- APPROXIMATE BRUSH LINE
- TP-A TEST PIT PERFORMED 4/96
- TP-6 TEST PIT PERFORMED 12/96
- 591 GROUNDWATER ELEVATION CONTOUR (FT.)
- 593.32 GROUNDWATER ELEVATION AT WELL (FT.)
- GROUNDWATER FLOW DIRECTION
- B.M. FIRE HYDRANT AND BENCH MARK

GROUNDWATER CONCENTRATIONS (ug/l)

<0.21b	BENZENE
<1.0n	NAPHTHALENE
<1.8x	XYLENES

NOTES:

1.) SURVEYED BY STS PERSONNEL ON 8-16-96 AND 7-17-89.

2.) MAP MODIFIED FROM 9/19/81 SITE SURVEY BY ROBERT D. HALL AND HISTORICAL AERIAL PHOTOGRAPHS.

3.) SHELL DISCONTINUED TERMINAL OPERATIONS IN 1981 AND SOLD PROPERTY TO FORT HOWARD CORP.

4.) TERMINAL WAS DISMANTLED IN 1988-1989.

5.) GROUND SURFACE CONTOURS INTERPOLATED FROM PREVIOUS STS SURVEY DATA.

6.) BENCH MARK IS TOP OF MAIN OUTLET ON FIRE HYDRANT ACROSS FROM ENTRANCE GATE. ELEAVATION + 594.38 FEET USGS DATUM.

REVISION NO.	DESCRIPTION	DATE	BY

DRAWN BY D.T.B. DATE 7-15-97
CHECKED BY R.A.M. DATE 10-3-97
APPROVED BY DATE
CADFILE

FORMER SHELL OIL TERMINAL
FORT HOWARD CORPORATION
1505 STATE STREET
GREEN BAY, WISCONSIN

GROUNDWATER CONTOUR MAP (5-8-97)

STS Consultants Ltd.
Consulting Engineers

STS PROJECT NUMBER	22176WA
STS PROJECT FILE	22176
SCALE	1"=50'
SHEET NUMBER	

X:\PROJECTS\20080\1976\04176A103.dwg, 2/3/2009 9:38:16 AM, DUCKART, RYAN; STS Standard.ctb

POST CLOSURE

Table 1
Summary of Soil Analytical Results
Former Shell Oil Property
STS Project No. 200801978

Parameter	Units	Topsoil Stockpile Grab Samples				Wisconsin Regulatory Standards			
						NR 720 RCL[1]			NR 746 Values[2] Table 1 Soil
		S-1 7/1/2008	S-2 7/1/2008	S-3 7/1/2008	S-4 7/1/2008	Groundwater Pathway	Direct Contact Non-Industrial	Direct Contact Industrial	
DRO	mg/kg	6.4	3.0	17.5	9.8	100	NL	NL	NL
GRO	mg/kg	5.6	6.3	6.4	6.2	100	NL	NL	NL
Benzene	µg/kg	<25.0	<25.0	<25.0	<25.0	5.5	NL	NL	8,500
Lead	mg/kg	9.7	10.3	25.9	14.8	NL	50	500	NL
TCLP Lead	mg/L	<0.0069	0.0074J	<0.0069	<0.0069				
Flashpoint	degrees F	>210	>210	>210	>210				
Free Liquids	Pass/Fail	Pass	Pass	Pass	Pass				
Moisture	%	13.2	15.6	18.6	15.0				

Notes:

No Detect = No detectable VOCs above the laboratory method detection limit.
(J) = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
RCL = Residual Contaminant Level; NL = Not listed
[1] NR 720 RCL = Chapter NR 720, Wisconsin Administrative Code, Generic Residual Contaminant Level
[2]NR 746 Values = Chapter NR 746, Wisconsin Administrative Code, Risk Screening and Closure Criteria

POST CLOSURE

Table 1
Soil Analytical Results (Detected Analytes)
Fox River Sediment Processing Plant
Green Bay, Wisconsin

Sample Location					
Sample No.	USF-CS1	USF-CS2	SSF-CS1	SSF-CS2	S-1
Sample Date	7/10/08	7/10/08	7/10/08	7/10/08	7/10/2008
Sample Depth (ft)					
METALS, GRO, & DRO	***Concentration (mg/kg)***				
Cadmium	0.15Q	0.12Q	0.13Q	0.17Q	---
Lead	16.5	11.5	12.2	16.7	---
Diesel Range Organics	22	91.8	13.1	5.7	21.3
Gasoline Range Organics	491	359	21.7	14.4	860
VOC	***Concentration (ug/kg)***				
1,2,4-Trimethylbenzene	22400	21000	421	937	65700
1,3,5-Trimethylbenzene	6460	6030	200	334	18900
sec-Butylbenzene	1620	1130	<25	134	<312
tert-Butylbenzene	<200	989	<25	<25	<312
Isopropylbenzene (Cumene)	1700	1350	115	126	4100
p-Isopropyltoluene	1740	1420	<25	<25	3600
n-Propylbenzene	4530	3640	158	243	12600
Benzene	502Q	315Q	<25	<25	539Q
Ethylbenzene	8880	7180	115	236	30400
Methyl tert-butyl ether	<200	<125	<25	<25	<312
Naphthalene	4500	5500	242	275	11500
Toluene	1440	1920	101	139	<312
Xylenes, total	20010	24120	557	960	76120
SVOC	***Concentration (ug/kg)***				
3&4-Methylphenol(m&p Cresol)	<98.0	160Q	47.5Q	<20.9	---
PCB	***Concentration (ug/kg)***				
	None Detected				

Notes:

(ug/kg) = micrograms per kilogram ; < = Not detected above method detection limit

(mg/kg) = milligrams per kilogram; --- = Not analyzed

(Q) = Concentration between the adjusted method detection limit and below the adjusted reporting limit

VOC = Volatile Organic Compounds;

PCB = Polychlorinated Biphenyls

SVOC = Semi-Volatie Organic Componds

POST CLOSURE

Soil Analytical Results
Samples Collected August 11, 2008
Fox River Sediment Processing Plant
Green Bay, Wisconsin

Sample ID	Depth (feet)	DRO (mg/kg)	GRO (mg/kg)
TP-1	0.5-2.0	29.7	4.0
TP-2	0.5-2.0	6,190.0	1,100.0
TP-3	0.5-2.0	2,060.0	179.0
TP-4	0.5-2.0	42.3	<3.0
TP-5	0.5-2.0	13.2	<3.0
TP-6	0.5-2.0	6.9	<3.3
TP-7	0.5-2.0	20.1	<3.3
TP-8	0.5-2.0	1,990.0	524.0
Stockpile Composite	---	89.8	505

Note: See laboratory report for VOCs and metals for stockpile composite sample

POST CLOSURE

Summary of Soil Analytical Results
Proposed Process Building
STS Project No. 200801978

Parameter	Units	Sample Location: B-2; S-1 2 - 3.5	B-6; S-1 2 - 2.5	B-7B 1.5 - 3	B-17 6 - 8	B-22; S-2 4 - 6	B-26; S-1 2 - 3.5	B-33; S-4 6 - 8	B-41 6 - 7.5	B-42 6 - 7.1	HA-1 ---	HA-2 ---	HA-3 ---	Wisconsin Regulatory Standards NR 720 RCL[1,2] Groundwater Pathway	Direct Contact Non-Industrial	Direct Contact Industrial	NR 746 Values[3] Table 1 Soil
date:		5/19/2008	5/19/2008	5/13/2008	5/13/2008	5/19/2008	5/19/2008	5/19/2008	5/13/2008	5/13/2008	5/19/2008	5/19/2008	5/19/2008				
PVOCs																	
Benzene	µg/kg	<25	<25	902	<25	<25	<25	<25	<51.9	33.5 (j)	<25	<25	<25	5.5	NL	NL	8,500
Toluene	µg/kg	<25	<25	397 (j)	<25	<25	<25	<25	<51.9	<25	<25	<25	<25	1,500	NL	NL	38,000
Ethylbenzene	µg/kg	<25	<25	18300	<25	<25	<25	<25	<51.9	<25	<25	<25	<25	2,900	NL	NL	4,600
Total Xylenes	µg/kg	<50	<50	4,706 (j)	<50	<50	<50	<50	<103.8	<25	<50	<50	<50	4,100	NL	NL	42,000
MTBE	µg/kg	<25	<25	<250	<25	<25	<25	<25	<51.9	<25	<25	<25	<25	NL	NL	NL	NL
1,2,4 TMB	µg/kg	<25	<25	52800	<25	<25	<25	<25	<51.9	<25	<25	<25	<25	NL	NL	NL	83,000
1,3,5-TMB	µg/kg	<25	<25	27800	<25	<25	<25	<25	<51.9	<25	<25	<25	<25	NL	NL	NL	11,000
Naphthalene	µg/kg	<25	<25	18400	<25	<25	<25	<25	<51.9	<25	<25	<25	<25	NL	NL	NL	2,700
sec-Butylbenzene	µg/kg	<25	<25	3210	137	<25	<25	<25	<51.9	<25	<25	<25	<25	NL	NL	NL	NL
Isopropylbenzene	µg/kg	<25	<25	3530	34.3 (j)	<25	<25	<25	<51.9	<25	<25	<25	<25	NL	NL	NL	NL
p-Isopropyltoluene	µg/kg	<25	<25	2520	45.2 (j)	<25	<25	<25	<51.9	<25	<25	<25	<25	NL	NL	NL	NL
n-Propylbenzene	µg/kg	<25	<25	11200	76.5	<25	<25	<25	<51.9	407 (j)	<25	<25	<25	NL	NL	NL	NL
Total PCBs	µg/kg	<12.8	<12.8	<12.8	<12.8	<12.8	<13.1	<12.8	<12.8	<12.7	<12.8	<12.7	<12.7	NL	NL	NL	NL
Metals																	
Arsenic	mg/kg	2.0	2.0	3.2	2.8	2.7	1.9	2.8	3.6	1.1	2.4	1.9	1.8	NL	0.039	1.6	NL
Barium	mg/kg	65.1	32.0	41.8	37.3	42.8	51.1	51.8	46.9	9.6	35.7	21.6	17.9	NL	NL	NL	NL
Cadmium	mg/kg	0.049 (j)	<0.0063	<0.0063	<0.0063	<0.0064	<0.0065	<0.0063	<0.0063	0.014 (j)	0.11 (j)	0.060 (j)	0.018 (j)	NL	8	510	NL
Chromium	mg/kg	17.9	13.3	16.6	13.6	16.5	22.2	18.8	17.3	3.9	15.9	7.6	7.2	NL	16,000	NL	NL
Lead	mg/kg	14.3	4.8	5.2	3.9	3.7	6.0	4.6	4.7	1.7	12.1	7.0	5.4	NL	50	500	NL
Selenium	mg/kg	0.11 (j)	<0.073	<0.073	0.09 (j)	<0.073	<0.075	<0.073	<0.073	<0.073	<0.074	0.096 (j)	<0.073 (j)	NL	NL	NL	NL
Silver	mg/kg	0.079 (j)	0.055 (j)	0.039 (j)	0.055 (j)	0.072 (j)	0.14 (j)	0.10(j)	0.039 (j)	<0.011	0.10(j)	0.025 (j)	0.018 (j)	NL	NL	NL	NL
Mercury	mg/kg	0.062	0.026	0.0	0.0	0.014	0.011	0.010	0.012	0.019	0.096	0.051	0.019	NL	NL	NL	NL
PAHs																	
Acenaphthene	µg/kg	19.1(j)	<1.6	200 (j)	<1.6	2.1(j)	5.2(j)	<1.6	45.6	<1.6	2.1(j)	<1.6	<1.6	38,000	900,000	6.00E+07	NL
Acenaphthaylene	µg/kg	8.7(j)	<1.7	55.4 (j)	<1.7	<1.7	<3.5	<1.7	9.9 (j)	<1.7	8.6(j)	1.9(j)	<1.7	700	18,000	390,000	NL
Anthracene	µg/kg	61.7	1.9(j)	76.7 (j)	<1.9	3.0(j)	24.5(j)	<1.9	27.8	<1.9	9.1(j)	2.4(j)	3.4(j)	3.00E+06	5.00E+06	3.00E+08	NL
Benzo(a)anthracene	µg/kg	240	7.8(j)	<23.1	<1.8	<1.8	145	<1.9	3.7 (j)	<1.8	26.6	8.6(j)	13.6(j)	17,000	88	3,900	NL
Benzo(a)pyrene	µg/kg	240	7.6(j)	<22.1	<1.8	<1.8	153	<1.8	1.8 (j)	<1.8	24.0	7.2(j)	13.9(j)	48,000	8.8	390	NL
Benzo(b)fluoranthene	µg/kg	235	6.0(j)	<22.4	<1.8	<1.8	174	<1.8	2.0 (j)	<1.8	27.9	10.1(j)	9.8(j)	360,000	88	3,900	NL
Benzo(g,h,i)perylene	µg/kg	166	6.4(j)	<24.2	<1.9	<1.9	68.5	<1.9	<1.9	<1.9	18.1	7.8(j)	11.2(j)	6.80E+06	1,800	39,000	NL
Benzo(k)fluoranthene	µg/kg	252	5.2(j)	<21.5	<1.7	<1.7	178	<1.7	1.7 (j)	<1.7	20.1	6.1(j)	9.5(j)	870,000	880	39,000	NL
Chrysene	µg/kg	290	9.4(j)	<25.6	<2.0	<2.0	185	<2.0	4.8 (j)	<2.0	40.9	14.1(j)	16.3(j)	37,000	8,800	390,000	NL
Dibenz(a,h)anthracene	µg/kg	58.6	2.2(j)	<24.1	<1.9	<1.9	27.8(j)	<1.9	<1.9	<1.9	6.0(j)	2.1(j)	4.5(j)	38,000	8.8	390	NL
Fluoanthene	µg/kg	711	9.7(j)	61.4 (j)	<1.9	<1.9	361	<1.9	10.5 (j)	<1.9	46.9	14.9(j)	16.9	500,000	600,000	4.00E+07	NL
Fluorene	µg/kg	25.2(j)	<1.7	327	<1.7	4.9(j)	10.5(j)	<1.7	80.1	<1.7	4.4(j)	1.8(j)	1.8(j)	100,000	600,000	4.00E+07	NL
Indeno(1,2,3-cd)pyrene	µg/kg	152	3.8(j)	<23.2	<1.9	<1.9	63.2	<1.9	<1.9	<1.8	13.4(j)	4.8(j)	6.4(j)	680,000	88	3,900	NL
1-Methylnaphthalene	µg/kg	24.4(j)	12.2(j)	3200	<1.4	1.6(j)	<2.8	<1.4	16.8	53.4	57.8	34	28.1	23,000	1.10E+06	7.00E+07	NL
2-Methylnaphthalene	µg/kg	34.8	17.4	5230	<1.4	1.6(j)	<2.9	<1.4	11.3 (j)	2.2 (j)	75.5	43.3	40.2	20,000	600,000	4.00E+07	NL
Naphthalene	µg/kg	31.3(j)	15.2(j)	1330	1.7 (j)	1.6(j)	<2.4	<1.2	12.0 (j)	3.7 (j)	56.8	30.7	35.9	400	60,000	4.00E+06	NL
Phenanthrene	µg/kg	399	11.5(j)	581	<1.8	<1.8	137	<1.8	19.2	<1.8	63.2	29.8	19.6	1,800	18,000	390,000	NL
Pyrene	µg/kg	500	10.6(j)	61.2 (j)	<2.0	<2.0	342	<2.0	19.1	<2.0	40.1	12.4(j)	16.0(j)	8.70E+06	500,000	3.00E+07	NL
2,3,7,8-TCDD	ng/kg	<0.29	<0.31	<10.0	<1.0	0.16 (bd)	<0.31	<0.47	<1.0	<1.0	<0.25	<0.28	<0.31	NL	NL	NL	NL
2,3,7,8-TCDF	ng/kg	1.1(b)	<0.22	<10.0	<1.0	<0.30	0.25(bd)	<0.19	<1.0	<1.0	3.2	0.5 (bd)	0.20(bd)	NL	NL	NL	NL

Notes:
No Detect = No detectable VOCs above the laboratory method detection limit.
(j) = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
(b) = Less than 10x higher than the method blank level
(d) = Value below calibration range
RCL = Residual Contaminant Level; SSLs = Soil Screening Levels; NL = Not listed; --- = Not assessed
[1] NR 720 RCL = Chapter NR 720, Wisconsin Administrative Code, Generic Residual Contaminant Level
[2] RCLs for PAH from WDNR Publication RR-519-97, "Soil Cleanup Levels for Polycyclic Aromatic Hydrocarbons Interim Guidance."
[3] NR 746 Values = Chapter NR 746, Wisconsin Administrative Code, Risk Screening and Closure Criteria
PVOC = Petroleum Volatile Organic Compounds; VOC = Volatile Organic Compounds; PAH = Polycyclic Aromatic Hydrocarbons
NR 720/PAH Guidance RCL Exceedance Identified By: 100 NR 746 Exceedance Identified By: 100

TABLE 3
Soil Boring Analytical Results
Former Shell Green Bay Terminal

Boring No.	Date	Depth (feet)	DRO (mg/kg)	GRO (mg/kg)	FID Reading	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Xylenes (µg/kg)	1,2,4-TMB (µg/kg)	1,3,5-TMB (µg/kg)	MTBE (µg/kg)	Lead (mg/kg)
MW-1	3/4/97	3.5-5.5	<10	<10	7	<25	<25	<25	53	<25	<25	<25	21
MW-2	3/3/97	1.0-3.0	19000	7200	1000	480	4000	13000	210000	320000	190000	<250	117
MW-3	3/4/97	0.0-2.0	<10	<10	8	<25	<25	<25	<50	<25	<25	<25	6
MW-4	3/3/97	0.0-2.0	<10	45	175	37	270	130	510	370	200	<25	15
MW-5	3/5/97	0.0-2.0	<10	<10	1	<25	33	<25	51	29	<25	<25	28
MW-6	3/4/97	0.0-2.0	<10	<10	14	<25	<25	<25	<50	33	<25	<25	30
MW-7	3/4/97	0.0-2.0	<10	<10	9	<25	<25	<25	<50	<25	<25	<25	15
MW-8	3/5/97	0.0-2.0	<10	<10	2	<25	<25	<25	<50	<25	<25	<25	22
MW-9	3/5/97	0.0-2.0	<10	<10	2	<25	44	<25	80	31	<25	<25	42
MW-10	3/5/97	0.0-2.0	<10	<10	11	<25	29	<25	83	49	27	<25	45
NR 720 Generic RCL			250	250	NA	5.5	1500	2900	4100	NA	NA	NA	500
Site-Specific Groundwater Pathway RCL						240	24000	177000	182000	NA	NA	NA	NA
COMM 46 Table 1 Values			NA	NA	NA	1100	670000	400000	470000	NA	NA	NA	

Notes:

[ ] NR 720 Residual Contaminant Level (RCL) Exceedance.

DRO = Diesel Range Organics

GRO = Gasoline Range Organics

FID = Flame Ionization Detector

MTBE = Methyl tert Butyl Ether

TMB = Trimethylbenzene

TABLE 2
Test Pit Analytical Results
Former Shell Green Bay Terminal

Test Pits	Date	Depth (feet)	DRO (mg/kg)		GRO (mg/kg)	FID Reading	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Xylenes (µg/kg)	1,2,4-TMB (µg/kg)	1,3,5-TMB (µg/kg)	MTBE (µg/kg)	1,2-DCA (µg/kg)	Lead (mg/kg)	TOC (mg/kg)
TP-A	4/24/96	0.5-2.0	5570		7030	928										
TP-2	12/3/96	0.5-2.0	<2.0	N	1.4	10	<25	<25	<25	<25	<25	<25	<25	<25	13	-
TP-3	12/3/96	0-2.0	<2.1	N	<0.89	<1	<25	<25	<25	<25	<25	<25	<25	<25	9.3	-
TP-4	12/2/96	0-1.0	335	M	9	4	<25	131	84	309	82	<25	<25	<25	90	-
TP-5	12/3/96	0.5-2.0	513	L	11	10	<25	107	78	328	680	296	<25	<25	62	-
TP-6	12/3/96	0-2.0	8.4	L	<0.89	<1	<25	<25	<25	<25	<25	<25	<25	<25	8.8	-
TP-7	12/3/96	0-1.5	34	L	2.3	<1	<25	<25	<25	<25	<25	<25	<25	<25	9.7	-
TP-8	12/3/96	0-2.0	3.8	L	<0.89	<1	<25	<25	<25	<25	<25	<25	<25	<25	6.9	8120
TP-9	12/3/96	0-2.0	278	M	41	100	<25	<25	<25	<25	95	100	<25	<25	15	4110
TP-10	12/3/96	0-2.0	<2.0	N	<0.89	1	<25	<25	<25	<25	<25	<25	<25	<25	18	-
TP-11	12/2/96	0.5-2.5	7.2	N	1.6	7	<25	59	<25	131	<25	<25	<25	<25	13	-
TP-12	12/2/96	0.5-2.0	45	L	<0.89	2	<25	<25	<25	<25	<25	<25	<25	<25	7.8	-
TP-13	12/3/96	0-2.0	11	L	<0.89	<1	<25	<25	<25	<25	<25	<25	<25	<25	2.7	-
TP-14	12/2/96	0-1.0	5.7	N	<0.89	18	<25	32	<25	42	<25	<25	<25	<25	26	-
TP-15	12/2/96	0-2.0	<1.6	N	<0.89	70	<25	<25	<25	<25	<25	<25	<25	<25	8.2	2140
TP-16	12/2/96	0-2.0	16	L	<0.89	10	<25	<25	<25	<25	<25	<25	<25	<25	15	10,700
TP-17	12/2/96	0-2.0	2.6	L	<0.89	22	<25	<25	<25	<25	<25	<25	<25	<25	6.4	674
TP-18	12/2/96	0.5-2.0	<2.1	N	<0.89	3	<25	<25	<25	<25	<25	<25	<25	<25	29	-
TP-19	12/3/96	0-2.0	8.7	N	1.5	3	<25	47	<25	221	52	<25	<25	<25	14	-
TP-20	12/2/96	0.5-2.0	<2.0	N	1.5	3	<25	<25	<25	50	<25	<25	<25	<25	3.6	-
TP-21	12/2/96	0-2.0	6.5	L	<0.89	5	<25	<25	<25	<25	<25	<25	<25	<25	12	-
TP-22	12/2/96	0.5-2.5	21	L	4.6	4	206	600	147	980	255	150	<25	<25	37	-
TP-23	12/2/96	0.5-2.5	17	L	<0.89	6	<25	50	<25	55	42	<25	<25	<25	14	-
TP-24	12/2/96	1.0-3.0	2990	M	659	500	<45	<25	440	1023	1400	4360	<112	<64	11	28,900
TP-25	12/2/96	1.0-3.0	<1.7	N	1.3	8	<25	28	<25	<25	<25	<25	<25	<25	<2.1	-
TP-26	12/3/96	0-1.5	44	L	<0.89	10	42	68	<25	107	64	<25	<25	<25	65	-
TP-27	12/3/96	1.0-3.0	334	M/L	3.1	350	<25	44	28	77	55	<25	<25	<25	3.5	40,100
TP-28	12/3/96	1.0-3.0	50	L	<0.89	70	39	195	42	217	57	<25	<25	<25	51	20,800
TP-28B	12/4/96	2.0-3.0	48	L	<0.89	<1	<25	66	<25	123	64	<25	<25	<25	51	-
TP-29	12/2/96	0-1.5	24	L	2.6	3	<25	33	31	187	32	<25	<25	<25	17	-
TP-30	12/2/96	0-2.0	1030	M	11	1000+	<25	<25	<25	<25	<25	<25	<25	<25	5.7	-
TP-31	12/4/96	3.0-4.0	4.4	N	<0.89	<1	<25	<25	<25	<25	<25	<25	<25	<25	57	-
TP-32	12/4/96	3.0-4.0	181	L	<0.89	<1	<25	46	<25	52	79	<25	<25	<25	20	-
TP-33	12/4/96	3.0-4.0	11	L	<0.89	2	<25	51	<25	87	33	<25	<25	<25	19	-
NR 720 Generic RCL			250		250		5.5	1500	2900	4100	NA	NA	NA	4.9	500	NA
Site-Specific Groundwater Pathway RCL							240	24000	177000	182000	NA	NA	NA	NA	NA	NA
COMM 46 Table 1 Values			NA		NA		1100	670000	400000	470000	NA	NA	NA	540	NA	NA

SPLP	Date	Depth (feet)	DRO (mg/l)	GRO (mg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	1,2,4-TMB (µg/l)	1,3,5-TMB (µg/l)	MTBE (µg/l)
TP-8	12/3/96	0-2.0	-	-	<0.5	<0.6	<0.6	<1.7	<1.7	<0.9	<2.7
TP-9	12/3/96	0-2.0	-	-	<0.5	<0.6	<0.6	<1.7	<1.7	<0.9	<2.7
TP-15	12/2/96	0-2.0	-	-	<0.5	<0.6	<0.6	<1.7	<1.7	<0.9	<2.7
TP-16	12/2/96	0-2.0	-	-	<0.5	<0.6	<0.6	<1.7	<1.7	<0.9	<2.7
TP-17	12/2/96	0-2.0	-	-	<0.5	<0.6	<0.6	<1.7	<1.7	<0.9	<2.7
TP-24	12/2/96	1.0-3.0	-	-	<0.5	<0.6	<0.6	<1.7	<1.7	<0.9	<2.7
TP-27	12/3/96	1.0-3.0	-	-	<0.5	<0.6	<0.6	<1.7	<1.7	<0.9	<2.7
TP-28	12/3/96	1.0-3.0	-	-	<0.5	<0.6	<0.6	<1.7	<1.7	<0.9	<2.7

Groundwater	Date	Depth (feet)	DRO (mg/l)	GRO (mg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	1,2,4-TMB (µg/l)	1,3,5-TMB (µg/l)	MTBE (µg/l)
TP-4	12/2/96		-	-	54	5.7	11	21	4.5	1.3	<2.7
TP-6	12/3/96		-	-	<0.5	<0.6	<0.6	<1.7	<1.7	<0.9	<2.7
TP-8	12/3/96		-	-	14	1.4	3.3	5.1	5.3	1.5	<2.7
TP-27	12/3/96		-	-	885	192	1800	4170	3560	943	<135
NR 140 PAL					0.5	68.6	140	124	NA	NA	12
NR 140 ES					5	243	720	620	NA	NA	60

Notes:

[ ] NR 720 Residual Contaminant Level (RCL) Exceedance.

Enforcement Standards (ES) and Preventive Action Limits (PAL) from Wisconsin Administrative Code NR 140 (October 1996).

DRO = Modified Diesel Range Organics

M = Mid-Eluting Peaks on the DRO chromatogram.

L = Late-Eluting Peaks or a Raised Baseline on the DRO Chromatogram.

N = No Apparent Peaks on the DRO Chromatogram.

GRO = Gasoline Range Organics

FID = Flame Ionization Detector

MTBE = Methyl tert Butyl Ether

TMB = Trimethylbenzene

TOC = Total Organic Carbon

SPLP = Synthetic Precipitation Leaching Procedure

FID = Flame Ionization Detector

- = Not Analyzed

Table 5

Groundwater Analytical Results
Former Shell Green Bay Terminal

Well	Date	Benzene (µg/L)	Ethyl-Benzene (µg/L)	MTBE (µg/L)	Naph-thalene (µg/L)	Toluene (µg/L)	Trimethyl-benzenes (µg/L)	Total Xylene (µg/L)	Lead (µg/L)	Sulfate (mg/L)
MW-1	8-May-97	0.43	<0.68	<0.21	<1	<1.5	<1.0	<1.8	<1	290
	31-Dec-97	<0.21	<0.68	<0.21	<1	<1.5	<1.0	<1.8	<1	--
MW-2	8-May-97	1900	820	<2.1	320	38	1580	2800	14	130
	31-Dec-97	3200	640	<2.1	190	38	1260	530	5	--
MW-3	8-May-97	<0.21	<0.68	<0.21	<1	<1.5	<1.0	<1.8	<1	110
	31-Dec-97	<0.21	<0.68	<0.21	4.4	1.6	<1.0	<1.8	<1	--
MW-4	8-May-97	16	0.82	<0.21	5.9	1.5	<1.0	2	<1	240
	31-Dec-97	94	8.9	<0.21	<1	6.8	2.7	<1.8	<1	--
MW-5	8-May-97	<0.21	<0.68	<0.21	<1	<1.5	<1.0	<1.8	<1	430
	31-Dec-97	0.28	<0.68	<0.21	<1	<1.5	<1.0	<1.8	<1	--
MW-6	8-May-97	<0.21	<0.68	<0.21	<1	<1.5	<1.0	<1.8	<1	270
	31-Dec-97	<0.21	<0.68	<0.21	<1	<1.5	<1.0	<1.8	<1	--
MW-7	8-May-97	<0.21	<0.68	<0.21	<1	<1.5	<1.0	<1.8	<1	510
	31-Dec-97	0.26	<0.68	<0.21	<1	<1.5	<1.0	<1.8	<1	--
MW-8	8-May-97	<0.21	<0.68	<0.21	<1	<1.5	<1.0	<1.8	<1	360
	31-Dec-97	<0.21	<0.68	<0.21	<1	<1.5	<1.0	<1.8	<1	--
MW-9	8-May-97	<0.21	<0.68	<0.21	<1	<1.5	10.0	<1.8	<1	100
	31-Dec-97	<0.21	<0.68	<0.21	<1	<1.5	3.6	<1.8	<1	--
MW-10	8-May-97	<0.21	<0.68	<0.21	<1	<1.5	<1.0	<1.8	<1	133
	31-Dec-97	<0.21	<0.68	<0.21	<1	<1.5	<1.0	<1.8	<1	--
PAL		0.5	140	12	8	68.6	96	124	1.5	NA
ES		5	700	60	40	343	480	620	15	NA

Notes:

Enforcement Standards (ES) and Preventive Action Limits (PAL) are from Chapter NR 140 Wisconsin Administrative Code (Groundwater Quality) dated December 1998.

[ ] = NR 140 ES exceedance.

TABLE 5

Field Groundwater Sampling Summary

Former Shell Green Bay Terminal

Well [TPVC Elev.] (GS Elev.)	Date	Water Depth (ft)	Water Elevation (ft)	pH	Cond. (µmhos/cm)	Temp. (°C)	Dissolved Oxygen (ppm)	Ferrous Iron (ppm)	Nitrate (ppm)	Turbidity
MW-1	12-Mar-97	2.81	591.02	--	--	--	--	--	--	--
[593.83]	8-May-97	3.28	590.55	6.78	1103	15.5	3	0.4	<1	slight
(591.1)										
MW-2	12-Mar-97	2.61*	590.70	--	--	--	--	--	--	--
[593.31]	8-May-97	2.93	590.38	7.12	1687	12.6	3	0.6	<1	slight
(590.8)										
MW-3	12-Mar-97	2.86	593.75	--	--	--	--	--	--	--
[596.61]	8-May-97	3.29	593.32	7.13	776	13.4	4	0.1	<1	slight
(594.9)										
MW-4	12-Mar-97	2.93	593.83	--	--	--	--	--	--	--
[593.83]	8-May-97	2.95	590.88	7.03	1119	14.3	3	0.6	<1	slight
(592.0)										
MW-5	12-Mar-97	2.85	589.86	--	--	--	--	--	--	--
[592.71]	8-May-97	2.56	590.15	6.96	1302	13.5	3	0.4	<1	slight
(590.9)										
MW-6	12-Mar-97	2.65	586.95	--	--	--	--	--	--	--
[589.60]	8-May-97	1.96	587.64	7.13	1227	13.7	4	0.1	<1	slight
(587.9)										
MW-7	12-Mar-97	7.88	582.43	--	--	--	--	--	--	--
[590.31]	8-May-97	2.98	587.33	6.87	1707	14.0	2	1	<1	slight
(588.9)										
MW-8	12-Mar-97	6.68	582.34	--	--	--	--	--	--	--
[589.02]	8-May-97	3.64	585.38	6.74	2090	13.0	<1	10	<1	slight
(587.0)										
MW-9	12-Mar-97	4.82	583.49	--	--	--	--	--	--	--
[588.31]	8-May-97	3.51	584.80	6.94	1093	14.3	2	10	<1	slight
(586.5)										
MW-10	12-Mar-97	3.37	581.36	--	--	--	--	--	--	--
[584.73]	8-May-97	1.65	583.08	6.63	1620	14.0	1	10	<1	slight
(583.3)										

Notes:

TPVC Elev. = Top of PVC Well Casing Elevation (ft) relative U.S.G.S. datum.
GS Elev. = Ground Surface Elevation (ft) relative to U.S.G.S. datum.
Water depths and elevations were measured relative to the TPVC elevation.
*Ice in well.
Cond. = Conductivity
Temp. = Temperature
Dissolved Oxygen, Ferrous Iron, and Nitrate were measured in the field using colorimetric ampoules.