Substance Aciease Politication

Department of Natural Resources

Form 4400-91 (Rev 5-2000) page 1 of 2

24-Hour Emergency Hotline Number: 1-800-943-0003

Date and Mil. Time of Incident	9/21/2000	Date and	Mil. Time Reported	9/22/2000	
Person Reporting	Repre	senting	Phone # (7/	15) 394-1410	
Mark Sidek Responsible Party/Spiller	RP De	ecision based on	94		
Enbridge Energy		coision based on	A STATE OF THE STA	5) 394 -1410	
RP Contact Name Side K		A Section	Phone # (7	15) 394- 1410	
Address 199 N. 25th			City, State,	Zip Code	
Substance Involved	Amount &	Units Released	Amount Res	or, W1 54480 covered	
Cryde oil	30 barr		ajal	oovered.	
Solid Semisolid Liqu	id Gas Color_		Odor Odor		
Exact Location (inc. address, fac		ldg. #, etc.)	Property Ov	vner (if known)	
2800 East 21	Country		Lat/long	dge thergy	
Juperi or	Dou	glas	Enviore 46 5	dge Energy H 166-92-03-4	
DNR Region NOR Cause of Incident	NE1/4NE1/4sec	3 61 49NR/4 (I	Weather Cond.		
	cross over lin	C			
Spilled Substance Impact To: Check (√) all that apply: Air Potential Soil Potential Groundwater Potential Surface Water Potential Name Storm Sewer Potential Concrete/Asphalt Potential Private Well Potential Contained/Recovered Other:	Spill Source: Transportation Accident, Fuel Tank Spill Transportation Accident, Load Spill Industrial Facility Paper Mill Chemical Co. Ag Coop/Facility/ Food Factory/Facility Gas/Service Station/Garage/Auto Dealer, Repair Shop Pipeline, Terminal, Tank Farm, Oil Jobber/Wholesaler Public Property (city, state, church, school, etc.) Utility Co, Power Generating/ Transfer Facility Private Property (home/farm) Construction, Excavation, Wrecking, Quarry, Mine Airport Facility Railroad Facility Other Other Action Taken By Spiller: No Action Taken By Spiller:				
Injuries? Yes No If yes, ho	ow many?	Has an evac	uation occurred? Yes	No Potential? Yes No	
Are there any resource damages?	Yes No Pote	ntial What kinds?			
Other Agencies Notified (√ first column Fire Department Local Law Enforcement LEPC or Local Emer. Mgt. Level A/Level B Team	Local DNR Div. Emer. Mgt. Coast Guard DHFS 608-258-0	EPA Nat'l F Chemt O099 Other	Resp. Ctr. 800-442-8802 rec 800-424-9300	Phone:	
Prepared By: (Print) Dun bar	力で	765-8963	Date: /10/02	Rpt'd to DATCP? ☐ Yes No	
Person Notified Nosch	7.75 -	392-0802	Date: 9/2000	Time:	
Investgtd By: (Print)	(Sign)	Date:	Incident Closed? Yes No	
Jim Hosch				Date: 6/10/02	
Spill Coordinator Signoff: Morman Jun bon	Da 6/1	DA	ansferred to: ERP TCP Date: se #	NFA Letter Sent? Yes No Spill Packet Sent? Yes No To:	
				Additional Comments on Reverse	

Date and Military Time	of Incident:	Responsible Party:							
Additional Comments:									
•									
Case Activity Report:		(Please attach copy of all CAR and other documentation)							
Enforcement Action:	Yes No (explain below)								
		······································							

Enbridge Energy Company, Inc. Lake Superior Place 21 West Superior Street Duluth, MN 55802-2067 Tel 218 725 0100 Fax 218 725 0139 www.enbridgepartners.com Scott W. Lounsbury Supervisor, Environment Dana A. Slade Senior Environmental Analyst Kris H. Benson Environmental Analyst Barry F. Power Environmental Engineer



JUNE 5, 2002

Mr. Norm Dunbar Wisconsin Department of Natural Resources 107 Sutliff Avenue Rhinelander, WI 54501

RE: Site Investigation Report

Superior Terminal - Line 5/6 Crossover

September 23, 2000

Dear Mr. Dunbar:

Enclosed is a report outlining the remedial actions taken in response to the above referenced incident. If you have any questions or comments, please call me – I can be reached at (218) 725-0143.

Sincerely,

Barry F. Power, P.E. Environmental Engineer

jam

Enclosure

c: Mark Sitek / Al Aleknavicius – EEC Superior Scott Lounsbury – EEC Duluth

SITE INVESTIGATION REPORT:

CRUDE OIL RELEASE AT

SUPERIOR TERMINAL

SEPTEMBER 2000

LINE 5/6 CROSSOVER

SUPERIOR, WISCONSIN

Prepared by:

NATURAL RESOURCES

ENGINEERING COMPANY

13 WEST SUPERIOR STREET

DULUTH, MN 55802

MAY 2002



Enbridge Energy Company

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I. INTRODUCTION

A. BACKGROUND

On September 23, 2000, a crude oil release was discovered near the Line 5/6 crossover pipe at Enbridge Energy Company's Superior Terminal (or simply "Site" from hereon). The Site is located at Milepost 1098 in Superior, Wisconsin (see Figure 1). The released oil followed topographic contours and collected in a drainage ditch approximately 20 feet east of the release location. A map of the Site showing the release location is included as Figure 2.

Upon discovery of the release, remedial activities commenced. Oil migration was impeded using absorbent booms. Vacuum trucks were used to recover free product pooled in the drainage ditch and on the ground surface. Hand augered soil borings were advanced at various locations surrounding the release area to define the extent of subsurface impact. Approximately 245 cubic yards of soil were removed from the area surrounding the release, using observations from soil borings and visual characteristics of the soil to guide the excavation process. The Line 5/6 crossover pipe was also removed during the excavation process. Excavated soil was hauled off-site and disposed of at Waste Management's Timberline Trail Landfill in Weyerhaeuser, Wisconsin.

The following is a chronology of events from the Site:

- September 23, 2000 Release is discovered and remedial activities commence;
- September 25, 2000 Hand augered soil borings are advanced to define extent of impacted soil;
- September 25 November 30, 2000 Impacted soil is removed from the release area and the crossover pipe is removed;
- November 20 November 30, 2000 Excavated soil is hauled off-site and disposed of at Waste Management's Timberline Trail Landfill in Weyerhaeuser, Wisconsin.

Specifics of the release (including: township and range, near surface geology/hydrogeology, nearby drinking water wells, number of nearby dwellings, and volume of oil lost) are summarized on the WDNR Case Summary and Close Out Form included as Appendix A.

B. PURPOSE/CONTENT

This report serves to detail environmental activities conducted in response to the crude oil release at Enbridge's Superior Terminal and to document existing subsurface conditions at the Site.

Including this section, the report is divided into five parts. Section II summarizes the local topography, near surface geology, and hydrologic setting. Section III details remedial activities at the Site. Section IV provides conclusions and sets forth recommendations. Section V contains a list of references.

II. PHYSICAL SETTING

A. HYDROLOGY

The area around the Site is characterized by the flat ancient lakebed of Glacial Lake Duluth and deeply incised ravines and river valleys. Surface drainage from the Site is to the east, ultimately discharging to the Nemadji River, a low energy river that flows north to Superior Bay. The slope across the Site is generally less than 0.5%, but steepens to over 15% along the Nemadji River valley. Average annual precipitation in the area is on the order of 28 inches, with approximately 1 to 2 inches (per year) seeping into the ground, 6 inches (per year) as run off, and the remainder lost to evapotranspiration (Young et al., 1974).

B. HYDROGEOLOGY

Regionally, the near-surface geology is composed of greater than 300 feet of red, plastic, fat clay with a USCS designator of CL (Olcott et al., 1978). This clay was deposited on the bottom of Glacial Lake Duluth during the Holocene/Pleistocene epochs when the Lake was at a higher stand, and is common at lower elevations throughout the Western Lake Superior Basin. Locally, the near-surface geology has been modified by the inclusion of fill materials – an artifact of the Site's industrial setting.

At the Site, groundwater flows to the east toward the Nemadji River (a regional sink for shallow groundwater flow) under unconfined conditions, with a southerly variation in flow direction across the central portion of the Site due to deeply incised ravines south of the Terminal. Depth to groundwater across the Site varies from a minimum of approximately 6 feet to over 15 feet below grade in response to topographic and piezometric relief across the Site.

C. GROUNDWATER RECEPTOR SURVEY

The Nemadji River, located approximately ½-mile east of the release location, is the closest surface water and groundwater receptor. There are no known drinking water supply wells located within 1,200 feet of the Site.

III. SITE REMEDIATION

A. SOIL CLEANUP

Upon discovery of the release in September 2000, initial response efforts consisted of excavating and stockpiling oil stained soils, recovery of free product with a vacuum truck, and removal of the Line 5/6 crossover pipe. Visibly stained soil was targeted during the excavation process, and approximately 245 cubic yards of impacted soil were removed from the area surrounding the release. This soil was hauled off-site and disposed of at Waste Management's Timberline Trail Landfill in Weyerhaeuser, Wisconsin. Soil disposal manifests are included as Appendix B. Following excavation and disposal of impacted soil, clean fill was used to backfill the excavation.

B. SOIL SAMPLING AND ANALYSIS

When the removal of visibly impacted soil had been completed, soil samples for headspace screening were collected from the scraped area. Samples were screened in the field for concentrations of organic vapors using a photoionazation detector (PID) calibrated to an isobutylene standard. Table 1 summarizes the headspace screening results. The final excavation limits and seven soil sampling locations are shown in Figure 3. Pursuant to a discussion with Mr. Jim Hosch, Wisconsin Department of Natural Resources on November 21, 2000, soil samples were collected and analyzed for diesel range organics (DRO) and polycylic aromatic hydrocarbons (PAHs). Soil samples were submitted to Midwest Analytical Services in Duluth, Minnesota for laboratory analysis. Laboratory Analytical reports are contained in Appendix C.

C. RESULTS

Results of the laboratory analysis are summarized in Table 2. With the exception of DRO, analytes were not detected above the laboratory's method detection limit. DRO concentrations ranged from below detection limits at B-1, SW-2, and SW-4 to

247 mg/kg at SW-3. Concentrations fell below the NR 720 generic standard of 250 mg/kg for low permeability soils.

IV. CONCLUSIONS AND RECOMMENDATIONS

The following is a summary of conclusions and recommendations drawn upon the findings of the initial response and remediation activities and data provided in this report.

A. CONCLUSIONS

- On September 23, 2000, a crude oil release was discovered in the area of the Line 5/6 crossover line at Enbridge's Superior Terminal;
- Near-surface geology at the release location consists of clay with a USCS designator of CL;
- The Nemadji River, approximately ½-mile east of the release location, is the closest surface water and groundwater receptor;
- There are no known drinking water supply wells within 1,200 feet of the Site;
- Approximately 245 cubic yards of impacted soil were excavated and disposed of at Waste Management's Timberline Trail Landfill in Weyerhaeuser, Wisconsin;
- PAHs were not detected in the confirmatory samples above laboratory detection limits;
- DRO was detected in four of the confirmatory samples above laboratory detection limits; and
- DRO concentrations fell below the guidelines for low permeability soils set forth in the NR 720 generic standard.

B. RECOMMENDATIONS

Based on the environmental setting of the Site and effectiveness of the remediation, residual crude oil related compounds, if present, pose little (if any) risk, and we are requesting closure of the Site.

V. REFERENCES

Olcott, P.G., Ericson, D.W., Felsheim, P.E., and Broussard, W.L., 1978, "Water Resources of the Lake Superior Watershed, Northeastern Minnesota, Hydrologic Investigations Atlas HA-582," United States Geological Survey, Reston, Virginia.

Young, H.L., and Skinner, E.L., 1974, "Water Resources of Wisconsin, Lake Superior Basin, Hydrologic Investigations Atlas HA-524," United States Geological Survey, Reston, Virginia.

TABLES

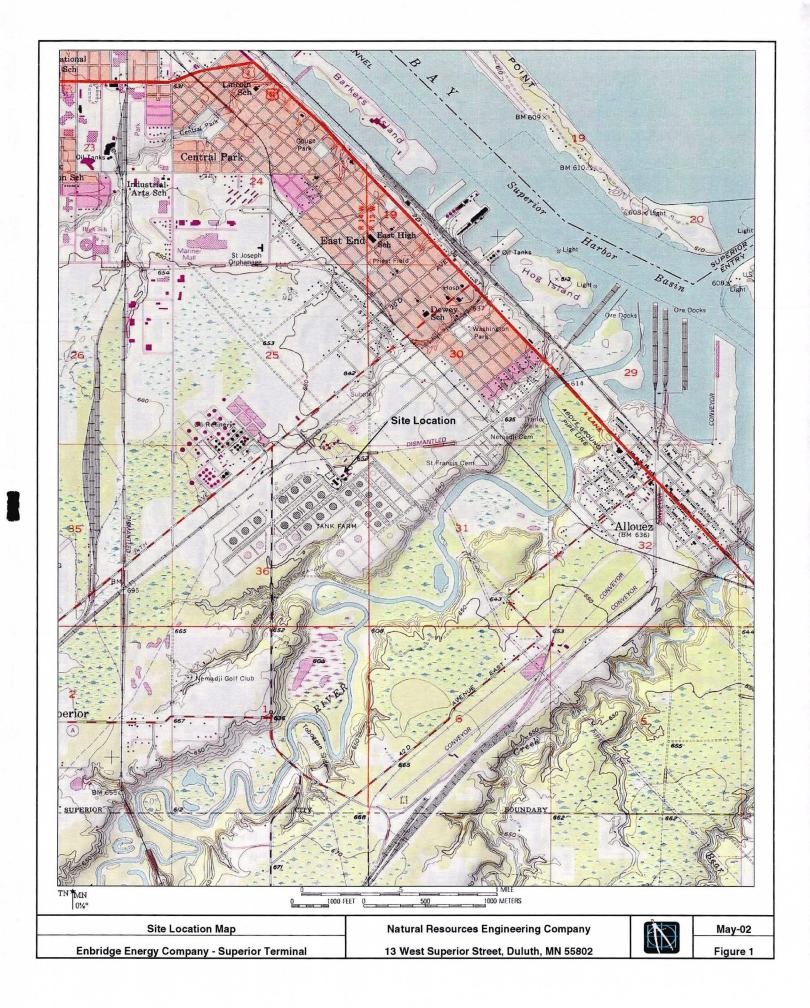
Table 1: Headspace Screening Results
Enbridge Energy Company - Superior Terminal (Line 5/6 Crossover)

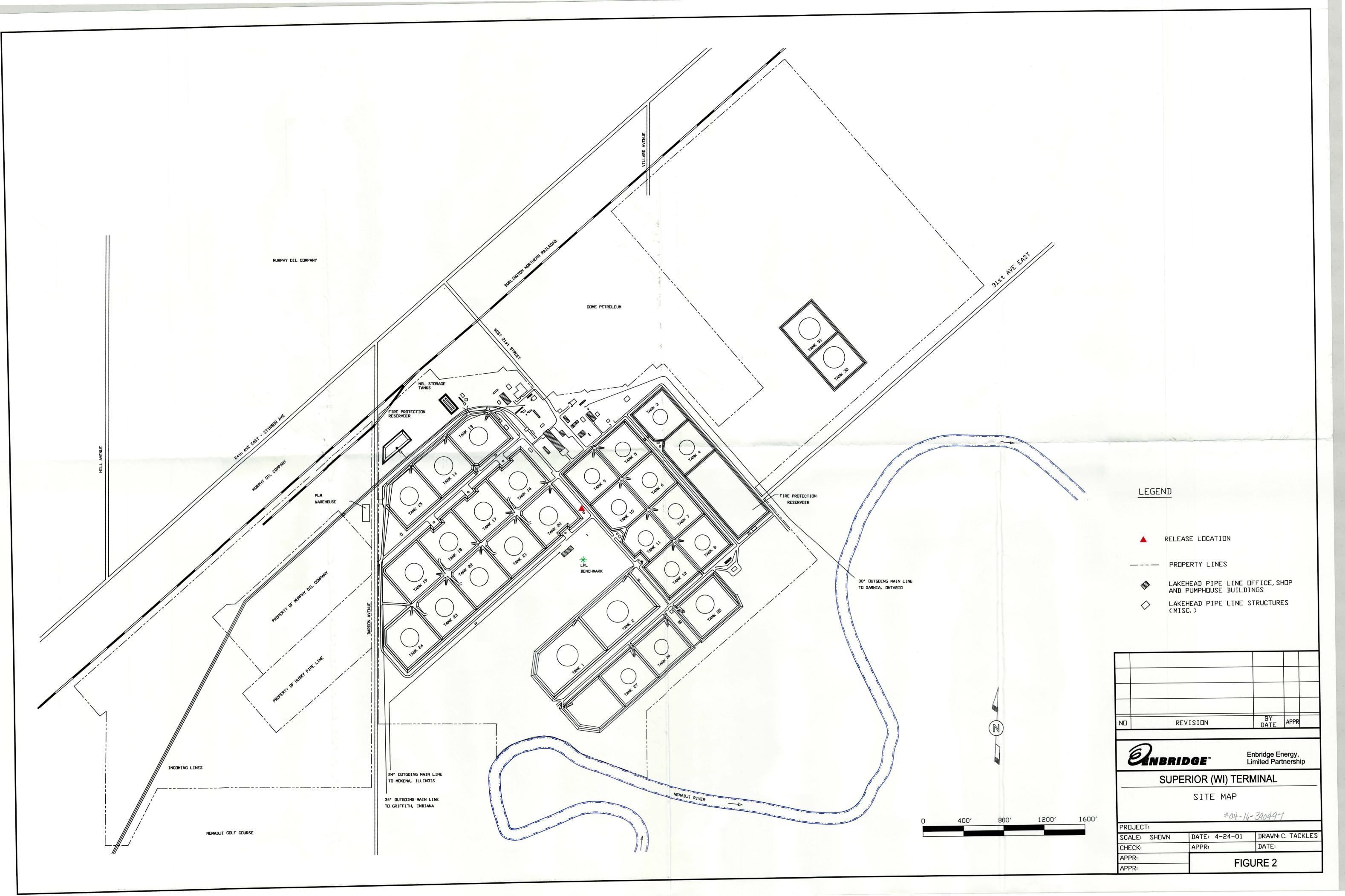
		Headspace
Location	Date	(ppm)
SW-1	11/20/00	< 5
SW-2	11/20/00	24.1
SW-4	11/27/00	< 5
B-1	11/20/00	7.8
B-2	11/20/00	9.1
B-3	11/27/01	24.1

Table 2: Laboratory Analytical Results
Enbridge Energy Company - Superior Terminal (Line 5/6 Crossover)

Location	Depth (feet)	Date Collected	Total Hydrocarbons as DRO (mg/kg)	Acenaphthylene (mg/kg)	Acenapthene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(k)fluoranthene (mg/kg)	Benzo(g,h,l)perylene (mg/kg)	Benzo(a)pyrene (mg/kg)	Carbazole (mg/kg)	Chrysene (mg/kg)	Dibenz(a,h)anthracene (mg/kg)	Dibenzofuran (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno(1,2,3-cd)pyrene (mg/kg)	2-Methylnaphthalene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
SW-1	2	11/20/00	14.4	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SW-2	2	11/20/00	< 10.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
SW-3	1	12/4/00	247	< 0.97	< 0.97	< 0.97	< 0.97	< 0.97	< 0.97	< 0.97	< 0.97	< 0.97	< 0.97	< 0.97	< 0.97	< 0.97	< 0.97	< 0.97	< 0.97	< 0.97	< 0.97	< 0.97
SW-4	2	11/27/00	< 10.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
B-1	4	11/20/00	< 10.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
B-2	4	11/20/00	< 10.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
B-3	3.5	11/27/00	33.1	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20

FIGURES



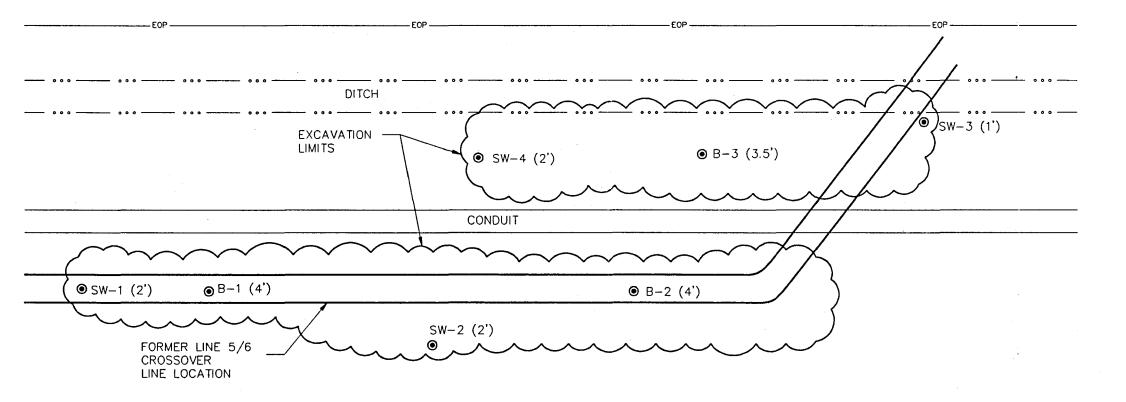


= = = =

TANK 9 SECONDARY CONTAINMENT BERM

______EOP _______EOP ______EOP _____

ROAD



<u>LEGEND</u>

SAMPLING LOCATION



SCALE 1" = 10'

SITE MAP
SCALE: 1" = 10'

L	Engineers & DULUTH, MINNESOTA 55802	Archite	cts		latural l	Resources	Engineering	g Compai	ny
NO.	REVISION	DATE	APPR.		FX	CAVATI	ON ARE	Δ	
1	ISSUED FOR REVIEW	04/10/01	HELDT				SAMPLIN		
				LOCATIONS SUPERIOR, WI TERMINAL					
				DATE	DRAWN	APPROVED	LHB PROJ. NO.	DRAWING N	١٥.
				APR 2001	ABB	DAH	01807.62	FIGURE	3
			1,0		ł	•	1		

APPENDICES

APPENDIX A: CASE SUMMARY AND CLOSEOUT FORM

WDNR BRRTS CASE # WI	DNR SITE NAME EN SIZE TO EN ERGY COMPANY -
	DNR SITE NAME ENBITTION EIVER OF EOMPANY -
I certify that, to the best of my knowledge, the information recommendation for case closure is based upon all availab Close Out Form Instructions and all required information	n presented on and attached to this form is true and accurate. This le data as of(date). I have read the Case Summary and has been included.
Form Completed By:	Closeout Review Fee Attached GW Registry fee attached
(C:)	20/02
Printed Name: SARRY POWER Email address: NCC O CODITER.	T.E. Company Name: NICE SET. COM
If not site owner, relationship to site owner:	SOLIAUT
Address: 13 WEST SOPERTION	L SIRLET, I JUSTH, MN. 55802
Telephone Number: (218) 722-9554	FAX Number: (218) 722-9562
Environmental Consultant (if different then above):	
Address:	
Telephone Number: ()	FAX Number: ()
1. SITE LOCATION & ZONING	
WDNR Site Name: ENBILDGE ENERGY	LOMPANY, SIPERTOIR LERANDOAR ANÉ, SIPERTOIR, WI 54880
Complete Site Address: 2800 EAST 215	AVE, SIPERTOIL, WI 54880
WDNR BRRTS Case #:	· · · · · · · · · · · · · · · · · · ·
PECFA Claim #:	
Responsible Party Name: ENBIDOGE E	DERGY LOMPINDY
Complete Responsible Party Address: Z1 WEST	SOPERTOR STREET, 1) ULUTH, MD. 55802
Site Legal Description: $\underline{\mathcal{NE}}_{1/4}$, $\underline{\mathcal{NE}}_{1/4}$, Section $\underline{\underline{36}}$,	T49N, R14 (END) TOWN: SUPERIOR
County: Doublas Latitude: 46	41.1 6.6" Longitude: 92.03 4 1.4"
	onverted or projected onto WMTM '91 creen digitizing to get WMTM coordinates
Date of Incident/Discovery: 9/23/00	Contaminant Type(s):
Quantity Released: 30 BAIRLES	Post remedial Zoning Classification :(do not abbreviate zoning terms)

WDNR BRRTS CASE	# WDNR SITE NAME ENCETOGE EDERGY SUPERIOR Page 4
2. RECEPTORS	
basements or sumps of	dial potential and actual receptors, the potential risk and their locations (i.e. both on and off site utility corridors, of nearby buildings, direct contact threat from soil, water supplies, surface waters, sediments, etc.) (For definition,
PUIENITAL	(45), Wis. Adm. Code): NEMATTI PRUEIL, - 1200 FEET EAST
If no, provide details	tions abated the potential or actual impacts to these receptors?X_YesNo in case summary. the nature of the remaining risk and the receptor at risk:
Extent Defined? 🗶	GATION INFORMATION YesNo If not, explain Why?
Soil Type(s):	Depth of Contamination: 4 FEEL 2/ SALUTNE / 125 CAMISTERN Depth to Bedrock: \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Type of Bedrock	2/SIALLING 126 CAMISTERN Depth to Bedrock: 200 FEET
Is any contaminated s	oil (unsaturated or saturated) in contact with the bedrock?Yes _X_No
List all contaminants	found in soil (regardless of ch. NR 720 standards/attach table if necessary) KADGE ORGADIES (DRO)
Measurable Free Prod	luct? Yes X No Depth/ Location: NIX
4. SOIL REMEDIA	TION INFORMATION
Remedial Action Con	npleted? YesNo s. NR 720.19 Analysis?Yes X_No If yes, attach supporting documentation.
Were Immediate or In	nterim Actions Conducted? X Yes No If yes, what action was taken? OF 1724 1720001 IMPARTED SOIL WAS EXCAUNTED AND HAULUS
Brief Description of I	Remedial Action Taken: OIT -SITE FOIL DISPOSAL
Were Soils Excavated	1? Yes No Quantity: 273 y 03 Disposal Method: Chevisto Parposa Hallari
Final Confirmation Sa	AREA AND AMPLES WERE COILETED FROM EXCAPTION AREA AND AMAYERS FOR DIED AND PAIR. Age Disposal Location. TEMBERICITY TRAIT LANDER, WEYER LANDER, WEYER LANDER, WEYER LANDER, WEYER LANDER, WEYER LANDERS, WE
Final Soil/Drill Cuttin	igs Disposal Location. FEMBEIZLING TILATE LANDERL, WEIZITAENSEIZ, WIL
Estimated volume and	d depth of in situ soils exceeding ch. NR 720 Table RCLs or site specific RCLs:
Estimated volume and	d depth of in situ soils exceeding ch. NR 746 Table 1 or Table 2 or site specific RCLs:
5. GROUNDWATE Extent of Contaminat	R INFORMATION ion Defined?YesNo _X N/A Remedial Action Completed?YesNo _X N/A
Brief Description of F	Remedial Action Taken:
# of Sample Rounds:	Depth(s) to Groundwater/Flow Direction(s):
Field Analyses?	YesNo Lab Analyses?YesNo # of Sampling points:

WDNR BRRTS CASE # WDI	NR SITE NAME EDECEDEE EDERGY SUI ENTER
	EMMENAL
# NR 141 Monitoring Wells Sampled:	# Temporary Groundwater Sampling Points Sampled:
# Recovery Sumps Sampled: # Municipal W	Vells Sampled: # Private Wells Sampled:
List all contaminants found in groundwater (regardless of ch. N	NR 140 standards/attach table if necessary)
Has DNR Been Notified of Substances in Groundwater w/o Sta	andards?YesNo If Yes, How Many?
What Substances?	
Potable Wells Within 1200 Feet of Site? Yes No [NOTE: Wells are to be included on map described in Item B8]	
Have Well Owners/Occupants Been Notified of Results?	YesNo Are notification letters attached?YesNo
Preventive Action Limit Currently Exceeded?Yes	No If yes, identify location(s)
Enforcement Standard Currently Exceeded?Yes	No If yes, identify location(s)
Measurable Free Product Detected?YesNo	pre-remediation? post-remediation?
Was Free Product remediated?YesNo Explain:	
6. OTHER CONTAMINATED MEDIA INFORMATION Have Other Media Been Impacted (either on-site or off-site)? _ contamination found in media other than soil or groundwater: Remedial Action Completed?YesNoXN/A1	Yes X No Briefly describe type and extent of all Brief Description of Remedial Action Taken:
# of Sample Rounds: Field Analyses?	YesNo Lab Analyses?YesNo
•	ral Results for all contaminants Attached?Yes
 s. NR 720.09/720.11 Generic RCLs s. NR 720.19(2) Soil Performance Standards(SPS) s. NR 720.19(3) Site Specific Standards(SSRCLs) Petroleum Storage Tank Soil Options for Closure: 	ATED SITE INFORMATION: Groundwater < s. NR 140.10 Table 1 & Table 2 Values s. NR 140.28(2) PAL Exemption s. NR 726.05(2)(b), ≥ ES Natural Attenuation Petroleum Storage Tank Groundwater Options for Closure: s. NR 746.07 ≥PAL <es investigation<="" low="" permeability="" post="" site="" td=""></es>
s. NR 746.08 Soil Screening/Post Remediation	s. NR746.07 ≥ES, Permeable Site, Post Investigation s. NR 746.08 ≥ES, Low Permeability Site, Post Remediation s. NR 746.08 ≥ES, Permeable Site, Post Remediation

A. Enforcement Actions Closed Out?YesNoXN/A Permits Closed Out?YesNoXN/A B. Proposed Post Remediation Land Use: Residential Commercial Industrial Other Specify: C. Does Remedy Include Soil Performance Standard (SPS)? YesXNo Type: Cap Soil Building Natural Attenuation of Groundwater Other Specify: Will the proposed post remediation land use be consistent with the maintenance of the SPS? Yes
C. Does Remedy Include Soil Performance Standard (SPS)?Yes
Type:CapSoilBuildingNatural Attenuation of GroundwaterOther Specify:
Proof of ch. NR 714 public notice attached?YesNo (Proof can be either the actual entire page of the newspaper with the notice OR a "Proof of Publication" from the Newspaper Publisher) Maps and photos attached documenting the cap area, construction, and/or the integrity of the cap?YesNoN/A A maintenance plan is attached for the performance standard per ss. NR 720.19(2) and 724.13(2), Wis. Adm. Code?YesNo D. Does Remedy include SSRCLs?YesNo Is post-remedial land use industrial?YesNo Is zoning change required or completed?YesNo Complete assumptions and calculations for SSRCLs attached with justification?YesNo If using EPA Soil Screening Level Model as justification for closure of sites with residual contaminated soils, are the numbers used: (circle one)site specific inputs ordefaults andare calculations and results attached?YesNo E. Does Remedy Include Natural Attenuation of Groundwater only? (i.e. there is no residual soil contamination?)YesNo
with the notice OR a "Proof of Publication" from the Newspaper Publisher) Maps and photos attached documenting the cap area, construction, and/or the integrity of the cap?YesNoN/A A maintenance plan is attached for the performance standard per ss. NR 720.19(2) and 724.13(2), Wis. Adm. Code?YesNo D. Does Remedy include SSRCLs?YesNo Is post-remedial land use industrial?YesNo Is zoning change required or completed?YesNo Complete assumptions and calculations for SSRCLs attached with justification?YesNo If using EPA Soil Screening Level Model as justification for closure of sites with residual contaminated soils, are the numbers used: (circle one)site specific inputs orsite andare calculations and results attached?YesNo E. Does Remedy Include Natural Attenuation of Groundwater only? (i.e. there is no residual soil contamination?)YesNo Mann-Kendall/Mann-Whitney U Results attached?YesNo (required for ch. NR 746 permeable sites) F. Describe how the following pathways are protected: 1) Direct Contact Pathway:
A maintenance plan is attached for the performance standard per ss. NR 720.19(2) and 724.13(2), Wis. Adm. Code?YesNo D. Does Remedy include SSRCLs?YesX_No Is post-remedial land use industrial?X_YesNo Is zoning change required or completed?YesX_No If yes, have you attached verification of the zoning for affected properties?YesNo Complete assumptions and calculations for SSRCLs attached with justification?YesNo If using EPA Soil Screening Level Model as justification for closure of sites with residual contaminated soils, are the numbers used: (circle one) site specific inputs or defaults and are calculations and results attached?YesNo E. Does Remedy Include Natural Attenuation of Groundwater only? (i.e. there is no residual soil contamination?)YesNo Mann-Kendall/Mann-Whitney U Results attached?YesNo (required for ch. NR 746 permeable sites) F. Describe how the following pathways are protected: 1) Direct Contact Pathway:
D. Does Remedy include SSRCLs?YesNo Is post-remedial land use industrial?YesNo Is zoning change required or completed?Yes
Is post-remedial land use industrial? X YesNo Is zoning change required or completed?Yes _X _NoIf yes, have you attached verification of the zoning for affected properties?YesNo Complete assumptions and calculations for SSRCLs attached with justification?YesNo If using EPA Soil Screening Level Model as justification for closure of sites with residual contaminated soils, are the numbers used: (circle one)site specific inputs or or
Complete assumptions and calculations for SSRCLs attached with justification?YesNo If using EPA Soil Screening Level Model as justification for closure of sites with residual contaminated soils, are the numbers used: (circle one) site specific inputs or defaults and are calculations and results attached?YesNo E. Does Remedy Include Natural Attenuation of Groundwater only? (i.e. there is no residual soil contamination?)YesNo Mann-Kendall/Mann-Whitney U Results attached?YesNo (required for ch. NR 746 permeable sites) F. Describe how the following pathways are protected: 1) Direct Contact Pathway:
If using EPA Soil Screening Level Model as justification for closure of sites with residual contaminated soils, are the numbers used: (circle one) site specific inputs or defaults and are calculations and results attached? Yes No E. Does Remedy Include Natural Attenuation of Groundwater only? (i.e. there is no residual soil contamination?) Yes No Mann-Kendall/Mann-Whitney U Results attached? Yes No (required for ch. NR 746 permeable sites) F. Describe how the following pathways are protected: 1) Direct Contact Pathway:
(circle one) site specific inputs or defaults and are calculations and results attached?YesNo E. Does Remedy Include Natural Attenuation of Groundwater only? (i.e. there is no residual soil contamination?)Yes
Mann-Kendall/Mann-Whitney U Results attached?YesNo (required for ch. NR 746 permeable sites) F. Describe how the following pathways are protected: 1) Direct Contact Pathway:
1) Direct Contact Pathway:
2) Groundwater:
8. PROPOSED INSTITUTIONAL CONTROLS (See PUB. RR-606) Unrestricted
Deed Restriction (required for industrial cleanup level/ and when performance standard requires maintenance plan)
Deed Notice For public street or highway right of way contamination, provide notice as required See item (E) in the case summary
checklist
RR GIS Registry of Closed Sites Other
Conv. of Droft Dood Dooumant(s) attached? Vos No (see PD web site: http://www.dnr.state.wi.us/org/aw/rr/index.html)

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FIRST REVIEW DATE:	[] Approved [] Denied	
(Signature) (Signature)	(Signature)	(Signature)
SECOND REVIEW DATE:	[] Approved [] Denied	
(Signature) (Signature)	(Signature)	(Signature)
COMMITTEE RECOMMENDATION:		
Closure Denied, Needs More: Investigation Groundwater Monitoring Soil Remediation Groundwater Remediation Documentation of Soil Landspre Specific Comments:	eading or Biopile Destiny	

APPENDIX B: SOIL DISPOSAL MANIFESTS

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APPENDIX C: LABORATORY ANALYTICAL REPORTS

330 SO. CLEVELAND ST. CAMBRIDGE, MN 55008 LAB (612) 689-2175 METRO (612) 444-9270 FAX (612) 689-3660

MIDWEST ANALYTICAL SERVICES

ERIOR LABORATORIES

MINNESOTA CERTIFIED LABORATORY NUMBER 027-059-156



205 WEST 2ND STREET SUITE 105 DULUTH, MN 55802 LAB (218) 722-9884 FAX (218) 722-9964

Analytical Report

December 12, 2000

Natural Resources Engineering

13 W. Superior Street Duluth, MN 55802

Chain of Custody

Project ID: Line 5/6 X

Chain of Custody: 32007

Date Received: 11/22/2000 2:17:13 PM by John Delahanty

Sample Information

SamplelD	Description	Date	Matrix
63155	SW-1 2'	: 11/20/2000	Soil
63156	SW-2 2'	11/22/2000	Soil
63157	B-1 4'	11/22/2000	Soil
63158	B-2 4'	11/22/2000	Soil

Analytical results are listed on the following page(s).

Reviewed By

e Hoppenrath

Organic Chemist

December 12, 2000 Page 2 COC 32007

Date Analyzed: 11/30/00

Parameter:	Total Hydrocarbons as DRO	Percent Moisture
Units: MDL:	(mg/kg) 10.0	(%)
63155 SW-1 2'	14.4	25.6
63156 SW-2 2'	BDL	26.8
63157 B-1 4'	BDL	27.6
63158 B-2 4'	16.9	28.6

BDL = Below Detection Limit, MDL = Method Detection Limit

December 12, 2000 Page 3 COC 32007

Date Analyzed: 12/01/00

Analyte	63155 SW-1 2' (mg/kg)	63156 SW-2 2' (mg/kg)	63157 B-1 4' (mg/kg)	63158 B-2 4' (mg/kg)	Report Limit (mg/kg)
Acenaphthylene	ND	ND	ND	ND	0.20
Acenaphthene	ND	ND	ND	ND	0.20
Anthracene	ND	ND	ND	ND	0.20
Benzo(a)anthracene	ND	ND	ND	ND	0.20
Benzo(b)fluoranthene	ND	ND.	ND	ND	0.20
Benzo(k)fluoranthene	ND	ND	ND	ND	0.20
Benzo(g,h,I)perylene	ND	ND	ND	ND	0.20
Benzo(a)pyrene	ND	ND	ND	ND	0.20
Carbazole	ND	ND	ND	ND	0.20
Chrysene	ND	ND	ND	ND	0.20
Dibenz(a,h)anthracene	ND	ND	ND	ND	0.20
Dibenzofuran	ND	ND	ND	ND	0.20
Fluoranthene	ND	ND	ND	ND	0.20
Fluorene	ND	ND	ND	ND	0.20
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	0.20
2-Methylnaphthalene	ND	ND	ND	ND	0.20
Naphthalene	ND	ND	ND	ND	0.20
Phenanthrene	ND	ND	ND	ND	0.20
Pyrene	ND	ND	ND	ND	0.20

ND = Not detected at the report limit.

PAH analysis was subcontracted to an outside laboratory.

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DULUTH OFFICE:

330 SO. P.O. BOX CAMBRI

330 SO. CLEVELAND ST. P.O. BOX 349 CAMBRIDGE, MN 55008 LAB (612) 689-2175 FAX (612) 689-3660

REQUEST FOR ANALYSIS

(Instructions on Back of Form)

205 WEST 2ND STREET DULUTH, MN 55802 PHONE (218) 722-9884 FAX (218) 722-9964

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330 SO. CLEVELAND ST. CAMBRIDGE, MN 55008 LAB (612) 689-2175 METRO (612) 444-9270 FAX (612) 689-3660

MIDWEST ANALYTICAL SERVICES

RIOR LABORATORIES

MINNESOTA CERTIFIED LABORATORY NUMBER 027-059-156



205 WEST 2ND STREET SUITE 105 DULUTH, MN 55802 LAB (218) 722-9884 FAX (218) 722-9964

Analytical Report

December 19, 2000

Natural Resources Engineering

13 W. Superior Street Duluth, MN 55802

Chain of Custody

Project ID: Line 5/6 X

Chain of Custody: 32466

Date Received: 11/29/2000 4:05:51 PM by John Delahanty

Sample Information

SampleID	Description	Date	Matrix
63403	SW-4 2'	11/27/2000	Soil
63404	B-3 3.5'	11/27/2000	Soil

Analytical results are listed on the following page(s).

Reviewed By

ne Hoppenrath

Organic Chemist

December 19, 2000 Page 2 COC 32466

Date Analyzed: 12/06/00

Parameter:	Total Hydrocarbons as DRO	Percent Moisture
Units: MDL:	(mg/kg) 10.0	(%)
63403 SW-4 2'	BDL	28.3
63404 B-3 3.5'	33.1	25.6

BDL = Below Detection Limit, MDL = Method Detection Limit

December 19, 2000 Page 3 COC 32466

Analyte	63403 SW-4 2' (mg/kg)	63404 B-3 3.5' (mg/kg)	Report Limit (mg/kg)				
Acenaphthene	ND	ND	0.20				
Acenaphthylene	ND	ND	0.20				
Anthracene	ND	ND	0.20				
Benzo(a)anthracene	ND	ND	0.20				
Benzo(b)fluoranthene	ND	ND	0.20				
Benzo(k)fluoranthene	ND	ND	0.20				
Benzo(g,h,l) perylene	ND	ND	0.20				
Benzo(a)pyrene	ND	ND	0.20				
Carbazole	ND	ND	0.20				
Chrysene	ND	ND	0.20				
Dibenz(a,h)anthracene	ND	ND	0.20				
Dibenzofuran	ND	ND	0.20				
Fluoranthene	ND	ND	0.20				
Fluorene	ND	ND	0.20				
Indeno(1,2,3-cd)pyrene	ND	ND	0.20				
2-Methylnaphthalene	ND	ND	0.20				
Naphthalene	ND	ND	0.20				
Phenanthrene	ND	ND	0.20				
Pyrene	ND	ND	0.20				

ND = Not detected at the report limit.

PAH analysis was subcontracted to an outside laboratory.

ANALYTICAL SERVICES

CHAIN OF CUSTODY RECORD

MO 32466

P.O. BOX 349

330 SO. CLEVELAND ST. CAMBRIDGE, MN 55008 LAB (612) 689-2175

REQUEST FOR ANALYSIS

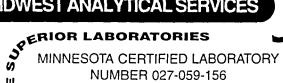
(Instructions on Back of Form)

DULUTH OFFICE: 205 WEST 2ND STREET **DULUTH, MN 55802** PHONE (218) 722-9884-FAX (218) 722-98-4

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330 SO. CLEVELAND ST. CAMBRIDGE, MN 55008 LAB (612) 689-2175 METRO (612) 444-9270 FAX (612) 689-3660

MIDWEST ANALYTICAL SERVICES



205 WEST 2ND STREET SUITE 105 DULUTH, MN 55802 LAB (218) 722-9884 FAX (218) 722-9964

December 28, 2000

Analytical Report

Natural Resources Engineering

13 W. Superior Street Duluth, MN 55802

Chain of Custody

Project ID: Line 5/6X

Chain of Custody: 32467

Date Recieved: 12/6/2000 3:21:24 PM by Anne Hoppenrath

Sample Information

SampleID	Description	Date	Matrix
63691	SW-3 (1')	12/4/2000	Soil

Analytical results are listed on the following page(s).

Reviewed By

Anne Hoppenrath

Organic Chemist

December 28, 2000 Page 2 COC 32467

Date Analyzed: 12/20/00

Parameter:	Total Hydrocarbons as DRO	Percent Moisture
Units: MDL:	(mg/kg) 10.0	(%)
63691 SW-3 (1')	247	27.3

Analyte	63691 SW-3 (1') (mg/kg)	Report Limit (mg/kg)
Acenaphthene	ND	0.97
Acenaphthylene	ND	0.97
Anthracene	ND	0.97
Benzo(a)anthracene	ND	0.97
Benzo(b)fluoranthene	ND	0.97
Benzo(k)fluoranthene	ND	0.97
Benzo(g,h,l) perylene	ND	0.97
Benzo(a)pyrene	ND	0.97
Carbazole	ND	0.97
Chrysene	ND	0.97
Dibenz(a,h)anthracene	ND	0.97
Dibenzofuran	ND	0.97
Fluoranthene	ND ND	0.97
Fluorene	ND	0.97
Indeno(1,2,3-cd)pyrene	ND	0.97
2-Methylnaphthalene	ND	0.97
Naphthalene	ND .	0.97
Phenanthrene	ND	0.97
Pyrene	ND	0.97

ND = Not detected at the report limit.
PAH analysis was subcontracted to an outside laboratory.

MIDWEL VALYTICAL SERVICES

330 SO. CLEVELAND ST. P.O. BOX 349 CAMBRIDGE, MN 55008 LAB (612) 689-2175

FAX (612) 689-3660

CHAIN OF C'__TODY RECORD

REQUEST FOR ANALYSIS
(Instructions on Back of Form)

M9 32467

DULUTH OFFICE:

205 WEST 2ND STREET DULUTH, MN 65802 PHONE (218) 722-9884 FAX (218) 722-9964

SAMPLER NAME: SHADED AREAS FOR A WIND WAR PARTCH PROJECT I.D.: SAMPLER GRO (Includes BTEX) SIGNATURE: Pb (Dss. On TOTAL) ACA48 METALS PRESERVATIVE Luy PARTCH REMARKS: 800 SZ / 738 OBOD TO BE Voc (MNV465) Fou OF Tou PID = SENT TO: NO. OF CONTAINERS **MATRIX** SAMPLE IDENTIFICATION DATE SOIL SOIL BAG A HWO, 10E 0. COMP LABORATORY L'ELD'NO GRAB SAMPLE SAMPLE 12/4/5 3 15:20 SN-3 Relinquished by: (Signature) Date / Time Date / Time Received by: (Signature) CHECK HERE FOR DRINKING 145/10 WATER DETECTION LIMITS Received by: (Signature) Reinquished by: Signature) Date / Time Received by: (Signature) TURNARQUND TIME REQUIRED: NORMAL | RUSH Received for Californioly by: (Signature) Contents Temperature: Relinquished by: (Signature) Date / Time DATE REQUIRED: 12/19/00