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### **Tab 1- Regional Specific**

Figure 1- Revision Process Flowchart  
Revision Process  
Revision Request Form  
Revision Record  
Operator Identification  
Qualified Individual  
Response Zone Description

### **Tab 2- Company/Cooperative Equipment Lists**

Enbridge Emergency Response Equipment and Boat Inventories  
Station Response Equipment Guidelines  
Winter Spill Equipment  
Primary Water Recovery Equipment  
Mutual Aids/Co-ops  
OSRO (Oil Spill Response Organization)  
Canadian Cross Border Emergency Response Equipment – Gretna Manitoba  
Qualified Individuals Notification  
Emergency Response Trained Personnel

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Pipeline System Map  
Main Line Valves  
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Emergency Response/Worst-Case Discharge Location Map  
Worst-Case Discharge Inset Maps  
Form F- Release Alert  
Site Safety Plot Plan

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Control Point Map Record

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### **Appendix**

Info Summary  
Operator Identification  
Response Zone Description Reference  
Consistency with National and Area Contingency Plans  
Calculation of Worst-Case Discharge  
Identification of Environmentally Sensitive Areas  
Basis for Determination of Significant and Substantial Harm



# Region Specific

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## Region Specific

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*Figure 1- Revision Process Flowchart*

Revision Process.....	1
Revision Request Form.....	2
Revision Record.....	3
Operator Identification & Qualified Individual.....	4
Response Zone Description.....	5
Superior Region (#866) Description	
Counties included in the Chicago Region Response Zone	
Pipeline Miles	

### Revision Process Flowchart

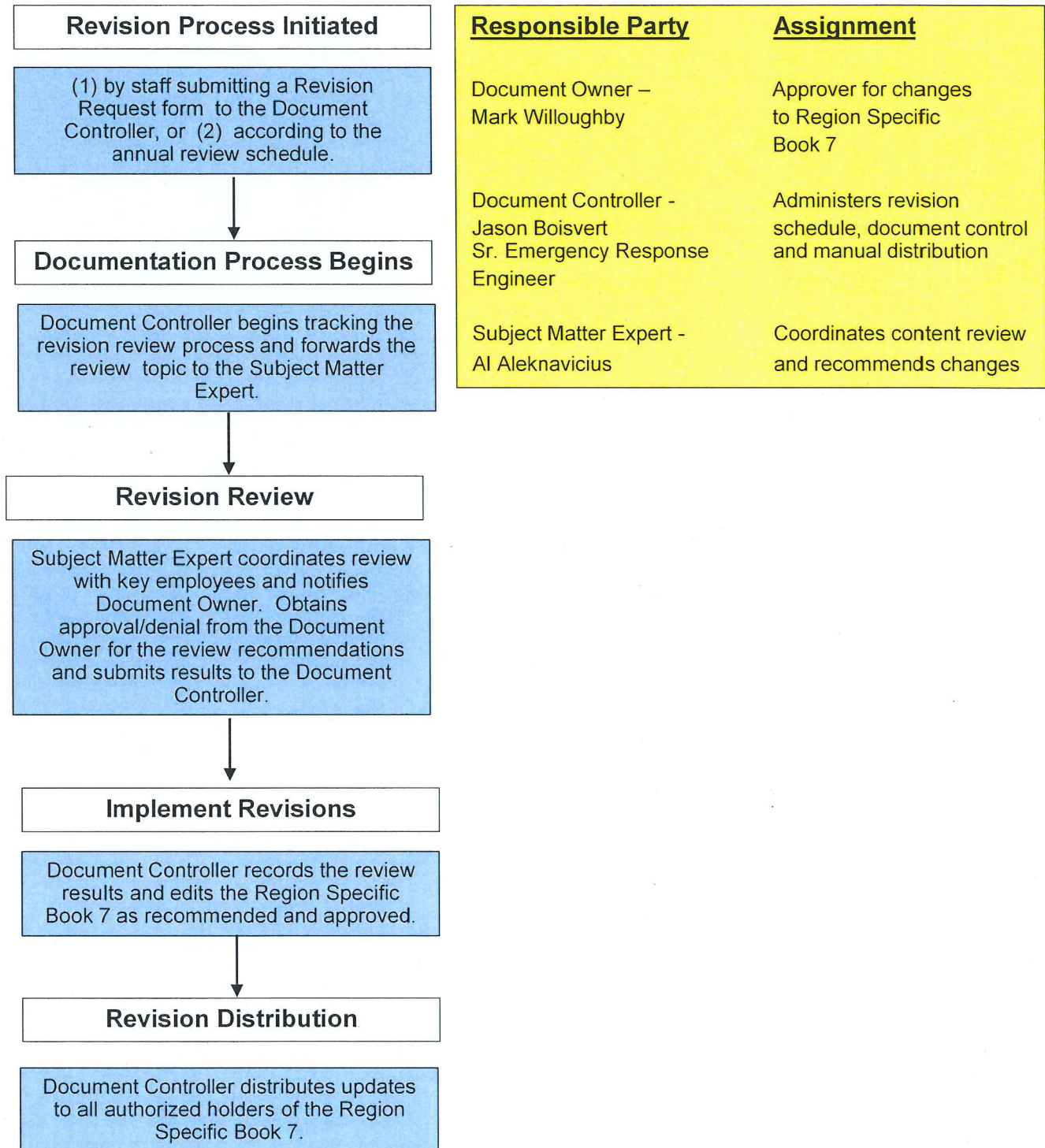


Figure 1



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## REVISION PROCESS

Enbridge requires a review and update to the regional *Emergency Response Plan (ERP)* immediately when a substantial change occurs. The following operating condition changes would be cause for a modification:

- Extension of existing pipeline;
- Construction of new pipeline;
- Type of oil transported;
- Worst-Case Discharge;
- Qualified Individual;
- Response Procedures;
- Response Equipment Requirements; or
- Circumstances that may influence full implementation of the ERP.

Annually, as HCA Management Plans are reviewed and HCA maps and tables are updated all maps and worst-case discharge changes will be incorporated into the regional *Emergency Response Plans*. Review of the O&MP will ensure that the most accurate drawings and references are included in Book 7: Emergency Response.

In the event of a revision requirement before the annual review, a revision request may be submitted for consideration by completing and sending a Revision Request Form to the Manual Custodian of this Plan (Emergency Response Coordinator in the Superior Office). As required of *CFR49 §194.121*, within thirty days of a revision incorporated into the *Emergency Response Plan*, Pipeline and Hazardous Materials Safety Administration (PHMSA) will be notified.

The Revision Request Form is examined and when integrated, it is listed on the Annual Revision Sheet with the revisions sent to respective manual holders to update their manuals. The Revision Record within each manual is to be signed and dated whenever a revision is issued.



**Revision Request Form**

**Photocopy this form and return the original to your manual.**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Subject Title: \_\_\_\_\_

Section No.: \_\_\_\_\_ Subsection No.: \_\_\_\_\_ Page No.: \_\_\_\_\_

Date Issued: \_\_\_\_\_ (printed at bottom left-hand corner of page)

Existing wording: \_\_\_\_\_

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Proposed wording: \_\_\_\_\_

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Reason for change: \_\_\_\_\_

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Issued: 10/31/11

Submit Request Form to the Document Controller



**REVISION RECORD**

Use this Revision Record to document the insertion of all revisions. After inserting a revision into your manual, enter the date inserted and your signature. Discard old pages. Detailed supporting documents (Revision Request Form) for each of the revisions are retained in the Superior Region Office.

Revision	Date Requested	Date Inserted	Signature
01		6-5-09	√
02		1-30-10	
03	9/10/11	1-6-12	Cheryl Allen
04	10-15-12	10-30-12	Cheryl Allen
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## OPERATOR IDENTIFICATION

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(713) 653-8711 (Fax)

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NOTE: For overview of **emergency procedures** and **contact information** refer to the *Enbridge Emergency Response Directory (ERD)*.



## ENBRIDGE U.S. INC. RESPONSE ZONE DESCRIPTION

The Enbridge Liquids Pipeline System (Lakehead System) consists of four response zones. These response zones represent the regional boundaries designated in the normal operating structure. The response zones include:

- **Superior Region - #866** is comprised of-  
**Enbridge Energy, Limited Partnership (Lakehead)**  
**Enbridge Pipelines (Southern Lights) L.L.C.**
- Chicago Region
- Cushing Region
- Enbridge Pipelines North Dakota

### SUPERIOR REGION RESPONSE ZONE (#866)

The Superior Region response zone consists of two entities: Enbridge Energy, Limited Partnership and Enbridge Pipelines (Southern Lights) L.L.C. This response zone begins at the Canadian border near Neche, North Dakota and continues across northern Minnesota into Wisconsin and Michigan. The first section of this response zone includes seven pipelines (Lines 1, 2, 3, 4, 13, 65, and 67) that transport crude oil and natural gas south and diluent condensate north. The response zone continues south of Superior to Ladysmith, WI with four pipelines (Lines 6A, 13, 14, and 61) transporting crude oil and diluent condensate. A 30-inch pipeline (Line 5) originates in Superior, WI that transports crude oil and natural gas liquids west across northern Wisconsin, the Upper Peninsula of Michigan and into lower Michigan with the Superior Region ending south of Indian River, MI.

The Superior Region system is comprised of eleven pipelines with adjoining facilities:

*Enbridge Energy, Limited Partnership (Lakehead)* includes:

- **Lines 1** (18"/20"), **2** (26"), **3** (34"), **4** (36"/48"), and **67** (36") extend from the US/Canadian border near Gretna, Manitoba to Superior, Wisconsin;
- **Line 65** (20") begins at the US/Canadian border near Gretna, Manitoba and terminates at Clearbrook, Minnesota;
- **Line 5** (30") starts at Superior, Wisconsin extends north of Lake Michigan, and terminates at Sarnia, Ontario. The Superior Region ends south of the Indian River, Michigan station at MP 1544.25.
- **Lines 6A** (34") and **14** (24") begin at Superior, Wisconsin and traverse south of the Great Lakes, with Line 14 terminating at Mokena, Illinois and Line 6A terminating at Griffith, Indiana. The Superior Region ends at the Ladysmith, Wisconsin station for both lines.
- **Line 61** (42") (Southern Access) extends from Superior, Wisconsin to Flanagan, Illinois. The Superior Region ends at Ladysmith, Wisconsin.

*Enbridge Pipelines (Southern Lights) L.L.C.:*

- **Line 13** (18"/20") runs from Manhattan, Illinois to the US/Canadian border near Gretna, Manitoba. The Superior Region includes the segment north of Ladysmith, Wisconsin.



The Superior Region system is comprised of:

- Approximately 2,937 miles of pipeline, with pipe diameters ranging from 18 to 48 inches;
- 17 crude oil and diluent pump stations and 10 natural gas pump stations located along the pipe; and
- Two tank facilities with a total of 49 tanks (40 tanks are located at Superior, WI (8.7 million barrels storage capacity); nine at Clearbrook, MN (1.3 million barrels storage capacity)).

Counties included in the Superior Region response zone are:

North Dakota	Minnesota	Wisconsin	Michigan
Pembina	Aitkin	Ashland	Cheboygan
	Beltrami	Bayfield	Delta
	Carlton	Douglas	Dickinson
	Cass	Iron	Emmet
	Clearwater	Rusk	Gogebic
	Hubbard	Sawyer	Iron
	Itasca	Washburn	Mackinac
	Kittson		Marquette
	Marshall		Otsego
	Polk		Schoolcraft
	Red Lake		
	St. Louis		

This response zone includes the following pipelines:

Line	Pipeline Sections	Begin Stationing	End Stationing	Miles	Pipeline Diameter	Product
1	Gretna, Manitoba to Clearbrook, MN	0	716,232	135.7	20"	Crude Oil & Natural Gas Liquids
1	Clearbrook, MN to Superior, WI	716,232	1,712,883	188.8	18"	Crude Oil & Natural Gas Liquids
2	Gretna, Manitoba to Superior, WI	0	1,712,887	324.4	26"	Crude Oil
3	Gretna, Manitoba to Superior, WI	0	1,712,887	324.4	34"	Crude Oil
4	Gretna, Manitoba to Donaldson, MN (MP814)	0	168,408	31.9	36"	Crude Oil
4	Donaldson, MN ( to Viking, MN	168,041	213,109	8.5	48"	Crude Oil
4	Donaldson, MN to Viking, MN (MP 834)	213,461	322,423	20.6	36"	Crude Oil
4	Donaldson, MN to Plummer, MN	320,971	393,021	13.6	48"	Crude Oil
4	Viking, MN to Plummer, MN (MP 874)	394,395	527,703	25.2	36"	Crude Oil
4	Viking, MN to Clearbrook, MN	526,404	545,840	3.7	48"	Crude Oil
4	Plummer, MN to Clearbrook, MN (MP 909)	547,141	647,345	19.0	36"	Crude Oil
4	Plummer, MN to Clearbrook, MN	645,406	716,261	13.4	48"	Crude Oil
4	Clearbrook, MN to Cass Lake, MN Loop (MP 940)	716,411	878,927	30.8	36"	Crude Oil
4	Cass Lake, MN Loop (MP939.87 to MP953.04)	877,981	946,695	13.1	48"	Crude Oil
4	Clearbrook, MN to Deer River, MN Loop (MP 996)	946,641	1,059,570	21.4	36"	Crude Oil
4	Deer River, MN Loop (MP974.73 to MP995.83)	(127,102)	1,173,196	22.0	48"	Crude Oil
4	Cass Lake, MN to Floodwood, MN Loop (MP 1044)	1,173,151	1,306,304	25.2	36"	Crude Oil

\*Diversion Stationing



Line	Pipeline Sections	Begin Stationing	End Stationing	Miles	Pipeline Diameter	Product
4	Floodwood, MN Loop (MP1019.73 to MP1044.33)	1,299,654	(47,009)	24.6	48"	Crude Oil
4	Deer River, MN to Wrenshall, MN Loop (MP 1080)	1,429,072	1,512,231	15.7	36"	Crude Oil
4	Wrenshall, MN Loop (MP1060.11 to MP1079.91)	1,512,091	1,616,806	20.0	48"	Crude Oil
4	Wrenshall, MN Loop to Superior, WI ( MP 1098)	1,616,840	1,712,760	19.8	36"	Crude Oil
Southern Lights 13	Gretna, Manitoba to Clearbrook, MN	0	715,074	135.4	18"	Diluent Condensate
Southern Lights 13	Clearbrook, MN to Superior, WI	0	1,003,300	190	20"	Diluent Condensate
Southern Lights 13	Superior, WI to Ladysmith, WI	0	524,052	99	20"	Diluent Condensate
Alberta Clipper 67	Gretna, Manitoba to Superior, WI	0	1,723,800	326.7	36"	Crude Oil
5	Superior, WI to Mackinaw, MI	0	1,993,306	377.5	30"	Crude Oil & Natural Gas
5	Straits of Mackinac East and West (*2)	1,993,306	2,015,016	8.2	20"	Crude Oil & Natural Gas
5	Straits of Mackinac to Lewiston Pump Station MP1544.3	2,015,016	2,378,371	68.8	30"	Crude Oil & Natural Gas
6A	Superior, WI to MP97.23 (Ladysmith, WI)	0	513,368	97.2	34"	Crude Oil
14	Superior, WI to MP97.23 (Ladysmith, WI)	0	512,719	97.1	24"	Crude Oil
61	Superior, WI to MP97.23 (Ladysmith WI)	0	523,170	99.08	42"	Crude Oil
LSr (65)	Gretna, Manitoba to Clearbrook, MN	0	721,140	136.6	20"	Crude Oil
	<b>Total Pipeline Miles</b>			<b>2937.38</b>		

\*Diversion Stationing



Company/Co-Op  
Equipment Lists



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## Company/Cooperative Equipment Lists

### **Company-**

Superior Terminal Inventory.....	2
Clearbrook Terminal Inventory.....	3
Thief River Falls PLM Inventory.....	4
Bemidji PLM Inventory.....	6
Superior PLM Inventory.....	9
Ironwood PLM Inventory.....	11
Escanaba PLM Inventory.....	13
Station Response Equipment Guidelines.....	18
• Manistique Station	
• Gould City Station	
• St. Ignace Valve	
• Mackinac Station	
• Indian River	
Winter Spill Equipment.....	22
Primary Water Recovery Equipment.....	23

### **Other-**

#### **Government, Contractors or other Cooperative Resources-**

Twin Ports Mutual Aid Group.....	25
OSRO.....	28

#### **Canadian Cross Border Emergency Response Equipment**

Gretna Manitoba.....	29
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<b>Qualified Individuals Notification.....</b>	<b>41</b>
<b>Emergency Response Trained Personnel.....</b>	<b>42</b>



## ENBRIDGE EMERGENCY RESPONSE EQUIPMENT

As required in the Federal Response Framework and Area Contingency Plans, Enbridge owns and maintains extensive emergency response equipment throughout its liquid pipeline systems. This equipment is located at all area office locations as well as other strategic locations along the system to ensure a prompt containment and recovery response in the event of a pipeline release. It is the responsibility of each Area Supervisor/Maintenance Team Leader to ensure that the equipment is inventoried annually and restocked as resources are expended.

Further company owned and maintained equipment is stored in listed trailers at local area storage facilities for immediate response until additional resources arrive. These resources are maintained and restocked by the respective area supervisors as needed.

Temporary storage is available via company owned and operated storage tanks throughout the pipeline system. Recovered product can often be off loaded at pump stations and re-injected into the pipeline. Numerous portable storage tanks are included in emergency response equipment inventories and in many areas, the company owns and maintains vacuum recovery trucks. Further details of this storage capacity can be found in the water recovery equipment inventory.

Enbridge has Master Service Agreements with Garner Environmental Services Inc. and Bay West to supplement resources in the event of a worst-case discharge scenario. Both of these entities are United States Coast Guard (USCG) classified Oil Spill Response Organizations (OSRO). A copy of Garner's OSRO equipment inventory is kept on file at the regional offices.

Numerous other HAZWOPER trained contractors may be utilized for emergency response and their contact information and resources can be found listed by response zone in the *Enbridge Emergency Response Directory* (ERD). Enbridge does not retain equipment inventory lists for all non USCG classified contractors.



**SUPERIOR TERMINAL EMERGENCY RESPONSE INVENTORY**

QTY	DESCRIPTION
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**FIRE BARN**

6	Barricades
2	Foam Trailers - 700 Gal. & 500 Gal.
17	Barrels AFFF Foam
13	50 # Pails of Dry Chemical Fire Extinguishing Agent
50	Bundles Sorbent Pads - 100 / Bundle
15	Bags 8" x 10' Sorbent Booms - 40'/Bag
45	2 1/2" x 50' Fire Hose

**SUPERIOR TERMINAL -**

**CONTINGENCY BUILDING**

10	Bags 8" x 10' Sorbent Booms - 40'/Bag
13	Bundles Sorbent Pads - 100/Bundle
4	#2 Shovels
2	Flat Shovels
4	Aluminum Scoop Shovels
1	Sledge Hammer
15	Bundles of 5 Fence Posts
2	Scrub Brushes- No Handles
3	Squeegees- No Handles
10	Extra Squeegee Blades
4	Brass Scrapers
5	Prs. Chest Waders
1	Spill Kit
3	Sheets of 1/2" Plywood
1	Sheet of 2" Foam Insulation
2	Sheets of Hardboard
19	12' 2X4s & 6s
2	Pick Axes
7	50' x 3' Plastic Hose
3	50' x 3' Wire Fence
1	Roll Orange Safety Fence
4	15" x 8' Sorbent Booms

**SUPERIOR TERMINAL**

**MAINTENANCE SHOP**

9	Aluminum Scoop Shovels
4	Rakes
2	Fan Rakes
1	Pitch Forks
2	#2 Shovels
3	Flat Shovels
1	Aluminum Square Shovels
3	Squeegees



**MAINTENANCE SHOP cont.**

QTY	DESCRIPTION
3	Rescue Harnesses
1	100' Rope
2	Brooms
5	10 Minute Emergency Escape Packs

**CLEARBROOK TERMINAL EMERGENCY RESPONSE INVENTORY**

**MAIN BUILDING**

5	Escape Packs
3	30-Minute Scott SCBA's
1	Tank Rescue Equipment
4	Harness'
8	Assorted Fire Retardant Coveralls
2	Squeegees
4	Snow Shovels
7	Windsocks

**CLEARBROOK TERMINAL**

**UTILITY BUILDING**

1	500 Gal. Foam Trailer (Full)
4	Squeegees
2	Aluminum Scoop Shovels
4	Square Shovel
2	Leaf Rakes
2	Garden Rake
1	Sledge Hammer
1	Axe
3	Ice Scrapers
20	2 ½" Fire Hose (50' Rolls)
5	1 ¼" Fire Hose (50' Rolls)
13	50# Pails of Purple K Fire Extinguisher Agent
1	55 Gal. Barrel of 3%-6% Foam
2	3" Suction Hose (10' Piece)
1	2" Suction Hose (10' Piece)
2	3" Discharge Hose (50' Rolls)
3	2" Discharge Hose (50' Rolls)
100'	Rope
1	Pressure Washer/Steamer
1	2" Diaphragm Pump
1	1" Diaphragm Pump
1	Generator
2	Brooms



**CLEARBROOK TERMINAL**

**METERING BUILDING**

QTY	DESCRIPTION
7	Bags of Sorbent Pads (100/Bag)
28	3"x 8' Sorbent Booms
5	Bags of 8"x 10' Sorbent Booms (40' /Bag)
5	Box of Tyvek Coveralls (25/Box)
3	Brooms
	2 Pneumatic Air Movers

**CLEARBROOK TERMINAL**

**PRESSURE WASHER BUILDING**

3	Squeegees
2	Brooms
1	Pressure Washer/Steamer

**CLEARBROOK TERMINAL**

**OLD COLD STORAGE BUILDING**

20	Rolls of Snow Fence (Orange)
50	Fence Posts

**THIEF RIVER FALLS PLM ER INVENTORY**

**PLM COMMAND POST**

1	Emergency Response Directory (ERD)
10	Contractor Handbook
1	Minnesota Atlas
2	Flashlights
10	Gloves
1	Earplug
16	Safety goggles
1	Flare Gun and Cartridges
4	Pipeline Strip Maps
2	Hard Hats
3	Trash Bags
2	Caution Tape

**THIEF RIVER FALLS**

**PLM BOOM TRAILER INVENTORY**

3,000'	12" Floating Containment Boom
2	8' Oil Skimmers
8	Adjustable Boom Deflectors
6	Anchor Marker Buoys with Connectors
10	Anchors
15	Life jackets
12	Totes of Nylon Rope (Various Lengths - 25', 50', 100', 150'), with Quick Connect Fittings
1	Sledge Hammer



**PLM LEAK TRAILER cont.**

<b>QTY</b>	<b>DESCRIPTION</b>
8	Drive-in Post Anchors
1	Metal Stretcher
2	Stop / Slow Signs
1	Roll Plastic Fence
2	Stihl Chainsaws with Ice Blades
2	Quarts Chain Caw Oil
2	Pair Chain Saw Chaps
2	Chain Saw Hard Hats with Ear Muffs and Face Shields Attached
1	Pair Ice Tongs
4	Slotted # 2 Shovels
2	# 2 Shovels
1	Bolt Cutter
1	Axe
1	Post Pounder for Fencing
1	Staple Gun
1	3" Skimmer with Air Hose and Controls
4	Face Shields with Hard Hat Adapters
8	Sets Rain Gear
1	Roll Reflective Tape
2	Reflective Vests
1	12V Spotlight
2	AC Trouble Lights
12	Pair Rubber Gloves
8	Pair NGL Sleeves
1	Windsocks with Attachments for Mounting on Leak Trailer
8	Flashing Lights with Holders
5	Harnesses
6	NGL Aprons
10	Pair Insulated Rubber Gloves
12	Security Barricades
25	Safety Cones
1	Fire Extinguisher -30# Ansul
2	Bundles, Absorbent Pads
1	Eskimo ice auger
36	Decontamination Suits
1	Poly Sprayers for Decon
4	55 Gal. Containers with Covers
1	Box of Rags
1	25' Extension Cord
18	"Bird Chasers" - Wildlife Deterrents
1	Aerial Owl Predator
6	Rolls Plastic Sheeting
9	Pairs, Ice Picks of Life
1	Eagle Predator
6	Scrub Brushes
4	Brooms



**THIEF RIVER FALLS PLM LEAK TRAILER cont.**

QTY	DESCRIPTION
3	Fire Blankets
	Assorted Kamlock Fittings
	Assorted Lumber – 2 x 4 x 12, 2 x 6 x 12
1	Roll 5/8' Rope
6	Squeegees



**BEMIDJI PLM ER INVENTORY**

**PLM MISCELLANEOUS**

2	3000 Watt Generator
1	3500 Watt Generator
4	3" Gas Water Pump
2	2" Gas Water Pump
12	2" Electric Water Pump
3	3" Hydraulic Oil Pump
2	3" Air Oil Pump
25	2" X 50' Discharge Water Hose
8	3" x 50' Water Discharge Hose
20	3" x 20' Water Suction Hose
6	2" x 20' Water Suction Hose
22	3" X 20' Oil Suction Hose
13	2" X 20' Oil Suction Hose
24	2" X 8' Oil Sorbent Mini Booms
5	50' Fast Water Boom
20	Pairs of Ice Cleats
7	Rolls of 3/8" Twist Poly Rope 600'/Roll
20	30" Squeegee's
4	Drums for 4' Skimmer
4	Drums for 8' Skimmer
80	8" x 10' Oil Sorbent Boom
24	Bags 17" x 19" Oil Sorbent Pads 100/Bag
2	38" x 144' Oil Sorbent Rolls



**BEMIDJI**

**PLM BOOM TRAILER INVENTORY - # 220**

360'	Sorbent Boom
500'	Floating Oil Containment Boom
350'	18" Long Skirt Containment Boom
100'	12" Long Skirt Containment Boom
2	8" Barrel Skimmers
2	Bridge Pier Bridles
8	Boom Couplers
7	Buoy Markers
19	Tow Bridles
6	Life Jackets
1	Windsock
1	First-Aid Kit



**BEMIDJI**

**PLM LEAK TRAILER #109**

QTY	DESCRIPTION
10	Bundles Sorbent Pads
200'	Sorbent Boom
4	Road Barricades W/Flashing Lights
12	Pair Iceman Boots
10	Pair Hip Boots
1	Generator
1	Axe
1	Sledge Hammer
1	2' Water Pump
1	Grounding Rod/Probe/Fence Post
8	Shovels
1	First-Aid Kit
12	Protective Sleeves
5	Pair Insulated Gloves
10	Sets Fire Retardant Rain Gear
20	Pair Rubber Gloves
5	Face Shields
5	Aprons
2	Scott Air Packs
10	Reflective Vests
1	Air Horn
2	Fire Blankets
4	Danger Signs
	Incident Command System Vests
1	12-Volt Spot Lights
2	Windsock
	Assortment of Reflective Tape and Caution Tape
21	Pair of Coveralls
7	Winter Coats
1	Winter Bib
2	Portable Generators
1	Box Scare Balloons For Wildlife
10	100' Safety Signs
6	Cold Zone Signs
6	Warm Zone Signs
6	Hot Zone Signs
2	Emergency Response Signs
1	Stretcher
12	Fence Posts
1	Roll Fence
2	2" Rigid Suction Hose
2	3" Rigid Suction Hoses
1	2" Discharge Hose
1	Chain Saw



**PLM LEAK TRAILER #109 cont.**

QTY	DESCRIPTION
1	Scare Eagle for Wildlife
1	2" Trash Pump
	NGL Flare Launchers in Vehicles
30	Traffic Cones
2	3" Diaphragm Pumps
3	Life Vests
3	Sets of Ice Cleats
3	Slow/Stop Signs
<b>BEMIDJI</b>	

**PLM LEAK TRAILER #292**

<b>SKIMMERS</b>	
2	Elastec 8' Skimmers
1	4' Elastec Skimmer
1	Elastec Mini Max Skimmer
1	Manta Ray Skimmer
1	Skim Pack Skimmer
<b>MISCELLANEOUS</b>	
1	Bolt Cutter
1	Sledge Hammer
1	Windsock
1	First-Aid Kit
1	Stretcher
1	Post Pounder
4	20' Lengths of Chain
12	Fence Posts
1	Roll Fencing
1	1800 Gal. Port-a-Tank and Liner
9	Pairs Insulated Rubber Gloves
18	Pairs of Rubber Gloves
6	Rain Coats & Rain Bibs
7	Screw Anchors
1	Flashing Amber Light
1	Spot Light
12	Boom Connectors
6	Pairs-Hip Boots
10	Pairs-Chest Waders
1	Danger Sign
1	No Smoking Sign
20	Ice Picks
1	Fire Blanket
1	Reel of Blue Rope, 500' in 25' Sections With Safety Snaps
1	Reel of Yellow Rope 500' in 50' Sections With Safety Snaps
1	Reel of Green Rope 500' in 100' Sections With Safety Snaps
2	Reels of Orange Rope 750' in 150' Sections with Safety Snaps
2	2"-3" Kamlock Fitting, Male-Female Thread



**BEMIDJI PLM LEAK TRAILER #292 cont.**

QTY	DESCRIPTION
2	2"-3" Kamlock Fitting, Female-Female Thread
2	2"-3" Kamlock Adapters
2	2" Kamlock Fittings Male Adapter Female Thread
2	2" Kamlock Fittings Female Adapter Female Thread
3	Sets of Skimmer Hose
2	30# Fire Guns (Dry Chemical)
11	Life Jackets
11	Hose Floats
2	Big Aluminum Anchors
5	3" Diameter Floating Hose 10' Long Each
1	3" x 35' Long Hose
1	Axe
4	Shovels
2	2" x 8" x 12' Lumber
7	2" x 4" x 12' Lumber
1	Environment Back Pack

**SUPERIOR PLM ER INVENTORY**

**PLM BOOM TRAILER INVENTORY**

6	Bundles of Sorbent Pads (100/Bundle)
250'	Sorbent Boom
100'	Containment Boom - Small
2100'	Containment Boom - Open Water
700'	Floating Containment Boom w/ Quick Latch Couplings
5	Boom Tow Bridles
4	Fabricated Disk Anchors
4	Danforth Anchors
4	15' Lengths ½" Anchor Chain
29	Assorted Kamlock Fittings
1	Skim-Pak Skimmer
1	Manta Ray Skimmer
10	Pair Steel-Toed Chest Waders
4	Pair Neoprene Gloves
6	USCG Approved Life Vests
4	Shovels
1	Sledge Hammer
1	Bolt Cutter
2	Axe
10	Steel Fence Posts
2	Drive in Fence Post Anchors
5	Screw in Fence Post Anchors
1	Megaphone
1	12 volt Handheld Spotlight
1	Amber 12 Volt Strobe Light
	Assorted Fencing / Chicken Wire
	Assorted 2 x 4 x 12 2 x 6 x 12 Lumber



**SUPERIOR**

**PLM MISCELLANEOUS**

QTY	DESCRIPTION
5	12" Orange Round Water Buoys w/Weights
2	Towable Bridles w/Floats
3	Re-Q-Disc Throwable Floatation w/Rope
11	Rescue Harnesses
200	Ft. Rope
2	3" Gas Pumps
7	2" Gas Pumps
1	2" Diaphragm Pump
1	3" Air Pump
3	3" Hydraulic Pumps
2	3" Air Diaphragm Pumps
360	Ft. 2" Hose
20	Ft. Floatable 2" Hose
400	Ft. 3" Hose
20	Ft. Floatable 3" Hose
420	Ft. 4" Hose
450	Ft. 6" Hose
5	Personal Floatation Devices

**SUPERIOR**

**PLM LEAK TRAILER**

7	Bundles Sorbent Pads ( 100/Bundle )
1	Roll Sorbent Pads
10	Bundles of Sorbent Boom ( 40'/Bundle )
5	Bags Absorbent Cellulose
150'	Floating Containment Boom
50'	Containment Boom - Small
4	8' Boom Deflectors
1	4' Oil Skimmer
1	8' Oil Skimmer
4	Fire Blankets
2	Wind Socks
7	Pair Insulated Rubber Gloves
13	Pair Rubber NGL Sleeves
15	NGL Aprons
5	Face Shields
6	Nomex Coveralls
1	First-Aid Kit
1	Stretcher
4	Road Barricades
4	Stop / Slow Signs
12	Safety Vests
9	Rolls Caution Tape
12	Amber Flashing Light
17	Safety Cones (Orange)



**PLM LEAK TRAILER cont.**

<b>QTY</b>	<b>DESCRIPTION</b>
12	Fence Posts
1	Roll Plastic Fencing
2	Trouble Lights
1	12 Volt Spotlight
1	Box Wildlife Deterrent
1	3" Air Operated Diaphragm Pump
1	3" Hydraulic Pump
3	2" Hard Suction / Discharge Hose
1	2" Discharge Hose
1	2" Female to 3" Male Kamlock Fitting
1	3" Male to 2" Male Kamlock Fitting
4	Heavy Lanyards
2	Miscellaneous Lengths of Heavy Rope
1	Grounding Rod and Cable
1	Bolt Cutter
4	Shovels
1	Axe
1	Roll of Heavy Plastic
2	Rolls of Chicken Wire
1	Winch

**IRONWOOD PLM ER INVENTORY**

**PLM MISCELLANEOUS**

20	Bundles Sorbent Boom
2	150,000 BTU Heaters
1	Quick Tent
1	Power Ice Auger
1	Hand Auger
1	3500 Watt Generator
1	4000 Watt Generator
2	3" Pumps
3	Bundles Sorbent Pads
3	3" FR Hoses
5	3" Flexible Discharge Hoses
7	2" Flexible Discharge Hoses
20	3" Rigid Hoses
10	2" Rigid Hoses
25	Rolls Orange Fence
2	2" Multi-Quip Pumps
10	Road Barricades
2	Portable Lights
1	Light Plant
4	Scott Air Paks
500'	Floating Oil Boom w/Quick Latch Couplings (12" Skirt)



**IRONWOOD PLM MISCELLANEOUS cont.**

QTY	DESCRIPTION
8	12" Boom Tow Bridles
5	Sorbent Boom 6" X 10' 4/Bag- 200'
2	Boom Connectors
5	Bales Sorbent Pads 17" X 19" 100/Bale
2	Bales Sorbent Boom 4/Bale
6	Anchors-15 # Danforth
4	Anchors- Fabricated Disk
5	Buoys
2	Air Power Units
1	4' Elastec Drum Skimmer
2	30' Skimmer Hoses
2	3" Metal 45° Fittings
1	3" Air Operated Diaphragm Pump
5	3" X 10' Floating Discharge Hose
1	25' Discharge Hose
1	50' X 2" Discharge Hose
2	Hose Floats
1	1800 Gal. Port-a-Tank and Liner
1	Lot Ropes w/Connectors
6	Safety Belts
2	Safety Belts w/Tail Lines
1	Axe
1	Sledge Hammer
4	Shovels
9	Fire Retardant Rain Gear
10	Body Harness'
1	12 Volt Strobe Light
1	12 Volt Hand Held Spot Light
12	Life Vests
1	Bolt Cutter
1	Lot Rubber Gloves
10	Coveralls
2	Wind Socks
5	Screw in Fence Post Anchors
12	Fence Posts
1	Post Driver
1	Post Hole Digger
1	Hacksaw
2	Hammers

**IRONWOOD**

**PLM BOOM TRAILER INVENTORY**

1	Assorted Lumber and Nails
1	1000 Watt Honda Generator
1	Husky Power Saw
1	STIHL Power Saw



**IRONWOOD PLM BOOM TRAILER INVENTORY cont.**

<b>QTY</b>	<b>DESCRIPTION</b>
1	Lot Bar Oil
1	Stihl Leaf Blower
1	Warn Electric Winch
1	First-Aid Kit
1	NGL Flare Gun
1	Stretcher
3	Wool Blankets
1	Megaphone
3	Pitch Forks
1	50' Drop Cord
1	Fire Blanket
2	Danger Signs
1	Incident Command Chart
1	Case Garbage Bags
1	Bale Rags
1	Lot Tape (Caution and Reflective)
10	Hip and Chest Waders
1	Lot Ice Cleats
3	Pike Poles
19	Picks of Life

**ESCANABA PLM ER INVENTORY**

500'	Floating Oil Boom w/Quick Latch Couplings (6" Skirt on Boom)
6	50' Lengths of 4" Boom w/ Couplers and Towing Bridles
2	Boom Tow Bridle
2	Oil Sorbent SPC Sweep
6	Sorbent Boom 6"x10' 4/Bag - 240'
1	Sorbent Boom 5"x10' 4/Bag - 40'
7	Bales of Sorbent Pads 17"x19" 100/Bale
2	Bales of Sorbent Boom 4/Bale
4	Anchors -15# -Danforth
4	Anchors - Fabricated Disc.
4	Buoys
1	Skim-Pak Weir Skimmer w/ Discharge+Hose+Wand Extension+Screen
1	Manta-Ray Floating Suction Head
1	Elastec Power Unit Motor Manual + Tools
2	3" Metal 45s for Pipe for Skimmer
1	3" Air Operated Diaphragm Pump with 3" Kamlocks
2	15' x 3" Floating Discharge Hose
4	15' x 3" Rigid Suction/Discharge Hose
1	3" Discharge Hose
2	50' x 2" Discharge Hose
2	2" Hose Floats



**PLM BOOM TRAILER cont.**

QTY	DESCRIPTION
1	1800 Gal. Port-a-Tank and Liner
1	50' 1/2" Rope with Quick Disconnect Fitting
5	25' 1/2" Rope with Quick Disconnect Fitting
1	Roll with 1/2" Plastic Rope (1/4 roll) (Yellow)
1	3/4" Rope
3	25' Ropes for Body Harness
1	Axe
1	Sledge Hammer
4	Shovels
5	Reflective Vests
2	Body Harness
1	Amber 12-Volt Strobe Light
1	Pair of Snorkel Rubber Gloves
1	12-Volt Hand-Held Spotlight
5	Life Vest Type 2
2	Life Vest Type 1
1	Bolt Cutter
9	Pairs of Neoprene Rubber Gloves Long Sleeves
9	Deluxe Safety Vest
1	Roll of Orange Fence
1	Wind Sock
5	Screw in Fence Post Anchors
21	Fence Post
2	Rolls of Fence (Chicken Wire)
2	Rolls of Bailing Wire
4	12' 2x6s
4	12' 2x4s
1	16' Probe
2	3" Male to Female Threads
2	3" Female to Female Threads
4	3" Male to Male Threads
4	3" Female to 2" Male Adaptor
2	3" Male to 2" Female Adaptor
4	2" Male to Male Threads
2	2" Male to Female Threads
2	2" Female to Female Threads

\*No Change 2011

**ESCANABA**

**MISCELLANEOUS EMERGENCY RESPONSE EQUIPMENT**

1	Power Unit for Skimmers
1	4' Drum Skimmer
1	8' Drum Skimmer
1	20' Section of 3" Suction Hose
2	20' Section of 2" Suction Hose
3	50' Sections of 2" Discharge Hose
1	3" Discharge Hose
4	Hose Floats for 3" Hose



**MISCELLANEOUS EMERGENCY RESPONSE EQUIPMENT cont.**

QTY	DESCRIPTION
1	3500 Watt Generator
2	36" Chainsaw for Ice Slotting
4	1 Gal. Containers of Bar Oil
1	8" Power Ice Auger
1	6" Hand Ice Auger
1	Backpack Blower
18	Ice Picks of Life
1	Portable 12-Volt 3500# Winch
9	Rolls of Silt Fence
14	Bales of Sorbent Pads
2	12' Aluminum Pike Poles
1	Bale of Sand Bags
1	Roll of Plastic
5	Pullover Harnesses
1	18" Lund Boat with 50hp Motor & Trailer
2	Oars
6	Life Vests
2	Anchors
1	Telescoping Gaff Hook
1	Hand Held Spot Light
1	Tow Bridle
1	2" Mud Sucker Pump
2	3" Trash Pumps
2	2" Trash Pumps
1	4" Hydraulic Pump
2	2" Electric Pumps

\*No Change 2011

**ESCANABA**

**PLM LEAK TRAILER ( VAN )**

4	25' Wire Rope Slings
4	12' Blue Slings
4	10' Red Slings
4	8' Red Slings
2	6' Red Slings
6	10' Yellow Slings
2	8' Yellow Slings
2	4' Yellow Slings
4	12' Wire Slings with Hooks
2	20' Extension Ladders
1	Pitch Fork
6	Spade Shovels
1	Post Hole Digger
2	Rakes
2	Axes
1	Pick Axe
5	Assorted Pipe Wrenches



**PLM LEAK TRAILER ( VAN ) cont.**

<b>QTY</b>	<b>DESCRIPTION</b>
3	12' Crescent Wrenches
1	Metal Probe with Extension
2	150 # Fire Extinguishers
4	30 # Fire Extinguishers
1	Air Spade
1	Jack Hammer/Assorted Bits
4	Journal Jacks with Caps
1	Post Pounder
1	12# Sledge Hammer
2	Tent Pole Bands with Poles
1	36" Bolt Cutter
1	1 Ton Chainfall
1	3 Ton Com-a-Long
4	Bales of Sorbent Pads -
2	Scott Air Paks
1	Roll of Visqueen Plastic
24	Wooden Lathe
7	Face Shields with Spare Shields
1	Emergency Back Board
1	Air Lifting Bag
2	Bundles of Silt Screen
1	Air Operated Air Mover
1	Loud Speaker
4	½" 20 ft. Jacking Chains
6	Gas Cans
2	20# Propane Tanks
2	Empty 5 Gal. Pails
	Motor Oil
	Chainsaw Bar and Chain Oil
	Assortment of Alkaline Batteries
	Pocket Penetrometer Soil Tester
	Tool Kit for Chain Saws
	Assortment of Chains and Locks
4	Cans of Marking Paint
	Assorted Wire Brushes
2	Rolls of Duct Tape
	Garbage Bags
3	Rolls of Caution Tape(Yellow)
	Numerous Assorted Kamlock Fittings (Various Sizes and Threads)
	Assorted Pipe Plugs (Various Sizes)
	Assorted Pipe Adapters (Various Sizes)
	Assorted Pipe Reducers (Various Sizes)
1	25' 110 Volt Trouble Light
1	20 oz. Stanley Claw Hammer



**PLM LEAK TRAILER ( VAN ) cont.**

<b>QTY</b>	<b>DESCRIPTION</b>
4	No Smoking Signs (Orange and Yellow)
2	48 Quart Coolers
1	Electric Air Mover
10	Flashing Emergency Lights (Orange)
34	6 Volt Batteries
20	Pair of Long Rubber Gloves
9	Pair of Short Rubber Gloves
18	Orange Vests
7	Pair of Yellow Rubber Sleeves
4	Windssocks
4	Stop Signs
2	Fire Blankets
1	12-Volt Spot Light
10	Sets of Rain Gear
4	Safety Belts
3	Safety Belt Tag Lines
4	Pair of Lineman Gloves
3	Hard Hats
8	Pair of Blue Nomex Coveralls
5	Pair of Red Nomex Coveralls
1	5 Gal. Water Cooler
1	3 Gal. Water Cooler
1	Coffee Pot
10	Gal. of Purple K-Fire Extinguishing Agent
1	1000 Watt Generator
200	Sand Bags
2	Drain Tubs
2	Extra Air Hose
	Assorted Tent Poles
	Assorted Fence Posts
2	2" Air Pumps for Oil Recovery
2	3" Air Pumps for Oil Recovery

\*No Change 2011



## STATION RESPONSE EQUIPMENT GUIDELINES

Enbridge retains the suggested minimum response materials at each pump station along our pipeline system. This equipment is intended for minor spills or short term containment until additional resources arrive.

(These quantities are suggested minimums – each location is encouraged to add or modify this list based on needs specific to that location).

- 200 feet – 5” Sorbent Boom
- 200 feet – 8” Sorbent Boom
- 2 – Bales Sorbent Pads (17’ x19” x 3/16”)    minimum 100 pads per bale
- 2 – Bales Sorbent Pads (17’ x19” x 3/8”)    minimum 100 pads per bale
- 5 – Bales Sorbent Roll (38” x 144’ x 3/8”)

MANISTIQUE BOOM TRAILER INVENTORY	
QTY	DESCRIPTION
400'	Floating Oil Boom w/Quick Latch Coupling (6" skirt on boom)
4	BoomTow Bridle
5	Sorbent Boom Bales 8"x10' 4/Bale
5	Sorbent Boom Bales 5"x10' 4/Bale
1	Sorbent Pads 17"x19" 200/Bale
1	Sorbent Pads 17"x19" 100/Bale
1	½" Rope 100'
4	½" Ropes 25' with Hooks
6	Shovels
1	Sledge Hammer
2	Claw Hammer
25	Fence Post
3	Row of Fence (Chicken Wire)
1	Culvert
5#	16 Penny Nails
1	Windsock & Pole
2	Row of Baling Wire
2	Flashlights/Batteries
2	Life Jackets
2	Chest Waders (Size 10&12)
1	Electrician Pliers
1	Garbage Bags (Box of 100)
1	Safety Barricade Tape (Yellow)
1	Tin Snips
1	Hacksaw with 6 Blades
2	Reflective Vests
2	Permalon 40'x100' ply 210
6	Neoprene Rubber Gloves
2	Hip Boots (Size 10&12)
1	Telescoping Gaff Hook
10	12' 2X4s
10	12' 2x6s

\*No Change 2011



**GOULD CITY STATION**

**BOOM TRAILER INVENTORY**

QTY	DESCRIPTION
300'	Floating Oil Boom w/Quick Latch Coupling (6" Skirt on Boom)
4	Boom Tow Bridle
5	Sorbent Boom Bales 8"x10' 4/Bale
5	Sorbent Boom Bales 5"x10' 4/Bale
1	Sorbent Pads 17"x19" 200/Bale
1	Sorbent Pads 17"x19" 100/Bale
1	½" Rope 100'
4	½" Ropes 25' with Hooks
6	Shovels
1	Rake
1	Sledge Hammer
2	Claw Hammer
25	Fence Post
1	Culvert
5#	16 Penny Nails
1	Windsock & Pole
2	Flashlight/Batteries
2	Row of Baling Wire
2	Life Jackets
2	Chest Waders (Size 10&12)
1	Electrician Pliers
1	Garbage Bags (Box of 100)
1	Safety Barricade Tape (Yellow)
1	Tin Snip
1	Hacksaw with 6 Blades
2	Reflective Vests
2	Permalon 40'x100' ply 210
6	Neoprene Rubber Gloves
2	Hip Boots (Size 10&12)
1	Telescoping Gaff Hook
10	12' 2x4s
10	12' 2x6s

\*No Change 2011

**ST. IGNACE VALVE YARD**

**BOOM TRAILER INVENTORY**

1000'	Floating Oil Boom w/Quick Latch Couplings - 16" Skirt on Boom
1	Boom Tow Bridle
5	Anchors-with Chains & Rope
5	Buoys Markers with Lights & Ropes & Batteries
2	Bales 40' each 6"x10" Sorbent Boom
2	Bales 40' each 8"x10" Sorbent Boom
1	Bales oil Sorbent Sweep 17"x100"
1 1/2	Bales of Sorbent Pads 17"x18" 100/Bale
1	Bales of Sorbent Rolls 38"x144"



**ST. IGNACE BOOM TRAILER INVENTORY cont.**

QTY	DESCRIPTION
1	3" Air Operator Diaphragm Pump c/w 3" Kamlocks
1	Generator 2500 Watts
4	Life Jackets
1	Gaff Hook
4	Pairs of Hip Boots 2 EA.(Size 10 & 12)
4	Packs of Slip Protection for Boots
1	Fast Tank+1 Fast Tank Saddle Assembly
5	Rain Pants
2	Rain Jackets
1	Quick Tank
1	Cover for Tank
4	Shovels
1	Sledge Hammer
1	Hammer
12	Fence Posts
1	Bag of Fence Ties/ bag of Penny Nails

\*No Change 2011

**MACKINAC STATION**

**BOOM TRAILER**

<b>1000'</b>	Floating Oil Boom w/Quick Latch Couplings (16" Skirt on Boom)
1	Boom Tow Bridle
5	Anchors-with Chains & Rope
5	Buoys Markers with Lights, Ropes & Batteries
2	Bales 40' each 6"x10" Sorbent Boom
2	Bales 40' each 8"x10" Sorbent Boom
2	Bales Oil Sorbent Sweep 17"x100"
2	Bales of Sorbent Pads 17"x18" 100/Bale
1	Bales of Sorbent Pads 100/Bale 17"x19"
2	Bales of Sorbent Rolls 38"x144"
1	3" Air Operator Diaphragm Pump c/w 3" Kamlocks
1	Generator 2500 Watts
4	Life Jackets
1	Gaff Hook
4	Pairs of Hip Boots 2 EA.(Size 10 & 12)
4	Packs of Slip Protection for Boots
1	Fast Tank + 1 Fast Tank Saddle Assembly
5	Rain Pants
2	Rain Jackets
1	Quick Tank
1	Cover for Tank
4	Shovels
1	Sledge Hammer
1	Hammer
12	Fence posts
2	Rolls of Baling Wire



**BOOM TRAILER cont.**

QTY	DESCRIPTION
1	Bag of Fence Ties
1	Bag of 16 Penny Nails
*No Change 2011	

**INDIAN RIVER STATION**

**BOOM TRAILER INVENTORY**

400'	Floating Oil Boom w/Quick Latch Coupling (6" Skirt on Boom)
4	Boom Tow Bridle
5	Sorbent Boom Bales 8"x10' 4/Bale
5	Sorbent Boom Bales 5"x10' 4/Bale
1	Sorbent Pads 17"x19" 200/Bale
1	Sorbent pads 17"x19" 100/Bale
4	1/2" Rope 100'
1	1/2" Ropes 25' with Hooks
6	Shovels
1	Rake
1	Sledge Hammer
2	Claw Hammer
25	Fence Post
3	Row of Fence (Chicken Wire)
1	Culvert
5#	16 Penny Nails
1	Windsock & Pole
2	Row of Baling Wire
2	Flashlight/Batteries
2	Life Jackets
1	Chest Waders (Size 10-12)
1	Electrician Pliers
1	Garbage Bags (Box of 100)
1	Safety Barricade Tape (Yellow)
1	Tin Snip
2	Hacksaw with 6 Blades
2	Reflective Vests
6	Permalon 40'x100' ply 210
2	Neoprene Rubber Gloves
1	Hip Boots (Size 10-12)
10	Telescoping Gaff Hook
10	12' 2x4s
10	12' 2x6s
*No Change 2011	



ENBRIDGE ENERGY WINTER SPILL EMERGENCY RESPONSE EQUIPMENT

WINTER EQUIPMENT	Thief River Falls	Bemidji	Superior	Ironwood	Escanaba
Backpack Leaf Blowers	1	2	2	1	1
Portable Heaters - All	2	2	2	2	2
Power Ice Augers	1	1	1	1	1
Chainsaws	2	2	2	2	1
Winches	1	1	1	1	1
Containment Boom		180'			
50' Lengths Mini Boom	3	6	3	6	8
Tow Bridles	6	0	3	6	16
Pike Poles	3	1	0	2	3
Pick-of-Life	12	24	5	10	10
HONDA 3500w - 10000w Generator	1	1	1	1	1
Hydraulic Submersible Pumps	2	1	3	1	1
1 lot Aluminum Camlock Fittings (2", 3")	1	2	1	1	1
25' Length 2" Low Temp Hose	2	2	2	2	2
LWT Hose Floats for 3" Hose	0	0	0	2	0
Hand Ice Augers w/Extension	1	0	1	1	1
Hazardous Location Trouble Light	4	4	5	4	3
Skimmers		3			
Ice cleats	6	0	2	12	0
Shelter	0	1	1	1	0

Winter Equipment: Enbridge maintains this equipment for winter/cold weather spill response. It is staged at each Pipeline Maintenance Facility. Due to the seasonal nature of this equipment, it may not be stored in existing response trailers. The Pipeline Supervisor is responsible for the facility will ensure that the equipment is maintained, inventoried and accessible in the event of a winter spill incident.



OCTOBER 2011 PRIMARY WATER RECOVERY EQUIPMENT	Thief River Falls PLM	Bemidji PLM	Superior PLM	Ironwood PLM	Escanaba PLM	Manistique Station	Gould City Station	Straits of Mackinac	Indian River
<b>Boom &amp; Absorbents</b>									
Containment Boom – River (feet)	3,000	250	850	500	500	400	300	1000	400
Containment Boom – Open Water (feet)		500	2100					2000	
Containment Boom – Small ( feet )		450	550	500	300				
Sorbent Boom ( feet)		640	250	200	280	400	400	160	400
Sorbent Pads		3,400	1300	800	700	300	300	300	300
Sorbent Sweep/Rolls (bales)		2	1	2	6	2		8	
<b>Skimmers</b>									
3' Drum Skimmer	1								
4' Drum Skimmer		1	1	1	1				
8' Drum Skimmer	2	4	1		1				
Mini Max Skimmer		1							
Skimmer Power Pak					1				
Manta Ray		1	1						
Skim Pak		1	1						
<b>Pumps</b>									
2" Air Operated + Hoses					2				
3" Air Operated + Hoses		2	1	1	2			1	
2" Trash Pump + Hoses		1			2				
3" Trash Pump + Hoses		2	3	2	3				
3" Hydraulic Pump + Hoses		3	4						
4" Hydraulic Pump + Hoses					1				
2" Electric Pumps		12			2				



OCTOBER 2011 PRIMARY WATER RECOVERY EQUIPMENT	Thief River Falls PLM	Bemidji PLM	Superior PLM	Ironwood PLM	Escanaba PLM	Manistique Station	Gould City Station	Straits of Mackinac	Indian River
<b>Storage</b>									
Vacuum Truck -- 1500 - 1800 Gal.	1	1	1	1	1				
Portable Storage Tanks ( 1800 gal)		1		1	1				
Tankage Storage		8.7 million barrels at Superior WI 1.2 million barrels at Clearbrook, MN				5,000 barrels at Gould City MI			
<b>Boats &amp; Motors</b>									
18' Lund w/motor & equipment									
20' Lund Alaskan w/motor & equipment									
12' John Boat									
20' Aqua Deck w/inboard & equipment									
<b>Response Trailers</b>									
Leak Trailers ( van )	1	2	1		1				
Boom Trailer	1	1	1	1	1	1	1	1	1
Command Post Trailer	1								
Decontamination/Command Trailer									



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## Twin Ports Mutual Aid Group

The Twin Ports Petroleum Mutual Aid Group (TPPMAG) was formed in 1992 to provide for mutual assistance and cooperation in the control of oil spill emergencies occurring in the general area of Superior, WI and Duluth, MN. A key component of this agreement is the joint ownership of a fully equipped response trailer. The City of Superior, WI Fire Department agrees to store the trailer and transport it to emergency response sites as designated by the member companies and at reasonable cost to the user. The Group agrees to give the City of Superior full authority to use the trailer, equipment and materials as it deems appropriate.

Member Companies include:

- Enbridge Energy
- Murphy Oil USA, Inc. Superior Refinery
- Conoco Inc.
- Magellan Pipeline
- Murphy Oil USA, Inc Marine Terminal

### FOR EMERGENCY DELIVERY OF THE RESPONSE TRAILER

Call the Superior Fire Department at:

715-394-0227 (normal business hours)

715-394-0231 (after hours)



TWIN PORTS MUTUAL AID GROUP EMERGENCY RESPONSE INVENTORY	
QTY	DESCRIPTION
1	Spare Trailer Tire
3	18 # Boxes Fiberperl Absorbent
2	Rolls Absorbent - 144'
4	Boxes Tharco Absorbent Pellets
5	Bundles Absorbent Pads - 100 / bundle
2	Anchors - 43 #
1	Axe
5	50' Sections of Containment Boom
1	Section of 25' Containment Boom
1	Portable Generator
1	100' 12 Gauge Extension Cord
11	Steel Fence Posts
1	Fence Post Driver
2	Fire Extinguishers 30# (Dry Chemical) (2005 –Due for TEST)
1	First- Aid Kit
1	Flashlight (No Batteries)
1	Gas Can for Generator
1	Plastic Boat Gas Tank
1	Can Adhesive Glue
	Miscellaneous Hardware
3	Pair Steel Toed Hip Waders
4	Life Jackets
2	Portable Light Towers
1	Portable Light
6	Non-Conducting Pads
2	Wooden Boat Oars
1	25 Horsepower Outboard Motor
2	Pitchforks
1	Box Plastic Sheeting
2	Metal Rakes
1	Leaf Rake
12	Various Lengths of Nylon Rope
1	50' Length of Nylon Rope
1	Spool of Nylon Rope
2	Scoop Shovels
3	Spade Shovels
1	Square shovel
1	12# Sledge Hammer
4	Boxes Sorbaid
1	12-Volt 100,000 Candlepower Handheld Spotlight



**TWIN PORTS MUTUAL AID GROUP EMERGENCY RESPONSE INVENTORY cont.**

QTY	DESCRIPTION
24	Tent Stakes
1	Tool Box with Assorted Hand Tools
1	Bag Gloves
1	Bag Response Suits
1	16' Alumaweld Boat
	Tow Bridles
	Water Buoys
	Barricade Tape – (Yellow “Caution” & Red “Danger”)
10/31/11	



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## SPECIALTY CONTRACTOR CONTACTS

### GARNER ENVIRONMENTAL SERVICES INC.

Garner Environmental Services is a full service environmental and emergency response company and a classified **OSRO** (Oil Spill Response Organization) based near Houston, TX. Numerous locations and away teams, allows response in a timely manner to any situation upon notification.

Enbridge has contracted with Garner to provide personnel, equipment, and expertise in the event of a **WORST-CASE DISCHARGE** situation where timeliness is critical and additional resources are needed. The Master Service Agreement is located in the Superior Regional Office. Copies of inventory and equipment lists can be obtained through the Region Offices.

A list of Garner Environmental Services' emergency response equipment can be found at: [http://www.garner-es.com/pdf/Response Equipment List 2009.pdf](http://www.garner-es.com/pdf/Response_Equipment_List_2009.pdf)

**Garner should only be contacted from the Qualified Individual (QI) level or higher. The QI may wish to confer with senior management or the crisis management team prior to enlisting Garner's services.**

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**Garner Environmental Services Inc.  
1717 W 13<sup>th</sup> St.  
Deer Park, TX 77536  
(281) 930-1200  
1-800-424-1716 (24 hrs.)**

### BAY WEST

Bay West is an established Coast Guard responding out of Minneapolis, Minnesota, that provides 24-hour emergency spill response. Their services include cleanup, removal and the remediation of oil spill sites as well as environmental investigations and assessments.

Bay West has an extensive inventory of emergency response equipment, HAZMAT and HAZWOPER trained personnel, and an experienced support staff to respond to various types of spill scenarios.

Enbridge has retained Bay West by means of a Master Service Agreement to supplement internal resources in the event of a pipeline incident. Copies of their inventory and equipment lists can be obtained through Enbridge Energy's Superior Regional Office.

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**Bay West  
5 Empire Drive  
St. Paul, MN 55103  
(651) 291-0456  
1-800-279-0456 (24 hrs.)  
[www.baywest.com](http://www.baywest.com)**



## CANADIAN CROSS BORDER EMERGENCY RESPONSE EQUIPMENT

Enbridge recognizes that there may be circumstances where additional resources are required for emergency response in our operating areas along the U.S / Canadian border. In these situations, agreements have been reached to allow equipment and manpower to cross the border to respond. These agreements have been discussed and cleared with both the U.S. and Canadian Customs offices. Equipment and manpower lists have been provided to these entities as a reference in the event a cross border crossing becomes necessary.

This Canadian area is included in this cross border agreement with the Superior Region:

- Gretna, Manitoba

Contacts:

Eldon Strachan (PLM Coordinator/Central Region)  
Office: (204) 327-6660  
Cell: (204) 324-7006

Larry Doherty (Area Sup/Operations/Gretna)  
Office: (204) 327-6611  
Cell: (204) 324-3151

Lawrence Michalchuk (Coord/Maint. Services/Gretna)  
Office: (204) 327-6447  
Cell: (204) 324-3991

### INVENTORY LISTS ATTACHED

GRETNA MOBILE EQUIPMENT EMERGENCY RESPONSE INVENTORY	
QTY	DESCRIPTION
1	½ Ton 4X4 Pickup Truck
1	1-Ton 4X4 Extend-a-Cab
1	Picker Truck-Fassi 17 ton
1	Welding 1-Ton Truck
1	3/4 Ton 4 X 4 Pickup Truck
1	CM-1 Jet Boat
1	GF -1 Jet Boat
1	Boat Trailer
1	Boat Trailer
1	Oil Spill Trailer
1	Emergency Equipment Trailer
1	Lighting Plant
1	Arne's Tandem Trailer
1	Cat Skid Steer
1	Skid Steer Trailer



**GRETNA EMERGENCY RESPONSE TRAILER INVENTORY-  
UNIT 38903**

<b>QTY</b>	<b>DESCRIPTION</b>
1	2003 Chevrolet 1500 Silverado Extended Cab(VIN.# 2GCEK19T531277318)
1	Motorola MCX100 Mobile Telephone (Serial #484PKY4434)
1	Motorola MCX100 Private Company Radio (Serial #428PQS5142)
1	Motorola Cellular Plus Telephone (Serial #8189B0632)
1	Flare Pistol
1	Box of Flares for Flare Pistol.
1	BX-82 Gas Detector (Serial #GX-1108-HSD)
1	Safe Work Permit Book
1	District #2 System Map Atlas
1	Pembina Valley Telephone Book
1	100' Tape Measure
1	50' Tape Measure
1	16' Tape Measure
1	25" Tape Measure
1	Western/Central Emergency Response Directory
1	Nylon Tow Rope / Clevises
2	Flashlights. (Lantern Style)
2	Fire Blankets
1	First Aid Kit
1	District #2 Route Sheets
1	Set of Booster Cables
1	Box of Ear Plugs
1	Set of Binoculars
1	Hardhat
1	Pressure Gauge- Serial #801
1	Container of Safety Supplies such as Gloves, Safety Glasses,
2	Pairs of Safety Glasses
1	Pipeline Information Book
1	Landowner Information Book
1	Regina Telephone Book
1	Manitoba Telephone Book
1	Emergency Border Crossing Manual
1	Oil Spill Control Point Book
1	Western Operations Emergency Call Down List Booklet
2	Lakehead Safe Work Permit Books
1	Lens Cleaning Kit
1	Westward Travel Tool Kit
1	3/8" Socket Set / Sockets
1	Box of Emergency Road Flares
1	Spotlight
1	Air Horn
1	Yellow Emergency Flashing Light



**EMERGENCY RESPONSE TRAILER INVENTORY- UNIT 38903 cont.**

QTY	DESCRIPTION
1	Laerdal Pocket Face Mark
1	5 # General Fire Extinguisher (Serial #H648373C)
1	Flange Installation Quality Control Form
4	Pairs of Work Gloves

**GRETNA EMERGENCY RESPONSE TRAILER INVENTORY-  
UNIT A351**

QTY	DESCRIPTION
1	2000 Ford F-350 1 Ton Truck (VIN # 1FDWX37F7YEC63078)
1	Motorola 2-way Radio (Serial #428ATUT161)
1	TMX Gas Detector with Spare Battery (Serial # 9407075-293)
1	TMX Charger (Serial # 941Z083-006)
1	Flare Pistol (Serial # 66823)
1	Box (8) Flare Cartridges
1	Motorola Permanent CellP
1	External Rotating Amber Light
1	36" Aluminum Pipe Wrench
2	24" Aluminum Pipe Wrenches
2	18" Aluminum Pipe Wrenches
2	12" Aluminum Pipe Wrenches
2	Ball Peen Hammers
1	Claw Hammer
1	3/8" Drive Socket Set
1	Set Metric Open-End Wrenches (6 mm – 24mm)
1	Set Standard Open-End Wrenches (1/4" – 1 1/4")
1	1/2" Drive Socket Set
2	Pry Bars
1	Set (3) Rolling Pry Bars
2	10" Vise Grips
1	12" Chain Vise Grip
3	10" Pliers
2	7" Pliers
2	7" Needle Nose Pliers
1	7" Wire Cutter
1	Tin Snip
1	Set Internal and External Snap Ring Pliers
4	Phillips Screwdrivers
3	Robertson Screwdrivers
5	Flat Screwdrivers
2	Sets Folding Allan Wrenches
1	Set Regular Allan Wrenches
1	15" Crescent Wrench
1	12" Crescent Wrench
1	10" Crescent Wrench



UNIT A351 cont.

QTY	DESCRIPTION
1	8" Crescent Wrench
1	6" Crescent Wrench
1	Hack Saw (2 spare Blades)
4	Half Bastard Round Files
3	Flat Files
3	Rat Tail Files
<b>Assortment of:</b>	Banana Knives    Electrical Tape    Teflon Tape
	Wire Brushes    Tape Measures    Awls
	Utility Knives    Tube Pipe Sealant
1	Roll Chalk-line
1	Battery Post Cleaner
1	Utility Magnet
1	Utility Claw
1	5 Gal. Gas Can    1 – 5-Gal. Diesel Can
1	12 # Sledge
2	Spades
1	District 2 System Map Atlas
1	District 2 Route Map
1	District 2 Landowners Book
1	Emergency Preparedness Book
1	Local Pipeline Information Book
1	Telephone Book
4	Safety Shields
2	Safety Shields
2	Safety Shields Hardware
1	Box CAA Survival Kit
1	Full Body Harness.
2	Shock Absorbers
2	Lanyards
2	Tag Line
2	Lock-out Locks
2	Lock-out Clevises
2	Lengths Lock- out Chain
1	Pair Gloves
1	Snap-in Tool Box
4	Pressure Gauges
	Assortment of Air Fittings
1	Micro Cassette Recorder
2	Reflective Vests
1	Skid Pick
1	Pick
1	Probe
1	Tag Line
1	3/8" Tie-down Chain
1	3/8" Load Boomer



**UNIT A351 cont.**

QTY	DESCRIPTION
1	2' Level
1	5" Vent Hose
	Rags
2	Liters Motor Oil
2	Cans Penetrating Oil
1	2 Gal. - Antifreeze
2	2" Ratchet Tie-downs
2	Hydraulic Journal Jacks
1	Emerpac Hydraulic Jack with 4" Head
1	3/4" Socket Set
2	Pig Tails
2	Probe Lite Stands
2	Flood Lights
4	Clear Deck Lights
1	1 1/2- Ton Come-Along
1	Rear Deck Box (Assorted Pipe Fittings)
1	Rear Deck Box (Tow Rope and Booster Cables)
1	Wisk Broom
1	100' Tapes
1	Ice Scraper
2	Explosion Proof Flashlights
1	First-Aid Kit
2	6' x 5' Fire Blanket
1	Spotlight
1	Box of Emergency Road Flares
1	Safe Work Permit Book
1	Flange Installation Quality Control Form

**GRETNA EMERGENCY RESPONSE INVENTORY-  
UNIT 35203**

1	2004 Kenworth T 800 Tandem (VIN # 1NKDLUOX74J973128)
1	2003 Fassi F530 XP Hydraulic Crane with Wireless Remote Control.
1	Motorola 2- Way Radio / Accessories
1	Motorola 650 Flip Cell Phone/ Accessories
1	Industrial Scientific Gas Detector (Serial # 9407075-292)
1	Windsock
1	Set of Roadside Flares
4	RED 30 minute Emergency Flares
4	Wheel Chocks
1	Full Body Harness
1	Fall Arrest Lanyard
1	Shock Absorber
1	Survival Kit
1	Flare Gun (Serial # 66816)



**UNIT 35203 cont.**

QTY	DESCRIPTION
1	Box Flares (10)
1	6 Volt Flashlight
1	Fire Blanket
2	Fire Extinguishers 30 # (Ansul ) (Serial # KW 514283 , Serial # KW 514284)
1	First-Aid Kit (Safety Center)
2	30' Tag Lines
1	Hardhat Mounted Face-Shield (Clear)
1	Lardal Pocket Mask
2	CPR Protectors
4	Dust Masks
4	Pair Latex Disposable Gloves
1	Reflective Vest
2	Beacon Lights
1	Nut Driver Set of 7, 1/4" to 1/2"
1	3/4" Drive Air Impact Wrench Ingersol Rand (Serial A01J13264)
1	Set of 10, 3/4" Impact Sockets 3/16" to 1 5/16"
2	12" Rigid Pipe Wrench
1	18" Rigid Pipe Wrench
2	24" Rigid Pipe Wrench
1	36" Rigid Pipe Wrench
1	Set of 16, SK Flat Wrenches 1/4" To 1 1/4"
1	Set of 16, Westward Metric Flat Wrenches 7mm to mm
1	Westward 1/4" DR Socket Set
1	Proto 3/8" DR Socket Set
1	Proto 1/2" DR Socket Set
1	Westward 1/2" DR Deep Socket Set
1	6" Proto Crescent Wrench
1	8" Proto Crescent Wrench
1	10" Proto Crescent Wrench
1	12" Proto Crescent Wrench
1	15" Proto Crescent Wrench
3	Ball Peen Hammers
3	Pairs of Channel Lock Pliers
1	Set of 9, SK 1/2" DR Allen Head Wrenches 5/32" to 5/8"
1	Proto Hex Key Set of 11, 1/4" to 3/8"
1	Hex Key Set of 9, 5/64" to 1/4"
1	Hex Key Set of 7, 2mm to 8mm
1	1/2" DR to 3/4" DR Adaptor
1	1/2" DR to 3/8" Dr Adaptor
2	Wire Brushes
9	Assorted Steel Files
1	Battery Post Cleaner
	Assortment of Punches and Chisels
2	Pinch Bars



**UNIT 35203 cont.**

<b>QTY</b>	<b>DESCRIPTION</b>
1	6" Vice Grip Pliers
2	8" Vice Grip Pliers
3	10" Vice Grip Pliers
2	6" Pliers
2	8" Pliers
4	Side Cutter Pliers
1	6" Needle Nose Pliers
1	8" Needle Nose Pliers
1	Hacksaw with 4 Spare Blades
	Assorted Screw Drivers
2	Pair Tin Snips
1	Pair External Retaining Ring Pliers
1	Pair Internal Retaining Ring Pliers
3	Utility Knives
4	Scrapers
1	Magnetic Stick
1	100' Tape Measure
1	Chalk Line
1	2' Carpenter Level
1	Torpedo Level
1	Carpenter Square
2	Sets of 3/8" Chain Spreaders
1	2" - 6' Lift-all Sling
2	2" -10' Lift-all Slings
2	2" - 4' Lift-all Slings
2	3" -10' Lift-all Slings
4	8' Tuflex Slings
4	6' Tuflex Slings
4	10' Tuflex Slings
2	14' Tuflex Slings
2	26"x 26" Wooden Outrigger Pads
2	22"x 22" Wooden Outrigger Pads
2	20" Aluminum Outrigger Pads
1	Plastic Tool Box With 2 - Danger Wide Load Signs & 4 Orange Flags
1	Pin On Steel Push Pole Receiver
1	Plastic Tool Box with an Assortment of Eye Bolts 1/4" to 1 1/4"
1	Plastic Tool Box with an Assortment of Shackles 3/8" to 1"
2	16' Lengths System 7 3/8" Load Chain with Hooks
4	11' Lengths System 7 3/8" Load Chain with Hooks
6	Load Binders
2	Spare 3/8" Load Chain Hooks
1	3' Steel Snipe
2	3" Ratchet Tie- Down Straps
6	2" Ratchet Tie- Down Straps



**UNIT 35203 cont.**

QTY	DESCRIPTION
1	1 ½ -Ton Columbus McKinnon Com-a-long
1	8-Ton Hydraulic Jack
1	15-Ton Journal Jack
1	30-Ton Enerpac Hydraulic Pump with Jack Head
2	Detachable Tow Hooks
1	50' Rapid Reel of ¾" Air Hose
2	Spare ¾" THOR Couplers
2	Spare ¼" by ¾" Male Air Fittings
2	Spare ¼" by ¾" Female Air Fittings
1	¼" Air Chuck
1	¼" Air Gun
1	Tire Pressure Gauge
1	¾" Thor Coupler to ¼" Male Air Fitting Adaptor
1	¾" Thor Coupler to ¼" Female Air Fitting Adaptor
4	¾" Aero-Quip HYD Quick Couplers
1	¾" Drill Adapter
1	7/8" Drill Adapter
1	1" Drill Adapter
2	Valve Stem Shear Pins
	Assortment of Roll Pins, Cotter Pins, Snap Rings, Electrical Crimp Fittings
8	¾" Latch Kits
1	O-Ring Kit
1	O-Ring Repair Kit
2	Spade Shovels
1	8 # Sledge Hammer
1	10 # Sledge Hammer
1	Skid Pick
1	Long Pry Bar
2	Short Pry Bars
1	Fiber Glass Probe
1	Set of Booster Cables
2	20' Power Cords
1	25 # Propane Bottle with Hose, Regulator, Torch , & Striker
1	5 Gal. Gas Can
1	5 Gal. Diesel Can
1	3 Gal. Rubberized Pail
1	6" Nylon Tow Rope
1	Waterloo Tool Chest
1	Proto Tool Chest
1	Large Frame Mounted Tool Locker
2	Custom Made Deck Tool Boxes
1	Electrical Pig Tail Adapter
	Assortment of Plastic Ties
	Assortment of Fuses



**UNIT 35203 cont.**

QTY	DESCRIPTION
1	Bug Screen
1	Winter Front
1	Box of Assorted Drill Bits
1	Grease Gun & 2 Tubes of Grease
1	4 Liter Jug of Motor Oil
1	Box of Rags
	Assortment of Spray Cans, Penetrating Oil, WD-40, Cleaners
	Pipe Thread Sealant
	Assortment Of Pipeline Info Books, Manuals & Maps
	Teflon Tape & Emery Cloth
2	2000-PSI Pressure Gauges
1	½" Ball Valve
1	¾" Ball Valve
1	1" Ball Valve
1	2" Ball Valve
	Assortment of 2" & 3" Male & Female Kamlock Fittings
	Assortment of Threaded Fittings, Pipe Nipples , Bushings ¼" to 2"

**GRETNA EMERGENCY RESPONSE INVENTORY  
UNIT 319**

1	Fire Extinguishers 30# (Ansul & Redline)
1	Miller Pipe Pro-Welder
1	Motorola Radio
1	Motorola Flip – Cell Phone. Hands Free
1	Motorola Receiver Type
1	Flare Pistol
1	Box of Flares
1	Revolving Amber Light
1	Industrial Scientific Gas Monitor TMX412
1	Industrial Scientific Personal Gas Monitor (Serial #0207492-261)
2	Safe Work Permit Books
1	Enbridge Welding Manual
2	Greenlee Volt/Amp meters
1	F.N. Bell Gauss/Tesla Meter 4048
1	Bushnell Binoculars
1	Spare Motorcraft Fuel Filter
1	Orange Flashlight
1	Hydraulic Jack
1	3' x 8' Sheet x ½" Plywood
1	Aluminum Deck
2	5" Makita Angle Grinders
1	7 Drawers International Toolbox
5	Blue Plastic Rod Guard Containers
1	2' Aluminum Level



**UNIT 319 cont.**

<b>QTY</b>	<b>DESCRIPTION</b>
1	2' Magnetic Level (Yellow)
1	4' Magnetic Level (Yellow)
2	Large Oxygen Bottles
3	2' Carpenter Squares
1	Large Acetylene Bottle
1	Set of Oxygen – Acetylene Regulators
1	Hack Saw
1	25' Brica Tape Measure
1	16' Brica Tape Measure
1	100' Stanley Tape Measure
1	Aluminum spool with 50' Oxygen-Acetylene Hose
1	Welding Helmet
1	Leather Welding Coat
1	12 # Sledge Hammer
1	Face Shield
1	Piece Screwdriver Set (Fuller)
1	21 Piece Flat Wrench Set (S – K) Standard
1	8" Crescent (Proto)
1	10" Crescent (Proto)
1	15 Piece Set of Punches (Proto)
1	22 Piece Set Flat Wrenches (Westward) Metric
1	24 Piece Set Westward Sockets 3/8" Drive
1	24 Piece Set Westward Sockets 1/2" Drive
6	Vise Grips
1	Stanley Line Level
13	Pipeline Wedges – Brass
3	Pliers
1	Stanley 100' Tape Measure
2	Clipping Hammers
3	Wing Wraps for Line Level
4	Ball Peen Hammers
4	Large Pliers
1	Tin Snips
1	Snap ring Pliers
1	Needle nose Pliers
2	Side Cutters
6	Pipeline Files
1	Claw Hammer
1	Piece Rigid Pipe Wrench Set
1	Pipe Line-up Dogs
1	Victor Cutting Torch
1	6' Aluminum Step Ladder
1	4' Mud Board
1	8" Vice



**UNIT 319 cont.**

<b>QTY</b>	<b>DESCRIPTION</b>
1	Magnetic Grinder Stand
1	30# Propane Bottle
1	Hiab 130 Picker
1	Tiger Torch
1	Galvanized Milk Pail
6	Beveling Bands (10" – 48" CRC-Evens)
2	Victor Beveling Torches
1	Beveling Machine (Cranler & Remote)
3	Aluminum Spools (Lead, Ground & Remote Cables)
1	CAA First-Aid Kit
1	Set of Fire Blankets
1	Set of Booster Cables
1	Spare Stinger & Whip
1	1 Ton Strap
1	25' – 220 amps. Extension Cord
1	Enbridge Right-of-Way Maps Package
1	Halogen Portable Work Lamp
1	Arc-Air Stinger
4	110 Amps. Extension Cords
1	6' x 1" Sling
1	Set of Spreader Chains
16	11# Boxes of Liquid Air Welding Rods
1	50# Box of Lincoln Welding Rods
1	Plate Clamp
1	Large Shackle
1	Set of Drill Bits (29 Piece)
4	Spare Face Shield Lenses
3	Pairs of Spare Work Gloves
1	O-ring Kit
1	Black & Decker 1 1/2" Die Grinder
6	Valve Adapters
1	Spare Tweco Stinger
2	Spare Tweco Connectors
2	20' Chains
1	15 Ton Sleeve Jack
1	5 Ton Hydraulic Jack
2	4' Aluminum Yard Sticks
3	Wire Brushes
4	Utility Knives
3	Scrapers
1	Ridged Laser Level (Torpedo)
2	Torpedo Levels
1	0 – 6 Calipers
1	Compass
2	Combination Squares



**UNIT 319 cont.**

<b>QTY</b>	<b>DESCRIPTION</b>
2	12" Square
1	Curve-O-Mark Center Finder
2	Boxes of clear welding Helmet Lenses
1	20 Piece Set of 1/4" Letter Stamps
7	Piece Pry Bar Set
5	1" Ratchet Straps
1	2" Ratchet Straps
1	2' Pro Smart Level
1	20 Piece Set of 3/4" Drive Sockets (Proto)
1	Box of Walter Zip Cuts
1	Box of Walter Pipeline Wheels
2	Walter Buffing Wheels
1	Emergency Road Flare Kit
1	Set of Welding Gloves
2	Curve-O-Mark Wrap-Around
1	3/8" Makita Drill
1	1/2" Makita Drill
1	Portable Halogen Work Lamp
1	Heat Demon (Portable Heater)
1	6 Drawers International Tool Box
1	In Cab First-Aid Kit
1	50# Pioneer Rod Oven
4	Boomers



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## QUALIFIED INDIVIDUALS NOTIFICATION

As per the National Preparedness for Response Exercise Program (PREP) guidelines, a Qualified Individual (QI) notification drill is performed 4 times per year (quarterly). During these quarterly drills, contact is made from the Control Center via telephone, radio, or pager to the Qualified Individual or their designate in the Superior Region to ensure they can be reached to carry out their duties in the event of a spill response emergency. Confirmation of receipt of the contact must be made by the QI back to the Control Center to validate the drill.

Documentation for these drills is filed in the Control Center and in Superior, Wisconsin Regional office.

### QUALIFIED INDIVIDUAL(S)

#### **Mark J. Willoughby**

*Superior Region General Manager, Enbridge (U.S.) Inc.*

Business Office: 715-394-1410

Cellular: 218-393-5772

Fax: 715-394-1405

E-mail: [mark.willoughby@enbridge.com](mailto:mark.willoughby@enbridge.com)

### ALTERNATE INDIVIDUALS

#### **Mike Goman**

*Superior Region Manager, Technical Services*

Business Office: 715-394-1523

Cellular: 218-428-5027

Fax: 715-394-1405

E-mail: [mike.goman@enbridge.com](mailto:mike.goman@enbridge.com)

#### **Tony Hommerding**

*Superior Region Manager, Pipeline Services*

Business Office: 715-394-1415

Cellular: 218-393-1308

Fax: 715-394-1405

E-mail: [tony.hommerding@enbridge.com](mailto:tony.hommerding@enbridge.com)



### Emergency Response Trained Personnel

Enbridge employees are trained for emergency response according to the OSHA 1910.120 Hazardous Waste Operations and Emergency Response (HAZWOPER) standard. Depending on their job classification, employees receive training in first responder awareness, first responder operations, hazardous material technicians, hazardous material specialists, incident commander, support and clerical staff. Employees receive an 8 hour annual refresher as required by the standard.

As per the National Preparedness for Response Exercise Program (PREP) guidelines, company initiated tabletop exercises, equipment deployment exercises, and unannounced deployment exercises are performed and documented annually. Company personnel also participate in industry led emergency response exercises as well as local exercises throughout our system.

The following chart reflects the number of annually HAZWOPER trained Enbridge employees by response zone:

<b>Superior Region Response Zone</b>	<b>Chicago Region Response Zone</b>	<b>Cushing Region Response Zone</b>	<b>Enbridge Pipelines North Dakota Response Zone</b>
131	125	85	40

In addition, internal response resources are supplemented by contract staff supplied by pre determined agreements with Oil Spill Response Organizations (OSRO's) and other local contractors. In many instances these resources are response zone specific and contact information is listed in the Enbridge Emergency Response Directory.



# Maps & References

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## **Maps & References**

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Pipeline System Map

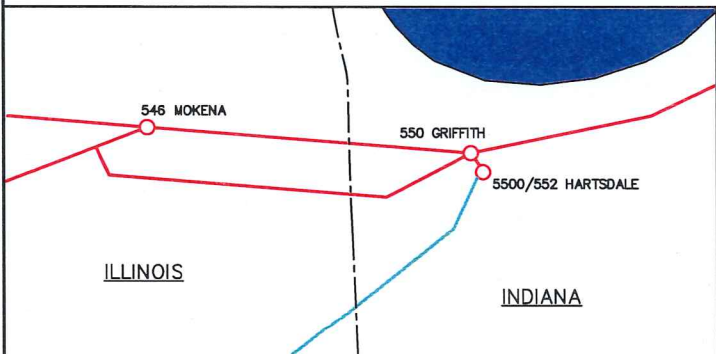
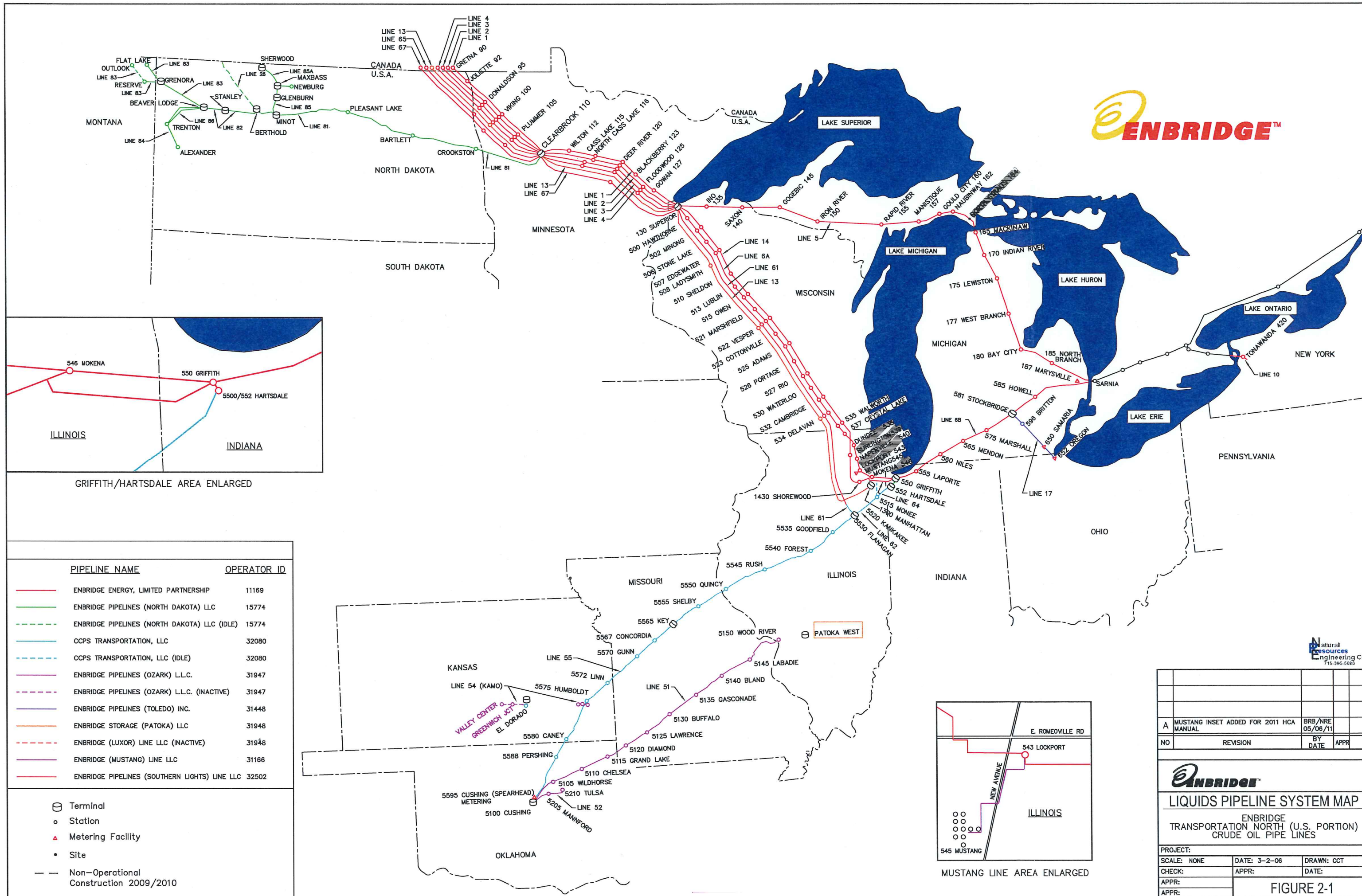
Main Line Valves

Unusually Sensitive Areas (USA) Overview Map  
USA Tables

Emergency Response/ Worst-Case Discharge Location Map  
Worst-Case Discharge Inset Maps

Form F- Release Alert

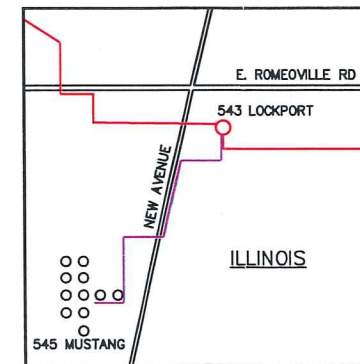
Site Safety Plot Plan



GRIFFITH/HARTSDALE AREA ENLARGED

PIPELINE NAME	OPERATOR ID
ENBRIDGE ENERGY, LIMITED PARTNERSHIP	11169
ENBRIDGE PIPELINES (NORTH DAKOTA) LLC	15774
ENBRIDGE PIPELINES (NORTH DAKOTA) LLC (IDLE)	15774
CCPS TRANSPORTATION, LLC	32080
CCPS TRANSPORTATION, LLC (IDLE)	32080
ENBRIDGE PIPELINES (OZARK) L.L.C.	31947
ENBRIDGE PIPELINES (OZARK) L.L.C. (INACTIVE)	31947
ENBRIDGE PIPELINES (TOLEDO) INC.	31448
ENBRIDGE STORAGE (PATOKA) LLC	31948
ENBRIDGE (LUXOR) LINE LLC (INACTIVE)	31948
ENBRIDGE (MUSTANG) LINE LLC	31166
ENBRIDGE PIPELINES (SOUTHERN LIGHTS) LINE LLC	32502

- ⊖ Terminal
- Station
- ▲ Metering Facility
- Site
- Non-Operational Construction 2009/2010



MUSTANG LINE AREA ENLARGED

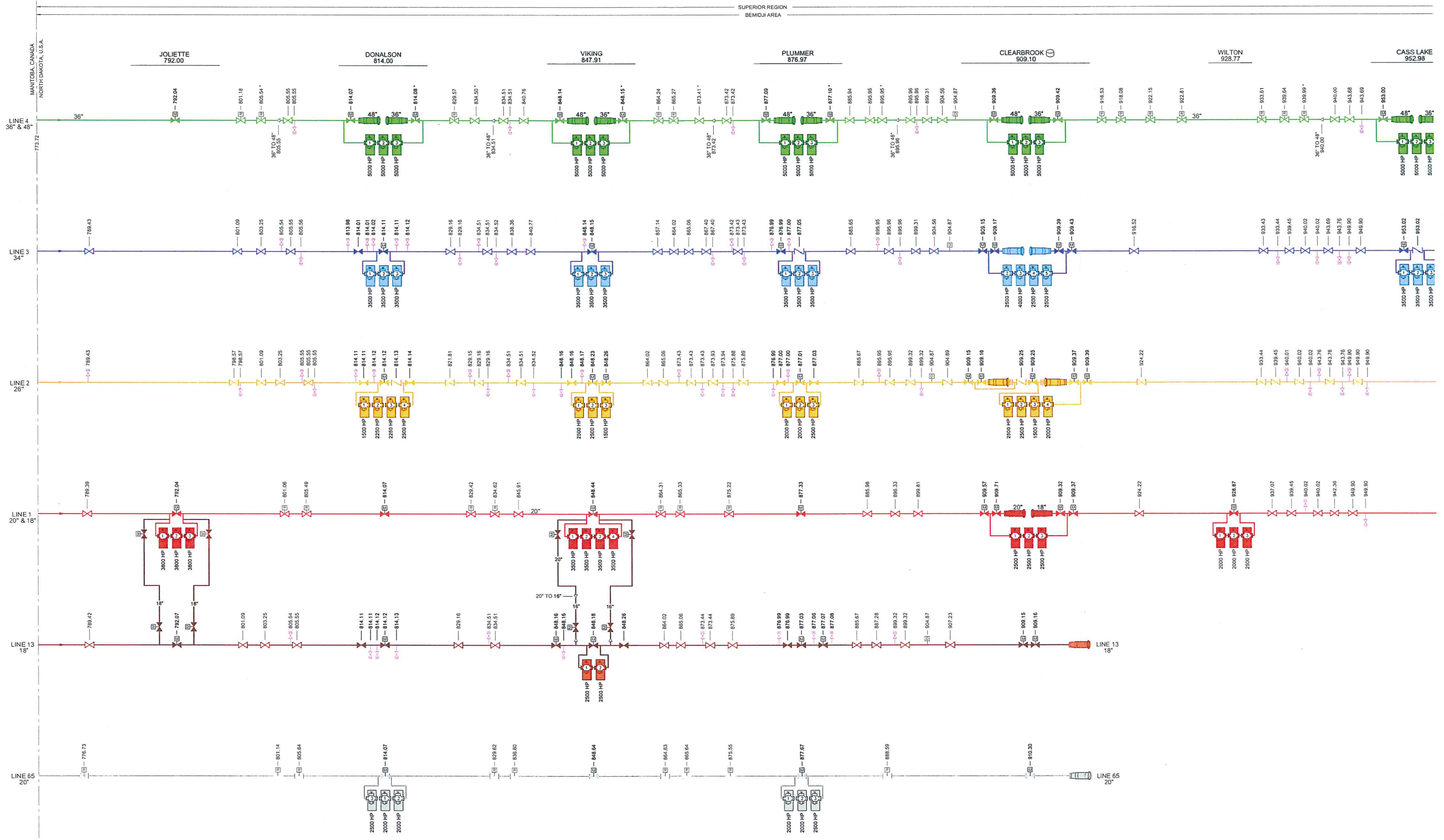
Natural Resources Engineering Co.  
715-395-5880

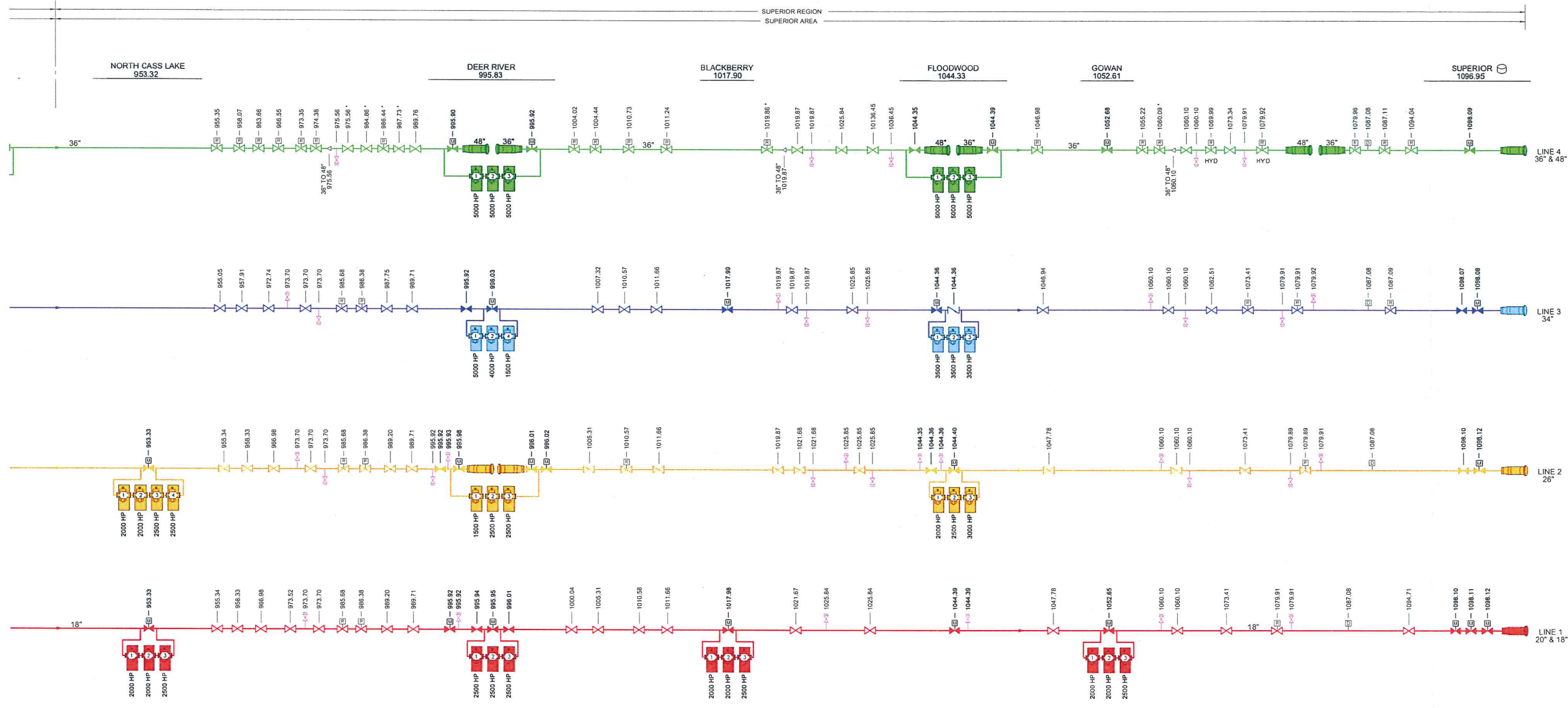
A	MUSTANG INSET ADDED FOR 2011 HCA MANUAL	BRB/NRE 05/06/11	
NO	REVISION	BY DATE	APPR

**ENBRIDGE**  
LIQUIDS PIPELINE SYSTEM MAP  
ENBRIDGE TRANSPORTATION NORTH (U.S. PORTION) CRUDE OIL PIPE LINES

PROJECT:  
SCALE: NONE    DATE: 3-2-06    DRAWN: CCT  
CHECK:    APPR:    DATE:  
APPR:    DATE:  
APPR:    DATE:

**FIGURE 2-1**





**LEGEND**

- REMOTE OPERATED VALVE
- MOTOR OPERATED VALVE WITHIN STATION
- HAND OPERATED VALVE WITHIN STATION
- CHECK VALVE
- STATION PUMP
- TANKAGE
- DENSITOMETER LOCATION
- CROSSOVER VALVE (A.I.P)
- LINE 4
- LINE 3
- LINE 2
- LINE 1
- LINE 13
- LINE 65

**AREA CLASSIFICATION**

- STATION LIMITS

**NOTES**  
 DUE TO THE COMPLEXITY OF STATION PIPING, NOT ALL TAKE-OFFS OR STATION VALVES WITHIN A STATION SHOW UP ON THIS DRAWING. FOR FURTHER DETAILS WITHIN THE STATION, SEE THE RESPECTIVE STATION GENERAL PIPING PLAN.  
 MILE POST/VALVE NUMBER MAY HAVE BEEN ADJUSTED TO FIT FIELD CONDITIONS AND DO NOT REFLECT EXACT STATIONING.

**NOTE:**  
 \* = ADJUSTED MILE POST

REPLACES DRAWINGS			
D-3.7-14138--0	D-3.7-08101--0		
D-3.7-14140--0	D-0.4-10155--0		
D-3.7-14141--0			

NO.	REVISION	DATE	BY	APPR
3	COMBINED REPLACED DWG'S (NOTED), ADDED LINE 65 & REV'D/AS-BUILT INFO	5-06-09	JSL	SD
2	REVISED LINE 1 VALVE #834 81 TO #834 62	8-8-07	MKS	KWS
1	CORRECTED PUMP STATION FROM LINE 12 TO LINE 1	4-13-07	MKS	KWS

**ENBRIDGE**  
**GRETN A TO SUPERIOR SYSTEMS**  
 BEMIDJI & SUPERIOR AREA  
 LINES 1, 2, 3, 4, 13, 65  
 MAINLINE SCHEMATIC DIAGRAM

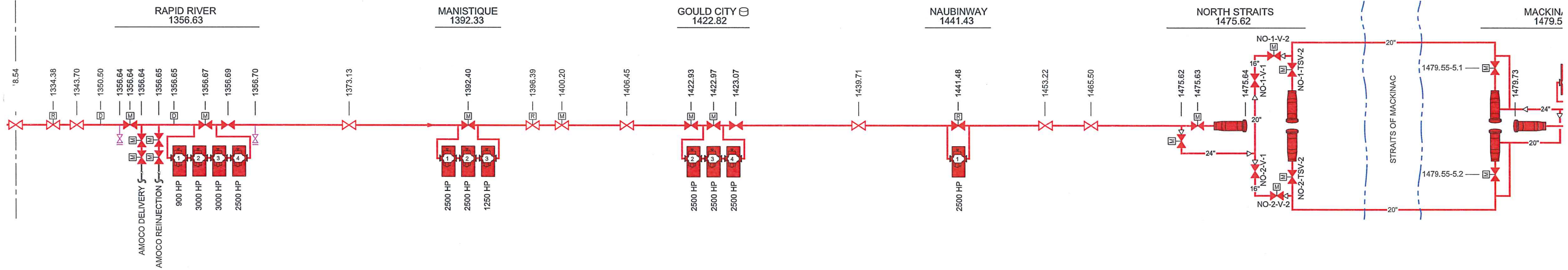
PROJECT	SCALE	DATE	DRAWN
	NONE	1-22-07	MKS
CHECK		APPR	DATE
APPR			

D-3.7-14138-3-0

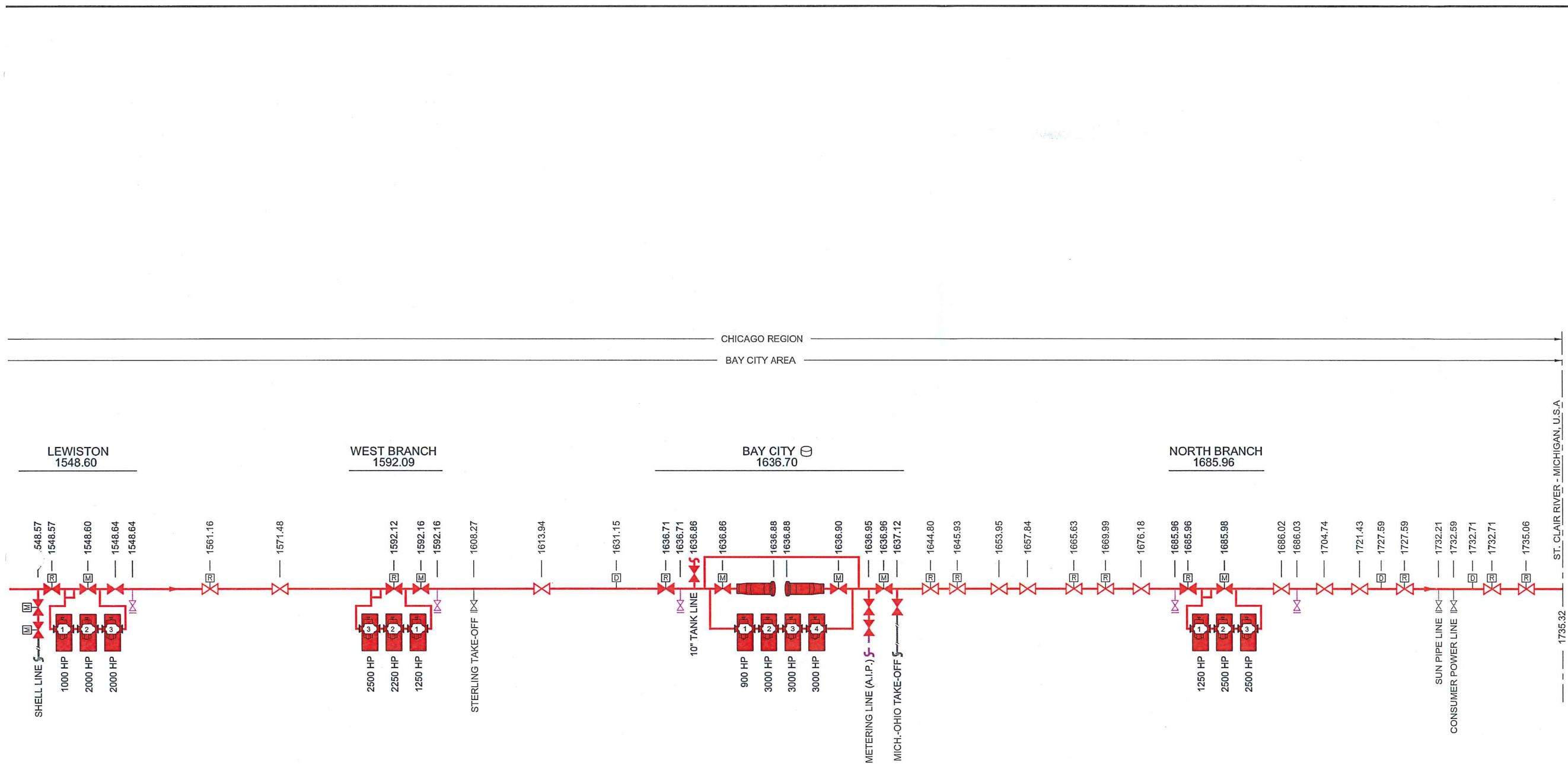


SUPERIOR REGION

ESCANABA AREA







**LEGEND**

- REMOTE OPERATED VALVE
- MOTOR OPERATED VALVE WITHIN FACILITY
- HAND OPERATED VALVE
- HAND OPERATED VALVE WITHIN FACILITY
- MOTOR OPERATED VALVE
- REMOTE OPERATED VALVE WITHIN FACILITY
- CROSSOVER VALVE (A.I.P.)
- CROSSOVER VALVE (FOREIGN)
- TANKAGE
- STATION PUMP
- REDUCER
- DENSITOMETER LOCATION
- LINE 5
- OTHER/FOREIGN PIPELINE
- LINE A.I.P.

**AREA CLASSIFICATION**

- FACILITY

**NOTES:**  
 DUE TO THE COMPLEXITY OF STATION PIPING, NOT ALL TAKE-OFFS OR STATION VALVES WITHIN A STATION SHOW UP ON THIS DRAWING. FOR FURTHER DETAILS WITHIN THE STATION, SEE THE RESPECTIVE STATION GENERAL PIPING PLAN.  
 MILE POST/VALVE NUMBER MAY HAVE BEEN ADJUSTED TO FIT FIELD CONDITIONS AND DO NOT REFLECT EXACT STATIONING.

REPLACES DRAWING			
	D-3.7-6198--0	D-0.4-10201--0	
3	ADDED CROSSOVER VALVES, REGIONS/AREAS, FACILITY AREAS & REV'D PER FIELD INFO.	JSL 4-23-10	SD
2	CORRECTED UNIT HP AT GOULD CITY, MACKINAW & LEWISTON	JT 12-3-07	KWS
1	CHANGE CHECK VALVE TO GATE VALVE @ 1548.60 FLM REPORT (BC2005-025)	MKS 4-27-07	KWS
NO	REVISION	BY DATE	APPR

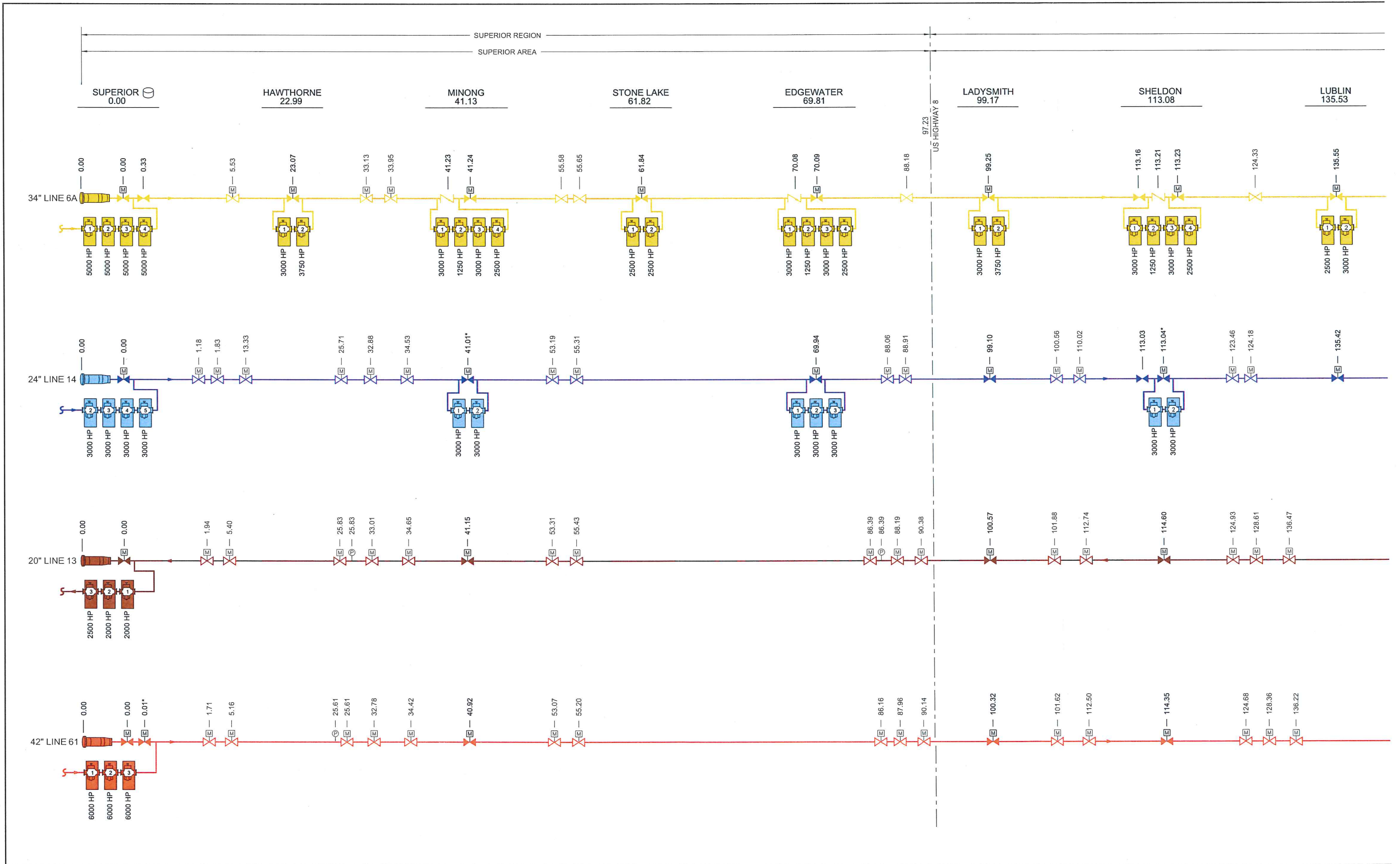
**ENBRIDGE**

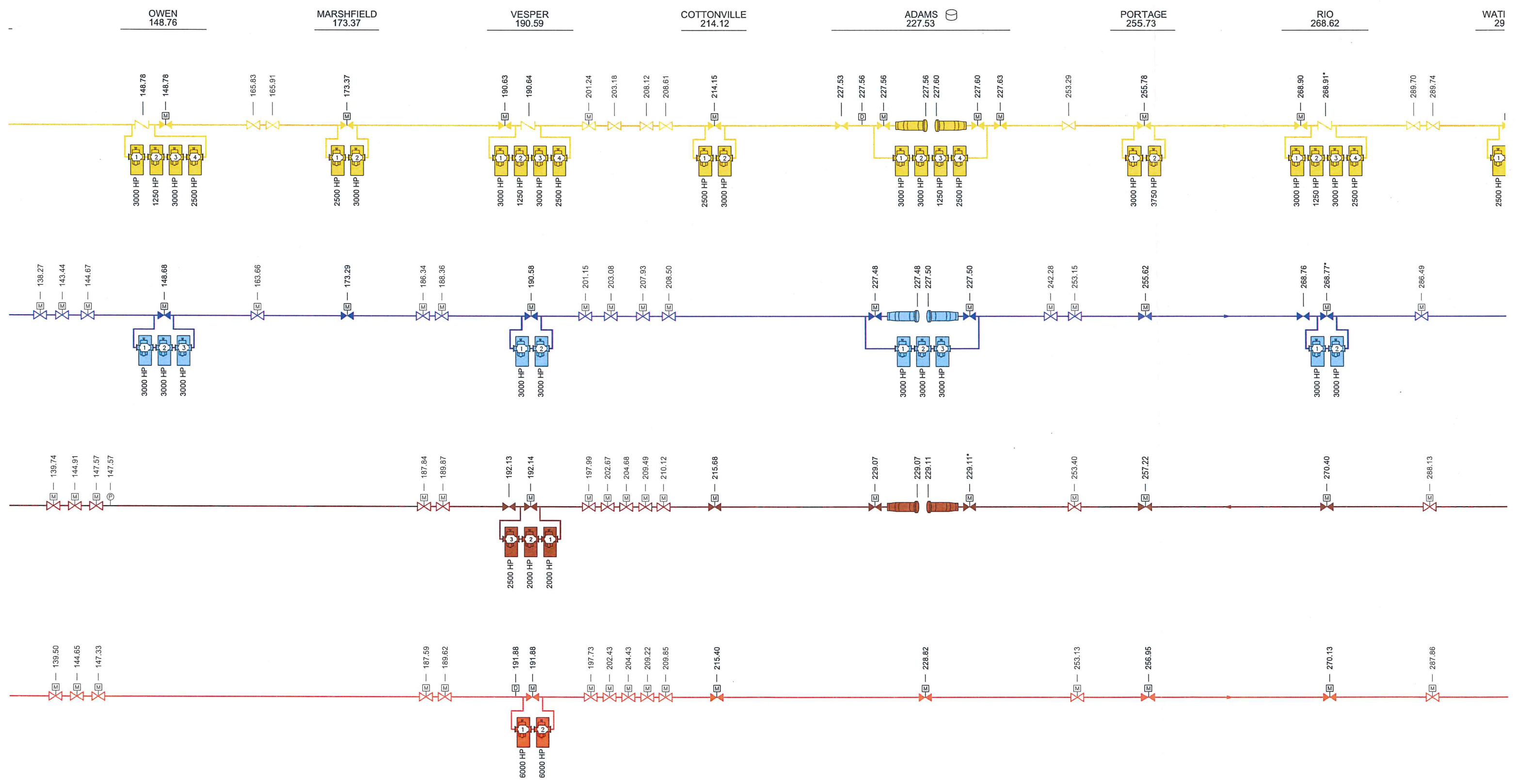
**LINE 5**

SUPERIOR, IRONWOOD, ESCAN & BAY CITY AREAS  
 MAINLINE SCHEMATIC DIAGR

PROJECT:

SCALE: NONE	DATE: 1-18-07	DRAWN
CHECK: KWS	APPR:	DATE:
APPR: SD	<b>D-3.7-14144</b>	





WATERLOO  
292.63

CAMBRIDGE  
304.54

DELAVAN  
321.28

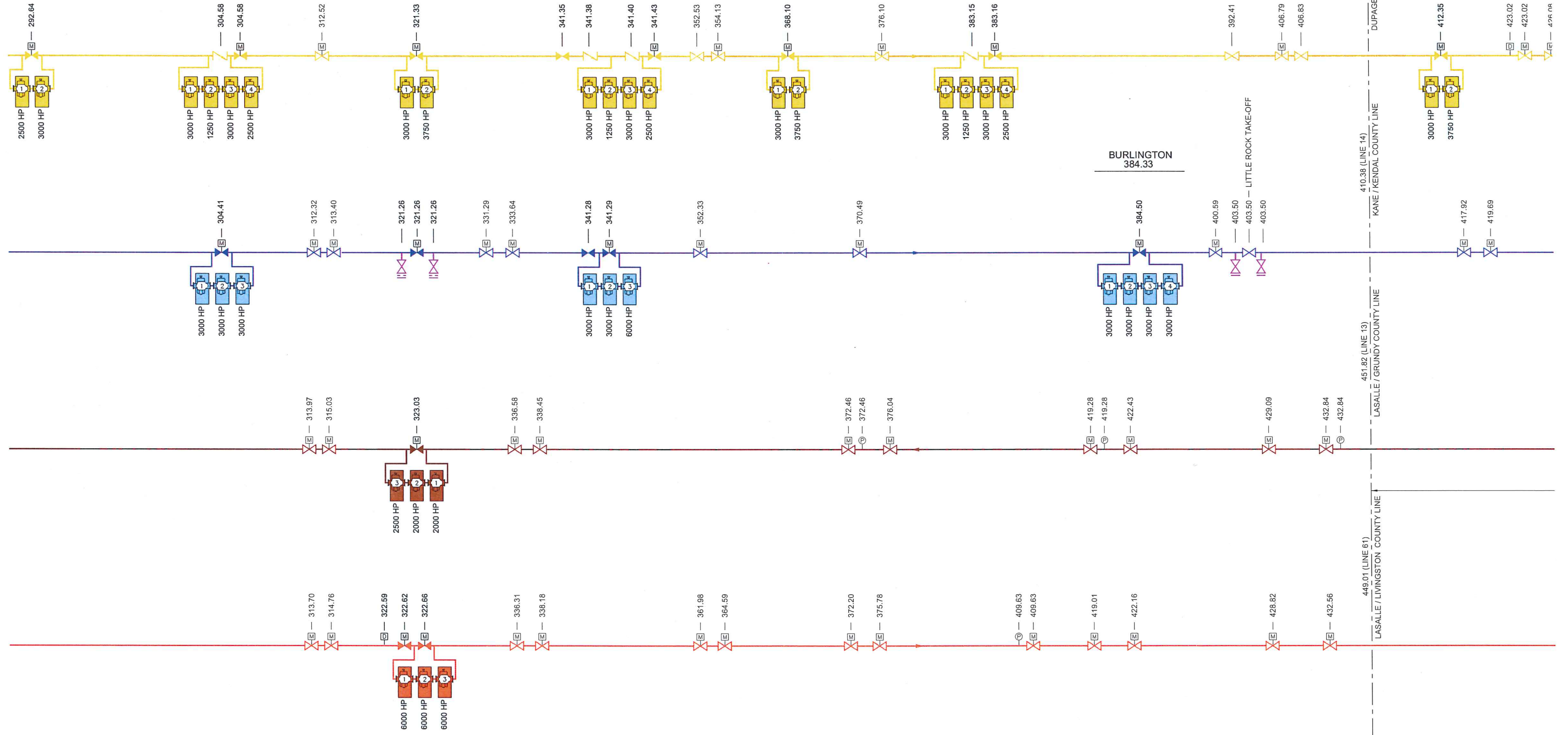
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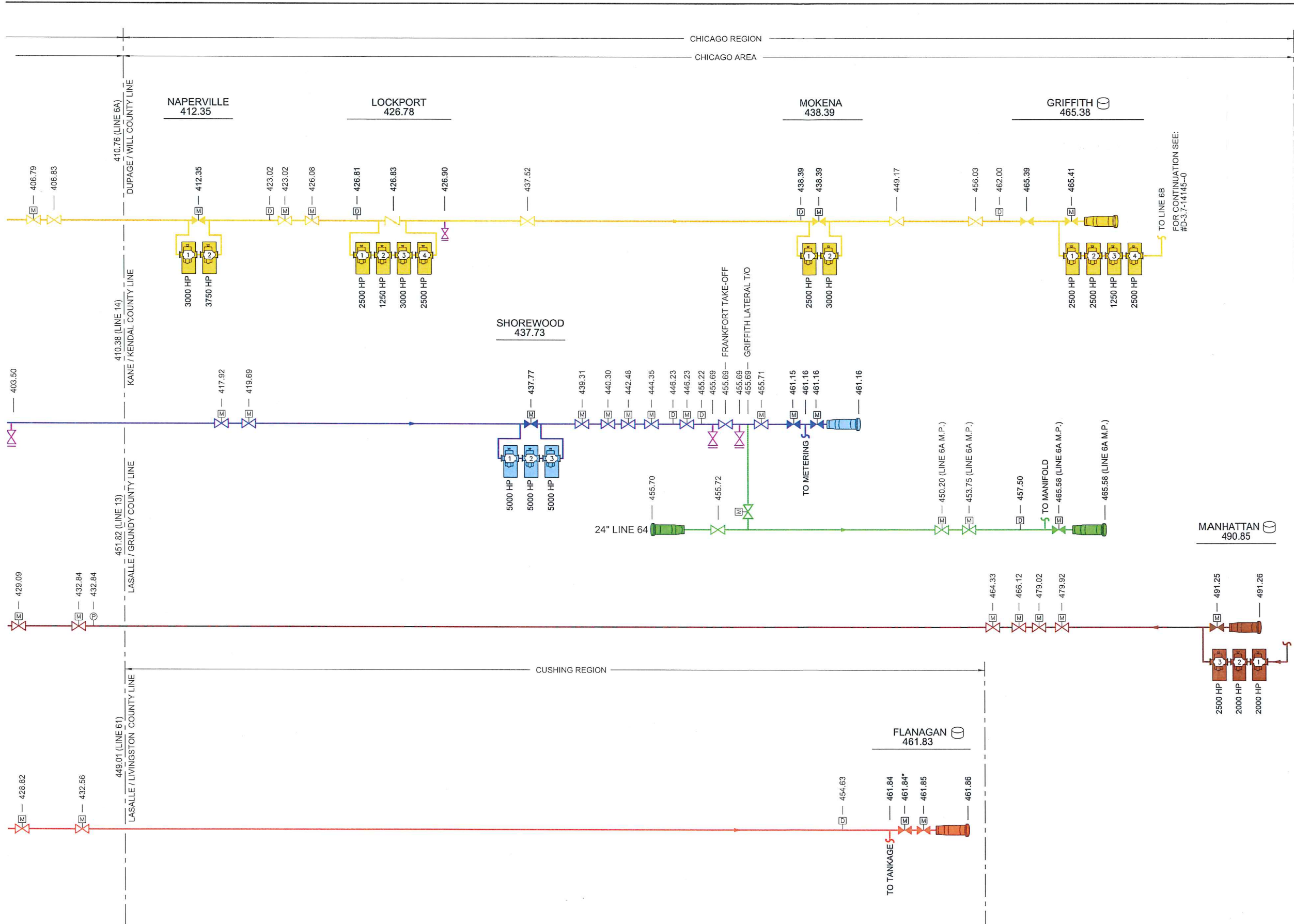
CRYSTAL LAKE  
368.05

DUNDEE  
383.09

BURLINGTON  
384.33

NAPERVILLE  
412.35





**LEGEND**

- MOTOR OPERATED VALVE
- MOTOR OPERATED VALVE WITHIN FACILITY
- HAND OPERATED VALVE
- HAND OPERATED VALVE WITHIN FACILITY
- CHECK VALVE
- VALVE A.I.P.
- STATION PUMP
- TANKAGE
- DENSITOMETER LOCATION
- PRESSURE TRANSMITTER LOCATION (ONLY OUTSIDE FACILITY LIMITS)
- LINE 6A
- LINE 13
- LINE 14
- LINE 61
- LINE 64

**AREA CLASSIFICATION**

- FACILITY LIMITS

**NOTES:**  
 MILE POST/VALVE NUMBER MAY HAVE BEEN ADJUSTED TO FIT FIELD CONDITIONS AND DO NOT REFLECT EXACT STATIONING.  
 \* ADJUSTED MILE POST

**REPLACES DRAWING'S**

D-3.7-14143--0	D-3.7-06201--0
D-3.7-15013--0	D-3.7-12462--0
D-3.7-15014--0	D-0.4-10200--0
	D-0.4-10242--0

NO	REVISION	BY DATE	APPR
3	ADDED LINE 13 AND REVISED LINE 61 PER PHASE 2 AS-BUILTS	JSL 3-22-11	SD
2	COMBINED REPLACED DWG'S (NOTED). ADDED LINE 61 & REV'D/AS-BUILT INFO	JSL 4-27-09	SD
1	REVISED AS PER FRANKFORT & SHOREWOOD ADDITION	JSL 10-8-08	SD

**ENBRIDGE™**  
**SUPERIOR SOUTH SYST**  
 SUPERIOR, FORT ATKINSON, CHICAGO  
 LINES 6A, 13, 14, 61 & 64  
 MAINLINE SCHEMATIC DIAGR

**PROJECT:**

SCALE: NONE	DATE: 1-29-07	DRAWN:
CHECK: KWS	APPR:	DATE:
APPR: SD	<b>D-3.7-14142</b>	



**Legend**

- Response Facilities
- Commercially Navigable Waterways
- Pipeline

\*The U.S. DOT PHMSA restricts the release of DW and ESA symbology to pipeline states.

**High Consequence Areas (HCA)\***

- Drinking Water HCA
- Ecological HCA

**Enbridge Energy, Limited Partnership  
Superior Region Unusually Sensitive Areas**

**(USA) Overview Map**



DATE ISSUED: 12/1/2004

DATE REVISED: 10/14/2011

SCALE: 1:2,600,000

DRAWN BY: CMK

SERIES: Emergency Response Times



**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Crude Oil:</b>								
1	20-inch	3,900	26,543			4.29	777	U.S. DW / SW
1	20-inch	49,555	51,605			0.39	783	Enbridge DW / SW
1	20-inch	63,600	67,300			0.70	786	Enbridge DW / SW
1	20-inch	114,450	117,050			0.49	796	Enbridge CNW / Red River
1	20-inch	114,450	117,050			0.49	796	U.S. ESA
1	20-inch	122,070	124,470			0.45	797	Enbridge CNW / Red River
1	20-inch	122,070	124,470			0.45	797	U.S. ESA
1	20-inch	129,659	131,659			0.38	798	Enbridge CNW / Red River
1	20-inch	129,659	131,659			0.38	798	U.S. ESA
1	20-inch	136,891	138,891			0.38	800	Enbridge CNW / Red River
1	20-inch	136,891	138,891			0.38	800	U.S. ESA
1	20-inch	141,691	145,891			0.80	801	Enbridge CNW / Red River
1	20-inch	146,350	148,456			0.40	802	Enbridge CNW / Red River
1	20-inch	155,506	158,700			0.60	803	Enbridge CNW / Red River
1	20-inch	165,906	168,906			0.57	805	Enbridge CNW / Red River
1	20-inch	447,460	452,196			0.90	859	U.S. DW / SW
1	20-inch	454,346	460,480			1.16	860	U.S. DW / SW
1	20-inch	462,080	468,917			1.29	862	U.S. DW / SW
1	20-inch	472,140	476,670			0.86	864	U.S. ESA
1	20-inch	473,118	475,618			0.47	864	U.S. DW / SW
1	20-inch	478,204	482,125			0.74	865	Enbridge DW / GW
1	20-inch	536,815	538,955			0.41	876	U.S. DW / GW
1	20-inch	539,555	543,740			0.79	876	U.S. DW / GW
1	20-inch	594,912	597,699			0.53	887	Enbridge DW / GW

Diversion Stationing: See Tab 3, Section 5.1 for more information  
May 2011

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>U.S. Border to Clearbrook 20" (0 - 716,232) cont.</b>								
1	20-inch	688,773	690,620			0.35	904	Enbridge DW / GW
1	20-inch	715,600	716,232			0.12	909	Enbridge DW / GW
<b>Clearbrook to Superior 18" (716,232 - 1,712,883)</b>								
1	18-inch	716,232	717,555			0.25	909	Enbridge DW / GW
1	18-inch	782,740	791,250			1.61	923	U.S. ESA
1	18-inch	793,800	804,620			2.05	925	U.S. ESA
1	18-inch	828,820	838,320			1.80	932	U.S. ESA
1	18-inch	864,826	881,559			3.17	939	U.S. ESA
1	18-inch	880,750	886,400			1.07	941	U.S. DW / GW
1	18-inch	903,447	926,887			4.44	947	U.S. ESA
1	18-inch	903,447	921,882			3.49	947	U.S. ESA
1	18-inch	903,447	919,782			3.09	946	U.S. DW / GW
1	18-inch	976,300	991,465			2.87	960	U.S. ESA
1	18-inch	1,003,365	1,007,335			0.75	964	U.S. ESA
1	18-inch	1,018,230	1,030,864			2.39	968	U.S. ESA
1	18-inch	1,037,880	1,045,345			1.41	971	U.S. ESA
1	18-inch	1,051,350	1,063,163			2.24	974	U.S. ESA
1	18-inch	1,060,348	1,072,813			2.36	976	U.S. ESA
1	18-inch	1,082,800	1,094,300			2.18	980	U.S. ESA
1	18-inch	1,099,513	1,101,323			0.34	982	U.S. ESA
1	18-inch	1,111,153	1,123,370			2.31	985	U.S. ESA
1	18-inch	1,117,854	1,123,065			0.99	986	Enbridge CNW / Mississippi River
1	18-inch	1,117,854	1,123,065			0.99	986	U.S. ESA
1	18-inch	1,124,569	1,140,470			3.01	988	U.S. ESA

Diversion Stationing: See Tab 3, Section 5.1 for more information

May 2011

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Crude Oil:</b>								
<b>Clearbrook to Superior 18" (716,232 - 1,712,883) cont.</b>								
1	18-inch	1,137,868	1,140,470			0.49	989	Enbridge CNW / Mississippi River
1	18-inch	1,161,100	1,174,037			2.45	995	U.S. ESA
1	18-inch	1,181,900	1,182,880			0.19	998	U.S. ESA
1	18-inch	1,204,230	1,209,130			0.93	1,002	Enbridge DW / GW
1	18-inch	1,204,230	1,209,130			0.93	1,002	U.S. ESA
1	18-inch	1,226,800	1,240,040	<b>4,800</b>	<b>20,200</b>	2.92	1,007	Enbridge DW / GW
1	18-inch	1,321,970	1,323,952			0.38	1,024	U.S. ESA
1	18-inch	1,428,029	1,429,516			0.28	1,044	Enbridge DW / GW
1	18-inch	1,571,593	1,573,305			0.32	1,072	Enbridge DW / GW
1	18-inch	1,586,344	1,587,825			0.28	1,074	Enbridge DW / GW
1	18-inch	1,668,500	1,676,640			1.54	1,090	U.S. ESA
1	18-inch	1,684,500	1,687,720			0.61	1,093	Enbridge DW / GW
1	18-inch	1,700,850	1,702,500			0.31	1,096	U.S. DW / SW
1	18-inch	1,706,800	1,712,883			1.15	1,098	U.S. DW / SW

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			

**Natural Gas Liquids:**

<b>U.S. Border to Clearbrook 20" (0 - 716,232)</b>								
1	20-inch	131,959	161,768			5.65	802	Enbridge CNW / Red River
1	20-inch	466,256	482,550			3.09	864	U.S. ESA

**Clearbrook to Superior 18" (716,232 - 1,712,883)**

1	18-inch	779,037	795,250			3.07	923	U.S. ESA
1	18-inch	789,740	808,533			3.56	925	U.S. ESA
1	18-inch	825,174	843,500			3.47	932	U.S. ESA
1	18-inch	861,176	885,489			4.61	939	U.S. ESA
1	18-inch	913,350	931,787			3.49	948	U.S. ESA
1	18-inch	918,190	929,737			2.19	949	U.S. ESA
1	18-inch	960,700	965,700			0.95	956	U.S. ESA
1	18-inch	970,753	995,410			4.67	960	U.S. ESA
1	18-inch	998,260	1,013,484			2.88	964	U.S. ESA
1	18-inch	1,002,935	1,011,184			1.56	964	U.S. ESA
1	18-inch	1,013,484	1,050,732			7.05	969	U.S. ESA
1	18-inch	1,029,064	1,036,364			1.38	969	U.S. ESA
1	18-inch	1,046,795	1,067,713			3.96	974	U.S. ESA
1	18-inch	1,055,619	1,077,563			4.16	976	U.S. ESA
1	18-inch	1,078,413	1,098,980			3.90	980	U.S. ESA
1	18-inch	1,093,913	1,098,980			0.96	981	U.S. ESA
1	18-inch	1,106,753	1,126,720			3.78	985	U.S. ESA
1	18-inch	1,110,003	1,128,923			3.58	986	Enbridge CNW / Mississippi River
1	18-inch	1,121,200	1,146,070			4.71	988	U.S. ESA
1	18-inch	1,134,100	1,144,000			1.88	989	Enbridge CNW / Mississippi River
1	18-inch	1,156,916	1,178,290			4.05	995	U.S. ESA

Diversion Stationing: See Tab 3, Section 5.1 for more information

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Natural Gas Liquids:</b>								
1	18-inch	1,175,240	1,184,240			1.70	997	U.S. ESA
1	18-inch	1,180,490	1,189,540			1.71	998	U.S. ESA
1	18-inch	1,206,640	1,215,800			1.73	1,003	U.S. ESA
1	18-inch	1,267,040	1,276,800			1.85	1,015	U.S. ESA
1	18-inch	1,313,895	1,327,202			2.52	1,024	U.S. ESA

**Clearbrook to Superior 18" (716,232 - 1,712,883) cont.**

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Crude Oil:</b>								
2	26-inch	4,000	26,541			4.27	777	U.S. DW / SW
2	26-inch	49,730	51,950			0.42	783	Enbridge DW / SW
2	26-inch	63,800	67,300			0.66	786	Enbridge DW / SW
2	26-inch	114,328	117,578			0.62	796	Enbridge CNW / Red River
2	26-inch	114,328	117,578			0.62	796	U.S. ESA
2	26-inch	121,980	125,328			0.63	797	Enbridge CNW / Red River
2	26-inch	121,980	125,328			0.63	797	U.S. ESA
2	26-inch	129,080	132,700			0.69	799	Enbridge CNW / Red River
2	26-inch	129,080	132,700			0.69	799	U.S. ESA
2	26-inch	137,229	140,429			0.61	800	Enbridge CNW / Red River
2	26-inch	137,229	140,029			0.53	800	U.S. ESA
2	26-inch	141,179	151,365			1.93	801	Enbridge CNW / Red River
2	26-inch	154,500	159,515			0.95	803	Enbridge CNW / Red River
2	26-inch	165,460	169,510			0.77	805	Enbridge CNW / Red River
2	26-inch	446,020	450,850			0.91	859	U.S. DW / SW
2	26-inch	452,876	459,000			1.16	860	U.S. DW / SW
2	26-inch	460,360	468,110			1.47	862	U.S. DW / SW
2	26-inch	470,600	475,300			0.89	863	U.S. ESA
2	26-inch	471,600	474,360			0.52	863	U.S. DW / SW
2	26-inch	476,280	481,550			1.01	864	Enbridge DW / GW
2	26-inch	535,540	542,100			1.24	876	U.S. DW / GW
2	26-inch	592,936	596,086		4,641	0.60	886	Enbridge DW / GW
2	26-inch	686,500	688,650			0.41	904	Enbridge DW / GW
2	26-inch	713,500	715,382			0.36	909	Enbridge DW / GW

Diversion Stationing: See Tab 3, Section 5.1 for more information  
May 2011

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Stationing	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
					Begin Stationing	End Stationing			
<b>Crude Oil:</b>									
<b>Clearbrook to Deer River (715,072 - 1,163,393 (855 - diversion))</b>									
2	26-inch	782,780	791,250				1.60	923	U.S. ESA
2	26-inch	793,850	804,600				2.04	925	U.S. ESA
2	26-inch	828,900	838,270				1.77	932	U.S. ESA
2	26-inch	864,880	881,800				3.20	939	U.S. ESA
2	26-inch	864,880	867,160				0.43	938	U.S. DW / GW
2	26-inch	880,800	886,400				1.06	941	U.S. DW / GW
2	26-inch	903,297	927,287				4.54	947	U.S. ESA
2	26-inch	903,297	922,087				3.56	947	U.S. ESA
2	26-inch	903,297	919,732				3.11	946	U.S. DW / GW
2	26-inch	976,300	991,540				2.89	960	U.S. ESA
2	26-inch	1,003,185	1,007,480				0.81	964	U.S. ESA
2	26-inch	1,018,014	1,031,164				2.49	968	U.S. ESA
2	26-inch	1,037,885	1,045,595				1.46	971	U.S. ESA
2	26-inch	1,051,480	1,063,700				2.31	974	U.S. ESA
2	26-inch	1,060,500	1,073,013				2.37	976	U.S. ESA
2	26-inch	1,082,613	1,101,313				3.54	981	U.S. ESA
2	26-inch	1,110,850	1,123,350				2.37	985	U.S. ESA
2	26-inch	1,117,504	1,123,169				1.07	986	Enbridge CNW / Mississippi River
2	26-inch	1,117,504	1,123,169				1.07	986	U.S. ESA
2	26-inch	1,124,470	1,140,318				3.00	988	U.S. ESA
2	26-inch	1,137,418	1,140,318				0.55	989	Enbridge CNW / Mississippi River
2	26-inch	1,161,130	1,174,050				2.45	995	U.S. ESA
<b>Deer River to Superior (1,163,393 (855 - diversion) - 1,712,887)</b>									
2	26-inch	1,181,987	1,183,487				0.28	998	U.S. ESA

Diversion Stationing: See Tab 3, Section 5.1 for more information

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**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

**Diversion**

Line	Diameter	Begin Stationing	End Stationing	Begin Stationing	End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
<b>Crude Oil:</b>								
<b>Deer River to Superior (1,163,393 (855 - diversion) - 1,712,887) cont.</b>								
2	26-inch	1,203,978	1,209,395			1.03	1,002	Enbridge DW / GW
2	26-inch	1,203,978	1,209,395			1.03	1,002	U.S. ESA
2	26-inch	1,229,380	1,244,650			2.89	1,008	Enbridge DW / GW
2	26-inch	1,246,560	1,250,460			0.74	1,010	Enbridge DW / GW
2	26-inch	1,251,880	1,255,270			0.64	1,011	Enbridge DW / GW
2	26-inch	1,315,395	1,317,045			0.31	1,023	U.S. ESA
2	26-inch	1,320,700	1,324,100			0.64	1,024	U.S. ESA
2	26-inch	1,427,879	1,429,560			0.32	1,044	Enbridge DW / GW
2	26-inch	1,571,490	1,573,550			0.39	1,072	Enbridge DW / GW
2	26-inch	1,585,752	1,588,000			0.43	1,074	Enbridge DW / GW
2	26-inch	1,665,407	1,676,600			2.12	1,090	U.S. ESA
2	26-inch	1,684,500	1,687,670			0.60	1,093	Enbridge DW / GW
2	26-inch	1,701,200	1,702,050			0.16	1,096	U.S. DW / SW
2	26-inch	1,709,750	1,712,887			0.59	1,098	U.S. DW / SW

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Crude Oil:</b>								
3	34-inch	4,000	26,541			4.27	777	U.S. DW / SW
3	34-inch	49,642	51,891			0.44	783	Enbridge DW / SW
3	34-inch	63,500	68,610			0.97	786	Enbridge DW / SW
3	34-inch	113,700	117,750	30,774	34,824	0.77	796	Enbridge CNW / Red River
3	34-inch	113,700	117,750	30,774	34,824	0.77	796	U.S. ESA
3	34-inch	121,630	125,350	38,700	42,424	0.71	797	Enbridge CNW / Red River
3	34-inch	121,630	125,350	38,700	42,424	0.71	797	U.S. ESA
3	34-inch	128,800	132,820	45,875	47,975	0.40	798	Enbridge CNW / Red River
3	34-inch	128,800	132,820	45,875	47,975	0.40	798	U.S. ESA
3	34-inch	137,160	140,100	54,234	57,982	0.63	800	Enbridge CNW / Red River
3	34-inch	137,160	140,100	54,234	57,982	0.71	800	U.S. ESA
3	34-inch	140,800	159,725	58,682		3.58	802	Enbridge CNW / Red River
3	34-inch	165,302	170,150			0.92	805	Enbridge CNW / Red River
3	34-inch	446,020	450,850			0.91	859	U.S. DW / SW
3	34-inch	452,826	458,858			1.14	860	U.S. DW / SW
3	34-inch	460,100	467,610			1.42	862	U.S. DW / SW
3	34-inch	470,500	475,380			0.92	863	U.S. ESA
3	34-inch	471,600	474,360			0.52	863	U.S. DW / SW
3	34-inch	476,080	481,868			1.10	864	Enbridge DW / GW
3	34-inch	534,810	542,140			1.39	876	U.S. DW / GW
3	34-inch	593,216	596,443	4,490		0.72	886	Enbridge DW / GW
3	34-inch	686,780	688,480			0.32	904	Enbridge DW / GW
3	34-inch	713,380	715,225			0.35	909	Enbridge DW / GW

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Crude Oil:</b>								
3	34-inch	782,770	791,150			1.59	923	U.S. ESA
3	34-inch	793,900	804,620			2.03	925	U.S. ESA
3	34-inch	828,820	838,370			1.81	932	U.S. ESA
3	34-inch	864,780	881,850			3.23	939	U.S. ESA
3	34-inch	864,780	867,860			0.58	938	U.S. DW / GW
3	34-inch	880,750	886,490			1.09	941	U.S. DW / GW
3	34-inch	903,250	927,675			4.63	947	U.S. ESA
3	34-inch	903,250	922,450			3.64	947	U.S. ESA
3	34-inch	903,250	919,700			3.12	946	U.S. DW / GW
3	34-inch	951,300	954,500	<b>11,750</b>	<b>14,950</b>	0.61	954	Enbridge DW / GW
3	34-inch	976,414	991,500			2.86	960	U.S. ESA
3	34-inch	1,003,235	1,007,550			0.82	964	U.S. ESA
3	34-inch	1,018,014	1,030,864			2.43	968	U.S. ESA
3	34-inch	1,033,564	1,035,864			0.44	970	U.S. ESA
3	34-inch	1,037,900	1,045,595			1.46	971	U.S. ESA
3	34-inch	1,051,430	1,063,900			2.36	974	U.S. ESA
3	34-inch	1,060,350	1,072,900			2.38	976	U.S. ESA
3	34-inch	1,082,860	1,101,450			3.52	981	U.S. ESA
3	34-inch	1,110,950	1,123,300			2.34	985	U.S. ESA
3	34-inch	1,117,404	1,123,115			1.08	986	Enbridge CNW / Mississippi River
3	34-inch	1,117,404	1,123,115			1.08	986	U.S. ESA
3	34-inch	1,124,400	1,140,328			3.02	988	U.S. ESA
3	34-inch	1,137,330	1,140,328			0.57	989	Enbridge CNW / Mississippi River
3	34-inch	1,161,230	1,173,986		<b>11,439</b>	2.41	995	U.S. ESA

Diversion Stationing: See Tab 3, Section 5.1 for more information

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**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Crude Oil:</b>								
3	34-inch	1,184,500	1,190,350	21,950	27,990	1.14	999	U.S. ESA
3	34-inch	1,229,050	1,244,350			2.90	1,008	Enbridge DW / GW
3	34-inch	1,246,500	1,250,350			0.73	1,010	Enbridge DW / GW
3	34-inch	1,251,261	1,256,048			0.91	1,011	Enbridge DW / GW
3	34-inch	1,316,245	1,317,295			0.20	1,023	U.S. ESA
3	34-inch	1,320,420	1,324,250			0.73	1,024	U.S. ESA
3	34-inch	1,427,615	1,429,516	45,802		0.36	1,044	Enbridge DW / GW
3	34-inch	1,571,693	1,573,355			0.31	1,072	Enbridge DW / GW
3	34-inch	1,586,154	1,587,804			0.31	1,074	Enbridge DW / GW
3	34-inch	1,665,993	1,676,140			1.92	1,090	U.S. ESA
3	34-inch	1,684,450	1,687,620			0.60	1,093	Enbridge DW / GW
3	34-inch	1,700,700	1,702,450			0.33	1,096	U.S. DW / SW
3	34-inch	1,706,200	1,712,752			1.24	1,097	U.S. DW / SW

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Crude Oil:</b>								
<b>U.S. Border to Donaldson 36" (0-168,408)</b>								
4	36-inch	4,000	26,601			4.28	777	U.S. DW / SW
4	36-inch	49,680	52,505			0.54	783	Enbridge DW / SW
4	36-inch	63,250	67,780			0.86	786	Enbridge DW / SW
4	36-inch	114,650	118,000			0.63	796	Enbridge CNW / Red River
4	36-inch	114,650	118,000			0.63	796	U.S. ESA
4	36-inch	122,200	125,450			0.62	797	Enbridge CNW / Red River
4	36-inch	122,200	125,450			0.62	797	U.S. ESA
4	36-inch	129,460	132,860			0.64	799	Enbridge CNW / Red River
4	36-inch	129,460	132,860			0.64	799	U.S. ESA
4	36-inch	137,519	139,890			0.45	800	Enbridge CNW / Red River
4	36-inch	137,519	139,890			0.45	800	U.S. ESA
4	36-inch	142,000	149,613			1.44	801	Enbridge CNW / Red River
4	36-inch	155,400	159,730			0.82	804	Enbridge CNW / Red River
4	36-inch	165,830	168,408			0.49	805	Enbridge CNW / Red River
<b>U.S. Border to Donaldson 48" (168,041-212,348)</b>								
4	48-inch	168,041	170,100			0.39	806	Enbridge CNW / Red River
<b>Donaldson to Viking 48" (212,348 - 213,109)</b>								
<b>Donaldson to Viking 36" (213,461-322,423)</b>								
<b>Donaldson to Viking 48" (320,971-392,075)</b>								
<b>Viking to Plummer 48" (392,075-393,021)</b>								

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Viking to Plummer 36" (394,395-527,703)</b>								
4	36-inch	447,210	469,860			4.29	861	U.S. DW / SW
4	36-inch	471,650	476,350			0.89	863	U.S. ESA
4	36-inch	472,700	475,400			0.51	864	U.S. DW / SW
4	36-inch	477,000	483,100			1.16	865	Enbridge DW / GW
<b>Viking to Plummer 48" (526,404-545,165)</b>								
4	48-inch	534,740	541,824			1.34	876	U.S. DW / GW
<b>Plummer to Clearbrook 48" (545,165 - 545,840)</b>								
<b>Plummer to Clearbrook 36" (547,141-647,345)</b>								
4	36-inch	594,908	598,558			0.69	887	Enbridge DW / GW
<b>Plummer to Clearbrook 48" (645,406-716,261)</b>								
4	48-inch	684,059	689,560			1.04	904	Enbridge DW / GW
4	48-inch	710,950	712,184			0.23	908	Enbridge DW / GW
4	48-inch	713,134	715,880			0.52	909	Enbridge DW / GW
<b>Clearbrook to Cass Lake 36" (716,411-878,927)</b>								
4	36-inch	783,530	791,930			1.59	923	U.S. ESA
4	36-inch	794,580	805,249			2.02	925	U.S. ESA
4	36-inch	829,670	839,250			1.81	932	U.S. ESA
4	36-inch	865,700	878,927			2.51	939	U.S. ESA
4	36-inch	865,700	868,300			0.49	938	U.S. DW / GW
<b>Clearbrook to Cass Lake 48" (877,981-946,695)</b>								
4	48-inch	877,981	881,850			0.73	940	U.S. ESA
4	48-inch	880,750	886,400			1.07	941	U.S. DW / GW

Diversion Stationing: See Tab 3, Section 5.1 for more information  
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**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Crude Oil:</b>								
<b>Clearbrook to Cass Lake 48" (877,981-946,695) cont.</b>								
4	48-inch	903,119	919,850			3.17	946	U.S. DW / GW
4	48-inch	903,119	922,578			3.69	947	U.S. ESA
4	48-inch	903,119	927,687			4.65	947	U.S. ESA
<b>Clearbrook to Cass Lake 36" (946,641-946,717)</b>								
<b>Cass Lake to Deer River 36" (946,717-1,059,570)</b>								
4	36-inch	951,250	954,250			0.57	954	Enbridge DW / GW
4	36-inch	974,240	989,160			2.83	960	U.S. ESA
4	36-inch	1,000,826	1,005,053			0.80	964	U.S. ESA
4	36-inch	1,015,913	1,028,750			2.43	967	U.S. ESA
4	36-inch	1,031,950	1,033,550			0.30	969	U.S. ESA
4	36-inch	1,035,600	1,043,820			1.56	971	U.S. ESA
4	36-inch	1,049,420	1,059,570			1.92	973	U.S. ESA
<b>Cass Lake to Deer River 48" (127,102 (diversion)-1,173,196)</b>								
4	48-inch	1,057,233	1,063,970	<b>127,102</b>	<b>133,840</b>	1.28	975	U.S. ESA
4	48-inch	1,082,200	1,102,200	<b>152,069</b>	<b>172,069</b>	3.79	981	U.S. ESA
4	48-inch	1,110,680	1,123,150	<b>180,550</b>	<b>193,019</b>	2.36	985	U.S. ESA
4	48-inch	1,119,250	1,125,350	<b>189,119</b>	<b>195,219</b>	1.16	986	Enbridge CNW / Mississippi River
4	48-inch	1,119,250	1,142,100	<b>189,119</b>		4.33	988	U.S. ESA
4	48-inch	1,137,495	1,140,600		<b>2,885</b>	0.60	989	Enbridge CNW / Mississippi River
4	48-inch	1,161,116	1,173,196		<b>8,336</b>	2.29	995	U.S. ESA

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Cass Lake to Deer River 36" (1,173,151-1,173,232)</b>								
4	36-inch	1,173,232	1,174,300			0.20	996	U.S. ESA
4	36-inch	1,173,151	1,173,232			0.02	996	U.S. ESA
<b>Deer River to Floodwood 36" (1,173,232-1,306,304)</b>								
4	36-inch	1,184,240	1,190,710			1.23	999	U.S. ESA
4	36-inch	1,228,600	1,246,000			3.30	1,008	Enbridge DW / GW
4	36-inch	1,258,130	1,262,528			0.83	1,012	Enbridge DW / GW
<b>Deer River to Floodwood 48" (1,299,654-1,428,994 (47,009 - diversion))</b>								
4	48-inch	1,313,895	1,318,270			0.83	1,023	U.S. ESA
4	48-inch	1,319,670	1,325,002			1.01	1,024	U.S. ESA
4	48-inch	1,428,000	1,428,994	46,015	47,009	0.19	1,044	Enbridge DW / GW
<b>Deer River to Floodwood 36" (1,429,072-1,429,145)</b>								
4	36-inch	1,429,072	1,429,145			0.01	1,044	Enbridge DW / GW
<b>Floodwood to Wrenshall 36" (1,429,145-1,512,231)</b>								
4	36-inch	1,429,145	1,429,472			0.06	1,044	Enbridge DW / GW
<b>Floodwood to Wrenshall 48" (1,512,091-1,616,806)</b>								
4	48-inch	1,571,743	1,573,593			0.35	1,072	Enbridge DW / GW
4	48-inch	1,585,926	1,587,854	5,045		0.37	1,074	Enbridge DW / GW
<b>Floodwood to Wrenshall 36" (1,616,840-1,617,041)</b>								
<b>Wrenshall to Superior 36" (1,617,041-1,712,760)</b>								
4	36-inch	1,665,217	1,676,700			2.17	1,090	U.S. ESA
4	36-inch	1,684,600	1,687,701			0.59	1,093	Enbridge DW / GW
4	36-inch	1,701,252	1,702,152			0.17	1,096	U.S. DW / SW

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**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Crude Oil:</b>								
5	30-inch	0	26,916			5.10	1,101	U.S. DW / SW
5	30-inch	0	6,019			1.14	1,099	U.S. CNW / Superior Harbor
5	30-inch	7,100	8,821			0.33	1,100	U.S. DW / GW
5	30-inch	16,661	19,541			0.55	1,102	U.S. ESA
5	30-inch	18,044	21,307			0.62	1,102	U.S. DW / GW
5	30-inch	23,616	26,316			0.51	1,103	U.S. ESA
5	30-inch	27,466	34,066			1.25	1,104	U.S. DW / SW
5	30-inch	27,466	31,123			0.69	1,104	U.S. ESA
5	30-inch	37,191	38,941			0.33	1,105	U.S. DW / SW
5	30-inch	64,700	66,679			0.37	1,111	U.S. ESA
5	30-inch	121,416	125,928			0.85	1,122	U.S. ESA
5	30-inch	132,152	134,252			0.40	1,123	U.S. ESA
5	30-inch	134,752	137,252			0.47	1,124	U.S. ESA
5	30-inch	147,672	151,972			0.81	1,126	U.S. DW / GW
5	30-inch	166,593	170,043			0.65	1,130	U.S. ESA
5	30-inch	253,634	256,895			0.62	1,146	U.S. ESA
5	30-inch	253,634	256,895			0.62	1,146	U.S. ESA
5	30-inch	260,890	262,290			0.27	1,148	U.S. ESA
5	30-inch	260,890	262,290			0.27	1,148	U.S. ESA
5	30-inch	267,650	269,600			0.37	1,149	U.S. DW / SW
5	30-inch	270,687	274,330			0.69	1,150	U.S. DW / SW
5	30-inch	273,602	277,203			0.68	1,150	U.S. ESA
5	30-inch	285,467	289,944			0.85	1,153	Enbridge ESA

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**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Superior to Iron River (0 - 919,037) cont.</b>								
5	30-inch	299,052	303,387			0.82	1,155	U.S. DW / SW
5	30-inch	305,393	310,600			0.99	1,156	U.S. DW / SW
5	30-inch	307,569	309,469			0.36	1,157	U.S. CNW / Lake Superior
5	30-inch	307,569	309,469			0.36	1,157	Enbridge ESA
5	30-inch	312,500	332,091			3.71	1,159	U.S. DW / SW
5	30-inch	335,813	337,435			0.31	1,162	U.S. DW / SW
5	30-inch	417,230	421,845			0.87	1,178	U.S. ESA
5	30-inch	417,230	421,845			0.87	1,178	U.S. CNW / Lake Superior
5	30-inch	435,634	437,434			0.34	1,181	U.S. ESA
5	30-inch	435,634	437,434			0.34	1,181	U.S. CNW / Lake Superior
5	30-inch	479,099	482,586			0.66	1,189	U.S. DW / GW
5	30-inch	489,451	491,211			0.33	1,191	U.S. DW / GW
5	30-inch	501,783	506,333			0.86	1,194	U.S. DW / GW
5	30-inch	501,783	506,333			0.86	1,194	U.S. DW / GW
5	30-inch	521,800	540,543			3.55	1,199	Enbridge DW / GW
5	30-inch	524,230	533,267			1.71	1,198	Enbridge DW / GW
5	30-inch	551,843	554,743			0.55	1,203	ENB DW / GW
5	30-inch	654,412	657,512			0.59	1,222	U.S. ESA
5	30-inch	662,100	666,070			0.75	1,224	U.S. ESA
5	30-inch	711,870	713,520			0.31	1,233	U.S. ESA
5	30-inch	734,450	738,350			0.74	1,238	U.S. ESA
5	30-inch	740,650	745,550			0.93	1,239	U.S. ESA
5	30-inch	740,650	745,550			0.93	1,239	U.S. DW / GW
5	30-inch	748,150	758,594			1.98	1,241	U.S. DW / GW

Diversion Stationing: See Tab 3, Section 5.1 for more information

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**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Superior to Iron River (0 - 919,037) cont.</b>								
5	30-inch	752,100	758,594			1.23	1,241	U.S. ESA
5	30-inch	767,107	769,287			0.41	1,244	Enbridge DW / GW
5	30-inch	770,687	773,664			0.56	1,244	U.S. ESA
5	30-inch	770,687	773,664			0.56	1,244	U.S. DW / GW
5	30-inch	770,687	773,664			0.56	1,244	U.S. ESA
5	30-inch	795,533	797,583			0.39	1,249	U.S. ESA
5	30-inch	848,061	859,911			2.24	1,260	U.S. ESA
5	30-inch	869,601	871,701			0.40	1,263	U.S. ESA
5	30-inch	875,001	877,796			0.53	1,264	U.S. ESA
5	30-inch	897,427	908,592			2.11	1,269	U.S. DW / GW
5	30-inch	911,842	919,037			1.36	1,271	U.S. DW / GW
<b>Iron River to North Straits (919,037 - 1,993,306)</b>								
5	30-inch	919,370	927,800			1.60	1,273	Enbridge DW / GW
5	30-inch	929,305	931,905			0.49	1,274	Enbridge DW / GW
5	30-inch	986,400	988,200			0.34	1,285	U.S. ESA
5	30-inch	1,028,041	1,030,491			0.46	1,293	U.S. ESA
5	30-inch	1,031,941	1,040,184			1.56	1,294	U.S. ESA
5	30-inch	1,047,166	1,053,016			1.11	1,297	U.S. ESA
5	30-inch	1,136,385	1,146,885			1.99	1,314	U.S. ESA
5	30-inch	1,261,275	1,263,225			0.37	1,337	U.S. ESA
5	30-inch	1,278,343	1,286,480			1.54	1,341	U.S. ESA
5	30-inch	1,293,995	1,296,295			0.44	1,343	U.S. ESA
5	30-inch	1,342,061	1,345,211			0.60	1,353	U.S. DW / GW
5	30-inch	1,301,295	1,303,645			0.45	1,345	U.S. ESA

Diversion Stationing: See Tab 3, Section 5.1 for more information

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Crude Oil:</b>								
<b>Iron River to North Straits (919,037 - 1,993,306) cont.</b>								
5	30-inch	1,356,931	1,361,427			0.85	1,356	U.S. DW / GW
5	30-inch	1,364,712	1,367,227			0.48	1,357	U.S. DW / GW
5	30-inch	1,371,917	1,374,317			0.45	1,358	U.S. DW / GW
5	30-inch	1,378,127	1,379,432			0.25	1,359	U.S. DW / GW
5	30-inch	1,380,232	1,383,682			0.65	1,360	U.S. DW / GW
5	30-inch	1,412,201	1,415,422			0.61	1,366	U.S. ESA
5	30-inch	1,454,030	1,455,544			0.29	1,374	U.S. ESA
5	30-inch	1,472,844	1,476,808			0.75	1,377	U.S. ESA
5	30-inch	1,519,995	1,530,640			2.02	1,387	Enbridge DW / SW
5	30-inch	1,550,892	1,568,541			3.34	1,394	Enbridge DW / SW
5	30-inch	1,562,738	1,567,319			0.87	1,395	U.S. ESA
5	30-inch	1,568,175	1,572,367			0.79	1,395	U.S. ESA
5	30-inch	1,654,062	1,660,111			1.15	1,412	U.S. DW / GW
5	30-inch	1,749,210	1,752,673			0.66	1,430	U.S. DW / GW
5	30-inch	1,752,801	1,754,935			0.40	1,430	U.S. ESA
5	30-inch	1,752,801	1,754,935			0.40	1,430	U.S. ESA
5	30-inch	1,771,036	1,775,364			0.82	1,434	U.S. ESA
5	30-inch	1,771,036	1,775,064			0.76	1,434	U.S. ESA
5	30-inch	1,771,036	1,775,064			0.76	1,434	U.S. ESA
5	30-inch	1,783,181	1,785,431			0.43	1,436	U.S. ESA
5	30-inch	1,783,181	1,785,431			0.43	1,436	U.S. ESA
5	30-inch	1,787,370	1,790,139			0.52	1,437	U.S. ESA
5	30-inch	1,787,370	1,790,139			0.52	1,437	U.S. ESA

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Crude Oil:</b>								
5	30-inch	1,787,370	1,790,139			0.52	1,437	U.S. ESA
5	30-inch	1,800,921	1,803,150			0.42	1,439	U.S. ESA
5	30-inch	1,800,921	1,803,150			0.42	1,439	U.S. ESA
5	30-inch	1,804,893	1,807,000			0.40	1,440	U.S. ESA
5	30-inch	1,804,893	1,807,000			0.40	1,440	U.S. ESA
5	30-inch	1,810,494	1,812,394			0.36	1,441	U.S. ESA
5	30-inch	1,810,494	1,812,394			0.36	1,441	U.S. ESA
5	30-inch	1,815,230	1,817,380			0.41	1,442	U.S. ESA
5	30-inch	1,815,230	1,817,380			0.41	1,442	U.S. ESA
5	30-inch	1,823,420	1,826,337			0.55	1,444	U.S. ESA
5	30-inch	1,823,420	1,826,337			0.55	1,444	U.S. ESA
5	30-inch	1,823,420	1,826,337			0.55	1,444	U.S. ESA
5	30-inch	1,828,586	1,830,506			0.36	1,445	U.S. ESA
5	30-inch	1,869,864	1,872,834			0.56	1,453	U.S. ESA
5	30-inch	1,893,871	1,903,021			1.73	1,458	U.S. ESA
5	30-inch	1,915,300	1,923,475			1.55	1,462	U.S. ESA
5	30-inch	1,915,300	1,917,171			0.35	1,461	U.S. ESA
5	30-inch	1,924,025	1,935,700			2.21	1,464	U.S. ESA
5	30-inch	1,927,100	1,935,700			1.63	1,464	U.S. ESA
5	30-inch	1,939,072	1,951,750			2.40	1,467	U.S. ESA
5	30-inch	1,943,503	1,948,500			0.95	1,467	U.S. ESA
5	30-inch	1,944,353	1,950,300			1.13	1,467	U.S. ESA

Diversion Stationing: See Tab 3, Section 5.1 for more information

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**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Crude Oil:</b>								
<b>North Straits to Mackinaw - Straits of Mackinac East (1,993,306 - 2,015,016)</b>								
5	30-inch	1,975,660	1,980,826			0.98	1,473	Enbridge DW / SW
5	30-inch	1,990,444	1,993,306			0.54	1,475	U.S. ESA
5	30-inch	1,990,925	1,993,306			0.45	1,475	U.S. ESA
5	30-inch	1,991,563	1,993,306			0.33	1,475	U.S. CNW / Lake Michigan
5	30-inch	1,991,563	1,993,306			0.33	1,475	U.S. ESA
5	20-inch	1,993,306	1,995,813			0.47	1,476	U.S. ESA
5	20-inch	1,993,306	1,993,963			0.12	1,476	U.S. ESA
5	20-inch	1,993,306	1,994,913			0.30	1,476	U.S. ESA
5	20-inch	1,993,306	2,015,016			4.11	1,478	U.S. CNW / Lake Michigan
5	20-inch	1,995,813	2,011,781			3.02	1,478	Enbridge ESA
5	20-inch	2,011,781	2,015,016			0.61	1,479	U.S. ESA
<b>North Straits to Mackinaw - Straits of Mackinac West (1,993,306 - 2,015,016)</b>								
5	20-inch	1,993,306	1,995,813			0.47	1,476	U.S. ESA
5	20-inch	1,993,306	1,993,963			0.12	1,476	U.S. ESA
5	20-inch	1,993,306	1,994,913			0.30	1,476	U.S. ESA
5	20-inch	1,993,306	2,015,016			4.11	1,478	U.S. CNW / Lake Michigan
5	20-inch	1,995,813	2,011,781			3.02	1,478	Enbridge ESA
5	20-inch	2,011,781	2,015,016			0.61	1,479	U.S. ESA
<b>Mackinaw to Bay City (2,015,016 - 2,843,835)</b>								
5	30-inch	2,015,016	2,015,766			0.14	1,480	U.S. CNW / Lake Michigan
5	30-inch	2,015,016	2,026,652			2.20	1,481	U.S. ESA
5	30-inch	2,015,366	2,024,563			1.74	1,481	U.S. ESA
5	30-inch	2,019,980	2,035,632			2.96	1,482	Enbridge DW / GW
5	30-inch	2,042,085	2,044,595			0.48	1,485	U.S. ESA

Diversion Stationing: See Tab 3, Section 5.1 for more information

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**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Crude Oil:</b>								
<b>Mackinaw to Bay City (2,015,016 - 2,843,835) cont. (Indian River Station)</b>								
5	30-inch	2,077,721	2,088,841			2.11	1,493	U.S. ESA
5	30-inch	2,089,255	2,101,746			2.37	1,495	U.S. ESA
5	30-inch	2,096,522	2,098,972			0.46	1,495	U.S. ESA
5	30-inch	2,108,526	2,113,754			0.99	1,498	U.S. ESA
5	30-inch	2,111,100	2,117,115			1.14	1,498	U.S. ESA
5	30-inch	2,119,170	2,124,691			1.05	1,500	U.S. ESA
5	30-inch	2,125,441	2,129,618			0.79	1,501	U.S. ESA
5	30-inch	2,141,035	2,141,885			0.16	1,504	U.S. ESA
5	30-inch	2,148,338	2,158,357			1.90	1,506	U.S. ESA
5	30-inch	2,157,045	2,160,630			0.68	1,507	U.S. ESA
5	30-inch	2,159,491	2,164,960			1.04	1,508	Enbridge CNW / Indian River
5	30-inch	2,159,491	2,164,960			1.04	1,508	U.S. ESA
5	30-inch	2,159,491	2,164,960			1.04	1,508	U.S. ESA
5	30-inch	2,166,560	2,169,069			0.48	1,509	Enbridge CNW / Indian River
5	30-inch	2,166,560	2,169,069			0.48	1,509	U.S. ESA
5	30-inch	2,166,560	2,169,069			0.48	1,509	U.S. ESA
5	30-inch	2,173,990	2,187,601			2.58	1,511	Enbridge CNW / Indian River
5	30-inch	2,173,990	2,187,601			2.58	1,511	U.S. ESA
5	30-inch	2,173,990	2,187,601			2.58	1,511	U.S. ESA

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Natural Gas Liquids:</b>								
<b>Superior to Iron River (0 - 919,037)</b>								
5	30-inch	0	19,906			3.77	1,100	U.S. CNW / Lake Superior
5	30-inch	9,387	13,966			0.87	1,100	U.S. ESA
5	30-inch	23,342	26,345			0.57	1,103	U.S. ESA
5	30-inch	44,317	59,478			2.87	1,108	U.S. ESA
5	30-inch	266,022	280,447			2.73	1,150	U.S. ESA
5	30-inch	268,237	283,632			2.92	1,150	U.S. ESA
5	30-inch	632,908	653,457			3.89	1,220	U.S. ESA
5	30-inch	707,123	724,697			3.33	1,234	U.S. ESA
5	30-inch	740,451	757,910			3.31	1,240	U.S. ESA
5	30-inch	804,502	812,419			1.50	1,251	U.S. ESA
5	30-inch	843,251	865,005			4.12	1,260	U.S. ESA
<b>Iron River to North Straits (919,037 - 1,993,306)</b>								
5	30-inch	925,418	935,082			1.83	1,274	U.S. ESA
5	30-inch	1,043,493	1,052,367			1.68	1,297	U.S. ESA
5	30-inch	1,126,488	1,152,791			4.98	1,314	U.S. ESA
5	30-inch	1,271,583	1,295,382			4.51	1,341	U.S. ESA
5	30-inch	1,440,069	1,450,170			1.91	1,372	U.S. ESA
5	30-inch	1,511,128	1,530,580			3.68	1,386	U.S. ESA
5	30-inch	1,533,942	1,541,369			1.41	1,389	U.S. ESA
5	30-inch	1,536,035	1,546,179			1.92	1,390	U.S. ESA
5	30-inch	1,536,604	1,547,316			2.03	1,390	U.S. ESA
5	30-inch	1,548,226	1,561,256			2.47	1,393	U.S. CNW / Lake Michigan
5	30-inch	1,560,118	1,579,934			3.75	1,395	U.S. ESA

Diversion Stationing: See Tab 3, Section 5.1 for more information

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Iron River to North Straits (919,037 - 1,993,306) cont.</b>								
5	30-inch	1,761,120	1,775,771			2.77	1,433	U.S. ESA
5	30-inch	1,766,171	1,781,222			2.85	1,434	U.S. ESA
5	30-inch	1,770,175	1,790,064			3.77	1,435	U.S. ESA
5	30-inch	1,772,814	1,792,333			3.70	1,436	U.S. ESA
5	30-inch	1,783,269	1,787,812			0.86	1,436	U.S. ESA
5	30-inch	1,788,085	1,792,999			0.93	1,437	U.S. ESA
5	30-inch	1,799,795	1,828,752			5.48	1,442	U.S. ESA
5	30-inch	1,851,320	1,859,282			1.51	1,449	U.S. ESA
5	30-inch	1,862,035	1,874,047			2.28	1,452	U.S. ESA
5	30-inch	1,876,812	1,888,529			2.22	1,455	U.S. ESA
5	30-inch	1,877,361	1,888,529			2.12	1,455	U.S. ESA
5	30-inch	1,884,070	1,897,902			2.62	1,456	U.S. ESA
5	30-inch	1,887,391	1,907,726			3.85	1,457	U.S. ESA
5	30-inch	1,907,362	1,927,524			3.82	1,461	U.S. ESA
5	30-inch	1,907,726	1,945,720			7.20	1,463	U.S. ESA
5	30-inch	1,908,204	1,939,354			5.90	1,462	U.S. ESA
5	30-inch	1,908,318	1,922,696			2.72	1,461	U.S. ESA
5	30-inch	1,929,435	1,944,674			2.89	1,465	U.S. ESA
5	30-inch	1,931,710	1,960,614			5.47	1,467	U.S. ESA
5	30-inch	1,934,394	1,957,872			4.45	1,467	U.S. ESA
5	30-inch	1,936,545	1,945,720			1.74	1,466	U.S. ESA
5	30-inch	1,937,000	1,953,095			3.05	1,466	U.S. ESA
5	30-inch	1,937,364	1,956,098			3.55	1,467	U.S. ESA

**Natural Gas Liquids:**

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Iron River to North Straits (919,037 - 1,993,306) cont.</b>								
5	30-inch	1,937,637	1,953,823			3.07	1,467	U.S. ESA
5	30-inch	1,938,365	1,957,508			3.63	1,467	U.S. ESA
5	30-inch	1,940,024	1,956,507			3.12	1,467	U.S. ESA
5	30-inch	1,945,402	1,961,843			3.11	1,468	U.S. ESA
5	30-inch	1,948,727	1,966,767			3.42	1,469	U.S. ESA
5	30-inch	1,950,774	1,962,025			2.13	1,469	U.S. ESA
5	30-inch	1,951,502	1,967,814			3.09	1,469	U.S. ESA
5	30-inch	1,954,596	1,968,869			2.70	1,470	U.S. ESA
5	30-inch	1,955,279	1,968,869			2.57	1,470	U.S. ESA
5	30-inch	1,956,962	1,967,814			2.06	1,470	U.S. ESA
5	30-inch	1,971,417	1,979,084			1.45	1,472	U.S. ESA
5	30-inch	1,971,417	1,982,070			2.02	1,472	U.S. ESA
5	30-inch	1,972,145	1,982,525			1.97	1,473	U.S. ESA
5	30-inch	1,979,948	1,990,086			1.92	1,474	U.S. ESA
5	30-inch	1,983,663	1,993,306			1.83	1,475	U.S. ESA
5	30-inch	1,985,528	1,993,306			1.47	1,475	U.S. ESA
5	30-inch	1,986,939	1,993,306			1.21	1,475	U.S. CNW / Mackinac Straits
<b>North Straits to Mackinaw - Straits of Mackinac East (1,993,306 - 2,015,016)</b>								
5	20-inch	1,993,306	2,015,016			4.11	1,476	U.S. CNW / Mackinac Straits
5	20-inch	1,993,306	1,995,131			0.35	1,476	U.S. ESA
5	20-inch	1,993,306	1,998,586			1.00	1,476	U.S. ESA
5	20-inch	1,993,306	1,998,859			1.05	1,476	U.S. ESA
5	30-inch	1,998,859	2,015,016			3.06	1,478	Enbridge ESA
5	20-inch	2,010,234	2,015,016			0.91	1,479	U.S. ESA

Diversion Stationing: See Tab 3, Section 5.1 for more information

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**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>North Straits to Mackinaw - Straits of Mackinac East (1,993,306 - 2,015,016) cont.</b>								
5	20-inch	2,008,187	2,015,016			1.29	1,479	U.S. ESA
5	20-inch	2,010,780	2,015,016			0.80	1,479	U.S. ESA
<b>North Straits to Mackinaw - Straits of Mackinac West (1,993,306 - 2,015,016)</b>								
5	20-inch	1,993,306	2,015,016			4.11	1,476	U.S. CNW / Mackinac Straits
5	20-inch	1,993,306	1,995,131			0.35	1,476	U.S. ESA
5	20-inch	1,993,306	1,998,586			1.00	1,476	U.S. ESA
5	20-inch	1,993,306	1,998,859			1.05	1,476	U.S. ESA
5	30-inch	1,998,859	2,015,016			3.06	1,478	Enbridge ESA
5	20-inch	2,008,187	2,015,016			1.29	1,479	U.S. ESA
5	20-inch	2,010,234	2,015,016			0.91	1,479	U.S. ESA
5	20-inch	2,010,780	2,015,016			0.80	1,479	U.S. ESA
<b>Mackinaw to Bay City (2,015,016 - 2,843,835)</b>								
5	30-inch	2,015,016	2,037,577			4.27	1,482	U.S. ESA
5	30-inch	2,015,016	2,033,371			3.48	1,481	U.S. ESA
5	30-inch	2,015,016	2,031,255			3.08	1,481	U.S. ESA
5	30-inch	2,015,016	2,024,679			1.83	1,481	U.S. CNW / Mackinac Straits
5	30-inch	2,015,200	2,031,392			3.07	1,481	U.S. ESA
5	30-inch	2,015,200	2,027,934			2.41	1,481	U.S. ESA
5	30-inch	2,015,200	2,027,934			2.41	1,481	U.S. ESA
5	30-inch	2,015,376	2,031,050			2.97	1,481	U.S. ESA
5	30-inch	2,026,470	2,032,438			1.13	1,482	U.S. ESA
5	30-inch	2,035,412	2,060,869			4.82	1,486	U.S. ESA

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Mackinaw to Bay City (2,015,016 - 2,843,835) cont. (Indian River Station)</b>								
5	30-inch	2,086,195	2,122,201			6.82	1,497	U.S. ESA
5	30-inch	2,067,978	2,153,308			16.16	1,498	U.S. ESA
5	30-inch	2,105,004	2,125,292			3.84	1,499	U.S. ESA
5	30-inch	2,106,005	2,117,878			2.25	1,498	U.S. ESA
5	30-inch	2,142,616	2,165,639			4.36	1,506	U.S. ESA
5	30-inch	2,149,759	2,171,099			4.04	1,507	U.S. ESA
5	30-inch	2,152,421	2,171,236			3.56	1,508	Enbridge CNW / Indian River

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Superior to Adams (0 - 1,201,518)</b>								
6A	34-inch	0	11,673			2.21	1	U.S. DW / SW
6A	34-inch	14,447	19,429			0.94	3	U.S. DW / SW
6A	34-inch	139,882	143,376			0.66	27	U.S. DW / GW
6A	34-inch	174,497	184,386			1.87	34	U.S. ESA
6A	34-inch	174,497	184,386			1.87	34	U.S. ESA
6A	34-inch	203,603	204,843			0.23	39	U.S. ESA
6A	34-inch	213,851	217,331			0.66	41	U.S. ESA
6A	34-inch	213,851	217,331			0.66	41	U.S. ESA
6A	34-inch	274,261	277,686			0.65	52	U.S. ESA
6A	34-inch	281,936	285,814			0.73	54	U.S. ESA
6A	34-inch	304,820	313,462			1.64	59	U.S. ESA
6A	34-inch	353,422	355,933			0.48	67	U.S. ESA
6A	34-inch	423,751	425,700			0.37	80	U.S. DW / GW
6A	34-inch	435,988	437,938			0.37	83	U.S. DW / GW
6A	34-inch	441,350	447,747			1.21	84	U.S. ESA
6A	34-inch	441,350	447,747			1.21	84	U.S. ESA
6A	34-inch	448,897	453,800			0.93	85	U.S. ESA
6A	34-inch	448,897	453,800			0.93	85	U.S. ESA
6A	34-inch	454,650	459,350			0.89	87	U.S. ESA
6A	34-inch	454,650	459,350			0.89	87	U.S. ESA
6A	34-inch	464,453	467,889			0.65	88	U.S. ESA
6A	34-inch	464,453	467,889			0.65	88	U.S. ESA
6A	34-inch	464,453	467,889			0.65	88	U.S. ESA
6A	34-inch	468,684	471,034			0.45	89	U.S. ESA
6A	34-inch	468,684	471,034			0.45	89	U.S. ESA
6A	34-inch	468,684	471,034			0.45	89	U.S. ESA
6A	34-inch	477,212	502,732			4.83	93	U.S. ESA

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Superior to Adams (0 - 1,201,518) cont.</b>								
6A	34-inch	505,192	508,318			0.59	96	U.S. ESA
6A	34-inch	515,370	516,670			0.25	98	Enbridge DW / GW
6A	34-inch	522,685	533,088			1.97	100	U.S. ESA

Crude Oil:

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
HIGH CONSEQUENCE PIPE SEGMENTS BY STATIONING - TRANSPORT IMPACT**

**Diversion**

Line	Diameter	Begin Stationing	End Stationing	Begin Stationing	End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
<b>Border to Clearbrook (0 - 715,074)</b>								
13	18-inch	3,740	26,750			4.36	776.6	U.S. DW / SW
13	18-inch	49,850	51,840			0.38	783.4	U.S. DW / SW
13	18-inch	64,240	66,718			0.47	786.1	U.S. DW / SW
13	18-inch	114,878	117,345			0.47	795.7	Enbridge CNW / Red River of the North
13	18-inch	114,878	117,345			0.47	795.7	U.S. ESA
13	18-inch	122,528	124,790			0.43	797.2	Enbridge CNW / Red River of the North
13	18-inch	122,528	124,790			0.43	797.2	U.S. ESA
13	18-inch	129,711	162,587			6.23	801.3	Enbridge CNW / Red River of the North
13	18-inch	129,711	131,957			0.43	798.5	U.S. ESA
13	18-inch	136,985	139,572			0.49	799.9	U.S. ESA
13	18-inch	165,887	169,460			0.68	805.5	Enbridge CNW / Red River of the North
13	18-inch	446,472	450,676			0.80	858.9	U.S. DW / SW
13	18-inch	452,550	459,160			1.25	860.3	U.S. DW / SW
13	18-inch	461,010	467,310			1.19	861.9	U.S. DW / SW
13	18-inch	464,210	482,203			3.41	863.6	U.S. ESA
13	18-inch	471,416	474,610			0.60	863.6	U.S. DW / SW
13	18-inch	476,481	481,453			0.94	864.7	Enbridge DW / GW
13	18-inch	535,724	542,127			1.21	876.0	U.S. DW / GW
13	18-inch	593,266	595,795			0.48	886.7	Enbridge DW / GW
13	18-inch	686,730	688,330			0.30	904.3	Enbridge DW / GW
13	18-inch	711,618	715,074			0.65	909.2	Enbridge DW / GW
13	20-inch	63,600	78,250			2.77	922.7	U.S. ESA

**Diluent:**

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
HIGH CONSEQUENCE PIPE SEGMENTS BY STATIONING - TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Clearbrook to Superior (-244 - 1,004, 157)</b>								
13	20-inch	74,350	91,200			3.19	925.0	U.S. ESA
13	20-inch	110,100	126,800			3.16	931.8	U.S. ESA
13	20-inch	146,900	169,750			4.33	939.1	U.S. ESA
13	20-inch	149,711	150,946			0.23	937.7	U.S. DW / GW
13	20-inch	165,900	171,550			1.07	941.1	U.S. DW / GW
13	20-inch	191,150	206,450			2.90	946.8	U.S. DW / GW
13	20-inch	191,150	215,450			4.60	947.4	U.S. ESA
13	20-inch	191,150	217,450			4.98	947.6	U.S. ESA
13	20-inch	237,750	240,900			0.60	954.4	Enbridge DW / GW
13	20-inch	256,550	278,600			4.18	959.9	U.S. ESA
13	20-inch	284,100	295,600			2.18	964.1	U.S. ESA
13	20-inch	299,650	333,150			6.34	969.2	U.S. ESA
13	20-inch	333,450	350,350			3.20	974.0	U.S. ESA
13	20-inch	341,900	359,650			3.36	975.7	U.S. ESA
13	20-inch	364,700	385,700			3.98	980.0	U.S. ESA
13	20-inch	392,850	409,750			3.20	985.3	U.S. ESA
13	20-inch	398,850	413,550			2.78	986.2	Enbridge CNW / Mississippi River
13	20-inch	404,250	431,200			5.10	988.3	U.S. ESA
13	20-inch	422,500	425,550			0.58	989.5	Enbridge CNW / Mississippi River
13	20-inch	443,000	461,000			3.41	988.7	U.S. ESA
13	20-inch	464,100	477,900			2.61	998.5	U.S. ESA
13	20-inch	484,350	485,700			0.26	1001.1	U.S. ESA
13	20-inch	511,010	526,353			2.91	1007.6	Enbridge DW / GW
13	20-inch	556,200	564,150			1.51	1014.5	U.S. ESA

Diluent:

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
HIGH CONSEQUENCE PIPE SEGMENTS BY STATIONING - TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Clearbrook to Superior (-244 - 1,004,157) cont.</b>								
13	20-inch	603,850	616,100			2.32	1023.8	U.S. ESA
13	20-inch	716,972	719,000			0.38	1044.1	Enbridge DW / GW
13	20-inch	862,000	863,900			0.36	1071.5	Enbridge DW / GW
13	20-inch	877,065	879,100			0.39	1074.3	Enbridge DW / GW
13	20-inch	960,565	968,857			1.57	1090.4	U.S. ESA
13	20-inch	976,400	979,838			0.65	1093.1	Enbridge DW / GW
13	20-inch	1,002,900	1,004,157			0.24	1097.7	U.S. DW / SW
<b>Superior to Manhattan (0 - 2,593,665)</b>								
13	20-inch	0	5,450			1.03	0.1	U.S. DW / SW
13	20-inch	6,374	9,739			0.64	1.5	U.S. DW / SW
13	20-inch	14,377	17,668			0.62	3.1	U.S. DW / SW
13	20-inch	139,612	142,350			0.52	26.7	U.S. DW / GW
13	20-inch	143,372	149,300			1.12		U.S. ESA
13	20-inch	166,800	177,820			2.09	32.7	U.S. ESA
13	20-inch	200,640	208,250			1.44	38.7	U.S. ESA
13	20-inch	211,350	218,850			1.42	40.7	U.S. ESA
13	20-inch	287,250	293,050			1.10	55.0	U.S. ESA
13	20-inch	303,932	306,050			0.40	57.8	U.S. ESA
13	20-inch	339,600	347,550			1.51	65.1	U.S. ESA
13	20-inch	349,600	360,000			1.97	67.2	U.S. ESA
13	20-inch	430,564	432,450			0.36	81.7	U.S. DW / GW
13	20-inch	443,100	444,950			0.35	84.1	U.S. DW / GW
13	20-inch	448,455	453,800			1.01	85.5	U.S. ESA
13	20-inch	457,016	459,347			0.44	86.8	U.S. ESA

Diversion Stationing: See Tab 3, Section 5.1 for more information

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
HIGH CONSEQUENCE PIPE SEGMENTS BY STATIONING - TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Superior to Manhattan (0 - 2,593,665) cont. (Ladysmith, WI)</b>								
13	20-inch	448,455	453,800			1.01	85.5	U.S. ESA
13	20-inch	457,016	459,347			0.44	86.8	U.S. ESA
13	20-inch	462,300	463,750			0.27	87.7	U.S. ESA
13	20-inch	462,300	463,750			0.27	87.7	U.S. ESA
13	20-inch	472,503	475,860			0.64	89.7	U.S. ESA
13	20-inch	472,746	474,843			0.40	89.7	U.S. ESA
13	20-inch	472,746	474,843			0.40	89.7	U.S. ESA
13	20-inch	472,746	474,843			0.40	89.7	U.S. ESA
13	20-inch	482,250	514,400			6.09	100.1	U.S. ESA
13	20-inch	524,950	542,450			3.31	101.1	U.S. ESA

Diluent:

HCA MANAGEMENT PLAN

IDENTIFYING HCA SYSTEM COMPONENTS

Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Superior to Adams (0 - 1,201,097)</b>								
14	24-inch	0	5,134			0.97	0	U.S. DW / SW
14	24-inch	6,098	10,949			0.92	2	U.S. DW / SW
14	24-inch	12,872	18,417			1.05	3	U.S. DW / SW
14	24-inch	139,268	141,974			0.51	27	U.S. DW / GW
14	24-inch	173,944	183,072			1.73	34	U.S. ESA
14	24-inch	173,944	183,072			1.73	34	U.S. ESA
14	24-inch	202,033	203,527			0.28	38	U.S. ESA
14	24-inch	212,624	216,124			0.66	41	U.S. ESA
14	24-inch	212,624	216,124			0.66	41	U.S. ESA
14	24-inch	273,297	276,350			0.58	52	U.S. ESA
14	24-inch	280,550	286,414			1.11	54	U.S. ESA
14	24-inch	303,394	312,240			1.68	58	U.S. ESA
14	24-inch	352,783	355,189			0.46	67	U.S. ESA
14	24-inch	423,127	425,027			0.36	80	U.S. DW / GW
14	24-inch	435,220	437,220			0.38	83	U.S. DW / GW
14	24-inch	440,833	446,678			1.11	84	U.S. ESA
14	24-inch	440,833	446,678			1.11	84	U.S. ESA
14	24-inch	448,328	452,643			0.82	85	U.S. ESA
14	24-inch	448,328	452,643			0.82	85	U.S. ESA
14	24-inch	454,043	458,343			0.81	86	U.S. ESA
14	24-inch	454,043	458,343			0.81	86	U.S. ESA
14	24-inch	463,698	467,202			0.66	88	U.S. ESA
14	24-inch	463,698	467,202			0.66	88	U.S. ESA
14	24-inch	463,698	467,202			0.66	88	U.S. ESA

Diversion Stationing: See Tab 3, Section 5.1 for more information

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Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)

UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Superior to Adams (0 - 1,201,097) cont. (Ladysmith, WI)</b>								
14	24-inch	467,812	469,919			0.40	89	U.S. ESA
14	24-inch	467,812	469,919			0.40	89	U.S. ESA
14	24-inch	467,812	469,919			0.40	89	U.S. ESA
14	24-inch	477,290	499,203			4.15	92	U.S. ESA
14	24-inch	504,696	506,657			0.37	96	U.S. ESA
14	24-inch	522,059	532,230			1.93	100	U.S. ESA
14	24-inch	527,222	529,680			0.47	100	U.S. ESA
14	24-inch	527,222	529,680			0.47	100	U.S. ESA

Crude Oil:

HCA MANAGEMENT PLAN

IDENTIFYING HCA SYSTEM COMPONENTS

Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)

UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT

Line	Diameter	Begin Stationing*	End Stationing*	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Crude Oil:</b>								
61	42-inch	0	9,610			1.82	1	U.S. DW / SW
61	42-inch	12,490	17,490			0.95	3	U.S. DW / SW
61	42-inch	138,680	141,389			0.51	27	U.S. DW / GW
61	42-inch	172,740	182,639			1.87	34	U.S. ESA
61	42-inch	172,740	182,639			1.87	34	U.S. ESA
61	42-inch	201,690	202,940			0.24	38	U.S. ESA
61	42-inch	211,950	215,430			0.66	40	U.S. ESA
61	42-inch	211,950	215,430			0.66	40	U.S. ESA
61	42-inch	272,530	275,910			0.64	52	U.S. ESA
61	42-inch	280,040	285,920			1.11	54	U.S. ESA
61	42-inch	302,685	312,770			1.91	58	U.S. ESA
61	42-inch	352,288	354,806			0.48	67	U.S. ESA
61	42-inch	429,080	432,560			0.66	82	U.S. DW / GW
61	42-inch	441,265	443,848			0.49	84	U.S. DW / GW
61	42-inch	446,800	458,560			2.23	86	U.S. ESA
61	42-inch	446,800	458,560			2.23	86	U.S. ESA
61	42-inch	460,460	464,240			0.72	88	U.S. ESA
61	42-inch	460,460	464,240			0.72	88	U.S. ESA
61	42-inch	470,520	473,500			0.56	89	U.S. ESA
61	42-inch	470,520	473,500			0.56	89	U.S. ESA
61	42-inch	470,520	473,500			0.56	89	U.S. ESA
61	42-inch	474,450	476,800			0.45	90	U.S. ESA
61	42-inch	474,450	476,800			0.45	90	U.S. ESA
61	42-inch	474,450	476,800			0.45	90	U.S. ESA

Diversion Stationing: See Tab 3, Section 5.1 for more information

Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)

UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING- TRANSPORT IMPACT

Line	Diameter	Stationing*	End Stationing*	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Superior to Delavan (0-1,703,457) cont. (Ladysmith, WI)</b>								
61	42-inch	483,630	506,580			4.35	94	U.S. ESA
61	42-inch	511,334	513,322			0.38	97	U.S. ESA
61	42-inch	528,433	538,722			1.95	101	U.S. ESA

Crude Oil:

\*Stationing is based on temporary Enbridge stationing

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
HIGH CONSEQUENCE PIPE SEGMENTS BY STATIONING - TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Crude Oil:</b>								
65	20-inch	3,700	13,050			1.77	775	U.S. DW / SW
65	20-inch	49,476	51,620			0.41	783	U.S. DW / SW
65	20-inch	64,950	66,650			0.32	786	U.S. DW / SW
65	20-inch	115,250	117,200			0.37	796	Enbridge CNW / Red River
65	20-inch	115,250	117,200			0.37	796	U.S. ESA
65	20-inch	122,850	124,800			0.37	797	Enbridge CNW / Red River
65	20-inch	122,850	124,800			0.37	797	U.S. ESA
65	20-inch	130,100	132,200			0.40	799	Enbridge CNW / Red River
65	20-inch	130,100	132,200			0.40	799	U.S. ESA
65	20-inch	137,450	139,500			0.39	800	Enbridge CNW / Red River
65	20-inch	137,450	139,500			0.39	800	U.S. ESA
65	20-inch	142,460	146,350			0.74	801	Enbridge CNW / Red River
65	20-inch	147,000	149,100			0.40	802	Enbridge CNW / Red River
65	20-inch	155,900	158,650			0.52	804	Enbridge CNW / Red River
65	20-inch	166,500	169,500			0.57	806	Enbridge CNW / Red River
65	20-inch	449,300	453,870			0.87	859	U.S. DW / SW
65	20-inch	455,970	462,315			1.20	861	U.S. DW / SW
65	20-inch	463,920	470,630			1.27	862	U.S. DW / SW
65	20-inch	473,750	478,290			0.86	864	U.S. ESA
65	20-inch	474,850	477,200			0.45	864	U.S. DW / SW
65	20-inch	480,000	484,100			0.78	865	Enbridge DW / GW
65	20-inch	538,750	540,550			0.34	876	U.S. DW / GW
65	20-inch	541,240	544,980			0.71	877	U.S. DW / GW
65	20-inch	596,400	600,050			0.69	887	Enbridge DW / GW

Diversion Stationing: See Tab 3, Section 5.1 for more information

May 2011

Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)

HIGH CONSEQUENCE PIPE SEGMENTS BY STATIONING - TRANSPORT IMPACT

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			

Crude Oil:

**U.S. Border to Clearbrook (0 - 721,214) cont.**

65	20-inch	692,600	694,250			0.31	905	Enbridge DW / GW
65	20-inch	719,748	721,214			0.28	910	Enbridge DW / GW

Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
 HIGH CONSEQUENCE PIPE SEGMENTS BY STATIONING - TRANSPORT IMPACT

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Crude Oil:</b>								
<b>Border to Viking (0-395,630)</b>								
67	36-inch	3,800	26,500			4.30	777	U.S. DW / SW
67	36-inch	49,350	51,800			0.46	783	U.S. DW / SW
67	36-inch	64,150	67,150			0.57	786	U.S. DW / SW
67	36-inch	114,750	117,850			0.59	796	Enbridge CNW / Red River of the North
67	36-inch	114,750	117,850			0.59	796	US ESA
67	36-inch	122,000	125,350			0.63	797	Enbridge CNW / Red River of the North
67	36-inch	122,000	125,350			0.63	797	US ESA
67	36-inch	129,250	132,150			0.55	798	Enbridge CNW / Red River of the North
67	36-inch	129,250	132,150			0.55	798	US ESA
67	36-inch	137,500	140,450			0.56	800	Enbridge CNW / Red River of the North
67	36-inch	137,500	140,450			0.56	800	US ESA
67	36-inch	142,000	146,600			0.87	801	Enbridge CNW / Red River of the North
67	36-inch	147,000	149,150			0.41	802	Enbridge CNW / Red River of the North
67	36-inch	155,650	159,300			0.69	804	Enbridge CNW / Red River of the North
67	36-inch	166,450	169,750			0.63	806	Enbridge CNW / Red River of the North
<b>Viking to Clearbrook (395,630-721,240)</b>								
67	36-inch	449,650	454,000			0.82	859	U.S. DW / SW
67	36-inch	456,100	462,400			1.19	861	U.S. DW / SW
67	36-inch	464,100	471,400			1.38	862	U.S. DW / SW
67	36-inch	474,350	479,250			0.93	864	U.S. ESA
67	36-inch	474,600	478,300			0.70	864	U.S. DW / SW
67	36-inch	479,250	484,250			0.95	865	Enbridge DW / GW
67	36-inch	538,500	545,300			1.29	876	U.S. DW / GW
67	36-inch	596,550	599,400			0.54	887	Enbridge DW / GW

Diversion Stationing: See Tab 3, Section 5.1 for more information

Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)

HIGH CONSEQUENCE PIPE SEGMENTS BY STATIONING - TRANSPORT IMPACT

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			

Crude Oil:

**Viking to Clearbrook (395,630-721,240) cont.**

67	36-inch	692,600	694,500			0.36	905	Enbridge DW / GW
67	36-inch	719,850	721,000			0.22	910	Enbridge DW / GW

**Clearbrook to Deer River (723,033-1,177,820)**

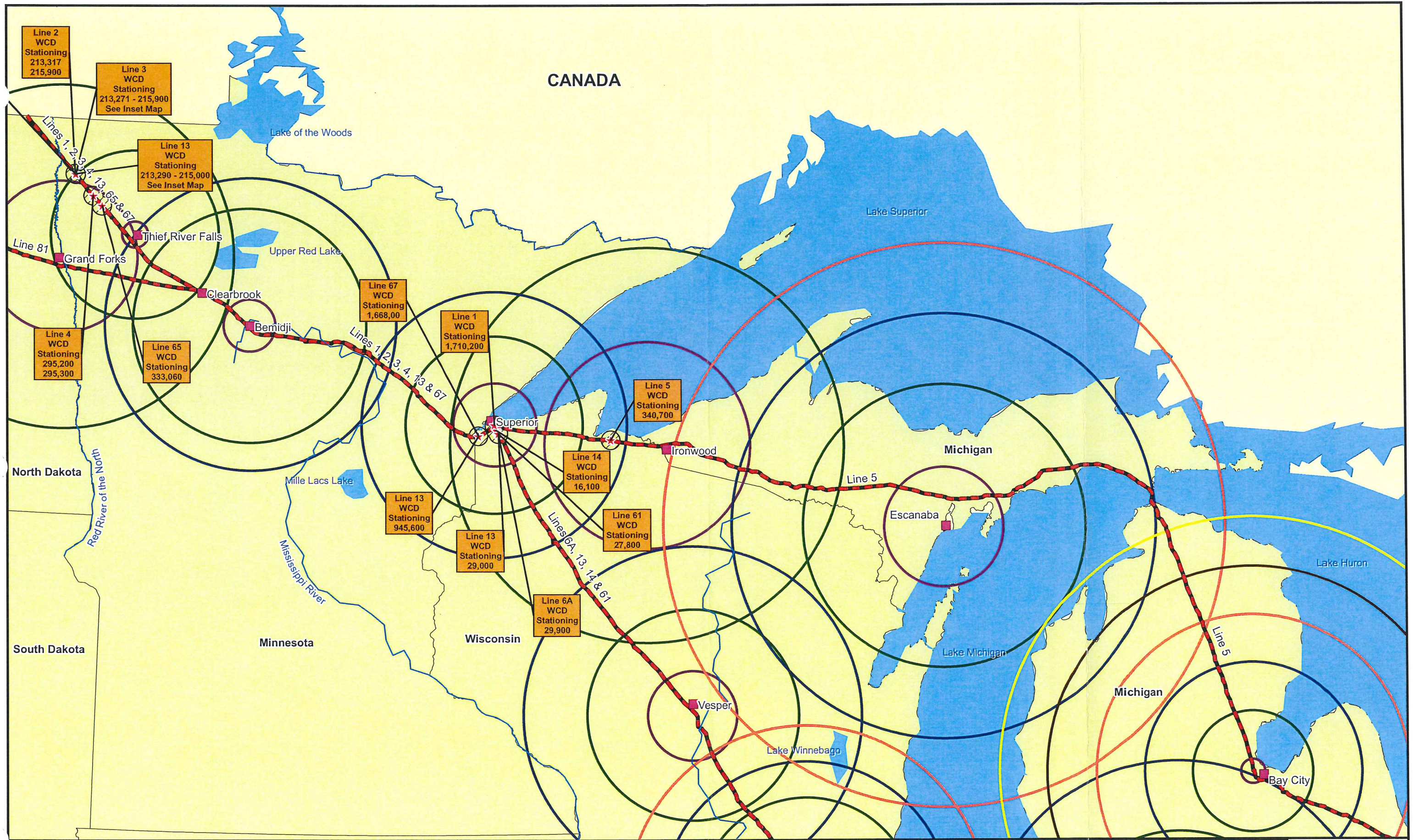
67	36-inch	789,850	798,100			1.56	924	U.S. ESA
67	36-inch	800,800	811,500			2.03	926	U.S. ESA
67	36-inch	835,745	845,550			1.86	933	U.S. ESA
67	36-inch	872,450	890,280			3.38	941	U.S. ESA
67	36-inch	873,150	874,100			0.18	939	U.S. DW / GW
67	36-inch	889,100	894,760			1.07	943	U.S. DW / GW
67	36-inch	911,750	929,550			3.37	948	U.S. DW / GW
67	36-inch	911,750	932,050			3.84	948	U.S. ESA
67	36-inch	911,750	936,850			4.75	949	U.S. ESA
67	36-inch	961,000	964,100			0.59	956	Enbridge DW / GW
67	36-inch	983,950	998,850			2.82	961	U.S. ESA
67	36-inch	1,010,460	1,014,800			0.82	966	U.S. ESA
67	36-inch	1,025,630	1,038,450			2.43	969	U.S. ESA
67	36-inch	1,041,000	1,043,950			0.56	971	U.S. ESA
67	36-inch	1,045,150	1,053,150			1.52	972	U.S. ESA
67	36-inch	1,059,100	1,070,900			2.23	975	U.S. ESA
67	36-inch	1,068,250	1,080,300			2.28	977	U.S. ESA
67	36-inch	1,090,350	1,108,950			3.52	982	U.S. ESA
67	36-inch	1,118,550	1,130,650			2.29	987	U.S. ESA
67	36-inch	1,125,350	1,130,650			1.00	987	Enbridge CNW / Mississippi River
67	36-inch	1,131,800	1,148,700			3.20	990	U.S. ESA

Diversion Stationing: See Tab 3, Section 5.1 for more information

May 2011

**Superior Region Response Zone- Drinking Water (DW), Environmentally Sensitive Areas (ESA) and Commercially Navigable Waterways (CNW)  
HIGH CONSEQUENCE PIPE SEGMENTS BY STATIONING - TRANSPORT IMPACT**

Line	Diameter	Begin Stationing	End Stationing	Diversion		Segment Length (mile)	Approximate Milepost	High Consequence Area
				Begin Stationing	End Stationing			
<b>Crude Oil:</b>								
<b>Clearbrook to Deer River (723,033-1,177,820) cont.</b>								
67	36-inch	1,145,700	1,148,700			0.57	991	Enbridge CNW / Mississippi River
<b>Deer River to Superior (1,180,361-1,727,948)</b>								
67	36-inch	1,169,300	1,180,650			2.15	996	U.S. ESA / Deer River
67	36-inch	1,191,200	1,197,750			1.24	1000	U.S. ESA
67	36-inch	1,234,250	1,249,550			2.90	1009	Enbridge DW / GW
67	36-inch	1,266,300	1,267,700			0.27	1014	Enbridge DW / GW
67	36-inch	1,326,950	1,330,000			0.58	1025	U.S. ESA
67	36-inch	1,332,950	1,337,050			0.78	1027	U.S. ESA
67	36-inch	1,439,700	1,442,200			0.47	1047	Enbridge DW / GW
67	36-inch	1,585,000	1,587,300			0.44	1074	Enbridge DW / GW
67	36-inch	1,600,300	1,602,100			0.34	1077	Enbridge DW / GW
67	36-inch	1,678,650	1,691,500			2.43	1093	U.S. ESA
67	36-inch	1,699,450	1,702,600			0.60	1096	Enbridge DW / GW
67	36-inch	1,715,825	1,717,450			0.31	1099	U.S. DW / SW



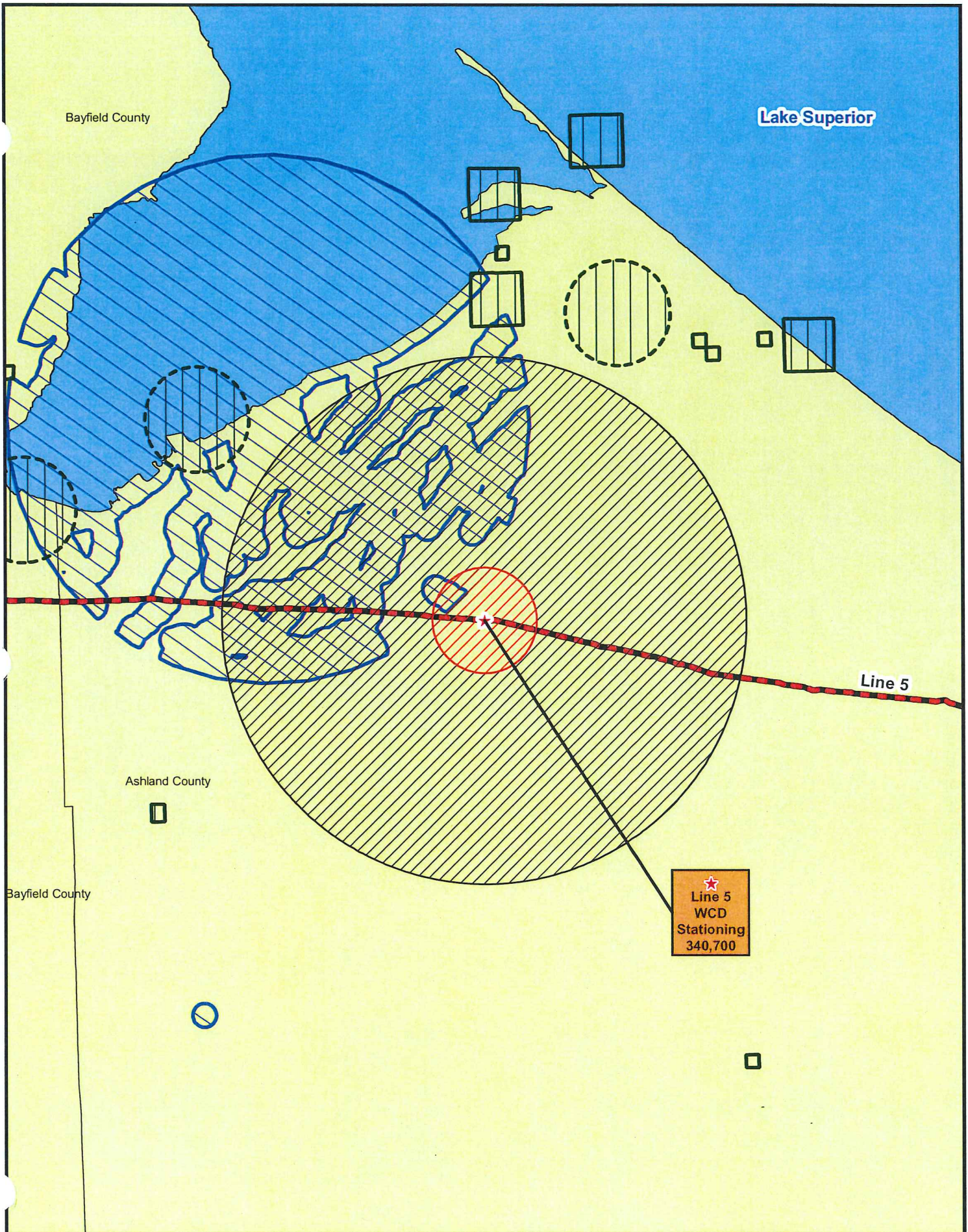
Legend		Response Times			
<span style="color: pink;">■</span>	Response Facilities	<span style="border: 1px solid purple; border-radius: 50%; padding: 2px;"> </span>	<span style="border: 1px solid red; border-radius: 50%; padding: 2px;"> </span>	<span style="border: 1px solid blue; border-radius: 50%; padding: 2px;"> </span>	<span style="border: 1px solid yellow; border-radius: 50%; padding: 2px;"> </span>
<span style="color: blue;">—</span>	Rivers	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;"> </span>	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;"> </span>	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;"> </span>	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;"> </span>
<span style="color: red;">- - -</span>	Pipeline	<span style="border: 1px solid purple; border-radius: 50%; padding: 2px;"> </span>	<span style="border: 1px solid red; border-radius: 50%; padding: 2px;"> </span>	<span style="border: 1px solid blue; border-radius: 50%; padding: 2px;"> </span>	<span style="border: 1px solid yellow; border-radius: 50%; padding: 2px;"> </span>
<span style="color: red;">★</span>	Worst Case Discharge (WCD)	<span style="border: 1px solid purple; border-radius: 50%; padding: 2px;"> </span>	<span style="border: 1px solid red; border-radius: 50%; padding: 2px;"> </span>	<span style="border: 1px solid blue; border-radius: 50%; padding: 2px;"> </span>	<span style="border: 1px solid yellow; border-radius: 50%; padding: 2px;"> </span>
<span style="border: 1px dashed black; border-radius: 50%; padding: 2px;"> </span>	5 Mile Buffer WCD	<span style="border: 1px solid purple; border-radius: 50%; padding: 2px;"> </span>	<span style="border: 1px solid red; border-radius: 50%; padding: 2px;"> </span>	<span style="border: 1px solid blue; border-radius: 50%; padding: 2px;"> </span>	<span style="border: 1px solid yellow; border-radius: 50%; padding: 2px;"> </span>

Times derived from emergency response drills.

### Enbridge Pipelines, Limited Partnership Superior Region Emergency Response Times & Worst-Case Discharge Locations



DATE ISSUED: 12/1/2004	 Natural Resources Engineering Co. 715-395-5680
DATE REVISED: 9/30/2011	
SCALE: 1:3,000,000	
DRAWN BY: CMK	
SERIES: Emergency Response Times	



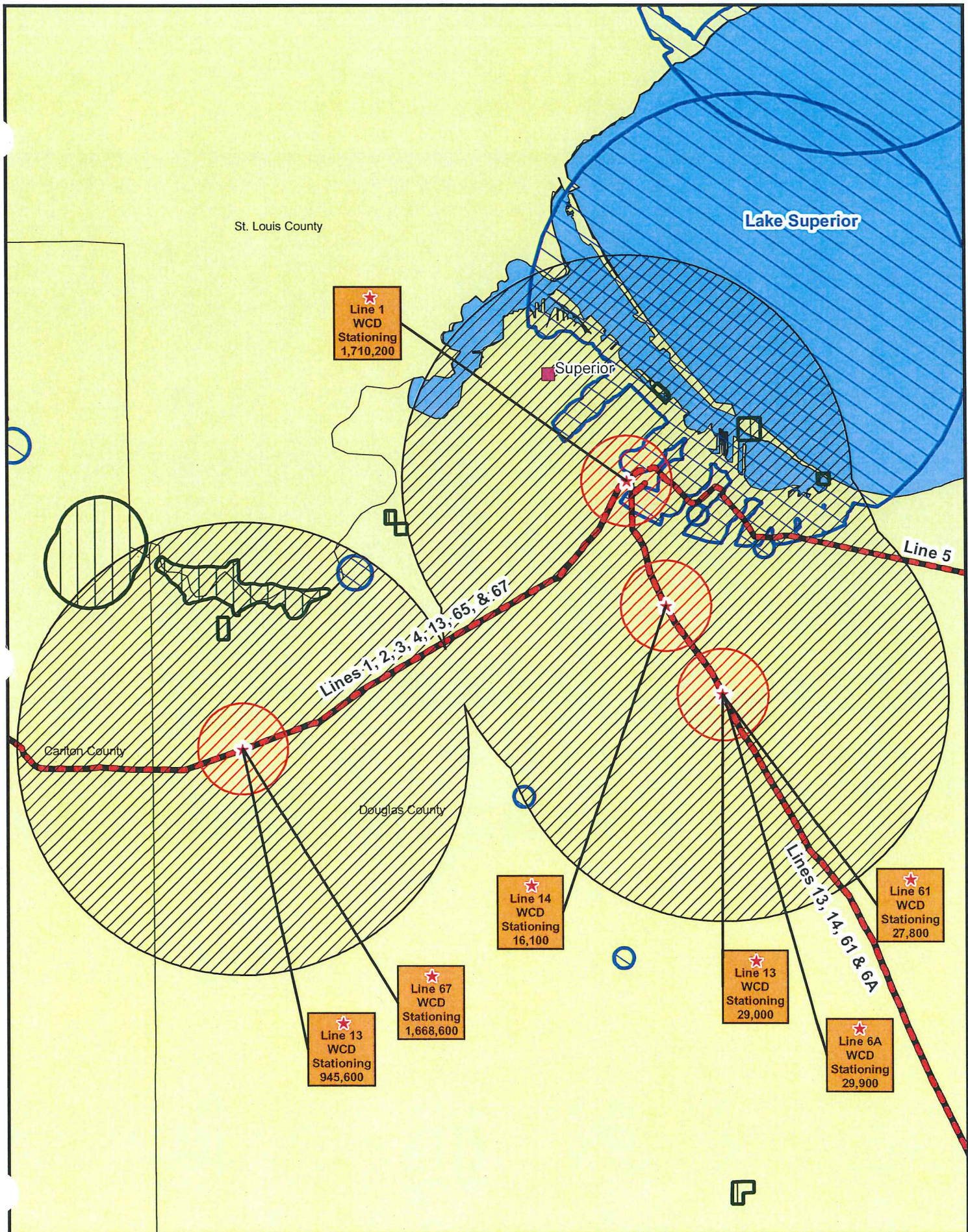
Legend	
	Superior WCDs
	1 mile buffer
	5 mile buffer
	Response Facilities
	Pipeline
	Drinking Water HCA
	Ecological HCA

Enbridge Energy, Limited Partnership  
 Pipeline System  
 Superior Region Worst-Case Discharge

0 2 4 Miles

DATE ISSUED:  
 DATE REVISED: 9/14/11  
 SCALE: 1:150,000  
 DRAWN BY: NREC  
 SERIES: Superior





Legend	
	Superior WCDs
	1 mile buffer
	5 mile buffer
	Response Facilities
	Pipeline
	Drinking Water HCA
	Ecological HCA

Enbridge Energy, Limited Partnership  
 Pipeline System  
 Superior Region Worst-Case Discharge

0 2.5 5 Miles

DATE ISSUED:  
 DATE REVISED: 10/14/11  
 SCALE: 1:175,000  
 DRAWN BY: NREC  
 SERIES: Superior



## ENBRIDGE ENERGY LIMITED PARTNERSHIP RELEASE U.S. Only (Page 1 of 2)

**To:**

CCO Group	Senior Risk Management Analyst
Corporate Secretary	US Compliance & Risk Management Manager
Environment Supervisor	US Tax Services Manager
Lands & Right-Of-Way Manager	Cushing - Regional Manager
Operations Vice President	Cushing - Pipeline Services Supervisor
Operational Risk Management Analyst	North Dakota - Compliance Assistance
Pipeline Integrity Manager	North Dakota - Enbridge Pipelines Manager
Pipeline Operations Director	Superior - Regional Manager
Public & Government Affairs Director	Superior - Pipeline Services Manager
Health & Safety Manager	Chicago - Regional Manager
Health & Safety Clerk	Chicago - Pipeline Services Manager
Safety, Training & Compliance Coordinator	Saskatchewan - Enbridge General Manager

### RELEASE INFORMATION

Place an **X** in all boxes that apply.

A failure in the pipeline system which results in:

- Loss of 5 gallons or more of liquid
- Escape of more than 5 barrels NGL to atmosphere
- Unintentional explosion or fire
- Death of any person
- Bodily harm that resulted in medical treatment, loss of consciousness, modified work, or necessity to carry the person from the scene
- Estimated property damage exceeding \$50,000 (including repair and cleanup)
- Pollution of a water body (river/stream/wetland/reservoir) including less than 5 gallon release indicated by a sheen on the water
- Reportable to a state agency
- Contaminated soil left in place
- Any other event that the Regional Manager deems significant for internal awareness but not external reporting purposes.

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**ENBRIDGE ENERGY LIMITED PARTNERSHIP RELEASE**  
**U.S. Only (Page 2 of 2)**

- A. List all federal, state, county or local regulatory or governmental agencies that have been notified:

List Telephone Report:

NRC Report Number:

NRC Report Date:

- B. Date of Incident (MM/DD/YY):

Time of Incident (MST):

- C. Location:

Region:

State:

Service (Line No.):

Milepost:

- D. Product/Commodity Released:

Preliminary Estimate of Barrels Released:

- E. Other people to include in distribution of release alert:

- a. Description of incident (include significant environment, safety, public affairs, regulatory, or financial concern):

# ENBRIDGE ENERGY SITE SAFETY PLAN

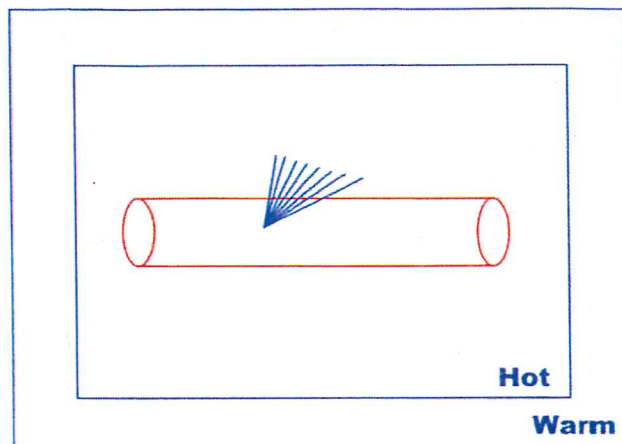
LEAK LOCATION \_\_\_\_\_ SITE # ( if more than one ) \_\_\_\_\_ DATE \_\_\_\_\_

## SITE MAP

(Identify Incident Location and Evacuation Routes)

(Identify on Env. Sensitivity map or other)

(Check Requirements for Each) (Identify Hot, Warm, & Cold Zone Boundaries)

<p style="color: red; margin: 0;"><b>Hot Zone Requirements</b></p> <p>Min. 24 hrs training (I.D.) <span style="float: right;"><input type="checkbox"/></span></p> <p>Fire Retardant Clothing <span style="float: right;"><input type="checkbox"/></span></p> <p>Oil Resistant Clothing <span style="float: right;"><input type="checkbox"/></span></p> <p>Respiratory Protection; S.C.B.A. <span style="float: right;"><input type="checkbox"/></span></p> <p>Air Purifying Respirator <span style="float: right;"><input type="checkbox"/></span></p> <p>Proper PPE <span style="float: right;"><input type="checkbox"/></span></p> <p>Other _____ <span style="float: right;"><input type="checkbox"/></span></p> <p>_____ <span style="float: right;"><input type="checkbox"/></span></p> <p>_____ <span style="float: right;"><input type="checkbox"/></span></p>	<p style="text-align: center; font-size: small;">Insert distances, directions, or landmarks for each zone</p> <div style="border: 1px solid black; padding: 10px; text-align: center;">  </div>
<p style="color: red; margin: 0;"><b>Warm Zone Requirements</b></p> <p>Min. 8 hrs training (I.D.) <span style="float: right;"><input type="checkbox"/></span></p> <p>Fire Retardant Clothing <span style="float: right;"><input type="checkbox"/></span></p> <p>Oil Resistant Clothing <span style="float: right;"><input type="checkbox"/></span></p> <p>Respiratory Protection; S.C.B.A. <span style="float: right;"><input type="checkbox"/></span></p> <p>Air Purifying Respirator <span style="float: right;"><input type="checkbox"/></span></p> <p>Proper PPE <span style="float: right;"><input type="checkbox"/></span></p> <p>Other _____ <span style="float: right;"><input type="checkbox"/></span></p> <p>_____ <span style="float: right;"><input type="checkbox"/></span></p> <p>_____ <span style="float: right;"><input type="checkbox"/></span></p>	

## Emergency Medical Facility

(Identify Route of Travel)

Phone#: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Contact Person(if any) \_\_\_\_\_

\_\_\_\_\_

(Post City, County or Env Sensitivity map and show Route)

	Yes	No
Emergency Response Directory on Site? <small>(Review Notification of Government Agencies pages) (Review Notification Chart Page) (Review Reporting Procedures pages) (Review Safety Equipment/Leak List Procedures)</small>	<input type="checkbox"/>	<input type="checkbox"/>
Material Safety Data Sheets (MSDS) Available? <small>(Review Emergency Response Directory pages) (Locate Sheets from Suppliers)</small>	<input type="checkbox"/>	<input type="checkbox"/>
Emergency Evacuation Routes & Means of Communication Established?	<input type="checkbox"/>	<input type="checkbox"/>
Risk Assessment of Site Conducted?	<input type="checkbox"/>	<input type="checkbox"/>
Book 7 Emergency Response Plan on Site?	<input type="checkbox"/>	<input type="checkbox"/>
Environmental Sensitivity Maps Available?	<input type="checkbox"/>	<input type="checkbox"/>
Book 2 Safety on Site?	<input type="checkbox"/>	<input type="checkbox"/>
Book 3 Pipeline Facilities on Site?	<input type="checkbox"/>	<input type="checkbox"/>

**Monitoring Log Checklist**  
*(Circle one or Both)*

A. Continuous      B. Periodic

1. Date/Time/Temp/Location/Wind Direction
2. Name of person/s conducting test
3. Type of instrument/s used
4. Calibration dates, persons name
5. Types of hazards to be testing or sampling
6. Record conditions and/or instrument reading
7. Other conditions as appropriate

*(Keep a copy of daily log)*

NOTE: ENSURE WINDSOCK IS DEPLOYED

Date: \_\_\_\_\_ Time: \_\_\_\_\_  
(Please write down name/s)

\_\_\_\_\_ Name of Incident Commander

\_\_\_\_\_ Name of Site Supervisor

\_\_\_\_\_ Name of Site Safety Person/s

	Number of Employees at site	Initial Briefing	
Name of Contractor/s at Site		Yes	No
_____		<input type="checkbox"/>	<input type="checkbox"/>
_____		<input type="checkbox"/>	<input type="checkbox"/>
_____		<input type="checkbox"/>	<input type="checkbox"/>
_____		<input type="checkbox"/>	<input type="checkbox"/>
_____		<input type="checkbox"/>	<input type="checkbox"/>
_____		<input type="checkbox"/>	<input type="checkbox"/>

Update is required at shift or personnel changes  
Revised sheets should be kept at Command Post for reference and retention



# Control Point Maps



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## CONTROL POINTS

Control Point Map Process  
Control Point Map Record



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## CONTROL POINT MAPPING

### **Enbridge Transportation North Liquids System**

As part of an emergency response readiness program Enbridge has developed Control Point Map sets to be used as a tool for training during spill response activities, and communications. Information gathered on other projects (High Consequence Area analysis, river bank stabilizations, stream risk ranking, etc...) is used in conjunction with relevant pre-existing information, data from governmental agencies such as the U.S. Army Corps of Engineers and the U.S. Geological Survey. Aerial and ground confirmation of the control points is performed as a means to field truth the data. Annual control point reviews are conducted and updates are incorporated into the control point maps. Efficiency and control point mapping enhancements are made by qualified emergency response personnel.

Refer to O&MP Book 7: Emergency Response-Part 1- Corporate 01-02-03 for criteria relevant to Control Point Mapping procedures.

As required in the Federal Response Framework and Area Contingency Plans, attached is a list of the Control Point Maps significant to this region planning for low-probability, high consequence scenarios. Full sets of Control Point Maps are also retained in Enbridge Regional Offices, along with holders of the Book 7- Emergency Response Plan.



**Superior Region Control Point Maps Record-**  
**Refer to Regional Control Point**  
**Map Books**

<b><u>LINES 1-4, 13 &amp; 65</u></b>	
<b>Area Overview</b>	(4 Maps)
Pembina River	MP 775.57 (2 Maps)
Tongue River Cutoff & Tributaries	MP 781.44 – MP 786.16
Red River Of The North	MP 801.73
Tamarac River	MP 828.87
Red Lake River	MP 864.31
Clearwater River	MP 875.34
Lost River	MP 885.80 – MP 903.96 (2 Maps)
<b><u>LINES 1-4, 13 &amp; 67</u></b>	
<b>Area Overview</b>	(4 Maps)
Clearwater River	MP 922.44 (2 Maps)
Grant Creek	MP 927.34 – MP 933.66
Mississippi River	MP 939.72 (2 Maps)
Necktie River	MP 945.32 (LINES 1-3) & MP 947.13 (LINE 4)
Cass Lake	MP 956
Six Mile Lake Tributary Ditch	MP 975.05
Bear Brook Creek Tributary	MP 980.83
Mississippi River	MP 985.97 (2 Maps)
Ball Club River	MP 989.43 (2 Maps)
Deer River	MP 994.88
Bass Brook (Blackwater Creek)	MP 1004.21
Prairie River	MP 1011.00 (2 Maps)
Swan River	MP 1024.23
Floodwood Station Ditch	MP 1044.33 (2 Maps)
East Savanna River	MP 1046.04 (3 Maps)
Stoney Brook & Ditch	MP 1062.46 & MP 1062.48
Big Lake	MP 1066.18
Little Otter Creek	MP 1074.28
Little Pokegama	MP 1090.00
Pokegama River	MP 1094.42
<b><u>LINE 5</u></b>	
<b>Area Overview</b>	(8 Maps)
Nemadji River	MP 1098.85
Bluff Creek	MP 1100.66
Bear Creek	MP 1101.57
Dutchman Creek	MP 1104.29
Morrison Creek	MP 1105.28
Amnicon River	MP 1107.07



**LINE 5 – cont.**

Middle River	MP 1111.51
Poplar River	MP 1112.18
Bois Brule River	MP 1121.45
Iron River (WI)	MP 1129.89 (2 Maps)
North Fish Creek	MP 1150.20
South Fish Creek	MP 1152.60
Bay City Creek	MP 1156.55
Beartrap Creek	MP 1160.41
White River	MP 1162.76
Bad River	MP 1165.00
Denomie Creek	MP 1171.54
Spoon Creek & Spoon Creek Tributary	MP 1177.47 & MP 1177.59
Montreal River	MP 1189.32 (2 Maps)
Welch Creek	MP 1191.00 (2 Maps)
Siemens Creek	MP 1193.50 (2 Maps)
Kallander Creek	MP 1197.18 (2 Maps)
Black River	MP 1199.97 (2 Maps)
Planter Creek	MP 1202.82 (2 Maps)
Presque Isle River	MP 1217.26 (4 Maps)
Pelton Creek	MP 1222.51
Slate River	MP 1223.79
Cisco Branch Ontonagon River	MP 1232.32 (2 Maps)
Middle Branch Ontonagon River	MP 1237.60 (2 Maps)
Duck Creek	MP 1244.40 (2 Maps)
South Branch Paint River	MP 1254.44 (2 Maps)
Cooks Run	MP 1260.15 (3 Maps)
South Branch Iron River	MP 1268.32 (3 Maps)
Nash Creek	MP 1269.84 (3 Maps)
Iron River & Iron Lake Creek	MP 1271.65 & MP 1271.94 (3 Maps)
Briar Hill Creek	MP 1284.98
Paint River	MP 1290.10 (2 Maps)
Michigamme River	MP 1294.77
Parks Creek	MP 1297.09
Ford River	MP 1315.64 (2 Maps)
Escanaba River Tributary	MP 1337.20
Escanaba River	MP 1341.55
Tacoosh River	MP 1352.54
Rapid River	MP 1356.87
Whitefish River	MP 1358.16
Sturgeon River	MP 1369.87 (2 Maps)
Indian River	MP 1393.57
Manistique River	MP 1394.31



<b>LINE 5 – cont.</b>	
Lower Millecoquins River	MP 1433.95
West Mile Creek	MP 1436.18
East Mile Creek	MP 1436.92
Black River	MP 1439.36
Davenport Creek	MP 1444.60
Cut River	MP 1452.56
Brevoort River	MP 1464.45
Straits of Mackinac	MP 1477.48
Indian River	MP 1507.78
Pigeon River	MP 1528.53 (3 Maps)
<b>LINES 6A, 13, 14 &amp; 61</b>	
<b>Area Overview</b>	(3 Maps)
Nemadji River	MP 1.58
St. Croix River	MP 33.13
Eau Claire River	MP 34.17
Totogatic River	MP 40.53
Namekagon River	MP 53.78 (2 Maps)
Sand Creek	MP 65.52
Summit Creek	MP 70.50 (3 Maps)
Big Weirgor Creek	MP 85.28 (2 Maps)
Chippewa River	MP 88.27 (2 Maps)
Thornapple River	MP 94.36 (2 Maps)



# Region Security Plan



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## SECURITY PLAN

**Purpose** To ensure employee safety and system integrity, it is critical that appropriate protective measures are implemented throughout pipeline operations in response to security threat notifications.

**Responsibilities** **Training & Emergency Response**

Training & Emergency Response, in consultation with Corporate Security, is responsible for communicating security threats to regional management.

**Regional Management**

Regions are responsible for:

- developing and maintaining region-specific security response plans for critical and noncritical facilities that address each security threat, including:
  - signage
  - fences and gates
  - access control
  - keys and padlocks
  - lighting
  - cameras and alarms
  - external security resources
  - communications and monitoring
  - employee awareness
- implementing appropriate protective measures specific to the area in response to changes in security threats.

**Requirements** **National Advisory System**

The Homeland Security National Terrorism Advisory System (NTAS) replaces the color-coded Homeland Security Advisory System. This new system will communicate information about terrorist threats by providing timely, detailed information to the public, government agencies, first responders, airports and other transportation hubs, and the private sector.

**NTAS Alerts**

After reviewing the available information, the Secretary of Homeland Security will decide, in coordination with other Federal entities, whether an NTAS Alert should be issued.

NTAS Alerts will only be issued when credible information is available.

These alerts will include a clear statement that there is an imminent threat (credible, specific and impending) or elevated threat (credible). Using available information, the alerts will provide a concise summary of the potential threat, information about actions being taken to ensure public safety, and recommended steps that individuals, communities,



businesses and governments can take to help prevent, mitigate or respond to the threat.

The NTAS Alerts will be based on the nature of the threat: in some cases, alerts will be sent directly to law enforcement or affected areas of the private sector, while in others, alerts will be issued more broadly through both official and media channels.

NTAS Alerts contain a **sunset provision** indicating a specific date when the alert expires - there will not be a constant NTAS Alert or blanket warning that there is an overarching threat. If threat information changes for an alert, the Secretary of Homeland Security may announce an updated NTAS Alert. All changes, including the announcement that cancels an NTAS Alert, will be distributed the same way as the original alert.

#### ***Alert Announcements***

NTAS Alerts will be issued through state, local and tribal partners, the news media and directly to the public via the following channels:

- Via the official DHS NTAS webpage – <http://www.dhs.gov/alerts>
- Via email signup at – <http://www.dhs.gov/alerts>
- Via social media
  - Facebook – <http://facebook.com/NTASAlerts>
  - Twitter – <http://www.twitter.com/NTASAlerts>
- Via data feeds, web widgets and graphics
  - <http://www.dhs.gov/alerts>



The security procedures in this tab are specific to Superior Region. For information applicable to all sites at all times, see *Book 7: Emergency Response, 01-02-04, General Site Security Standards, 03-02-05, Security Threat Condition Levels and 03-02-08, Bomb and Security Threats*. For contact lists, see the *Enbridge Energy Emergency Response Directory (ERD)*.

In accordance with the pipeline security guidance provided by the Pipeline and Hazardous Materials Safety Administration (PHMSA), the below listed locations in the Superior Region have been identified as "Critical Facilities".

Superior Terminal - Superior, WI  
Clearbrook Terminal, Clearbrook, MN

All other locations within the Superior Region do not meet the PHMSA threshold for being designated critical. Accordingly this document is divided into two sections. The first section outlines security measures to be taken within the Superior Region at its critical facilities. The second section outlines security measures to be taken at all other facilities within the Superior Region.

All information in the Superior Region Security Response Plan must be reviewed annually.

## Definition

Critical Facility- a facility that meets one or more of the following criteria:

- may be considered a viable terrorist target, and a release from the facility has the potential for mass casualties or significant impact on public drinking water affecting a major population center
- if damaged or destroyed would have a detrimental impact on the reliability or operability of the pipeline system, significantly impairing the ability to service a large number of customers for an extended period
- if damaged or destroyed, would significantly impair other modes of transportation or other critical infrastructures (e.g. electrical power generation, telecommunications, public utility)

Scheduled Work Day – any work day an employee reports to that work location.

Monitoring – Visually, electronically or physically reviewing or looking over property, persons or Right-Of-Ways (ROW).

Threat Condition- Information received from a NTAS or through the company chain of command that a security condition or situation has developed that could jeopardize the safety of our employees, the general public or our operations.



## Critical Facilities: Clearbrook/Superior Terminals

### Monitoring

Employee will make rounds, which includes driving the perimeter of the terminal and checking within pump rooms, at least twice per shift.

Quarterly site security inspections must be completed using the Safety Inspection form (for more information, see Book 2: Safety, 01-03-01, Completing Safety Inspections).

### Employee Awareness

Unless they are of immediate concern, security issues should be identified and documented at local monthly EH&S meetings. Items of immediate concern should be brought to Management's immediate attention.

Safety coordinators are responsible to ensure all company security standards and procedures are reviewed annually with employees.

Employees must be aware of vehicles frequently driving by or parking along roadways adjacent to company facilities, including:

- Clearbrook: County Road # 49 and township road north of station.
- Superior: Bardon Avenue, East 21<sup>st</sup> Street, and 31<sup>st</sup> Avenue.

Secure sensitive company information (e.g., route sheets, employee information) in locked filing cabinets, desk drawers or office outside regular working hours.

Shred discarded sensitive company information

### Communications

Test and maintain communication systems (e.g., cellular phones, radio systems) as part of emergency response exercises (see Book 7: Emergency Response, 01-02-01, Training and Exercises).

As part of public awareness, provide security awareness information to landowners along the right-of-way and to emergency response organizations.

**WHEN AN ELEVATED NTAS ALERT IS ISSUED AND HAS BEEN FORWARDED TO REGIONAL MANAGEMENT BY TRAINING & EMERGENCY RESPONSE AND THE CORPORATE SECURITY DEPARTMENTS –  
All of above, PLUS:**

### Access Control

Tours of the facilities must be approved by the General Manager.

Unknown visitors must be escorted by an employee at all time.

### Monitoring

Employees will make rounds, which include driving the perimeter of the terminal and checking within pump rooms, at least three times per shift.

Employees must perform undocumented weekly inspections of buildings (including those that are not regularly used); storage areas, tanks and perimeter fencing (alter days and times).

### Communications

Area site supervisors or designates are responsible to establish contact with local law enforcement to discuss changes in threat condition levels, company security standards and procedures, sharing of resources, and to provide quarterly updates. Consider arranging site visits.

### Employee Awareness

Area site supervisors or designates are responsible to immediately notify employees when threat condition levels change (e.g., emails, bulletin board), and review all company security standards and procedures pertaining to the new threat level.

In addition, safety coordinators are responsible to ensure all company security standards and procedures are reviewed quarterly with employees.



## Critical Facilities: Clearbrook/Superior Terminals

**WHEN AN IMMINENT NTAS ALERT IS ISSUED AND HAS BEEN FORWARDED TO REGIONAL MANAGEMENT BY TRAINING & EMERGENCY RESPONSE AND THE CORPORATE SECURITY DEPARTMENTS –**

**All of above, PLUS:**

### Access Control

Regional management must establish contact with ETN Crisis Management Center and ETN Incident Screening Committee in Edmonton.

Prepare for shut down or evacuate facilities as identified or directed by senior management.

Restrict access to area staff unless approved in advance by regional management.

Assign employees 24 hours to assist with access control and monitoring the facility.

All facility tours will be canceled.

Upon entry into the facility, security must ensure the visitor ( including office employees visiting field locations ) :

- Signs in at the designated guard house
- Records vehicle description/license number
- Shows photo ID

An outside security service will be utilized to man the front gates and be responsible for the preceding bullets.

Restrict access through main gates only.

At Superior, the guard house at the main gate will be used as a checkpoint. Visitors must be escorted within the terminal after initial check-in.

At Clearbrook, a checkpoint will be established outside of the main gate. Visitors must be escorted within the terminal after initial check-in.

During construction, contractor identities should be verified by regional management before entry.

Request police to assist with securing access to the facility. For example, extra patrols on the following:

- Clearbrook: County Road # 49 and township road north of station
- Superior: Bardon Ave, East 21<sup>st</sup> St, and 31<sup>st</sup> Ave access to back gate

Tours of the facilities will be postponed during an Imminent Alert Level.

### Vehicle Control

Use a 24-hour security service to monitor and inspect all vehicles entering the main gate, including cargo areas, undercarriage, glove box and any area where dangerous items could be concealed. All vehicles will be routed through the main gate. All other perimeter gates will be shut down to traffic.

Move vehicles to a central parking area away from equipment/buildings as specified by the site supervisor or designate (where possible, at least 30 yds from critical buildings, tanks and equipment).

Restrict vehicle access to employees and emergency vehicles only.

### Lighting

If necessary, install temporary lighting at all gates to ensure all areas are adequately lit.

### Security Officers

PerMar Security will be used for outside security services for Superior Terminal. They can be reached at 1-715-297-1466 (Brian Thacker) or 1-715-848-4932 (Tami Artz).

Professional and Trustworthy Security of Park Rapids, MN will be used for outside security services for Clearbrook Terminal. They are on retainer and can be reached at 1-866-887-8790. The contact is Dwight Patterson.

Review site security standards and procedures with the security service weekly.

### Monitoring

Employees must perform undocumented inspections of buildings (including those that are not regularly used), storage areas, and tank areas at least once per day. This is over and above normal rounds, which include driving the perimeter of the terminal and checking pump rooms, at least three times per shift.

Monitor media (television, radio and internet) and company communications for status changes, additional instructions or information.

Area site supervisors or designates are responsible to coordinate all employee travel (e.g., remote job sites). Maintain scheduled contact with employees at remote locations.

Request police to increase the frequency of patrols.

### Employee Awareness

Area site supervisors or designates are responsible to immediately notify employees when threat condition levels change (e.g., emails, bulletin board), and review all company security standards and procedures pertaining to the new threat level.



### Critical Facilities: Clearbrook/Superior Terminals

**Communication**

Area site supervisors will keep an open line of communication with local law enforcement concerning our protective measures.

**General**

All security response activities must be logged.

Review all contract maintenance and capital project work, and consider canceling or delaying non-essential work.

Lock doors at all times.

Suspend all maintenance and capital project work involving contractors.

### Non-Critical Facilities: Pump Stations, Remote Valve Sites, ROW, PLM Shops and Offices (Superior/Bemidji/Thief River Falls/Ironwood/Escanaba)

**Signage**

Post signs identifying company emergency contact information on each side of the perimeter fencing.

Post "No Trespassing" signs every 100 – 150 ft along the perimeter fencing and at the main gate.

Along the right-of-way, post warning signs in accordance with Book 3: Pipeline Facilities, 03-02-03, Right-Of-Way Signs.

**Access Control**

Upon entry to the site, an employee must review site-specific safety information with visitors. This does not apply at shops and offices.

For the Superior Office, outside regular working hours, the alarms at the main doors are monitored by Arrowhead Security. For the Bemidji Office, outside regular working hours, the alarms at the main doors are monitored by Bonded Lock and Alarm. The first/last employee to enter/leave the facility at the start/end of the day is responsible to enter the security code to enable the alarms.

**Vehicle Control**

Vehicles must be parked in designated areas.

**Buildings/Gates/Fences/Mainline Valves**

The perimeter of the facility must be fenced. Stations under construction will maintain proper fencing around station at the height of existing fence. This does not apply for Offices.

Gates must be locked or secured in the closed position when facility is unattended.

The integrity of fences and gates must be maintained at all times.

Vegetation growth must be controlled on the exterior perimeter of the fencing.

Buildings must be locked when employees are offsite.

Mainline valves must be chained and locked at all times.

**Keys and Padlocks**

Spare keys and padlocks must be stored in a locked box maintained by the Supervisor or designate.

All spare keys must be signed in/out with the Supervisor or designate using a log sheet kept with the locked box.

All staff will be issued one key and spares will be controlled with a sign-out sheet maintained by the Supervisor or designate.

Only the Region Manager has the authority to acquire additional keys.

Contractors may be issued keys only with approval from the Regional Manager or designate.

The Region Accountant is responsible for distributing and tracking keys in the Region.

Supervisor or designates are responsible to ensure any keys issued are returned when an employee is transferred or leaves the company or when a contractor completes their work.

**Lighting**

Facility and perimeter lighting must be functional at all times, with perimeter lighting directed toward the fence line.

**Monitoring**

Quarterly site security inspections must be completed using the Safety Inspection form (for more information, see Book 2: Safety, 01-03-01, Completing Safety Inspections).



## Non-Critical Facilities: Pump Stations, Remote Valve Sites, ROW, PLM Shops and Offices (Superior/Bemidji/Thief River Falls/Ironwood/Esanaba)

### Employee Awareness

Unless they are of immediate concern, security issues should be identified and documented at each local EH&S monthly meeting. Items of immediate concern should be brought to management's immediate attention.

Safety coordinators are responsible to ensure all company security standards and procedures are reviewed annually with employees.

Secure sensitive company information (e.g., route sheets, employee information) in locked filing cabinets, desk drawers or office outside regular working hours.

Shred discarded sensitive company information.

### Communications

Test and maintain communication systems (e.g., cellular phones, radio systems) as part of emergency response exercises (see Book 7: Emergency Response, 01-02-01, Training and Exercises).

### **WHEN AN ELEVATED NTAS ALERT IS ISSUED AND HAS BEEN FORWARDED TO REGIONAL MANAGEMENT BY TRAINING & EMERGENCY RESPONSE AND THE CORPORATE SECURITY DEPARTMENTS –**

#### **All of above, PLUS:**

Regional Manager is responsible to notify areas when the threat level changes.

### Access Control

Visitors must be checked in by an employee and escorted when possible. This does not apply to shops and offices.

### Monitoring

Employees must complete weekly site inspections of manned and unmanned pump stations, including valves; buildings and perimeter fencing (alter days and times).

### Employee Awareness

Area site supervisors or designates are responsible to immediately notify employees when threat condition levels change (e.g., emails, bulletin board), and review all company security standards and procedures.

In addition, safety coordinators are responsible to ensure all company security standards and procedures are reviewed quarterly with employees.

### **WHEN AN IMMINENT NTAS ALERT IS ISSUED AND HAS BEEN FORWARDED TO REGIONAL MANAGEMENT BY TRAINING & EMERGENCY RESPONSE AND THE CORPORATE SECURITY DEPARTMENTS –**

#### **All of above, PLUS:**

### Access Control

No visitors or contractors are permitted without approval from the regional manager. This does not apply to offices and PLM shops. Regional management must establish contact with ETN Crisis Management Center and ETN Incident Screening Committee in Edmonton.

Prepare for or shut down or evacuate facilities as identified or directed by senior management.

Restrict access to area staff unless approved in advance by regional management.

### Vehicle Control

Restrict vehicle access to employees and emergency vehicles only. No visitor or contractor vehicles are permitted without approval from the regional manager. This does not apply to offices and PLM shops.

### Security Officers

Regional management must assess need for 24-hour security services on a site-specific basis.

### Monitoring

Employees must complete site inspections of all manned and unmanned pump stations to include valves, buildings and perimeter fencing, at least twice per week.

All valve sites, densitometers and other remote facilities will be inspected once per week. This includes all manual valves. Inspect for tampering and condition of locking devices.

In consultation with Aviation and Operation Services, increase frequency of Aerial Patrols to weekly.

Maintain scheduled contact with employee(s) at remote locations.

Request police to increase the frequency of patrols.

Regarding Aerial Patrols, confirm with Aviation Department as no fly restrictions could apply.



## **Non-Critical Facilities: Pump Stations, Remote Valve Sites, ROW, PLM Shops and Offices (Superior/Bemidji/Thief River Falls/Ironwood/Escanaba)**

### **Employee Awareness**

Area site supervisors or designates are responsible to immediately notify employees when threat condition levels change (e.g., emails, bulletin board), and review all company security standards and procedures.

In addition, area site supervisors or designates are responsible to ensure all company security standards and procedures are reviewed weekly with employees.

### **Communications**

Area site supervisors or designates will keep an open line of communication with local law enforcement concerning our protective measures.

Advise landowners of security status and provide emergency contact information if unusual or suspicious activity is observed.

### **General**

All security response activities must be logged.

Review all contract maintenance and capital work, and consider canceling or delaying non-essential work.

Lock doors at all times.

Suspend all maintenance and capital work involving contractors.



# Appendix



## **1.0 OPERATOR IDENTIFICATION**

Enbridge (U.S.) Inc.  
Operates the Enbridge Energy, Limited Partnership Pipeline System  
1100 Louisiana, Suite 3200  
Houston, TX 77002-5216  
(713) 650-8900 (Phone Number)  
(713) 653-8711 (Fax)

**24 hr. Contact: 800-858-5253 via Edmonton Control Center**

### **QUALIFIED INDIVIDUAL(S)**

#### **Mark J. Willoughby**

*Superior Region General Manager, Enbridge (U.S.) Inc.*  
Business Office: 715-394-1410  
Cellular: 218-393-5772  
Fax: 715-394-1405

E-mail:

[mark.willoughby@enbridge.com](mailto:mark.willoughby@enbridge.com)

### **ALTERNATE INDIVIDUALS**

#### **Mike Goman**

*Superior Region Manager, Technical Services*  
Business Office: 715-394-1523  
Cellular: 218-428-5027  
Fax: 715-394-1405

E-mail: [mike.goman@enbridge.com](mailto:mike.goman@enbridge.com)

#### **Tony Hommerding**

*Superior Region Manager, Pipeline Services*  
Business Office: 715-394-1415  
Cellular: 218-393-1308  
Fax: 715-394-1405

E-mail: [tony.hommerding@enbridge.com](mailto:tony.hommerding@enbridge.com)

Enbridge Pipelines (Lakehead), L.L.C.  
Superior Central Square Office  
1320 Grand Ave.  
Superior, WI 54880  
Fax: 715-394-1405

\*NOTE: For summary of emergency procedures and contact information refer to the *Enbridge Emergency Response Directory (ERD)*.



## **2.0 ENBRIDGE U.S. INC. RESPONSE ZONE DESCRIPTION**

The Superior Region System traverses through North Dakota, Minnesota Wisconsin, and Michigan. This region encompasses two entities: Enbridge Energy (Lakehead), Limited Partnership and Enbridge Pipelines (Southern Lights) L.L.C. Refer to *Tab 1, Region Specific* for in-depth description of the Superior Region including:

- Transportation pipelines
- Delivery lines
- Natural Gas lines
- Counties located in the region
- Miles of mainline pipe

## **3.0 CONSISTENCY WITH NATIONAL AND AREA CONTINGENCY PLANS**

### **3.1 National Contingency Plan**

Enbridge (U.S.) Inc. has reviewed the National Contingency Plan to ensure our emergency response planning and structure is consistent. The Incident Command Structure established for Enbridge assumes Enbridge, as a “responsible party” will work in a “unified command structure” with local, state and/or federal agencies to manage the emergency.

The Enbridge Emergency Response Plan (ERP) adheres to all Federal, State and Local emergency response requirements for the crude oil pipeline transportation industry. This section of the appendix was developed to address specific protocol questions common to ERP requirements.

Enbridge identifies the technical training and qualification standards for operations employees in accordance with company policy, industry standards, and applicable government regulations. For the Liquid Pipeline side, these can be found in our *Operations and Maintenance Procedures (O&MP) Book 1 Tab 5 – Training and Qualifications*. For the Gathering Systems, this can be found in *Gathering Systems O&MP Section 4*. Specifically:

1. Characteristics and hazards of oil: This training is conducted annually during HAZWOPER refresher training, specifically in the hazardous materials and Material Safety Data Sheet (MSDS) training components.
2. Conditions that are likely to worsen emergencies, including the consequence of facility malfunctions or failures and appropriate corrective actions: These are covered in our O&MP Books 7 both General & Region Specific under the High Consequence Areas (HCA) identified on individual maps and covered as part of the Emergency Response Training.
3. Steps necessary to control an accidental discharge of oil: Training on general operations procedures cover the precautions to prevent discharges and are reviewed during our annual table-top exercises, field exercises and HAZWOPER training.



4. Steps necessary to minimize the potential for fire, explosion, or environmental damage: Covered in annual ignition source, HAZWOPER and emergency response training.
5. Proper firefighting procedures and use of personal protective equipment (PPE), firefighting procedures or extinguisher use is provided within three months of initial hire or before an individual is assigned to a specific response position and every three years thereafter. PPE training is covered in annual refresher training for all employees.

**Additional Comments:**

The Enbridge O&MP Book 2 Section 15-02-01- *Emergency Response Training Matrix (Table 2)* and O&MP Book 7 Section 02-01-01- *Overview of Emergency Response Actions* address the appropriate levels of training and the requirements specified in OSHA 29 CFR 1910.120.

The OM&P Book 2 Section 15-02-02 describes the requirements for maintaining drill response documentation for three years ensuring the availability of such records for inspectors.

**3.2 Area Contingency Plan**

Enbridge has reviewed the applicable Area Contingency Plans and established communication, where necessary, with the appropriate Area Contingency Plan coordinator to ensure that Enbridge information is accurate. Enbridge will, on an on-going basis, continue to review these plans, provide input as necessary and participate in the Area Committees as appropriate. The identification of environmentally sensitive (high consequence areas) will be reviewed with Area Contingency Plans in order to establish consistency.

The Area Contingency Plans that must be considered within Enbridge’s Emergency Response Plan have been identified and are listed below according to the response zone affected.

Superior Response Zone

USCG		EPA	
<i>National Response Center</i> <a href="http://www.nrc.uscg.mil/nrchp.html">http://www.nrc.uscg.mil/nrchp.html</a>	800-424-8802	<i>EPA Region V</i> 77 W. Jackson Blvd. Chicago, IL 60604	312-886-3000
<i>USCG Ninth District</i> 1240 E. 9 <sup>th</sup> Street Cleveland, OH 44199	216-902-2045	<i>EPA Region VIII</i> 999 – 18 <sup>th</sup> St., Ste. 300 Denver, CO 80202-2466	303-312-6312
<i>USCG Marine Safety Office</i> 600 S. Lake Ave. Duluth, MN 55802-2352	218-720-5286		
<i>USCG Marine Safety Office 337</i> Water Street Sault Ste. Marie, MI 49783	906-635-3233		



#### 4.0 WORST-CASE DISCHARGE VOLUME CALCULATION METHODOLOGY

The approach for calculating Worst-Case Discharge (WCD) volume utilizes Enbridge's Automated Valve Placement (AVP) System. The AVP model performs two calculations to determine the total volume-out at any given point along the pipeline in the event of a rupture; maximum initial loss and maximum stabilization loss.

The calculations used to determine the worst-case discharge volume use:

- An assumption of a guillotine rupture (100% volume out);
- Design pipeline capacity to determine the amount of product released prior to a rupture being isolated by closure of remote-controlled mainline valves;
- An assumption that all of the product in the pipe except that isolated by either elevation or the location of existing remote-controlled valves will be discharged at a rupture location.

This yields a conservative estimate of the worst-case discharge volume regardless of weather conditions.

Mainline and facility risk assessment data are compiled and entered into American Innovation's Risk Intelligence Platform (RIPL) software. RIPL is used to manage the pipeline and facility data and to generate risk assessment results and outputs. Further information on RIPL is contained in the *ORM Reference Library*.

##### Maximum Initial Loss

Initial volume-out is the amount of product that is released before a pipeline is shutdown and remote-controlled isolation valves closed in vicinity of the rupture.

**Maximum Initial Loss** = pipeline flow rate x (time to recognize rupture and isolate the pipeline)

*Time to Recognize Rupture (i.e. Time to Isolate Rupture)*

The SCADA system alarms within 10 minutes of a full mainline leak. This is followed by 3 minutes to initiate shutdown.

The Material Balance Leak Detection is a backup to operator recognition. The Material Balance Leak Detection system used for leak detection runs on a five minute cycle, therefore it will recognize a rupture within 5 minutes and initiate the shutdown.

##### Valve Closure Rate

All motor operated valves in the Enbridge liquid mainline system close in three minutes or less. This is a design criteria requirement for motorized mainline valves used by Enbridge.

The time to isolate a given rupture is 13 minutes (10 minutes to recognize and initiate isolation + 3 minutes for remote controlled valves to close).



### Maximum Stabilization Loss

The maximum stabilization loss is a worst-case calculation of the amount of oil that will escape to ground after isolation has occurred. The calculation takes into consideration the outer diameter and wall thickness of the pipe, the pipeline elevation profile, and the location of remote-controlled valves.

### Worst-Case Discharge Volume

Worst-Case Discharge (WCD) Volume= Maximum Initial Loss + Maximum Stabilization Loss

### Calculation of Worst Case Discharge for Mainline Piping

Line	"Design Flow Rate" Capacity (bbbls/day)	Time to Isolate (min)	Worst Case Discharge (bbbls)	Location (ft Stationing)	Location (~MP)
1	235,176	13	15,024	1,710,200	1097
2	491,234	13	35,267	213,317-215,900 (13 sites)	815
3	434,493	13	56,953	213,271-215,900 (11 sites)	1098
4	859,176	13	86,511	295,200 & 295,300	830
5	525,683	13	32,851	340,700	62.5
6A	727,335	13	36,635	29,900	6
13 Clearbrook-Gretna	194,800	13	20,689	213,290-215,900	949
13 Superior-Clearbrook	180,000	13	13,088	945,600	1086
13 Ladysmith-Superior	180,000	13	11,372	29,000	5.5
14	398,774	13	18,363	16,100	3
61	400,000	13	47,421	27,800	6
LSr (65)	186,000	13	9,952	333,060	815
67	450,000	13	41,375	1,668,600	1085

\*Emergency Response/ WCD Location Map in Tab 4- Maps and References

### Calculation of Worst Case Discharge for Tankage

Prevention Measure	Standard	Credit (percent)
Secondary containment > 100%	NFPA 30	50
Built/repaired to API standards	API STD 620/650/653	10
Overfill protection standards	API RP 2350	5
Testing/cathodic protection	API STD 650/651/653	5
Tertiary containment/drainage/treatment	NFPA 30	5
<b>Maximum allowable credit</b>		<b>75</b>

25% of largest tank in Superior Region Zone = 390,000 x 25% (75% RSPA credit) = 97,500 bbls



## **5.0 IDENTIFICATION OF ENVIRONMENTALLY SENSITIVE AREAS**

Enbridge utilizes the criteria described in its integrity management plan (HCA Management Plan) to identify and evaluate varying degrees of sensitivity to a number of public safety and environmental concerns along its right-of-way.

Spatial data regarding the HCA sites were derived from the National Pipeline Mapping System (NPMS) database maintained by PHMSA and mapped using the Geographic Information System (GIS) software ESRI (Environmental Systems Research Institute) ArcMap. In addition to the HCA's identified by PHMSA, Enbridge considered the following features in its Unusually Sensitive Area assessment:

- Rivers identified as high volume areas;
- Additional drinking water resources; and
- Environmentally sensitive areas identified through regional or field knowledge.

In addition, HCA's were identified that may be affected by a release from Enbridge pipelines via transport mechanisms. The types of transport mechanisms considered were:

- Overland flow of crude oil to an HCA which is a function of topographic gradients, locations of ditches, and barriers to flow, in addition to stationing-specific volumes of crude oil that could be potentially released from an Enbridge pipeline.
- Flow of crude oil with/on water to an HCA from static lakes and ponds or perennial streams.
- Spray of crude oil from a potential rupture to an HCA.

The Enbridge HCA maps are an integral part of Enbridge emergency planning and response and are distributed to the Enbridge Regional Offices. The HCA maps are available upon request.

## **6.0 BASIS FOR DETERMINATION OF "SIGNIFICANT AND SUBSTANTIAL HARM"**

Enbridge has determined that the Superior Response Zone meets the criteria which requires the zone to be considered as having the potential to cause "significant and substantial" harm.