ENBRIDGE

Chicago (#[illegible]) Region Specific Operating and Maintenance Procedures

Emergency Response – Book 7

Do not combine with the Corporate O&MP Book 7

Region Specific

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 (Environment & Safety Clerk 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: _____

Proposed wording: _____

Reason for change: _____

Issued: 1/20/10

Submit Request Form to Manual Custodian.
Attn: Health & Safety Clerk, Superior Office

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			
03			
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			

Qualified Individual(s)

T.W. Fridel
General Manager, Chicago Region
1500 W. Main St.
Griffith, IN 46319
Business: 219-922-3133 #201
Business FAX: 219-922-3128
24 hr. contact: 800-858-5253 via Edmonton Control Center

M.J. Willoughby
General Manager, Superior Region
119 N. 25th St. E.
Superior, WI 54880
Business: 715-394-1410
Business FAX: 715-394-1405
24 hr. contact: 800-858-5253 via Edmonton Control Center

CHICAGO REGION RESPONSE ZONE

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
- **Chicago Region**
- Cushing Region
- Enbridge Pipelines North Dakota

The Chicago Region response zone includes eleven pipelines (Lines 6A, 13, 14, 61, 62, 64, 6B, 5, 10, 17, and Mustang) and three terminal lines (Lines TL 1, GFHT 2 and GFHT 3) that transport crude oil, natural gas liquids Wisconsin, Illinois, Indiana, Michigan and New York. Line 13 transports diluent across Illinois, Wisconsin, Minnesota and the North Dakota systems. This section of response zone includes:

- Approximately 2,108 miles of pipeline, with pipe diameters ranging from 12 to 42 inches;
- 42 Pump Stations located along the pipe;
- The Mustang pipeline segment for which Enbridge has operations, maintenance, repair and emergency response responsibility includes the Lockport Metering Station and the portion of the Mustang 24" pipeline system from Lockport, Illinois to Interstate 74;

- Line 17 – Enbridge operates the 88 mile pipeline segment beginning in Stockbridge, Michigan and ending in Oregon, Ohio. The first 35 miles of pipeline, from Stockbridge, Michigan to Freedom Junction, Michigan was constructed in 1998 and is owned by Enbridge. The remaining 53 mile segment runs from Freedom Junction, Michigan to Oregon, Ohio (MP is leased from Wolverine Pipeline). Per the established lease agreement, Enbridge is responsible for all operations, maintenance and emergency response associated with this line segment (as if we were the owner); however, Wolverine retains ownership.

- The Chicago system also includes 25 tanks (11 tanks at Griffith; 9 tanks at Hartsdale; 3 tanks at Stockbridge, 2 tanks at Manhattan). Breakout tanks are located at Griffith, IN (2.84 million barrels storage capacity), Hartsdale, IN (846,000 barrels storage capacity) Stockbridge, MI (440,000 barrels storage capacity), and two diluent tanks at Manhattan (511,000 barrels storage capacity).

Counties included in the Chicago Region response zone are:

Wisconsin	Illinois	Indiana	Michigan	New York
Rusk	McHenry	Lake	Crawford	Erie
Chippewa	Kane	Porter	Ogemaw	
Clark	Cook	LaPorte	Arenac	
Marathon	Dupage	St. Joseph	Bay	
Marathon	Kendall		Lapeer	
Adams	Will		St. Claire	
Adams	Kankakee		Berrion	
Columbia	Ford		Cass	
Dane	Livingston		St. Joseph	
Jefferson	Champaign		Kalamazoo	
Washburn	Piatt		Calhoun	
			Livingston	
			Oakland	
			Tuscola	
			Saginaw	
			Oscoda	
			Macomb	
			Ingham	
			Jackson	
			Washtenaw	

This response zone includes the following pipelines:

Line	Pipeline Sections	Begin Stationing	End Stationing	Miles	Pipeline Diameter	Product
5	Lewiston Pump Station to Sarnia, Ontario	2,378,371	3,364,529	186.77	30"	Crude Oil & Natural Gas Liquids
6A	Hwy 8 Ladysmith, WI to Mokena, IL	513,368	2,457,347	368.2	34"	Crude Oil & Natural Gas Liquids
6B	Griffith, IN to Sarnia, Ontario	0	1,509,516	285.9	30"	Crude Oil
10	Westover, Ontario to Grand Island, NY	0	3,484	.7	12"	Crude Oil
10	Grand Island, NY to East Niagara, NY	3,484	29,409	4.9	20"	Crude Oil
10	East Niagara, NY to Kiantone, NY Take-Off	29,409	119,975	17.3	12"	Crude Oil
13	Streator, IL to Manhattan, IL	0	237,710	45.02	20"	Diluent
13	Manhattan, IL to Delevan, WI	0	889,310	168.43	20"	Diluent
13	Delevan, WI to Ladysmith, WI	528,000	1,216,611	230.42	20"	Diluent
14	Hwy 8 Ladysmith, WI to Mokena, IL	512,719	2,434,861	364.0	24"	Crude Oil
17	Stockbridge, MI to Freedom Junction, MI	0	186,089	35.3	16"	Crude Oil
17	Freedom Junction, MI to Toledo, OH	0	279,047	52.9	16"	Crude Oil
61	Ladysmith, WI to Delevan, WI	523,170	1,703,457	223.54	42"	Crude Oil
61	Delevan, WI to LaSalle Livingston County Line	0	467,030	88.45	42"	Crude Oil
62*	IN State Line to Hartsdale, IL	363,296	398,336	6.5	22"	Crude Oil
64	Mokena, IL to Griffith, IN	2,406,091	2,543,685	26.1	24"	Crude Oil
TL1	Griffith, IN to Hartsdale, IN	0	3,171	.6	34"	Crude Oil
GFHT 2	Griffith, IN to Hartsdale, IN	0	4,090	.8	36"	Crude Oil
GFHT 3	Griffith, IN to Hartsdale, IN	0	4,128	.8	36"	Crude Oil
Mustang	Lockport Metering Station, IL to North of Interstate 74	0	10,001	1.9	18"	Crude Oil

* Stationing used is not As-Built- Begins at zero in Flanagan

Company/Co-Op Equipment Lists

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 with tankage and then re-injected into the pipeline.

Enbridge has working 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 the OSRO's equipment inventories are kept on file at each region office.

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. Enbridge does not retain equipment inventory lists for all non USCG classified contractors.

COMPANY/COOPERATIVE EQUIPMENT LISTS

Company-

Emergency Response (ER) Trailer Lists and Locations

PLM 3

- Bay City
- Fort Atkinson
- Dundee
- Marshall
- Vesper

Griffith Terminal.....14

Station Response Equipment Guidelines.....15

Station Inventories.....16

Winter Spill Equipment.....22

Primary Water Recovery Equipment.....23

Other-

Government, Contractors or other Cooperative Resources-

OSRO.....26

Canadian Cross Border Emergency Response Equipment-

- Westover, Ontario.....28
- Sarnia, Ontario.....37

Qualified Individuals Notification.....53

Emergency Response Trained Personnel.....53

BAY CITY PLM EMERGENCY RESPONSE EQUIPMENT

MISCELLANEOUS

QTY	DESCRIPTION
1	6000 Watt Light Plant on Wheels
2	18' Lund Boats with 50/hp Motors
4	2" Trash Pumps
2	3" Trash Pumps
15	20' 2" Tank Truck Hose
15	20' 3" Tank Truck Hose
10	Bundles Absorbent Pads (100/Bundle)
1	185 cfm Wheeled Air Compressor
1	Polaris 6 x 6 ATV
1	4810 ASV Rubber Tracked Machine
1	420 Cat Rubber Tired Backhoe
1	TD550 John Deere Dozer

LEAK TRAILER

4	30# Fire Extinguishers
4	Safety Belts and Tag Lines
1	Fire Blanket
2	Windsocks
10	Neoprene Hip Boots and Gloves (Pairs)
5	NGL Protective Equipment (Face Shields, Mitts, Protective Sleeves and Aprons)
10	Sets Fire Retardant Clothing
10	Sets Fire Retardant Rain Gear
2	Scott Air Paks (2.2 cu. ft. Units)
1	First-Aid Kit
1	Stretcher
2	Wool Blankets
1	3" Air Operated Diaphragm Pump
1	2" Trash Pump
45-50'	Rigid Suction/Discharge Hose
5	Bales Sorbent Pads
4	Road Barricades w/Flashers
4	Danger Signs to Warn Public
10	High Visibility Vests
1	Roll Caution Tape to Barricade Leak Area and Trenches
1	Portable Generator
1	Air Horn
4	Shovels
1	Sledge Hammer
1	Axe
12	Steel Fence Posts
1	Plastic Fencing (Roll)

BAY CITY PLM - LEAK TRAILER cont.

QTY	DESCRIPTION
1	12 Volt Spotlight
6	Rolls Mylar Scare Tape
12	Scare Balloons or Equivalent
1	Grounding Rod

BOOM TRAILER

5	Bundles Absorbent Pads
200'	Absorbent Boom
4	Fabricated Disc Anchors
4	15lb Danforth Anchors
4	15' Lengths of 1/2"Anchor Chain
500'	Floating Oil Boom w/Quick Latch Couplings
2	Boom Tow Bridles
5	Anchor Marker Buoys w/Boom Connection
2	3"Kamlock-Male (Female Thread)
2	3"Kamlock Female (Female Thread)
2	3"x 2" Kamlock Adapters
2	2" Kamlock Male (Female Thread)
2	2" Kamlock Female (Female thread)
1	3" Air Operated Diaphragm Pump w/3" Kamlocks
60'	Rigid Suction/Discharge Hose
30'	3" Floating Discharge Hose
5	Hose Floats
1	Skim Pak Weir Skimmer w/Discharge Hose, Wand Extension, and Debris Screen
1	Manta-Ray Floating Suction Head
1	1800 Gal. Porta-Tank and Liner
10	Steel Toe Chest Waders (Pairs)
10	Neoprene Rubber Gloves (Pairs)
10	USCG Approved Life Vests
6	Safety Belt and Tag Lines
1	Rope Reel or Various Lengths of Rope w/Quick Connect Fittings
4	Shovels
1	Sledge hammer
1	Bolt cutter
1	Axe
12	Steel Fence Posts
1	Drive in Fence Post Anchor
5	Screw in Fence Post Anchors
1	Megaphone
1	12 Volt Hand-Held Spotlight
1	Amber 12 Volt Strobe Light
2	Rolls Plastic Fencing
1	Assorted Lumber of 2' x 4" & 2" x 6" (Lot)

COMMAND POST TRAILER

QTY	DESCRIPTION
	Book 1 (O&MP Procedures-General Reference)
	Book 2 (O&MP Procedures-Safety)
	Book 3 (O&MP Procedures-Pipeline Facilities)
	Book 7 Emergency Response
	Emergency Response Directory
	Environmental Sensitivity Maps
	Radio Directory
1	Grease Board w/Markers and Eraser
5	Sets Fire Retardant Clothing
5	Sets Fire Retardant Rain Gear
5	Hard Hats for Visitors
1	First-Aid Kit
1	Strobe Light
1	Pedestal Sign (*Visitors to Stop at Command Post*)
1	12 Volt Spotlight
3	Flashlights
1	Roll Tape to Restrict Site Access
1	Portable Generator

FORT ATKINSON PLM INVENTORY

RESPONSE BOATS/ MOTORS/ TRAILERS

LEAK TRAILER

1	1986 14' Alumacraft John Boat
	Model 1457 (Serial # ABCD19L3L586)
	Reg # WS 3662 (WI) Expires 03-31-2009
1	1986 Johnson 9.9 Motor (Serial # R 08218672) Two-Stroke
1	1992 Pace American Trailer
	Model 820TA3 (20') Unit # 431 GVW 10,000 Actual Wt.
	(Serial # 40LAB2028NPO16323)
	License # BR 2284 (WI) Expires 12-31-07 Smith # AC 7599
	Safety Inspection 08-06 Due 08-07 Tire Size ST225/75R15
2	Boat Oars

BOOM TRAILER

1	1990 Mac Lander Trailer
	Model 20' Unit #299 GVW 11,440 Actual Wt.
	(Serial # 1M9PV2020L1217041)
	License # DR 1028 (WI) Expires 12-31-07 Smith # AC 7552
	Safety Inspection 08-06 Due 08-07 Tire Size 9.50 - 16.5 LT

COMMAND POST

1	1990 TSI Trailer

FORT ATKINSON PLM - COMMAND POST BOAT cont.

QTY	DESCRIPTION
	Model 8x28 (28') Unit # 268 GVW 4,500 Actual Wt.
	(Serial # 906123)
	License # AR 1983 (WI) Expires 12-31-07 Smith # AC 4310
	Safety Inspection 08-06 Due 08-07 Tire Size F 78x15

MISCELLANEOUS

35	Bags Sorbent Pads 100/Bag (3,500 Pads)
11	Bags Sorbent Boom 8" x 10' - 4/Roll - 4/Bag (440' Total)
2	3" Trash Pumps
5	2" Trash Pumps
2	2" Electric Pumps
1	2" Hydraulic Pump
1	3" Hydraulic Pump
1	2" Air Pump
2	3" Air Pumps
1	Kerosene Heater
1	Z-3500 Warn Winch

LEAK TRAILER

1	4 ft. Elastec Drum Skimmer
1	8 ft. Elastec Drum Skimmer
1	Elastec Skimmer Power Unit
1	50' section of orange mini boom
1	Stretcher
1	Roll of Plastic
3	12 ft. Pike Poles
164'	Orange Plastic Fence
1	30# Fire Gun
3	Traffic Safety Cones (Orange)
2	Joints 3" Clear Plastic Hose
1	Kerosene Heater
5	Bags Sorbent Pads 100/Bag (500 Total)
2	Bags Sorbent Boom 6" x 10' - 40 ft. Each- 4/ Bag (80 ft.Total)
1	Windsock
4	Erickson Safety Lights
	Assorted 2" & 3" Kamlock Fittings
1	Incident Command Chart
1	Prowler Owl
1	Roll *BURIED PIPELINE* Tape
1	Roll *DANGER* Tape
1	Roll *FITTING ON LINE* Tape
2	Rolls Flagging Ribbon (Yellow)
50	Marking Flags

FORT ATKINSON PLM - LEAK TRAILER cont.

QTY	DESCRIPTION
4	Do Not Enter Signs
4	Pair Rubber Arm Sleeve's
3	Face Shields
5	Rubber Aprons
15	Safety Vests (Orange)
5	Mylar Scare Tape (Rolls)
18	Scare Balloons
12	Rain Jackets (Various Sizes)
12	Rain Pants (Various Sizes)
2	Sledge Hammers
1	Axe
4	Hard Hat Face Shield Adaptors
4	Miller Safety Belts
4	Miller Safety Lines
20	Pair Rubber Gloves
1	Stihl Leaf Blower
2	6 Volt Batteries
3	Fire Blankets
1	Fence Post Driver
10	Life Jackets(Various Sizes)
1	Throwable Boat Cushion
13	Nomex Coveralls (Various Sizes)
8	Amber Barricade Warning Lights
4	Barricades
2	Flash Lights
1	Portable Spot Light
1	Mora Hand Ice Auger
1	Eskimo Gas Powered Ice Auger
2	Joints 1 3/4" Flexible Discharge Hose
1	Bundle Rags
2	044's Stihl Chain Saws
3	1 Gal. Bottles of Bar Oil
1	Cooler
10	Pair Waders (Various Sizes)
8	Pair Steel-Toed Winter Pak Boots
12	Carsonite Posts
200'	Rope
1	First-Aid Kit
4	Shovels
1	Honda Generator (Model EM3500S)
1	Tow Bridal

BOOM TRAILER

1280'	Floating Boom w/Quick Latch Couplings (Various Lengths)
4	Bags Sorbent Boom 6" x 10' - 40' Each 4/Bag

FORT ATKINSON PLM - BOOM TRAILER cont.

QTY	DESCRIPTION
2	Bundles of Orange Mini Boom 50' Each
4	Sorbent Pads 100/Bag
2	Joints 2" Clear Hose
1	Joints 3" Clear Hose
5	Traffic Safety Cones
5	Marker Buoys w/Chains and Clips
	Assorted Lumber
1	3" Roper Diaphragm Pump Air Operated
1	Manta Ray Skimmer
1	Waders (Pair)
300'	Nylon Rope
50'	Extra Boom Chain
1	3" Wand Skimmer - Skim Pak Weir Skimmer
1	Debris Screen
1	Fence Post Driver
4	3" hose floats
	Assorted 2" & 3" Kamlock Fittings
5	Life Jackets
16	Pair Pik-of-Life Ice Picks
1	Bull Horn
2	Rescue Disks w/100' of Rope Attached
1	Air Horn Signal Device
4	Nylon Gloves (Winter) (Pairs)
5	Rubber Gloves (Pairs)
1	Safety Harness
4	Safety Vests (Orange)
4	Amber Barricade Flashers
1	Amber Emergency Flashing Light - Magnetic
1	12 Volt Hand-Held Spot Light
2	Flashlights
1	Roll *DANGER* Tape (Red)
1	Roll *BURIED PIPELINE* Tape
1	Roll *FITTING ON LINE* Tape
8	Steel Fence Posts
1	Windsock
1	Sledge Hammer
1	Axe
4	Shovels
1	Roll Plastic Fence
1	6 Gal. Gas Tank (Empty)
1	30# Fire Gun
3	Anchors and Chains
3	Spiral Anchors
1	Bolt Cutter
1	Stretcher

FORT ATKINSON PLM - BOOM TRAILER cont.

QTY	DESCRIPTION
1	1800 Gal. Porta-Tank and Liner
1	First-Aid Kit

COMMAND POST

2	12 Volt Battery Chargers
3	Folding Chairs
1	Weather Haven Endurance Tent
4	Toilet Paper (Rolls)
1	Paper Towel (Rolls)
1	First-Aid Kit
4	Sets of Rain Gear Various Sizes
1	Pair Rain Pants
1	Plastic Battery Holder
1	Bag Rags
1	Bag Sorbent Pads - 100
	Miscellaneous Office Supplies
2	Signs " *All Persons Must Report To Command Post When Leaving"*
2	Enbridge Incident Command Charts
1	Enbridge Site Safety Plot Plan (Roll Up)
1	Extension Cord
1	Orange Safety Vest
1	Extension Cord (end to be hard wired)
1	Flash Light and Charger
4	Nomex Coveralls Various Sizes (Blue)
7	Nomex Coveralls Various Sizes (Red-Visitor)
2	Winter Jackets Nomex
5	Winter Blankets
1	Chalkboard Style Site Safety Plot Plan
1	Roll *CAUTION DO NOT ENTER* Tape
1	Amber Strobe Light
2	Amber Barricade Lights

DUNDEE PLM INVENTORY

BOOM TRAILER

300'	Slick Bar Boom w/Quick Latch Couplings
5	Bags Sorbent Boom 6" x 10' - 40' Each 4/Bag
3	Bags Sorbent Boom 4" x 10' - 40' Each 4/Bag
2	Bags Sorbent Pads 100 Each - 200 Pads
3	Chicken Wire Fence 150'/Rolls - 450'
1	Warning Fence 100' Roll (Orange)
10	Steel Fence Posts
2	Spade Shovels
2	Rolls Plastic Sheet 25' Rolls - 50 ft.

DUNDEE PLM - BOOM TRAILER cont.

QTY	DESCRIPTION
1	Sledge hammer
1	Poly rope 100' (Roll)
1	*CAUTION* Tape (Roll)
1	Box Rubber Gloves
1	Bailing Wire (Roll)
2	Safety Vests (Orange)
1	Claw Hammer
1	Box Nails
1	Hacksaw
1	Pliers
1	1992 Pace American Trailer
	Model 20' Unit # 432 GVW 10,000 Actual Wt.
	(Serial # 40LAB2027NP016247)
	License # BR 2285 (WI) Expires 12-31-07 Smith #
	Safety Inspection 08-06 Due 08-07 Tire Size ST 225/75R15

MARSHALL PLM INVENTORY

MISCELLANEOUS

7	2" Water Pumps
3	3" Water Pumps

BOOM TRAILER

5	Bundles Sorbent Pads
200'	Sorbent Boom
4	Fabricated Disk Anchors
4	15# Danforth Anchors
4	15' Lengths ½" Anchor Chain
500'	Floating Boom w/ Quick Latch Connectors
2	Boom Tow Bridles
5	Anchor Marker Buoys w/ Boom Connection
	Assorted 2" and 3" Kamlock fittings
1	3" Air Operated Diaphragm Pump
60'	Rigid Suction / Disc. Hose
30'	3" Floating Disc. Hose
5	Hose Floats
1	Skim-Pac Weir w/Disc. Hose, Wand and Debris Screen
1	Manta-Ray Floating Suction Head
1	1800 Gal. Porta-Tank
10	Steel-Toe Chest Waders (Pairs)
10	Neoprene Rubber Gloves (Pairs)
10	USCG Approved Life Vests
6	Safety Belt and Tag Lines
1	Reel Rope Polytron and Disconnect Fittings

MARSHALL PLM - BOOM TRAILER cont.

QTY	DESCRIPTION
4	Shovels
1	Sledge Hammer
1	Bolt Cutter
1	Axe
12	Steel Fence Posts
1	Drive-in Fence Post Anchors
5	Screw-in Fence Posts Anchors
1	Megaphone
1	12 Volt Hand-Held Spotlight
5	Rolls Plastic Fence
12	2 x 4 x 12 Lumber
12	2 x 6 x 12 Lumber

LEAK TRAILER

5	30# Fire Extinguishers
4	Safety Belts and Taglines
1	Fire Blanket
2	Windsocks
10	Neoprene Hip Boots (Pairs)
10	Neoprene Gloves (Pairs)
10	Fire Retardant Clothing (Sets)
10	Fire Retardant Rain Gear (Sets)
2	SCBA Scott Air Packs
1	First-Aid Kit
1	Stretcher
2	Wool Blankets
5	Face-Shields
5	Insulated Mitts
5	Protective Sleeves
5	Aprons
2	NGL Flare Launchers and Cartridges
1	3" Air Operated Diaphragm Pump
1	2" Trash Pumps
50'	Rigid Suction / Disc. Hose
5	Sorbent Pads (Bundles)
4	Road Barricades w/ Amber Flashers
4	Danger Signs
10	Reflective Vests
1	Roll Caution Tape
1	Portable Generator
6	Shovels
1	Sledge Hammer
2	Axe
12	Steel Fence Posts

MARSHALL PLM - LEAK TRAILER cont.

QTY	DESCRIPTION
1	Plastic Fence (Roll)
1	Hand Held Spotlight 12v
6	250' Rolls Mylar Bird Scare Tape
12	Animal / Bird Scare Balloons
1	Ground Rod

BOATS/ TRAILERS

1	Boat 18' (Lund with 50hp Mercury and Trailer)
1	Boat 22' (Jet with 2 Motors and Trailer)

MISCELLANEOUS

1	Winter Weather Shelter (8' X 12')
2	Chainsaw (Stihl 044 with 32" Bar)
1	Diaphragm Pump 3"
1	Diaphragm Pump 2"
1	Hydraulic Pump 2" with Power Unit
1	Backpack Air Blower
1	Ice Auger (8" with Gas Motor)
1	Venturi Air Mover
2	Generator (5000watt)
2	Torpedo Heaters
3	Trash Pump 2"
1	Trash Pump 3"
100'	River Boom
1	Air Mover
1	Rescue Basket

BOOM TRAILER

300'	River Boom
268'	Mini Boom
240'	8" Sorbent Boom (10' Sections)
160'	5" Sorbent Boom (10' Sections)
12	Bag of Sorbent Pads (17" X 19" 100 Pads/Bag)
1	Environmental Sample Kit
2	Explosion Proof Drop Lights
1	3" Skimmer with Air Hose and Motor
1	Portable Tank and Accessories 1500 Gal.
2	15' Pike Poles
1	Electric Winch 3500#
6	Tow Bridles for Mini Boom
7	Buoys 12"
8	River Anchors with Rope

VESPER PLM - BOOM TRAILER cont.

QTY	DESCRIPTION
1	Chicken Wire 100' Roll
1	Nylon Rope with Clevis 100'
1	Nylon Rope with Clevis 75'
1	Nylon Rope with Clevis 50'
5	5 Point Body Harness
3	Caution Tape (Rolls)
2	Rescue Discs
2	Flashlights
8	Incident Command System Reflective Vests
1	Bag of Rubber Gloves
1	Hacksaw
1	Tin Snip
1	Pliers
3	# of 3.5" 16 Penny Nails
10	Boom Connector
1	Prowler Owl
3	Mylar Tape (Rolls)
1	Box of Garbage Bags
6	Pick-O-Life
1	First-Aid Kit
1	Rope 200' Roll
1	Windsock and Pole
2	Kamlock Male 3"
2	Kamlock Female 3"
1	Kamlock Male 2"
1	Kamlock Female 2"
1	Spare Tire
1	Sledge Hammer
4	Screw Anchors
2	Shovels
2	Pitch Forks
13	Fence Posts
2	Hoses 2" 25'
1	Large Boom Anchor
1	Fire Blanket

GRIFFITH TERMINAL EMERGENCY RESPONSE EQUIPMENT	
QTY	**DESCRIPTION**
GRIFFITH FIRE PROTECTION BUILDING	
2	1 3/4" x 50' Fire Hose (on Foam Trailer)
2	2 1/2" x 25' Fire Hose (on Foam Trailer)
1	500 Gal. Foam Trailer
6	55 Gal. Barrels AFFF Foam
10	50# Pails of Dry Chemical Fire Extinguisher (Purple K)
1	200' Mobile Hose Reel
4	2 1/2" x 50' Fire Hose (on Foam Trailer)
2	Tank Rescue Basket
2	Road Guard Reflective Vests
1	Windsock
1	3 ft. Handle Axe
2	10# Sledge Hammers
	Various Rain and Flood Gear
	3 Steel, 2 Aluminum, 1 Plastic Flat Shovels
GRIFFITH COLD STORAGE	
20	Bales of 3' x 3' Absorbent Pads (100 per Bale)
4	8" x 10' Bales of Boom (4 per Bale)
2	30" x 150' Rolls of Oil Absorbent Pad
2	Portable Hydraulic Units
2	Squeegees
2	Steel Rakes
2	Chicken Fencing (Rolls)
1	Wheel Barrow
HARTSDALE NORTH GARAGE	
9	Bags of 8" Boom (Total of 280')
20	Bags of 5" Boom (Total of 840')
6	Bales of 3' x 3' Absorbent Pads (100 per Bale)
1	Spade Shovel

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")

LEWISTON STATION INVENTORY

BOOM TRAILER

QTY	DESCRIPTION
20	Bales of Straw
200'	6"Containment Boom
200'	5" Sorbent Boom (5 Bales-40' each)
200'	8" Sorbent Boom (5 Bales-40' each)
1	Bale Sorbent Pads (100 Grade)
1	Bale Sorbent Pads (200 Grade)
2	Waders (Pairs)
1	Windsock
200'	Rope- ⅜" (4)-50' Ropes
12	Fence Posts
100'	Baling Wire
2	Life Jackets
2	Flashlights w/Batteries
1	Electrician Pliers
10	Garbage Bags
1000'	Barricade Tape
450'	Chicken Wire Fencing (3 Rolls)
12	Lumber (2" x 4" x 12')
12	Lumber (2" x 6" x 12')
4	Shovels
1	Joint Culvert (12" x 10')
5	# 16 Penny Nails
1	Tin Snips
1	Claw Hammer
1	Rake
1	Hacksaw
2	Reflective Vests
1	Permalon Plastic (40' x 100') x 210 Ply
2	Rubber Gloves (Pairs)
10	Wood Lathe
1	Sledge Hammer

NORTH BRANCH STATION INVENTORY

BOOM TRAILER

20	Bales of Straw
200'	6"Containment Boom
200'	5" Sorbent Boom (5 Bales-40' Each)
200'	8" Sorbent Boom (5 Bales-40' Each)
1	Bale Sorbent Pads (100 Grade)
1	Bale Sorbent Pads (200 Grade)
2	Waders (Pairs)
1	Windsock
200'	Rope- ⅜" (4)-50' Ropes

NORTH BRANCH - BOOM TRAILER cont.

QTY	DESCRIPTION
12	Fence Posts
100'	Baling Wire
2	Life Jackets
2	Flashlights w/Batteries
1	Electrician Pliers
10	Garbage Bags
1000'	Barricade Tape
450'	Chicken Wire Fencing (3 Rolls)
12	Lumber (2" x 4" x 12')
12	Lumber (2" x 6" x 12')
4	Shovels
1	Joint Culvert (12"x 10')
5	# 16 Penny Nails
1	Tin Snips
1	Claw Hammer
1	Rake
1	Hacksaw
2	Reflective Vests
1	Roll Permalon Plastic (40' x 100') x 210 ply
2	Rubber Gloves (Pairs)
10	Wood Lathe
1	Sledge Hammer

MARYSVILLE STATION INVENTORY

BOOM TRAILER

20	Bales Straw
200'	6"Containment Boom
200'	5" Sorbent Boom (5 Bales-40' Each)
200'	8" Sorbent Boom (5 Bales-40' Each)
1	Bale Sorbent Pads (100 Grade)
1	Bale Sorbent Pads (200 Grade)
2	Waders (Pairs)
1	Windsock
200'	Rope-⅜" (4)-50' Ropes
12	Fence Posts
100'	Baling Wire
2	Life Jackets
2	Flashlights w/Batteries
1	Electrician Pliers
10	Garbage Bags
1000'	Barricade Tape
450'	Chicken Wire Fencing (3 Rolls)
12	Lumber (2" x 4" x 12')
12	Lumber (2" x 6" x 12')
4	Shovels

MARYSVILLE - BOOM TRAILER cont.

QTY	DESCRIPTION
1	Joint Culvert (12" x 10')
5	# 16 Penny Nails
1	Tin Snips
1	Claw Hammer
1	Rake
1	Hacksaw
2	Reflective Vests
1	Permalon Plastic (40' x 100') x 210 Ply
2	Rubber Gloves (Pairs)
10	Wood Lathe
1	Sledge Hammer

BUFFALO STATION INVENTORY

BOOM TRAILER

6	Bundles Sorbent Pads (100 Each)
12	Sections 5" x 10' Sorbent Boom - 120 ft
12	Sections 8" x 10' Sorbent Boom - 120 ft.
2	½" Anchor Chain- 20' length
1	IC Organizational Chart
2	½ Lengths Anchor Chain - 20 ft.
2	Boom Tow Bridle
2	Boom Tow Paravane
2	Boom Tow Sling - 3/8 Cable/Hooks - 25 ft.
12	Hand Line Tow Bridle
6	Drive-In Pins/ Wings/ Driver
4	Screw Anchor
3	Marker Buoy
2	Buoy Anchors
1	½" Rope & Reel - 50 ft. (yellow)
1	½" Rope & Reel - 100 ft. (green)
6	½" Rope/Snap Hooks on Both Ends - 25 ft. (blue)
1	Honda ES6500 Generator
1	Honda 2"XP Trash Pump
2	3" Floating Suction Hose - 15 ft.
2	Rigid 2" Discharge Hose - 20 ft.
2	2" Flexible Discharge Hose - 50 ft.
1	3" Pedco Skimmer
2	1,500 Gal. Porta-Tank Liner
1	1,500 Gal. Porta-Tank Frame
1	Porta-Tank Hose Saddle
1	2" Wash Down Nozzle
5	3" x 2" Kamlock Fittings
10	Orange Traffic Cones
2	Sledge Hammer
24	30 mil. Nitrile Gloves

BUFFALO - BOOM TRAILER cont.

QTY	DESCRIPTION
2	Full Body Harness
4	Type 1 Life Vests (2 Large, 2 Xlarge)
5	Steel Toe Thigh High Boots
7	Steel Toe Chest Waders
1	First-Aid Kit
1	30# Fire Extinguisher
2	Windsock
1	Sorbent Roll
1	Fire Blanket
4	Barrier Fence with Stakes- 100' lengths
2	Rolls Hot Zone Tape
2	Rolls Warm Zone Tape

HOWELL STATION PLM INVENTORY

BOOM TRAILER

4	Bundles of Sorbent Pads
5	Bags of 5" Sorbent Boom
5	Bags of 8" Sorbent Boom
20	Bales of Straw
200'	Containment Boom
12	2 x 4 x 12 Lumber
12	2 x 6 x 12 Lumber
2	Pair Waders
1	Windsock
3	Rope 50' Sections
1	Roll Bailing Wire
2	Flashlight w/Batteries
1	Electricians Pliers
10	Garbage Bags
2	Life Jackets
4	Shovels
5	# 16 Penny Nails
1	Tin Snips
1	Claw Hammer
1	Hacksaw
1	Reflective Vest
1	Roll Plastic
2	Pair Rubber Gloves
1	Sledge Hammer
10	Wood Laths
12	Fence Posts
1	Roll Barricade Tape
3	Rolls Chicken Wire
1	Culvert 12" x 10'
1	Rake

NILES STATION INVENTORY

BOOM TRAILER

QTY	DESCRIPTION
2	Bundles of Sorbent Pads
5	5" Sorbent Boom (Bags)
5	8" Sorbent Boom (Bags)
20	Straw (Bales)
200'	Containment Boom
12	2 x 4 x 12 Lumber
12	2 x 6 x 12 Lumber
2	Pair Waders
1	Windsock
2	Rope 50' Sections
1	Roll Bailing Wire
2	Flashlight w/batteries
1	Electricians Pliers
10	Garbage Bags
2	Life Jackets
3	Shovels
5	# 16 Penny Nails
1	Tin Snips
1	Claw Hammer
1	Hacksaw
1	Reflective Vest
1	Roll Plastic
2	Pair Rubber Gloves
1	Sledge Hammer
10	Wood Laths
12	Fence Posts
1	Roll Barricade Tape
3	Rolls Chicken Wire
1	Culvert 12" x 10'
1	Rake

SHELDON STATION INVENTORY

BOOM TRAILER

500'	River Boom
3	Chicken Wire (Roll)
1	Barricade
160'	Sorbent Boom 5" (10' Sections)
3	Snow Fence (Rolls) (50' Each)
2	Shovels
1	Pitch Fork
1	Sledge Hammer
6	Bag of Sorbent Pads (17"X19" 100 Pads/Bag)
2	Wood Board 2" X 6" X10'

SHELDON BOOM TRAILER cont.

QTY	DESCRIPTION
2	Wood Board 2" X 10" X 10'
1	Spare Tire
2	Flashlight
100'	Rope (Roll)
2	Caution Tape
1	Garbage Bags (Box)
12	Rubber Gloves
STANLEY RESPONSE BOAT EQUIPMENT INVENTORY	
6	USGS Approved Life Vests
1	½" Rope- 50' length (yellow)
1	½" Rope- 100' length (green)
1	½" Rope- 25' length (blue)
3	Marker Buoys
2	30# Fire Extinguishers
2	Danforth Anchors
3	Buoy Anchors
WAREHOUSE STORAGE EQUIPMENT INVENTORY	
2	3" Floating Suction Hose
1	1,500 Gal. Porta-Tank Frame
3	Fabricated Disc Anchors
1	Sorbent Roll
10	Drive Pins/ Wings
4	Screw Anchors
1	3" Diverter Manifold
12	½" Anchor Chain 20' Length

ENBRIDGE ENERGY WINTER SPILL EMERGENCY RESPONSE EQUIPMENT

Winter Equipment: The company maintains the following equipment for winter/cold weather spill response staged at each Pipeline Maintenance Facility.

WINTER EQUIPMENT	BAY CITY	MARSHALL	GRIFFITH	FT. ATKINSON	VESPER	TOTAL
Backpack Leaf Blowers	1	1	1	1	1	5
Portable Heaters - All	2	1	2	2	2	9
Power Ice Augers	2	1	1	1	1	6
Chainsaws	2	2	2	2	2	10
Winches	1	1	1	1	1	5
50' Lengths Mini Boom	8	4	2	3	3	20
Tow Bridles	6	6	2	3	6	23
Pike Poles	3	1	3	3	3	13
Pick-of-Life	8	17	19	16	6	66
3500w - 10000w Generator	1	1	1	1	2	6
Hydraulic Submersible Pumps	1	1	1	2	1	6
1 lot Aluminum Camlock Fittings	1	1	1	1	1	5
25' Length 2" Low Temp Hose	2	0	0	0	2	4
LWT Hose Floats for 3" Hose	0	0	0	4	0	4
Hand Ice Augers w/Extention	1	1	0	1 (no ext.)	1	3
Hazardous Location Trouble Light	2	2	6	4	2	16
Ice cleats	0	0	1	0	0	1
Shelter	0	0	0	1	1	2

Due to the seasonal nature of this equipment, it may not be stored in existing response trailers. The Pipeline Supervisor responsible for the facility will ensure that the equipment is maintained, inventoried and accessible in the event of a winter spill incident.

Revised April 2007

ENBRIDGE PIPELINES (CHICAGO) EMERGENCY RESPONSE EQUIPMENT

APRIL 25, 2007 PRIMARY WATER RECOVERY EQUIPMENT	LEWISTON	BAY CITY PLM	NORTH BRANCH	MARYSVILLE	BUFFALO	HOWELL	TOTAL
Boom & Absorbents							
Containment Boom - River (Feet)	200'	500'	200'	200'	300'	200'	**1600'**
Containment Boom - Small (Feet)							
Sorbent Boom (Feet)	400'	200'	400'	400'	240'	100'	**1740'**
Sorbent Pads (Bundles of 100)	200'	2000'	200'	200'	600'	400'	**3600'**
Sorbent Sweep/Rolls (Bales)					2		**2**
Skimmers							
3' Drum Skimmer							
4' Drum Skimmer		1					**1**
8' Drum Skimmer							
Skimmer Power Pak							
Manta Ray		1					**1**
Skim Pak Weir Skimmer							
Pedco Weir Skimmer					1		**1**
Pumps							
2" Air Operated + Hoses							
3" Air Operated + Hoses		2					**2**
2" Trash Pump + Hoses		5			1		**7**
3" Trash Pump + Hoses		2					**2**
2" Hydraulic Pump + Hoses							
3" Hydraulic Pump + Hoses							
4" Hydraulic Pump + Hoses							
2" Electric Pump + Hoses							
Storage							
Vacuum Truck - 1500 - 1800 Gal		1					**1**
Portable Storage Tanks (1800 Gal)		1			2(1500 Gal)		**3**
Tankage Storage		5000 bbls at Bay City					

ENBRIDGE PIPELINES (CHICAGO) EMERGENCY RESPONSE EQUIPMENT (cont.)

APRIL 25, 2007 PRIMARY WATER RECOVERY EQUIPMENT	LEWISTON	BAY CITY PLM	NORTH BRANCH	MARYSVILLE	BUFFALO	HOWELL	TOTAL
Boats & Motors							
18' Lund w/Motor & Equipment		2					**2**
20' Lund Alaskan w/Motor & Equipment							
14' John Boat							
22' Jet Boat w/Twin Inboard							
17' Lifetimer w/Motor & Equipment					2		**2**
16' Alumacraft Flat Bottom Boat							
Response Trailers							
Leak Trailers (Van)		1					**1**
Boom Trailer	1	1	1	1	1	1	**6**
Command Post Trailer		1					**1**

	MARSHALL PLM	NILES	GRIFFITH PLM	DUNDEE	FT. ATKINSON PLM	VESPER	SHELDON	TOTAL
Boats & Motors								
Containment Boom - River (Feet)	1100	200	500	300	1280	400		**3780'**
Containment Boom - Small (Feet)	200				150	268	500	**1118'**
Sorbent Boom (Feet)	200	100	200	320	680	400	160	**2060'**
Sorbent Pads (Bundles of 100)	1000	200	1100	200	4500	1200	600	**8800'**
Sorbent Sweep/Rolls (Bales)	2							**2**
Skimmers								
3' Drum Skimmer	1					1		**2**
4' Drum Skimmer			1		1			**2**
8' Drum Skimmer					1			**1**
Skimmer Power Pak					1			**1**
Manta Ray	1		1		1			**3**
Skim Pak Weir Skimmer	1				1			**2**
Pedco Weir Skimmer								

ENBRIDGE PIPELINES (CHICAGO) EMERGENCY RESPONSE EQUIPMENT (cont.)

	MARSHALL PLM	NILES	GRIFFITH PLM	DUNDEE	FT. ATKINSON PLM	VESPER	SHELDON	TOTAL
Pumps								
2" Air Operated + Hoses	2		2		1	1		**6**
3" Air Operated + Hoses	1		3		3	1		**8**
2" Trash Pump + Hoses	9		3		5	2		**19**
3" Trash Pump + Hoses	5		1		2	1		**9**
2" Hydraulic Pump + Hoses	1				1	1		**3**
3" Hydraulic Pump + Hoses					1			**1**
4" Hydraulic Pump + Hoses			1					**1**
2" Electric Pump + Hoses					1			**1**
Storage								
Vacuum Truck - 1500 - 1800 Gal			1			1		**2**
Portable Storage Tanks (1800 Gal)	1		1		1	1		**4**
Tankage Storage	2000 bbls at Marshall			3.1 million bbls at Griffith		5000 bbls at Adams		
Boats & Motors								
18' Lund w/motor & equipment	1				2	1		**4**
20' Lund Alaskan w/motor & equipment			1					**1**
14' John Boat			1		1			**2**
22' Jet Boat w/twin inboard	1					1		**2**
17' Lifetimerw/motor & equipment								
16' Alumacraft flat bottom boat	1							**1**
Response Trailers								
Leak Trailers (van)	1		1		1			**3**
Boom Trailer	1	1	1	1	1	1	1	**7**
Command Post Trailer					1			**1**

SPECIALTY CONTRACTOR CONTACTS

BAY WEST

Bay West is an established Coast Guard classified **OSRO** (Oil Spill Response Organization) 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 an Emergency Response retainer 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.

A list of Bay West's emergency response equipment can be found at:
http://www.baywest.com/emergency.htm

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

GARNER ENVIRONMENTAL SERVICES INC.

Garner Environmental Services is a full service environmental and emergency response company 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/documentsdown.html

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.

Garner Environmental Services Inc.
1717 W 13th St.
Deer Park, TX 77536
(281) 930-1200
1-800-424-1716 (24 hrs)
www.garner-es.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.

These Canadian areas are included in this cross border agreement:

- Westover Ontario

  Inventory lists attached
- Sarnia Ontario

  Inventory lists attached

WESTOVER EMERGENCY RESPONSE TRAILERS

UNIT 70203

QTY	DESCRIPTION
1	Booster Cable
1	30# Fire Extinguisher- Dry Chemical Extinguisher
1	First-Aid Kit
1	Flags (Red Cloth)
2	Flashing Amber Light
1	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
3	Vehicle Recovery Strap
1	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Control Point Map Book
0	Initial Response Guide Book
Valid	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for Timely Return to Work
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Multi-Screwdriver
1	Adj. Wrench
1	Wire Stripper
1	Needle Nose Pliers
1	Small Sledge Hammer

WESTOVER - UNIT 776

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket in Suitable Case
2	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)

WESTOVER - UNIT 776 cont.

QTY	DESCRIPTION
1	Flashing Amber Light
1	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Lincoln 350-Classic IIID Diesel-Welding Machine
	Cutting Torches
	Oxygen Gauges + Hose - 50 ft.
	Acetyln Gauges + Hose - 50 ft.
4	5" Makita Grinders
2	4.5" Makita Grinders
1	Clear Visor
	Assorted Spare Grinding Disc's and Brushes
	Assorted Steel Wedges
2	Bottle Jacks and Chains
1	Rod Oven

WESTOVER- UNIT 71703

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector and Personal H2S
1	Fire Blanket/Case

WESTOVER - UNIT 71703 cont.

QTY	DESCRIPTION
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
1	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
2	Infra Red Thermo - Meters
4	Traffic Cones
1	Q - Beam
1	FR Clothing
1	FR Raincoat

WESTOVER - UNIT 73003

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light

WESTOVER - UNIT 73003 cont.

QTY	DESCRIPTION
2	Reflective Vest
2	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Socket Set
1	Post Hole Digger
1	Screwdriver Set
	Road Cones
1	200 ft. Tape Measure
1	Bumper Jack
3	Probes

WESTOVER - UNIT 78003

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
1	Flashing Amber Light
2	Reflective Vest
1	Shovel

WESTOVER - UNIT 78003 cont.

QTY	DESCRIPTION
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Harness
1	Lanyard
1	APR (Full-Face)
1	Half Mask
1	100 ft. Tape
1	Digital Camera
4	Traffic Cones
1	Pair of Nomex Coveralls
1	Nomex Fleece Jacket

WESTOVER MOBILE EQUIPMENT EMERGENCY RESPONSE INVENTORY

MISCELLANEOUS

1	25 Ton Trailer, Float Trailer
1	Command Post Trailer
1	Light Plant
1	Foam Trailer
1	Gator 1 (old)
1	16' Tunnel Hull Jet Boat
1	Boat Trailer
1	16' Tunnel Hull Jet Boat
1	Boat Trailer
1	Oil Spill Trailer

WESTOVER - MISCELLANEOUS cont.

QTY	DESCRIPTION
1	Backhoe 4x4
1	Gator 2 (New)
1	Kubota Trailer
1	Emergency Response Trailer
1	SUV 4 x 4
1	SUV 4 x 4
1	Pickup Heavy-Duty 2 x 4, ¾ ton
1	Truck with Crane
1	TC-1663C Crane w/Single Personnel Bucket Attached to Freightliner FL-80 (Unit 731)
1	SUV
1	4 x 4 Pickup
1	¾ Ton 4 x 4 Pickup
1	4 x 4 Pickup Heavy-Duty, ¾ Ton
1	1 Ton Welding Pickup-Ext. Cab 4 x 4
1	Pickup 4 x 4, ½ Ton, Ext. Cab, 6.5 ft Box

WESTOVER - UNIT 100

40	3" x 4' Absorbent Socks
12	3" x 10' Absorbent Socks
48	Bags of Oclansorb
6	Bags of 17" x 19" Blue Pads
6	Bags of 17" x 19" White Pads
3	Bags of Industrial Peat Moss Absorbent
2	Rolls of 36" x 150' (Blue)
4	5" x 10' Absorbent Socks
8	3" x 10' Absorbent Socks
1	45 Gal. Drum
2	Pad Wringers
2	Ramps
2	Equipment Ramps
1	Windsock
6	10' x 3" Tiger Tails
1	10' Large Oil Absorbent Boom
7	1.5 Cubic Ft. Granular Multi-Zorb
6	18" x 3" Absorbent Sock
9	1.5 Cubic Ft. Universal Granular Multi-Zorb 2' Socks
6	8' Granular Absorbent Socks
9	2' Large Absorbent Socks
6	10' x 3" Tiger Tails
4	5 Gal. Pails Oil Clotter
16	1 Gal. Pails Oil Clotter
2	10' Large Oil Absorbent Boom
19	3" x 4' Tiger Tails (loose in bottom)

WESTOVER - UNIT 100 cont.

QTY	DESCRIPTION
8	Bundles of Rags
20	3" x 4' Tigers Tails (in Box)
100	16" x 18" x ⅜" Perforated Pads
50	3" x 18" Absorbent Socks

WESTOVER - UNIT 202

6	River Boom - O.S.C.A.R Mark XII 50 ft. Lengths
2	Boom Tow Bridle
2	Boom Tow Paravane
2	Boom Tow Sling - 3/8 Cable 25 ft. With Hooks
11	Handline Bridle
16	Drive in Pins - 4ft. With Wings
8	Screw Anchor
8	Rope - ½ Inch x 50 ft. Lengths (Yellow)
5	Rope - ½ Inch x 100 ft. Lengths (Green)
3	Rope - ½ Inch x 25 ft. - Snaps on Both Ends (Blue)
2	18 Inch Marker Buoy
3	20 lb. Mushroom Anchor
1	Wash Down Nozzle With 2 Inch Kamlock
1	2 Inch Female x 3 Inch Male Kamlock Adaptor
2	1500 Gal. Port-A-Tank Frame + Liners
2	1500 Gal. Port-A-Tank Liner - Extras
2	Port-A-Tank Hose Saddle
1	2 ft. Pedco Skimmer
1	Pair Pedco Skimmer Adaptors
1	Morris 11/24 Disc Skimmer With Powerpack
1	Honda ES6500 Generator
1	Set Wheel Chocks
1	Electric Winch
4	Floating Suction Hose 3" with 3" Fittings
2	Floating Suction Hose 3" with 2" Fittings
2	Suction Hose 2" with 2" Fittings
1	Adaptor - 2" Male x 3" Male Fittings
1	Adaptor - 3" Male x 3" Male Fittings
1	Adaptor - 3" Female x 3" Female Fittings
1	Adaptor - 3" Male Fitting
1	Adaptor - 2" male x 4" ABS Coupling
1	Bailing Bucket
2	Funnels
5	Life Jackets
1	First-Aid Kit
1	Stretcher
1	Splint Kit
6	Wool Blanket

WESTOVER - UNIT 202 cont.

QTY	DESCRIPTION
3	30 # Fire Extinguisher
1	50 ft. Extension Cord for 110 Power Supply
2	5 Gal. Jerry Cans
1	2 Inch Explosion Proof Electric Honda Pump
8	Wool Socks
1	Wind Socks - Large
10	Pylons - (MTO Approved)
9	Goggles
6	Waist Belts
3	Battery Flares
10	Safety Vests - (MTO Approved)
5	Towels
6	All Purpose Emergency Blankets
5	Winter Gloves
1	82 Inch Discharge Hose
3	3 Inch Discharge Hose
1	3 ft. Step Ladder
2	Shore Boom
30	Small Sorbent Booms
30	Oclandsord - Bags
1	Tool Box
1	Roll of Neoprene
2	Garden Rakes
2	Oil Fork
1	Neoprene Sledge Hammer
1	Axe
1	Chart - Boom Layout
4	Sewer Mats
1	Mega Phone
1	Command Vest
6	Hip Waders
2	Chest Waders
10	Self-Inflating Life Jackets - (Extra Cartridges - 5)
1	Flow Meter
1	Tarp 20' x 30'
1	Extension Ladder 20'
2	Danger Overhead Wire Signs
2	Sets of Mirrors - 2
1	Towing Bar for Pickup
1	Sway Control Bar
1	Set of Wheel Chocks
1	Hand Primer Kit for Electric Pump
2	Stop/Slow Signs
2	Lanyard
3	Full Body Harness

WESTOVER - UNIT 202 cont.

QTY	DESCRIPTION
3	30 # Fire Extinguisher
	P100 and P95 Respiratory Filters
1	Extension Cord
1	Fire Blanket
1	Box of 200 Ear Plugs
	W1-W75 Security Arm Bands
6	Battery Motorola Radio Charger
2	Boxes Nitrile Gloves
80	Reflective Arm/Leg Bands
3	Long Handled Shovels
1	Q-Beam Spot Light
	½ Mask Respirators
	½ Mask/Full Face Cartridges
	Tape - 200'
3	Cans Spray Paint (Orange)
2	Duct Tape (Rolls)
2	Caution Tape (Rolls)
12	Work Gloves (Pairs)
12	Gloves (White)
	Hand Cleaner Towels
	Bee Spray
10	Safety Glasses
1	Mechanics Wire (Roll)
2	Safety Lanterns and Extra Batteries
	Bird Scare Tape
	Hot/Warm and Cool Zone Flagging
1	Incident Command Organization Chart
2	Sets Towing Mirrors
4	Rolls Poly 6MM Plastic
2	Caution Training In Progress Signs
1	Yield to Oncoming Traffic Sign
2	Traffic Control Signs
1	Direction Arrow Sign
1	*No Smoking* Sign
6	S&E Guidelines for Contractors Handbook
1	Local Work Order Book
	Safe Work Permit
	JHA (Job Hazard Analysis)
	Safety Guideline for Contractors Checklist
	Incident Report
	Contractor's Tailgate/Toolbox Meeting Record
	Contractor's Site/Project Specific Orientation Record
	Dry Erase Markers
	Morris Industries Manual
	Trailer Ownership

WESTOVER - UNIT 202 cont.

QTY	DESCRIPTION
	Super Winch Manual
	Gorman-Rupp Pump Manual
	Equipment List Inventory

SARNIA EMERGENCY RESPONSE INVENTORY

14' STARCRAFT BOAT INVENTORY

3	Paddles
2	Life Jackets
1	9.9 Hp Motor
1	Gas Tank
1	Marine Safety Kit
1	Outboard Oil
4	Rope
1	Trailer
1	Ball Hitch
2	Ore Holders
2	Ratchet Straps
1	Standard Tool Kit
5	Motor Repair Tools
Valid	Insurance
Valid	License Sticker
Valid	Ownership

MISCELLANEOUS

1	White Trailer
1	Emergency Response Trailer
1	White Boom Truck
1	White Welding Truck
1	Foam Truck
1	White Pick-Up Truck
1	White Pick-Up Truck
1	White Pick-Up Truck
1	Grey Boat

SARNIA - UNIT 78104

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
1	Flags (Red Cloth)
1	Flashing Amber Light

SARNIA - UNIT 78104 cont.

QTY	DESCRIPTION
3	Reflective Vests
2	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
10	No Trespassing Signs
1	Flare Gun Kit
5	Bags Multi-Purpose Ties
5	Rolls Marking Ribbon
4	Rolls Sealant Tape
4	AA Batteries
1	Container Fast Orange Wipes
2	Measuring Tapes
1	Disposable Camera
3	Probes
1	Sledge Hammer
1	Socket
1	Spark Plug Tool
1	Striker
1	Wire Brush
3	Utility Knives
1	Channel Lock
1	Clevice
1	Staple Gun

SARNIA - UNIT 78104 cont.

QTY	DESCRIPTION
2	Cans Never Cease
1	Roll Paper Towels
1	Ball Hitch
1	Pinto Hitch
11	Right-a-Way Signs
1	Windshield Washer Fluid
2	Bundles Rope
1	Cargo Net
1	Caution Tape (Roll)
4	Pylons
1	Oil Spill Kit

SARNIA - UNIT 095

3	River Boom O.S.C.A.R. Mark X11, 50' Lengths
1	Shore Boom (15' Lengths)
2	Boom Tow Bridle
2	Boom Tow Paravane
2	Boom Tow Sling, ⅜ Cable X 25' with Hooks
4	Drive-in Pin, 4' w/Wings
5	Screw Anchor
8	18" Marker Buoy
2	1/2" Chain X 20' w/Quick Links at Both Ends
1	Rope Reel
10	½" Rope X 50' (Yellow)
5	½" Rope X 25' w/Snap Both Ends (Blue)
3	½" Rope X 25' w/Snap One End (Blue)
4	3" Floating Suction Hose X 15'
2	2" Floating Suction Hose X 15'
2	2" Non-Floating Suction Hose X 15'
2	2" Non-Floating Suction Hose X 25'
3	2" Discharge Hose X 50'
1	3-Way Fluid Manifold
1	Wash Down Nozzle w/2" Kamlock Adaptor
3	3" Female X 2" Male Kamlock Adaptor
3	2" Female X 3" Male Kamlock Adaptor
1	1500 Gal. Port-a-Tank Frame
2	1500 Gal. Port-a-Tank Liner
2	Porta-Tank Hose Saddle
2	5 Gal. Jerry Can
1	2' Pedco Skimmer
1	Pedco Skimmer Adaptors (Pair)
1	Morris 1 1/24 Disc Skimmer
1	Skimmer Head (Serial # 1789)
1	Power Pak (Serial # B8012)

SARNIA - UNIT 095 cont.

QTY	DESCRIPTION
1	Hydraulic Hose
1	Discharge Hose
1	Tool Box
12	Life Jackets (6 Large, 6 Xlarge)
10	Inflatable Life Jackets
1	First-Aid Kit
1	Stretcher
1	Wool Blanket
1	30# Fire Extinguisher
6	Pairs Rubber Gloves
1	Bundle Cotton Gloves
1	Eyewash Station
1	Ear Plugs (Box)
26	Respirators (Assorted Sizes)
17	Cartridges (Organic Vapor in Pairs)
4	Boxes Particulate Filter
2	Boxes Filter Retainer
6	Chemical Splash Goggles
4	Safety Glasses
6	Pair Hip Waders
11	Orange Traffic Vests
10	Emergency Light Stickers
6	Safety Belt (for Tag Line Attachment)
11	Traffic Cones
1	Traffic Control Kit
1	50' Extension Cord
4	Ratchet Style Cargo Strap
2	Equipment Ramp
1	Honda ES6500c Generator, Serial #1191164
2	Sorbent Roll
4	Sorbent Boom (8' X 4')
1	Scoop Shovels with Holes
1	Sledge Hammer
1	Axe
2	Garden Rake
1	Round Nose Shovel
2	Emergency Blankets
1	Post Hammer
1	Bow Saw
1	Hydraulic Oil (Gal.)
1	Bull Horn
1	Air Horn
1	Book 7 Emergency Response Manual
1	Morris Skimmer Operation and Procedures Manual
1	Emergency Response Organization Chart

SARNIA - UNIT 095 cont.

QTY	DESCRIPTION
1	Windsock (Trailer Mounted)
1	Windsock (Portable)
2	*Men At Work* signs (Vinyl Rollup)
2	*Men At Work* signs (Metal Roadside)
2	Caution; Training Exercise Signs
1	3-Sided Danger Keep Away Sign
3	Duct Tape (Rolls)
3	Caution Tape (Rolls)
3	Marker Ribbon (Rolls)
1	Pitch Fork
3	Pitch Fork with Wire Mesh
1	FP101 Global Flow Probe (Water Speed Meter)
50	Orange Numbered Reflective Armbands #"s 1-50

SARNIA - UNIT 180

3	River Boom O.S.C.A.R. Mark X11, 50' Lengths
3	Screw Anchor
1	Rope Reel
5	½" Rope X 100' (Green)
2	½" Rope X 25' w/Snap Both Ends (Blue)
2	½" Rope X 25' w/Snap One End (Blue)
3	2' Non-Floating Suction Hose X 12'
1	1500 Gal. Port-a-Tank Frame
1	1500 Gal. Port-a-Tank Liner
1	Elastek Drum Skimmer
1	Elastek Hydraulic Powerpak
1	Elastek Hydraulic Lines (Kit)
1	Elastek Hydraulic Pump
6	Life Jackets (D.O.T. Approved Adult PFD's)
12	Traffic Cones
1	Traffic Control Kit
1	50' Extension Cord
2	Emergency Blankets
1	Post Hammer
1	Sledge Hammer
1	Scoop Shovel with Holes
1	Pitch Fork
1	Pitch Fork with Wire Mesh
1	Garden Rake
1	Universal Wide Fender Mirrors (Set)
25	Orange Reflective Numbered Armbands (51 to 75)

SARNIA - UNIT 707

QTY	DESCRIPTION
1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/ Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
2	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
6	Warning Reflector
1	Back-up Alarm
2	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for Timely Return to Work
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
2	Raid
1	Container Hand Cleaning Wipes
3	Marking Ribbon (Rolls)
1	Drivers Log
3	Rain Coats
1	Bottle Windshield Washer Fluid
3	Harness Hookups
1	Snow Brush
1	Set Bama Feet Warmers
1	Flare Gun Kit
1	Oil Spill Kit

SARNIA - UNIT 707 cont.

QTY	DESCRIPTION
2	Paper Towels (Rolls)
2	Duct Tape (Rolls)
100	Garbage Bags
1	Package Whip-it Wipes
1	Container Hand Cleaning Towels
3	Wire (Rolls)
1	Can Grease
1	Can Oil
2	Saran Wrap (Rolls)
1	Wheel Chock
4	Outrigger Mats
1	Towing Strap 6" by 30
3	Measuring Tapes
20	Clevices
1	Cheater Bar (Strap Tightener)
2	Cans Low Friction Lubricant
1	Can Kleen Start
1	Can Wire Rope Lubricant
1	Pry Bar
4	Allan Wrench Sets
33	Lifting Slings
5	Ratchet Straps
9	Lifting Eyes
1	Plate Lifter
1	Grease Gun
1	Replacement Strap
3	Ropes with Hooks
3	Lifting Chains
2	Chains
1	Oil Spill Control Manual

SARNIA - UNIT 709

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/ Case
2	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
4	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit

SARNIA - UNIT 709 cont.

QTY	DESCRIPTION
1	Tire Jack
1	Vehicle Recovery Strap
5	Warning Reflector
1	Back-up Alarm
3	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Container Fast Orange Wipes
1	Oil Spill Control Manual
2	5" Grinding Wheels (Boxes)
2	Half-Mask Respirators
1	100 ft Measuring Tape
1	Windsock
5	Paper Towels (Rolls)
2	Cans Great Stuff (Foam Sealing)
1	CMI-100 Clamp-On Meter
2	Wire Brush
1	Can Armour-All
1	PLM Field Guide
3	Extension Cords
1	Set Heavy Duty Cable Connectors
1	300A Welding Ground Clamp
1	Temporary Conditions Field Edition
4	Rain Coats
5	Wire Wheel Brush 5"
2	Welding Strikers
1	Can Lysol Disinfectant Spray
2	Cans Flint for Striker
1	U-Bolt
2	H_2S Detector

SARNIA - UNIT 709 cont.

QTY	DESCRIPTION
18	Marking Ribbon (Rolls)
3	Electrical Tape (Rolls)
1	Face Shield
2	Welding Helmets
1	1 1/4" - 3/8" Wrench Set
2	Jacks
1	Level
2	Extra Floor Mats
2	Sledge Hammers
1	Square
1	Hack Saw
2	Magnetic Ground Clamps
2	Grinders
2	Power Brushes
1	Chipping Hammer
1	File
2	Pry Bars
1	Shortstub Head Assembly
4	Tape Measures
51	Loose Grinding Discs
2	Utility Knives
1	Welding Tarp
2	Pressure Regulators
1	Microwave
2	Trailer Hitches
2	Chains
2	Ratchet Straps
1	Nomex Pants (Pair)
1	Nomex Coat
1	Nomex Coveralls (Pair)
1	Indura-Ultrasoft Coveralls (Pair)
1	Can WD-40
1	Can Off Bug Spray
1	Caution Tape (Roll)
8	Bottles Oil
2	Pipe Measurers
1	Duct Tape (Roll)
1	Bottle Invisi-Lube
1	Can Never-Cease
11	Boxes Welding Rods (Electrodes)
1	Cocking Gun
1	Knee Pads (Pair)
6	Welding Gloves (Pairs)
11	Pieces Chalk
1	String

SARNIA - UNIT 709 cont.

QTY	DESCRIPTION
1	Chalk Line
1	Centering head tool
1	Box Welders Eye Ease
1	Burr Grinder
1	Caliper
1	Compass
2	Plumbob's
2	Clasps
1	Wire (Roll)
2	Tin Snips
1	Bottle Windex
1	Bottle Raid
1	Bottle Fantastik
1	Can Grease
1	Funnel
1	Package Whip-It Wipes
1	Arc Welder
1	Bench Clamp
3	Oxyacetylene Hoses
1	Oxygen Tank
1	Acetylene Tank
2	Probes
2	Snow Brushes/ Scrapers
5	Lengths Rope
1	Electrode Holder
3	Replacement Face Shields
1	Flare Gun Kit
1	Oil Spill Kit
1	Tarp
1	Light Stand
2	Heavy Duty Lights
4	Plug Adaptors
1	Welders Tool Support
1	Sling
1	Ground Cable-100ft
1	Stinger Cable-100ft
1	Current Adjustment Cable
2	500 Watt Halogen
6	Packages of Ear Plugs

SARNIA - UNIT 727

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector

SARNIA - UNIT 727 cont.

QTY	DESCRIPTION
1	Fire Blanket/ Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
1	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Oil Spill Control Manual
1	Marking Ribbon (Roll)
1	Recall Bandage
1	Company Credit Card
1	Drivers Daily Log
1	Warranty Book

SARNIA - UNIT 75005

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/ Case
1	30# Fire Extinguisher (Dry Chemical)

SARNIA - UNIT 75005 cont.

QTY	DESCRIPTION
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
1	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
1	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Sledge Hammer
4	Pylons
3	Probes
1	Bundle of Stakes
1	Hack Saw
1	Fencing Pliers (Pair)
4	Locks
1	Spare Hack Saw Blade
2	Pry Bars
3	Clevises (4¾ T, 1½ T, 1½ T)
1	Utility Knife
14	Marking Ribbon (Rolls)
1	Staple Gun
1	Box Staples
3	Wood screws (Boxes)
3	Measuring Tape

SARNIA - UNIT 75005 cont.

QTY	DESCRIPTION
1	Can Never-Cease
1	Striker
2	Sealant Tape (Rolls)
1	Pipe Sealant with Teflon
1	Bottle Starting Fluid
3	Duct Tape (Rolls)
1	Wire Brush
1	Pinto Hitch
18	Enbridge Signs
15	Locate Signs
1	Channel Lock
1	Oil Spill Kit
2	Rain Coat
1	Ball Hitch 2 5/16"
1	Can Grease
2	Cans Spray Paint
2	Bottles Penetrating Oil
40	Reflector Discs
1	Rock Shield
1	Cargo Net
1	Roll Caution Tape
1	Bottle Citrus Hand Cleaner
1	Bottle Oil
1	Bundle Rope
1	Windshield Washer Fluid
1	Container Fast Orange Wipes
1	Flare Gun Kit
1	Adaptor
4	Reflector Arm Bands
1	Bottle Hand Cleaner
1	Disposable Camera

SARNIA - UNIT 77806

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/ Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
2	Reflective Vest
1	Shovel
1	Spare Tire

SARNIA - UNIT 77806 cont.

QTY	DESCRIPTION
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
Valid	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
1	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Injury, Incident & Accident Reporting Responsibilities
1	Case Safety Glasses
2	Rain Coats
1	Q Beam Flashlight
3	Half-Face Piece Masks
2	Measuring Tapes
1	Company Credit Card
1	Auto Log Book
1	PLM Field Book
1	Disposable Camera

Manhattan Facility - PROPOSED BOOM TRAILER (2/4/2010)	
QTY	**DESCRIPTION**
5 Bales	Oil Sorbent Pads
200'	Absorbent Boom
500'	Floating Boom
1	3" Diaphragm Pump
1	Skim Pak Weir Skimmer
50'	Discharge Hose
50'	Suction Hose
10 Pairs	Hip Boots
10 Sets	Neoprene Gloves
10	FR Rain Gear- Jackets & Bibs
100'	River Boom
10	High Visibility Vests
1 Roll	Caution Tape
1	Portable Generator
1	Air Horn
4	Shovels
1	Sledge Hammer
1	Axe
12	Steel Fence Posts
1 Roll	Plastic Fencing
4	Miller Life Lines
4	Miller Harnesses
10	Steel Toe Chest Waders
10	Life Vests
	KamLock Fittings
1	MegaPhone
1	Fence Post Driver
1	8' X 20' Trailer; Cargo-Mate Tandem Axle; Model# BL820TA2 (Overall Length 23'10"); Width 8' 6", Inside Height 6' 7"; Double Rear Doors

Manhattan Facility - PROPOSED LEAK- EMERGENCY RESPONSE TRAILER (2/4/2010)	
QTY	**DESCRIPTION**
4	30# Fire Extinguishers
4	Body Harnesses
1	Fire Blanket
2	Wind Socks
10 Pairs	Hip Boots
10 Sets	Neoprene Gloves
10	FR Coveralls
10	FR Rain Gear- Jackets & Bibs
2	Scott Air Paks
1	First Aid Kit
5 Bales	Oil Sorbent Pads
200'	Absorbent Pads
10	High Visibility Vests
1 Roll	Caution Tape
1	Portable Generator
1	Air Horn
4	Shovels
1	Sledge hammer

	Manhattan Facility ER Trailer cont.
QTY	**DESCRIPTION**
1	Axe
12	Steel Fence Posts
1 Roll	Plastic Fencing
1	3" Diaphragm Pump
1	3" Trash Pump
50'	Suction Hose
	KamLock Fittings
50'	Discharge Hose
2	Handheld Spotlight
4	Lights with Stand
4	Road Barricades
1	Stretcher
2	Wool Blankets
5	Face Shields
5	Aprons
5	Sleeve Protectors
10	Traffic Safety Cones
1	Fence post Driver
1	8' X 20' Trailer- Cargo-Mate Tandem Axle; Model #BL820TA2; Overall Length 23'10"; Width 8' 6"; Inside Height 6' 7"; Double Rear Doors

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 Chicago 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 Chicago, Illinois Regional office.

T.W. Fridel
General Manager, Chicago Region
1500 W. Main St.
Griffith, IN 46319
Business: 219-922-3133 #201
Business FAX: 219-922-3128
24 hr. contact: 800-858-5253 via Edmonton Control Center

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 alsoparticipate in industry lead 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:

Superior Region Response Zone	Chicago Region Response Zone	Cushing Region Response Zone	Enbridge Pipelines North Dakota Response Zone
110	112	52	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.

Bill Beck

Southern Lights - 20" Pipeline - Line 13							
Valve #	Valve Size	As-Built Station	Section	Northern	Easting	MP	As Built Sheet
S/N 064400056	20	102+36	NORTH	552213.890	1451288.280	1.94	001
S/N 074200009	20	284+88	NORTH	536058.67	1459400.11	5.40	002
S/N 064400060	20	1363+80	NORTH	438066.26	1502285.21	25.83	011
S/N 064400058	20	1743+00	NORTH	402619.92	1513577.08	33.01	014
S/N 064300036	20	1829+79	NORTH	394889.03	1516660.73	34.66	015
S/N 074200007	20	2172+95	NORTH	363987.72	1529337.79	41.15	018
S/N 064400057	20	2814+73	NORTH	306917.21	1558234.25	53.31	023
S/N 064300039	20	2926+85	NORTH	297742.57	1564286.7	55.43	024
S/N 064400055	20	4561+56	CENTRAL	654308.03	1646600.21	86.39	038
S/N 074600002	20	4656+67	CENTRAL	646190.8	1651157.97	88.19	039
S/N 064400059	20	4771+81	CENTRAL	636949.68	1657285.9	90.38	040
S/N 064300041	20	5310+20	CENTRAL	587402.62	1677828.85	100.57	044
S/N 074200006	20	5379+04	CENTRAL	582618.77	1682538.4	101.88	045
S/N 064300040	20	5952+84	CENTRAL	538654.58	1718638.66	112.74	049
S/N 064300038	20	6050+87	CENTRAL	530534.170	1723975.670	114.60	050
S/N 073900042	20	6596+15	CENTRAL	486497.33	1756031.31	124.93	054
S/N 073900011	20	6790+82	CENTRAL	469887.34	1765768.22	128.61	056
S/N 073900000	20	7205+46	CENTRAL	438889.83	1792970.23	136.47	059
S/N 073900041	20	7378+38	CENTRAL	426891.03	1805325.21	139.74	061
S/N 074200008	20	7651+10	CENTRAL	403815.38	1818877.12	144.91	063
S/N 064300037	20	7791+73	CENTRAL	394932.06	1829668.74	147.57	064
S/N 073900012	20	9917+69	CENTRAL	230983.590	1962731.450	187.84	081
S/N 074200048	20	10025+22	CENTRAL	223269.500	1970214.040	189.87	082
S/N 074200045	20	10144+99	CENTRAL	214559.718	1978424.792	192.14	083
S/N 073900007	20	10453+67	CENTRAL	187227.080	1989009.800	197.99	085
S/N 073900009	20	10700+97	CENTRAL	166563.640	1996257.670	202.67	087
S/N 074200010	20	10807+05	CENTRAL	159898.088	2002939.267	204.68	088
S/N 072100020	20	11061+28	SOUTH	2013584.618	805957.663	209.49	091
S/N 072100020	20	11094+15	SOUTH	2014076.791	802730.011	210.12	091
S/N 074200047	20	11387+86	SOUTH	2021920.517	774775.728	215.68	093
S/N 090500012	20	12094+79	SOUTH	2051313.51	710828.45	229.07	099
S/N 090300015	20	12096+94	SOUTH	2051412.861	710675.6692	229.11	099

S/N 74200011	20	13379+73	SOUTH	2114108.016	601220.789	253.40	109
S/N 073900043	20	13581+29	SOUTH	2126747.846	586195.5391	257.22	111
S/N 73900004	20	14276+91	SOUTH	2170084.114	534072.073	270.40	116
S/N	20	15213+00	SOUTH	2214459.843	453062.59	288.13	124
S/N 73900039	20	16577+35	SOUTH	2269940.089	333875.138	313.96	135
S/N 074600041	20	16633+76	SOUTH	2273892.668	329924.825	315.03	135
S/N 085000025	20	17056+16	SOUTH	2289956.234	292899.8312	323.03	139
S/N 085000025	20	17056+16	STAGE 2	858390.834	2233497.038	323.03	140
S/N 81000024	20	17771+36	STAGE 2	859712.545	2164394.164	336.58	145
S/N 81100019	20	17870+07	STAGE 2	859190.804	2154619.247	338.45	146
S/N 081000023	20	19666+07	STAGE 2	859426.442	1985697.362	372.46	160
S/N 081000019	20	19854+98	STAGE 2	858178.29	1967192.53	376.04	162
S/N 81000021	20	22138+01	STAGE 2	881343.626	1755076.757	419.28	180
S/N 81100016	20	22304+54	STAGE 2	875667.409	1742038.534	422.43	181
S/N 81000020	20	22655+95	STAGE 2	871288.08	1708795.01	429.09	184
S/N 81100015	20	22853+89	STAGE 2	866219.185	1693866.573	432.84	186

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
Superior to Adams (0 - 1,201,097) cont.								
14	24-inch	522,343	532,230			1.87	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
14	24-inch	650,822	655,648			0.91	124	U.S. DW / GW
14	24-inch	659,517	662,537			0.57	125	U.S. DW / GW
14	24-inch	665,137	670,320			0.98	126	U.S. DW / GW
14	24-inch	753,218	759,150			1.12	143	U.S. DW / GW
14	24-inch	913,007	916,707			0.70	173	Enbridge DW / GW
14	24-inch	921,430	923,130			0.32	175	Enbridge DW / GW
14	24-inch	1,035,658	1,037,150			0.28	196	Enbridge DW / GW
14	24-inch	1,037,708	1,038,258			0.10	197	Enbridge DW / GW
14	24-inch	1,047,176	1,056,468			1.76	199	U.S. DW / GW
14	24-inch	1,062,245	1,065,866			0.69	202	Enbridge CNW / Wisconsin River
14	24-inch	1,067,016	1,068,716			0.32	202	Enbridge CNW / Wisconsin River
14	24-inch	1,075,718	1,079,418			0.70	204	Enbridge CNW / Wisconsin River
14	24-inch	1,118,350	1,153,210			6.60	215	U.S. ESA
14	24-inch	1,130,397	1,133,476			0.58	214	U.S. ESA
14	24-inch	1,141,476	1,144,643			0.60	216	U.S. ESA
14	24-inch	1,148,903	1,153,210			0.82	218	U.S. ESA
14	24-inch	1,176,345	1,177,863			0.29	223	U.S. ESA
14	24-inch	1,187,623	1,189,373			0.33	225	U.S. ESA
Adams to Mokena (1,201,097 - 2,434,861)								
14	24-inch	1,337,632	1,341,092			0.66	254	U.S. DW / GW
14	24-inch	1,421,981	1,424,731			0.52	270	U.S. DW / GW

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
Adams to Mokena (1,201,097 - 2,434,861) cont.								
14	24-inch	1,487,255	1,491,155			0.74	282	Enbridge DW / GW
14	24-inch	1,487,255	1,491,155			0.74	282	Enbridge DW / GW
14	24-inch	1,487,255	1,491,155			0.74	282	Enbridge DW / GW
14	24-inch	1,487,255	1,491,155			0.74	282	Enbridge DW / GW
14	24-inch	1,619,236	1,621,636			0.45	307	U.S. DW / GW
14	24-inch	1,643,331	1,644,900			0.30	311	Enbridge CNW / Rock River
14	24-inch	1,649,828	1,652,970			0.60	313	Enbridge CNW / Rock River
14	24-inch	1,654,170	1,662,628			1.60	314	Enbridge CNW / Rock River
14	24-inch	1,672,502	1,678,302			1.10	317	Enbridge CNW / Rock River
14	24-inch	1,766,306	1,769,352			0.58	335	U.S. DW / GW
14	24-inch	1,769,352	1,770,372			0.19	335	Enbridge DW / GW
14	24-inch	1,799,471	1,802,830			0.64	341	Enbridge DW / GW
14	24-inch	1,827,808	1,831,108			0.63	346	Enbridge DW / GW
14	24-inch	1,827,808	1,831,108			0.63	346	Enbridge DW / GW
14	24-inch	1,842,097	1,845,047			0.56	349	Enbridge DW / GW
14	24-inch	1,894,832	1,896,582			0.33	359	Enbridge DW / GW
14	24-inch	1,903,531	1,904,531			0.19	361	Enbridge DW / GW
14	24-inch	1,948,526	1,950,376			0.35	369	Enbridge DW / GW
14	24-inch	1,954,311	1,961,456			1.35	371	U.S. ESA
14	24-inch	2,008,740	2,012,485			0.71	381	Enbridge DW / GW
14	24-inch	2,100,095	2,103,685			0.68	398	Enbridge DW / GW
14	24-inch	2,126,168	2,128,318			0.41	403	Enbridge DW / GW
14	24-inch	2,126,168	2,128,318			0.41	403	Enbridge DW / GW
14	24-inch	2,126,168	2,128,318			0.41	403	U.S. DW / GW

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
Adams to Mokena (1,201,097 - 2,434,861) cont.								
14	24-inch	2,136,667	2,141,540			0.92	405	Enbridge DW / GW
14	24-inch	2,136,667	2,141,540			0.92	405	Enbridge DW / GW
14	24-inch	2,136,667	2,141,540			0.92	405	U.S. DW / GW
14	24-inch	2,152,944	2,155,614			0.51	408	Enbridge DW / GW
14	24-inch	2,152,944	2,155,614			0.51	408	U.S. DW / GW
14	24-inch	2,152,944	2,155,614			0.51	408	Enbridge DW / GW
14	24-inch	2,175,124	2,176,324			0.23	412	Enbridge DW / GW
14	24-inch	2,177,546	2,181,446			0.74	413	Enbridge DW / GW
14	24-inch	2,183,320	2,184,320			0.19	414	Enbridge DW / GW
14	24-inch	2,185,970	2,190,725			0.90	414	Enbridge DW / GW
14	24-inch	2,197,084	2,200,567			0.66	416	Enbridge DW / GW
14	24-inch	2,197,084	2,200,567			0.66	416	Enbridge DW / GW
14	24-inch	2,197,084	2,200,567			0.66	416	Enbridge DW / GW
14	24-inch	2,208,935	2,212,937			0.76	419	Enbridge DW / GW
14	24-inch	2,208,935	2,212,937			0.76	419	Enbridge DW / GW
14	24-inch	2,216,928	2,219,628			0.51	420	Enbridge DW / GW
14	24-inch	2,216,928	2,219,628			0.51	420	Enbridge DW / GW
14	24-inch	2,253,601	2,255,601			0.38	427	Enbridge DW / GW
14	24-inch	2,262,034	2,265,354			0.63	429	Enbridge DW / GW
14	24-inch	2,275,273	2,282,773			1.42	432	Enbridge DW / GW
14	24-inch	2,284,073	2,292,199			1.54	433	Enbridge DW / GW
14	24-inch	2,298,976	2,303,476			0.85	436	Enbridge DW / GW
14	24-inch	2,309,280	2,312,426			0.60	438	Enbridge DW / GW
14	24-inch	2,310,630	2,318,546			1.50	438	Enbridge DW / GW

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
Adams to Mokena (1,201,097 - 2,434,861) cont.								
14	24-inch	2,310,630	2,318,546			1.50	438	U.S. DW / GW
14	24-inch	2,318,335	2,321,774			0.65	439	Enbridge DW / GW
14	24-inch	2,320,381	2,322,424			0.39	440	Enbridge DW / GW
14	24-inch	2,320,381	2,322,424			0.39	440	U.S. DW / GW
14	24-inch	2,321,274	2,324,492			0.61	440	Enbridge DW / GW
14	24-inch	2,322,724	2,323,624			0.17	440	Enbridge DW / GW
14	24-inch	2,328,891	2,346,089			3.26	443	U.S. DW / GW
14	24-inch	2,334,476	2,346,089			2.20	443	Enbridge DW / GW
14	24-inch	2,347,826	2,352,004			0.79	445	U.S. CNW / Des Plaines River
14	24-inch	2,347,826	2,352,004			0.79	445	Enbridge DW / GW
14	24-inch	2,347,826	2,352,004			0.79	445	Enbridge DW / GW
14	24-inch	2,347,826	2,352,004			0.79	445	Enbridge DW / GW
14	24-inch	2,347,826	2,352,004			0.79	445	Enbridge DW / GW
14	24-inch	2,347,826	2,352,004			0.79	445	Enbridge DW / GW
14	24-inch	2,347,826	2,352,004			0.79	445	Enbridge DW / GW
14	24-inch	2,348,076	2,352,004			0.74	445	Enbridge DW / GW
14	24-inch	2,349,926	2,353,472			0.67	445	Enbridge DW / GW
14	24-inch	2,355,972	2,358,072			0.40	446	Enbridge DW / GW
14	24-inch	2,358,072	2,362,792			0.89	447	Enbridge DW / GW
14	24-inch	2,360,592	2,362,692			0.40	447	Enbridge DW / GW
14	24-inch	2,366,942	2,371,153			0.80	449	U.S. DW / GW
14	24-inch	2,366,942	2,371,153			0.80	449	Enbridge DW / GW
14	24-inch	2,366,942	2,371,153			0.80	449	U.S. CNW / Des Plaines River
14	24-inch	2,366,942	2,371,153			0.80	449	Enbridge DW / GW

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
Adams to Mokena (1,201,097 - 2,434,861) cont.								
14	24-inch	2,366,942	2,371,153			0.80	449	Enbridge DW / GW
14	24-inch	2,366,942	2,371,153			0.80	449	Enbridge DW / GW
14	24-inch	2,366,942	2,371,153			0.80	449	Enbridge DW / GW
14	24-inch	2,366,942	2,371,153			0.80	449	Enbridge DW / GW
14	24-inch	2,366,942	2,371,153			0.80	449	Enbridge DW / GW
14	24-inch	2,366,942	2,371,153			0.80	449	Enbridge DW / GW
14	24-inch	2,371,692	2,375,962			0.81	450	Enbridge DW / GW
14	24-inch	2,374,253	2,376,962			0.51	450	Enbridge DW / GW
14	24-inch	2,374,253	2,376,962			0.51	450	U.S. DW / GW
14	24-inch	2,374,253	2,376,962			0.51	450	Enbridge DW / GW
14	24-inch	2,374,253	2,376,962			0.51	450	U.S. CNW / Des Plaines River
14	24-inch	2,374,253	2,376,962			0.51	450	Enbridge DW / GW
14	24-inch	2,374,253	2,376,962			0.51	450	Enbridge DW / GW
14	24-inch	2,374,253	2,376,962			0.51	450	Enbridge DW / GW
14	24-inch	2,374,253	2,376,962			0.51	450	Enbridge DW / GW
14	24-inch	2,374,253	2,376,962			0.51	450	Enbridge DW / GW
14	24-inch	2,374,253	2,376,962			0.51	450	Enbridge DW / GW
14	24-inch	2,374,253	2,376,962			0.51	450	Enbridge DW / GW
14	24-inch	2,381,348	2,383,548			0.42	451	Enbridge DW / GW
14	24-inch	2,391,500	2,398,828			1.39	454	Enbridge DW / GW
14	24-inch	2,394,600	2,398,828			0.80	454	Enbridge DW / GW
14	24-inch	2,401,878	2,405,228			0.63	455	Enbridge DW / GW
14	24-inch	2,412,200	2,415,660			0.66	457	Enbridge DW / GW
14	24-inch	2,415,310	2,416,910			0.30	458	U.S. DW / GW

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
Adams to Mokena (1,201,097 - 2,434,861) cont.								
14	24-inch	2,415,310	2,416,910			0.30	458	Enbridge DW / GW
14	24-inch	2,415,310	2,416,910			0.30	458	Enbridge DW / GW
14	24-inch	2,415,310	2,416,910			0.30	458	Enbridge DW / GW
14	24-inch	2,415,310	2,416,910			0.30	458	Enbridge DW / GW
14	24-inch	2,415,310	2,416,910			0.30	458	Enbridge DW / GW
14	24-inch	2,425,305	2,429,348			0.77	460	U.S. DW / GW
14	24-inch	2,425,305	2,429,348			0.77	460	Enbridge DW / GW
14	24-inch	2,425,305	2,429,348			0.77	460	Enbridge DW / GW
14	24-inch	2,425,305	2,429,348			0.77	460	Enbridge DW / GW
14	24-inch	2,425,305	2,429,348			0.77	460	Enbridge DW / GW
14	24-inch	2,427,731	2,430,348			0.50	460	Enbridge DW / GW

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Stockbridge to Freedom Junction (0 - 186,089)								
17	16-inch	57,788	67,045			1.75	12	U.S. ESA
17	16-inch	152,785	166,278			2.56	30	U.S. ESA
Freedom Junction to Toledo (0 - 279,047)								
17	16-inch	103,754	105,804			0.39	20	U.S. ESA
17	16-inch	103,754	105,804			0.39	20	U.S. ESA
17	16-inch	112,358	131,737			3.69	23	U.S. ESA
17	16-inch	114,848	131,737			3.22	23	U.S. ESA
17	16-inch	126,738	130,287			0.70	24	Enbridge DW / GW
17	16-inch	132,537	143,722			2.12	26	U.S. ESA
17	16-inch	132,537	143,722			2.12	26	U.S. ESA
17	16-inch	140,669	144,816			0.79	27	U.S. DW / GW
17	16-inch	146,216	153,717			1.42	28	U.S. ESA
17	16-inch	146,216	153,717			1.42	28	U.S. ESA
17	16-inch	155,389	169,598			2.69	31	U.S. ESA
17	16-inch	246,514	247,885			0.26	47	U.S. CNW / Maumee River
17	16-inch	246,514	247,885			0.26	47	U.S. ESA
17	16-inch	248,318	256,607			1.57	48	U.S. CNW / Maumee River
17	16-inch	248,318	256,607			1.57	48	U.S. ESA
17	16-inch	260,216	268,107			1.49	50	U.S. ESA
17	16-inch	260,216	268,107			1.49	50	U.S. OPA / Toledo
17	16-inch	260,216	268,107			1.49	50	U.S. CNW / Maumee River
17	16-inch	268,707	270,306			0.30	51	U.S. ESA
17	16-inch	268,707	270,306			0.30	51	U.S. CNW / Maumee River
17	16-inch	273,894	279,047			0.98	52	U.S. CNW / Maumee River

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
Superior to Delavan (0-1,703,457)								
61	42-inch	528,913	538,722			1.86	101	U.S. ESA
61	42-inch	533,490	536,186			0.51	101	U.S. ESA
61	42-inch	533,490	536,186			0.51	101	U.S. ESA
61	42-inch	657,621	662,686			0.96	125	U.S. DW / GW
61	42-inch	666,481	669,513			0.57	127	U.S. DW / GW
61	42-inch	672,010	677,340			1.01	128	U.S. DW / GW
61	42-inch	759,970	765,991			1.14	145	U.S. DW / GW
61	42-inch	918,910	926,013			1.35	175	Enbridge DW / GW
61	42-inch	927,500	930,330			0.54	176	Enbridge DW / GW
61	42-inch	1,042,678	1,044,110			0.27	198	Enbridge DW / GW
61	42-inch	1,054,550	1,063,880			1.77	201	U.S. DW / GW
61	42-inch	1,069,610	1,072,840			0.61	203	Enbridge CNW / Wisconsin River
61	42-inch	1,074,620	1,076,464			0.35	204	Enbridge CNW / Wisconsin River
61	42-inch	1,083,270	1,087,104			0.73	206	Enbridge CNW / Wisconsin River
61	42-inch	1,125,690	1,160,642			6.62	217	U.S. ESA
61	42-inch	1,138,083	1,140,808			0.52	216	U.S. ESA
61	42-inch	1,149,024	1,152,151			0.59	218	U.S. ESA
61	42-inch	1,156,313	1,160,642			0.82	219	U.S. ESA
61	42-inch	1,183,370	1,184,850			0.28	224	U.S. ESA
61	42-inch	1,194,580	1,196,380			0.34	226	U.S. ESA
62	42-inch	1,343,820	1,348,550			0.90	255	U.S. DW / GW
61	42-inch	1,429,580	1,432,385			0.53	271	U.S. DW / GW
61	42-inch	1,494,890	1,498,835			0.75	283	Enbridge DW / GW
61	42-inch	1,494,890	1,498,835			0.75	283	Enbridge DW / GW
61	42-inch	1,494,890	1,498,835			0.75	283	Enbridge DW / GW

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
Superior to Delavan (0-1,703,457) cont.								
61	42-inch	1,494,890	1,498,835			0.75	283	Enbridge DW / GW
61	42-inch	1,626,902	1,629,304			0.46	308	U.S. DW / GW
61	42-inch	1,650,382	1,652,790			0.46	313	Enbridge CNW / Rock River
61	42-inch	1,658,370	1,660,900			0.48	314	Enbridge CNW / Rock River
61	42-inch	1,661,950	1,670,330			1.59	316	Enbridge CNW / Rock River
61	42-inch	1,680,190	1,685,570			1.02	319	Enbridge CNW / Allen Creek
Delavan To Flanagan (1,703,457-2,438,742)								
61	42-inch	1,780,010	1,782,310			0.44	337	Enbridge DW / GW
61	42-inch	1,913,510	1,918,040			0.86	363	Enbridge DW /GW
61	42-inch	1,913,510	1,917,240			0.71	363	Enbridge DW / GW
61	42-inch	1,913,510	1,917,240			0.71	363	Enbridge DW / GW
61	42-inch	1,934,130	1,937,460			0.63	367	Enbridge DW / GW
61	42-inch	1,934,130	1,937,460			0.63	367	Enbridge DW / GW
61	42-inch	1,934,130	1,937,460			0.63	367	Enbridge DW / GW
61	42-inch	1,962,210	1,965,110			0.55	372	Enbridge DW / GW
61	42-inch	2,032,900	2,036,180			0.62	385	Enbridge DW / GW
61	42-inch	2,158,470	2,163,550			0.96	409	Enbridge DW / GW
61	42-inch	2,205,890	2,208,570			0.51	418	Enbridge DW / GW
61	42-inch	2,205,890	2,208,570			0.51	418	Enbridge DW / GW
61	42-inch	2,205,890	2,208,570			0.51	418	Enbridge DW / GW
61	42-inch	2,220,700	2,227,910			1.37	421	Enbridge DW / GW
61	42-inch	2,220,700	2,227,910			1.37	421	Enbridge DW / GW
61	42-inch	2,220,700	2,227,910			1.37	421	Enbridge DW / GW
61	42-inch	2,220,700	2,227,910			1.37	421	Enbridge DW / GW

ENBRIDGE

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

UNUSUALLY SENSITIVE AREA PIPE SEGMENTS BY STATIONING - TRANSPORT IMPACT

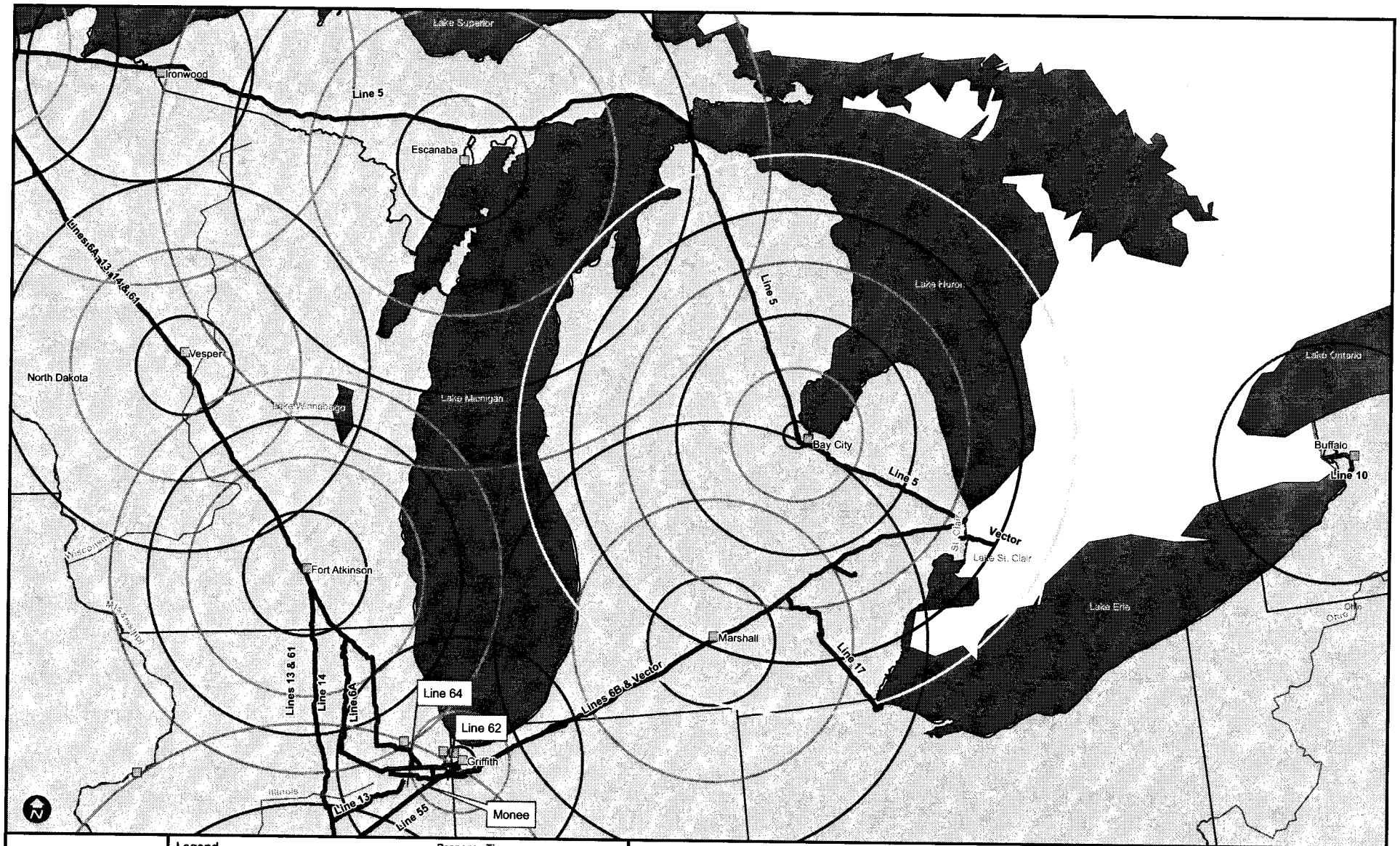
Line	Diameter	Begin Stationing	End Stationing	Diversion Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
Delavan To Flanagan (1,703,457-2,438,742) cont.								
61	42-inch	2,235,140	2,236,290			0.22	423	Enbridge DW / Wedron
61	42-inch	2,235,140	2,236,290			0.22	423	Enbridge DW / GW
61	42-inch	2,235,140	2,236,290			0.22	423	Enbridge DW / GW
61	42-inch	2,235,140	2,236,290			0.22	423	Enbridge DW / GW
61	42-inch	2,247,450	2,249,830			0.45	426	Enbridge DW / GW
61	42-inch	2,247,450	2,249,830			0.45	426	Enbridge DW / GW
61	42-inch	2,247,450	2,249,830			0.45	426	Enbridge DW / GW
61	42-inch	2,247,450	2,249,830			0.45	426	Enbridge DW / GW
61	42-inch	2,247,450	2,249,830			0.45	426	U.S. CNW / Illinois River
61	42-inch	2,256,810	2,261,340			0.86	428	Enbridge DW / GW
61	42-inch	2,256,810	2,261,340			0.86	428	U.S. CNW / Illinois River
61	42-inch	2,256,810	2,261,340			0.86	428	Enbridge DW / GW
61	42-inch	2,256,810	2,261,340			0.86	428	Enbridge DW / GW
61	42-inch	2,256,810	2,261,340			0.86	428	Enbridge DW / GW
61	42-inch	2,256,810	2,261,340			0.86	428	Enbridge DW / GW
61	42-inch	2,273,330	2,277,580			0.80	431	Enbridge DW / GW
61	42-inch	2,275,580	2,279,330			0.71	431	U.S. CNW / Illinois River
61	42-inch	2,275,580	2,279,330			0.71	431	Enbridge DW / GW
61	42-inch	2,275,580	2,279,330			0.71	431	Enbridge DW / GW
61	42-inch	2,275,580	2,279,330			0.71	431	Enbridge DW / GW
61	42-inch	2,275,580	2,279,330			0.71	431	Enbridge DW / GW
61	42-inch	2,275,580	2,279,330			0.71	431	Enbridge DW / GW
61	42-inch	2,275,580	2,279,330			0.71	431	Enbridge DW / GW
61	42-inch	2,275,580	2,279,330			0.71	431	Enbridge DW / GW

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
Delavan To Flanagan (1,703,457-2,438,742) cont.								
61	42-inch	2,294,270	2,296,500			0.42	435	Enbridge DW / GW
61	42-inch	2,294,270	2,296,500			0.42	435	Enbridge DW / GW
61	42-inch	2,294,270	2,296,500			0.42	435	U.S. CNW / Illinois River
61	42-inch	2,294,270	2,296,500			0.42	435	Enbridge DW / GW
61	42-inch	2,294,270	2,296,500			0.42	435	Enbridge DW / GW
61	42-inch	2,301,880	2,303,780			0.36	436	Enbridge DW / GW
61	42-inch	2,301,880	2,303,780			0.36	436	Enbridge DW / GW
61	42-inch	2,301,880	2,303,780			0.36	436	U.S. CNW / Illinois River
61	42-inch	2,301,880	2,303,780			0.36	436	Enbridge DW / GW
61	42-inch	2,301,880	2,303,780			0.36	436	Enbridge DW / GW
61	42-inch	2,308,660	2,310,660			0.38	437	Enbridge DW / GW
61	42-inch	2,308,660	2,310,660			0.38	437	Enbridge DW / GW
61	42-inch	2,308,660	2,310,660			0.38	437	U.S. CNW / Illinois River
61	42-inch	2,326,680	2,328,500			0.34	441	Enbridge DW / GW
61	42-inch	2,348,950	2,351,850			0.55	445	U.S. DW / SW
61	42-inch	2,348,950	2,351,850			0.55	445	U.S. DW / SW
61	42-inch	2,364,190	2,377,800			2.58	449	U.S. DW / SW
61	42-inch	2,364,190	2,377,800			2.58	449	U.S. DW / SW
61	42-inch	2,382,580	2,394,440			2.25	452	Enbridge DW / SW
61	42-inch	2,397,420	2,398,020			0.11	454	Enbridge DW / SW
61	42-inch	2,401,550	2,406,780			0.99	455	Enbridge DW / SW
61	42-inch	2,419,940	2,425,320			1.02	459	Enbridge DW / SW
61	42-inch	2,434,030	2,438,742			0.89	461	U.S. DW / SW
61	42-inch	2,434,680	2,438,742			0.77	461	Enbridge DW / SW



ENBRIDGE

Legend

- Response Facilities
- Rivers
- Pipeline

Response Times

- 1.0 Hour
- 2.0 Hours
- 3.0 Hours
- 4.0 Hours
- 5.0 Hours
- 6.0 Hours

Times derived from emergency response drills.

Enbridge Pipelines, Limited Partnership
Chicago Region Emergency Response Times

0 40 80 120 160 Miles

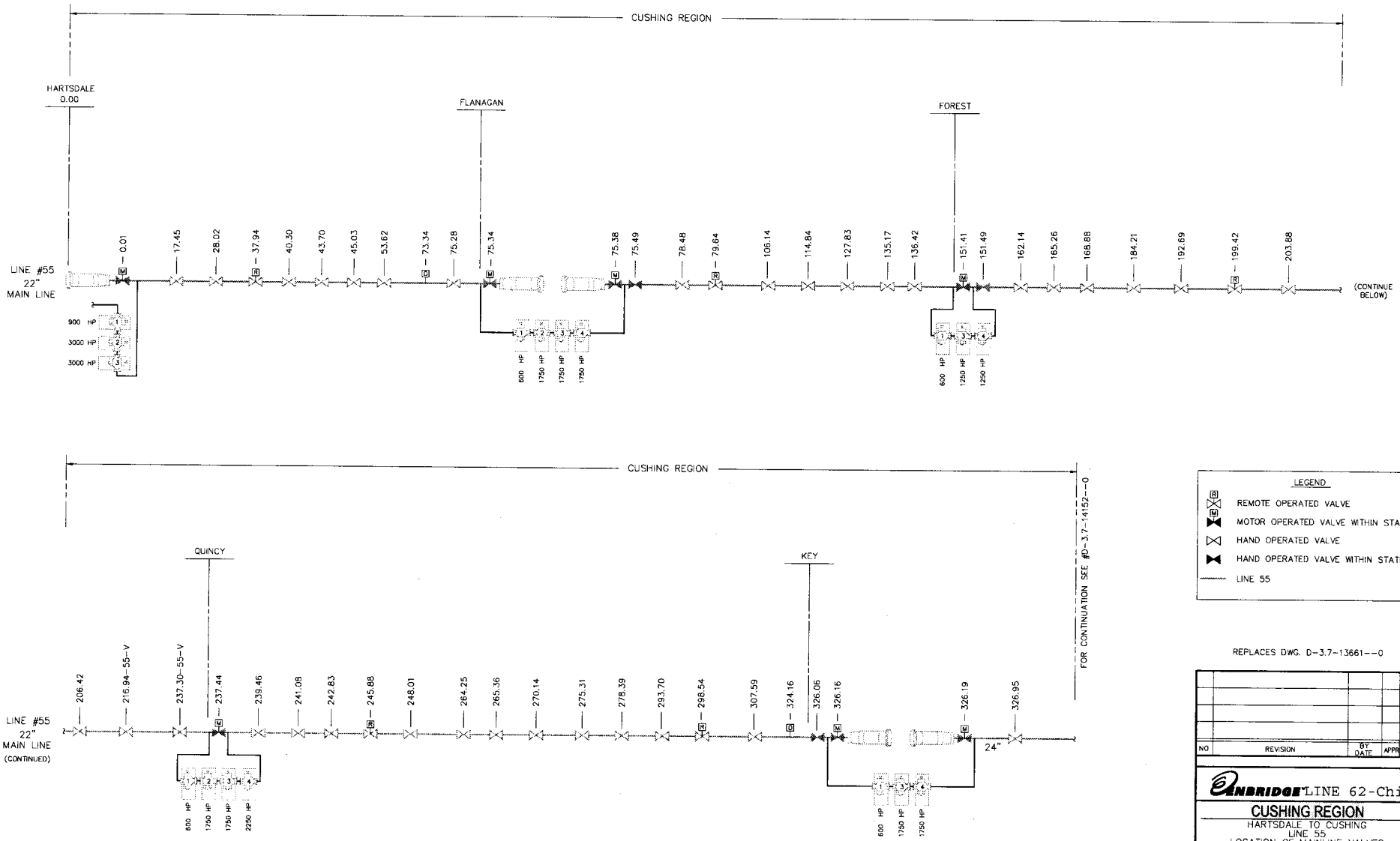
DATE ISSUED: 12/1/2004	Natural Resources Engineering Co. 715-395-5680
DATE REVISED: 3/10/2010	
SCALE: 1:2,700,000	
DRAWN BY: JDK	
SERIES: Emergency Response Times	

ENBRIDGE
Emergency Response
Chicago Region

LINE 13- STREATOR TO MANHATTAN VALVE LIST

FINAL AS-BUILT STATION	CONSTRUCTION STATION	DESCRIPTION		SKW#	JOINT	HEAT	LENGTH	PIPE MANUF	PIPE WALL THICKNESS	PIPE GRADE	PIPE COATING	COATING THICKNESS	MANUF PROCESS	COVER	POINT #	NORTHING	EASTING	ELEVATION
				1810	2179	477007	11.4'	EVRAZ	0.250	X-70	FBE	16 MILLS	ERW					
24611+31.4	7533+87.7	WELD VALVE	E-TI-134-R											4.6'	171398	1673117.36	981867.56	552.25
24611+34.9				9000	S/N 74400002	DOM 4/14/09	7.1'	J & J VALVE	0.375	X-70	PNT-330	25-80 MILLS	N/A					
24611+38.5	7533+94.8	WELD VALVE	E-TI-135											4.8'	171399	1673117.85	981874.67	552.18
				2179	306	594772	28.7'	EVRAZ	0.375	X-70	ARFBE	40 MILLS	ERW					
				3546	7038	591005	54.2'	EVRAZ	0.250	X-70	FBE	16 MILLS	ERW					
25292+15.1	8214+71.4	WELD VALVE	C-TI-541											4.7'	25198	1694562.82	1031394.13	531.89
25292+18.5				9001	S/N 74600003	DOM 4/14/09	7.0'	J & J VALVE	0.375	X-70	PNT-330	25-80 MILLS	N/A					
25292+22.0	8214+78.3	WELD VALVE	C-TI-540											4.5'	25199	1694569.77	1031393.76	532.02
				3549	719B	477005	35.8'	EVRAZ	0.250	X-70	ARFBE	40 MILLS	ERW					
				1476	1935	594550	30.1'	EVRAZ	0.250	X-70	FBE	16 MILLS	ERW					
24516+55.8	7439+12.1	WELD VALVE	A-TI-403											5.4'	33429	1668708.81	973789.52	555.94
24516+59.2				9003	S/N 074400001	DOM 4/14/09	6.8'	J&J VALVE	0.375	X-70	PNT-330	25-80 MILLS	N/A					
24516+62.6	7439+18.9	WELD VALVE	A-TI-402											5.1'	33428	1668711.67	973795.72	556.06
				1476	1935	594550	13.6'	EVRAZ	0.250	X-70	FBE	16 MILLS	ERW					
				2564	334	477004	56.8'	EVRAZ	0.250	X-70	FBE	16 MILLS	ERW					
25339+70.3	8262+26.6	WELD	B-TI-397											5.1'	80634	1697223.33	1034835.26	550.30
25339+73.6				9002	S/N 074600004	DOM 4/14/09	6.6'	J&J VALVE	0.375	X70	PNT-330	25-80 MILLS	N/A					
25339+76.9	8262+33.2	WELD	B-TI-396											5.2'	80635	1697223.51	1034841.87	550.27
				2564	334	477004	6.7'	EVRAZ	0.250	X-70	FBE	16 MILLS	ERW					

LINE 55



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.

LEGEND

- REMOTE OPERATED VALVE
- MOTOR OPERATED VALVE WITHIN STATION
- HAND OPERATED VALVE
- HAND OPERATED VALVE WITHIN STATION
- LINE 55

REPLACES DWG. D-3.7-13661--0

NO	REVISION	BY DATE	APPR

ENBRIDGE LINE 62-Chicago

CUSHING REGION
HARTSDALE TO CUSHING
LINE 55
LOCATION OF MAINLINE VALVES
SCHEMATIC DIAGRAM (SHT. 1 OF 2)

PROJECT:
SCALE: NTS | DATE: 1-31-07 | DRAWN: MKS
CHECK: KWS | APPR: _ | DATE: _
APPR: _
APPR: _

D-3.7-14151-0-0

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

To:

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

FORM F

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:

National Response Center (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:

F. Description of incident (include significant environment, safety, public affairs, regulatory, or financial concerns):

G. Weather Conditions:

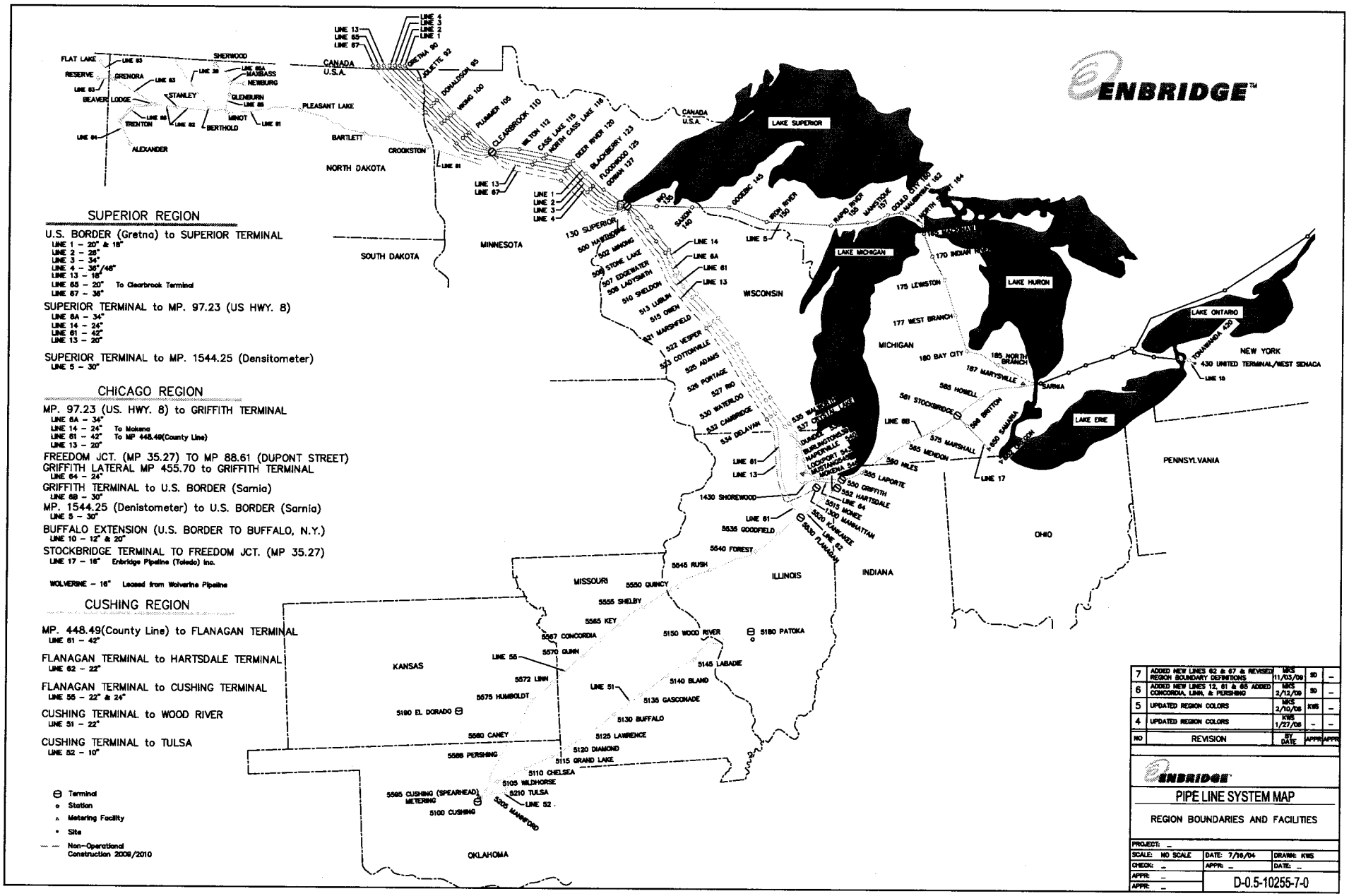
Miles of Mainline Pipe

ENBRIDGE ENERGY, LIMITED PARTERSHIP - Lakehead

Location	*Active Miles*	*Inactive Miles*	*HCA Miles (Unlapped)*
U.S. Border to Superior	**2,087**		**473**
20" Line 1 (U.S. Border to Clearbrook)-CO and NGL	135.7		41
18" Line 1 (Clearbrook to Superior) – CO and NGL	189.8		115
26" Line 2	324.5		95
34" Line 3	324.2		100
36"/48" Line 4 (U.S. Border to Clearbrook) 36"	136.0		20
36"/48" Line 4 (Clearbrook to Superior) 36"	191.0		82
18" Line 13 (U.S. Border to Clearbrook)	135.5		20
20" Line 13 (Clearbrook to Superior)	189.9		
20" Line 65 LSr (U.S. Border to Clearbrook)	136.0		
36" Line 67 AC (U.S. Border to Superior)	324.6		
Superior to Sarnia (Canadian Border)	**642**		**295**
30" Line 5 – CO and NGL	642.3		295
Superior to Griffith	**1,909**		**349**
34" Line 6A	465.4		164
20" Line 13 (Superior to Manhattan)	490.0		
24" Line 14	461.2		96
24" Line 64	26.1		26
42" Line 61 (Superior to Flanagan)	461.9		58
34" Griffith Hartsdale Transfer (TL 1)	0.6		0.6
36" Griffith Hartsdale Interconnect (GFHT 2)	0.8		0.8
36" Griffith Hartsdale Interconnect (GFHT 3)	0.8		0.8
Superior Terminal Pipe	0.3		0.3
Mokena 1	0.6		0.6
Mokena 2	0.6		0.6
Mustang	0.8		0.8
Griffith to Sarnia (Canadian Border)	**286**	**103**	**146**
30" Line 6B	285.9		128
30" Loops		103.2	18
Marysville	0.2		0.2
Buffalo Extension	**23**		**23**
12/20" Line 10	23.3		23
Enbridge Energy, Limited Partnership – Total Miles	**4,947**	**103**	**1,286**

ENBRIDGE - Affiliated Entities

Location	Active Miles	Inactive Miles	HCA Miles (Unlapped)
Enbridge Pipelines (North Dakota) LLC	**800**	**95**	**49**
6", 10", 12", and 16"	545.6		48
6", 8" Gathering Lines	117.7		
12" Line 26 (Lignite to Berthold)- Stanley to Plaza Field		95.2	1
Unregulated Gathering Lines	136.2		
Enbridge Pipelines (Toledo) Inc.	**88**		**38**
16" Line 17 (Stockbridge to Freedom Junction)	35.2		7
16" Line 17 (Freedom Junction to Toledo)	52.8		31
Samaria	0.2		0.2
Enbridge Pipelines (Ozark) L.L.C.	**484**	**32**	**260**
22" Line 51	433.5		224
10" Line 52 (intra-state)	47.1		29
10" Kamo		32	5
16" El Dorado – North	1.9		1
16" El Dorado – South	1.9		1
CCPS Transportation, LLC	**660**	**7**	**218**
22" Line 62 (Hartsdale to Flanagan)	75.1		27
22" Line 55 (Flanagan to Key)	251.4		47
24" Line 55 (Key to Cushing)	331.1		141
Cushing Seaway	0.1		0
Cushing Teppco H	0.7		0
Cushing Amoco 20"	0.4		0
Cushing Amoco 30"	0.5		0
Cushing Teppco Central	0.5		0
Cushing Teppco South	0.4		0
16" Monee		6.6	3
Mustang Pipeline Partners	**1**		**1**
24" Mustang Pipeline	0.8		1
Enbridge Pipelines (Illinois) LLC – (Luxor)		**117**	**23**
WPL #1 and WPL #3 (Patoka to Heyworth)		117.0	23
Enbridge Storage (Patoka) L.L.C.	0	0	0
This entity has tankage only, no pipeline miles			
Enbridge (affiliated entities) Total Miles	**2,033**	**251**	**589**
Enbridge Total Miles	**6,980**	**354**	**1,875**



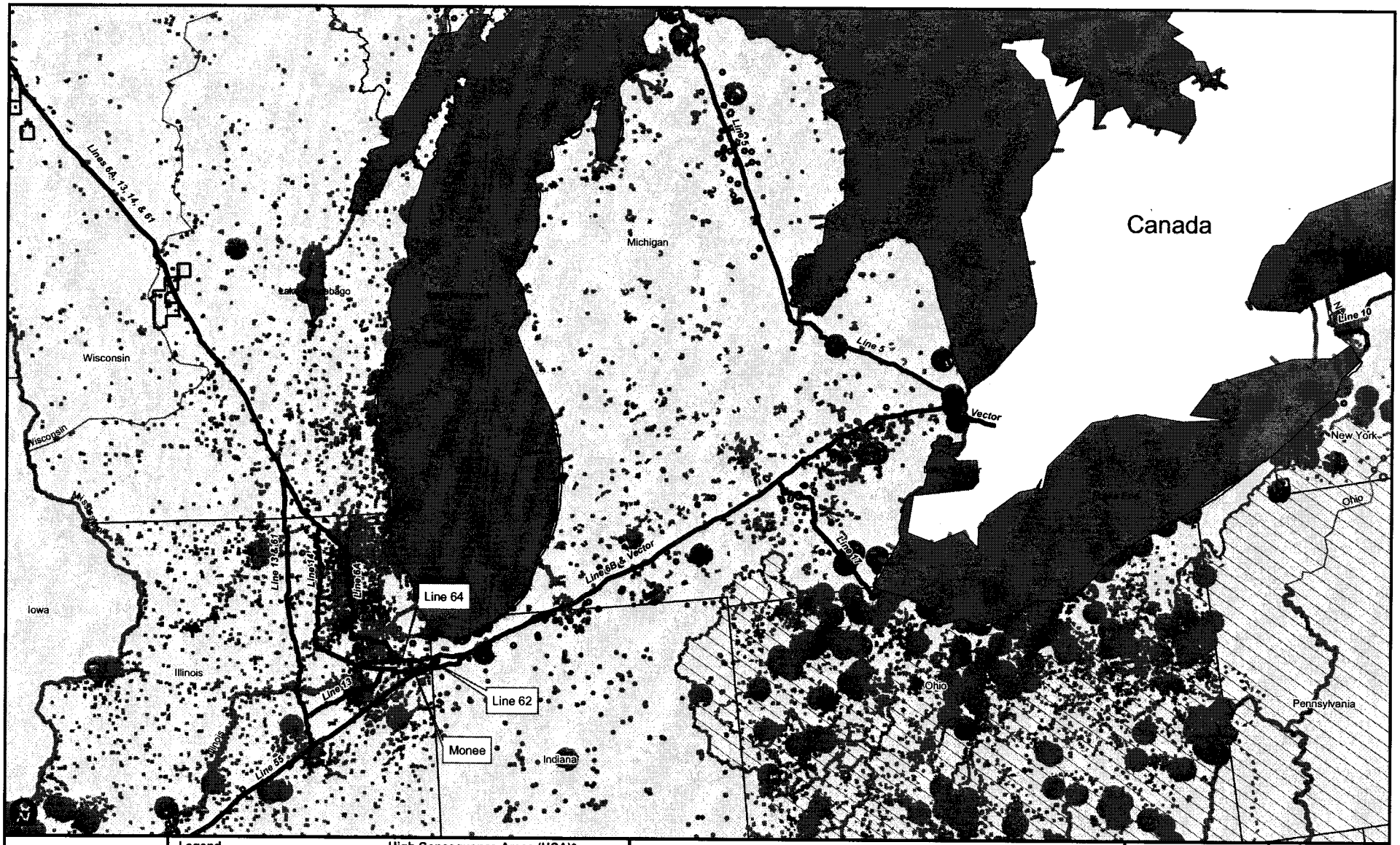
NO	REVISION	BY / DATE	APPR	APPR
7	ADDED NEW LINES 62 & 67 & REVISED REGION BOUNDARY DEFINITIONS	MKS 11/03/09	SD	–
6	ADDED NEW LINES 12, 61 & 65 ADDED CONCORDIA, LINN, & PERSHING	MKS 2/12/09	SD	–
5	UPDATED REGION COLORS	MKS 2/10/06	KWS	–
4	UPDATED REGION COLORS	KWS 1/27/06	–	–

ENBRIDGE

PIPE LINE SYSTEM MAP

REGION BOUNDARIES AND FACILITIES

PROJECT: –		
SCALE: NO SCALE	DATE: 7/16/04	DRAWN: KWS
CHECK: –	APPR: –	DATE: –
APPR: –	D-0.5-10255-7-0	
APPR: –		



ENBRIDGE

Legend

- Response Facilities
- Commercially Navigable Waterways
- Pipeline

High Consequence Areas (HCA)*

- Drinking Water HCA
- Ecological HCA

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

Enbridge Energy, Limited Partnership

Chicago Region HCA Overview Map

0 40 80 120 160 Miles

DATE ISSUED: 12/1/2004	Natural Resources Engineering Co. 715-395-6680
DATE REVISED: 3/9/2010	
SCALE: 1:2,600,000	
DRAWN BY: JDK	
SERIES: Emergency Response Times	

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Mackinaw to Bay City (2,015,016 - 2,843,835)								
5	30-inch	2,148,640	2,158,357			1.84	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
5	30-inch	2,231,211	2,232,361			0.22	1,521	U.S. ESA
5	30-inch	2,234,211	2,242,838			1.63	1,522	U.S. ESA
5	30-inch	2,301,499	2,303,749			0.43	1,534	U.S. ESA
5	30-inch	2,355,570	2,363,820			1.56	1,545	U.S. ESA
5	30-inch	2,360,620	2,362,520			0.36	1,545	U.S. ESA
5	30-inch	2,383,543	2,385,211			0.32	1,550	U.S. ESA
5	30-inch	2,403,105	2,414,694			2.19	1,554	U.S. ESA
5	30-inch	2,416,195	2,421,136			0.94	1,556	U.S. ESA
5	30-inch	2,416,195	2,421,136			0.94	1,556	U.S. ESA
5	30-inch	2,416,195	2,421,136			0.94	1,556	U.S. ESA
5	30-inch	2,440,568	2,444,018			0.65	1,561	U.S. ESA
5	30-inch	2,446,737	2,451,728			0.95	1,562	U.S. ESA
5	30-inch	2,465,962	2,471,988			1.14	1,566	U.S. ESA
5	30-inch	2,506,012	2,514,862			1.68	1,574	U.S. ESA

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Mackinaw to Bay City (2,015,016 - 2,843,835) cont.								
5	30-inch	2,578,293	2,595,183			3.20	1,588	U.S. ESA
5	30-inch	2,626,000	2,626,700			0.13	1,596	U.S. DW / GW
5	30-inch	2,778,732	2,780,732			0.38	1,625	U.S. ESA
5	30-inch	2,874,928	2,876,728			0.34	1,643	U.S. ESA
5	30-inch	2,882,551	2,894,534			2.27	1,645	U.S. ESA
5	30-inch	2,886,617	2,898,334			2.22	1,646	U.S. ESA
5	30-inch	2,886,987	2,890,487			0.66	1,645	U.S. CNW / Saginaw River
5	30-inch	2,978,998	2,999,475			3.88	1,664	U.S. ESA
5	30-inch	2,996,525	3,012,959			3.11	1,667	Enbridge DW / GW
5	30-inch	3,003,244	3,014,559			2.14	1,668	U.S. ESA
5	30-inch	3,025,565	3,034,398			1.67	1,672	U.S. ESA
5	30-inch	3,026,015	3,029,215			0.61	1,672	Enbridge DW / GW
5	30-inch	3,119,316	3,131,492			2.31	1,690	Enbridge DW / GW
5	30-inch	3,133,492	3,136,392			0.55	1,692	Enbridge DW / GW
5	30-inch	3,262,130	3,267,662			1.05	1,716	U.S. ESA
5	30-inch	3,268,372	3,274,478			1.16	1,718	U.S. ESA
5	30-inch	3,297,069	3,336,849			7.53	1,726	U.S. ESA
5	30-inch	3,340,663	3,344,838			0.79	1,731	U.S. ESA
5	30-inch	3,345,188	3,356,061			2.06	1,733	U.S. ESA
5	30-inch	3,351,773	3,354,023			0.43	1,733	U.S. CNW / St. Clair River
5	30-inch	3,351,773	3,354,023			0.43	1,733	Enbridge DW / GW
5	30-inch	3,354,971	3,364,529			1.81	1,734	Enbridge DW / GW
5	30-inch	3,357,391	3,364,529			1.35	1,735	U.S. ESA
5	30-inch	3,362,678	3,364,529			0.35	1,735	U.S. CNW / St. Clair River
5	30-inch	3,362,678	3,364,529			0.35	1,735	Enbridge DW / GW

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Superior to Adams (0 - 1,201,518)								
6A	34-inch	523,153	532,877			1.84	100	U.S. ESA
6A	34-inch	527,447	530,815			0.64	100	U.S. ESA
6A	34-inch	527,447	530,815			0.64	100	U.S. ESA
6A	34-inch	651,576	656,585			0.95	124	U.S. DW / GW
6A	34-inch	659,948	663,391			0.65	125	U.S. DW / GW
6A	34-inch	664,141	671,252			1.35	126	U.S. DW / GW
6A	34-inch	754,097	759,903			1.10	143	U.S. DW / GW
6A	34-inch	913,014	917,627			0.87	173	Enbridge DW / GW
6A	34-inch	921,754	923,804			0.39	175	Enbridge DW / GW
6A	34-inch	1,036,084	1,037,584			0.28	196	Enbridge DW / GW
6A	34-inch	1,038,184	1,038,784			0.11	197	Enbridge DW / GW
6A	34-inch	1,047,000	1,056,888			1.87	199	U.S. DW / GW
6A	34-inch	1,062,691	1,069,605			1.31	202	Enbridge CNW / Wisconsin River
6A	34-inch	1,076,318	1,079,968			0.69	204	Enbridge CNW / Wisconsin River
6A	34-inch	1,118,927	1,153,761			6.60	215	U.S. ESA
6A	34-inch	1,131,150	1,133,970			0.53	215	U.S. ESA
6A	34-inch	1,141,958	1,145,258			0.63	217	U.S. ESA
6A	34-inch	1,149,461	1,153,761			0.81	218	U.S. ESA
6A	34-inch	1,177,027	1,178,491			0.28	223	U.S. ESA
6A	34-inch	1,188,157	1,190,007			0.35	225	U.S. ESA
Adams to Griffith (1,201,518 - 2,457,347)								
6A	34-inch	1,337,064	1,342,595			1.05	254	U.S. DW / GW
6A	34-inch	1,422,959	1,425,459			0.47	270	U.S. DW / GW
6A	34-inch	1,488,197	1,492,045			0.73	282	Enbridge DW / GW

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
Adams to Griffith (1,201,518 - 2,457,347) cont.								
6A	34-inch	1,488,197	1,492,045			0.73	282	Enbridge DW / GW
6A	34-inch	1,488,197	1,492,045			0.73	282	Enbridge DW / GW
6A	34-inch	1,488,197	1,492,045			0.73	282	Enbridge DW / GW
6A	34-inch	1,620,556	1,622,618			0.39	307	U.S. DW / GW
6A	34-inch	1,644,789	1,647,130			0.44	312	Enbridge CNW / Rock River
6A	34-inch	1,651,155	1,654,513			0.64	313	Enbridge CNW / Rock River
6A	34-inch	1,655,430	1,663,889			1.60	314	Enbridge CNW / Rock River
6A	34-inch	1,673,213	1,679,113			1.12	317	Enbridge CNW / Rock River
6A	34-inch	1,766,876	1,769,832			0.56	335	U.S. DW / GW
6A	34-inch	1,769,832	1,770,882			0.20	335	Enbridge DW / GW
6A	34-inch	1,800,070	1,803,537			0.66	341	Enbridge DW / GW
6A	34-inch	1,828,589	1,831,739			0.60	347	Enbridge DW / GW
6A	34-inch	1,828,589	1,831,739			0.60	347	Enbridge DW / GW
6A	34-inch	1,842,770	1,845,720			0.56	349	Enbridge DW / GW
6A	34-inch	1,876,790	1,882,223			1.03	356	U.S. ESA
6A	34-inch	1,883,073	1,884,673			0.30	357	U.S. ESA
6A	34-inch	1,883,073	1,884,673			0.30	357	Enbridge DW / GW
6A	34-inch	1,924,246	1,926,696			0.46	365	U.S. DW / GW

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
Griffith to Sarnia (0 - 1,509,516)								
6B	30-inch	89,069	106,410			3.28	484	U.S. DW / SW
6B	30-inch	102,160	113,016			2.06	486	U.S. DW / SW
6B	30-inch	107,510	128,732			4.02	488	U.S. DW / SW
6B	30-inch	113,216	118,490			1.00	488	U.S. DW / SW
6B	30-inch	113,816	114,416			0.11	487	U.S. DW / GW
6B	30-inch	115,666	117,490			0.35	488	U.S. DW / GW
6B	30-inch	130,472	137,195			1.27	491	U.S. DW / GW
6B	30-inch	133,381	134,981			0.30	491	U.S. DW / GW
6B	30-inch	134,051	134,351			0.06	491	U.S. DW / SW
6B	30-inch	310,937	324,325			2.54	526	U.S. ESA
6B	30-inch	354,643	357,058			0.46	533	Enbridge CNW / St. Joseph River
6B	30-inch	354,643	357,058			0.46	533	U.S. DW / GW
6B	30-inch	369,178	373,814			0.88	536	Enbridge CNW / St. Joseph River
6B	30-inch	369,178	373,814			0.88	536	Enbridge DW / GW
6B	30-inch	369,178	373,814			0.88	536	U.S. DW / GW
6B	30-inch	452,790	454,790			0.38	552	U.S. DW / GW
6B	30-inch	546,824	549,658			0.54	569	U.S. DW / GW
6B	30-inch	592,029	593,729			0.32	578	U.S. DW / GW
6B	30-inch	650,154	652,704			0.48	589	U.S. ESA
6B	30-inch	883,462	886,639			0.60	633	U.S. DW / GW
6B	30-inch	1,125,648	1,138,132			2.36	680	U.S. ESA
6B	30-inch	1,165,919	1,173,227			1.38	687	U.S. ESA
6B	30-inch	1,168,613	1,170,832			0.42	687	U.S. ESA
6B	30-inch	1,168,613	1,170,832			0.42	687	U.S. DW / GW
6B	30-inch	1,177,160	1,179,447			0.43	689	Enbridge DW / GW

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Griffith to Sarnia (0 - 1,509,516) cont.								
6B	30-inch	1,179,697	1,195,390			2.97	690	U.S. ESA
6B	30-inch	1,186,959	1,195,190			1.56	691	U.S. ESA
6B	30-inch	1,201,404	1,205,690			0.81	694	U.S. DW / GW
6B	30-inch	1,205,890	1,209,675			0.72	694	U.S. DW / GW
6B	30-inch	1,262,424	1,264,217			0.34	705	U.S. DW / GW
6B	30-inch	1,273,131	1,279,031			1.12	707	U.S. DW / GW
6B	30-inch	1,356,294	1,358,405			0.40	723	U.S. DW / GW
6B	30-inch	1,359,655	1,363,884			0.80	723	U.S. DW / GW
6B	30-inch	1,364,184	1,365,894			0.32	724	U.S. DW / GW
6B	30-inch	1,366,476	1,370,476			0.76	725	U.S. DW / GW
6B	30-inch	1,386,745	1,390,371			0.69	729	U.S. DW / GW
6B	30-inch	1,433,737	1,439,087			1.01	738	U.S. ESA
6B	30-inch	1,449,322	1,477,982			5.43	743	U.S. ESA
6B	30-inch	1,479,782	1,491,517			2.22	747	U.S. ESA
6B	30-inch	1,493,249	1,501,503			1.56	749	U.S. ESA
6B	30-inch	1,497,130	1,499,721			0.49	749	U.S. CNW / St. Clair River
6B	30-inch	1,497,130	1,499,721			0.49	749	Enbridge DW / GW
6B	30-inch	1,500,503	1,509,516			1.71	751	Enbridge DW / GW
6B	30-inch	1,503,003	1,509,516			1.23	751	U.S. ESA
6B	30-inch	1,507,319	1,509,516			0.42	751	U. S. CNW / St. Clair River
6B	30-inch	1,507,319	1,509,516			0.42	751	U.S. ESA
6B	30-inch	1,507,319	1,509,516			0.42	751	Enbridge DW / GW

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Westover to Grand Island (0 - 3,484)								
10	20/12-inch	0	2,809			0.53	0	U.S. DW / SW
10	20/12-inch	0	2,809			0.53	0	U.S. DW / SW
10	20/12-inch	0	1,084			0.21	0	U.S. CNW / Niagara River
10	20-inch	2,809	5,336			0.48	1	Enbridge DW / SW
Grand Island to East Niagara (3,484 - 29,409)								
10	20-inch	5,336	13,120			1.47	2	U.S. DW / SW
10	20-inch	5,336	13,120			1.47	2	U.S. DW / SW
10	20-inch	5,336	13,120			1.47	2	U.S. DW / SW
10	20-inch	9,810	13,120			0.63	2	U.S. DW / SW
10	20-inch	9,910	13,120			0.61	2	U.S. DW / SW
10	20-inch	9,910	11,437			0.29	2	U.S. CNW / Niagara River
10	20-inch	13,120	17,690			0.87	3	Enbridge DW / SW
10	12-inch	17,690	40,323			4.29	5	U.S. DW / SW
10	12-inch	17,690	40,323			4.29	5	U.S. DW / SW
10	12-inch	17,690	40,323			4.29	5	U.S. DW / SW
10	12-inch	17,690	40,323			4.29	5	U.S. DW / SW
10	12-inch	23,521	32,576			1.71	5	U.S. CNW / Niagara River
East Niagara to Kiantone Take-Off (29,409 - 122,179)								
10	12-inch	37,580	39,023			0.27	7	U.S. CNW / Niagara River
10	12-inch	40,323	45,034			0.89	8	Enbridge DW / SW
10	12-inch	45,034	51,172			1.16	9	U.S. DW / SW
10	12-inch	45,034	51,172			1.16	9	U.S. DW / SW
10	12-inch	45,034	51,172			1.16	9	U.S. DW / SW
10	12-inch	51,172	59,684			1.61	10	Enbridge DW / SW

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
East Niagara to Kiantone Take-Off (29,409 - 122,179) cont.								
10	12-inch	59,684	64,351			0.88	12	U.S. DW / SW
10	12-inch	64,351	65,466		1,303	0.27	12	Enbridge DW / SW
10	12-inch	65,466	69,830	1,303		0.89	13	U.S. DW / SW
10	12-inch	68,030	69,830			0.34	13	Enbridge DW / GW
10	12-inch	68,030	69,830			0.34	13	U.S. DW / SW
10	12-inch	68,030	69,830			0.34	13	U.S. CNW / Niagara River
10	12-inch	69,830	71,780			0.37	13	Enbridge DW / SW
10	12-inch	71,780	73,430			0.31	14	U.S. DW / SW
10	12-inch	71,780	73,430			0.31	14	Enbridge DW / GW
10	12-inch	71,780	73,430			0.31	14	U.S. DW / SW
10	12-inch	71,780	73,430			0.31	14	U.S. CNW / Niagara River
10	12-inch	73,430	120,544			8.97	18	Enbridge DW / SW
10	12-inch	120,544	122,179			0.31	23	Enbridge CNW / Buffalo River
10	12-inch	120,544	122,179			0.31	23	U.S. DW / SW
10	12-inch	120,544	122,179			0.31	23	U.S. CNW / Lake Erie

ENBRIDGE

Chicago 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	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Diluent:	
Superior to Delavan						
13	20-inch	655,520	660,450	0.93	Gilman	US DW / Wellhead
13	20-inch	665,080	667,360	0.43	Gilman	US DW / Wellhead
13	20-inch	670,310	675,090	0.91	Gilman	US DW / Wellhead
13	20-inch	757,820	763,850	1.14	Owen	US DW / Wellhead
13	20-inch	917,770	921,720	0.75	Marshfield	ENB DW / Wellhead
13	20-inch	925,800	927,930	0.40	Marshfield	ENB DW / Wellhead
13	20-inch	1,040,560	1,042,160	0.30	Port Edwards	ENB DW / Wellhead
13	20-inch	1,052,250	1,061,480	1.75	Nekoosa	US DW / Wellhead
13	20-inch	1,063,030	1,074,840	2.24	Nekoosa	ENB CNW / Wisconsin River
13	20-inch	1,082,400	1,084,450	0.39	Nekoosa	ENB CNW / Wisconsin River
13	20-inch	1,121,210	1,161,850	7.70	Big Flats	US ESA
13	20-inch	1,133,420	1,141,480	1.53	Big Flats	US ESA
13	20-inch	1,144,960	1,152,840	1.49	Big Flats	US ESA
13	20-inch	1,151,940	1,161,850	1.88	Big Flats	US ESA
13	20-inch	1,189,100	1,197,110	1.52	Friendship	US ESA
13	20-inch	1,343,720	1,345,700	0.38	Endeavor	US DW / Wellhead
13	20-inch	1,428,500	1,431,230	0.52	Rio	US DW / Wellhead
13	20-inch	1,493,640	1,497,240	0.68	Columbus	ENB DW / Wellhead
13	20-inch	1,493,640	1,497,240	0.68	Columbus	ENB DW / Wellhead
13	20-inch	1,493,640	1,497,240	0.68	Columbus	ENB DW / Wellhead
13	20-inch	1,625,490	1,627,990	0.47	Oakland	US DW / Wellhead
13	20-inch	1,649,560	1,664,100	2.75	Fort Atkinson	ENB CNW / Rock River
13	20-inch	1,666,080	1,668,580	0.47	Fort Atkinson	ENB CNW / Rock River
13	20-inch	1,679,440	1,684,320	0.92	Koshkonong	ENB CNW / Rock River
13	20-inch	75,920	78,120	0.42	Clinton	ENB DW / Wellhead

ENBRIDGE

Chicago 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	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Diluent:	
Delavan to Streator						
13	20-inch	209,370	214,050	0.89	Belvidere	ENB DW / Wellhead
13	20-inch	209,370	213,250	0.73	Belvidere	ENB DW / Wellhead
13	20-inch	230,370	232,620	0.43	Spring	ENB DW / Wellhead
13	20-inch	230,370	232,620	0.43	Spring	ENB DW / Wellhead
13	20-inch	230,370	232,620	0.43	Spring	ENB DW / Wellhead
13	20-inch	258,170	261,020	0.54	Kingston	ENB DW / Wellhead
13	20-inch	328,910	331,940	0.57	De Kalb	ENB DW / Wellhead
13	20-inch	455,430	458,660	0.61	Adams	ENB DW / Wellhead
13	20-inch	517,340	523,020	1.08	Norway	ENB DW / Wellhead
13	20-inch	517,340	523,020	1.08	Norway	ENB DW / Wellhead
13	20-inch	517,340	523,020	1.08	Norway	ENB DW / Wellhead
13	20-inch	543,490	545,720	0.42	Rutland	ENB DW / Wellhead
13	20-inch	543,490	545,720	0.42	Rutland	ENB DW / Wellhead
13	20-inch	543,490	545,720	0.42	Rutland	ENB DW / Wellhead
13	20-inch	552,850	556,750	0.74	Rutland	US CNW / Illinois River
13	20-inch	552,850	556,750	0.74	Rutland	ENB DW / Wellhead
13	20-inch	552,850	556,750	0.74	Rutland	ENB DW / Wellhead
13	20-inch	552,850	556,750	0.74	Rutland	ENB DW / Wellhead
13	20-inch	552,850	556,750	0.74	Rutland	ENB DW / Wellhead
13	20-inch	568,290	578,300	1.90	Marseilles	US CNW / Illinois River
13	20-inch	569,740	573,640	0.74	Marseilles	ENB DW / Wellhead
13	20-inch	572,240	574,770	0.48	Marseilles	ENB DW / Wellhead
13	20-inch	572,240	574,770	0.48	Marseilles	ENB DW / Wellhead
13	20-inch	572,240	574,770	0.48	Marseilles	ENB DW / Wellhead
13	20-inch	572,240	574,770	0.48	Marseilles	ENB DW / Wellhead

ENBRIDGE

Chicago 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	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Diluent:	
Delavan to Streator cont.						
13	20-inch	572,240	574,770	0.48	Marseilles	ENB DW / Wellhead
13	20-inch	572,240	574,770	0.48	Marseilles	ENB DW / Wellhead
13	20-inch	590,530	592,360	0.35	Fall River	ENB DW / Wellhead
13	20-inch	590,530	592,360	0.35	Fall River	US CNW / Illinois River
13	20-inch	590,530	592,360	0.35	Fall River	ENB DW / Wellhead
13	20-inch	590,530	592,360	0.35	Fall River	ENB DW / Wellhead
13	20-inch	597,940	599,340	0.27	Fall River	ENB DW / Wellhead
13	20-inch	597,940	599,340	0.27	Fall River	US CNW / Illinois River
13	20-inch	597,940	599,340	0.27	Fall River	ENB DW / Wellhead
13	20-inch	597,940	599,340	0.27	Fall River	ENB DW / Wellhead
13	20-inch	605,000	606,550	0.29	Grand Rapids	ENB DW / Wellhead
13	20-inch	605,000	606,550	0.29	Grand Rapids	US CNW / Illinois River
13	20-inch	622,940	624,390	0.27	Grand Rapids	ENB DW / Wellhead
Streator to Manhattan						
13	20-inch	645,510	647,340	0.35	Ransom	US DW / SW Intake
13	20-inch	645,510	647,340	0.35	Ransom	US DW / SW Intake
13	20-inch	679,840	681,470	0.31	Kinsman	ENB DW / Wellhead
13	20-inch	679,840	681,470	0.31	Kinsman	ENB DW / Wellhead
13	20-inch	683,320	686,650	0.63	Kinsman	ENB DW / Wellhead
13	20-inch	694,580	695,430	0.16	Kinsman	ENB DW / Wellhead
13	20-inch	694,580	695,430	0.16	Kinsman	ENB DW / Wellhead
13	20-inch	736,900	741,100	0.80	Mazon	ENB DW / Wellhead
13	20-inch	773,880	775,960	0.39	Carbon Hill	US CNW / Illinois River
13	20-inch	779,610	812,770	6.28	Coal City	US DW / SW Intake
13	20-inch	791,300	812,770	4.07	Coal City	US DW / SW Intake

ENBRIDGE

Chicago 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	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Diluent:	
Streator to Manhattan cont.						
13	20-inch	794,200	797,530	0.63	Wilmington	ENB DW / Wellhead
13	20-inch	809,600	824,330	2.79	Wilmington	US ESA
13	20-inch	809,600	811,150	0.29	Wilmington	ENB CNW / Kankakee River
13	20-inch	809,600	811,150	0.29	Wilmington	ENB DW / Wellhead
13	20-inch	809,600	811,150	0.29	Wilmington	US ESA
13	20-inch	816,150	831,110	2.83	Wilmington	ENB CNW / Kankakee River
13	20-inch	822,250	844,050	4.13	Wilmington	US DW / SW Intake
13	20-inch	822,250	833,440	2.12	Wilmington	US DW / SW Intake
13	20-inch	847,100	853,080	1.13	Symerton	US DW / SW Intake
13	20-inch	848,280	851,380	0.59	Symerton	US DW / SW Intake
13	20-inch	848,280	851,380	0.59	Symerton	ENB CNW / Kankakee River
13	20-inch	848,280	851,380	0.59	Symerton	ENB DW / Wellhead
13	20-inch	848,280	851,380	0.59	Symerton	US ESA
13	20-inch	853,430	856,610	0.60	Symerton	ENB DW / Wellhead
13	20-inch	856,810	862,490	1.08	Symerton	ENB DW / SW Intake
13	20-inch	859,040	861,290	0.43	Symerton	US DW / SW Intake
13	20-inch	859,040	861,290	0.43	Symerton	ENB CNW / Kankakee River
13	20-inch	859,040	861,290	0.43	Symerton	ENB DW / Wellhead
13	20-inch	859,040	861,290	0.43	Symerton	US ESA
13	20-inch	876,130	878,180	0.39	Manhattan	US DW / SW Intake
13	20-inch	884,670	886,190	0.29	Manhattan	US DW / SW Intake

Control Point Maps

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 Book 7: Emergency Response 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 maintained in the regional offices.

Chicago Region Control Point Maps Record- Refer to Regional Control Point Map Books

LINE 5

Little Pigeon River	MP 1521.86
Pigeon River	MP 1528.53
Au Sable River	MP 1561.98
Rifle River West Branch	MP 1591.74
Pine River Middle Branch	MP 1610.67
Pine River South Branch	MP 1611.78
Saganing River	MP 1616.41
Pinconning River	MP 1621.41
Kawkawlin River North Branch	MP 1631.59
Kawkawlin River	MP 1637.93
Saginaw River*	MP 1644.80 (2 Maps)
Quanicassee River	MP 1654.74
Cass River	MP 1668.52
Pine River #1	MP 1724.74
Pine River #2	MP 1725.93
Pine River #3	MP 1726.48
Pine River #4	MP 1727.35
Pine River #5	MP 1728.36
Pine River #6	MP 1728.52
Pine River #7	MP 1728.76
St. Clair River*	MP 1735.32 (8 Maps)

LINE 6A

Fox River	MP 376.84
Ferry Creek	MP 404.74
Des Plaines River*	MP 425.10 (5 Maps)
Chicago Ship Canal	MP 425.56 (2 Maps)
Hickory Creek #1	MP 442.62
Hickory Creek #2	MP 447.30
Park Forest- Drain	MP 449.53
Park Forest- Wash	MP 450.20
Park Forest- Ditch	MP 451.19

LINE 6A cont.

Sauk Trail Lake	MP 453.59
Hart Ditch (Plum Creek)	MP 461.78
Dyer Ditch	MP 463.29
Griffith Tank Farm	MP 464.00

LINES 6A &14

Flambeau River	MP 100.16
Little Jump River	MP 110.79
Jump River	MP 111.89
Yellow River	MP 123.92 (2 Maps)
Eau Claire River	MP 132.50 (2 Maps)
Popple River	MP 144.17 (2 Maps)
East Branch Yellow River	MP 169.50 (2 Maps)
Wisconsin River*	MP 201.70
Fox River	MP 253.61
Fox River	MP 261.43
Crawfish River	MP 279.25
Maunesha River	MP 291.54 (2 Maps)
Rock River*	MP 313.03
Des Plaines River*	MP 313.03 (3 Maps)

LINE 6B

Turkey Creek	MP 471.43
Deep River - West	MP 475.15
Deep River - East	MP 475.22
St. Joseph River*	MP 533.02 (4 Maps)
Rocky River	MP 569.50
Portage River	MP 576.48
Kalamazoo River	MP 610.89
Grand River	MP 633.12
Cedar River Middle Branch	MP 661.09
Red Cedar River	MP 664.44
Shiawassee River South Branch	MP 667.47
Flint River SW Branch	MP 708.16
Flint River South Branch	MP 708.54
Clinton River North Branch	MP 722.70

LINE 6B cont.

Belle River	MP 736.13
Pine River	MP 744.72
St. Clair River*	MP 751.72

LINE 10

Niagara West Branch*	MP 1928.78 (6 Maps)
Niagara East Branch*	MP 1933.61 (7 Maps)
Buffalo River*	MP 1951.75 (2 Maps)

LINE 17

Maumee River	MP 83.34

LINE 61

Turtle Creek	MP 14.5 (4 Maps)
Beaver Creek	MP 27.5 (4 Maps)
Piscasaw Creek	MP 33 (3 Maps)
Coon Creek/Kishwaukee River	MP 40 (5 Maps)
S. Br. Kishwaukee River	MP 50.6 (4 Maps)
S. Br. Kishwaukee River	MP 67 (3 Maps)
Fox River	MP 98 (5 Maps)
Illinois River *	MP 108.5 (4 Maps)
Mud Creek	MP 129 (3 Maps)

LINE 13- Streator to Manhattan

Jordan Creek	MP 7 (4 Maps)
Kankakee River	MP 11.12 (3 Maps)
Mazon River	MP 24.83 (5 Maps)
Johnny Run	MP 29.7 (4 Maps)
Thunder Creek	MP 34.5 (4 Maps)

*Commercially Navigable Waterway

Appendix

Qualified Individual(s)

T.W. Fridel
General Manager, Chicago Region
1500 W. Main St.
Griffith, IN 46319
Business: 219-922-3133 #201
Business FAX: 219-922-3128
24 hr. contact: 800-858-5253 via Edmonton Control Center

M.J. Willoughby
General Manager, Superior Region
119 N. 25th St. E.
Superior, WI 54880
Business: 715-394-1410
Business FAX: 715-394-1405-
24 hr. contact: 800-858-5253 via Edmonton Control Center

CHICAGO REGION RESPONSE ZONE

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
- **Chicago Region**
- Cushing Region
- Enbridge Pipelines North Dakota

The Chicago Region response zone includes eleven pipelines (Lines 6A, 13, 14, 61, 62, 64, 6B, 5, 10, 17, and Mustang) and three terminal lines (Lines TL 1, GFHT 2 and GFHT 3) that transport crude oil, natural gas liquids Wisconsin, Illinois, Indiana, Michigan and New York. Line 13 transports diluent across Illinois, Wisconsin, Minnesota and the North Dakota systems. This section of response zone includes:

- Approximately 2,108 miles of pipeline, with pipe diameters ranging from 12 to 42 inches;
- 42 Pump Stations located along the pipe;
- The Mustang pipeline segment for which Enbridge has operations, maintenance, repair and emergency response responsibility includes the Lockport Metering Station and the portion of the Mustang 24" pipeline system from Lockport, Illinois to Interstate 74;

- Line 17 – Enbridge operates the 88 mile pipeline segment beginning in Stockbridge, Michigan and ending in Oregon, Ohio. The first 35 miles of pipeline, from Stockbridge, Michigan to Freedom Junction, Michigan was constructed in 1998 and is owned by Enbridge. The remaining 53 mile segment runs from Freedom Junction, Michigan to Oregon, Ohio (MP is leased from Wolverine Pipeline). Per the established lease agreement, Enbridge is responsible for all operations, maintenance and emergency response associated with this line segment (as if we were the owner); however, Wolverine retains ownership.

- The Chicago system also includes 25 tanks (11 tanks at Griffith; 9 tanks at Hartsdale; 3 tanks at Stockbridge, 2 tanks at Manhattan). Breakout tanks are located at Griffith, IN (2.84 million barrels storage capacity), Hartsdale, IN (846,000 barrels storage capacity) Stockbridge, MI (440,000 barrels storage capacity), and two diluent tanks at Manhattan (511,000 barrels storage capacity).

Counties included in the Chicago Region response zone are:

Wisconsin	Illinois	Indiana	Michigan	New York
Rusk	McHenry	Lake	Crawford	Erie
Taylor	Kane	Porter	Ogemaw	
Chippewa	Cook	LaPorte	Arenac	
Clark	Dupage	St. Joseph	Bay	
Marathon	Kendall		Lapeer	
Wood	Will		St. Claire	
Adams	Kankakee		Berrion	
Marquette	Ford		Cass	
Columbia	Livingston		St. Joseph	
Dane	Champaign		Kalamazoo	
Jefferson	Piatt		Calhoun	
Rock	Boone		Livingston	
Walworth	DeKalb		Oakland	
	LaSalle		Tuscola	
	Grundy		Sagionaw	
	Will		Oscoda	
			Macomb	
			Ingham	
			Jackson	
			Washtenaw	

This response zone includes the following pipelines:

Line	Pipeline Sections	Begin Stationing	End Stationing	Miles	Pipeline Diameter	Product
5	Lewiston Pump Station to Sarnia, Ontario	2,378,371	3,364,529	186.77	30"	Crude Oil & Natural Gas Liquids
6A	Hwy 8 Ladysmith, WI to Mokena, IL	513,368	2,457,347	368.2	34"	Crude Oil & Natural Gas Liquids
6B	Griffith, IN to Sarnia, Ontario	0	1,509,516	285.9	30"	Crude Oil
10	Westover, Ontario to Grand Island, NY	0	3,484	.7	12"	Crude Oil
10	Grand Island, NY to East Niagara, NY	3,484	29,409	4.9	20"	Crude Oil
10	East Niagara, NY to Kiantone, NY Take-Off	29,409	119,975	17.3	12"	Crude Oil
13	Streator, IL to Manhattan, IL	0	237,710	45.02	20"	Diluent
13	Manhattan, IL to Delevan, WI	0	889,310	168.43	20"	Diluent
13	Delevan, WI to Ladysmith, WI	528,000	1,216,611	230.42	20"	Diluent
14	Hwy 8 Ladysmith, WI to Mokena, IL	512,719	2,434,861	364.0	24"	Crude Oil
17	Stockbridge, MI to Freedom Junction, MI	0	186,089	35.3	16"	Crude Oil
17	Freedom Junction, MI to Toledo, OH	0	279,047	52.9	16"	Crude Oil
61	Ladysmith, WI to Delevan, WI	523,170	1,703,457	223.54	42"	Crude Oil
61	Delevan, WI to LaSalle Livingston County Line	0	467,030	88.45	42"	Crude Oil
62*	IN State Line to Hartsdale, IL	363,296	398,336	6.5	22"	Crude Oil
64	Mokena, IL to Griffith, IN	2,406,091	2,543,685	26.1	24"	Crude Oil
TL1	Griffith, IN to Hartsdale, IN	0	3,171	.6	34"	Crude Oil
GFHT 2	Griffith, IN to Hartsdale, IN	0	4,090	.8	36"	Crude Oil
GFHT 3	Griffith, IN to Hartsdale, IN	0	4,128	.8	36"	Crude Oil
Mustang	Lockport Metering Station, IL to North of Interstate 74	0	10,001	1.9	18"	Crude Oil

* Stationing used is not As-Built- Begins at zero in Flanagan

3. CONSISTENCY WITH NATIONAL AND AREA CONTINGENCY PLANS

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 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), fire fighting 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, which covers specific duties in the 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 O&MP Book 2 section 04 describes the company's procedures for maintenance of response training records for response personnel.

The O&MP Book 2 section 05-02-02 describes the requirements for maintaining drill documentation for three years and ensuring the availability of such records for inspectors.

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.

Chicago Response Zone

USCG		EPA	
National Response Center http://www.nrc.uscg.mil/nrchp.html	800-424-8802	EPA Region II 290 Broadway New York, NY 10007-1866	212-637-5000
USCG Ninth District 1240 E. 9th Street Cleveland, OH 44199	216-902-2045	EPA Region V 77 W. Jackson Blvd. Chicago, IL 60604	312-886-3000
USCG Marine Safety Office 1 Fuhrmann Blvd. Buffalo, NY 14203	716-843-9570		
USCG Marine Safety Office 215 West 83rd St., Ste. D Burr Ridge, IL 60527	630-986-2155		
USCG Marine Safety Office 110 Mt. Elliott Ave. Detroit, MI 48207-4380	313-568-9490		
USCG Marine Safety Office 2424 S. Lincoln Memorial Dr. Milwaukee, WI 53207	414-747-7154		

Table 2
Safety Training Participants—USA

Type of Training	Reference	Completed From Time of Hire	Ongoing Frequency	Operations Employees[1]	PLM Employees	Inspectors	Mechanical Employees[2]	Electrical Employees	Field Office Employees[3]
arc hazard	company policy	before task using 5 Kv equipment	3 yrs	◊	◊	◊	√	√	◊
asbestos awareness	29CFR 1910.1001	1 yr	annual	√	√	◊	√	√	◊
back care	company policy	6 mos	2 yrs	√	√	◊	√	√	◊
bloodborne pathogens	29CFR 1910.1030	1 yr	annual	√	√	◊	√	√	◊
confined space entry	29CFR 1910.146	before entry or 1 yr	3 yrs	√	√	√	√	√	◊
CPR – refresher	29CFR 1910.151	1 yr	@ expiry	√	√	√	√	√	◊
contractor safety management			3 yrs	◊	◊	√	◊	◊	◊
driver training – new hire orientation	company policy	before driving	—	√	√	◊	√	√	√
driver training – core (with driver observation)		before driving[4]	3 yrs	√	√	√	√	√	√
driver training – refresher		—	annual[5]	√	√	◊	√	√	√
driver training – advanced		—	3 yrs after core	√	√	◊	√	√	√
electrical safety	29CFR 1910.332	before task or 1 yr	2 yrs	√	√	◊	√	√	◊
			annual	◊	◊	◊	◊	√	◊

Table 2
Safety Training Participants—USA

Type of Training	Reference	Completed From Time of Hire	Ongoing Frequency	Operations Employees[1]	PLM Employees	Inspectors	Mechanical Employees[2]	Electrical Employees	Field Office Employees[3]
ergonomics	OSHA 5 (a)(1)	—	2 yrs	◊	◊	◊	◊	◊	◊
fall protection – core	29CFR 1926.503	before task or 1 yr	3 yrs	◊	√	◊	√	√	◊
fall protection – refresher		—	annual	◊	◊	◊	◊	◊	◊
fire extinguisher maintenance	industry best practice	—	5 yrs	◊	◊	◊	◊	◊	◊
Fire extinguisher training NGL/ crude ignition	49CFR 195.403 29CFR 1910.157	3 months	annual alternating	√	√	√	√	√	◊
first aid – standard level	29CFR 1910.151	1 yr	@ expiry	√	√	√	√	√	◊
forklift operations	29CFR 1910.178	before task or 1 yr	3 yrs	◊	√	◊	◊	◊	◊
forklift – train the trainer certification	industry best practice	—	5 yrs	◊	◊	◊	◊	◊	◊
gas detector operation	29CFR 1910.120 49CFR 195.402	before task or 1 wk	annual	√	√	√	√	√	◊
ground disturbance (excavation) – core	29CFR 1926.651	before task or 1 yr	3 yrs	◊	√	√	√	√	◊
ground disturbance (excavation) – refresher		—	annual	◊	◊	√	◊	◊	◊

Table 2
Safety Training Participants—USA

Type of Training	Reference	Completed From Time of Hire	Ongoing Frequency	Operations Employees[1]	PLM Employees	Inspectors	Mechanical Employees[2]	Electrical Employees	Field Office Employees[3]
HAZCOM	29CFR 1910.1200	before exposure or 1 wk	annual	√	√	√	√	√	◊
HAZMAT	49CFR 172.704	before exposure or 1 yr	3 yrs	◊	√	◊	√	√	◊
hearing conservation	29CFR 1910.95	before exposure or 1 yr	annual	√	√	◊	√	√	◊
high voltage	company policy	1 yr	3 yrs	◊	◊	◊	◊	√	◊
hoisting/rigging	29CFR 1910.184, 1910.179	before task or 1 yr	5 yrs	◊	√	◊	√	◊	◊
ignition sources	49CFR 195.402	before task or 1 wk	annual	√	√	◊	√	√	◊
lockout procedures	29CFR 1910.147	before task or 3 mos	annual	√	√	√	√	√	◊
personal protective equipment	29CFR 1910.132	before task or 1 mo	annual	√	√	√	√	√	◊
radiation safety	NRC[6] 10 Part 30.33	before task or 1 yr	2 yrs	◊	—	◊	—	◊	—
respiratory protection – air purifying/supplied fit testing	29CFR 1910.134	before task or 1 yr	annual	√	√	◊	√	√	◊
respiratory fit testing – train the trainer		—	—	◊	◊	◊	◊	◊	◊

4. Calculation of Worst Case Discharge

Worst Case Discharge Volume Calculation Methodology

The approach for calculating Worst Case Discharge (WCD) volume utilizes American Innovation's Integrity Assessment Program (IAP) software. The IAP 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 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.

IAP software and data is in custody of, and maintained by the Enbridge Liquid Pipelines Operational Risk Management Group.

<u>Maximum Initial Loss</u>

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

A full mainline rupture will show up as alarms on SCADA screens within 1 minute of its occurrence.

The Material Balance Leak Detection will recognize a rupture within 5 minutes of a rupture occurring (runs in a 5 minute cycle). The Material Balance Leak Detection is a backup to operator recognition.

The volume out calculation uses a time to recognize rupture of 5 minutes.

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.

Time to Isolate Line (Remote Controlled Valves Only)

The time to isolate a line is the time it takes to recognize the rupture plus the time it takes to close the remote-controlled mainline valves. For the Enbridge liquid mainline system this time is 8 minutes.

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 (bbls/day)	Time to Isolate (min)	Worst Case Discharge (bbls)	Location (ft Stationing)	Location (~MP)
	5	525,682	8	36,263	2,843,834	1,636.45
	6A	727,335	8	25,283	2,446,200	463.4
	6B	300,653	8	26,456	1,425,000	735.4
	10	80,824	8	2,497	10,700	1,930.8
	13	180,000	8	7,945	551,100	104.4
	14	398,774	8	19,467	2,289,400	433.8
Toledo	17	103,781	8	7,792	175,632	33.2
	61	400,000	8	34,717	988,450	187.2
	62	139,822	8	14,868	234,200	44.36
	64	398,774	8	8,511	2,531,400	463.8
(transfer line)	TL1	317,860	8	3,332	3024	
(transfer line)	TL2	363,080	8	2,379	2713 to 3913	
(transfer line)	TL3	363,080	8	2,379	2713 to 3913	

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
Maximum allowable credit		**75**

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

5. 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
- 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. Basis for Determination of "Significant and Substantial Harm"

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

ENBRIDGE

Facility Response Plan Review
United States Department of Transportation
Pipeline and Hazardous Materials Safety Administration (PHMSA)
Office of Pipeline Safety (OPS)

OPS Sequence Number: **Chicago Region- #867**

Facility Response Plan- ***Region Specific Book 7-Emergency Response Plan (ERP)***
Version Date: April 2009

Pipeline Operator Name: **Enbridge (U.S.) Inc.**

Contact Name: Jason Boisvert, Sr. Emergency Response Engineer
Contact Phone Numbers Office: 780-420-5255
Fax: 780-420-8253
Cellular: 780-893-0180
Contact Mailing Address: Enbridge Pipelines, Inc.
10201 Jasper Avenue
Edmonton, AB T5J 3N7 Canada

Contact Electronic Mail Address: jason.boisvert@enbridge.com

If different from the Contact Name, Facility Response Plan Author Name:
Facility Response Plan Author Phone Numbers- Office:
Fax:
Cellular:
Facility Response Plan Author Mailing Address:
Facility Response Plan Electronic Mail Address:

Questionnaire Submission Date: April 1, 2010

NATIONAL CONTINGENCY PLAN AND AREA CONTINGENCY PLAN CERTIFICATIONS FOR SEQUENCE NUMBER: 867

1. A. Has the operator reviewed the National Contingency Plan (NCP) and each applicable Area Contingency Plan (ACP)? YES
   B. Does the Facility Response Plan follow the Area Contingency Plan? YES
   C. Please list the names of the Area Contingency Plans and the pages in the Facility Response Plan (ERP) that relate to the Area Contingency Plans. (49 CFR 194.107 (b))

See Page Reference:

Region Specific Book 7 ERP-

Appendix- Pages 5-6- Consistency with National and Area Contingency Plans

Comment:

A. *A review of the National Contingency Plan (NCP) and each applicable Area Contingency Plan (ACP) has been completed.*

B. *The Facility Response Plan follows the Area Contingency Plan.*

C. *The Chicago Region falls within the scope of the following:* ***U.S. Coast Guard (USCG) Ninth District, the USCG Marine Safety Offices in: Buffalo, NY, Burr Ridge, IL, Detroit, MI, and Milwaukee, WI.*** *and the* ***U. S. Environmental Protection Agency (EPA) Region 2 & Region 5 Area Contingency Plans.*** *These are referenced in the Enbridge Facility Response Plan (49 CFR 194.107 (b)).*

PLAN INFORMATION SUMMARY FOR SEQUENCE NUMBER: 867

2. Does the Plan Information Summary contain the following: (49 CFR 194.107 (c)(1), (c)(1)(i), and (c)(2) and 49 CFR 194.113)
   - The Operator Name, Street Address, City, State, and Zip Code. YES
   - A list of response zones that meet the criteria for significant and substantial harm (49 CFR 194.113(a)(2) and a list of response zones in which a worst case discharge could cause substantial harm. YES
   - The basis for the operator's determination that the response zone meets the criteria for significant and substantial harm and a statement that a worst-case discharge in the response zone can be expected to cause significant and substantial harm for each response zone. YES
   - Description of each response zone, including the County(s) or Parishes and State(s). YES
   - Explanation for each response zone designation. YES
   - Names (s), titles(s), and office and cellular telephone number(s) for the Qualified Individual(s) twenty-four hours a day in each response zone. YES
   - Names (s), titles(s), and office and cellular telephone number(s) for the Alternate Qualified Individual(s) twenty-four hours a day in each response zone. YES
   - List of line sections in each response zone by milepost, survey station number, or other operator designation. YES
   - If any response zone contains multiple pipeline systems, all pipeline systems are described and the oils they transport are listed. YES
   - The type of oil and the volume of the worst- case discharge. YES

See Page References:

Region Specific Book 7 ERP- Tab 1

- *Page 4-6- Description of each response zone, including the County(s) and States.*
- *Page 4- Names (s), titles(s), and office and cellular telephone number(s) for the Qualified Individual(s) twenty-four hours a day in each response zone.*
- *Page 4- Names (s), titles(s), and office and cellular telephone number(s) for the Alternate Qualified Individual(s) twenty-four hours a day in each response zone.*
- *Page 4- Explanation for each response zone designation.*
- *Page 7- List of line sections in each response zone by milepost & survey station number designation.*
- *Page 7- If any response zone contains multiple pipeline systems, all pipeline systems are described and the oils they transport are listed.*

Region Specific Book 7 ERP- Tab 3- Maps and References

- *HCA Tables- A list of response zones that meet the criteria for significant and substantial harm (49 CFR 194.113(a)(2) and a list of response zones in which a worst case discharge could cause substantial harm.*

Region Specific Book 7 ERP- Appendix

- *Page 1- The Operator Name, Street Address, City, State, and Zip Code:*

  Enbridge (U.S.) Inc.
  Operator of the Enbridge Pipeline Systems
  1100 Louisiana, Suite 3200
  Houston, TX 77002-5216
- *Pages 1-2- Description of each response zone, including the County(s) and States.*
- *Page 4- List of line sections in each response zone by milepost & survey station number designation.*
- *Page 4- If any response zone contains multiple pipeline systems, all pipeline systems are described and the oils they transport are listed.*
- *Page 7-8 A list of response zones that meet the criteria for significant and substantial harm (49 CFR 194.113(a)(2) and a list of response zones in which a worst case discharge could cause substantial harm.*
- *Pages 8-9 The basis for the operator's determination that the response zone meets the criteria for significant and substantial harm and a statement that a worst-case discharge in the response zone can be expected to cause significant and substantial harm for each response zone. Based on the High Consequence Area Management Plan and HCA Map Book.*
- *Pages 4 & 8- The type of oil and the volume of the worst- case discharge.*

Supplemental Resource: Emergency Response Directory (ERD) – Product Information tab- Properties and frequently asked questions

NOTIFICATIONS
FOR SEQUENCE NUMBER: 867

3.1 What person, position, or facility is responsible for starting immediate notification? (49 CFR 194.107 (c)(1)(ii) Please list the person's, position's, or facility's mailing and electronic mail addresses and office, fax, and cellular telephone information. YES

See Page Reference:

O & MP Book 7: Emergency Response

Sec 02-02-01- Pages 1-4– Emergency Notification

Region Specific Book 7- ERP
Tab 1- Page 4- 24 Hour Contact
Appendix- Pages 5-6- Consistency with National and Area Contingency Plans
Supplemental Resource: Emergency Response Directory (ERD)- Notification Procedures tab

Comment:

The immediate emergency notification plan begins at the Control Center. As requested the facility address and phone numbers are listed below:

Edmonton Control Center
10201 Jasper Avenue
Edmonton, AB T5J 3N7
(780)-420-8899 (Phone Number)
(800) 858-5253 (24 Hr Emergency Number) Edmonton Control Center
(780)-420-8122 (Fax)

3.2 Is the person, position, or facility capable of starting immediate notification twenty-four hours a day, three hundred sixty-five days a year? (49 CFR 194.107(c)(1)(ii)) Please describe your immediate notification plan. YES

See Page References:

O & MP Book 7: Emergency Response
Sec 02-02-01- Pages 1-4- Emergency Notification
Supplemental Resource: Emergency Response Directory (ERD)- Notification Procedures tab

Comment:

The immediate emergency notification plan begins at the Edmonton Control Center (ECC). The Control Center is fully capable of starting immediate notification twenty-four hours a day, three hundred sixty-five days a year. For information on responsibilities see the ECC Procedures database. This includes responding to, investigating and correcting abnormal operations or shutdown:

- *Unintended valve closure or shutdown*
- *Increase or decrease in pressure or flow rate outside normal operating limits*
- *Loss of communications*
- *Operation of a safety device*
- *Any other malfunction of a component, deviation from normal operation, or employee error that could cause a hazard to persons or property*

When an emergency or suspected emergency report is received from the public, police, or an employee, the Control Center will notify:

- *Local police, if required*
- *Regional management*
- *Shipper services*

3.3 Do the Facility Response Plan notification procedures include telephone numbers so that the qualified individual(s) and oil spill removal organization(s) can be reached twenty-four hours a day, three hundred sixty-five days a year? (49 CFR 194.107(b)(1) and (2), 194.107(c)(1)(ii) and 194.113(b)(2))

- Qualified Individual(s)? YES
- Oil Spill Removal Organization(s)? YES
- Are the National Response Center numbers correctly listed as 1-800-424-8802 and 202-267-2675 in the plan? YES
- Company personnel (spill management team)? YES

See Page References:

Region Specific Book 7- ERP

Tab 1- Page 4- Region Specific- Qualified Individuals

Tab 2- Page 26-27 Company/Co-Op Equipment Lists- Specialty Contractors (Oil Spill Removal Organization)

Supplemental Resource: Emergency Response Directory (ERD)- Notification Procedures tab, Company Personnel tabs, and Emergency Contacts tab- these tabs contain current telephone numbers for company and contractor resources, as well as the National Response Center numbers 1-800-424-8802 and 202-267-2675.

3.4 Does the notification section include the following information? (49 CFR 194.107(b)(1) and (2), and 194.107(c)(1)(ii))

- Name of pipeline operator? YES
- Time of discharge? YES
- Location of discharge? YES
- Name of oil involved? YES
- Reason for discharge? YES
- Estimated volume of oil discharged? YES
- Weather conditions on scene? YES

See Page References:

Region Specific Book 7- ERP

Tab 3- Maps and References- This information is covered within the Enbridge Release Alert Form.

Supplemental Resource: Emergency Response Directory (ERD)- Forms tab- Form F

3.5 Does the Facility Response Plan (ERP) name and give the address(es) and telephone number(s) for the operator's oil spill removal organizations? (49 CFR 194.107(c)(1)(iv) and 194.115)

- Name(s)? YES
- Address(es)? YES
- Telephone Number(s)? YES

See Page References:

Region Specific Book 7- ERP

Tab 2- Page 26-27- Company/Co-Op Equipment Lists- Specialty Contractors

Supplemental Resource: Emergency Response Directory (ERD)- Contractors tab

SPILL DETECTION AND MITIGATION PROCEDURES FOR SEQUENCE NUMBER: 867

4.1 Does the Facility Response Plan (ERP) contain procedures to name and mitigate or prevent a substantial threat of a worst-case discharge? (49 CFR 194.107(a) and (b)(2)(i)) YES

See Page References:

Region Specific Book 7- ERP

Appendix - Pages 5-6- Consistency with National and Area Contingency Plans

Appendix - Pages 7-8- Calculation of Worst Case Discharge

O & MP Book 7: Emergency Response

Sections 1 through 4- Contain actions and procedures for mitigating or preventing substantial threat of a worst case discharge.

4.2 Does the Facility Response Plan (ERP) name personnel, equipment and procedures for detecting leaks and spills and locating spills throughout the response zone? (49 CFR 194.107(c)(1)(iii)) YES

See Page References:

O & MP Book 7: Emergency Response
Sec 02-02-01-Pages 1-4- Emergency Notification
Sec 02-02-02-Pages 1-4- First Responder
Sec 02-02-03-Pages 1-16- Incident Command System
Supplemental Resource: Emergency Response Directory (ERD)- Company Personnel tab
Supplemental Resource: The Control Center Procedures

4.3 Does the Facility Response Plan (ERP) name the maximum time to detect the spill and shut down flow in affected pipeline(s) in bad weather? (49 CFR 194.105(b)(1)) YES

See Page References:

Region Specific Book 7- ERP
Appendix- Pages 7-8- Calculation of Worst-Case Discharge
Supplemental Resource: The Control Center Procedures

4.4 Does the Facility Response Plan (ERP) have procedures to mitigate spills appropriate for the response zone(s) and consistent with applicable Area Contingency Plan(s)? (49 CFR 194.107(b)(2)(i), and (c)(a)(iii)and (v)) YES

See Page References:

O & MP Book 7: Emergency Response
Sections 1 through 4- Contain actions and procedures for mitigating and preventing spills.
Region Specific Book 7- ERP
Tab 2- Page 1- Company/Co-Op Equipment Lists
Appendix- Pages 5-6- *Consistency with National and Area Contingency Plans*

SPILL CONTAINMENT
FOR SEQUENCE NUMBER: 867

5.1 Does the Facility Response Plan (ERP) name spill containment strategies appropriate for the response zone(s) and consistent with applicable Area Contingency Plans? (49 CFR 194.107(b)(1)(iii), (b)(2)(i) and (c)(1)(v)) YES

See Page References:

O & MP Book 7: Emergency Response
Sec 04- Containment, Recovery and Clean-up
Sec 04-02-01- Pages 1-8- On Land
Sec 04-02-02- Pages 1-6- In Wetlands
Sec 04-02-03- Pages 1-5- In Muskeg
Sec 04-02-04- Pages 1-7- In Rivers
Sec 04-02-05- Pages 1-3- In Lakes
Sec 04-02-06- Pages 1-6- On Ice
Sec 04-02-07- Pages 1-6- Under Ice
Sec 04-02-08- Pages 1-3- During Freeze-up or Break-up
Sec 04-02-09- Pages 1-6- In Sensitive Areas
Sec 04-02-10- Pages 1-9- In-Situ Burning

5.2 Can planned spill containment activities be accomplished within the appropriate tier times? (49 CFR 194.107(b)(2)(i), (c)(1)(v) and 194.115) YES

See Page References:

Region Specific Book 7- ERP

Tab 3- Maps and References- Region Emergency Response Times Map

5.3 Are containment equipment capacities described in sufficient detail and does the Facility Response Plan (ERP) identify enough spill containment equipment to respond to a worst-case discharge to the maximum extent practicable? (49 CFR 194.107(b)(2)(i), (C)(1)(v) and 194.115) YES

See Page References:

Region Specific Book 7- ERP

Tab 2- Pages 2-52- Company/Co-Op Equipment Lists

O & MP Book 7: Emergency Response

Sec 01-02-02- Pages 1-3- *Support Equipment and Services*

SPILL RECOVERY
FOR SEQUENCE NUMBER: 867

6.1 Does the Facility Response Plan (ERP) identify spill recovery strategies appropriate for the response zone(s) and consistent with applicable Area Contingency Plans? (49 CFR 194.107(b)(1)(iii), (b)(2)(i), (iv), and (c)(1)(v)) YES

See Page References:

O & MP Book 7: Emergency Response

Sec 04- Containment, Recovery and Clean-up

Sec 04-02-01- Pages 1-8- On Land
Sec 04-02-02- Pages 1-6- In Wetlands
Sec 04-02-03- Pages 1-5- In Muskeg
Sec 04-02-04- Pages 1-7- In Rivers
Sec 04-02-05- Pages 1-3- In Lakes
Sec 04-02-06- Pages 1-6- On Ice
Sec 04-02-07- Pages 1-6- Under Ice
Sec 04-02-08- Pages 1-3- During Freeze-up or Break-up
Sec 04-02-09- Pages 1-6- In Sensitive Areas
Sec 04-02-10- Pages 1-9- In-Situ Burning

6.2 Can planned spill recovery activities be accomplished within the appropriate tier times? (49 CFR 194.107(b)(2)(i), (c)(1)(v) and 194.115) YES

See Page References:

Region Specific Book 7- ERP

Tab 3- Maps and References- Region Emergency Response Times Map

6.3 Are recovery equipment capacities described in sufficient detail and does the Facility Response Plan (ERP) identify enough spill recovery equipment to respond to a worst-case discharge to the maximum extent practicable? (49 CFR 194.107(b)(2)(i), (C)(1)(v) and 194.115) YES

See Page References:

Region Specific Book 7- ERP

Tab 2- Pages 2-52- Company/Co-Op Equipment Lists

DISPOSAL
FOR SEQUENCE NUMBER: 867

7.1 Does the Facility Response Plan (ERP) identify disposal procedures, including temporary storage equipment for recovered oil appropriate for the response zone(s) and consistent with applicable Area Contingency Plans? (49 CFR 194.107(b)(1)(iii), (b)(2)(i),and (c)(1)(v)) YES

See Page References:

O & MP Book 7: Emergency Response
Sec 02-02-08- Pages 1-2- Waste Management
Region Specific Book 7- ERP
Tab 2- Pages 1-52- Company/Co-Op Equipment Lists

7.2 Can planned temporary storage and waste disposal activities be accomplished within the appropriate tier times? (49 CFR 194.107(b)(2)(i), (c)(1)(v) and 194.115) YES

See Page References:

Region Specific Book 7- ERP
Tab 2- Pages 1- Company/Co-Op Equipment Lists
Tab 3- Maps and References-Region Emergency Response Times Map

7.3 Does the Facility Response Plan (ERP) identify sufficient temporary storage capabilities to respond to a worst-case discharge to the maximum extent practicable? (49 CFR 194.107(b)(2)(i), (C)(1)(v) and 194.115) YES

See Page References:

O & MP Book 7: Emergency Response
Sec 02-02-08- Pages 1-2- Waste Management
Region Specific Book 7- ERP
Tab 2- Pages 1-52- Company/Co-Op Equipment Lists

SENSITIVE AREA PROTECTION
FOR SEQUENCE NUMBER: 867

8.1 Does the Facility Response Plan (ERP) identify the protection strategies appropriate for the response zone(s) and consistent with applicable Area Contingency Plans? (49 CFR 194.107(b)(1)(iii), (b)(2)(i), (ii), and (c)(1)(v)) YES

See Page References:

O & MP Book 7: Emergency Response
Sections 1 through 4- Contain actions and procedures for the protection of the public, personnel and the environment
Region Specific Book 7- ERP
Tab 5- Pages 1-9- Region Security Plan

8.2 Can planned protection activities be accomplished within the appropriate tier times? (49 CFR 194.107(b)(2)(i), (c)(1)(v) and 194.115) YES
See Page References:

Region Specific Book 7- ERP
Tab 2- Page 1- Company/Co-Op Equipment Lists
Tab 3- Maps and References- Region Emergency Response Times Map

RESPONSE MANAGEMENT
FOR SEQUENCE NUMBER: 867

9.1 Is the response management system described in the Facility Response Plan (FRP) based on an Incident Command System? (49 CFR 194.107(b)(1)(i), (b)(2)(i), (iii), and (c)(3)) YES

See Page References:

O & MP Book 7: Emergency Response
Sec 02-02-03- Pages 1-16- Incident Command System

9.2 Does the operator's response organization describe roles and responsibilities for: (49 CFR 194.107(b)(2)(i), (c)(1)(v) and 194.117)

- Qualified Individual? YES
- Other operator response personnel including the spill management team? YES
- Contracted Oil Spill Removal Organization? YES

See Page References:

O & MP Book 7: Emergency Response
Sec 01-02-02- Pages 1-2- Support Equipment and Services- Oil Spill Response Organization
Sec 02-02-01- Pages 1-4- Emergency Notification- Qualified Individual
Sec 02-02-03- Pages 1-16- Incident Command System- Other operator response personnel including the spill management team.
Region Specific Book 7- ERP
Tab 1- Page 4- Qualified Individual
Tab 2- Pages 26-27- Company/Co-Op Equipment Lists- Contracted Oil Spill Removal Organizations

9.3 Does the operator's response organization describe how the operator works with the Unified Command and with responders including: (49 CFR 194.107(b)(1)(i), (b)(2)(iii) and (c)(3))

- Oil Spill Removal Organization? YES
- State and Local Responders? YES
- Federal On-Scene Coordinator? YES

See Page References:

O & MP Book 7: Emergency Response
Sec 02-02-03- Pages 1-16- Incident Command System- all of the above

COMMUNICATIONS, RESPONSE EQUIPMENT AND TRANSPORTATION
FOR SEQUENCE NUMBER: 867

10.1 Does the Facility Response Plan (FRP) describe appropriate communications procedures and system(s) adequate for notifications and response operations? (49 CFR 194.107(c)(1)(ii) and(v)) YES

See Page References:

O & MP Book 7: Emergency Response
Sec 02-02-01- Pages 1-4- Emergency Notification

10.2 Does the Facility Response Plan (FRP) identify response equipment that the operator owns and maintains? (49 CFR 194.107(c)(1)(v) and 194.115(a)) YES

See Page References:

Region Specific Book 7- ERP
Tab 2- Pages 1-52- Company/Co-Op Equipment Lists

10.3 Does the Facility Response Plan (FRP) describe procedures for maintaining response equipment the operator owns? (49 CFR 194.107(c)(1)(viii)) YES

See Page References:

O & MP Book 7: Emergency Response
Sec 01-02-02- Pages 1-3- Support Equipment and Services
Region Specific Book 7- ERP
Tab 2- Page 1- Company/Co-Op Equipment Lists

10.4 Does the Facility Response Plan (FRP) identify Oil Spill Removal Organization(s) response equipment when the U.S. Coast Guard has not classified the Oil Spill Removal Organization? (49 CFR 194.107(c)(1)(v) and 194.115(a)) N/A

Comment:

Not applicable since Enbridge's current OSRO's are classified by the Coast Guard.

10.5 Does the Facility Response Plan (FRP) describe procedures for maintaining Oil Spill Removal Organization(s) response equipment when the U.S. Coast Guard has not classified the Oil Spill Removal Organization? (49 CFR 194.107(c)(1)(viii)) N/A

Comment:

Not applicable since Enbridge's current OSRO's are classified by the Coast Guard.

10.6 Does the Facility Response Plan (FRP) identify locations for operator owned and Oil Spill Removal Organization(s)-owned response equipment? (49 CFR 194.115(b)) YES

See Page References:

Region Specific Book 7- ERP
Tab 2- Pages 1-52- Company/Co-Op Equipment Lists- Specialty Contract or Contacts

10.7 Does the Facility Response Plan (FRP) describe mobilizing and deploying response equipment within the appropriate tier times consistent with the plan's response activities? (49 CFR 194.107(c)(1)(v) and 194.115(b)) YES

See Page References:

O & MP Book 7: Emergency Response
Sec 02-02-03- Pages 1-16- Incident Command System
Sec 04-03-01- Pages 1-11- Deploying River Booms
Region Specific Book 7- ERP
Tab 3- Maps and References- Region Emergency Response Times Map
- Major Response Equipment Staging Area Map

10.8 Does the size of the response zone permit planned response activities, including equipment mobilization and deployment, within the appropriate tier times? (49 CFR 194.115(b)) YES
See Page Reference:

Region Specific Book 7- ERP
Tab 3- Maps and References- Region Emergency Response Times Map
- Major Response Equipment Staging Area Map

RESPONSE PERSONNEL AND MOBILIZATION
FOR SEQUENCE NUMBER: 867

11.1 Does the Facility Response Plan (FRP) identify enough trained personnel to respond to the worst-case discharge consistent with the Plan's response activities? (49 CFR 194.107(a),(c)(1)(v) and (c)(3),194.115, and 194.117) YES

See Page Reference:

Region Specific Book 7- ERP
Tab 2- Page 53- Company/Co-Op Equipment Lists – Emergency Response Trained Personnel

11.2 Does the Facility Response Plan (FRP) describe procedures for mobilizing and deploying response personnel throughout the response zone(s) consistent with the plan's response activities? (49 CFR 194.107(b)(2)(i), (c)(1)(v) and 194.115) YES

See Page Reference:

O & MP Book 7: Emergency Response
Sec 02-02-03- Pages 1-16- Incident Command System

RESPONSE DOCUMENTATION AND WORST-CASE DISCHARGE
FOR SEQUENCE NUMBER: 867

12.1 Does the operator describe procedures the response management organization must use to document response decisions, activities, and costs? (49 CFR 194.107(c)(3)) YES

See Page Reference:

O & MP Book 7: Emergency Response
Sec 02-02-09- Pages 1-5- Incident Records
Sec 02-02-10 Pages 1-2- Post-Emergency Review

12.2 Does the Facility Response Plan (FRP) provide the calculations and methodology used for determining the worst-case discharge for the response zone(s)? (49 CFR 194.105) YES

See Page Reference:

Region Specific Book 7- ERP
Appendix- Pages 7-8- Calculation of Worst- Case Discharge

12.3 Is the worst-case discharge volume calculated using the three specified methods in the Department of Transportation regulation? Are the calculations accurate and as prescribed? (49 CFR 194.105(b)) NO (See comments note below)

See Page Reference:

Region Specific Book 7- ERP
Appendix- Pages 7-8- Calculation of Worst- Case Discharge

Comments:

Enbridge uses a more conservative approach in their calculations for worst case discharge which has been previously approved by PHMSA, as described in listed reference.

TRAINING: PROGRAM AND PROCEDURES
FOR SEQUENCE NUMBER: 867

13.1 Does the Facility Response Plan (FRP) describe a training program that teaches response personnel about the Plan and their responsibilities under the plan? (49 CFR 194.107(b)(1)(ii),(c)(1)(vii) and (c)(3), and 194.117) YES

See Page Reference:

Region Specific Book 7- ERP
Appendix- Pages 5-6- *Consistency with National and Area Contingency Plans*

Comment:

For further information on emergency response training and exercises, see Book 2: Safety Sec 15-02-02.

13.2 Does the Facility Response Plan (ERP) describe a training program that teaches response personnel about matters including (49 CFR 194.117(a)(3)):

- Oil characteristics and hazards? YES
- Conditions that are likely to worsen emergencies, including the consequences of facility malfunctions or failures and appropriate corrective actions? YES
- Steps necessary to control an accidental discharge of oil? YES
- Steps necessary to minimize the potential for fire, explosion, or environmental damage? YES
- Proper fire-fighting procedures and use of personal protective equipment? YES

See Page Reference:

Region Specific Book 7- ERP
Tab 2-Page 53- Company/Co-Op Equipment Lists - Emergency Response Trained Personnel
Appendix- Pages 5-6- *Consistency with National and Area Contingency Plans*
O & MP Book 7: Emergency Response
Sec 01-02-03- Pages 1-3- Emergency Response Plans and Maps
Sec 02-02-04- Pages 1-3- Safety Precautions
Sec 02-02-06- Pages 1-4- Site Security and Control
Sec 02-02-10- Pages 1-2- Post-Emergency Reviews
Sec 03-03-02- Pages 1-6- Fires and Explosions

Comment:

For further information on emergency response training and exercises see Book 2: Safety Sec 15-02-02.

13.3 Does the Facility Response Plan (FRP) describe a response training program that addresses the appropriate levels of training and the requirements in OSHA 29 CFR 1910.120? (49 CFR 194.107(b) (1)(ii) and 194.117(c)) YES

See Page Reference:

Region Specific Book 7- ERP
Appendix- Pages 5-6- *Consistency with National and Area Contingency Plans*

Comment:

For further information on emergency response training and exercises see Book 2: Safety Sec 15-02-02.

13.4 Does the Facility Response Plan (ERP) describe the operator's procedures for maintaining records for response personnel? (49 CFR 194.117(b)) YES

See Page Reference:

O & MP Book 7: Emergency Response
Sec 02-02-03- Page 13- Incident Command Center- Documentation Unit
Sec 02-02-09 Pages 1-5- Incident Records
Region Specific Book 7- ERP
Appendix- Pages 5-6- *Consistency with National and Area Contingency Plans*

Comment:

For further information on emergency response training and exercises see Book 2: Safety Sec 15-02-02.

SPILL RESPONSE DRILL PROGRAM
FOR SEQUENCE NUMBER: 867

14.1 Does the Facility Response Plan (ERP) describe procedures for conducting internal and external drills that include (49 CFR 194.107(c)(1)(ix)):

- Responsibility for planning, carrying out, and monitoring drills? YES
- Announced drills? YES
- At least one unannounced internal drill? YES
- Quarterly Qualified Individual notification drills? YES
- Annual spill management team tabletop drills? YES
- Annual Oil Spill Removal Organization(s) equipment deployment drills of representative types and amounts of key equipment in the Facility Response Plan? YES
- At least one drill that tests the entire response plan for each response zone at least once every three years? YES

See Page Reference:

Region Specific Book 7- ERP
Tab 2- Page 53- Company/ Co-Op Equipment Lists - Qualified Individuals Notification:
- Quarterly Qualified Individual notification drills-

O & MP Book 7: Emergency Response
Sec 01-02-02- Pages 2-3- Support Equipment and Services- Spill Response Exercise:
- Responsibility for planning, carrying out, and monitoring drills- as per the National Preparedness for Response Exercise Program (PREP)
- Announced drills
- At least one unannounced internal drill
- Annual spill management team tabletop drills
- Annual Oil Spill Removal Organization(s) equipment deployment drills of representative types and amounts of key equipment in the Facility Response Plan
- At least one drill that tests the entire response plan for each response zone at least once every three years

Comment:

For information on the frequencies required for spill response tabletop exercises, deployment exercises, and water, land and ice exercises, see Book 2: Safety Sec 15-02-02.

14.2 Does the Facility Response Plan (ERP) describe a three-year drill and exercise cycle and the frequencies for each type of drill in that cycle? (49 CFR 194.107(c)(1)(ix)): YES

See Page Reference:

O & MP Book 7: Emergency Response
Sec 01-02-02- Pages 2-3- Support Equipment and Services- Spill Response Exercise

14.3 Does the Facility Response Plan (FRP) describe procedures for maintaining drill documentation for three-years? (49 CFR 194.107(c)(1)(ix)): YES

See Page Reference:

Region Specific Book 7- ERP
Appendix- Page 6- *Consistency with National and Area Contingency Plans*
O & MP Book 7: Emergency Response
Sec 05-02-02- Record Keeping

Comment:

For information on record keeping on drill documentation, see Book 2: Safety Sec 15-02-02.

RESPONSE PLAN MAINTENANCE
FOR SEQUENCE NUMBER: 867

15.1 Does the Facility Response Plan (FRP) describe the requirements and procedures for the operator to (a) review the Facility Response Plans at least every five years from the date the Office of Pipeline Safety approves the plan, (b) modify the Facility Response Plan to address new or different operating conditions or information in the Facility Response Plan, and (c) submit the plan for the Office of Pipeline Safety to review, require changes, and approve? (49 CFR 194.107(c)(1)(x) and 194.12(a)) YES

See Page Reference:

O & MP Book 7: Emergency Response
Review and Revision- *Pages 1-8*
Region Specific Book 7- ERP
Tab 1- Page 1- Revision Process

15.2 Does the Facility Response Plan (ERP)identify key factors that may cause revisions to the response plan and require the operator to submit revisions to the Office of Pipeline Safety within 30 days of making the revisions for factors including: (49 CFR 194.121(b))

- New pipeline construction or purchase? YES
- Different worst-case discharge volume? YES
- Change in commodities transported? YES
- Change in Oil Spill Removal Organization(s)? YES
- Change in Qualified Individuals? YES
- Change in National Contingency Plan or Area Contingency Plan that has a significant impact on the appropriateness of response equipment or response strategies? YES
- Change in response procedures? YES

See Page Reference:

Region Specific Book 7- ERP
Tab 1- Page 1- Revision Process

15.3 Does the Facility Response Plan (ERP) describe procedures for incorporating improvements in the following? (49 CFR 194.121(b)(8))

- Post-drill evaluation results? YES
- Post-incident evaluation results? YES

See Page Reference:

O & MP Book 7: Emergency Response

Sec 01-02-02- Pages 2-3- Support Equipment and Services- Adhere to the National Preparedness for Response Exercise Program (PREP) *guidelines for post drill evaluation*

Sec 02-02-03- Page 13- Incident Command Center- Documentation Unit for post- emergency review

Sec 02-02-10- Pages 1-2- Post-Emergency Reviews- for emergency response actions

Comment:

For information on determining causes of incidents and preventing similar events from occurring, see Book 1: General Reference: Incident Reporting 02-02-02, Incident Investigation 02-02-03 & Investigating Piping Failures 02-02-04.

NATIONAL CONTINGENCY PLAN AND AREA CONTINGENCY PLAN CONSISTENCY FOR SEQUENCE NUMBER: 867

16.1 Is the Plan consistent with the National Contingency Plan in effect at the time of submission? (49 CFR 194.107(b)(1)) Please answer yes or no. YES

See Page Reference:

Region Specific Book 7 ERP-

Appendix- Pages 5-6- Consistency with National and Area Contingency Plans

16.2 Is the Plan consistent with the Area Contingency Plans in effect for each response zone at the time of submission? (49 CFR 194.107(b)(2)) Please answer yes or no. YES

See Page Reference:

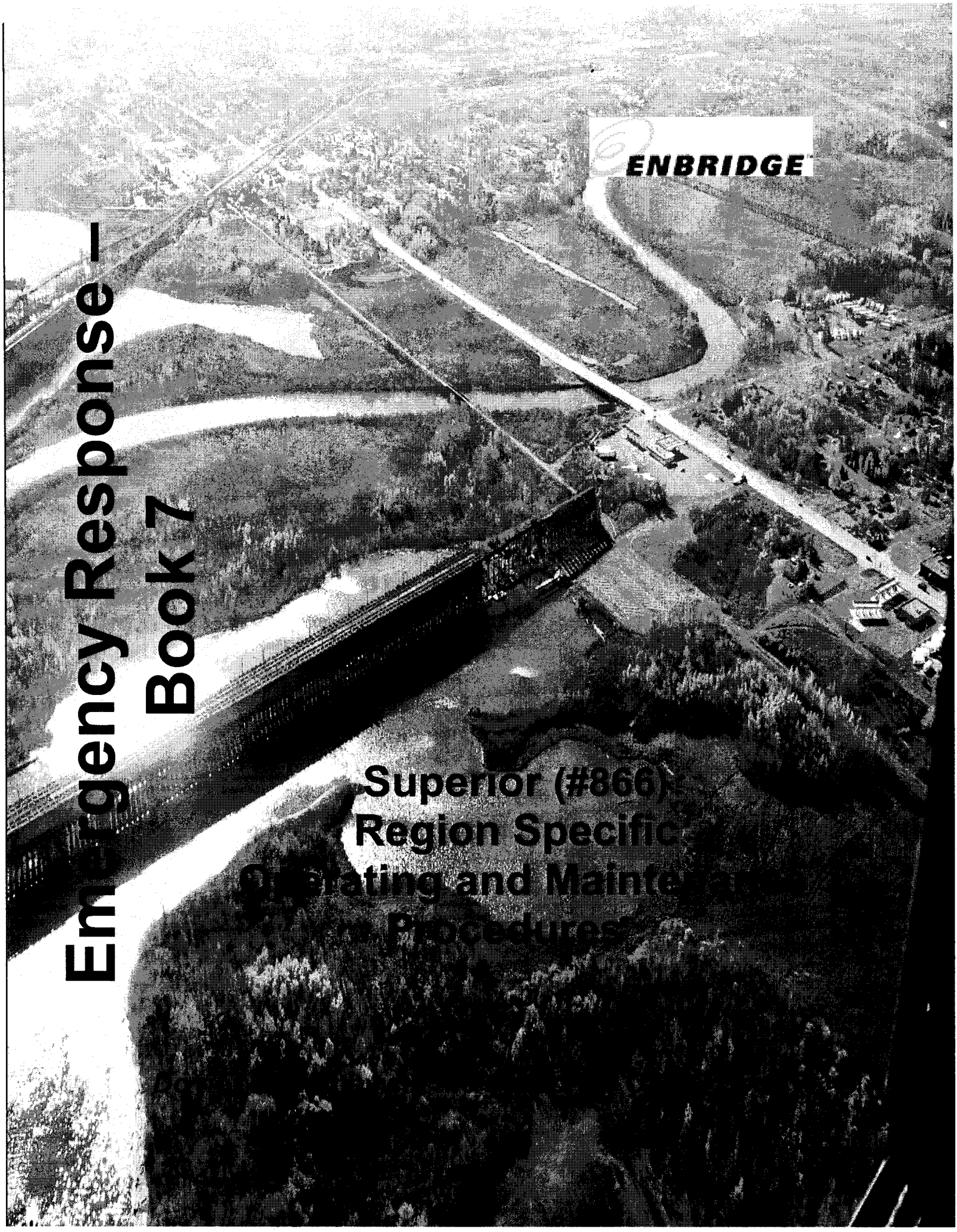
Region Specific Book 7 ERP-

Appendix- Pages 5-6- Consistency with National and Area Contingency Plans

16.3 Is the Plan's concept of operations adequate to carry out a response to the worst-case discharge under 49 CFR 194? (49 CFR 194.107) Please answer yes or no. YES

SPACER PAGE

INTENTIONALLY LEFT BLANK



ENBRIDGE

Emergency Response – Book 7

Superior (#866) Region Specific Operating and Maintenance Procedures

Region Specific

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 (Environment & Safety Clerk 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: _____

_____

_____

_____

_____

_____

Proposed wording: _____

_____

_____

_____

_____

_____

Reason for change: _____

_____

_____

_____

_____

Issued: 1/20/10

Submit Request Form to Manual Custodian.

Attn: Health & Safety Clerk, Superior Office

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			
03			
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			

Qualified Individual(s)

M. J. Willoughby
Superior Region General Manager, Enbridge (U.S.) Inc.
119 North 25th Street East,
Superior, WI 54880
Business: 715-394-1410
Business FAX: 715-394-1405
24 hr contact: 800-858-5253 via Edmonton Control Center

T.W. Fridel
Chicago Region General Manager, Enbridge (U.S.) Inc.
1500 W. Main Street
Griffith, IN 46319-
Business: 219-922-3133 Ext. 201
Business FAX: 219-922-3128
24 hr. contact: 800-858-5253 via Edmonton Control Center

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**
- Chicago Region
- Cushing Region
- Enbridge Pipelines North Dakota

Superior Region Response Zone (#866)

The Superior Region response zone begins at the Canadian border near Neche, North Dakota and continues across northern Minnesota into Superior, Wisconsin. This section of response zone includes seven pipelines (Lines 1, 2, 3, 4, 13, 65, and 67) that transport crude oil, natural gas and diluent condensate. 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. The Superior Region system is comprised in total of eleven pipelines:

- Approximately 2,937 miles of pipeline, with pipe diameters ranging from 18 to 48 inches;
- 29 Pump Stations are located along the pipes;
- The Superior System includes 44 tanks (35 Tanks at Superior; 9 at Clearbrook). Tanks located in Superior, WI have 7.5 million barrels storage capacity and Clearbrook, MN has 1.3 million barrels storage capacity.

Counties included in the Superior Region response zone are:

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

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	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	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	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	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	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	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	1,173,151	1,306,304	25.2	36"	Crude Oil

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	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	1,616,840	1,712,760	19.8	36"	Crude Oil
SL 13	Gretna, Manitoba to Clearbrook, MN	0	715,074	135.4	18"	Diluent Condensate
SL 13	Clearbrook, MN to Superior, WI	0	1,003,300	190	20"	Diluent Condensate
SL 13	Superior, WI to Ladysmith, WI	0	524,052	99	20"	Diluent Condensate
AC 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
	Total Pipeline Miles			**2937.38**		

Company/Co-Op Equipment Lists

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 with tankage and then re-injected into the pipeline.

Enbridge has working 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 the OSRO's equipment inventories are kept on file at each region office.

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. Enbridge does not retain equipment inventory lists for all non USCG classified contractors.

SPECIALTY CONTRACTOR CONTACTS

BAY WEST

Bay West is an established Coast Guard classified OSRO (Oil Spill Response Organization) 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 an Emergency Response retainer to supplement internal resources in the event of a pipeline incident.

A list of Bay West's emergency response equipment can be found at:
http://www.baywest.com/emergency.htm

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

GARNER ENVIRONMENTAL SERVICES INC.

Garner Environmental Services is a full service environmental and emergency response company 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.

A list of Garner Environmental Services' emergency response equipment can be found at: http://www.garner-es.com/documentsdown.html

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.

Garner Environmental Services Inc.
1717 W 13th St.
Deer Park, TX 77536
(281) 930-1200 1-800-424-1716 (24 hrs)
www.garner-es.com

Maps & References

Maps & References

Main Line Valves

Site Safety Plot Plan

Pipeline Information
Release Alert

Miles of Mainline Pipe

Pipeline System Map

HCA Overview Map
HCA Tables

Equipment Staging Area Map

Emergency Response Map

Superior Region
Emergency Response Plan

Valve Locations

			Alberta Clipper		Southern Lights	
			Asbuilt		For Bid	
(NAME)	(MP)	(TRACT)	(NORTHING)	(EASTING)	(NORTHING)	(EASTING)
Pembina River (downstream)	776.74	T-1107	1257829.9080	1570310.6560		
Red River of the North (upstream)	801.13	T-1034	1160253.4150	1653389.8520		
Red River of the North (downstream)	805.63	T-1018	1141238.6470	1667319.0320		
Donaldson Station	**814.10**	**T-998-B, T-998-C**	**1107402.7830**	**1696334.2000**		
Tamarac River (Vol. Out Red.)	829.28	T-953	1045323.7580	1746829.3960		
Middle River (Vol. Out Red.)	836.50	T-930	1016725.1930	1771394.1080		
Red Lake River (upstream)	864.10	T-840	905774.5460	1864434.2690		
Red Lake River (downstream)	865.10	T-838	901902.4010	1868036.5340		
Clearwater River (upstream)	875.00	T-810-B	861132.2520	1900532.4390		
Plummer Station	**877.10**	**T-805-B**	**853920.0490**	**1908976.8310**		
Oklee/Lost River (Risk Valve)	888.00	T-769	824689.2220	1957794.7790		
West Four Legged Lake (upstream)†	916.35	T-680	754051.3070	2088639.0560	754094.0658	2088657.0648
West Four Legged Lake (downstream)†	918.84	T-666	747695.7750	2100302.0700	747751.1229	2100240.6140
Grant Creek (upstream)†	926.50	T-646	726003,4130	2133171.3750	725935.2653	2133286.3083
Wilton Station	**928.80**	**T-638L**	**717375.3100**	**2142265.2560**	**717472.5721**	**2142199.8940**
Mississippi River 1 (upstream)†	939.42	T-585	679688.9030	2181572.7640	679710.5147	2181595.1706
Mississippi River 1 (downstream)†	939.94	T-583	677840.9600	2183630.8480	677853.8056	2183621.8730
Cass Lake Station	**953.15**	**T-531-S**	**652085.9010**	**2243764.6700**		
Sucker Lakes/Portage Trib (upstream)†	964.06	T-501	646973.3090	2298197.3030	647001.4318	2298201.6564
Sucker Lakes/Portage Trib (downstream)†	970.40	T-486	641008.8520	2331467.6610	641025.9723	2331486.7462
Mississippi River 2/Ball Club (upstream)†	985.60	T-453	629769.0620	2409310.7760	629617.4291	2409629.3452
Mississippi River 2/Ball Club (downstream) †	989.70	T-439	632767.8740	2429786.7350	632792.4416	2429775.3286
Prairie River (upstream)†	1008.71	GR-17	604629.1150	2521497.4610	604604.5160	2521498.3699
Prairie River (downstream)	1011.70	T-331D	594031.5100	2532616.0050	594090.4074	2532592.4739
Floodwood Station	**1044.40**	**T-202-C**	**488082.0420**	**2665227.3250**		
Military Road (Risk Valve)†	1087.07	T-33A	366658.8580	2839141.8840	366643.7514	2839159.7316
Pokegama River (Risk Valve)	1094.01	T-17	384091.6300	2871014.1300	384071.6570	2871024.4810

Miles of Mainline Pipe

ENBRIDGE ENERGY, LIMITED PARTERSHIP - Lakehead

Location	*Active Miles*	*Inactive Miles*	*HCA Miles (Unlapped)*
U.S. Border to Superior	**2,087**		**473**
20" Line 1 (U.S. Border to Clearbrook)-CO and NGL	135.7		41
18" Line 1 (Clearbrook to Superior) – CO and NGL	189.8		115
26" Line 2	324.5		95
34" Line 3	324.2		100
36"/48" Line 4 (U.S. Border to Clearbrook) 36"	136.0		20
36"/48" Line 4 (Clearbrook to Superior) 36"	191.0		82
18" Line 13 (U.S. Border to Clearbrook)	135.5		20
20" Line 13 (Clearbrook to Superior)	189.9		
20" Line 65 LSr (U.S. Border to Clearbrook)	136.0		
36" Line 67 AC (U.S. Border to Superior)	324.6		
Superior to Sarnia (Canadian Border)	**642**		**295**
30" Line 5 – CO and NGL	642.3		295
Superior to Griffith	**1,909**		**349**
34" Line 6A	465.4		164
20" Line 13 (Superior to Manhattan)	490.0		
24" Line 14	461.2		96
24" Line 64	26.1		26
42" Line 61 (Superior to Flanagan)	461.9		58
34" Griffith Hartsdale Transfer (TL 1)	0.6		0.6
36" Griffith Hartsdale Interconnect (GFHT 2)	0.8		0.8
36" Griffith Hartsdale Interconnect (GFHT 3)	0.8		0.8
Superior Terminal Pipe	0.3		0.3
Mokena 1	0.6		0.6
Mokena 2	0.6		0.6
Mustang	0.8		0.8
Griffith to Sarnia (Canadian Border)	**286**	**103**	**146**
30" Line 6B	285.9		128
30" Loops		103.2	18
Marysville	0.2		0.2
Buffalo Extension	**23**		**23**
12/20" Line 10	23.3		23
Enbridge Energy, Limited Partnership – Total Miles	**4,947**	**103**	**1,286**

ENBRIDGE - Affiliated Entities

Location	*Active Miles*	*Inactive Miles*	*HCA Miles (Unlapped)*
Enbridge Pipelines (North Dakota) LLC	**800**	**95**	**49**
6", 10", 12", and 16"	545.6		48
6", 8" Gathering Lines	117.7		
12" Line 26 (Lignite to Berthold)- Stanley to Plaza Field		95.2	1
Unregulated Gathering Lines	136.2		
Enbridge Pipelines (Toledo) Inc.	**88**		**38**
16" Line 17 (Stockbridge to Freedom Junction)	35.2		7
16" Line 17 (Freedom Junction to Toledo)	52.8		31
Samaria	0.2		0.2
Enbridge Pipelines (Ozark) L.L.C.	**484**	**32**	**260**
22" Line 51	433.5		224
10" Line 52 (intra-state)	47.1		29
10" Kamo		32	5
16" El Dorado – North	1.9		1
16" El Dorado – South	1.9		1
CCPS Transportation, LLC	**660**	**7**	**218**
22" Line 62 (Hartsdale to Flanagan)	75.1		27
22" Line 55 (Flanagan to Key)	251.4		47
24" Line 55 (Key to Cushing)	331.1		141
Cushing Seaway	0.1		0
Cushing Teppco H	0.7		0
Cushing Amoco 20"	0.4		0
Cushing Amoco 30"	0.5		0
Cushing Teppco Central	0.5		0
Cushing Teppco South	0.4		0
16" Monee		6.6	3
Mustang Pipeline Partners	**1**		**1**
24" Mustang Pipeline	0.8		1
Enbridge Pipelines (Illinois) LLC – (Luxor)		**117**	**23**
WPL #1 and WPL #3 (Patoka to Heyworth)		117.0	23
Enbridge Storage (Patoka) L.L.C.	0	0	0
This entity has tankage only, no pipeline miles			
Enbridge (affiliated entities) Total Miles	**2,033**	**251**	**589**
Enbridge Total Miles	**6,980**	**354**	**1,875**

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 Supervisor	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.

FORM F

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:

National Response Center (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:

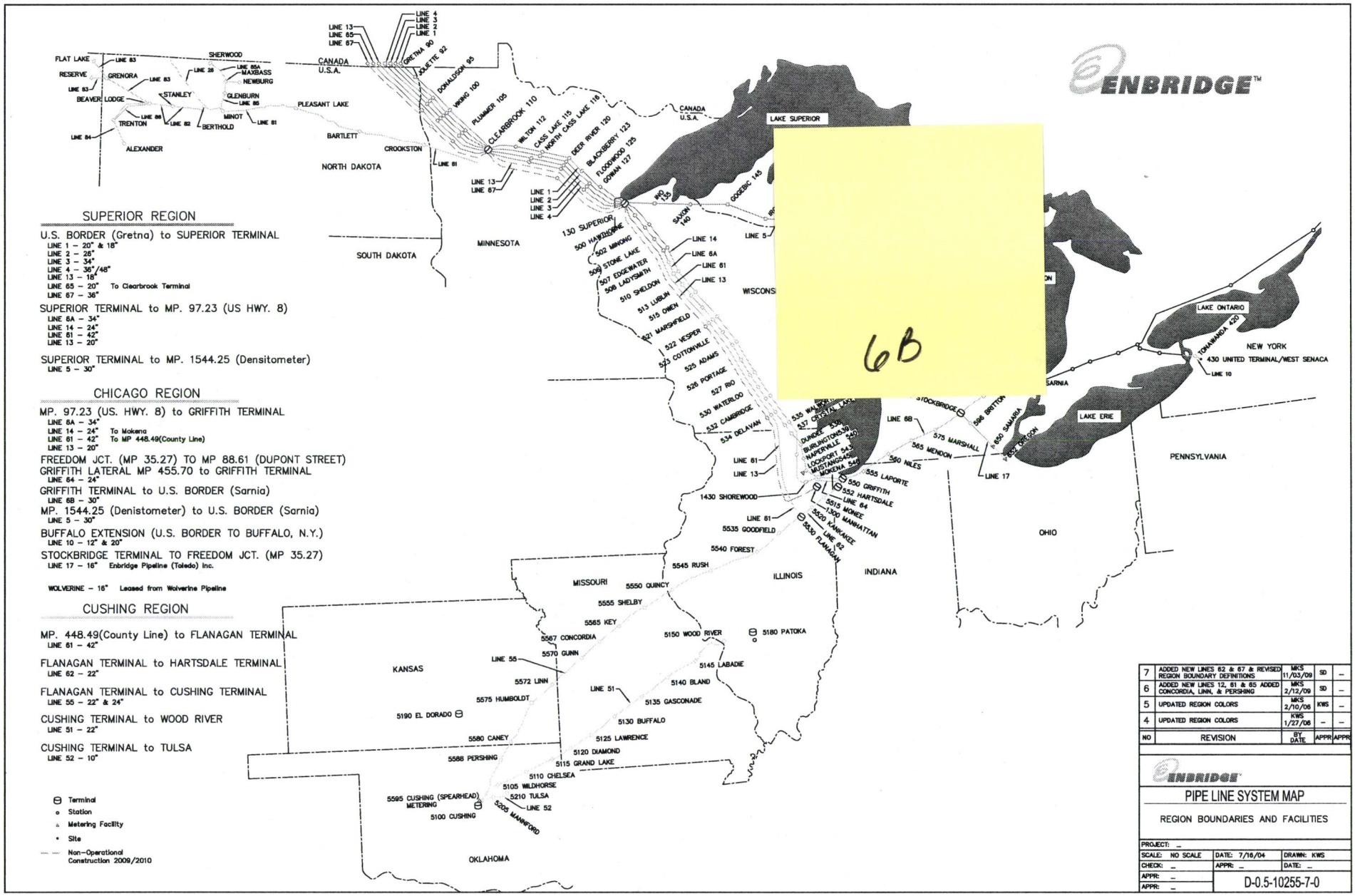
D. Product/Commodity Released:

Preliminary Estimate of Barrels Released:

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

F. Description of incident (include significant environment, safety, public affairs, regulatory, or financial concerns):

G. Weather Conditions:



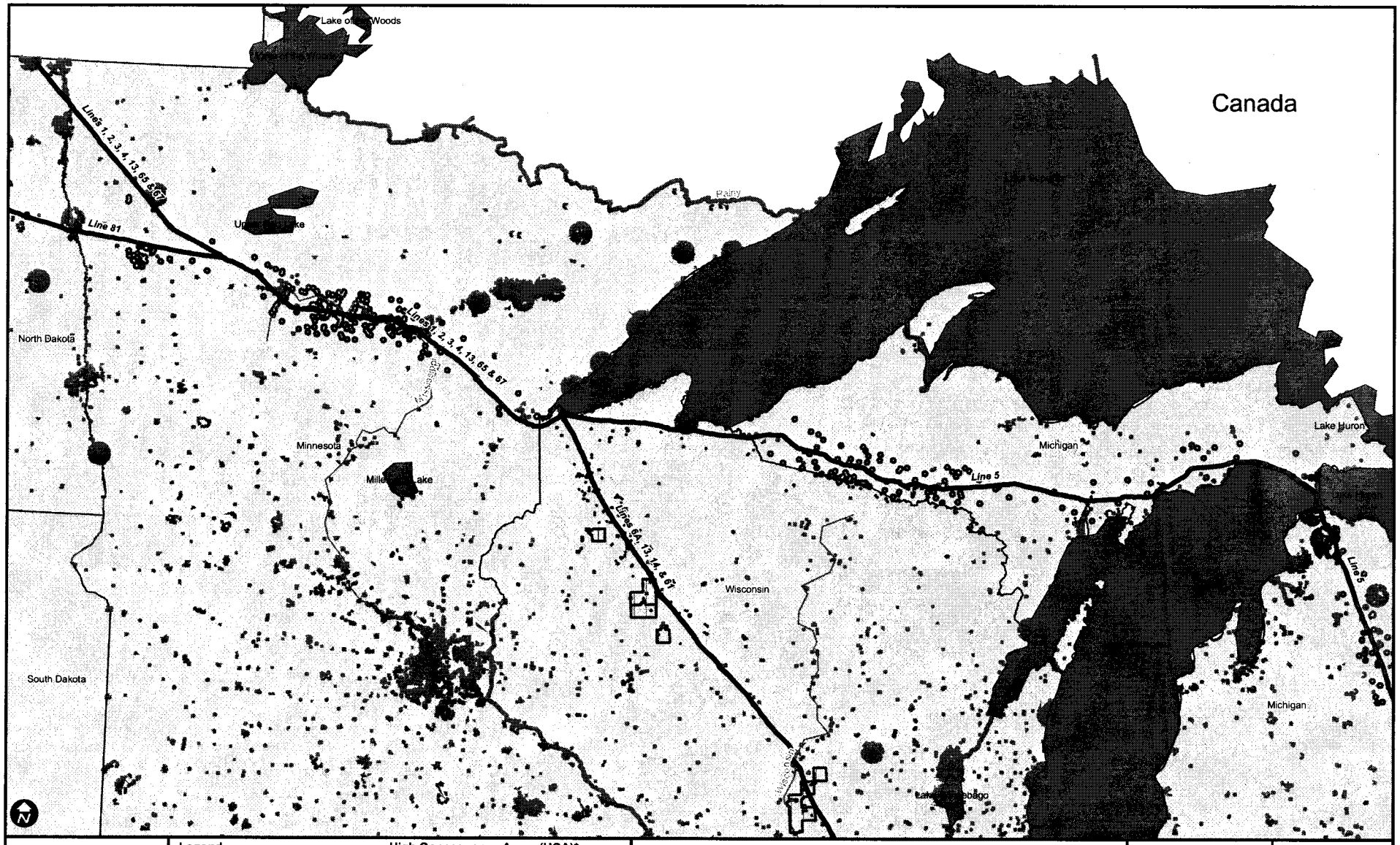
NO	REVISION	BY DATE	APPR	APPR
7	ADDED NEW LINES 62 & 67 & REVISED REGION BOUNDARY DEFINITIONS	MKS 11/03/09	SD	–
6	ADDED NEW LINES 12, 61 & 65 ADDED CONCORDIA, LINN, & PERSHING	MKS 2/12/09	SD	–
5	UPDATED REGION COLORS	MKS 2/10/08	KWS	–
4	UPDATED REGION COLORS	KWS 1/27/08	–	–

ENBRIDGE

PIPE LINE SYSTEM MAP

REGION BOUNDARIES AND FACILITIES

PROJECT: –		
SCALE: NO SCALE	DATE: 7/16/04	DRAWN: KWS
CHECK: –	APPR: –	DATE: –
APPR: –		D-0.5-10255-7-0
APPR: –		



ENBRIDGE

Legend

- Response Facilities
- Commercially Navigable Waterways
- Pipeline

High Consequence Areas (HCA)*

- Drinking Water HCA
- Ecological HCA

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

Enbridge Energy, Limited Partnership

Superior Region HCA Overview Map

0 40 80 120 160 Miles

DATE ISSUED: 12/1/2004	Natural Resources Engineering Co. 715-395-5680
DATE REVISED: 3/9/2010	
SCALE: 1:2,600,000	
DRAWN BY: JDK	
SERIES: Emergency Response Times	

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
U.S. Border to Clearbrook 20" (0 - 716,232)								
1	20-inch	3,900	13,093			1.74	775	U.S. DW / SW
1	20-inch	13,443	15,243			0.34	776	U.S. DW / SW
1	20-inch	15,943	26,543			2.01	778	U.S. DW / SW
1	20-inch	49,555	51,605			0.39	783	U.S. DW / SW
1	20-inch	64,824	66,774			0.37	786	U.S. DW / SW
1	20-inch	114,797	116,797			0.38	796	Enbridge CNW / Red River
1	20-inch	114,797	116,797			0.38	796	U.S. ESA
1	20-inch	122,347	124,297			0.37	797	Enbridge CNW / Red River
1	20-inch	122,347	124,297			0.37	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	141,891	145,891			0.76	801	Enbridge CNW / Red River
1	20-inch	146,541	148,456			0.36	802	Enbridge CNW / Red River
1	20-inch	155,506	158,248			0.52	803	Enbridge CNW / Red River
1	20-inch	165,906	168,906			0.57	805	Enbridge CNW / Red River
1	20-inch	447,859	452,196			0.82	859	U.S. DW / SW
1	20-inch	454,346	460,231			1.11	860	U.S. DW / SW
1	20-inch	462,431	468,917			1.23	862	U.S. DW / SW
1	20-inch	472,541	476,268			0.71	864	U.S. ESA
1	20-inch	473,118	475,618			0.47	864	U.S. DW / SW
1	20-inch	478,204	481,625			0.65	865	Enbridge DW / GW
1	20-inch	537,116	538,955			0.35	876	U.S. DW / GW

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
U.S. Border to Clearbrook 20" (0 - 716,232) cont.								
1	20-inch	539,855	543,462			0.68	876	U.S. DW / GW
1	20-inch	594,912	598,997			0.77	887	Enbridge DW / GW
1	20-inch	688,773	690,373			0.30	904	Enbridge DW / GW
1	20-inch	715,914	716,232			0.06	909	Enbridge DW / GW
Clearbrook to Superior 18" (716,232 - 1,712,883)								
1	18-inch	716,232	717,555			0.25	909	Enbridge DW / GW
1	18-inch	782,987	790,996			1.52	923	U.S. ESA
1	18-inch	794,050	804,430			1.97	925	U.S. ESA
1	18-inch	829,122	838,066			1.69	932	U.S. ESA
1	18-inch	864,826	881,559			3.17	939	U.S. ESA
1	18-inch	880,953	886,199			0.99	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	976,614	991,265			2.77	960	U.S. ESA
1	18-inch	1,003,365	1,007,335			0.75	964	U.S. ESA
1	18-inch	1,018,434	1,030,864			2.35	968	U.S. ESA
1	18-inch	1,038,085	1,045,345			1.38	971	U.S. ESA
1	18-inch	1,051,554	1,063,163			2.20	974	U.S. ESA
1	18-inch	1,060,348	1,072,813			2.36	976	U.S. ESA
1	18-inch	1,083,003	1,094,503			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	1,123,169			2.28	985	U.S. ESA
1	18-inch	1,117,854	1,123,065			0.99	986	Enbridge CNW / Mississippi River

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
Clearbrook to Superior 18" (716,232 - 1,712,883) cont.								
1	18-inch	1,117,854	1,123,065			0.99	986	U.S. ESA
1	18-inch	1,124,569	1,140,268			2.97	988	U.S. ESA
1	18-inch	1,137,868	1,140,268			0.45	989	Enbridge CNW / Mississippi River
1	18-inch	1,161,336	1,174,037			2.41	995	U.S. ESA
1	18-inch	1,182,137	1,182,687			0.10	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	1,226,009	1,243,765	3,965	24,596	3.91	1,008	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	1,611,094	1,611,944			0.16	1,079	Enbridge DW / GW
1	18-inch	1,668,943	1,676,143			1.36	1,090	U.S. ESA
1	18-inch	1,684,723	1,687,523			0.53	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

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
						Crude Oil:		
U.S. Border to Clearbrook (0 - 715,072)								
2	26-inch	4,000	13,145			1.73	775	U.S. DW / SW
2	26-inch	13,545	15,150			0.30	776	U.S. DW / SW
2	26-inch	15,850	26,541			2.02	778	U.S. DW / SW
2	26-inch	49,730	51,950			0.42	783	US DW / SW
2	26-inch	64,616	66,766			0.41	786	U.S. 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	122,528	125,328			0.53	797	Enbridge CNW / Red River
2	26-inch	122,528	125,328			0.53	797	U.S. ESA
2	26-inch	129,907	131,957			0.39	799	Enbridge CNW / Red River
2	26-inch	129,907	131,957			0.39	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	153,915	159,515			1.06	803	Enbridge CNW / Red River
2	26-inch	165,460	169,510			0.77	805	Enbridge CNW / Red River
2	26-inch	446,322	450,850			0.86	859	U.S. DW / SW
2	26-inch	452,876	458,758			1.11	860	U.S. DW / SW
2	26-inch	460,097	468,110			1.52	862	U.S. DW / SW
2	26-inch	470,907	475,007			0.78	863	U.S. ESA
2	26-inch	471,707	474,257			0.48	863	U.S. DW / SW
2	26-inch	476,581	481,853			1.01	864	Enbridge DW / GW
2	26-inch	535,540	541,880			1.20	876	U.S. DW / GW
2	26-inch	592,936	597,377	4,641		0.84	886	Enbridge DW / GW

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
						Crude Oil:		
U.S. Border to Clearbrook (0 - 715,072) cont.								
2	26-inch	686,780	688,430			0.31	904	Enbridge DW / GW
2	26-inch	713,734	715,382			0.31	909	Enbridge DW / GW
Clearbrook to Deer River (715,072 - 1,163,393 (855 - diversion))								
2	26-inch	782,987	791,050			1.53	923	U.S. ESA
2	26-inch	794,050	804,430			1.97	925	U.S. ESA
2	26-inch	829,122	838,066			1.69	932	U.S. ESA
2	26-inch	865,026	881,559			3.13	939	U.S. ESA
2	26-inch	881,003	886,199			0.98	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	976,614	991,265			2.77	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	1,030,864			2.43	968	U.S. ESA
2	26-inch	1,034,464	1,035,514			0.20	970	U.S. ESA
2	26-inch	1,038,145	1,045,595			1.41	971	U.S. ESA
2	26-inch	1,051,682	1,063,163			2.17	974	U.S. ESA
2	26-inch	1,059,819	1,073,013			2.50	976	U.S. ESA
2	26-inch	1,082,613	1,101,313			3.54	981	U.S. ESA
2	26-inch	1,111,203	1,123,169			2.27	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	1,124,673	1,140,318			2.96	988	U.S. ESA
2	26-inch	1,137,418	1,140,318			0.55	989	Enbridge CNW / Mississippi River

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
						Crude Oil:		
Clearbrook to Deer River (715,072 - 1,163,393 (855 - diversion)) cont.								
2	26-inch	1,161,336	1,172,801			2.17	995	U.S. ESA
Deer River to Superior (1,163,393 (855 - diversion) - 1,712,887)								
2	26-inch	1,181,987	1,183,487			0.28	998	U.S. ESA
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	1,226,173	1,244,449			3.46	1,008	Enbridge DW / GW
2	26-inch	1,246,763	1,250,263			0.66	1,010	Enbridge DW / GW
2	26-inch	1,252,082	1,255,270			0.60	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	1,323,902			0.61	1,024	U.S. ESA
2	26-inch	1,427,879	1,429,366			0.28	1,044	Enbridge DW / GW
2	26-inch	1,571,693	1,573,355			0.31	1,072	Enbridge DW / GW
2	26-inch	1,585,752	1,587,804			0.39	1,074	Enbridge DW / GW
2	26-inch	1,611,185	1,612,035			0.16	1,079	Enbridge DW / GW
2	26-inch	1,665,407	1,676,293			2.06	1,090	U.S. ESA
2	26-inch	1,684,723	1,687,473			0.52	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

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
U.S. Border to Clearbrook (0-715,082)								
3	34-inch	4,000	13,145			1.73	775	U.S. DW / SW
3	34-inch	13,545	15,150			0.30	776	U.S. DW / SW
3	34-inch	15,850	26,541			2.02	778	U.S. DW / SW
3	34-inch	49,642	51,891			0.44	783	US DW / SW
3	34-inch	63,966	66,866			0.55	786	U.S. 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	122,550	125,350	39,624	42,424	0.53	797	Enbridge CNW / Red River
3	34-inch	122,550	125,350	39,624	42,424	0.53	797	U.S. ESA
3	34-inch	129,860	131,860	46,934	48,934	0.38	799	Enbridge CNW / Red River
3	34-inch	129,860	131,860	46,934	48,934	0.38	799	U.S. ESA
3	34-inch	137,160	151,825	54,234		2.85	801	Enbridge CNW / Red River
3	34-inch	137,160	139,710	54,234	56,784	0.48	800	U.S. ESA
3	34-inch	153,825	159,725			1.12	803	Enbridge CNW / Red River
3	34-inch	165,302	169,510			0.80	805	Enbridge CNW / Red River
3	34-inch	446,422	450,850			0.84	859	U.S. DW / SW
3	34-inch	452,826	458,858			1.14	860	U.S. DW / SW
3	34-inch	459,758	468,060			1.57	862	U.S. DW / SW
3	34-inch	471,007	474,931			0.74	863	U.S. ESA
3	34-inch	471,707	474,157			0.46	863	U.S. DW / SW
3	34-inch	476,581	481,868			1.00	864	Enbridge DW / GW
3	34-inch	534,810	541,936			1.35	876	U.S. DW / GW
3	34-inch	593,216	597,593	4,490		0.94	886	Enbridge DW / GW
3	34-inch	686,780	688,480			0.32	904	Enbridge DW / GW

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
U.S. Border to Clearbrook (0-715,082) cont.								
3	34-inch	713,784	715,482			0.32	909	Enbridge DW / GW
Clearbrook to Superior (715,082-1,712,752)								
3	34-inch	783,016	790,900			1.49	923	U.S. ESA
3	34-inch	793,900	804,422			1.99	925	U.S. ESA
3	34-inch	829,122	838,122			1.70	932	U.S. ESA
3	34-inch	865,026	881,653			3.15	939	U.S. ESA
3	34-inch	880,953	886,290			1.01	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	951,500	954,300	11,954	14,754	0.53	954	Enbridge DW / GW
3	34-inch	976,614	991,310			2.78	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	1,038,195	1,045,595			1.40	971	U.S. ESA
3	34-inch	1,051,627	1,062,760			2.11	974	U.S. ESA
3	34-inch	1,059,610	1,073,413			2.61	976	U.S. ESA
3	34-inch	1,082,263	1,101,250			3.60	980	U.S. ESA
3	34-inch	1,111,203	1,123,115			2.25	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	1,124,615	1,140,328			2.98	988	U.S. ESA
3	34-inch	1,137,330	1,140,328			0.57	989	Enbridge CNW / Mississippi River

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Clearbrook to Superior (715,082-1,712,752) cont.								
3	34-inch	1,161,327	1,173,986		11,439	2.40	995	U.S. ESA
3	34-inch	1,184,700	1,190,350	22,145	27,791	1.07	999	U.S. ESA
3	34-inch	1,226,200	1,244,350			3.44	1,008	Enbridge DW / GW
3	34-inch	1,246,500	1,250,161			0.69	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	1,323,902			0.66	1,024	U.S. ESA
3	34-inch	1,427,615	1,429,516	45802		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	1,610,844	1,611,700			0.16	1,079	Enbridge DW / GW
3	34-inch	1,665,993	1,666,843			0.16	1,089	U.S. ESA
3	34-inch	1,667,493	1,676,140			1.64	1,090	U.S. ESA
3	34-inch	1,684,673	1,687,423			0.52	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

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
U.S. Border to Donaldson 36" (0-168,408)								
4	36-inch	4,000	13,159			1.73	775	U.S. DW / SW
4	36-inch	13,559	15,359			0.34	776	U.S. DW / SW
4	36-inch	16,009	26,601			2.01	778	U.S. DW / SW
4	36-inch	49,680	52,505			0.54	783	U.S. DW / SW
4	36-inch	63,780	66,930			0.60	786	U.S. DW / SW
4	36-inch	115,045	117,445			0.45	796	Enbridge CNW / Red River
4	36-inch	115,045	117,445			0.45	796	U.S. ESA
4	36-inch	122,795	124,745			0.37	797	Enbridge CNW / Red River
4	36-inch	122,795	124,745			0.37	797	U.S. ESA
4	36-inch	130,111	132,211			0.40	799	Enbridge CNW / Red River
4	36-inch	130,111	132,211			0.40	799	U.S. ESA
4	36-inch	137,519	139,687			0.41	800	Enbridge CNW / Red River
4	36-inch	137,519	139,687			0.41	800	U.S. ESA
4	36-inch	142,287	149,613			1.39	801	Enbridge CNW / Red River
4	36-inch	154,977	159,231			0.81	803	Enbridge CNW / Red River
4	36-inch	166,442	168,408			0.37	805	Enbridge CNW / Red River
U.S. Border to Donaldson 48" (168,041-212,348)								
4	48-inch	168,041	169,399			0.26	806	Enbridge CNW / Red River
Donaldson to Viking 48" (212,348 - 213,109)								
Donaldson to Viking 36" (213,461-322,423)								
Donaldson to Viking 48" (320,971-392,075)								

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
Viking to Plummer 48" (392,075-393,021)								
Viking to Plummer 36" (394,395-527,703)								
4	36-inch	447,512	451,972			0.84	859	U.S. DW / SW
4	36-inch	453,970	459,960			1.13	860	U.S. DW / SW
4	36-inch	462,073	469,308			1.37	862	U.S. DW / SW
4	36-inch	472,253	475,957			0.70	864	U.S. ESA
4	36-inch	472,803	475,170			0.45	863	U.S. DW / SW
4	36-inch	477,765	482,838			0.96	865	Enbridge DW / GW
Viking to Plummer 48" (526,404-545,165)								
4	48-inch	534,740	541,824			1.34	876	U.S. DW / GW
Plummer to Clearbrook 48" (545,165 - 545,840)								
Plummer to Clearbrook 36" (547,141-647,345)								
4	36-inch	594,908	600,008			0.97	887	Enbridge DW / GW
Plummer to Clearbrook 48" (645,406-716,261)								
4	48-inch	684,059	688,780			0.89	904	Enbridge DW / GW
4	48-inch	710,950	712,184			0.23	908	Enbridge DW / GW
4	48-inch	713,134	715,484			0.45	909	Enbridge DW / Clearbrook
Clearbrook to Cass Lake 36" (716,411-878,927)								
4	36-inch	783,868	791,681			1.48	923	U.S. ESA
4	36-inch	794,831	805,249			1.97	925	U.S. ESA
4	36-inch	829,927	839,010			1.72	932	U.S. ESA
4	36-inch	865,897	878,927			2.47	939	U.S. ESA / Lake Irving

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Clearbrook to Cass Lake 48" (877,981-946,695)								
4	48-inch	877,981	881,653			0.70	940	U.S. ESA
4	48-inch	880,953	886,277			1.01	941	U.S. DW / GW
4	48-inch	903,119	919,654			3.13	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
Clearbrook to Cass Lake 36" (946,641-946,717)								
Cass Lake to Deer River 36" (946,717-1,059,570)								
4	36-inch	951,455	954,055			0.49	954	Enbridge DW / GW
4	36-inch	974,442	988,963			2.75	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	1,028,545			2.39	967	U.S. ESA
4	36-inch	1,032,145	1,033,345			0.23	969	U.S. ESA
4	36-inch	1,035,854	1,043,354			1.42	971	U.S. ESA
4	36-inch	1,049,420	1,059,570			1.92	973	U.S. ESA
**Please note that the 36-inch pipeline south of Bena used to be diversion stationing but no longer is								
Cass Lake to Deer River 48" (127,102 (diversion)-1,173,196)								
4	48-inch	1,057,233	1,063,100	127,102	132,969	1.11	975	U.S. ESA
4	48-inch	1,061,158	1,071,300	131,027	141,169	1.92	976	U.S. ESA
4	48-inch	1,082,900	1,101,300	152,769	171,169	3.48	981	U.S. ESA
4	48-inch	1,111,300	1,123,150	181,169	193,019	2.24	985	U.S. ESA
4	48-inch	1,119,250	1,125,350	189,119	195,219	1.16	986	Enbridge CNW / Mississippi River
4	48-inch	1,119,250	1,142,100	189,119		4.33	988	U.S. ESA
4	48-inch	1,137,495	1,140,600		2,885	0.60	989	Enbridge CNW / Mississippi River
4	48-inch	1,161,316	1,173,196		8,336	2.25	995	U.S. ESA

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
Cass Lake to Deer River 36" (1,173,151-1,173,232)								
4	36-inch	1,173,151	1,174,300			0.22	996	U.S. ESA
Deer River to Floodwood 36" (1,173,232-1,306,304)								
4	36-inch	1,184,678	1,190,378			1.08	999	U.S. ESA
4	36-inch	1,227,508	1,248,604			4.00	1,008	Enbridge DW / GW
4	36-inch	1,259,500	1,262,528			0.57	1,013	Enbridge DW / GW
Deer River to Floodwood 48" (1,299,654-1,428,994 (47,009 - diversion))								
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
Deer River to Floodwood 36" (1,429,072-1,429,145)								
4	36-inch	1,429,072	1,429,472			0.08	1,044	Enbridge DW / GW
Floodwood to Wrenshall 36" (1,429,145-1,512,231)								
Floodwood to Wrenshall 48" (1,512,091-1,616,806)								
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
4	48-inch	1,611,209	1,612,325			0.21	1,079	Enbridge DW / GW
Floodwood to Wrenshall 48" (1,512,091-1,616,806)								
Floodwood to Wrenshall 36" (1,616,840-1,617,041)								
Wrenshall to Superior 36" (1,617,041-1,712,760)								
4	36-inch	1,665,217	1,676,305			2.10	1,090	U.S. ESA
4	36-inch	1,684,774	1,687,701			0.55	1,093	Enbridge DW / GW
Wrenshall to Superior 36" (1,617,041-1,712,760) cont.								

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
4	36-inch	1,701,252	1,702,152			0.17	1,096	U.S. DW / SW
4	36-inch	1,707,175	1,712,760			1.06	1,098	U.S. DW / SW

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Superior to Iron River (0 - 919,037)								
5	30-inch	0	11,100			2.10	1,099	U.S. DW / SW
5	30-inch	0	5,637			1.07	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	11,490	26,916			2.92	1,102	U.S. DW / SW
5	30-inch	16,661	19,541			0.55	1,102	U.S. ESA
5	30-inch	18,307	21,307			0.57	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	29,216			0.33	1,103	U.S. DW / SW
5	30-inch	27,466	29,216			0.33	1,103	U.S. ESA
5	30-inch	31,816	34,066			0.43	1,104	U.S. DW / SW
5	30-inch	31,816	34,066			0.43	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	121,916	125,528			0.68	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	151,600			0.74	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	256,689			0.58	1,146	U.S. ESA
5	30-inch	253,634	256,689			0.58	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

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Superior to Iron River (0 - 919,037) cont.								
5	30-inch	270,687	274,330			0.69	1,150	U.S. DW / SW
5	30-inch	273,858	276,905			0.58	1,150	U.S. ESA
5	30-inch	299,052	303,387			0.82	1,155	U.S. DW / SW
5	30-inch	305,637	310,600			0.94	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	ENB DW / GW
5	30-inch	307,569	309,469			0.36	1,157	ENB ESA
5	30-inch	312,500	332,091			3.71	1,159	U.S. DW / SW
5	30-inch	336,191	337,291			0.21	1,162	U.S. DW / SW
5	30-inch	417,438	419,938			0.47	1,177	U.S. ESA
5	30-inch	417,438	419,938			0.47	1,177	U.S. CNW / Lake Superior
5	30-inch	420,238	421,638			0.27	1,178	U.S. ESA
5	30-inch	420,238	421,638			0.27	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	479,586	482,586			0.57	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	522,410	540,543			3.43	1,199	Enbridge DW / GW
5	30-inch	524,460	533,055			1.63	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

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Superior to Iron River (0 - 919,037) cont.								
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
5	30-inch	752,100	758,594			1.23	1,241	U.S. ESA
5	30-inch	767,387	768,487			0.21	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	Enbridge OPA / Watersmeet
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
Iron River to North Straits (919,037 - 1,993,306)								
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	985,900	987,800			0.36	1,285	U.S. ESA
5	30-inch	1,011,645	1,016,186			0.86	1,290	U.S. ESA
5	30-inch	1,028,041	1,030,491			0.46	1,293	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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Iron River to North Straits (919,037 - 1,993,306) cont.								
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	1,262,975			0.32	1,337	U.S. ESA
5	30-inch	1,278,682	1,286,544			1.49	1,341	U.S. ESA
5	30-inch	1,293,995	1,296,295			0.44	1,343	U.S. ESA
5	30-inch	1,301,295	1,303,645			0.45	1,345	U.S. ESA
5	30-inch	1,342,061	1,345,211			0.60	1,353	U.S. DW / GW
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	1,453,550	1,455,200			0.31	1,374	U.S. ESA
5	30-inch	1,474,408	1,476,808			0.45	1,378	U.S. ESA
5	30-inch	1,552,604	1,566,888			2.71	1,394	Enbridge DW / GW
5	30-inch	1,563,288	1,566,788			0.66	1,395	U.S. ESA
5	30-inch	1,568,558	1,571,954			0.64	1,395	U.S. ESA
5	30-inch	1,654,586	1,660,111			1.05	1,412	U.S. DW / GW
5	30-inch	1,749,210	1,752,370			0.60	1,430	U.S. DW / GW
5	30-inch	1,752,801	1,754,732			0.37	1,430	U.S. ESA
5	30-inch	1,752,801	1,754,732			0.37	1,430	U.S. ESA
5	30-inch	1,771,514	1,775,364			0.73	1,434	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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Iron River to North Straits (919,037 - 1,993,306) cont.								
5	30-inch	1,771,514	1,775,064			0.67	1,434	U.S. ESA
5	30-inch	1,771,514	1,775,064			0.67	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	1,783,181	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
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	1,805,121	1,807,000			0.36	1,440	U.S. ESA
5	30-inch	1,805,121	1,807,000			0.36	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	1,825,930			0.48	1,444	U.S. ESA
5	30-inch	1,823,420	1,825,930			0.48	1,444	U.S. ESA
5	30-inch	1,823,420	1,825,930			0.48	1,444	U.S. ESA
5	30-inch	1,828,586	1,830,120			0.29	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	1,915,521	1,923,271			1.47	1,462	U.S. ESA
5	30-inch	1,915,521	1,917,171			0.31	1,461	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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Iron River to North Straits (919,037 - 1,993,306) cont.								
5	30-inch	1,924,350	1,935,500			2.11	1,464	U.S. ESA
5	30-inch	1,927,100	1,935,500			1.59	1,464	U.S. ESA
5	30-inch	1,939,333	1,951,500			2.30	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
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
North Straits to Mackinaw - Straits of Mackinac East (1,993,306 - 2,015,016)								
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
North Straits to Mackinaw - Straits of Mackinac West (1,993,306 - 2,015,016)								
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

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Mackinaw to Bay City (2,015,016 - 2,843,835)								
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	2,020,131	2,035,632			2.94	1,482	Enbridge DW / GW
5	30-inch	2,022,013	2,029,434			1.41	1,482	U.S. ESA
5	30-inch	2,042,582	2,044,232			0.31	1,485	U.S. ESA
5	30-inch	2,077,721	2,088,532			2.05	1,493	U.S. ESA
5	30-inch	2,089,482	2,101,272			2.23	1,495	U.S. ESA
5	30-inch	2,096,522	2,098,972			0.46	1,495	U.S. ESA
5	30-inch	2,108,870	2,113,754			0.93	1,498	U.S. ESA
5	30-inch	2,111,100	2,116,804			1.08	1,498	U.S. ESA
5	30-inch	2,119,371	2,124,691			1.01	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	2,148,640	2,158,357			1.84	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

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
Mackinaw to Bay City (2,015,016 - 2,843,835) cont.								
5	30-inch	2,173,990	2,187,601			2.58	1,511	U.S. ESA
5	30-inch	2,231,211	2,232,361			0.22	1,521	U.S. ESA
5	30-inch	2,234,211	2,242,838			1.63	1,522	U.S. ESA
5	30-inch	2,301,499	2,303,749			0.43	1,534	U.S. ESA
5	30-inch	2,355,570	2,363,820			1.56	1,545	U.S. ESA
5	30-inch	2,360,620	2,362,520			0.36	1,545	U.S. ESA

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Superior to Adams (0 - 1,201,518)								
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	143,106			0.61	27	U.S. DW / Solon Springs
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	204,603			0.19	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	305,115	313,462			1.58	59	U.S. ESA
6A	34-inch	353,845	355,933			0.40	67	U.S. ESA
6A	34-inch	423,751	426,901			0.60	81	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	467,634			0.60	88	U.S. ESA
6A	34-inch	464,453	467,634			0.60	88	U.S. ESA
6A	34-inch	464,453	467,634			0.60	88	U.S. ESA
6A	34-inch	468,684	471,034			0.45	89	U.S. ESA

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Superior to Adams (0 - 1,201,518) cont.								
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
6A	34-inch	505,533	508,318			0.53	96	U.S. ESA

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
						Diluent Condensate:		
Border to Clearbrook								
13	18-inch	4,100	13,045			1.69	Neche	US DW / SW Intake
13	18-inch	13,745	14,895			0.22	Neche	US DW / SW Intake
13	18-inch	15,950	26,490			2.00	Neche	US DW / SW Intake
13	18-inch	49,810	51,530			0.33	Carlisle	US DW / SW Intake
13	18-inch	64,750	66,750			0.38	Carlisle	US DW / SW Intake
13	18-inch	115,030	116,930			0.36	Joliette	ENB CNW / Red River of the North
13	18-inch	115,030	116,930			0.36	Joliette	ENB ESA / Red River of the North
13	18-inch	115,030	116,930			0.36	Joliette	US ESA
13	18-inch	122,480	124,480			0.38	Joliette	ENB CNW / Red River of the North
13	18-inch	122,480	124,480			0.38	Joliette	ENB ESA / Red River of the North
13	18-inch	122,480	124,480			0.38	Joliette	US ESA
13	18-inch	129,860	162,565			6.19	Joliette	ENB CNW / Red River of the North
13	18-inch	129,860	162,565			6.19	Joliette	ENB ESA / Red River of the North
13	18-inch	129,860	131,710			0.35	Joliette	US ESA
13	18-inch	137,260	139,110			0.35	Joliette	US ESA
13	18-inch	166,110	169,460			0.63	South Red River	ENB CNW / Red River of the North
13	18-inch	166,110	169,460			0.63	South Red River	ENB ESA / Red River of the North
13	18-inch	446,370	450,680			0.82	Rocksbury	US DW / SW Intake
13	18-inch	452,930	458,750			1.10	Rocksbury	US DW / SW Intake
13	18-inch	460,950	467,360			1.21	Rocksbury	US DW / SW Intake
13	18-inch	470,960	474,810			0.73	Rocksbury	US ESA
13	18-inch	471,710	474,110			0.45	Rocksbury	US DW / SW Intake
13	18-inch	476,581	481,400			0.91	Rocksbury	ENB DW / Wellhead
13	18-inch	535,270	541,800			1.24	Plummer	US DW / Wellhead

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
						Diluent Condensate:		
Border to Clearbrook cont.								
13	18-inch	593,180	597,190			0.76	Oklee	ENB DW / Wellhead
13	18-inch	686,730	688,380			0.31	Gonvick	ENB DW / Wellhead
13	18-inch	713,680	715,074			0.26	Clearbrook	ENB DW / Wellhead
Clearbrook to Superior								
13	20-inch	1,091,200	1,119,330			5.33	Pinewood	US ESA
13	20-inch	1,137,550	1,154,750			3.26	Scribner	US ESA
13	20-inch	1,174,410	1,197,980			4.46	Bemidji	US ESA
14	20-inch	1,193,880	1,199,180			1.00	Bemidji	US DW / Wellhead
13	20-inch	1,218,900	1,234,280			2.91	Rosby	US DW / Wellhead
13	20-inch	1,218,900	1,245,600			5.06	Rosby	US ESA
13	20-inch	1,266,080	1,268,680			0.49	Cass Lake	ENB DW / Wellhead
13	20-inch	1,285,380	1,307,650			4.22	Cass Lake	US ESA
13	20-inch	1,311,150	1,323,190			2.28	Schley	US ESA
13	20-inch	1,327,390	1,361,750			6.51	Portage Lake	US ESA
13	20-inch	1,360,800	1,378,500			3.35	Bena	US ESA
13	20-inch	1,370,120	1,387,750			3.34	Bena	US ESA
13	20-inch	1,392,050	1,409,750			3.35	Bena	US ESA
13	20-inch	1,411,850	1,413,550			0.32	Bena	US ESA
13	20-inch	1,420,600	1,460,510			7.56	Ball Club	US ESA
13	20-inch	1,426,350	1,441,800			2.93	Ball Club	ENB CNW / Mississippi River
13	20-inch	1,450,550	1,453,300			0.52	Ball Club	ENB CNW / Mississippi River
13	20-inch	1,470,450	1,489,590			3.63	Deer River	US ESA
13	20-inch	1,491,800	1,506,380			2.76	Cohasset	US ESA
13	20-inch	1,510,180	1,515,000			0.91	Cohasset	US ESA

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Diluent Condensate:			
Clearbrook to Superior cont.								
13	20-inch	1,537,950	1,558,810			3.95	Grand Rapids	ENB DW / Wellhead
13	20-inch	1,571,490	1,572,250			0.14	La Prairie	ENB DW / Wellhead
13	20-inch	1,583,850	1,593,380			1.80	Blackberry	US ESA
13	20-inch	1,631,100	1,645,080			2.65	Warba	US ESA
13	20-inch	1,744,480	1,746,630			0.41	Floodwood	ENB DW / Wellhead
13	20-inch	1,889,650	1,891,400			0.33	Cloquet	ENB DW / Wellhead
13	20-inch	1,904,600	1,906,450			0.35	Cloquet	ENB DW / Wellhead
13	20-inch	1,929,860	1,930,810			0.18	Wrenshall	ENB DW / Wellhead
13	20-inch	1,988,060	1,995,430			1.40	Superior	US ESA
13	20-inch	2,003,930	2,006,700			0.52	Superior	ENB DW / Wellhead
13	20-inch	2,030,400	2,031,435			0.20	Superior	US DW / SW Intake
Superior to Delavan								
13	20-inch	0	3,150			0.60	Superior	US DW / SW Intake
13	20-inch	4,330	7,010			0.51	Superior	US DW / SW Intake
13	20-inch	12,590	15,040			0.46	Superior	US DW / SW Intake
13	20-inch	137,630	139,980			0.45	Solon Springs	US DW / Wellhead
13	20-inch	166,530	173,890			1.39	Gordon	US ESA
13	20-inch	198,310	205,770			1.41	Red Lake	US ESA
13	20-inch	208,600	216,480			1.49	Minong	US ESA
13	20-inch	284,820	290,750			1.12	Stanberry	US ESA
13	20-inch	301,610	303,310			0.32	Bass Lake	US ESA
13	20-inch	336,990	344,900			1.50	Stone Lake	US ESA
13	20-inch	347,080	357,440			1.96	Stone Lake	US ESA
13	20-inch	427,880	429,480			0.30	Exeland	US DW / Wellhead

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Diluent Condensate:			
Superior to Delavan cont.								
13	20-inch	440,390	441,940			0.29	Exeland	US DW / Wellhead
13	20-inch	445,850	450,750			0.93	Murry	US ESA
13	20-inch	445,850	450,750			0.93	Murry	US ESA
13	20-inch	454,330	456,110			0.34	Murry	US ESA
13	20-inch	454,330	456,110			0.34	Murry	US ESA
13	20-inch	459,360	460,760			0.27	Murry	US ESA
13	20-inch	459,360	460,760			0.27	Murry	US ESA
13	20-inch	469,620	472,470			0.54	Murry	US ESA
13	20-inch	469,920	471,620			0.32	Murry	US ESA
13	20-inch	469,920	471,620			0.32	Murry	US ESA
13	20-inch	479,330	511,410			6.08	Thornapple	US ESA
13	20-inch	521,670	539,560			3.39	Ladysmith	US ESA
13	20-inch	528,600	533,850			0.99	Ladysmith	US ESA
13	20-inch	532,130	533,850			0.33	Ladysmith	US ESA

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Superior to Adams (0 - 1,201,097)								
14	24-inch	0	4,898			0.93	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	141,724			0.47	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	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	303,645	312,240			1.63	58	U.S. ESA
14	24-inch	353,278	355,189			0.36	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
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

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
Superior to Adams (0 - 1,201,097) cont.								
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	504,946	506,657			0.32	96	U.S. ESA

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Superior to Delavan (0-1,703,457)								
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	303,110	312,770			1.83	58	U.S. ESA
61	42-inch	352,716	354,806			0.40	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

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Superior to Delavan (0-1,703,457) cont.								
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

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
U.S. Border to Clearbrook (0 - 721,214)								
65	20-inch	4,100	13,050			1.70	775	U.S. DW / SW
65	20-inch	13,400	15,350			0.37	776	U.S. DW / SW
65	20-inch	15,950	26,500			2.00	778	U.S. DW / SW
65	20-inch	49,476	51,376			0.36	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	143,500	146,350			0.54	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	449,530	453,720			0.79	859	U.S. DW / SW
65	20-inch	455,970	462,030			1.15	861	U.S. DW / SW
65	20-inch	464,180	470,630			1.22	862	U.S. DW / SW
65	20-inch	474,250	477,850			0.68	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

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
				Crude Oil:				
U.S. Border to Clearbrook (0 - 721,214) cont.								
65	20-inch	541,880	544,980			0.59	877	U.S. DW / GW
65	20-inch	596,400	600,050			0.69	887	Enbridge DW / GW
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

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Border to Viking (0-395,630)								
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	66,900			0.52	786	U.S. DW / SW
67	36-inch	114,750	117,850			0.59	796	ENB CNW / Red River of the North
67	36-inch	114,750	117,850			0.59	796	US ESA
67	36-inch	122,750	125,350			0.49	797	ENB CNW / Red River of the North
67	36-inch	122,750	125,350			0.49	797	US ESA
67	36-inch	130,000	132,150			0.41	798	ENB CNW / Red River of the North
67	36-inch	130,000	132,150			0.41	798	US ESA
67	36-inch	137,500	140,450			0.56	800	ENB 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	ENB CNW / Red River of the North
67	36-inch	147,000	149,150			0.41	802	ENB CNW / Red River of the North
67	36-inch	155,650	159,300			0.69	803	ENB CNW / Red River of the North
67	36-inch	166,450	169,750			0.63	806	ENB CNW / Red River of the North
Viking to Clearbrook (395,630-719,920)								
67	36-inch	449,650	454,000			0.82	859	U.S. DW / SW
67	36-inch	456,100	462,400			1.19	860	U.S. DW / SW
67	36-inch	464,100	471,400			1.38	862	U.S. DW / SW
67	36-inch	474,350	478,300			0.75	864	U.S. ESA
67	36-inch	475,050	477,400			0.45	864	U.S. DW / SW
67	36-inch	480,200	484,250			0.77	865	ENB DW / GW
67	36-inch	538,500	545,300			1.29	876	U.S. DW / GW
67	36-inch	596,550	600,400			0.73	887	ENB DW / GW

ENBRIDGE

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

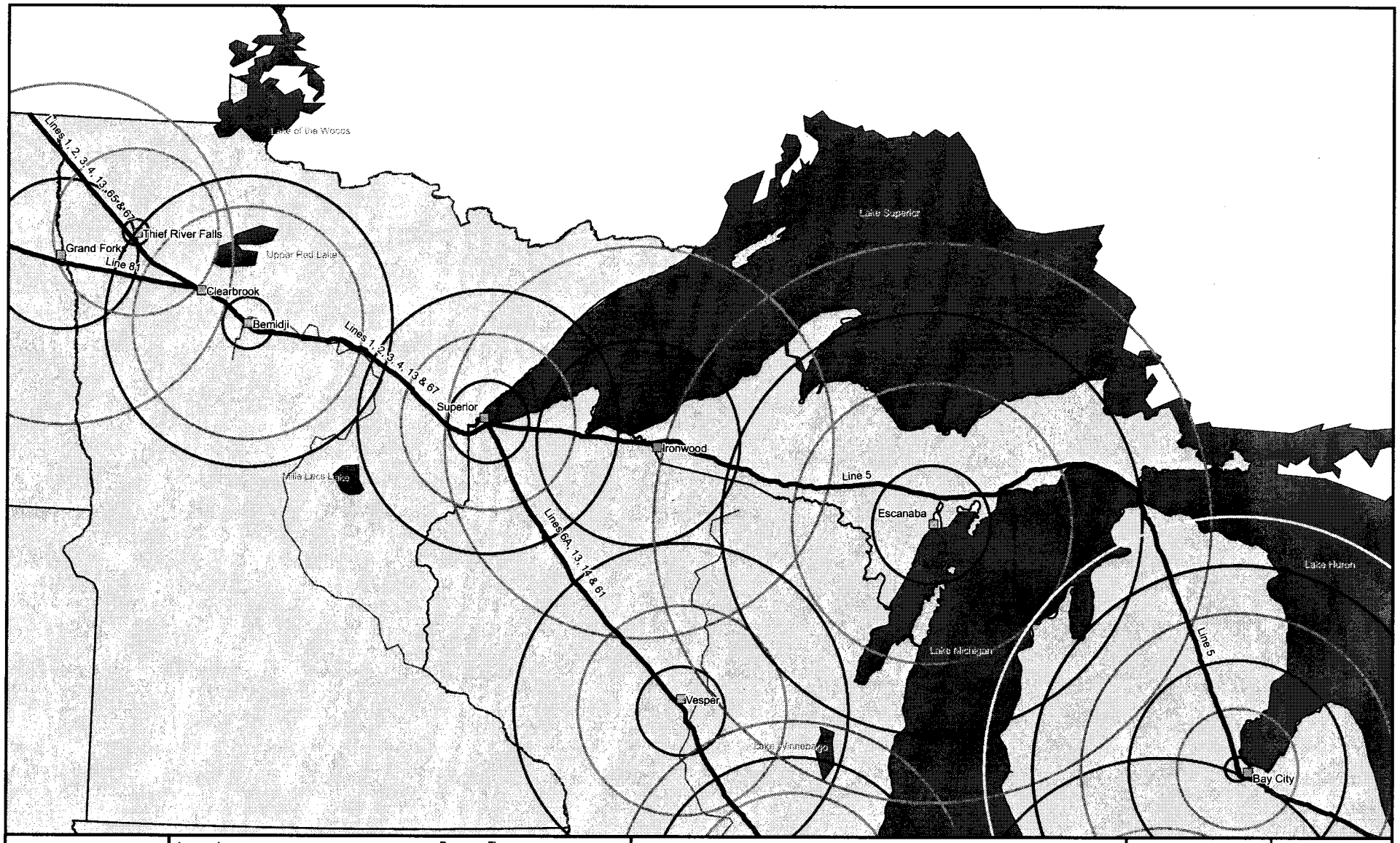
Line	Diameter	Begin Stationing	End Stationing	Diversion Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Viking to Clearbrook (395,630-719,920) cont.								
67	36-inch	692,600	694,500			0.36	904	ENB DW / GW
67	36-inch	719,850	721,000			0.22	909	ENB DW / GW
Clearbrook to Deer River (719,920-1,177,820)								
67	36-inch	788,200	796,050			1.49	923	U.S. ESA
67	36-inch	799,050	809,600			2.00	925	U.S. ESA
67	36-inch	834,000	843,350			1.77	932	U.S. ESA
67	36-inch	870,550	883,850			2.52	939	U.S. ESA
67	36-inch	887,250	892,750			1.04	941	U.S. DW / GW
67	36-inch	910,000	927,550			3.32	946	U.S. DW / GW
67	36-inch	910,000	930,350			3.85	947	U.S. ESA
67	36-inch	910,000	934,900			4.72	947	U.S. ESA
67	36-inch	959,100	962,000			0.55	955	ENB DW / GW
67	36-inch	959,800	972,850			2.47	956	U.S. ESA
67	36-inch	982,000	996,750			2.79	960	U.S. ESA
67	36-inch	1,008,500	1,012,750			0.80	964	U.S. ESA
67	36-inch	1,023,600	1,036,300			2.41	968	U.S. ESA
67	36-inch	1,038,850	1,041,150			0.44	970	U.S. ESA
67	36-inch	1,043,250	1,051,000			1.47	971	U.S. ESA
67	36-inch	1,057,000	1,068,800			2.23	974	U.S. ESA
67	36-inch	1,066,300	1,078,150			2.24	976	U.S. ESA
67	36-inch	1,088,000	1,106,850			3.57	981	U.S. ESA
67	36-inch	1,116,500	1,128,400			2.25	985	U.S. ESA
67	36-inch	1,124,300	1,128,250			0.75	986	ENB CNW / Mississippi River
67	36-inch	1,129,650	1,146,800			3.25	988	U.S. ESA

ENBRIDGE

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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	High Consequence Area
					Crude Oil:			
Clearbrook to Deer River (719,920-1,177,820) cont.								
67	36-inch	1,143,550	1,146,800			0.62	990	ENB CNW / Mississippi River
67	36-inch	1,167,150	1,178,150			2.08	995	U.S. ESA / Deer River
Deer River to Superior (1,177,820-1,749,260)								
67	36-inch	1,188,800	1,195,050			1.18	998	U.S. ESA
67	36-inch	1,230,400	1,251,550			4.01	1008	ENB DW / GW
67	36-inch	1,264,000	1,264,800			0.15	1012	ENB DW / GW
67	36-inch	1,326,000	1,327,000			0.19	1023	U.S. ESA
67	36-inch	1,330,250	1,333,850			0.68	1024	U.S. ESA
67	36-inch	1,437,000	1,439,550			0.48	1044	ENB DW / GW
67	36-inch	1,582,250	1,584,150			0.36	1072	ENB DW / GW
67	36-inch	1,597,550	1,599,300			0.33	1074	ENB DW / GW
67	36-inch	1,622,550	1,623,850			0.25	1079	ENB DW / GW
67	36-inch	1,679,750	1,688,350			1.63	1091	U.S. ESA
67	36-inch	1,696,550	1,699,650			0.59	1093	ENB DW / GW
67	36-inch	1,712,700	1,714,500			0.34	1096	U.S. DW / SW
67	36-inch	1,719,300	1,723,800			0.85	1097	U.S. DW / SW



ENBRIDGE

Legend

- Response Facilities
- Rivers
- Pipeline

Response Times

- 1.0 Hour
- 2.0 Hours
- 3.0 Hours
- 4.0 Hours
- 5.0 Hours
- 6.0 Hours

Times derived from emergency response drills.

Enbridge Pipelines, Limited Partnership
Superior Region Emergency Response Times

0 50 100 150 200 Miles

DATE ISSUED: 12/1/2004	Natural Resources Engineering Co. 715-395-5680
DATE REVISED: 3/10/2010	
SCALE: 1:3,000,000	
DRAWN BY: JDK	
SERIES: Emergency Response Times	

Control Point Maps

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 Book 7: Emergency Response 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 maintained in the regional offices.

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

LINES 1-4, 13 & 65	
Area Overview	(2 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
Red Lake River	MP 864.31
Clearwater River	MP 875.34
Lost River	MP 903.96
LINES 1-4	
Area Overview	(2 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 (2 Maps)
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
Little Otter Creek	MP 1074.28
Little Pokegama	MP 1090.00
Pokegama River	MP 1094.42 (2 Maps)

LINE 5	
Area Overview	(8 Maps)
Nemadji River	MP 1098.85
Bluff Creek	MP 1100.66 (2 Maps)
Bear Creek	MP 1101.57 (2 Maps)
Dutchman Creek	MP 1104.29 (2 Maps)
Morrison Creek	MP 1105.28
Amnicon River	MP 1107.07 (2 Maps)
Bois Brule River	MP 1121.45 (2 Maps)
Iron River (WI)	MP 1129.89 (3 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 (2 Maps)
Montreal River	MP 1189.32 (3 Maps)
Welch Creek	MP 1191.00 (2 Maps)
Siemens Creek	MP 1193.50 (3 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
Cooks Run	MP 1260.15 (2 Maps)
South Branch Iron River	MP 1268.32
Nash Creek	MP 1269.84

LINE 5 cont.	
Iron River	MP 1271.65 (2 Maps)
Iron Lake Creek	MP 1271.94 (2 Maps)
Briar Hill Creek	MP 1284.98
Paint River	MP 1290.20 (2 Maps)
Michigamme River	MP 1294.77 (2 Maps)
Parks Creek	MP 1297.09
Ford River	MP 1315.64 (2 Maps)
Escanaba River Tributary	MP 1337.20 (2 Maps)
Escanaba River	MP 1341.55 (2 Maps)
Tacoosh River	MP 1352.54
Rapid River	MP 1356.87
Whitefish River	MP 1358.16
Indian River	MP 1393.57
Manistique River	MP 1394.31
Lower Millecoquins River	MP 1433.95 (2 Maps)
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 (2 Maps)
LINES 6A, 13, 14 & 61	
Area Overview	(2 Maps)
Nemadji River	MP 1.58
St. Croix River	MP 33.13
Totogatic River	MP 40.53
Namekagon River	MP 53.78 (2 Maps)
Sand Creek	MP 65.52
Summit Creek	MP 70.5 (3 Maps)

Appendix

Enbridge (U.S.) Inc.
Operator of the Enbridge Pipeline Systems
1100 Louisiana, Suite 3200
Houston, TX 77002-5216

1. 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)
(800) 858-5253 (24 hr. Emergency Number)
(713) 653-8711 (Fax)

2. 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**
- Chicago Region
- Cushing Region
- Enbridge Pipelines North Dakota

Superior Region Response Zone (#866)

The Superior Region response zone begins at the Canadian border near Neche, North Dakota and continues across northern Minnesota into Superior, Wisconsin. This section of response zone includes seven pipelines that transport crude oil, natural gas and diluent condensate. The response zone continues south of Superior to Ladysmith, WI with four pipelines transporting crude oil and diluent condensate. A 30-inch pipeline 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. The Superior Region system is comprised in total of eleven pipelines:

- Approximately 2,838 miles of pipeline, with pipe diameters ranging from 18 to 48 inches;
- 29 Pump Stations are located along the pipes;
- The Superior System includes 44 tanks (35 Tanks at Superior; 9 at Clearbrook). Tanks located in Superior, WI have 7.5 million barrels storage capacity and Clearbrook, MN has 1.3 million barrels storage capacity.

Counties included in the Superior Region response zone are:

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

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	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	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	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	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	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	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	1,173,151	1,306,304	25.2	36"	Crude Oil

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	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	1,616,840	1,712,760	19.8	36"	Crude Oil
SL 13	Gretna, Manitoba to Clearbrook, MN	0	715,074	135.4	18"	Diluent Condensate
SL 13	Clearbrook, MN to Superior, WI	0	1,003,300	190	20"	Diluent Condensate
AC 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
	Total Pipeline Miles			**2838.38**		

(Number) Diversion Stationing)

3. CONSISTENCY WITH NATIONAL AND AREA CONTINGENCY PLANS

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 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), fire fighting 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, which covers specific duties in the 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 O&MP Book 2 section 04 describes the company's procedures for maintenance of response training records for response personnel.

The O&MP Book 2 section 05-02-02 describes the requirements for maintaining drill documentation for three years and ensuring the availability of such records for inspectors.

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

Table 2
Safety Training Participants—USA

Type of Training	Reference	Completed From Time of Hire	Ongoing Frequency	Operations Employees[1]	PLM Employees	Inspectors	Mechanical Employees[2]	Electrical Employees	Field Office Employees[3]
arc hazard	company policy	before task using 5 Kv equipment	3 yrs	◊	◊	◊	√	√	◊
asbestos awareness	29CFR 1910.1001	1 yr	annual	√	√	◊	√	√	◊
back care	company policy	6 mos	2 yrs	√	√	◊	√	√	◊
bloodborne pathogens	29CFR 1910.1030	1 yr	annual	√	√	◊	√	√	◊
confined space entry	29CFR 1910.146	before entry or 1 yr	3 yrs	√	√	√	√	√	◊
CPR – refresher	29CFR 1910.151	1 yr	@ expiry	√	√	√	√	√	◊
contractor safety management			3 yrs	◊	◊	√	◊	◊	◊
driver training – new hire orientation	company policy	before driving	—	√	√	◊	√	√	√
driver training – core (with driver observation)		before driving[4]	3 yrs	√	√	√	√	√	√
driver training – refresher		—	annual[5]	√	√	◊	√	√	√
driver training – advanced		—	3 yrs after core	√	√	◊	√	√	√
electrical safety	29CFR 1910.332	before task or 1 yr	2 yrs	√	√	◊	√	√	◊
			annual	◊	◊	◊	◊	√	◊

Table 2
Safety Training Participants—USA

Type of Training	Reference	Completed From Time of Hire	Ongoing Frequency	Operations Employees[1]	PLM Employees	Inspectors	Mechanical Employees[2]	Electrical Employees	Field Office Employees[3]
ergonomics	OSHA 5 (a)(1)	—	2 yrs	◊	◊	◊	◊	◊	◊
fall protection – core	29CFR 1926.503	before task or 1 yr	3 yrs	◊	√	◊	√	√	◊
fall protection – refresher		—	annual	◊	◊	◊	◊	◊	◊
fire extinguisher maintenance	industry best practice	—	5 yrs	◊	◊	◊	◊	◊	◊
Fire extinguisher training NGL/ crude ignition	49CFR 195.403 29CFR 1910.157	3 months	annual alternating	√	√	√	√	√	◊
first aid – standard level	29CFR 1910.151	1 yr	@ expiry	√	√	√	√	√	◊
forklift operations	29CFR 1910.178	before task or 1 yr	3 yrs	◊	√	◊	◊	◊	◊
forklift – train the trainer certification	industry best practice	—	5 yrs	◊	◊	◊	◊	◊	◊
gas detector operation	29CFR 1910.120 49CFR 195.402	before task or 1 wk	annual	√	√	√	√	√	◊
ground disturbance (excavation) – core	29CFR 1926.651	before task or 1 yr	3 yrs	◊	√	√	√	√	◊
ground disturbance (excavation) – refresher		—	annual	◊	◊	√	◊	◊	◊

Table 2
Safety Training Participants—USA

Type of Training	Reference	Completed From Time of Hire	Ongoing Frequency	Operations Employees[1]	PLM Employees	Inspectors	Mechanical Employees[2]	Electrical Employees	Field Office Employees[3]
HAZCOM	29CFR 1910.1200	before exposure or 1 wk	annual	√	√	√	√	√	◊
HAZMAT	49CFR 172.704	before exposure or 1 yr	3 yrs	◊	√	◊	√	√	◊
hearing conservation	29CFR 1910.95	before exposure or 1 yr	annual	√	√	◊	√	√	◊
high voltage	company policy	1 yr	3 yrs	◊	◊	◊	◊	√	◊
hoisting/rigging	29CFR 1910.184, 1910.179	before task or 1 yr	5 yrs	◊	√	◊	√	◊	◊
ignition sources	49CFR 195.402	before task or 1 wk	annual	√	√	◊	√	√	◊
lockout procedures	29CFR 1910.147	before task or 3 mos	annual	√	√	√	√	√	◊
personal protective equipment	29CFR 1910.132	before task or 1 mo	annual	√	√	√	√	√	◊
radiation safety	NRC[6] 10 Part 30.33	before task or 1 yr	2 yrs	◊	—	◊	—	◊	—
respiratory protection – air purifying/supplied fit testing	29CFR 1910.134	before task or 1 yr	annual	√	√	◊	√	√	◊
respiratory fit testing – train the trainer		—	—	◊	◊	◊	◊	◊	◊

4. CALCULATION OF WORST CASE DISCHARGE

Worst Case Discharge Volume Calculation Methodology

The approach for calculating Worst Case Discharge (WCD) volume utilizes American Innovation's Integrity Assessment Program (IAP) software. The IAP 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 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.

IAP software and data is in custody of, and maintained by the Enbridge Liquid Pipelines Operational Risk Management Group.

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

A full mainline rupture will show up as alarms on SCADA screens within 1 minute of its occurrence.

The Material Balance Leak Detection will recognize a rupture within 5 minutes of a rupture occurring (runs in a 5 minute cycle). The Material Balance Leak Detection is a backup to operator recognition.

The volume out calculation uses a time to recognize rupture of 5 minutes.

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.

Time to Isolate Line (Remote Controlled Valves Only)

The time to isolate a line is the time it takes to recognize the rupture plus the time it takes to close the remote-controlled mainline valves. For the Enbridge liquid mainline system this time is 8 minutes.

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 (bbls/day)	Time to Isolate (min)	Worst Case Discharge (bbls)	Location (ft Stationing)	Location (~MP)
LSr (65)	186,000	8	8,312	216,820	814.8
1	235,176	8	14,207	1,710,200	1097
2	505,072	8	43,083	214,100	815
3	434,500	8	36,333	1,712,752	1098
4	859,176	8	83,527	295,200	829.8
5	525,687	8	36,263	2,843,834	1636.8
6A	727,335	8	34,109	29,900	5.8
MN 13	180,000	8	20,065	214,500	818
WI 13	180,000	8	5,143	214,434	40.5
67	450,000	8	40,488	1,665,700	315
14	398,774	8	16,979	16,100	3.1
61	400,000	8	45,023	27,750	5.5

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
Maximum allowable credit		**75**

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

Facility Response Plan Review
United States Department of Transportation
Pipeline and Hazardous Materials Safety Administration (PHMSA)
Office of Pipeline Safety (OPS)

OPS Sequence Number: **Superior Region- #866**

Facility Response Plan- ***Region Specific Book 7-Emergency Response Plan (ERP)***
Version Date: April 2010

Pipeline Operator Name: **Enbridge Pipelines, Inc.**

Contact Name: Jason Boisvert, Emergency Response Engineer
Contact Phone Numbers Office: 780-420-5255
Fax: 780-420-8253
Cellular: 780-893-0180
Contact Mailing Address: Enbridge Pipelines, Inc.
10201 Jasper Avenue
Edmonton, AB T5J 3N7 Canada

Contact Electronic Mail Address: jason.boisvert@enbridge.com

If different from the Contact Name, Facility Response Plan Author Name:
Facility Response Plan Author Phone Numbers- Office:
Fax:
Cellular:
Facility Response Plan Author Mailing Address:
Facility Response Plan Electronic Mail Address:

Date of Review: 4/1/2010

NATIONAL CONTINGENCY PLAN AND AREA CONTINGENCY PLAN CERTIFICATIONS FOR SEQUENCE NUMBER: 866

1. A. Has the operator reviewed the National Contingency Plan (NCP) and each applicable Area Contingency Plan (ACP)? YES
   B. Does the Facility Response Plan follow the Area Contingency Plan? YES
   C. Please list the names of the Area Contingency Plans and the pages in the Facility Response Plan (ERP) that relate to the Area Contingency Plans. (49 CFR 194.107 (b))

See Page Reference:
Regional Book 7- ERP
Appendix- Pages 5-6- Consistency with National and Area Contingency Plans

Comment:

A. *A review of the National Contingency Plan (NCP) and each applicable Area Contingency Plan (ACP) has been completed.*
B. *The Facility Response Plan follows the Area Contingency Plan.*
C. *The Superior Region falls within the scope of the following Plans: the* ***U.S. Coast Guard (USCG) Ninth District, the USCG Marine Safety Offices in Duluth, MN & Sault Ste. Marie, MI.*** *and the* ***U. S. Environmental Protection Agency (EPA) Region 5 & Region 8 Area Contingency Plans*** *and are referenced in the Facility Response Plan (49 CFR 194.107 (b)).*

PLAN INFORMATION SUMMARY FOR SEQUENCE NUMBER: 866

2. Does the Plan Information Summary contain the following: (49 CFR 194.107 (c)(1), (c)(1)(i), and (c)(2) and 49 CFR 194.113)
   - The Operator Name, Street Address, City, State, and Zip Code. YES
   - A list of response zones that meet the criteria for significant and substantial harm (49 CFR 194.113(a)(2) and a list of response zones in which a worst case discharge could cause substantial harm. YES
   - The basis for the operator's determination that the response zone meets the criteria for significant and substantial harm and a statement that a worst-case discharge in the response zone can be expected to cause significant and substantial harm for each response zone. YES
   - Description of each response zone, including the County(s) or Parishes and State(s). YES
   - Explanation for each response zone designation. YES
   - Names (s), titles(s), and office and cellular telephone number(s) for the Qualified Individual(s) twenty-four hours a day in each response zone. YES
   - Names (s), titles(s), and office and cellular telephone number(s) for the Alternate Qualified Individual(s) twenty-four hours a day in each response zone. YES
   - List of line sections in each response zone by milepost, survey station number, or other operator designation. YES
   - If any response zone contains multiple pipeline systems, all pipeline systems are described and the oils they transport are listed. YES
   - The type of oil and the volume of the worst- case discharge. YES

See Page References:

Region Specific Book 7 ERP- Tab 1

- *Page 4-5- Description of each response zone, including the County(s) and States.*
- *Page 4- Names (s), titles(s), and office and cellular telephone number(s) for the Qualified Individual(s) twenty-four hours a day in each response zone.*
- *Page 4- Names (s), titles(s), and office and cellular telephone number(s) for the Alternate Qualified Individual(s) twenty-four hours a day in each response zone.*
- *Page 4- Explanation for each response zone designation.*
- *Page 6-7- List of line sections in each response zone by milepost & survey station number designation.* Inclusion of Lines 13 and 67
- *Page 6-7- If any response zone contains multiple pipeline systems, all pipeline systems are described and the oils they transport are listed.* Inclusion of Lines 13 and 67

Region Specific Book 7 ERP- Tab 3 - Maps and References

- *HCA Tables- A list of response zones that meet the criteria for significant and substantial harm (49 CFR 194.113(a)(2) and a list of response zones in which a worst case discharge could cause substantial harm.* Inclusion of Lines 13 and 67

Region Specific Book 7 ERP- Appendix

- *Page 1- The Operator Name, Street Address, City, State, and Zip Code:*
- ***Enbridge (U.S.) Inc.***
  Operates the Enbridge Energy, Limited Partnership Pipeline System
  1100 Louisiana, Suite 3200
  Houston, TX 77002-5216
- *Pages 1-2- Description of each response zone, including the County(s) and States.*
- *Page 3-4- List of line sections in each response zone by milepost & survey station number designation.* Inclusion of Lines 13 and 67
- *Page 3-4- If any response zone contains multiple pipeline systems, all pipeline systems are described and the oils they transport are listed.* Inclusion of Lines 13 and 67
- *Page 8- A list of response zones that meet the criteria for significant and substantial harm (49 CFR 194.113(a)(2) and a list of response zones in which a worst case discharge could cause substantial harm.* Inclusion of Lines 13 and 67
- *Page 9- The basis for the operator's determination that the response zone meets the criteria for significant and substantial harm and a statement that a worst-case discharge in the response zone can be expected to cause significant and substantial harm for each response zone. Based on the High Consequence Area Management Plan and HCA Map Book.*
- *Pages 5 & 8- The type of oil and the volume of the worst- case discharge.* Inclusion of Lines 13 and 67

Supplemental Resource: Emergency Response Directory (ERD) – Product Information tab- Properties and frequently asked questions

NOTIFICATIONS
FOR SEQUENCE NUMBER: 866

3.1 What person, position, or facility is responsible for starting immediate notification? (49 CFR 194.107 (c)(1)(ii) Please list the person's, position's, or facility's mailing and electronic mail addresses and office, fax, and cellular telephone information. YES

See Page References:

O & MP Book 7: Emergency Response
Sec 02-02-01-Pages 1-4– Emergency Notification
Region Specific Book 7- ERP
Tab 1- Page 4- 24 Hour Contact
Appendix- Pages 5-6- Consistency with National and Area Contingency Plans
Supplemental Resource: Emergency Response Directory (ERD)- Notification Procedures tab

Comment:

The immediate emergency notification plan begins at the Control Center. As requested the facility address and phone numbers are listed below:

Enbridge Pipelines, Inc.
Edmonton Control Center
10201 Jasper Avenue
Edmonton, AB T5J 3N7
(780)-420-8899 (Phone Number)
(800) 858-5253 (24 Hr Emergency Number) Edmonton Control Center
(780)-420-8122 (Fax)

3.2 Is the person, position, or facility capable of starting immediate notification twenty-four hours a day, three hundred sixty-five days a year? (49 CFR 194.107(c)(1)(ii)) Please describe your immediate notification plan. YES

See Page References:

O & MP Book 7: Emergency Response
Sec 02-02-01- Pages 1-4- Emergency Notification
Supplemental Resource: Emergency Response Directory (ERD)- Notification Procedures tab

Comment:

The immediate emergency notification plan begins at the Edmonton Control Center (ECC). The Control Center is fully capable of starting immediate notification twenty-four hours a day, three hundred sixty-five days a year. For information on responsibilities see the ECC Procedures database. This includes responding to, investigating and correcting abnormal operations or shutdown:

- *Unintended valve closure or shutdown*
- *Increase or decrease in pressure or flow rate outside normal operating limits*
- *Loss of communications*
- *Operation of a safety device*
- *Any other malfunction of a component, deviation from normal operation, or employee error that could cause a hazard to persons or property*

When an emergency or suspected emergency report is received from the public, police, or an employee, the Control Center will notify:

- *Local police, if required*
- *Regional management*
- *Shipper services*

3.3 Do the Facility Response Plan notification procedures include telephone numbers so that the qualified individual(s) and oil spill removal organization(s) can be reached twenty-four hours a day, three hundred sixty-five days a year? (49 CFR 194.107(b)(1) and (2), 194.107(c)(1)(ii) and 194.113(b)(2))

- Qualified Individual(s)? YES
- Oil Spill Removal Organization(s)? YES
- Are the National Response Center numbers correctly listed as 1-800-424-8802 and 202-267-2675 in the plan? YES
- Company personnel (spill management team)? YES

See Page References:

Region Specific Book 7- ERP

Tab 1- Page 4- Region Specific- Qualified Individuals

Tab 2- Page 30 & 33- Company/Co-Op Equipment Lists- Specialty Contractors (Oil Spill Removal Organization)

Supplemental Resource: Emergency Response Directory (ERD)- Notification Procedures tab, Company Personnel tabs, and Emergency Contacts tab- these tabs contain current telephone numbers for company and contractor resources, as well as the National Response Center numbers 1-800-424-8802 and 202-267-2675.

3.4 Does the notification section include the following information? (49 CFR 194.107(b)(1) and (2), and 194.107(c)(1)(ii))

- Name of pipeline operator? YES
- Time of discharge? YES
- Location of discharge? YES
- Name of oil involved? YES
- Reason for discharge? YES
- Estimated volume of oil discharged? YES
- Weather conditions on scene? YES

See Page References:

Region Specific Book 7- ERP

Tab 3- Maps and References-This information is covered within the Enbridge Release Alert Form.

Supplemental Resource: Emergency Response Directory (ERD)- Forms tab- Form F

3.5 Does the Facility Response Plan (ERP) name and give the address(es) and telephone number(s) for the operator's oil spill removal organizations? (49 CFR 194.107(c)(1)(iv) and 194.115)

- Name(s)? YES
- Address(es)? YES
- Telephone Number(s)? YES

See Page References:

Region Specific Book 7- ERP

Tab 2- Page 30 & 33- Company/Co-Op Equipment Lists- Specialty Contractors

Supplemental Resource: Emergency Response Directory (ERD)- Contractors tab

SPILL DETECTION AND MITIGATION PROCEDURES FOR SEQUENCE NUMBER: 866

4.1 Does the Facility Response Plan (ERP) contain procedures to name and mitigate or prevent a substantial threat of a worst-case discharge? (49 CFR 194.107(a) and (b)(2)(i)) YES

See Page References:

Region Specific Book 7- ERP
Appendix- Page 5-6- Consistency with National and Area Contingency Plans
Appendix - Pages 7-8- Calculation of Worst Case Discharge
O & MP Book 7: Emergency Response
Sections 1 through 4- Contain actions and procedures for mitigating or preventing substantial threat of a worst case discharge.

4.2 Does the Facility Response Plan (ERP) name personnel, equipment and procedures for detecting leaks and spills and locating spills throughout the response zone? (49 CFR 194.107(c)(1)(iii)) YES

See Page References:

O & MP Book 7: Emergency Response
Sec 02-02-01-Pages 1-4- Emergency Notification
Sec 02-02-02-Pages 1-4- First Responder
Sec 02-02-03-Pages 1-16- Incident Command System
Supplemental Resource: Emergency Response Directory (ERD)- Company Personnel tab
Supplemental Resource: The Control Center Procedures

4.3 Does the Facility Response Plan (ERP) name the maximum time to detect the spill and shut down flow in affected pipeline(s) in bad weather? (49 CFR 194.105(b)(1)) YES

See Page References:

Region Specific Book 7- ERP
Appendix- Pages 7-8- Calculation of Worst- Case Discharge
Supplemental Resource: The Control Center Procedures

4.4 Does the Facility Response Plan (ERP) have procedures to mitigate spills appropriate for the response zone(s) and consistent with applicable Area Contingency Plan(s)? (49 CFR 194.107(b)(2)(i), and (c)(a)(iii)and (v)) YES

See Page References:

O & MP Book 7: Emergency Response
Sections 1 through 4- Contain actions and procedures for mitigating and preventing spills.
Region Specific Book 7- ERP
Tab 2- Page 1- Company/Co-Op Equipment Lists
Appendix- Pages 5-6- *Consistency with National and Area Contingency Plans*

SPILL CONTAINMENT
FOR SEQUENCE NUMBER: 866

5.1 Does the Facility Response Plan (ERP) name spill containment strategies appropriate for the response zone(s) and consistent with applicable Area Contingency Plans? (49 CFR 194.107(b)(1)(iii), (b)(2)(i) and (c)(1)(v)) YES

See Page References:

O & MP Book 7: Emergency Response
Sec 04- Containment, Recovery and Clean-up
Sec 04-02-01- Pages 1-8- On Land
Sec 04-02-02- Pages 1-6- In Wetlands
Sec 04-02-03- Pages 1-5- In Muskeg
Sec 04-02-04- Pages 1-7- In Rivers
Sec 04-02-05- Pages 1-3- In Lakes
Sec 04-02-06- Pages 1-6- On Ice
Sec 04-02-07- Pages 1-6- Under Ice
Sec 04-02-08- Pages 1-3- During Freeze-up or Break-up
Sec 04-02-09- Pages 1-6- In Sensitive Areas
Sec 04-02-10- Pages 1-9- In-Situ Burning

5.2 Can planned spill containment activities be accomplished within the appropriate tier times? (49 CFR 194.107(b)(2)(i), (c)(1)(v) and 194.115) YES

See Page References:

Region Specific Book 7- ERP
Tab 3- Maps and References-Region Emergency Response Times Map

5.3 Are containment equipment capacities described in sufficient detail and does the Facility Response Plan (ERP) identify enough spill containment equipment to respond to a worst-case discharge to the maximum extent practicable? (49 CFR 194.107(b)(2)(i), (C)(1)(v) and 194.115) YES

See Page References:

Region Specific Book 7- ERP
Tab 2- Pages 2-45- Company/Co-Op Equipment Lists
O & MP Book 7: Emergency Response
Sec 01-02-02- Pages 1-3- *Support Equipment and Services*

SPILL RECOVERY
FOR SEQUENCE NUMBER: 866

6.1 Does the Facility Response Plan (ERP) identify spill recovery strategies appropriate for the response zone(s) and consistent with applicable Area Contingency Plans? (49 CFR 194.107(b)(1)(iii), (b)(2)(i), (iv), and (c)(1)(v)) YES

See Page References:

O & MP Book 7: Emergency Response
Sec 04- Containment, Recovery and Clean-up
Sec 04-02-01- Pages 1-8- On Land
Sec 04-02-02- Pages 1-6- In Wetlands
Sec 04-02-03- Pages 1-5- In Muskeg
Sec 04-02-04- Pages 1-7- In Rivers
Sec 04-02-05- Pages 1-3- In Lakes
Sec 04-02-06- Pages 1-6- On Ice
Sec 04-02-07- Pages 1-6- Under Ice
Sec 04-02-08- Pages 1-3- During Freeze-up or Break-up
Sec 04-02-09- Pages 1-6- In Sensitive Areas
Sec 04-02-10- Pages 1-9- In-Situ Burning

6.2 Can planned spill recovery activities be accomplished within the appropriate tier times? (49 CFR 194.107(b)(2)(i), (c)(1)(v) and 194.115) YES

See Page References:

Region Specific Book 7- ERP
Tab 3- Maps and References-Region Emergency Response Times Map

6.3 Are recovery equipment capacities described in sufficient detail and does the Facility Response Plan (ERP) identify enough spill recovery equipment to respond to a worst-case discharge to the maximum extent practicable? (49 CFR 194.107(b)(2)(i), (C)(1)(v) and 194.115) YES

See Page References:

Region Specific Book 7- ERP
Tab 2- Pages 2-45- Company/Co-Op Equipment Lists

DISPOSAL
FOR SEQUENCE NUMBER: 866

7.1 Does the Facility Response Plan (ERP) identify disposal procedures, including temporary storage equipment for recovered oil appropriate for the response zone(s) and consistent with applicable Area Contingency Plans? (49 CFR 194.107(b)(1)(iii), (b)(2)(i),and (c)(1)(v)) YES

See Page References:

O & MP Book 7: Emergency Response
Sec 02-02-08- Pages 1-2- Waste Management
Region Specific Book 7- ERP
Tab 2- Pages 1-45- Company/Co-Op Equipment Lists

7.2 Can planned temporary storage and waste disposal activities be accomplished within the appropriate tier times? (49 CFR 194.107(b)(2)(i), (c)(1)(v) and 194.115) YES

See Page References:

Region Specific Book 7- ERP
Tab 2- Page 1- Company/Co-Op Equipment Lists
Tab 3- Maps and References- Region Emergency Response Times Map

7.3 Does the Facility Response Plan (ERP) identify sufficient temporary storage capabilities to respond to a worst-case discharge to the maximum extent practicable? (49 CFR 194.107(b)(2)(i), (C)(1)(v) and 194.115) YES

See Page References:

O & MP Book 7: Emergency Response
Sec 02-02-08- Pages 1-2- Waste Management
Region Specific Book 7- ERP
Tab 2- Pages 1-45 Company/Co-Op Equipment Lists

SENSITIVE AREA PROTECTION
FOR SEQUENCE NUMBER: 866

8.1 Does the Facility Response Plan (ERP) identify the protection strategies appropriate for the response zone(s) and consistent with applicable Area Contingency Plans? (49 CFR 194.107(b)(1)(iii), (b)(2)(i), (ii), and (c)(1)(v)) YES

See Page References:

O & MP Book 7: Emergency Response
Sections 1 through 4- Contain actions and procedures for the protection of the public, personnel and the environment
Region Specific Book 7- ERP
Tab 5- Pages 1-8- Region Security Plan

8.2 Can planned protection activities be accomplished within the appropriate tier times? (49 CFR 194.107(b)(2)(i), (c)(1)(v) and 194.115) YES

See Page References:

Region Specific Book 7- ERP
Tab 2- Page 1- Company/Co-Op Equipment Lists
Tab 3- Maps and References-Region Emergency Response Times Map

RESPONSE MANAGEMENT
FOR SEQUENCE NUMBER: 866

9.1 Is the response management system described in the Facility Response Plan (ERP) based on an Incident Command System? (49 CFR 194.107(b)(1)(i), (b)(2)(i), (iii), and (c)(3)) YES

See Page References:

O & MP Book 7: Emergency Response
Sec 02-02-03- Pages 1-16- Incident Command System

9.2 Does the operator's response organization describe roles and responsibilities for: (49 CFR 194.107(b)(2)(i), (c)(1)(v) and 194.117)

- Qualified Individual? YES
- Other operator response personnel including the spill management team? YES
- Contracted Oil Spill Removal Organization? YES

See Page References:

O & MP Book 7: Emergency Response
Sec 01-02-02- Pages 1-2- Support Equipment and Services- Oil Spill Response Organization
Sec 02-02-01- Pages 1-4- Emergency Notification- Qualified Individual
Sec 02-02-03- Pages 1-16- Incident Command System- Other operator response personnel including the spill management team.
Region Specific Book 7- ERP
Tab 1- Page 4- Qualified Individual
Tab 2- Pages 30, 33 & 34- Company/Co-Op Equipment Lists- Contracted Oil Spill Removal Organizations

9.3 Does the operator's response organization describe how the operator works with the Unified Command and with responders including: (49 CFR 194.107(b)(1)(i), (b)(2)(iii) and (c)(3))

- Oil Spill Removal Organization? YES
- State and Local Responders? YES
- Federal On-Scene Coordinator? YES

See Page References:

O & MP Book 7: Emergency Response
Sec 02-02-03- Pages 1-16- Incident Command System- all of the above

COMMUNICATIONS, RESPONSE EQUIPMENT AND TRANSPORTATION FOR SEQUENCE NUMBER: 866

10.1 Does the Facility Response Plan (ERP) describe appropriate communications procedures and system(s) adequate for notifications and response operations? (49 CFR 194.107(c)(1)(ii) and(v)) YES

See Page References:

O & MP Book 7: Emergency Response
Sec 02-02-01- Pages 1-4- Emergency Notification

10.2 Does the Facility Response Plan (ERP) identify response equipment that the operator owns and maintains? (49 CFR 194.107(c)(1)(v) and 194.115(a)) YES

See Page References:

Region Specific Book 7- ERP
Tab 2- Page 1-45- Company/Co-Op Equipment Lists

10.3 Does the Facility Response Plan (ERP) describe procedures for maintaining response equipment the operator owns? (49 CFR 194.107(c)(1)(viii)) YES

See Page References:

O & MP Book 7: Emergency Response
Sec 01-02-02- Pages 1-3- Support Equipment and Services
Region Specific Book 7- ERP
Tab 2- Page 1- Company/Co-Op Equipment Lists

10.4 Does the Facility Response Plan (ERP) identify Oil Spill Removal Organization(s) response equipment when the U.S. Coast Guard has not classified the Oil Spill Removal Organization? (49 CFR 194.107(c)(1)(v) and 194.115(a)) N/A

Comment:

Not applicable since Enbridge's current OSRO's are classified by the Coast Guard.

10.5 Does the Facility Response Plan (ERP) describe procedures for maintaining Oil Spill Removal Organization(s) response equipment when the U.S. Coast Guard has not classified the Oil Spill Removal Organization? (49 CFR 194.107(c)(1)(viii)) N/A

Comment:

Not applicable since Enbridge's current OSRO's are classified by the Coast Guard.

10.6 Does the Facility Response Plan (ERP) identify locations for operator owned and Oil Spill Removal Organization(s)-owned response equipment? (49 CFR 194.115(b)) YES

See Page References:

Region Specific Book 7- ERP
Tab 2- Pages 1-45- Company/Co-Op Equipment Lists –Specialty Contract or Contacts

10.7 Does the Facility Response Plan (ERP) describe mobilizing and deploying response equipment within the appropriate tier times consistent with the plan's response activities? (49 CFR 194.107(c)(1)(v) and 194.115(b)) YES

See Page References:

O & MP Book 7: Emergency Response
Sec 02-02-03- Pages 1-16- Incident Command System
Sec 04-03-01- Pages 1-11- Deploying River Booms
Region Specific Book 7- ERP
Tab 3- Maps and References- Region Emergency Response Times Map
- Major Response Equipment Staging Area Map

10.8 Does the size of the response zone permit planned response activities, including equipment mobilization and deployment, within the appropriate tier times? (49 CFR 194.115(b)) YES

See Page Reference:

Region Specific Book 7- ERP
Tab 3- Maps and References- Region Emergency Response Times Map
- Major Response Equipment Staging Area Map

RESPONSE PERSONNEL AND MOBILIZATION FOR SEQUENCE NUMBER: 866

11.1 Does the Facility Response Plan (ERP) identify enough trained personnel to respond to the worst-case discharge consistent with the Plan's response activities? (49 CFR 194.107(a),(c)(1)(v) and (c)(3),194.115, and 194.117) YES

See Page Reference:

Region Specific Book 7- ERP
Tab 2- Page 47- Company/Co-Op Equipment Lists- Emergency Response Trained Personnel

11.2 Does the Facility Response Plan (ERP) describe procedures for mobilizing and deploying response personnel throughout the response zone(s) consistent with the plan's response activities? (49 CFR 194.107(b)(2)(i), (c)(1)(v) and 194.115) YES

See Page Reference:

O & MP Book 7: Emergency Response
Sec 02-02-03- Pages 1-16- Incident Command System

RESPONSE DOCUMENTATION AND WORST-CASE DISCHARGE FOR SEQUENCE NUMBER: 866

12.1 Does the operator describe procedures the response management organization must use to document response decisions, activities, and costs? (49 CFR 194.107(c)(3)) YES

See Page Reference:

O & MP Book 7: Emergency Response
Sec 02-02-09- Pages 1-5- Incident Records
Sec 02-02-10 Pages 1-2- Post- Emergency Review

12.2 Does the Facility Response Plan (ERP) provide the calculations and methodology used for determining the worst-case discharge for the response zone(s)? (49 CFR 194.105) YES

See Page Reference:

Region Specific Book 7- ERP
Appendix- Page 7-8- Calculation of Worst- Case Discharge

12.3 Is the worst-case discharge volume calculated using the three specified methods in the Department of Transportation regulation? Are the calculations accurate and as prescribed? (49 CFR 194.105(b)) NO (See comment)

See Page Reference:

Region Specific Book 7- ERP
Appendix- Page 7-8- Calculation of Worst- Case Discharge

Comment:

Enbridge uses a more conservative approach in their calculations for worst case discharge which has been previously approved by PHMSA, as described in listed reference.

TRAINING: PROGRAM AND PROCEDURES FOR SEQUENCE NUMBER: 866

13.1 Does the Facility Response Plan (ERP) describe a training program that teaches response personnel about the Plan and their responsibilities under the plan? (49 CFR 194.107(b)(1)(ii),(c)(1)(vii) and (c)(3), and 194.117) YES

See Page Reference:

Region Specific Book 7- ERP
Appendix- Pages 5-6- *Consistency with National and Area Contingency Plans*

Comment:

For further information on emergency response training and exercises, see Book 2: Safety Sec 15-02-02.

13.2 Does the Facility Response Plan (ERP) describe a training program that teaches response personnel about matters including (49 CFR 194.117(a)(3)):

- Oil characteristics and hazards? YES
- Conditions that are likely to worsen emergencies, including the consequences of facility malfunctions or failures and appropriate corrective actions? YES
- Steps necessary to control an accidental discharge of oil? YES
- Steps necessary to minimize the potential for fire, explosion, or environmental damage? YES
- Proper fire-fighting procedures and use of personal protective equipment? YES

See Page Reference:

Region Specific Book 7- ERP
Tab 2-Page-47- Company/Co-Op Equipment Lists – Emergency Response Trained Personnel
Appendix- Pages 5-6- *Consistency with National and Area Contingency Plans*
O & MP Book 7: Emergency Response
Sec 01-02-03- Pages 1-3- Emergency Response Plans and Maps

Sec 02-02-04- Pages 1-3- Safety Precautions
Sec 02-02-06- Pages 1-4- Site Security and Control
Sec 02-02-10- Pages 1-2- Post-Emergency Reviews
Sec 03-03-02- Pages 1-6- Fires and Explosions

Comment:

For further information on emergency response training and exercises see Book 2: Safety Sec 15-02-02.

13.3 Does the Facility Response Plan (ERP) describe a response training program that addresses the appropriate levels of training and the requirements in OSHA 29 CFR 1910.120? (49 CFR 194.107(b) (1)(ii) and 194.117(c)) YES

See Page Reference:

Region Specific Book 7- ERP
Appendix- Pages 5-6- *Consistency with National and Area Contingency Plans*

Comment:

For further information on emergency response training and exercises see Book 2: Safety Sec 15-02-02.

13.4 Does the Facility Response Plan (ERP) describe the operator's procedures for maintaining records for response personnel? (49 CFR 194.117(b)) YES

See Page Reference:

O & MP Book 7: Emergency Response
Sec 02-02-03- Page 13- Incident Command Center- Documentation Unit
Sec 02-02-09 Pages 1-5- Incident Records
Region Specific Book 7- ERP
Appendix- Pages 5-6- *Consistency with National and Area Contingency Plans*

Comment:

For further information on emergency response training and exercises see Book 2: Safety Sec 15-02-02.

SPILL RESPONSE DRILL PROGRAM
FOR SEQUENCE NUMBER: 866

14.1 Does the Facility Response Plan (ERP) describe procedures for conducting internal and external drills that include (49 CFR 194.107(c)(1)(ix)):

- Responsibility for planning, carrying out, and monitoring drills? YES
- Announced drills? YES
- At least one unannounced internal drill? YES
- Quarterly Qualified Individual notification drills? YES
- Annual spill management team tabletop drills? YES
- Annual Oil Spill Removal Organization(s) equipment deployment drills of representative types and amounts of key equipment in the Facility Response Plan? YES
- At least one drill that tests the entire response plan for each response zone at least once every three years? YES

See Page Reference:

Region Specific Book 7- ERP

Tab 2- Page 46- Company/Co-Op Equipment Lists - Qualified Individuals Notification:

- Quarterly Qualified Individual notification drills-

O & MP Book 7: Emergency Response

Sec 01-02-02- Pages 2-3- Support Equipment and Services- Spill Response Exercise:

- Responsibility for planning, carrying out, and monitoring drills- as per the National Preparedness for Response Exercise Program (PREP)
- Announced drills
- At least one unannounced internal drill
- Annual spill management team tabletop drills
- Annual Oil Spill Removal Organization(s) equipment deployment drills of representative types and amounts of key equipment in the Facility Response Plan
- At least one drill that tests the entire response plan for each response zone at least once every three years

Comment:

For information on the frequencies required for spill response tabletop exercises, deployment exercises, and water, land and ice exercises, see Book 2: Safety Sec 15-02-02.

14.2 Does the Facility Response Plan (ERP) describe a three-year drill and exercise cycle and the frequencies for each type of drill in that cycle? (49 CFR 194.107(c)(1)(ix)): YES

See Page Reference:

O & MP Book 7: Emergency Response

Sec 01-02-02- Pages 2-3- Support Equipment and Services- Spill Response Exercise

14.3 Does the Facility Response Plan (ERP) describe procedures for maintaining drill documentation for three-years? (49 CFR 194.107(c)(1)(ix)): YES

See Page Reference:

Region Specific Book 7- ERP

Appendix- Page 6- *Consistency with National and Area Contingency Plans*

O & MP Book 7: Emergency Response

Sec 05-02-02- Record Keeping

Comment:

For information on record keeping on drill documentation, see Book 2: Safety Sec 15-02-02.

RESPONSE PLAN MAINTENANCE
FOR SEQUENCE NUMBER: 866

15.1 Does the Facility Response Plan (ERP) describe the requirements and procedures for the operator to (a) review the Facility Response Plans at least every five years from the date the Office of Pipeline Safety approves the plan, (b) modify the Facility Response Plan to address new or different operating conditions or information in the Facility Response Plan, and (c) submit the plan for the Office of Pipeline Safety to review, require changes, and approve? (49 CFR 194.107(c)(1)(x) and 194.12(a)) YES

See Page Reference:

O & MP Book 7: Emergency Response

Review and Revision- *Pages 1-8*

Region Specific Book 7- ERP

Tab 1- Page 1- Revision Process

15.2 Does the Facility Response Plan (ERP)identify key factors that may cause revisions to the response plan and require the operator to submit revisions to the Office of Pipeline Safety within 30 days of making the revisions for factors including: (49 CFR 194.121(b))

- New pipeline construction or purchase? YES
- Different worst-case discharge volume? YES
- Change in commodities transported? YES
- Change in Oil Spill Removal Organization(s)? YES
- Change in Qualified Individuals? YES
- Change in National Contingency Plan or Area Contingency Plan that has a significant impact on the appropriateness of response equipment or response strategies? YES
- Change in response procedures? YES

See Page Reference:

Region Specific Book 7- ERP

Tab 1- Page 1- Revision Process

15.3 Does the Facility Response Plan (ERP) describe procedures for incorporating improvements in the following? (49 CFR 194.121(b)(8))

- Post-drill evaluation results? YES
- Post-incident evaluation results? YES

See Page Reference:

O & MP Book 7: Emergency Response

Sec 01-02-02- Pages 2-3- Support Equipment and Services- Adhere to the National Preparedness for Response Exercise Program (PREP)*guidelines for post drill evaluation*

Sec 02-02-03- Page 13- Incident Command Center- Documentation Unit for post- emergency review

Sec 02-02-10- Pages 1-2- Post- Emergency Reviews- for emergency response actions

Comment:

For information on determining causes of incidents and preventing similar events from occurring, see Book 1: General Reference: Incident Reporting 02-02-02, Incident Investigation 02-02-03 & Investigating Piping Failures 02-02-04.

NATIONAL CONTINGENCY PLAN AND AREA CONTINGENCY PLAN CONSISTENCY FOR SEQUENCE NUMBER: 866

16.1 Is the Plan consistent with the National Contingency Plan in effect at the time of submission? (49 CFR 194.107(b)(1)) Please answer yes or no.

YES

16.2 Is the Plan consistent with the Area Contingency Plans in effect for each response zone at the time of submission? (49 CFR 194.107(b)(2)) Please answer yes or no.

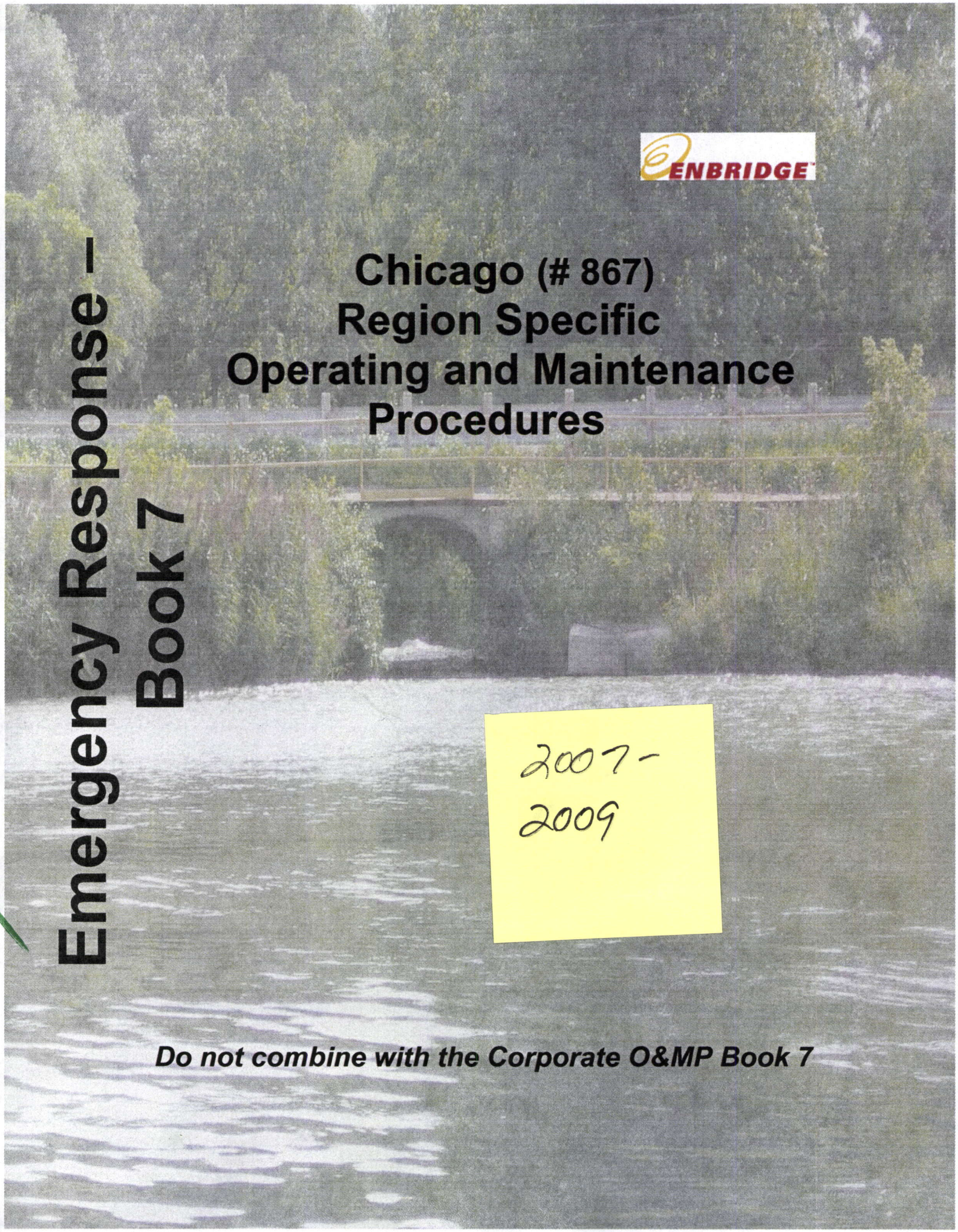
YES

16.3 Is the Plan's concept of operations adequate to carry out a response to the worst-case discharge under 49 CFR 194?(49 CFR 194.107) Please answer yes or no.

YES

SPACER PAGE

INTENTIONALLY LEFT BLANK



ENBRIDGE

Chicago (# 867) Region Specific Operating and Maintenance Procedures

Emergency Response – Book 7

2007-2009

Do not combine with the Corporate O&MP Book 7

Regional Specific
- Revision Process
- Revision Request Form
- Revision Record
- Qualified Individual and Region Response Description

Company/Cooperative Equipment Lists
- Enbridge Emergency Response Equipment
- Station Response Equipment Guidelines
- Winter Spill Equipment
- Water Recovery Equipment
- OSRO (Oil Spill Response Organization)
- Canadian Cross Border Emergency Response Equipment
- Qualified Individuals Notification
- Emergency Response Trained Personnel

Maps and Reference
- Main Line Valves
- Site Safety Plot Plan
- Pipeline Information
  - Miles of Mainline Pipe
  - Release Alert
- Pipeline System Map
  - Vector System Map- Appendix
- HCA Map Overview
  - HCA Tables
- Emergency Equipment Staging Areas
- Emergency Response Times Map

Control Points
- Control Point Map Process
- Control Point Map Record

Region Security Plans

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

Region Specific

Region Specific

Revision Process.....1
Revision Request Form.....2
Revision Record.....3
Qualified Individual and Response Zone Description.....4

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 (Environment & Safety Clerk 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 incorporated, 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 top left-hand corner of page)

Existing wording: _____

_____

_____

_____

_____

_____

Proposed wording: _____

_____

_____

_____

_____

_____

Reason for change: _____

_____

_____

_____

_____

Issued: 4/20/07

Submit Request Form to Manual Custodian.

Attn: Environment & Safety Clerk, Superior Office

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 Chicago Region Office.

Revision	Date Requested	Date Inserted	Signature
01			
02			
03			
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			

Qualified Individual(s)

T.W. Fridel
General Manager, Chicago Region
1500 W. Main St.
Griffith, IN 46319
Business: 219-922-3133 #201
Business FAX: 219-922-3128
24 hr. contact: 800-858-5253 via Edmonton Control Center

M.J. Willoughby
General Manager, Superior Region
119 N. 25th St. E.
Superior, WI 54880
Business: 715-394-1410
Business FAX: 715-394-1405-
24 hr. contact: 800-858-5253 via Edmonton Control Center

CHICAGO REGION RESPONSE ZONE

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
- **Chicago Region**
- Cushing Region
- Enbridge Pipelines North Dakota

The Chicago Region response zone includes eleven pipelines (Lines 6A, 13, 14, 61, 62, 64, 6B, 5, 10, 17, and Mustang) and three terminal lines (Lines TL 1, GFHT 2 and GFHT 3) that transport crude oil, natural gas liquids and diluent across Wisconsin, Illinois, Indiana, Michigan and New York. This section of response zone includes:

- Approximately 2,177 miles of pipeline, with pipe diameters ranging from 12 to 42 inches;
- 42 Pump Stations located along the pipe;
- The Mustang pipeline segment for which Enbridge has operations, maintenance, repair and emergency response responsibility includes the Lockport Metering Station and the portion of the Mustang 24" pipeline system from Lockport, Illinois to Interstate 74;

- Line 17 – Enbridge operates the 88 mile pipeline segment beginning in Stockbridge, Michigan and ending in Oregon, Ohio. The first 35 miles of pipeline, from Stockbridge, Michigan to Freedom Junction, Michigan was constructed in 1998 and is owned by Enbridge. The remaining 53 mile segment runs from Freedom Junction, Michigan to Oregon, Ohio (MP is leased from Wolverine Pipeline). Per the established lease agreement, Enbridge is responsible for all operations, maintenance and emergency response associated with this line segment (as if we were the owner); however, Wolverine retains ownership.

- The Chicago system also includes 23 tanks (11 tanks at Griffith; 9 tanks at Hartsdale; 3 tanks at Stockbridge). Breakout tanks are located at Griffith, IN (2.84 million barrels storage capacity), Hartsdale, IN (846,000 barrels storage capacity) and at Stockbridge, MI (440,000 barrels storage capacity);

Counties included in the Chicago Region response zone are:

Wisconsin	Illinois	Indiana	Michigan	New York
Rusk	McHenry	Lake	Crawford	Erie
Chippewa	Kane	Porter	Ogemaw	
Taylor	Cook	LaPorte	Arenac	
Clark	Dupage	St. Joseph	Bay	
Marathon	Kendall		Lapeer	
Wood	Will		St. Claire	
Adams	Kankakee		Berrion	
Marquette	Ford		Cass	
Columbia	Livingston		St. Joseph	
Dane	Champaign		Kalamazoo	
Jefferson	Piatt		Calhoun	
Rock	Boone		Livingston	
Walworth	DeKalb		Oakland	
	LaSalle		Tuscola	
	Grundy		Saginaw	
	Will		Oscoda	
			Macomb	
			Ingham	
			Jackson	
			Washtenaw	

This response zone includes the following pipelines:

Line	Pipeline Sections	Begin Stationing	End Stationing	Miles	Pipeline Diameter	Product
5	Lewiston Pump Station to Sarnia, Ontario	2,378,371	3,364,529	186.77	30"	Crude Oil & Natural Gas Liquids
6A	Hwy 8 Ladysmith, WI to Mokena, IL	513,368	2,457,347	368.2	34"	Crude Oil & Natural Gas Liquids
6B	Griffith, IN to Sarnia, Ontario	0	1,509,516	285.9	30"	Crude Oil
10	Westover, Ontario to Grand Island, NY	0	3,484	.7	12"	Crude Oil
10	Grand Island, NY to East Niagara, NY	3,484	29,409	4.9	20"	Crude Oil
10	East Niagara, NY to Kiantone, NY Take-Off	29,409	119,975	17.3	12"	Crude Oil
13	Streator, IL to Manhatten, IL	0	237,710	45.02	20"	Diluent
13	Manhatten, IL to Delevan, WI	0	889,310	168.43	20"	Diluent
13	Delevan, WI to Ladysmith, WI	528,000	1,216,611	230.42	20"	Diluent
14	Hwy 8 Ladysmith, WI to Mokena, IL	512,719	2,434,861	364.0	24"	Crude Oil
17	Stockbridge, MI to Freedom Junction, MI	0	186,089	35.3	16"	Crude Oil
17	Freedom Junction, MI to Toledo, OH	0	279,047	52.9	16"	Crude Oil
61	Ladysmith, WI to Delevan, WI	523,170	1,703,457	223.54	42"	Crude Oil
61	Delevan, WI to LaSalle Livingston County Line	0	467,030	88.45	42"	Crude Oil
62*	IN State Line to Hartsdale, IL	363,296	398,336	6.5	22"	Crude Oil
64	Mokena, IL to Griffith, IN	2,406,091	2,543,685	26.1	24"	Crude Oil
TL1	Griffith, IN to Hartsdale, IN	0	3,171	.6	34"	Crude Oil
GFHT 2	Griffith, IN to Hartsdale, IN	0	4,090	.8	36"	Crude Oil
GFHT 3	Griffith, IN to Hartsdale, IN	0	4,128	.8	36"	Crude Oil
Mustang	Lockport Metering Station, IL to North of Interstate 74	0	10,001	1.9	18"	Crude Oil

* Stationing used is not As-Built- Begins at zero in Flanagan

Company/Co-Op Equipment Lists

ENBRIDGE EMERGENCY RESPONSE EQUIPMENT

Enbridge owns and maintains extensive emergency response equipment throughout its liquid pipeline systems. This equipment is located at all Pipeline Maintenance facilities 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 Pipeline Maintenance Supervisor to ensure that the equipment is inventoried annually and restocked as resources are expended.

Further company owned and maintained equipment is stored at each pump station for immediate response until additional resources arrive. These resources are maintained and restocked by the respective site 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 found on the water recovery equipment inventory.

Enbridge has working 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 the OSRO's equipment inventories are kept on file at each region office.

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. Enbridge does not retain equipment inventory lists for all non USCG classified contractors.

COMPANY/COOPERATIVE EQUIPMENT LISTS

Company-

Emergency Response (ER) Trailer Lists and Locations

PLM 3

- Bay City
- Fort Atkinson
- Dundee
- Marshall
- Vesper

Griffith Terminal.....14

Station Response Equipment Guidelines.....15

Station Inventories.....16

Winter Spill Equipment.....22

Primary Water Recovery Equipment.....23

Other-

Government, Contractors or other Cooperative Resources-

OSRO.....26

Canadian Cross Border Emergency Response Equipment-

- Westover, Ontario.....28
- Sarnia, Ontario.....37

Qualified Individuals Notification.....51

Emergency Response Trained Personnel.....52

BAY CITY PLM EMERGENCY RESPONSE EQUIPMENT

MISCELLANEOUS

QTY	DESCRIPTION
1	6000 Watt Light Plant on Wheels
2	18' Lund Boats with 50/hp Motors
4	2" Trash Pumps
2	3" Trash Pumps
15	20' 2" Tank Truck Hose
15	20' 3" Tank Truck Hose
10	Bundles Absorbent Pads (100/Bundle)
1	185 cfm Wheeled Air Compressor
1	Polaris 6 x 6 ATV
1	4810 ASV Rubber Tracked Machine
1	420 Cat Rubber Tired Backhoe
1	TD550 John Deere Dozer

LEAK TRAILER

4	30# Fire Extinguishers
4	Safety Belts and Tag Lines
1	Fire Blanket
2	Windsocks
10	Neoprene Hip Boots and Gloves (Pairs)
5	NGL Protective Equipment (Face Shields, Mitts, Protective Sleeves and Aprons)
10	Sets Fire Retardant Clothing
10	Sets Fire Retardant Rain Gear
2	Scott Air Paks (2.2 cu. ft. Units)
1	First-Aid Kit
1	Stretcher
2	Wool Blankets
1	3" Air Operated Diaphragm Pump
1	2" Trash Pump
45-50'	Rigid Suction/Discharge Hose
5	Bales Sorbent Pads
4	Road Barricades w/Flashers
4	Danger Signs to Warn Public
10	High Visibility Vests
1	Roll Caution Tape to Barricade Leak Area and Trenches
1	Portable Generator
1	Air Horn
4	Shovels
1	Sledge Hammer
1	Axe
12	Steel Fence Posts
1	Plastic Fencing (Roll)

BAY CITY PLM - LEAK TRAILER cont.

QTY	DESCRIPTION
1	12 Volt Spotlight
6	Rolls Mylar Scare Tape
12	Scare Balloons or Equivalent
1	Grounding Rod

BOOM TRAILER

5	Bundles Absorbent Pads
200'	Absorbent Boom
4	Fabricated Disc Anchors
4	15lb Danforth Anchors
4	15' Lengths of 1/2"Anchor Chain
500'	Floating Oil Boom w/Quick Latch Couplings
2	Boom Tow Bridles
5	Anchor Marker Buoys w/Boom Connection
2	3"Kamlock-Male (Female Thread)
2	3"Kamlock Female (Female Thread)
2	3"x 2" Kamlock Adapters
2	2" Kamlock Male (Female Thread)
2	2" Kamlock Female (Female thread)
1	3" Air Operated Diaphragm Pump w/3" Kamlocks
60'	Rigid Suction/Discharge Hose
30'	3" Floating Discharge Hose
5	Hose Floats
1	Skim Pak Weir Skimmer w/Discharge Hose, Wand Extension, and Debris Screen
1	Manta-Ray Floating Suction Head
1	1800 Gal. Porta-Tank and Liner
10	Steel Toe Chest Waders (Pairs)
10	Neoprene Rubber Gloves (Pairs)
10	USCG Approved Life Vests
6	Safety Belt and Tag Lines
1	Rope Reel or Various Lengths of Rope w/Quick Connect Fittings
4	Shovels
1	Sledge hammer
1	Bolt cutter
1	Axe
12	Steel Fence Posts
1	Drive in Fence Post Anchor
5	Screw in Fence Post Anchors
1	Megaphone
1	12 Volt Hand-Held Spotlight
1	Amber 12 Volt Strobe Light
2	Rolls Plastic Fencing
1	Assorted Lumber of 2' x 4" & 2" x 6" (Lot)

COMMAND POST TRAILER

QTY	DESCRIPTION
	Book 1 (O&MP Procedures-General Reference)
	Book 2 (O&MP Procedures-Safety)
	Book 3 (O&MP Procedures-Pipeline Facilities)
	Book 7 Emergency Response
	Emergency Response Directory
	Environmental Sensitivity Maps
	Radio Directory
1	Grease Board w/Markers and Eraser
5	Sets Fire Retardant Clothing
5	Sets Fire Retardant Rain Gear
5	Hard Hats for Visitors
1	First-Aid Kit
1	Strobe Light
1	Pedestal Sign (*Visitors to Stop at Command Post*)
1	12 Volt Spotlight
3	Flashlights
1	Roll Tape to Restrict Site Access
1	Portable Generator

FORT ATKINSON PLM INVENTORY

RESPONSE BOATS/ MOTORS/ TRAILERS

LEAK TRAILER

1	1986 14' Alumacraft John Boat
	Model 1457 (Serial # ABCD19L3L586)
	Reg # WS 3662 (WI) Expires 03-31-2009
1	1986 Johnson 9.9 Motor (Serial # R 08218672) Two-Stroke
1	1992 Pace American Trailer
	Model 820TA3 (20') Unit # 431 GVW 10,000 Actual Wt.
	(Serial # 40LAB2028NPO16323)
	License # BR 2284 (WI) Expires 12-31-07 Smith # AC 7599
	Safety Inspection 08-06 Due 08-07 Tire Size ST225/75R15
2	Boat Oars

BOOM TRAILER

1	1990 Mac Lander Trailer
	Model 20' Unit #299 GVW 11,440 Actual Wt.
	(Serial # 1M9PV2020L1217041)
	License # DR 1028 (WI) Expires 12-31-07 Smith # AC 7552
	Safety Inspection 08-06 Due 08-07 Tire Size 9.50 - 16.5 LT

COMMAND POST

1	1990 TSI Trailer

FORT ATKINSON PLM - COMMAND POST BOAT cont.

QTY	DESCRIPTION
	Model 8x28 (28') Unit # 268 GVW 4,500 Actual Wt.
	(Serial # 906123)
	License # AR 1983 (WI) Expires 12-31-07 Smith # AC 4310
	Safety Inspection 08-06 Due 08-07 Tire Size F 78x15

MISCELLANEOUS

35	Bags Sorbent Pads 100/Bag (3,500 Pads)
11	Bags Sorbent Boom 8" x 10' - 4/Roll - 4/Bag (440' Total)
2	3" Trash Pumps
5	2" Trash Pumps
2	2" Electric Pumps
1	2" Hydraulic Pump
1	3" Hydraulic Pump
1	2" Air Pump
2	3" Air Pumps
1	Kerosene Heater
1	Z-3500 Warn Winch

LEAK TRAILER

1	4 ft. Elastec Drum Skimmer
1	8 ft. Elastec Drum Skimmer
1	Elastec Skimmer Power Unit
1	50' section of orange mini boom
1	Stretcher
1	Roll of Plastic
3	12 ft. Pike Poles
164'	Orange Plastic Fence
1	30# Fire Gun
3	Traffic Safety Cones (Orange)
2	Joints 3" Clear Plastic Hose
1	Kerosene Heater
5	Bags Sorbent Pads 100/Bag (500 Total)
2	Bags Sorbent Boom 6" x 10' - 40 ft. Each- 4/ Bag (80 ft.Total)
1	Windsock
4	Erickson Safety Lights
	Assorted 2" & 3" Kamlock Fittings
1	Incident Command Chart
1	Prowler Owl
1	Roll *BURIED PIPELINE* Tape
1	Roll *DANGER* Tape
1	Roll *FITTING ON LINE* Tape
2	Rolls Flagging Ribbon (Yellow)
50	Marking Flags

FORT ATKINSON PLM - LEAK TRAILER cont.

QTY	DESCRIPTION
4	Do Not Enter Signs
4	Pair Rubber Arm Sleeve's
3	Face Shields
5	Rubber Aprons
15	Safety Vests (Orange)
5	Mylar Scare Tape (Rolls)
18	Scare Balloons
12	Rain Jackets (Various Sizes)
12	Rain Pants (Various Sizes)
2	Sledge Hammers
1	Axe
4	Hard Hat Face Shield Adaptors
4	Miller Safety Belts
4	Miller Safety Lines
20	Pair Rubber Gloves
1	Stihl Leaf Blower
2	6 Volt Batteries
3	Fire Blankets
1	Fence Post Driver
10	Life Jackets(Various Sizes)
1	Throwable Boat Cushion
13	Nomex Coveralls (Various Sizes)
8	Amber Barricade Warning Lights
4	Barricades
2	Flash Lights
1	Portable Spot Light
1	Mora Hand Ice Auger
1	Eskimo Gas Powered Ice Auger
2	Joints 1 3/4" Flexible Discharge Hose
1	Bundle Rags
2	044's Stihl Chain Saws
3	1 Gal. Bottles of Bar Oil
1	Cooler
10	Pair Waders (Various Sizes)
8	Pair Steel-Toed Winter Pak Boots
12	Carsonite Posts
200'	Rope
1	First-Aid Kit
4	Shovels
1	Honda Generator (Model EM3500S)
1	Tow Bridal

BOOM TRAILER

1280'	Floating Boom w/Quick Latch Couplings (Various Lengths)
4	Bags Sorbent Boom 6" x 10' - 40' Each 4/Bag

FORT ATKINSON PLM - BOOM TRAILER cont.

QTY	DESCRIPTION
2	Bundles of Orange Mini Boom 50' Each
4	Sorbent Pads 100/Bag
2	Joints 2" Clear Hose
1	Joints 3" Clear Hose
5	Traffic Safety Cones
5	Marker Buoys w/Chains and Clips
	Assorted Lumber
1	3" Roper Diaphragm Pump Air Operated
1	Manta Ray Skimmer
1	Waders (Pair)
300'	Nylon Rope
50'	Extra Boom Chain
1	3" Wand Skimmer - Skim Pak Weir Skimmer
1	Debris Screen
1	Fence Post Driver
4	3" hose floats
	Assorted 2" & 3" Kamlock Fittings
5	Life Jackets
16	Pair Pik-of-Life Ice Picks
1	Bull Horn
2	Rescue Disks w/100' of Rope Attached
1	Air Horn Signal Device
4	Nylon Gloves (Winter) (Pairs)
5	Rubber Gloves (Pairs)
1	Safety Harness
4	Safety Vests (Orange)
4	Amber Barricade Flashers
1	Amber Emergency Flashing Light - Magnetic
1	12 Volt Hand-Held Spot Light
2	Flashlights
1	Roll *DANGER* Tape (Red)
1	Roll *BURIED PIPELINE* Tape
1	Roll *FITTING ON LINE* Tape
8	Steel Fence Posts
1	Windsock
1	Sledge Hammer
1	Axe
4	Shovels
1	Roll Plastic Fence
1	6 Gal. Gas Tank (Empty)
1	30# Fire Gun
3	Anchors and Chains
3	Spiral Anchors
1	Bolt Cutter
1	Stretcher

FORT ATKINSON PLM - BOOM TRAILER cont.

QTY	DESCRIPTION
1	1800 Gal. Porta-Tank and Liner
1	First-Aid Kit

COMMAND POST

2	12 Volt Battery Chargers
3	Folding Chairs
1	Weather Haven Endurance Tent
4	Toilet Paper (Rolls)
1	Paper Towel (Rolls)
1	First-Aid Kit
4	Sets of Rain Gear Various Sizes
1	Pair Rain Pants
1	Plastic Battery Holder
1	Bag Rags
1	Bag Sorbent Pads - 100
	Miscellaneous Office Supplies
2	Signs " *All Persons Must Report To Command Post When Leaving"*
2	Enbridge Incident Command Charts
1	Enbridge Site Safety Plot Plan (Roll Up)
1	Extension Cord
1	Orange Safety Vest
1	Extension Cord (end to be hard wired)
1	Flash Light and Charger
4	Nomex Coveralls Various Sizes (Blue)
7	Nomex Coveralls Various Sizes (Red-Visitor)
2	Winter Jackets Nomex
5	Winter Blankets
1	Chalkboard Style Site Safety Plot Plan
1	Roll *CAUTION DO NOT ENTER* Tape
1	Amber Strobe Light
2	Amber Barricade Lights

DUNDEE PLM INVENTORY

BOOM TRAILER

300'	Slick Bar Boom w/Quick Latch Couplings
5	Bags Sorbent Boom 6" x 10' - 40' Each 4/Bag
3	Bags Sorbent Boom 4" x 10' - 40' Each 4/Bag
2	Bags Sorbent Pads 100 Each - 200 Pads
3	Chicken Wire Fence 150'/Rolls - 450'
1	Warning Fence 100' Roll (Orange)
10	Steel Fence Posts
2	Spade Shovels
2	Rolls Plastic Sheet 25' Rolls - 50 ft.

DUNDEE PLM - BOOM TRAILER cont.

QTY	DESCRIPTION
1	Sledge hammer
1	Poly rope 100' (Roll)
1	*CAUTION* Tape (Roll)
1	Box Rubber Gloves
1	Bailing Wire (Roll)
2	Safety Vests (Orange)
1	Claw Hammer
1	Box Nails
1	Hacksaw
1	Pliers
1	1992 Pace American Trailer
	Model 20' Unit # 432 GVW 10,000 Actual Wt.
	(Serial # 40LAB2027NP016247)
	License # BR 2285 (WI) Expires 12-31-07 Smith #
	Safety Inspection 08-06 Due 08-07 Tire Size ST 225/75R15

MARSHALL PLM INVENTORY

MISCELLANEOUS

7	2" Water Pumps
3	3" Water Pumps

BOOM TRAILER

5	Bundles Sorbent Pads
200'	Sorbent Boom
4	Fabricated Disk Anchors
4	15# Danforth Anchors
4	15' Lengths ½" Anchor Chain
500'	Floating Boom w/ Quick Latch Connectors
2	Boom Tow Bridles
5	Anchor Marker Buoys w/ Boom Connection
	Assorted 2" and 3" Kamlock fittings
1	3" Air Operated Diaphragm Pump
60'	Rigid Suction / Disc. Hose
30'	3" Floating Disc. Hose
5	Hose Floats
1	Skim-Pac Weir w/Disc. Hose, Wand and Debris Screen
1	Manta-Ray Floating Suction Head
1	1800 Gal. Porta-Tank
10	Steel-Toe Chest Waders (Pairs)
10	Neoprene Rubber Gloves (Pairs)
10	USCG Approved Life Vests
6	Safety Belt and Tag Lines
1	Reel Rope Polytron and Disconnect Fittings

MARSHALL PLM - BOOM TRAILER cont.

QTY	DESCRIPTION
4	Shovels
1	Sledge Hammer
1	Bolt Cutter
1	Axe
12	Steel Fence Posts
1	Drive-in Fence Post Anchors
5	Screw-in Fence Posts Anchors
1	Megaphone
1	12 Volt Hand-Held Spotlight
5	Rolls Plastic Fence
12	2 x 4 x 12 Lumber
12	2 x 6 x 12 Lumber

LEAK TRAILER

5	30# Fire Extinguishers
4	Safety Belts and Taglines
1	Fire Blanket
2	Windsocks
10	Neoprene Hip Boots (Pairs)
10	Neoprene Gloves (Pairs)
10	Fire Retardant Clothing (Sets)
10	Fire Retardant Rain Gear (Sets)
2	SCBA Scott Air Packs
1	First-Aid Kit
1	Stretcher
2	Wool Blankets
5	Face-Shields
5	Insulated Mitts
5	Protective Sleeves
5	Aprons
2	NGL Flare Launchers and Cartridges
1	3" Air Operated Diaphragm Pump
1	2" Trash Pumps
50'	Rigid Suction / Disc. Hose
5	Sorbent Pads (Bundles)
4	Road Barricades w/ Amber Flashers
4	Danger Signs
10	Reflective Vests
1	Roll Caution Tape
1	Portable Generator
6	Shovels
1	Sledge Hammer
2	Axe
12	Steel Fence Posts

MARSHALL PLM - LEAK TRAILER cont.

QTY	DESCRIPTION
1	Plastic Fence (Roll)
1	Hand Held Spotlight 12v
6	250' Rolls Mylar Bird Scare Tape
12	Animal / Bird Scare Balloons
1	Ground Rod

BOATS/ TRAILERS

1	Boat 18' (Lund with 50hp Mercury and Trailer)
1	Boat 22' (Jet with 2 Motors and Trailer)

MISCELLANEOUS

1	Winter Weather Shelter (8' X 12')
2	Chainsaw (Stihl 044 with 32" Bar)
1	Diaphragm Pump 3"
1	Diaphragm Pump 2"
1	Hydraulic Pump 2" with Power Unit
1	Backpack Air Blower
1	Ice Auger (8" with Gas Motor)
1	Venturi Air Mover
2	Generator (5000watt)
2	Torpedo Heaters
3	Trash Pump 2"
1	Trash Pump 3"
100'	River Boom
1	Air Mover
1	Rescue Basket

BOOM TRAILER

300'	River Boom
268'	Mini Boom
240'	8" Sorbent Boom (10' Sections)
160'	5" Sorbent Boom (10' Sections)
12	Bag of Sorbent Pads (17" X 19" 100 Pads/Bag)
1	Environmental Sample Kit
2	Explosion Proof Drop Lights
1	3" Skimmer with Air Hose and Motor
1	Portable Tank and Accessories 1500 Gal.
2	15' Pike Poles
1	Electric Winch 3500#
6	Tow Bridles for Mini Boom
7	Buoys 12"
8	River Anchors with Rope

VESPER PLM - BOOM TRAILER cont.

QTY	DESCRIPTION
1	Chicken Wire 100' Roll
1	Nylon Rope with Clevis 100'
1	Nylon Rope with Clevis 75'
1	Nylon Rope with Clevis 50'
5	5 Point Body Harness
3	Caution Tape (Rolls)
2	Rescue Discs
2	Flashlights
8	Incident Command System Reflective Vests
1	Bag of Rubber Gloves
1	Hacksaw
1	Tin Snip
1	Pliers
3	# of 3.5" 16 Penny Nails
10	Boom Connector
1	Prowler Owl
3	Mylar Tape (Rolls)
1	Box of Garbage Bags
6	Pick-O-Life
1	First-Aid Kit
1	Rope 200' Roll
1	Windsock and Pole
2	Kamlock Male 3"
2	Kamlock Female 3"
1	Kamlock Male 2"
1	Kamlock Female 2"
1	Spare Tire
1	Sledge Hammer
4	Screw Anchors
2	Shovels
2	Pitch Forks
13	Fence Posts
2	Hoses 2" 25'
1	Large Boom Anchor
1	Fire Blanket

GRIFFITH TERMINAL EMERGENCY RESPONSE EQUIPMENT

QTY	DESCRIPTION
	GRIFFITH FIRE PROTECTION BUILDING
2	1 3/4" x 50' Fire Hose (on Foam Trailer)
2	2 1/2" x 25' Fire Hose (on Foam Trailer)
1	500 Gal. Foam Trailer
6	55 Gal. Barrels AFFF Foam
10	50# Pails of Dry Chemical Fire Extinguisher (Purple K)
1	200' Mobile Hose Reel
4	2 1/2" x 50' Fire Hose (on Foam Trailer)
2	Tank Rescue Basket
2	Road Guard Reflective Vests
1	Windsock
1	3 ft. Handle Axe
2	10# Sledge Hammers
	Various Rain and Flood Gear
	3 Steel, 2 Aluminum, 1 Plastic Flat Shovels
	GRIFFITH COLD STORAGE
20	Bales of 3' x 3' Absorbent Pads (100 per Bale)
4	8" x 10' Bales of Boom (4 per Bale)
2	30" x 150' Rolls of Oil Absorbent Pad
2	Portable Hydraulic Units
2	Squeegees
2	Steel Rakes
2	Chicken Fencing (Rolls)
1	Wheel Barrow
	HARTSDALE NORTH GARAGE
9	Bags of 8" Boom (Total of 280')
20	Bags of 5" Boom (Total of 840')
6	Bales of 3' x 3' Absorbent Pads (100 per Bale)
1	Spade Shovel

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")

LEWISTON STATION INVENTORY

BOOM TRAILER

QTY	DESCRIPTION
20	Bales of Straw
200'	6"Containment Boom
200'	5" Sorbent Boom (5 Bales-40' each)
200'	8" Sorbent Boom (5 Bales-40' each)
1	Bale Sorbent Pads (100 Grade)
1	Bale Sorbent Pads (200 Grade)
2	Waders (Pairs)
1	Windsock
200'	Rope- ⅜" (4)-50' Ropes
12	Fence Posts
100'	Baling Wire
2	Life Jackets
2	Flashlights w/Batteries
1	Electrician Pliers
10	Garbage Bags
1000'	Barricade Tape
450'	Chicken Wire Fencing (3 Rolls)
12	Lumber (2" x 4" x 12')
12	Lumber (2" x 6" x 12')
4	Shovels
1	Joint Culvert (12" x 10')
5	# 16 Penny Nails
1	Tin Snips
1	Claw Hammer
1	Rake
1	Hacksaw
2	Reflective Vests
1	Permalon Plastic (40' x 100') x 210 Ply
2	Rubber Gloves (Pairs)
10	Wood Lathe
1	Sledge Hammer

NORTH BRANCH STATION INVENTORY

BOOM TRAILER

20	Bales of Straw
200'	6"Containment Boom
200'	5" Sorbent Boom (5 Bales-40' Each)
200'	8" Sorbent Boom (5 Bales-40' Each)
1	Bale Sorbent Pads (100 Grade)
1	Bale Sorbent Pads (200 Grade)
2	Waders (Pairs)
1	Windsock
200'	Rope- ⅜" (4)-50' Ropes

NORTH BRANCH - BOOM TRAILER cont.

QTY	DESCRIPTION
12	Fence Posts
100'	Baling Wire
2	Life Jackets
2	Flashlights w/Batteries
1	Electrician Pliers
10	Garbage Bags
1000'	Barricade Tape
450'	Chicken Wire Fencing (3 Rolls)
12	Lumber (2" x 4" x 12')
12	Lumber (2" x 6" x 12')
4	Shovels
1	Joint Culvert (12"x 10')
5	# 16 Penny Nails
1	Tin Snips
1	Claw Hammer
1	Rake
1	Hacksaw
2	Reflective Vests
1	Roll Permalon Plastic (40' x 100') x 210 ply
2	Rubber Gloves (Pairs)
10	Wood Lathe
1	Sledge Hammer

MARYSVILLE STATION INVENTORY

BOOM TRAILER

20	Bales Straw
200'	6"Containment Boom
200'	5" Sorbent Boom (5 Bales-40' Each)
200'	8" Sorbent Boom (5 Bales-40' Each)
1	Bale Sorbent Pads (100 Grade)
1	Bale Sorbent Pads (200 Grade)
2	Waders (Pairs)
1	Windsock
200'	Rope-⅜" (4)-50' Ropes
12	Fence Posts
100'	Baling Wire
2	Life Jackets
2	Flashlights w/Batteries
1	Electrician Pliers
10	Garbage Bags
1000'	Barricade Tape
450'	Chicken Wire Fencing (3 Rolls)
12	Lumber (2" x 4" x 12')
12	Lumber (2" x 6" x 12')
4	Shovels

MARYSVILLE - BOOM TRAILER cont.

QTY	DESCRIPTION
1	Joint Culvert (12" x 10')
5	# 16 Penny Nails
1	Tin Snips
1	Claw Hammer
1	Rake
1	Hacksaw
2	Reflective Vests
1	Permalon Plastic (40' x 100') x 210 Ply
2	Rubber Gloves (Pairs)
10	Wood Lathe
1	Sledge Hammer

BUFFALO STATION INVENTORY

BOOM TRAILER

5	Bundles Sorbent Pads (100 Each)
2	Sorbent Rolls
12	Sections 5" x 10' Sorbent Boom - 120 ft
12	Sections 8" x 10' Sorbent Boom - 120 ft.
2	Danforth Anchors
3	Fabricated Disc Anchors
6	½ Lengths Anchor Chain - 20 ft.
2	Boom Tow Bridle
2	Boom Tow Paravane
2	Boom Tow Sling - 3/8 Cable/Hooks - 25 ft.
12	Hand Line Tow Bridle
16	Drive-In Pins/ Wings
8	Screw Anchor
6	Marker Buoy
5	Buoy Anchors
1	½" Rope & Reel - 50 ft.
1	½" Rope & Reel - 100 ft.
6	½" Rope/Snap Hooks on Both Ends - 25 ft.
2	½" Rope/Snap Hooks on Both Ends.- 25 ft.
1	Honda ES6500 Generator
1	Honda 2" Trash Pump
4	Floating Suction Hose - 15 ft.
2	Ridged 2" Discharge Hose - 27 ft.
2	Flexible Discharge Hose - 50 ft.
1	2 ft. Pedco Skimmer
2	1500 Gal. Porta-Tank Liner
2	1500 Gal. Porta-Tank Frame
2	Porta-Tank Hose Saddle
1	3-Way Fluid Manifold/Stand
1	Wash Down Nozzle/ 2" Kamlock
5	3" x 2" Kamlock Adaptors

BUFFALO - BOOM TRAILER cont.

QTY	DESCRIPTION
3	2" Male Kamlock Fittings (Male Thread)
5	2" Female Kamlock (Male Thread)
1	2" Female Kamlock (Female Thread)
3	3" Female Kamlock (Male Thread)
3	3" Female Kamlock (Female Thread)
3	Full Body Harness
9	Type 1 Life Vests (4 Large, 5 Xlarge)
9	Steel Toe Thigh High Boots
2	Sledge Hammer
1	First-Aid Kit
1	30# Fire Extinguisher
2	Windsock
1	Stretcher
1	Fire Blanket
2	Equipment Ramps
3	Extension Cords

HOWELL STATION PLM INVENTORY

BOOM TRAILER

4	Bundles of Sorbent Pads
5	Bags of 5" Sorbent Boom
5	Bags of 8" Sorbent Boom
20	Bales of Straw
200'	Containment Boom
12	2 x 4 x 12 Lumber
12	2 x 6 x 12 Lumber
2	Pair Waders
1	Windsock
3	Rope 50' Sections
1	Roll Bailing Wire
2	Flashlight w/Batteries
1	Electricians Pliers
10	Garbage Bags
2	Life Jackets
4	Shovels
5	# 16 Penny Nails
1	Tin Snips
1	Claw Hammer
1	Hacksaw
1	Reflective Vest
1	Roll Plastic
2	Pair Rubber Gloves
1	Sledge Hammer
10	Wood Laths
12	Fence Posts

HOWELL - BOOM TRAILER cont.

QTY	DESCRIPTION
1	Roll Barricade Tape
3	Rolls Chicken Wire
1	Culvert 12" x 10'
1	Rake

NILES STATION INVENTORY

BOOM TRAILER

2	Bundles of Sorbent Pads
5	5" Sorbent Boom (Bags)
5	8" Sorbent Boom (Bags)
20	Straw (Bales)
200'	Containment Boom
12	2 x 4 x 12 Lumber
12	2 x 6 x 12 Lumber
2	Pair Waders
1	Windsock
2	Rope 50' Sections
1	Roll Bailing Wire
2	Flashlight w/batteries
1	Electricians Pliers
10	Garbage Bags
2	Life Jackets
3	Shovels
5	# 16 Penny Nails
1	Tin Snips
1	Claw Hammer
1	Hacksaw
1	Reflective Vest
1	Roll Plastic
2	Pair Rubber Gloves
1	Sledge Hammer
10	Wood Laths
12	Fence Posts
1	Roll Barricade Tape
3	Rolls Chicken Wire
1	Culvert 12" x 10'
1	Rake

SHELDON STATION INVENTORY

BOOM TRAILER

500'	River Boom
3	Chicken Wire (Roll)
1	Barricade
160'	Sorbent Boom 5" (10' Sections)
3	Snow Fence (Rolls) (50' Each)
2	Shovels

SHELDON - BOOM TRAILER

QTY	DESCRIPTION
1	Pitch Fork
1	Sledge Hammer
6	Bag of Sorbent Pads (17"X19" 100 Pads/Bag)
2	Wood Board 2" X 6" X10'
2	Wood Board 2" X 10" X 10'
1	Spare Tire
2	Flashlight
100'	Rope (Roll)
2	Caution Tape
1	Garbage Bags (Box)
12	Rubber Gloves

ENBRIDGE ENERGY WINTER SPILL EMERGENCY RESPONSE EQUIPMENT

Winter Equipment: The company maintains the following equipment for winter/cold weather spill response staged at each Pipeline Maintenance Facility.

WINTER EQUIPMENT	BAY CITY	MARSHALL	GRIFFITH	FT. ATKINSON	VESPER	TOTAL
Backpack Leaf Blowers	1	1	1	1	1	5
Portable Heaters - All	2	1	2	2	2	9
Power Ice Augers	2	1	1	1	1	6
Chainsaws	2	2	2	2	2	10
Winches	1	1	1	1	1	5
50' Lengths Mini Boom	8	4	2	3	3	20
Tow Bridles	6	6	2	3	6	23
Pike Poles	3	1	3	3	3	13
Pick-of-Life	8	17	19	16	6	66
3500w - 10000w Generator	1	1	1	1	2	6
Hydraulic Submersible Pumps	1	1	1	2	1	6
1 lot Aluminum Camlock Fittings	1	1	1	1	1	5
25' Length 2" Low Temp Hose	2	0	0	0	2	4
LWT Hose Floats for 3" Hose	0	0	0	4	0	4
Hand Ice Augers w/Extention	1	1	0	1 (no ext.)	1	3
Hazardous Location Trouble Light	2	2	6	4	2	16
Ice cleats	0	0	1	0	0	1
Shelter	0	0	0	1	1	2

Due to the seasonal nature of this equipment, it may not be stored in existing response trailers. The Pipeline Supervisor responsible for the facility will ensure that the equipment is maintained, inventoried and accessible in the event of a winter spill incident.

Revised April 2007

ENBRIDGE PIPELINES (CHICAGO) EMERGENCY RESPONSE EQUIPMENT

APRIL 25, 2007 PRIMARY WATER RECOVERY EQUIPMENT	LEWISTON	BAY CITY PLM	NORTH BRANCH	MARYSVILLE	BUFFALO	HOWELL	TOTAL
Boom & Absorbents							
Containment Boom - River (Feet)	200'	500'	200'	200'	300'	200'	**1600'**
Containment Boom - Small (Feet)							
Sorbent Boom (Feet)	400'	200'	400'	400'	240'	100'	**1740'**
Sorbent Pads (Bundles of 100)	200'	2000'	200'	200'	600'	400'	**3600'**
Sorbent Sweep/Rolls (Bales)					2		**2**
Skimmers							
3' Drum Skimmer							
4' Drum Skimmer		1					**1**
8' Drum Skimmer							
Skimmer Power Pak							
Manta Ray		1					**1**
Skim Pak Weir Skimmer							
Pedco Weir Skimmer					1		**1**
Pumps							
2" Air Operated + Hoses							
3" Air Operated + Hoses		2					**2**
2" Trash Pump + Hoses		5			1		**7**
3" Trash Pump + Hoses		2					**2**
2" Hydraulic Pump + Hoses							
3" Hydraulic Pump + Hoses							
4" Hydraulic Pump + Hoses							
2" Electric Pump + Hoses							
Storage							
Vacuum Truck - 1500 - 1800 Gal		1					**1**
Portable Storage Tanks (1800 Gal)		1			2(1500 Gal)		**3**
Tankage Storage		5000 bbls at Bay City					

ENBRIDGE PIPELINES (CHICAGO) EMERGENCY RESPONSE EQUIPMENT (cont.)

APRIL 25, 2007 PRIMARY WATER RECOVERY EQUIPMENT	LEWISTON	BAY CITY PLM	NORTH BRANCH	MARYSVILLE	BUFFALO	HOWELL	TOTAL
Boats & Motors							
18' Lund w/Motor & Equipment		2					**2**
20' Lund Alaskan w/Motor & Equipment							
14' John Boat							
22' Jet Boat w/Twin Inboard							
17' Lifetimer w/Motor & Equipment					2		**2**
16' Alumacraft Flat Bottom Boat							
Response Trailers							
Leak Trailers (Van)		1					**1**
Boom Trailer	1	1	1	1	1	1	**6**
Command Post Trailer		1					**1**

	MARSHALL PLM	NILES	GRIFFITH PLM	DUNDEE	FT. ATKINSON PLM	VESPER	SHELDON	TOTAL
Boats & Motors								
Containment Boom - River (Feet)	1100	200	500	300	1280	400		**3780'**
Containment Boom - Small (Feet)	200				150	268	500	**1118'**
Sorbent Boom (Feet)	200	100	200	320	680	400	160	**2060'**
Sorbent Pads (Bundles of 100)	1000	200	1100	200	4500	1200	600	**8800'**
Sorbent Sweep/Rolls (Bales)	2							**2**
Skimmers								
3' Drum Skimmer	1					1		**2**
4' Drum Skimmer			1		1			**2**
8' Drum Skimmer					1			**1**
Skimmer Power Pak					1			**1**
Manta Ray	1		1		1			**3**
Skim Pak Weir Skimmer	1				1			**2**
Pedco Weir Skimmer								

ENBRIDGE PIPELINES (CHICAGO) EMERGENCY RESPONSE EQUIPMENT (cont.)

	MARSHALL PLM	NILES	GRIFFITH PLM	DUNDEE	FT. ATKINSON PLM	VESPER	SHELDON	TOTAL
Pumps								
2" Air Operated + Hoses	2		2		1	1		6
3" Air Operated + Hoses	1		3		3	1		8
2" Trash Pump + Hoses	9		3		5	2		19
3" Trash Pump + Hoses	5		1		2	1		9
2" Hydraulic Pump + Hoses	1				1	1		3
3" Hydraulic Pump + Hoses					1			1
4" Hydraulic Pump + Hoses			1					1
2" Electric Pump + Hoses					1			1
Storage								
Vacuum Truck - 1500 - 1800 Gal			1			1		2
Portable Storage Tanks (1800 Gal)	1		1		1	1		4
Tankage Storage	2000 bbls at Marshall			3.1 million bbls at Griffith		5000 bbls at Adams		
Boats & Motors								
18' Lund w/motor & equipment	1				2	1		4
20' Lund Alaskan w/motor & equipment			1					1
14' John Boat			1		1			2
22' Jet Boat w/twin inboard	1					1		2
17' Lifetimerw/motor & equipment								
16' Alumacraft flat bottom boat	1							1
Response Trailers								
Leak Trailers (van)	1		1		1			3
Boom Trailer	1	1	1	1	1	1	1	7
Command Post Trailer					1			1

SPECIALTY CONTRACTOR CONTACTS

BAY WEST

Bay West is an established Coast Guard classified **OSRO** (Oil Spill Response Organization) 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 an Emergency Response retainer 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.

Bay West
5 Empire Drive
St. Paul, MN 55103
(651) 291-0456
1-800-279-0456 (24 hrs.)

GARNER ENVIRONMENTAL SERVICES INC.

Garner Environmental Services is a full service environmental and emergency response company 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.

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.

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

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.

These Canadian areas are included in this cross border agreement:

- Westover Ontario

  Inventory lists attached
- Sarnia Ontario

  Inventory lists attached

WESTOVER EMERGENCY RESPONSE TRAILERS

UNIT 70203

QTY	DESCRIPTION
1	Booster Cable
1	30# Fire Extinguisher- Dry Chemical Extinguisher
1	First-Aid Kit
1	Flags (Red Cloth)
2	Flashing Amber Light
1	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
3	Vehicle Recovery Strap
1	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Control Point Map Book
0	Initial Response Guide Book
Valid	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for Timely Return to Work
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Multi-Screwdriver
1	Adj. Wrench
1	Wire Stripper
1	Needle Nose Pliers
1	Small Sledge Hammer

WESTOVER - UNIT 776

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket in Suitable Case
2	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)

WESTOVER - UNIT 776 cont.

QTY	DESCRIPTION
1	Flashing Amber Light
1	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Lincoln 350-Classic IIID Diesel-Welding Machine
	Cutting Torches
	Oxygen Gauges + Hose - 50 ft.
	Acetyln Gauges + Hose - 50 ft.
4	5" Makita Grinders
2	4.5" Makita Grinders
1	Clear Visor
	Assorted Spare Grinding Disc's and Brushes
	Assorted Steel Wedges
2	Bottle Jacks and Chains
1	Rod Oven

WESTOVER- UNIT 71703

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector and Personal H2S
1	Fire Blanket/Case

WESTOVER - UNIT 71703 cont.

QTY	DESCRIPTION
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
1	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
2	Infra Red Thermo - Meters
4	Traffic Cones
1	Q - Beam
1	FR Clothing
1	FR Raincoat

WESTOVER - UNIT 73003

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light

WESTOVER - UNIT 73003 cont.

QTY	DESCRIPTION
2	Reflective Vest
2	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Socket Set
1	Post Hole Digger
1	Screwdriver Set
	Road Cones
1	200 ft. Tape Measure
1	Bumper Jack
3	Probes

WESTOVER - UNIT 78003

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
1	Flashing Amber Light
2	Reflective Vest
1	Shovel

WESTOVER - UNIT 78003 cont.

QTY	DESCRIPTION
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Harness
1	Lanyard
1	APR (Full-Face)
1	Half Mask
1	100 ft. Tape
1	Digital Camera
4	Traffic Cones
1	Pair of Nomex Coveralls
1	Nomex Fleece Jacket

WESTOVER MOBILE EQUIPMENT EMERGENCY RESPONSE INVENTORY

MISCELLANEOUS

1	25 Ton Trailer, Float Trailer
1	Command Post Trailer
1	Light Plant
1	Foam Trailer
1	Gator 1 (old)
1	16' Tunnel Hull Jet Boat
1	Boat Trailer
1	16' Tunnel Hull Jet Boat
1	Boat Trailer
1	Oil Spill Trailer

WESTOVER - MISCELLANEOUS cont.

QTY	DESCRIPTION
1	Backhoe 4x4
1	Gator 2 (New)
1	Kubota Trailer
1	Emergency Response Trailer
1	SUV 4 x 4
1	SUV 4 x 4
1	Pickup Heavy-Duty 2 x 4, ¾ ton
1	Truck with Crane
1	TC-1663C Crane w/Single Personnel Bucket Attached to Freightliner FL-80 (Unit 731)
1	SUV
1	4 x 4 Pickup
1	¾ Ton 4 x 4 Pickup
1	4 x 4 Pickup Heavy-Duty, ¾ Ton
1	1 Ton Welding Pickup-Ext. Cab 4 x 4
1	Pickup 4 x 4, ½ Ton, Ext. Cab, 6.5 ft Box

WESTOVER - UNIT 100

40	3" x 4' Absorbent Socks
12	3" x 10' Absorbent Socks
48	Bags of Oclansorb
6	Bags of 17" x 19" Blue Pads
6	Bags of 17" x 19" White Pads
3	Bags of Industrial Peat Moss Absorbent
2	Rolls of 36" x 150' (Blue)
4	5" x 10' Absorbent Socks
8	3" x 10' Absorbent Socks
1	45 Gal. Drum
2	Pad Wringers
2	Ramps
2	Equipment Ramps
1	Windsock
6	10' x 3" Tiger Tails
1	10' Large Oil Absorbent Boom
7	1.5 Cubic Ft. Granular Multi-Zorb
6	18" x 3" Absorbent Sock
9	1.5 Cubic Ft. Universal Granular Multi-Zorb 2' Socks
6	8' Granular Absorbent Socks
9	2' Large Absorbent Socks
6	10' x 3" Tiger Tails
4	5 Gal. Pails Oil Clotter
16	1 Gal. Pails Oil Clotter
2	10' Large Oil Absorbent Boom
19	3" x 4' Tiger Tails (loose in bottom)

WESTOVER - UNIT 100 cont.

QTY	DESCRIPTION
8	Bundles of Rags
20	3" x 4' Tigers Tails (in Box)
100	16" x 18" x ⅜" Perforated Pads
50	3" x 18" Absorbent Socks

WESTOVER - UNIT 202

6	River Boom - O.S.C.A.R Mark XII 50 ft. Lengths
2	Boom Tow Bridle
2	Boom Tow Paravane
2	Boom Tow Sling - 3/8 Cable 25 ft. With Hooks
11	Handline Bridle
16	Drive in Pins - 4ft. With Wings
8	Screw Anchor
8	Rope - ½ Inch x 50 ft. Lengths (Yellow)
5	Rope - ½ Inch x 100 ft. Lengths (Green)
3	Rope - ½ Inch x 25 ft. - Snaps on Both Ends (Blue)
2	18 Inch Marker Buoy
3	20 lb. Mushroom Anchor
1	Wash Down Nozzle With 2 Inch Kamlock
1	2 Inch Female x 3 Inch Male Kamlock Adaptor
2	1500 Gal. Port-A-Tank Frame + Liners
2	1500 Gal. Port-A-Tank Liner - Extras
2	Port-A-Tank Hose Saddle
1	2 ft. Pedco Skimmer
1	Pair Pedco Skimmer Adaptors
1	Morris 11/24 Disc Skimmer With Powerpack
1	Honda ES6500 Generator
1	Set Wheel Chocks
1	Electric Winch
4	Floating Suction Hose 3" with 3" Fittings
2	Floating Suction Hose 3" with 2" Fittings
2	Suction Hose 2" with 2" Fittings
1	Adaptor - 2" Male x 3" Male Fittings
1	Adaptor - 3" Male x 3" Male Fittings
1	Adaptor - 3" Female x 3" Female Fittings
1	Adaptor - 3" Male Fitting
1	Adaptor - 2" male x 4" ABS Coupling
1	Bailing Bucket
2	Funnels
5	Life Jackets
1	First-Aid Kit
1	Stretcher
1	Splint Kit
6	Wool Blanket

WESTOVER - UNIT 202 cont.

QTY	DESCRIPTION
3	30 # Fire Extinguisher
1	50 ft. Extension Cord for 110 Power Supply
2	5 Gal. Jerry Cans
1	2 Inch Explosion Proof Electric Honda Pump
8	Wool Socks
1	Wind Socks - Large
10	Pylons - (MTO Approved)
9	Goggles
6	Waist Belts
3	Battery Flares
10	Safety Vests - (MTO Approved)
5	Towels
6	All Purpose Emergency Blankets
5	Winter Gloves
1	82 Inch Discharge Hose
3	3 Inch Discharge Hose
1	3 ft. Step Ladder
2	Shore Boom
30	Small Sorbent Booms
30	Oclandsord - Bags
1	Tool Box
1	Roll of Neoprene
2	Garden Rakes
2	Oil Fork
1	Neoprene Sledge Hammer
1	Axe
1	Chart - Boom Layout
4	Sewer Mats
1	Mega Phone
1	Command Vest
6	Hip Waders
2	Chest Waders
10	Self-Inflating Life Jackets - (Extra Cartridges - 5)
1	Flow Meter
1	Tarp 20' x 30'
1	Extension Ladder 20'
2	Danger Overhead Wire Signs
2	Sets of Mirrors - 2
1	Towing Bar for Pickup
1	Sway Control Bar
1	Set of Wheel Chocks
1	Hand Primer Kit for Electric Pump
2	Stop/Slow Signs
2	Lanyard
3	Full Body Harness

WESTOVER - UNIT 202 cont.

QTY	DESCRIPTION
3	30 # Fire Extinguisher
	P100 and P95 Respiratory Filters
1	Extension Cord
1	Fire Blanket
1	Box of 200 Ear Plugs
	W1-W75 Security Arm Bands
6	Battery Motorola Radio Charger
2	Boxes Nitrile Gloves
80	Reflective Arm/Leg Bands
3	Long Handled Shovels
1	Q-Beam Spot Light
	½ Mask Respirators
	½ Mask/Full Face Cartridges
	Tape - 200'
3	Cans Spray Paint (Orange)
2	Duct Tape (Rolls)
2	Caution Tape (Rolls)
12	Work Gloves (Pairs)
12	Gloves (White)
	Hand Cleaner Towels
	Bee Spray
10	Safety Glasses
1	Mechanics Wire (Roll)
2	Safety Lanterns and Extra Batteries
	Bird Scare Tape
	Hot/Warm and Cool Zone Flagging
1	Incident Command Organization Chart
2	Sets Towing Mirrors
4	Rolls Poly 6MM Plastic
2	Caution Training In Progress Signs
1	Yield to Oncoming Traffic Sign
2	Traffic Control Signs
1	Direction Arrow Sign
1	*No Smoking* Sign
6	S&E Guidelines for Contractors Handbook
1	Local Work Order Book
	Safe Work Permit
	JHA (Job Hazard Analysis)
	Safety Guideline for Contractors Checklist
	Incident Report
	Contractor's Tailgate/Toolbox Meeting Record
	Contractor's Site/Project Specific Orientation Record
	Dry Erase Markers
	Morris Industries Manual
	Trailer Ownership

WESTOVER - UNIT 202 cont.

QTY	DESCRIPTION
	Super Winch Manual
	Gorman-Rupp Pump Manual
	Equipment List Inventory

SARNIA EMERGENCY RESPONSE INVENTORY

14' STARCRAFT BOAT INVENTORY

3	Paddles
2	Life Jackets
1	9.9 Hp Motor
1	Gas Tank
1	Marine Safety Kit
1	Outboard Oil
4	Rope
1	Trailer
1	Ball Hitch
2	Ore Holders
2	Ratchet Straps
1	Standard Tool Kit
5	Motor Repair Tools
Valid	Insurance
Valid	License Sticker
Valid	Ownership

MISCELLANEOUS

1	White Trailer
1	Emergency Response Trailer
1	White Boom Truck
1	White Welding Truck
1	Foam Truck
1	White Pick-Up Truck
1	White Pick-Up Truck
1	White Pick-Up Truck
1	Grey Boat

SARNIA - UNIT 78104

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
1	Flags (Red Cloth)
1	Flashing Amber Light

SARNIA - UNIT 78104 cont.

QTY	DESCRIPTION
3	Reflective Vests
2	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
10	No Trespassing Signs
1	Flare Gun Kit
5	Bags Multi-Purpose Ties
5	Rolls Marking Ribbon
4	Rolls Sealant Tape
4	AA Batteries
1	Container Fast Orange Wipes
2	Measuring Tapes
1	Disposable Camera
3	Probes
1	Sledge Hammer
1	Socket
1	Spark Plug Tool
1	Striker
1	Wire Brush
3	Utility Knives
1	Channel Lock
1	Clevice
1	Staple Gun

SARNIA - UNIT 78104 cont.

QTY	DESCRIPTION
2	Cans Never Cease
1	Roll Paper Towels
1	Ball Hitch
1	Pinto Hitch
11	Right-a-Way Signs
1	Windshield Washer Fluid
2	Bundles Rope
1	Cargo Net
1	Caution Tape (Roll)
4	Pylons
1	Oil Spill Kit

SARNIA - UNIT 095

3	River Boom O.S.C.A.R. Mark X11, 50' Lengths
1	Shore Boom (15' Lengths)
2	Boom Tow Bridle
2	Boom Tow Paravane
2	Boom Tow Sling, ⅜ Cable X 25' with Hooks
4	Drive-in Pin, 4' w/Wings
5	Screw Anchor
8	18" Marker Buoy
2	1/2" Chain X 20' w/Quick Links at Both Ends
1	Rope Reel
10	½" Rope X 50' (Yellow)
5	½" Rope X 25' w/Snap Both Ends (Blue)
3	½" Rope X 25' w/Snap One End (Blue)
4	3" Floating Suction Hose X 15'
2	2" Floating Suction Hose X 15'
2	2" Non-Floating Suction Hose X 15'
2	2" Non-Floating Suction Hose X 25'
3	2" Discharge Hose X 50'
1	3-Way Fluid Manifold
1	Wash Down Nozzle w/2" Kamlock Adaptor
3	3" Female X 2" Male Kamlock Adaptor
3	2" Female X 3" Male Kamlock Adaptor
1	1500 Gal. Port-a-Tank Frame
2	1500 Gal. Port-a-Tank Liner
2	Porta-Tank Hose Saddle
2	5 Gal. Jerry Can
1	2' Pedco Skimmer
1	Pedco Skimmer Adaptors (Pair)
1	Morris 1 1/24 Disc Skimmer
1	Skimmer Head (Serial # 1789)
1	Power Pak (Serial # B8012)

SARNIA - UNIT 095 cont.

QTY	DESCRIPTION
1	Hydraulic Hose
1	Discharge Hose
1	Tool Box
12	Life Jackets (6 Large, 6 Xlarge)
10	Inflatable Life Jackets
1	First-Aid Kit
1	Stretcher
1	Wool Blanket
1	30# Fire Extinguisher
6	Pairs Rubber Gloves
1	Bundle Cotton Gloves
1	Eyewash Station
1	Ear Plugs (Box)
26	Respirators (Assorted Sizes)
17	Cartridges (Organic Vapor in Pairs)
4	Boxes Particulate Filter
2	Boxes Filter Retainer
6	Chemical Splash Goggles
4	Safety Glasses
6	Pair Hip Waders
11	Orange Traffic Vests
10	Emergency Light Stickers
6	Safety Belt (for Tag Line Attachment)
11	Traffic Cones
1	Traffic Control Kit
1	50' Extension Cord
4	Ratchet Style Cargo Strap
2	Equipment Ramp
1	Honda ES6500c Generator, Serial #1191164
2	Sorbent Roll
4	Sorbent Boom (8' X 4')
1	Scoop Shovels with Holes
1	Sledge Hammer
1	Axe
2	Garden Rake
1	Round Nose Shovel
2	Emergency Blankets
1	Post Hammer
1	Bow Saw
1	Hydraulic Oil (Gal.)
1	Bull Horn
1	Air Horn
1	Book 7 Emergency Response Manual
1	Morris Skimmer Operation and Procedures Manual
1	Emergency Response Organization Chart

SARNIA - UNIT 095 cont.

QTY	DESCRIPTION
1	Windsock (Trailer Mounted)
1	Windsock (Portable)
2	*Men At Work* signs (Vinyl Rollup)
2	*Men At Work* signs (Metal Roadside)
2	Caution; Training Exercise Signs
1	3-Sided Danger Keep Away Sign
3	Duct Tape (Rolls)
3	Caution Tape (Rolls)
3	Marker Ribbon (Rolls)
1	Pitch Fork
3	Pitch Fork with Wire Mesh
1	FP101 Global Flow Probe (Water Speed Meter)
50	Orange Numbered Reflective Armbands #"s 1-50

SARNIA - UNIT 180

3	River Boom O.S.C.A.R. Mark X11, 50' Lengths
3	Screw Anchor
1	Rope Reel
5	½" Rope X 100' (Green)
2	½" Rope X 25' w/Snap Both Ends (Blue)
2	½" Rope X 25' w/Snap One End (Blue)
3	2' Non-Floating Suction Hose X 12'
1	1500 Gal. Port-a-Tank Frame
1	1500 Gal. Port-a-Tank Liner
1	Elastek Drum Skimmer
1	Elastek Hydraulic Powerpak
1	Elastek Hydraulic Lines (Kit)
1	Elastek Hydraulic Pump
6	Life Jackets (D.O.T. Approved Adult PFD's)
12	Traffic Cones
1	Traffic Control Kit
1	50' Extension Cord
2	Emergency Blankets
1	Post Hammer
1	Sledge Hammer
1	Scoop Shovel with Holes
1	Pitch Fork
1	Pitch Fork with Wire Mesh
1	Garden Rake
1	Universal Wide Fender Mirrors (Set)
25	Orange Reflective Numbered Armbands (51 to 75)

SARNIA - UNIT 707

QTY	DESCRIPTION
1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/ Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
2	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
6	Warning Reflector
1	Back-up Alarm
2	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for Timely Return to Work
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
2	Raid
1	Container Hand Cleaning Wipes
3	Marking Ribbon (Rolls)
1	Drivers Log
3	Rain Coats
1	Bottle Windshield Washer Fluid
3	Harness Hookups
1	Snow Brush
1	Set Bama Feet Warmers
1	Flare Gun Kit
1	Oil Spill Kit

SARNIA - UNIT 707 cont.

QTY	DESCRIPTION
2	Paper Towels (Rolls)
2	Duct Tape (Rolls)
100	Garbage Bags
1	Package Whip-it Wipes
1	Container Hand Cleaning Towels
3	Wire (Rolls)
1	Can Grease
1	Can Oil
2	Saran Wrap (Rolls)
1	Wheel Chock
4	Outrigger Mats
1	Towing Strap 6" by 30
3	Measuring Tapes
20	Clevices
1	Cheater Bar (Strap Tightener)
2	Cans Low Friction Lubricant
1	Can Kleen Start
1	Can Wire Rope Lubricant
1	Pry Bar
4	Allan Wrench Sets
33	Lifting Slings
5	Ratchet Straps
9	Lifting Eyes
1	Plate Lifter
1	Grease Gun
1	Replacement Strap
3	Ropes with Hooks
3	Lifting Chains
2	Chains
1	Oil Spill Control Manual

SARNIA - UNIT 709

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/ Case
2	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
4	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit

SARNIA - UNIT 709 cont.

QTY	DESCRIPTION
1	Tire Jack
1	Vehicle Recovery Strap
5	Warning Reflector
1	Back-up Alarm
3	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Container Fast Orange Wipes
1	Oil Spill Control Manual
2	5" Grinding Wheels (Boxes)
2	Half-Mask Respirators
1	100 ft Measuring Tape
1	Windsock
5	Paper Towels (Rolls)
2	Cans Great Stuff (Foam Sealing)
1	CMI-100 Clamp-On Meter
2	Wire Brush
1	Can Armour-All
1	PLM Field Guide
3	Extension Cords
1	Set Heavy Duty Cable Connectors
1	300A Welding Ground Clamp
1	Temporary Conditions Field Edition
4	Rain Coats
5	Wire Wheel Brush 5"
2	Welding Strikers
1	Can Lysol Disinfectant Spray
2	Cans Flint for Striker
1	U-Bolt
2	H_2S Detector

SARNIA - UNIT 709 cont.

QTY	DESCRIPTION
18	Marking Ribbon (Rolls)
3	Electrical Tape (Rolls)
1	Face Shield
2	Welding Helmets
1	1 1/4" - 3/8" Wrench Set
2	Jacks
1	Level
2	Extra Floor Mats
2	Sledge Hammers
1	Square
1	Hack Saw
2	Magnetic Ground Clamps
2	Grinders
2	Power Brushes
1	Chipping Hammer
1	File
2	Pry Bars
1	Shortstub Head Assembly
4	Tape Measures
51	Loose Grinding Discs
2	Utility Knives
1	Welding Tarp
2	Pressure Regulators
1	Microwave
2	Trailer Hitches
2	Chains
2	Ratchet Straps
1	Nomex Pants (Pair)
1	Nomex Coat
1	Nomex Coveralls (Pair)
1	Indura-Ultrasoft Coveralls (Pair)
1	Can WD-40
1	Can Off Bug Spray
1	Caution Tape (Roll)
8	Bottles Oil
2	Pipe Measurers
1	Duct Tape (Roll)
1	Bottle Invisi-Lube
1	Can Never-Cease
11	Boxes Welding Rods (Electrodes)
1	Cocking Gun
1	Knee Pads (Pair)
6	Welding Gloves (Pairs)
11	Pieces Chalk
1	String

SARNIA - UNIT 709 cont.

QTY	DESCRIPTION
1	Chalk Line
1	Centering head tool
1	Box Welders Eye Ease
1	Burr Grinder
1	Caliper
1	Compass
2	Plumbob's
2	Clasps
1	Wire (Roll)
2	Tin Snips
1	Bottle Windex
1	Bottle Raid
1	Bottle Fantastik
1	Can Grease
1	Funnel
1	Package Whip-It Wipes
1	Arc Welder
1	Bench Clamp
3	Oxyacetylene Hoses
1	Oxygen Tank
1	Acetylene Tank
2	Probes
2	Snow Brushes/ Scrapers
5	Lengths Rope
1	Electrode Holder
3	Replacement Face Shields
1	Flare Gun Kit
1	Oil Spill Kit
1	Tarp
1	Light Stand
2	Heavy Duty Lights
4	Plug Adaptors
1	Welders Tool Support
1	Sling
1	Ground Cable-100ft
1	Stinger Cable-100ft
1	Current Adjustment Cable
2	500 Watt Halogen
6	Packages of Ear Plugs

SARNIA - UNIT 727

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector

SARNIA - UNIT 727 cont.

QTY	DESCRIPTION
1	Fire Blanket/ Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
1	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Oil Spill Control Manual
1	Marking Ribbon (Roll)
1	Recall Bandage
1	Company Credit Card
1	Drivers Daily Log
1	Warranty Book

SARNIA - UNIT 75005

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/ Case
1	30# Fire Extinguisher (Dry Chemical)

SARNIA - UNIT 75005 cont.

QTY	DESCRIPTION
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
1	Reflective Vest
1	Shovel
1	Spare Tire
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
1	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
1	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
Valid	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Enbridge Disability Certificate
1	Injury, Incident & Accident Reporting Responsibilities
1	Sledge Hammer
4	Pylons
3	Probes
1	Bundle of Stakes
1	Hack Saw
1	Fencing Pliers (Pair)
4	Locks
1	Spare Hack Saw Blade
2	Pry Bars
3	Clevises (4¾ T, 1½ T, 1½ T)
1	Utility Knife
14	Marking Ribbon (Rolls)
1	Staple Gun
1	Box Staples
3	Wood screws (Boxes)
3	Measuring Tape

SARNIA - UNIT 75005 cont.

QTY	DESCRIPTION
1	Can Never-Cease
1	Striker
2	Sealant Tape (Rolls)
1	Pipe Sealant with Teflon
1	Bottle Starting Fluid
3	Duct Tape (Rolls)
1	Wire Brush
1	Pinto Hitch
18	Enbridge Signs
15	Locate Signs
1	Channel Lock
1	Oil Spill Kit
2	Rain Coat
1	Ball Hitch 2 5/16"
1	Can Grease
2	Cans Spray Paint
2	Bottles Penetrating Oil
40	Reflector Discs
1	Rock Shield
1	Cargo Net
1	Roll Caution Tape
1	Bottle Citrus Hand Cleaner
1	Bottle Oil
1	Bundle Rope
1	Windshield Washer Fluid
1	Container Fast Orange Wipes
1	Flare Gun Kit
1	Adaptor
4	Reflector Arm Bands
1	Bottle Hand Cleaner
1	Disposable Camera

SARNIA - UNIT 77806

1	Booster Cable
1	Set Chain, Rope and Boosters to Secure Loads
1	Combustible Gas Detector
1	Fire Blanket/ Case
1	30# Fire Extinguisher (Dry Chemical)
1	First-Aid Kit
2	Flags (Red Cloth)
1	Flashing Amber Light
2	Reflective Vest
1	Shovel
1	Spare Tire

SARNIA - UNIT 77806 cont.

QTY	DESCRIPTION
1	Standard Tool Kit
1	Tire Jack
1	Vehicle Recovery Strap
3	Warning Reflector
1	Back-up Alarm
1	Flashlight
1	Set Deer Whistles
1	Fluke Meter and Lineman Gloves
1	Route Sheet Book
1	Control Point Map Book
1	Initial Response Guide Book
Valid	Emergency Response Book
Valid	License Sticker
Valid	Ownership
Valid	Insurance
1	C.V.O.R. Certificate
1	Enbridge Injury/Incident Report
1	Enbridge Auto Incident Report
1	Pink WSIB Treatment Form
1	Employer's Report of Injury/Disease (WSIB Form 7)
1	WSIB Functional Abilities Form for *Timely Return to Work*
1	Injury, Incident & Accident Reporting Responsibilities
1	Case Safety Glasses
2	Rain Coats
1	Q Beam Flashlight
3	Half-Face Piece Masks
2	Measuring Tapes
1	Company Credit Card
1	Auto Log Book
1	PLM Field Book
1	Disposable Camera

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 Chicago 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 the Chicago Regional office.

T.W. Fridel
General Manager, Chicago Region
1500 W. Main St.
Griffith, IN 46319
Business: 219-922-3133 #201
Business FAX: 219-922-3128
24 hr. contact: 800-858-5253 via Edmonton Control Center

EMERGENCY RESPONSE TRAINED PERSONNEL

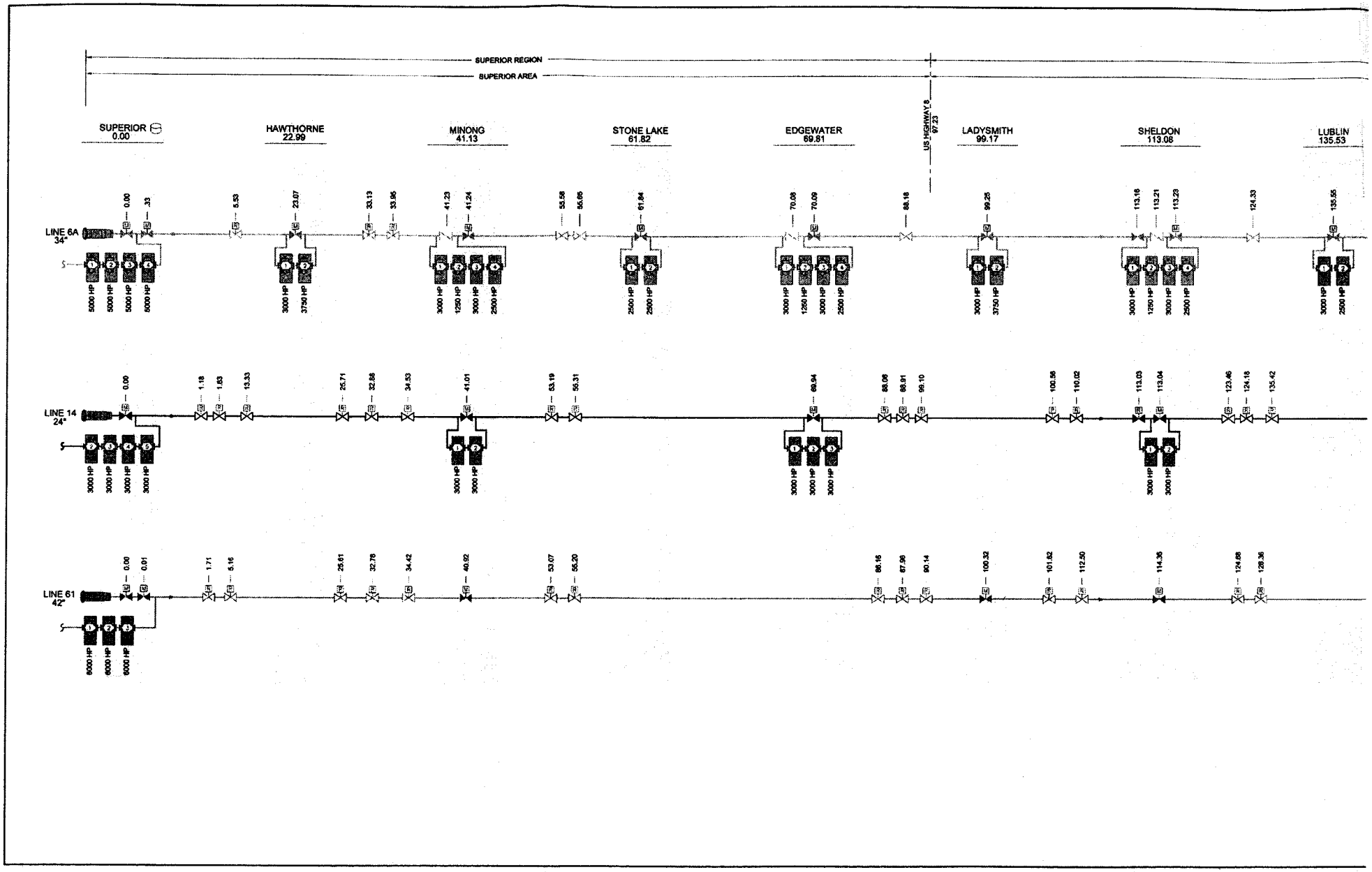
Enbridge employees are trained for emergency response according to the OSHA 1910.120 Hazardous Waste Operations and Emergency Response (HAZWOPER) standard. Depending on their job classification, employees receive training in first responder awareness, first responder operations, hazardous material technicians, 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 lead 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:

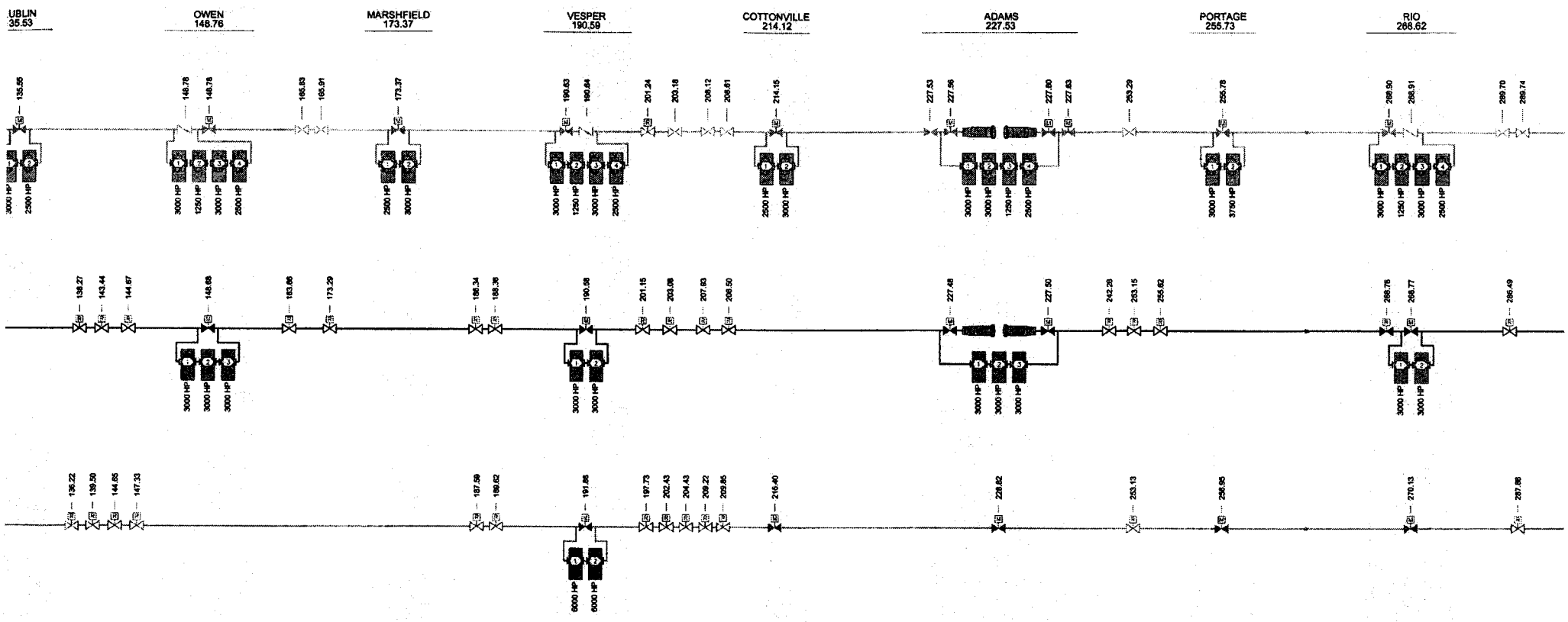
Superior Region Response Zone	Chicago Region Response Zone	Cushing Region Response Zone	Enbridge Pipelines North Dakota Response Zone
110	112	60	40

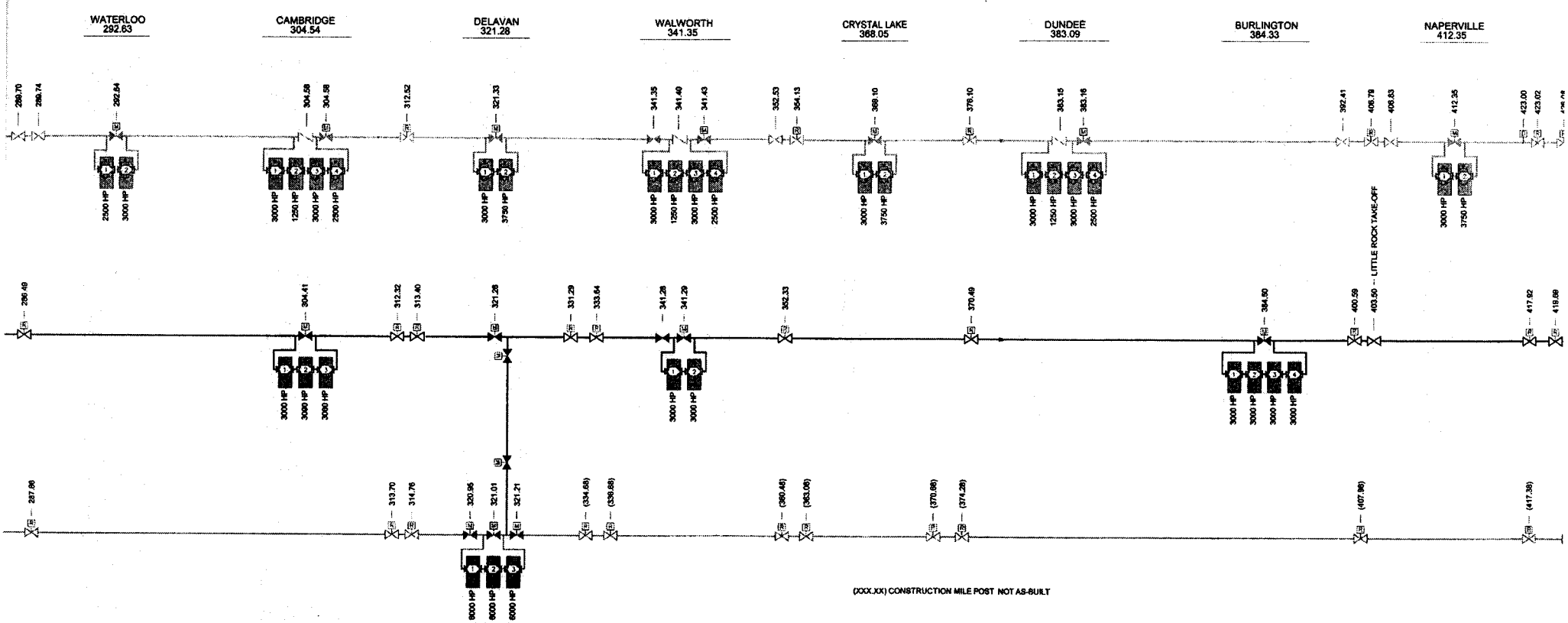
In addition, internal response resources are supplemented by contract staff supplied by pre determined agreements with Oil Spill Response Organizations (OSRO's) and other local contractors. In many instances these resources are response zone specific and contact information is listed in the Enbridge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

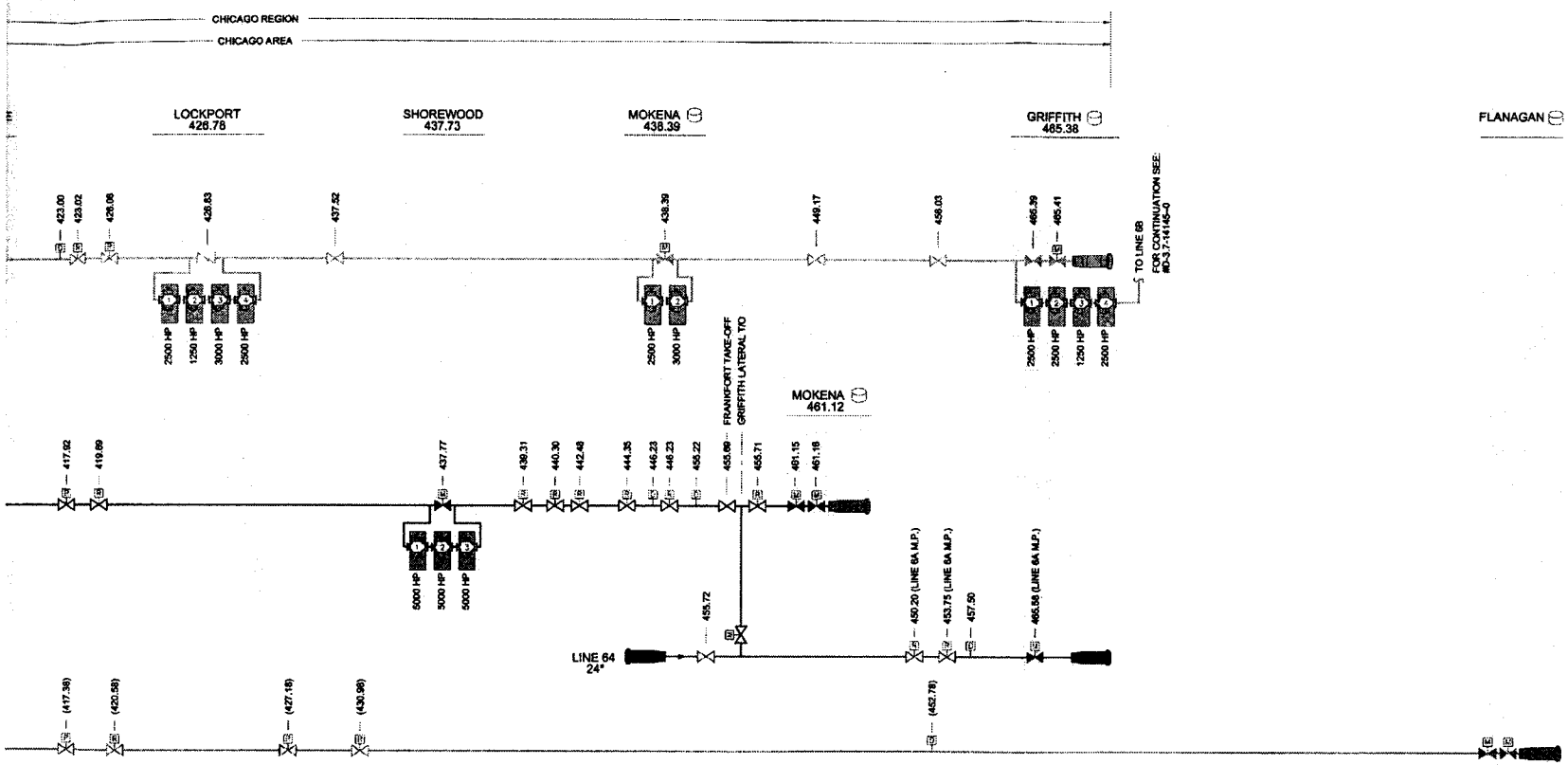

SUPERIOR REGION
SUPERIOR AREA
SUPERIOR 0.00
HAWTHORNE 22.99
MINONG 41.13
STONE LAKE 61.82
EDGEWATER 69.81
US HIGHWAY 8 97.23
LADYSMITH 99.17
SHELDON 113.08
LUBLIN 135.53
LINE 6A 34"
5000 HP 5000 HP 5000 HP 5000 HP
3000 HP 3750 HP
3000 HP 1250 HP 3000 HP 2500 HP
2500 HP 2500 HP
3000 HP 1250 HP 3000 HP 2500 HP
3000 HP 3750 HP
3000 HP 1250 HP 3000 HP 2500 HP
3000 HP 2500 HP
LINE 14 24"
3000 HP 3000 HP 3000 HP 3000 HP
3000 HP 3000 HP
3000 HP 3000 HP 3000 HP
3000 HP 3000 HP
LINE 61 42"
6000 HP 6000 HP 6000 HP

CHICAGO REGION

FORT ATKINSON AREA




WATERLOO 292.63
CAMBRIDGE 304.54
DELAVAN 321.28
WALWORTH 341.35
CRYSTAL LAKE 368.05
DUNDEE 383.09
BURLINGTON 384.33
NAPERVILLE 412.35
LITTLE ROCK TAKE-OFF
(XXX.XX) CONSTRUCTION MILE POST NOT AS-BUILT



(XXX.XX) CONSTRUCTION MILE POST NOT AS-BUILT

PROVISIONAL ONLY 04/27/09

LEGEND

- REMOTE OPERATED VALVE
- REMOTE OPERATED VALVE WITHIN STATION
- MOTOR OPERATED VALVE WITHIN STATION
- HAND OPERATED VALVE
- HAND OPERATED VALVE WITHIN STATION
- CHECK VALVE
- STATION PUMP
- TANKAGE
- DENSITOMETER LOCATION
- LINE 6A
- LINE 14
- LINE 61
- LINE 64

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.

REPLACES DRAWINGS	
D-3.7-14143--0	D-3.7-09201--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
2	COMBINED REPLACED DWG'S (NOTED). ADDED LINE 61 & REVD/AS-BUILT INFO	JSL 4-27-09	SD
1	REVISED AS PER FRANKFORT & SHOREWOOD ADDITION	JSL 10-8-08	SD

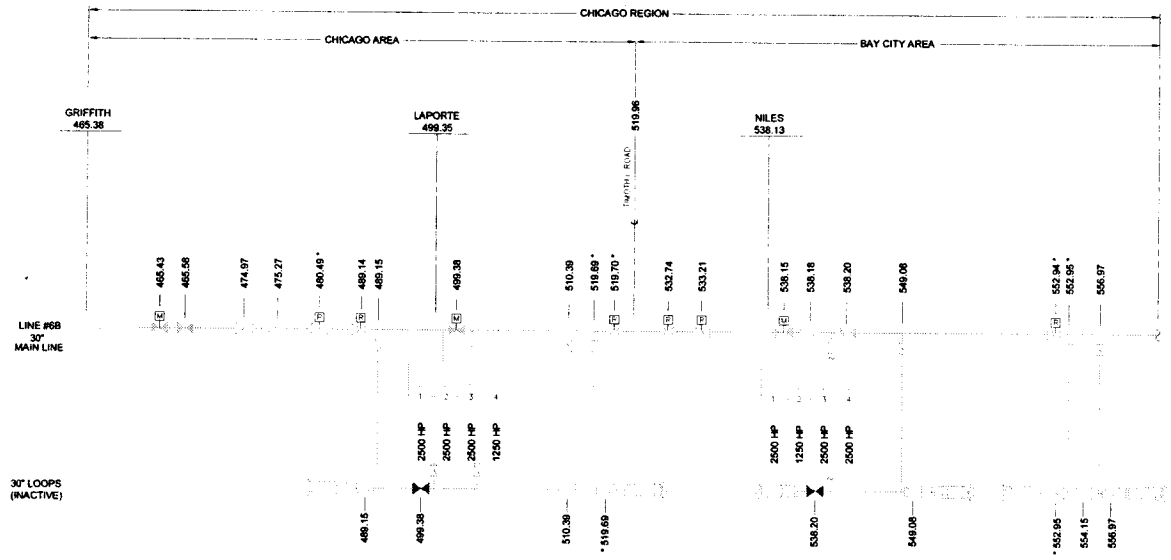
ENBRIDGE

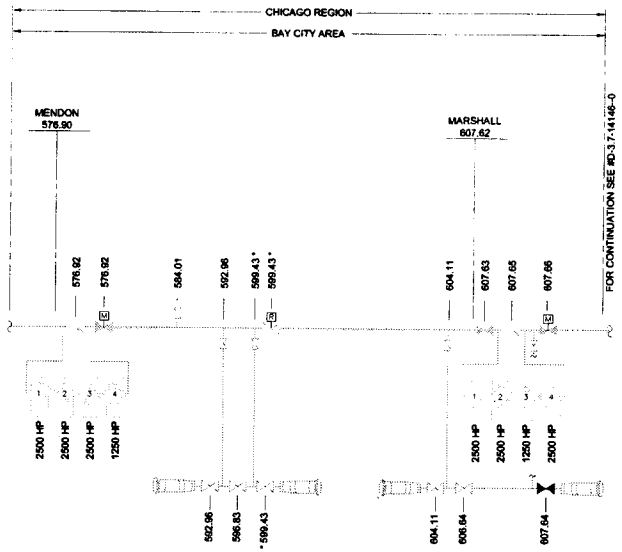
SUPERIOR SOUTH SYSTEMS

SUPERIOR, FORT ATKINSON & CHICAGO AREAS
LINES 6A, 14, 61 & 64
MAINLINE SCHEMATIC DIAGRAM

PROJECT:		
SCALE: NONE	DATE: 1-29-07	DRAWN: MKS
CHECK: KWS	APPR:	DATE:
APPR:		
APPR: SD	D-3.7-14142-02-0	

LINE 6B





LEGEND

- REMOTE OPERATED VALVE
- MOTOR OPERATED VALVE WITHIN STATION
- HAND OPERATED VALVE
- HAND OPERATED VALVE WITHIN STATION
- CHECK VALVE
- STATION PUMP
- LINE 6B
- CROSSOVER VALVE
- CROSSOVER VALVE WITHIN STATION
- OUT OF SERVICE (CROSSOVER)

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.

* = LOCATION OF REMOVED STATION.

REPLACES DWG. D-3.7-6202--0

NO	REVISION	BY DATE	APPR
1	REV. VALVES AT LAPORTE STATION & RECONFIGURED DWG	JSL 10-6-08	SD

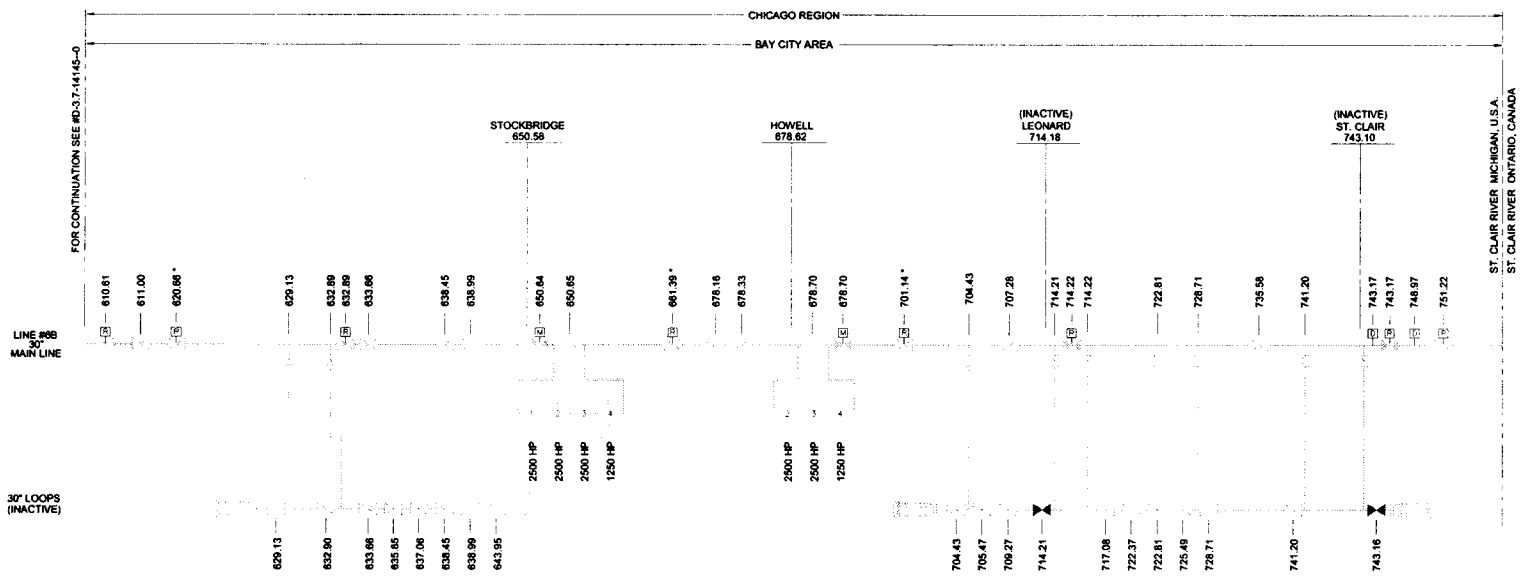
ENBRIDGE

CHICAGO REGION

CHICAGO & BAY CITY AREA
LINE 6B
LOCATINO OF MAINLINE VALVES
SCHEMATIC DIAGRAM (SHT. 1 OF 2)

PROJECT:		
SCALE: NTS	DATE: 1-30-07	DRAWN: MKS
CHECK: KWS	APPR:	DATE:
APPR:		
APPR:	D-3.7-14145-1-0	

LINE 6B



LEGEND

- REMOTE OPERATED VALVE
- MOTOR OPERATED VALVE WITHIN STATION
- HAND OPERATED VALVE
- REMOTE OPERATED VALVE WITHIN STATION
- CHECK VALVE
- STATION PUMP
- LINE 5B
- CROSSOVER VALVE
- CROSSOVER VALVE WITHIN STATION
- POINT OF SERVICE (CROSSOVER)
- DENSITOMETER LOCATION
- FLANGE

NOTES:

DUE TO THE COMPLEXITY OF STATION PIPING, NOT ALL TAKE-OFFS OR STATION VALVES WITHIN A STATION SHOWN ON THIS DRAWING. FOR FURTHER DETAILS WITHIN THE STATION SEE THE RESPECTIVE STATION GENERAL PIPING PLAN.

* = LOCATION OF REMOTE STATION

REPLACES DWG. D-3.7-6202--0

NO	REVISION	BY DATE	APPR.
1	RECONFIGURED DWG.	JSL 10-6-08	SD

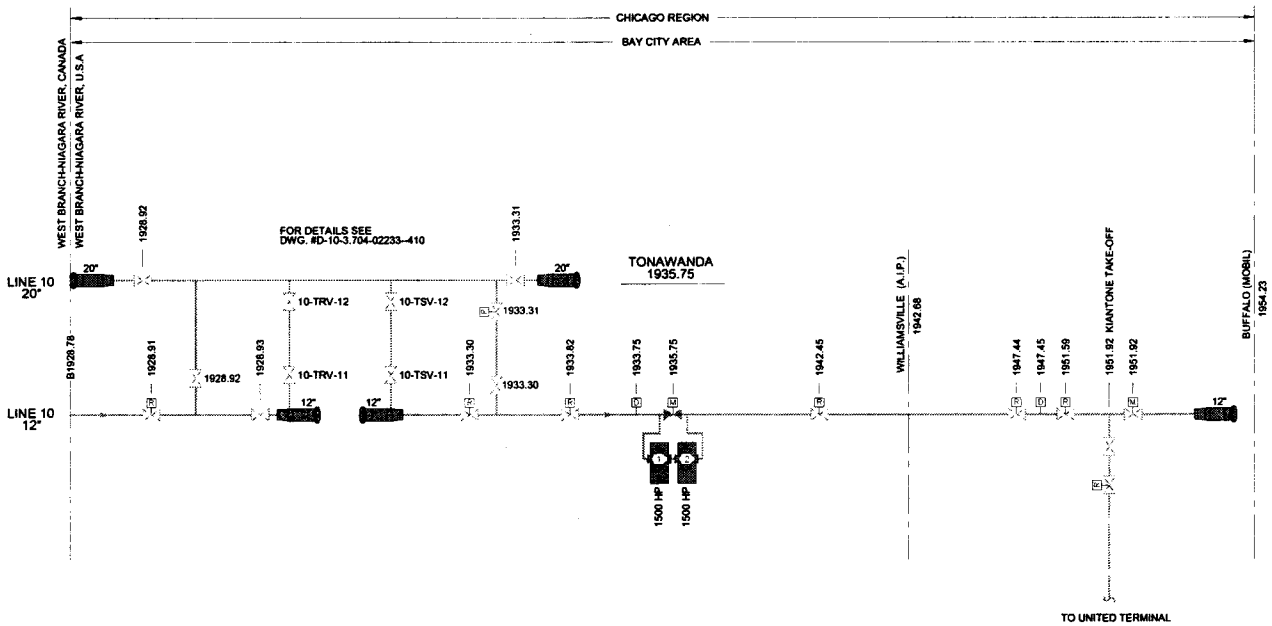
ENBRIDGE

CHICAGO REGION
BAY CITY AREA
LINE 6B
LOCATION OF MAINLINE VALVES
SCHEMATIC DIAGRAM (SHT. 2 OF 2)

PROJECT:
SCALE: NTS | DATE: 1-30-07 | DRAWN: MKS
CHECK: KWS | APPR: | DATE:
APPR:
APPR:

D-3.7-14146-1-0

LINE 10



LEGEND

- REMOTE OPERATED VALVE
- MOTOR OPERATED VALVE WITHIN STATION
- HAND OPERATED VALVE
- MOTOR OPERATED VALVE
- STATION PUMP
- DENSITOMETER LOCATION
- LINE 10
- OTHER/FOREIGN LINE

AREA CLASSIFICATION

- STATION LIMITS

NOTES:

DUE TO THE COMPLEXITY OF STATION PIPING, NOT ALL TAKE OFFS OF 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 DWG'S: D-3.7-06249--0
D-0.4-10200--0

NO	REVISION	BY DATE	APPR
1	REV'D MLV'S PER FIELD VERIFICATION & REMOVED VALVES: 1954.22-AIPV, 286-AIPV/ PLM RPT. 019	JSL 4-28-09	SD

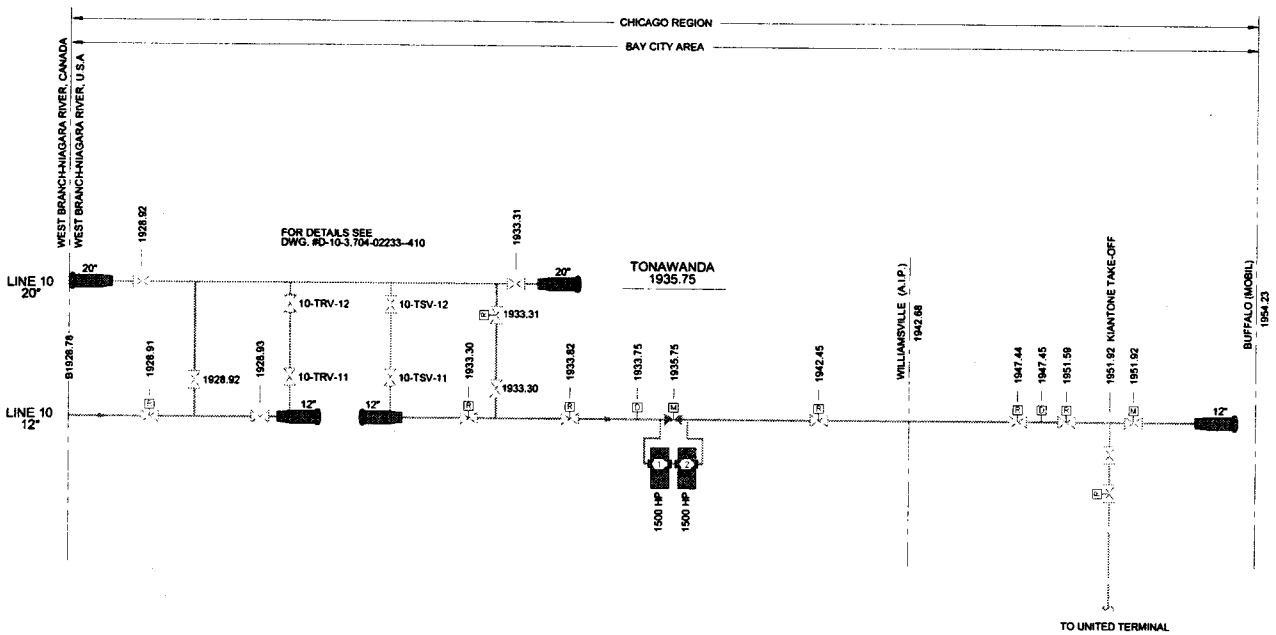
ENBRIDGE

CHICAGO REGION

BAY CITY AREA
LINE 10
LOCATION OF MAINLINE VALVES
SCHEMATIC DIAGRAM

PROJECT:		
SCALE: NTS	DATE: 1-30-07	DRAWN: MKS
CHECK: KWS	APPR:	DATE:
APPR:		
APPR: SD	D-3.7-14147-01-0	

LINE 10



LEGEND

- REMOTE OPERATED VALVE
- MOTOR OPERATED VALVE WITHIN STATION
- HAND OPERATED VALVE
- MOTOR OPERATED VALVE
- STATION PUMP
- DENSITOMETER LOCATION
- LINE 10
- OTHER/FOREIGN LINE

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.

REPLACES DWG'S: D-3.7-06249--0
D-04-10200--0

NO	REVISION	BY DATE	APPR
1	REV'D MLV'S PER FIELD VERIFICATION & REMOVED VALVES:1954.22-APV, 286-APV/ PLM RPT 019	JSL 4-28-09	SD

ENBRIDGE

CHICAGO REGION

BAY CITY AREA
LINE 10
LOCATION OF MAINLINE VALVES
SCHEMATIC DIAGRAM

PROJECT:		
SCALE: NTS	DATE: 1-30-07	DRAWN: MKS
CHECK: KWS	APPR:	DATE:
APPR:		
APPR: SD	D-3.7-14147-01-0	

List of Main Line Valves as an appendum to the Regional Book 7 – Maps and References- Main Line Valves:

Drawings available upon request.

Lines 61 & 13	Description	Approximate MP*	Latitude (N)	Longitude (W)
	Densitometer Site			
	1400 E. Rd	131.5		
Line 62	**Description**	**Approximate MP***	**Latitude (N)**	**Longitude (W)**
	Hartsdale Terminal	75.44	41.3025	87.2713

Miles of Mainline Pipe

ENBRIDGE ENERGY, LIMITED PARTERSHIP - Lakehead

Location	*Active Miles*	*Inactive Miles*	*HCA Miles (Unlapped)*
U.S. Border to Superior	**1,573**		**473**
20" Line 1 (U.S. Border to Clearbrook)-CO and NGL	135.7		41
18" Line 1 (Clearbrook to Superior) – CO and NGL	189.8		115
26" Line 2	324.5		95
34" Line 3	324.2		100
36"/48" Line 4 (U.S. Border to Clearbrook) 36"	136.0		20
36"/48" Line 4 (Clearbrook to Superior) 36"	191.0		82
18" Line 13 (U.S. Border to Clearbrook)	135.5		20
20" LSr (U.S. Border to Clearbrook)	136.0		
Superior to Sarnia (Canadian Border)	**642**		**295**
30" Line 5 – CO and NGL	642.3		295
Superior to Griffith	**1280**		**349**
34" Line 6A	465.4		164
24" Line 14	461.2		96
24" Line 64	26.1		26
42" Line 61 (Superior to Flanagan)	461.9		58
34" Griffith Hartsdale Transfer (TL 1)	0.6		0.6
36" Griffith Hartsdale Interconnect (GFHT 2)	0.8		0.8
36" Griffith Hartsdale Interconnect (GFHT 3)	0.8		0.8
Superior Terminal Pipe	0.3		0.3
Mokena 1	0.6		0.6
Mokena 2	0.6		0.6
Mustang	0.8		0.8
Griffith to Sarnia (Canadian Border)	**286**	**103**	**146**
30" Line 6B	285.9		128
30" Loops		103.2	18
Marysville	0.2		0.2
Buffalo Extension	**23**		**23**
12/20" Line 10	23.3		23
Enbridge Energy, Limited Partnership – Total Miles	**3,943**	**103**	**1,286**

ENBRIDGE - Affiliated Entities

Location	*Active Miles*	*Inactive Miles*	*HCA Miles (Unlapped)*
Enbridge Pipelines (North Dakota) LLC	**800**	**95**	**49**
6", 10", 12", and 16"	545.6		48
6", 8" Gathering Lines	117.7		
12" Line 26 (Lignite to Berthold)-Stanley to Plaza Field		95.2	1
Unregulated Gathering Lines	136.2		
Enbridge Pipelines (Toledo) Inc.	**88**		**38**
16" Line 17 (Stockbridge to Freedom Junction)	35.2		7
16" Line 17 (Freedom Junction to Toledo)	52.8		31
Samaria	0.2		0.2
Enbridge Pipelines (Ozark) L.L.C.	**484**	**32**	**260**
22" Line 51	433.5		224
10" Line 52 (intra-state)	47.1		29
10" Kamo		32	5
16" El Dorado – North	1.9		1
16" El Dorado – South	1.9		1
CCPS Transportation, LLC	**660**	**7**	**218**
22" Line 62 (Hartsdale to Flanagan)	75.1		27
22" Line 55 (Flanagan to Key)	251.4		47
24" Line 55 (Key to Cushing)	331.1		141
Cushing Seaway	0.1		0
Cushing Teppco H	0.7		0
Cushing Amoco 20"	0.4		0
Cushing Amoco 30"	0.5		0
Cushing Teppco Central	0.5		0
Cushing Teppco South	0.4		0
16" Monee		6.6	3
Mustang Pipeline Partners	**1**		**1**
24" Mustang Pipeline	0.8		1
Enbridge Pipelines (Illinois) LLC – (Luxor)		**117**	**23**
WPL #1 and WPL #3 (Patoka to Heyworth)		117.0	23
Enbridge Storage (Patoka) L.L.C.	0	0	0
This entity has tankage only, no pipeline miles			
Enbridge (affiliated entities) Total Miles	**2,033**	**251**	**589**
Enbridge Total Miles	**5,976**	**354**	**1,875**

SUPERIOR REGION

U.S. BORDER (Gretna) to SUPERIOR
LINE 1 – 20" & 18"
LINE 2 – 26"
LINE 3 – 34"
LINE 4 – 36"/48"
LINE 13 – 18" (To Clearbrook Terminal)
LINE 65 – 20" (To Clearbrook Terminal))

SUPERIOR to MP. 97.23 (US HWY. 8)
LINE 6A – 34"
LINE 14 – 24"
LINE 61 – 42"
LINE 13 – 20"

SUPERIOR to MP. 1544.25 (Densitometer)
LINE 5 – 30"

CHICAGO REGION

MP. 97.23 to GRIFFITH
LINE 6A – 34"
LINE 14 – 24" (Mokena)
LINE 64 – 24" (Griffith Lateral Take-off to Griffith Terminal)
LINE 61 – 42"
LINE 13 – 20" (Manhattan to Superior)

GRIFFITH to U.S. BORDER (Sarnia)
LINE 6B – 30"

MP. 1544.25 to U.S. BORDER (Sarnia)
LINE 5 – 30"

BUFFALO EXTENSION
LINE 10 – 12" & 20"

ENBRIDGE PIPELINES (TOLEDO) INC.
LINE 17 – 16"

HARTSDALE to IN./ IL. Border
LINE 55 – 22"

CUSHING REGION

CUSHING to WOOD RIVER
LINE 51 – 22"

CUSHING to TULSA
LINE 52 – 10"

IN./ IL. Border to CUSHING
LINE 55 – 22" & 24"

Metering Facility

Non-Operational

Planned for construction 2009 (Streator to Manhattan)

NO	REVISION	BY DATE	APPR
6	ADDED NEW LINES 13, 61 & 65 ADDED CONCORDIA, LINN AND PERSHING	MKS 2/12/09	
5	UPDATED REGION COLORS	LHB/MKS 2/10/06	KWS
4	UPDATED REGION COLORS	KWS 1/27/06	-
3	UPDATED PER FIELD INFO	KWS 1/16/06	-

ENBRIDGE

PIPE LINE SYSTEM MAP

ENBRIDGE PIPELINES (LAKEHEAD) L.L.C.
ENBRIDGE PIPELINES (TOLEDO) INC.
ENBRIDGE PIPELINES (OZARK) L.L.C.
ENBRIDGE PIPELINES (CCPS TRANSPORTATION) L.L.C.

PROJECT:		
SCALE: NO SCALE	DATE: 7/16/2004	DRAWN: KWS
CHECK:	APPR:	DATE:
APPR:	D-0.5-10255-6-0	
APPR:		

SUPERIOR REGION

U.S. BORDER (Gretna) to SUPERIOR
- LINE 1 - 20" & 18"
- LINE 2 - 26"
- LINE 3 - 34"
- LINE 4 - 36"/48"
- LINE 13 - 18" (To Clearbrook Terminal)
- LINE 65 - 20" (To Clearbrook Terminal)

SUPERIOR to MP. 97.23 (US HWY. 8)
- LINE 6A - 34"
- LINE 14 - 24"
- LINE 61 - 42"
- LINE 13 - 20"

SUPERIOR to MP. 1544.25 (Densitometer)
- LINE 5 - 30"

CHICAGO REGION

MP. 97.23 to GRIFFITH
- LINE 6A - 34"
- LINE 14 - 24" (Makena)
- LINE 64 - 24" (Griffith Lateral Take-off to Griffith Terminal)
- LINE 61 - 42"
- LINE 13 - 20" (Manhattan to Superior)

GRIFFITH to U.S. BORDER (Sarnia)
- LINE 6B - 30"

MP. 1544.25 to U.S. BORDER (Sarnia)
- LINE 5 - 30"

BUFFALO EXTENSION
- LINE 10 - 12" & 20"

ENBRIDGE PIPELINES (TOLEDO) INC.
- LINE 17 - 16"

HARTSDALE to IN./ IL. Border
- LINE 55 - 22"

CUSHING REGION

CUSHING to WOOD RIVER
- LINE 51 - 22"

CUSHING to TULSA
- LINE 52 - 10"

IN./ IL. Border to CUSHING
- LINE 55 - 22" & 24"

Metering Facility

Non-Operational

Planned for construction 2009 (Streator to Manhattan)

NO	REVISION	BY DATE	APPR
6	ADDED NEW LINES 13, 61 & 65 ADDED CONCORDIA, LINN AND PERSHING	MKS 2/12/09	
5	UPDATED REGION COLORS	LHB/MKS 2/10/06	KWS
4	UPDATED REGION COLORS	KWS 1/27/06	-
3	UPDATED PER FIELD INFO	KWS 1/16/06	-

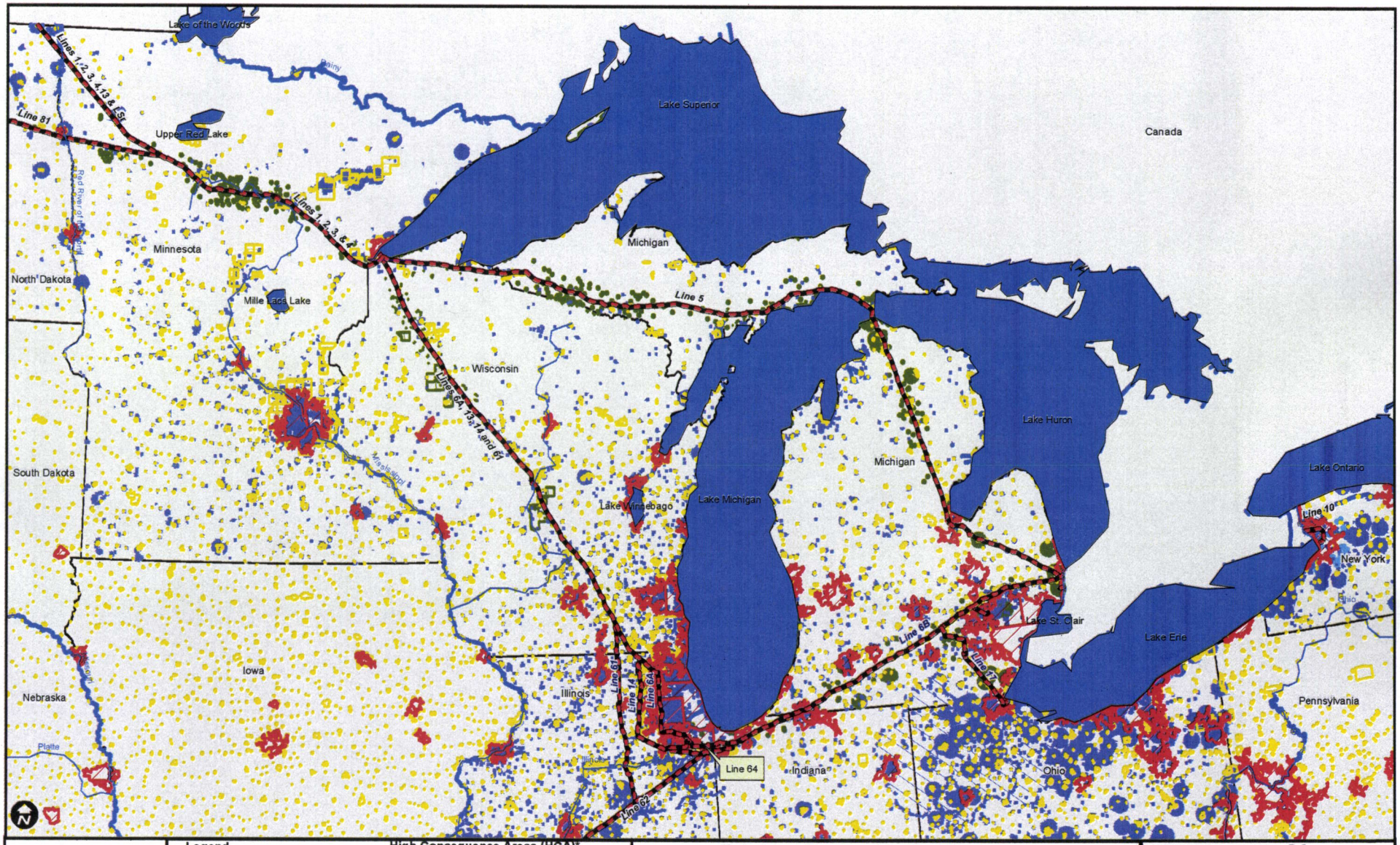
ENBRIDGE

PIPE LINE SYSTEM MAP

ENBRIDGE PIPELINES (LAKEHEAD) L.L.C.
ENBRIDGE PIPELINES (TOLEDO) INC.
ENBRIDGE PIPELINES (OZARK) L.L.C.
ENBRIDGE PIPELINES (CCPS TRANSPORTATION) L.L.C.

PROJECT:			
SCALE: NO SCALE	DATE: 7/16/2004	DRAWN: KWS	
CHECK:	APPR:	DATE:	
APPR:			
APPR:	D-0.5-10255-6-0		

Darker Copy of previous page



ENBRIDGE

Legend

- Response Facilities
- Commercially Navigable Waterways
- Pipeline

High Consequence Areas (HCA)*

- High Population HCA
- Other Popluation HCA
- Drinking Water HCA
- Ecological HCA

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

Enbridge Energy, Limited Partnership

Chicago Region HCA Overview Map

0 30 60 90 120 Miles

DATE ISSUED:	12/1/2004
DATE REVISED:	3/19/2009
SCALE:	1:4,000,000
DRAWN BY:	EJN
SERIES:	Emergency Response Times

Natural Resources Engineering Co.
715-395-5680

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	Approximate Location	High Consequence Area
						Crude Oil:			
Mackinaw to Bay City (2,015,016 - 2,843,835)									
5	30-inch	2,015,016	2,024,363			1.77	1,481	Mackinaw City	U.S. ESA / Mackinaw City
5	30-inch	2,015,016	2,026,384			2.15	1,481	Mackinaw City	U.S. ESA / Mackinaw City
5	30-inch	2,018,577	2,036,149			3.33	1,482	Mackinaw City	Enbridge DW / Mackinaw City
5	30-inch	2,022,013	2,029,434			1.41	1,482	Mackinaw City	U.S. ESA / Mackinaw City
5	30-inch	2,042,582	2,043,874			0.24	1,485	Carp Lake	U.S. ESA / Carp Lake
5	30-inch	2,075,383	2,101,529			4.95	1,494	Douglas Lake	U.S. ESA / Douglas Lake
5	30-inch	2,108,870	2,114,942			1.15	1,498	Mullet Creek	U.S. ESA / Mullet Creek
5	30-inch	2,111,100	2,116,604			1.04	1,498	Burt Lake	U.S. ESA / Burt Lake
5	30-inch	2,119,371	2,129,456			1.91	1,500	Burt Creek	U.S. ESA / Burt Creek
5	30-inch	2,148,040	2,158,357			1.95	1,506	Indian River	U.S. ESA / Indian River
5	30-inch	2,157,519	2,160,630			0.59	1,507	Indian River	U.S. ESA / Indian River
5	30-inch	2,160,730	2,164,960			0.80	1,508	Indian River	Enbridge CNW / Indian River
5	30-inch	2,160,730	2,164,960			0.80	1,508	Indian River	U.S. ESA / Indian River
5	30-inch	2,166,560	2,168,844			0.43	1,509	Indian River	Enbridge CNW / Indian River
5	30-inch	2,166,560	2,168,844			0.43	1,509	Indian River	U.S. ESA / Indian River
5	30-inch	2,166,560	2,168,844			0.43	1,509	Indian River	U.S. ESA / Indian River
5	30-inch	2,173,990	2,186,665			2.40	1,511	Indian River	Enbridge CNW / Indian River
5	30-inch	2,173,990	2,186,665			2.40	1,511	Little Sturgeon River	U.S. ESA / Little Sturgeon River
5	30-inch	2,355,270	2,363,526			1.56	1,545	Caulkins Lake	U.S. ESA / Caulkins Lake
5	30-inch	2,383,801	2,385,211			0.27	1,550	Middle Branch Big Creek	U.S. ESA / Au Sable
5	30-inch	2,403,452	2,414,694			2.13	1,554	Au Sable	U.S. ESA / Au Sable
5	30-inch	2,416,195	2,421,136			0.94	1,556	East Branch Big Creek	U.S. ESA / E.B. Big Creek
5	30-inch	2,440,319	2,443,333			0.57	1,561	Au Sable River	U.S. ESA / Au Sable River
5	30-inch	2,444,333	2,451,728			1.40	1,562	Au Sable River	U.S. ESA / Au Sable River
5	30-inch	2,466,162	2,470,702			0.86	1,566	West Branch Big Creek	U.S. ESA / Luzerne
5	30-inch	2,578,293	2,588,117			1.86	1,587	Rifle Lake	U.S. DW / Rifle Lake
5	30-inch	2,578,293	2,595,183			3.20	1,588	Rifle Lake	U.S. ESA / Rifle Lake
5	30-inch	2,626,000	2,626,450			0.09	1,595	Gustafson Airport	U.S. DW / Gustafson Airport

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	Approximate Location	High Consequence Area
						Crude Oil:			
Bay City to Sarnia (2,843,835 - 3,364,529)									
5	30-inch	2,882,551	2,894,334			2.23	1,645	Bay City	U.S. ESA / Bay City
5	30-inch	2,886,617	2,898,334			2.22	1,646	Bay City	U.S. ESA / Bay City
5	30-inch	2,886,987	2,890,487			0.66	1,645	Saginaw River	U.S. CNW / Saginaw River
5	30-inch	2,978,998	2,999,758			3.93	1,664	Tinglan	U.S. ESA / Tinglan
5	30-inch	2,995,609	3,013,909			3.47	1,667	Vassar	Enbridge DW / Vassar
5	30-inch	3,002,538	3,015,509			2.46	1,668	Vassar	U.S. ESA / Vassar
5	30-inch	3,024,586	3,034,636			1.90	1,672	Goodings Creek	U.S. ESA / Goodings Creek
5	30-inch	3,026,236	3,029,936			0.70	1,672	Vassar	Enbridge DW / Vassar
5	30-inch	3,119,516	3,131,492			2.27	1,690	North Branch	Enbridge DW / North Branch
5	30-inch	3,133,492	3,136,016			0.48	1,692	North Branch	Enbridge DW / North Branch
5	30-inch	3,262,310	3,267,662			1.01	1,716	Quaker Bush Drain	U.S. ESA / Quaker Bush Drain
5	30-inch	3,268,762	3,274,478			1.08	1,718	Pine River	U.S. ESA / Pine River
5	30-inch	3,293,123	3,304,395			2.13	1,723	Port Huron	U.S. ESA / Port Huron
5	30-inch	3,305,125	3,336,849			6.01	1,727	Port Huron	U.S. ESA / Port Huron
5	30-inch	3,340,663	3,344,838			0.79	1,731	Port Huron	U.S. ESA / Port Huron
5	30-inch	3,345,188	3,356,061			2.06	1,733	Port Huron	U.S. ESA / Port Huron
5	30-inch	3,354,971	3,364,529			1.81	1,734	St. Clair River	Enbridge DW / St. Clair River
5	30-inch	3,358,841	3,364,529			1.08	1,735	Port Huron	U.S. ESA / Port Huron
5	30-inch	3,361,011	3,364,529			0.67	1,735	St. Clair River	U.S. CNW / St. Clair River

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	Approximate Location	High Consequence Area
						Crude Oil:			
Superior to Adams (505,033- 1,201,518)									
6A	34-inch	505,033	507,317			0.43	96	Thornapple	U.S. ESA / Thornapple
6A	34-inch	522,918	532,877			1.89	100	Flambeau River	U.S. ESA / Flambeau River
6A	34-inch	527,447	530,240			0.53	100	Flambeau River	U.S. ESA / Flambeau River
6A	34-inch	527,447	530,240			0.53	100	Flambeau River	U.S. ESA / Flambeau River
6A	34-inch	527,447	530,240			0.53	100	Flambeau River	U.S. ESA / Flambeau River
6A	34-inch	651,376	656,585			0.99	124	Gilman	U.S. DW / Gilman
6A	34-inch	753,147	759,903			1.28	143	Owen	U.S. DW / Owen
6A	34-inch	912,600	917,627			0.95	173	Trinity Church	Enbridge DW / Trinity Church
6A	34-inch	921,554	923,804			0.43	175	Beaver Creek	Enbridge DW / Trinity Church
6A	34-inch	1,035,734	1,038,784			0.58	196	Port Edwards	Enbridge DW / Port Edwards
6A	34-inch	1,044,940	1,056,888			2.26	199	Nekoosa	U.S. DW / Nekoosa
6A	34-inch	1,062,691	1,069,255			1.24	202	Wisconsin River	Enbridge CNW / Wisconsin River
6A	34-inch	1,075,968	1,079,768			0.72	204	Rome	Enbridge CNW / Wisconsin River
6A	34-inch	1,118,717	1,153,761			6.64	215	Big Flats	U.S. ESA / Big Flats
6A	34-inch	1,130,950	1,134,220			0.62	215	Big Flats	U.S. ESA / Big Flats
6A	34-inch	1,141,958	1,145,258			0.63	217	Big Flats	U.S. ESA / Big Flats
6A	34-inch	1,149,461	1,153,761			0.81	218	Big Flats	U.S. ESA / Big Flats
6A	34-inch	1,187,857	1,190,607			0.52	225	Friendship	U.S. ESA / Friendship
Adams to Griffith (1,201,518 - 2,457,347)									
6A	34-inch	1,398,850	1,406,502			1.45	266	Wyocena	U.S. DW / Wyocena
6A	34-inch	1,423,066	1,425,791			0.52	270	Rio	U.S. DW / Rio
6A	34-inch	1,620,556	1,623,073			0.48	307	Busseyville	U.S. DW / Busseyville
6A	34-inch	1,644,789	1,647,130			0.44	312	Rock River	Enbridge CNW / Rock River
6A	34-inch	1,651,155	1,660,610			1.79	314	Rock River	Enbridge CNW / Rock River
6A	34-inch	1,767,076	1,767,345			0.05	335	Sharon	Enbridge DW / Sharon
6A	34-inch	1,767,345	1,769,832			0.47	335	Sharon	U.S. DW / Sharon
6A	34-inch	1,769,832	1,770,882			0.20	335	Sharon	Enbridge DW / Sharon
6A	34-inch	1,800,070	1,803,537			0.66	341	Walworth	Enbridge DW / Walworth
6A	34-inch	1,842,770	1,845,420			0.50	349	Alden	Enbridge DW / Alden

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	Approximate Location	High Consequence Area
						Crude Oil:			
Adams to Griffith (1,201,518 - 2,457,347) cont.									
6A	34-inch	1,924,246	1,928,028			0.72	365	McHenry Shores	U.S. DW / McHenry Shores
6A	34-inch	1,925,496	1,928,928			0.65	365	Bull Valley	Enbridge DW / Bull Valley
6A	34-inch	1,933,497	1,938,408			0.93	367	Bull Valley	Enbridge DW / Bull Valley
6A	34-inch	1,941,571	1,945,172			0.68	368	Nunda	Enbridge DW / Nunda
6A	34-inch	1,948,666	1,950,761			0.40	369	Nunda	Enbridge DW / Nunda
6A	34-inch	1,948,666	1,950,761			0.40	369	Nunda	Enbridge DW / Nunda
6A	34-inch	1,948,666	1,950,761			0.40	369	Nunda	Enbridge DW / Nunda
6A	34-inch	1,957,184	1,957,724			0.10	371	Prairie Grove	Enbridge DW / Prairie Grove
6A	34-inch	1,960,367	1,963,457			0.59	372	Prairie Grove	Enbridge DW / Prairie Grove
6A	34-inch	1,965,934	1,968,534			0.49	373	Cary	Enbridge DW / Cary
6A	34-inch	1,965,934	1,968,534			0.49	373	Fox River Garden Valley	U.S. DW / Fox River Garden Valley
6A	34-inch	1,970,910	1,972,657			0.33	373	Oakland Hills	Enbridge DW / Oakland Hills
6A	34-inch	1,970,910	1,972,657			0.33	373	Fox River	Enbridge DW / Fox River
6A	34-inch	1,970,910	1,972,657			0.33	373	Fox River Garden Valley	U.S. DW / Fox River Garden Valley
6A	34-inch	1,973,157	1,976,957			0.72	374	Oakland Hills	Enbridge DW / Oakland Hills
6A	34-inch	1,982,021	1,989,242			1.37	376	Cary	U.S. DW / Cary
6A	34-inch	1,984,447	1,986,876			0.46	376	Fox River	Enbridge DW / Fox River
6A	34-inch	1,986,047	1,987,176			0.21	376	Cary	Enbridge DW / Cary
6A	34-inch	1,986,047	1,994,683			1.64	377	Cary	Enbridge DW / Cary
6A	34-inch	1,988,276	1,994,683			1.21	377	Fox River	Enbridge DW / Cary
6A	34-inch	1,988,276	1,994,683			1.21	377	Fox River	Enbridge DW / Turner Camp
6A	34-inch	1,988,276	1,994,683			1.21	377	Fox River	Enbridge DW / Algonquin
6A	34-inch	1,988,276	1,994,683			1.21	377	Fox River	Enbridge DW / Algonquin
6A	34-inch	2,003,376	2,019,722			3.10	381	Spring Lake	U.S. ESA / Spring Lake
6A	34-inch	2,019,722	2,023,821			0.78	383	Carpentersville	Enbridge DW / Carpentersville
6A	34-inch	2,023,608	2,028,307			0.89	384	Dundee	U.S. DW / Dundee
6A	34-inch	2,030,612	2,042,247			2.20	386	Hoffman Estates	U.S. DW / Hoffman Estates
6A	34-inch	2,032,239	2,039,132			1.31	386	Fox River	U.S. DW / Fox River
6A	34-inch	2,046,914	2,053,698			1.28	388	Poplar Creek	U.S. DW / Poplar Creek
6A	34-inch	2,048,394	2,052,450			0.77	388	Poplar Creek	U.S. DW / South Elgin
6A	34-inch	2,055,604	2,065,242			1.83	390	Elgin	U.S. DW / Elgin
6A	34-inch	2,061,869	2,064,842			0.56	391	Elgin	Enbridge DW / Elgin

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	Approximate Location	High Consequence Area
						Crude Oil:			
Adams to Griffith (1,201,518 - 2,457,347) cont.									
6A	34-inch	2,064,265	2,069,092			0.91	391	Brewster Creek Trib	Enbridge DW / South Elgin
6A	34-inch	2,064,265	2,069,092			0.91	391	Brewster Creek Trib	Enbridge DW / Aurora
6A	34-inch	2,064,265	2,069,092			0.91	391	Brewster Creek Trib	Enbridge DW / Valley View
6A	34-inch	2,064,265	2,069,092			0.91	391	Brewster Creek Trib	Enbridge DW / Valley View
6A	34-inch	2,064,265	2,069,092			0.91	391	Brewster Creek Trib	Enbridge DW / Novak Park
6A	34-inch	2,064,265	2,069,092			0.91	391	Brewster Creek Trib	Enbridge DW / St .Charles
6A	34-inch	2,072,816	2,077,987			0.98	393	Wayne	Enbridge DW / Wayne
6A	34-inch	2,072,816	2,078,287			1.04	393	Brewster Creek	Enbridge DW / Brewster Creek
6A	34-inch	2,074,687	2,076,887			0.42	393	Brewster Creek	Enbridge DW / Valley View
6A	34-inch	2,074,687	2,076,887			0.42	393	Brewster Creek	Enbridge DW / Valley View
6A	34-inch	2,074,687	2,076,887			0.42	393	Brewster Creek	Enbridge DW / Novak Park
6A	34-inch	2,074,687	2,076,887			0.42	393	Brewster Creek	Enbridge DW / St .Charles
6A	34-inch	2,080,013	2,082,113			0.40	394	Wayne	Enbridge DW / Wayne
6A	34-inch	2,097,955	2,109,984			2.28	398	West Chicago	U.S. ESA / West Chicago
6A	34-inch	2,112,976	2,119,229			1.18	401	West Chicago	Enbridge DW / West Chicago
6A	34-inch	2,125,751	2,130,501			0.90	403	Warrenville	Enbridge DW / Warrenville
6A	34-inch	2,127,751	2,130,501			0.52	403	Warrenville	Enbridge DW / Warrenville
6A	34-inch	2,141,542	2,146,678			0.97	406	Aurora	U.S. DW / Aurora
6A	34-inch	2,145,878	2,149,728			0.73	407	Naperville	Enbridge DW / Naperville
6A	34-inch	2,149,878	2,161,321			2.17	408	Aurora	U.S. DW / Aurora
6A	34-inch	2,157,505	2,161,321			0.72	409	Naperville	Enbridge DW / Naperville
6A	34-inch	2,170,224	2,172,624			0.45	411	West Chicago	Enbridge DW / West Chicago
6A	34-inch	2,183,665	2,188,110			0.84	414	Plainfield	Enbridge DW / Plainfield
6A	34-inch	2,183,665	2,188,110			0.84	414	Plainfield	Enbridge DW / Plainfield
6A	34-inch	2,191,360	2,193,199			0.35	415	Plainfield	Enbridge DW / Plainfield
6A	34-inch	2,199,946	2,203,816			0.73	417	Plainfield	Enbridge DW / Plainfield
6A	34-inch	2,201,756	2,208,572			1.29	418	Dupage River	Enbridge DW / Plainfield
6A	34-inch	2,201,756	2,208,572			1.29	418	Dupage River	Enbridge DW / Plainfield
6A	34-inch	2,212,886	2,215,350			0.47	419	Lily Cache Creek	Enbridge DW / Plainfield
6A	34-inch	2,234,070	2,237,380			0.63	423	Romeoville	Enbridge DW / Romeoville
6A	34-inch	2,234,620	2,259,760			4.76	426	Romeoville	U.S. ESA / Romeoville

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	Approximate Location	High Consequence Area
						Crude Oil:			
Adams to Griffith (1,201,518 - 2,457,347) cont.									
6A	34-inch	2,235,763	2,259,760			4.54	426	Romeoville	U.S. ESA / Romeoville
6A	34-inch	2,241,837	2,246,000			0.79	425	Des Plaines River	Enbridge CNW / Des Plaines River
6A	34-inch	2,241,837	2,251,309			1.79	425	Romeoville	Enbridge DW / Romeoville
6A	34-inch	2,245,521	2,251,821			1.19	426	Chicago Ship Canal	U.S. CNW / Chicago Ship Canal
6A	34-inch	2,245,521	2,251,821			1.19	426	Des Plaines River	U.S. ESA / Romeoville
6A	34-inch	2,252,035	2,253,248			0.23	427	Romeoville	Enbridge DW / Romeoville
6A	34-inch	2,263,914	2,265,561			0.31	429	Homer	Enbridge DW / Homer
6A	34-inch	2,272,487	2,275,387			0.55	431	Homer	Enbridge DW / Homer
6A	34-inch	2,278,887	2,282,338			0.65	432	Homer	Enbridge DW / Homer
6A	34-inch	2,288,055	2,290,855			0.53	434	Goodings Grove	Enbridge DW / Goodings Grove
6A	34-inch	2,308,785	2,310,335			0.29	437	Orland Park	Enbridge DW / Orland Park
6A	34-inch	2,323,039	2,326,346			0.63	440	Mokena	Enbridge DW / Mokena
6A	34-inch	2,329,095	2,331,446			0.45	441	Arbury Hills	Enbridge DW / Arbury Hills
6A	34-inch	2,333,646	2,339,085			1.03	442	Frankfort	Enbridge DW / Frankfort
6A	34-inch	2,336,192	2,339,085			0.55	443	Frankfort	Enbridge DW / Frankfort
6A	34-inch	2,339,597	2,342,347			0.52	443	Frankfort	Enbridge DW / Frankfort
6A	34-inch	2,348,189	2,351,637			0.65	445	Lincoln Estates	Enbridge DW / Lincoln Estates
6A	34-inch	2,348,189	2,355,239			1.34	445	Lincoln Estates	Enbridge DW / Lincoln Estates
6A	34-inch	2,382,237	2,390,210			1.51	452	Park Forest	Enbridge DW / Park Forest
6A	34-inch	2,400,052	2,401,712			0.31	455	Chicago Heights	U.S. DW / Chicago Heights
6A	34-inch	2,401,532	2,403,790			0.43	455	Chicago Heights	Enbridge DW / Chicago Heights
6A	34-inch	2,405,040	2,407,040			0.38	456	Chicago Heights	U.S. DW / Chicago Heights
6A	34-inch	2,423,028	2,426,193			0.60	459	Sauk Village	Enbridge DW / Sauk Village
6A	34-inch	2,428,643	2,433,705			0.96	460	Lynwood	Enbridge DW / Lynwood

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	Approximate Location	High Consequence Area
						Crude Oil:			
Griffith to Sarnia (0 - 1,509,516)									
6B	30-inch	88,419	128,532			7.60	486	Liberty	U.S. DW / Liberty
6B	30-inch	101,883	118,790			3.20	486	Liberty	U.S. DW / Liberty
6B	30-inch	130,472	137,831			1.39	491	Sand Creek	U.S. DW / Sand Creek
6B	30-inch	310,937	325,110			2.68	526	Deer Lake	U.S. ESA / Deer Lake
6B	30-inch	353,816	357,570			0.71	533	St. Joseph River	Enbridge CNW / St. Jospeh River
6B	30-inch	353,816	357,570			0.71	533	Niles	U.S. DW / Niles
6B	30-inch	368,078	374,014			1.12	536	Niles	U.S. DW / Niles
6B	30-inch	368,078	374,014			1.12	536	St. Joseph River	Enbridge CNW / St. Jospeh River
6B	30-inch	451,640	455,340			0.70	551	Diamond	U.S. DW / Diamond
6B	30-inch	592,029	593,729			0.32	578	Portage Lake	U.S. DW / Portage Lake
6B	30-inch	882,882	885,831			0.56	633	Onondaga	U.S. DW / Onondaga
6B	30-inch	1,125,360	1,138,132			2.42	680	Parshallville	U.S. ESA / Parshallville
6B	30-inch	1,165,919	1,173,227			1.38	687	Richardson Lake	U.S. ESA / Richardson Lake
6B	30-inch	1,177,384	1,179,247			0.35	689	Rattalee Lake	Enbridge DW / Rattalee Lake
6B	30-inch	1,179,107	1,195,859			3.17	690	Rattalee Lake	U.S. ESA / Rattalee Lake
6B	30-inch	1,186,959	1,194,509			1.43	691	Rattalee Lake	U.S. ESA / Rattalee Lake
6B	30-inch	1,201,404	1,209,487			1.53	694	Springfield	U.S. DW / Springfield
6B	30-inch	1,262,224	1,263,874			0.31	705	Oxford	U.S. DW / Oxford
6B	30-inch	1,267,477	1,269,977			0.47	706	Oxford	Enbridge DW / Oxford
6B	30-inch	1,273,131	1,279,231			1.16	707	New Life	U.S. DW / New Life
6B	30-inch	1,293,141	1,299,226			1.15	711	Oxford	Enbridge DW / Oxford
6B	30-inch	1,356,494	1,369,745			2.51	724	Bruce	U.S. DW / Bruce
6B	30-inch	1,382,545	1,391,791			1.75	728	Armada	U.S. DW / Armada
6B	30-inch	1,432,955	1,439,755			1.29	738	Columbus	U.S. ESA / Columbus
6B	30-inch	1,445,455	1,509,516			12.13	745	Columbus	U.S. ESA / Columbus
6B	30-inch	1,495,631	1,500,081			0.84	749	Marysville	U.S. CNW / St. Clair River
6B	30-inch	1,500,503	1,509,516			1.71	751	Marysville	Enbridge DW / Marysville
6B	30-inch	1,506,923	1,509,516			0.49	751	Marysville	U. S. CNW / St. Clair River

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	Approximate Location	High Consequence Area
						Crude Oil:			
Westover to Grand Island (0 - 3,484)									
10	20-inch	0	1,084			0.21	0	Niagara River W. Branch	U.S. CNW / Niagara River W. Branch
10	20-inch	0	2,809			0.53	0	Niagara River	U.S. DW / Niagara River
10	20-inch	2,809	3,484			0.13	1	Tonawanda / Buffalo	Enbridge DW / Tonawanda / Buffalo
Grand Island to East Niagara (3,484 - 29,409)									
10	20-inch	3,484	5,336			0.35	1	Tonawanda / Buffalo	Enbridge DW / Tonawanda / Buffalo
10	20-inch	5,336	13,120			1.47	2	Big Sixmile Creek	U.S. DW / Big Sixmile Creek
10	20/12-inch	13,120	17,690			0.87	3	Tonawanda / Buffalo	Enbridge DW / Tonawanda / Buffalo
10	20/12-inch	17,690	29,409			2.22	4	Tonawanda / Buffalo	U.S. DW / Tonawanda / Buffalo
10	20/12-inch	22,645	29,409			1.28	5	Tonawanda / Buffalo	U.S. CNW / Niagara River E. Branch
East Niagara to Kiantone Take-Off (29,409 - 122,179)									
10	20/12-inch	29,409	33,376			0.75	6	Tonawanda / Buffalo	U.S. CNW / Niagara River E. Branch
10	20/12-inch	29,409	40,323			2.07	7	Tonawanda / Buffalo	U.S. DW / Tonawanda / Buffalo
10	12-inch	40,323	45,034			0.89	8	Tonawanda / Buffalo	Enbridge DW / Tonawanda / Buffalo
10	12-inch	45,034	50,940			1.12	9	Elm Lawn	U.S. DW / Elm Lawn
10	12-inch	50,940	59,684			1.66	10	Tonawanda / Buffalo	Enbridge DW / Tonawanda / Buffalo
10	12-inch	59,577	64,692			0.97	12	Tonawanda / Buffalo	U.S. DW / Tonawanda / Buffalo
10	12-inch	64,692	65,466			0.15	12	Tonawanda / Buffalo	Enbridge DW / Tonawanda / Buffalo
10	12-inch	65,466	68,344			0.55	13	North Bailey	U.S. DW / North Bailey
10	12-inch	68,344	120,544			9.89	18	Tonawanda / Buffalo	Enbridge DW / Tonawanda / Buffalo
10	12-inch	120,544	122,179			0.31	23	Buffalo River	Enbridge CNW / Buffalo River
10	12-inch	120,544	122,179			0.31	23	Buffalo River	U.S. DW / Buffalo River

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	Approximate Location	High Consequence Area
						Crude Oil:			
Superior to Adams (435,220 - 1,201,097)									
14	24-inch	435,220	437,220			0.38	83	Exeland	U.S. DW / Exeland
14	24-inch	464,600	466,958			0.45	88	Chippewa River	U.S. ESA / Chippewa River
14	24-inch	464,600	466,958			0.45	88	Chippewa River	U.S. ESA / Chippewa River
14	24-inch	464,600	466,958			0.45	88	Chippewa River	U.S. ESA / Chippewa River
14	24-inch	467,812	469,719			0.36	89	Chippewa River	U.S. ESA / Chippewa River
14	24-inch	467,812	469,719			0.36	89	Chippewa River	U.S. ESA / Chippewa River
14	24-inch	467,812	469,719			0.36	89	Chippewa River	U.S. ESA / Chippewa River
14	24-inch	477,290	500,460			4.39	93	Thornapple	U.S. ESA / Thornapple
14	24-inch	504,746	506,657			0.36	96	Thornapple	U.S. ESA / Thornapple
14	24-inch	522,343	532,230			1.87	100	Flambeau River	U.S. ESA / Flambeau River
14	24-inch	527,222	529,267			0.39	100	Flambeau River	U.S. ESA / Flambeau River
14	24-inch	527,222	529,267			0.39	100	Flambeau River	U.S. ESA / Flambeau River
14	24-inch	527,222	529,267			0.39	100	Flambeau River	U.S. ESA / Flambeau River
14	24-inch	650,822	655,648			0.91	124	Gilman	U.S. DW / Gilman
14	24-inch	753,218	759,150			1.12	143	Owen	U.S. DW / Owen
14	24-inch	913,007	917,007			0.76	173	Trinity Church	Enbridge DW / Trinity Church
14	24-inch	921,430	923,130			0.32	175	Trinity Church	Enbridge DW / Trinity Church
14	24-inch	1,035,408	1,038,258			0.54	196	Port Edwards	Enbridge DW / Port Edwards
14	24-inch	1,045,001	1,046,546			0.29	198	Nekoosa	U.S. DW / Nekoosa
14	24-inch	1,047,176	1,056,468			1.76	199	Nekoosa	U.S. DW / Nekoosa
14	24-inch	1,062,245	1,065,866			0.69	202	Wisconsin River	Enbridge CNW / Wisconsin River
14	24-inch	1,067,016	1,068,716			0.32	202	Wisconsin River	Enbridge CNW / Wisconsin River
14	24-inch	1,076,418	1,077,458			0.20	204	Rome	Enbridge CNW / Wisconsin River
14	24-inch	1,118,350	1,153,603			6.68	215	Big Flats	U.S. ESA / Big Flats
14	24-inch	1,130,397	1,133,476			0.58	214	Big Flats	U.S. ESA / Big Flats
14	24-inch	1,141,170	1,144,643			0.66	216	Big Flats	U.S. ESA / Big Flats
14	24-inch	1,148,903	1,153,210			0.82	218	Big Flats	U.S. ESA / Big Flats
14	24-inch	1,187,623	1,191,268			0.69	225	Friendship	U.S. ESA / Friendship

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	Approximate Location	High Consequence Area
						Crude Oil:			
Adams to Mokena (1,201,097 - 2,434,861)									
14	24-inch	1,397,719	1,401,645			0.74	265	Wyocena	U.S. DW / Wyocena
14	24-inch	1,402,595	1,405,638			0.58	266	Wyocena	U.S. DW / Wyocena
14	24-inch	1,421,981	1,424,731			0.52	270	Rio	U.S. DW / Rio
14	24-inch	1,619,236	1,621,636			0.45	307	Busseyville	U.S. DW / Busseyville
14	24-inch	1,643,331	1,644,900			0.30	311	Rock River	Enbridge CNW / Rock River
14	24-inch	1,650,778	1,652,970			0.42	313	Rock River	Enbridge CNW / Rock River
14	24-inch	1,654,170	1,659,484			1.01	314	Rock River	Enbridge CNW / Rock River
14	24-inch	1,766,306	1,766,656			0.07	335	Sharon	Enbridge DW / Sharon
14	24-inch	1,766,656	1,769,352			0.51	335	Sharon	U.S. DW / Sharon
14	24-inch	1,769,352	1,770,372			0.19	335	Sharon	Enbridge DW / Sharon
14	24-inch	1,799,471	1,802,830			0.64	341	Walworth	Enbridge DW / Walworth
14	24-inch	1,842,097	1,844,097			0.38	349	Alden	Enbridge DW / Alden
14	24-inch	1,894,832	1,896,382			0.29	359	Hartland	Enbridge DW / Hartland
14	24-inch	1,903,531	1,904,881			0.26	361	Woodstock	Enbridge DW / Woodstock
14	24-inch	1,954,311	1,961,456			1.35	371	Kishwaukee	U.S. ESA / Kishwaukee
14	24-inch	2,008,985	2,012,485			0.66	381	Hampshire	Enbridge DW / Hampshire
14	24-inch	2,099,680	2,103,985			0.82	398	Kaneville	Enbridge DW / Kaneville
14	24-inch	2,136,667	2,141,540			0.92	405	Welch Creek	Enbridge DW / Camp Dean
14	24-inch	2,152,944	2,155,614			0.51	408	Big Rock Creek	Enbridge DW / Big Rock Creek
14	24-inch	2,177,246	2,181,446			0.80	413	Fox River	Enbridge DW / Fox River
14	24-inch	2,183,320	2,184,720			0.27	414	Fox River	Enbridge DW / Fox River
14	24-inch	2,186,120	2,190,725			0.87	414	Fox River	Enbridge DW / Fox River
14	24-inch	2,196,831	2,200,767			0.75	416	Little Rock Creek	Enbridge DW / Fox River
14	24-inch	2,196,831	2,200,767			0.75	416	Little Rock Creek	Enbridge DW / Millbrook
14	24-inch	2,208,935	2,212,937			0.76	419	Millhurst	Enbridge DW / Millbrook
14	24-inch	2,208,935	2,212,937			0.76	419	Millhurst	Enbridge DW / Millington
14	24-inch	2,208,935	2,212,937			0.76	419	Millhurst	Enbridge DW / Sheridan
14	24-inch	2,216,417	2,219,828			0.65	420	Millhurst	Enbridge DW / Millbrook
14	24-inch	2,216,417	2,219,828			0.65	420	Millhurst	Enbridge DW / Millington
14	24-inch	2,216,417	2,219,828			0.65	420	Millhurst	Enbridge DW / Sheridan

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	Approximate Location	High Consequence Area
						Crude Oil:			
Adams to Mokena (1,201,097 - 2,434,861) cont.									
14	24-inch	2,274,982	2,281,693			1.27	432	Aux Sable	Enbridge DW / Aux Sable
14	24-inch	2,284,073	2,292,199			1.54	433	Aux Sable	Enbridge DW / Aux Sable
14	24-inch	2,309,280	2,312,426			0.60	438	DuPage	Enbridge DW / DuPage
14	24-inch	2,318,335	2,323,929			1.06	440	DuPage	Enbridge DW / DuPage
14	24-inch	2,319,573	2,322,174			0.49	440	DuPage	Enbridge DW / Minooka
14	24-inch	2,319,573	2,322,174			0.49	440	DuPage	Enbridge DW / Minooka
14	24-inch	2,334,476	2,346,089			2.20	443	Joliet	Enbridge DW / Joliet
14	24-inch	2,347,476	2,352,004			0.86	445	Joliet	U.S. CNW / Des Plaines River
14	24-inch	2,347,476	2,352,004			0.86	445	Joliet	Enbridge DW / Joliet
14	24-inch	2,347,476	2,352,004			0.86	445	Joliet	Enbridge DW / Channahon
14	24-inch	2,347,476	2,352,004			0.86	445	Joliet	Enbridge DW / Channahon
14	24-inch	2,348,076	2,353,472			1.02	445	Joliet	Enbridge DW / Joliet
14	24-inch	2,355,972	2,358,072			0.40	446	Joliet	Enbridge DW / Joliet
14	24-inch	2,358,072	2,362,792			0.89	447	Joliet	Enbridge DW / Joliet
14	24-inch	2,366,942	2,370,892			0.75	449	Sugar Run	U.S. DW / Joliet
14	24-inch	2,366,942	2,370,892			0.75	449	Sugar Run	U.S. CNW / Des Plaines River
14	24-inch	2,366,942	2,370,892			0.75	449	Sugar Run	Enbridge DW / Joliet
14	24-inch	2,366,942	2,370,892			0.75	449	Sugar Run	Enbridge DW / Joliet
14	24-inch	2,366,942	2,370,892			0.75	449	Sugar Run	Enbridge DW / Channahon
14	24-inch	2,367,692	2,370,892			0.61	449	Joliet	Enbridge DW / Joliet
14	24-inch	2,371,692	2,375,962			0.81	450	Joliet	Enbridge DW / Joliet
14	24-inch	2,374,253	2,376,962			0.51	450	Sugar Run	Enbridge DW / Joliet
14	24-inch	2,374,253	2,376,962			0.51	450	Sugar Run	U.S. DW / Joliet
14	24-inch	2,374,253	2,376,962			0.51	450	Sugar Run	U.S. CNW / Des Plaines River
14	24-inch	2,374,253	2,376,962			0.51	450	Sugar Run	Enbridge DW / Joliet
14	24-inch	2,374,253	2,376,962			0.51	450	Sugar Run	Enbridge DW / Joliet
14	24-inch	2,374,253	2,376,962			0.51	450	Sugar Run	Enbridge DW / Channahon
14	24-inch	2,381,348	2,383,298			0.37	451	New Lenox	Enbridge DW / New Lenox
14	24-inch	2,391,500	2,398,828			1.39	454	New Lenox	Enbridge DW / New Lenox

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	Approximate Location	High Consequence Area
						Crude Oil:			
Adams to Mokena (1,201,097 - 2,434,861) cont.									
14	24-inch	2,401,878	2,405,228			0.63	455	New Lenox	Enbridge DW / New Lenox
14	24-inch	2,412,200	2,415,660			0.66	457	Mokena	Enbridge DW / Mokena
14	24-inch	2,427,731	2,430,348			0.50	460	Mokena	Enbridge DW / Mokena

ENBRIDGE

Chicago 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 Begin Stationing	End Stationing	Segment Length (mile)	Approximate Milepost	Approximate Location	High Consequence Area
						Crude Oil:			
Superior to Delavan (48.,394-1,703,457)									
61	42-inch	483,394	507,065			4.48	94	Thornapple	U.S. ESA / Thornapple
61	42-inch	511,334	513,322			0.38	97	Thornapple	U.S. ESA / Thornapple
61	42-inch	528,913	538,722			1.86	101	Ladysmith	U.S. ESA / Ladysmith
61	42-inch	533,490	536,186			0.51	101	Port Arthur	U.S. ESA / Port Arthur
61	42-inch	533,490	536,186			0.51	101	Thornapple	U.S. ESA / Thornapple
61	42-inch	533,490	536,186			0.51	101	Thornapple	U.S. ESA / Thornapple
61	42-inch	657,621	662,686			0.96	125	Gilman	U.S. DW / Gilman
61	42-inch	759,282	765,991			1.27	144	Owen	U.S. DW / Owen
61	42-inch	918,910	926,013			1.35	175	Cameron	Enbridge DW / Cameron
61	42-inch	927,877	931,030			0.60	176	Cameron	Enbridge DW / Cameron
61	42-inch	1,042,678	1,045,251			0.49	198	Nekoosa	Enbridge DW / Nekoosa
61	42-inch	1,045,494	1,049,275			0.72	198	Nekoosa	Enbridge OPA / Nekoosa
61	42-inch	1,052,416	1,063,880			2.17	200	Nekoosa	U.S. DW / Nekoosa
61	42-inch	1,070,769	1,076,464			1.08	203	Wisconsin River	Enbridge CNW / Wisconsin River
61	42-inch	1,083,270	1,087,104			0.73	206	Wisconsin River	Enbridge CNW / Wisconsin River
61	42-inch	1,125,436	1,160,642			6.67	216	Big Flats	U.S. ESA / Big Flats
61	42-inch	1,138,083	1,140,808			0.52	216	Big Flats	U.S. ESA / Big Flats
61	42-inch	1,149,024	1,152,151			0.59	218	Big Flats	U.S. ESA / Big Flats
61	42-inch	1,156,313	1,160,642			0.82	219	Big Flats	U.S. ESA / Big Flats
61	42-inch	1,194,242	1,196,912			0.51	226	Adams	U.S. ESA / Adams
61	42-inch	1,405,584	1,413,074			1.42	267	Wyocena	U.S. DW / Wyocena
61	42-inch	1,429,189	1,432,385			0.61	271	Rio	U.S. DW / Rio
61	42-inch	1,626,902	1,629,304			0.46	308	Oakland	U.S. DW / Oakland
61	42-inch	1,650,382	1,652,491			0.40	313	Rock River	Enbridge CNW / Rock River
61	42-inch	1,658,077	1,667,058			1.70	315	Rock River	Enbridge CNW / Rock River

ENBRIDGE

Chicago 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 Begin Stationing	End Stationing	Segment Length (mile)	Approximate Milepost	Approximate Location	High Consequence Area
						Crude Oil:			
Delevan to Flanagan (0 - 734,038									
61	42-inch	75,650	78,570			0.55	15	Turtle Creek	Enbridge DW / Bradford
61	42-inch	209,000	214,030			0.95	40	Belvidere	Enbridge DW / Belvidere
61	42-inch	209,000	213,380			0.83	40	Kishwaukee River/Coon Creek	Enbridge DW / Belvidere
61	42-inch	209,000	213,380			0.83	40	Kishwaukee River/Coon Creek	Enbridge DW / Belvidere
61	42-inch	265,450	269,280			0.73	51	S Branch Kishwaukee River	Enbridge DW / Kirkland
61	42-inch	328,260	332,090			0.73	63	De Kalb	Enbridge DW / De Kalb
61	42-inch	500,800	504,380			0.68	95	Fox River	Enbridge DW / Sheridan
61	42-inch	500,800	504,380			0.68	95	Fox River	Enbridge DW / Wedron
61	42-inch	516,310	522,770			1.22	98	Fox River	Enbridge DW / Wedron
61	42-inch	524,320	525,220			0.17	99	Fox River	Enbridge DW / Wedron
61	42-inch	564,810	572,940			1.54	108	Marseilles	Enbridge DW / Marseilles
61	42-inch	571,040	577,560			1.23	109	Illinois River	U.S. CNW / Illinois River
61	42-inch	571,040	577,560			1.23	109	Illinois River	Enbridge DW / Ottowa
61	42-inch	571,040	577,560			1.23	109	Illinois River	Enbridge DW / Ottowa
61	42-inch	571,040	577,560			1.23	109	Illinois River	Enbridge DW / Naplate
61	42-inch	571,040	577,560			1.23	109	Illinois River	Enbridge DW / Naplate
61	42-inch	571,040	577,560			1.23	109	Illinois River	Enbridge DW / Naplate
61	42-inch	571,040	577,560			1.23	109	Illinois River	Enbridge DW / Leopold
61	42-inch	677,300	689,780			2.36	129	Sunbury	Enbridge DW / Streator
61	42-inch	692,100	693,800			0.32	131	Sunbury	Enbridge DW / Streator
61	42-inch	716,675	723,350			1.26	136	Esmen	Enbridge DW / Streator

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Location	High Consequence Area
				Crude Oil:				
Flanagan to Hartsdale (327,236 - 398,336)								
62	22-inch	327,236	331,836			0.87	Crete	Enbridge DW / Crete
62	22-inch	333,886	338,486			0.87	Crete	U.S. ESA / Crete
62	22-inch	338,386	340,386			0.38	Crete	Enbridge DW / Crete
62	22-inch	355,186	358,436			0.62	Willowbrook	Enbridge DW / Willowbrook

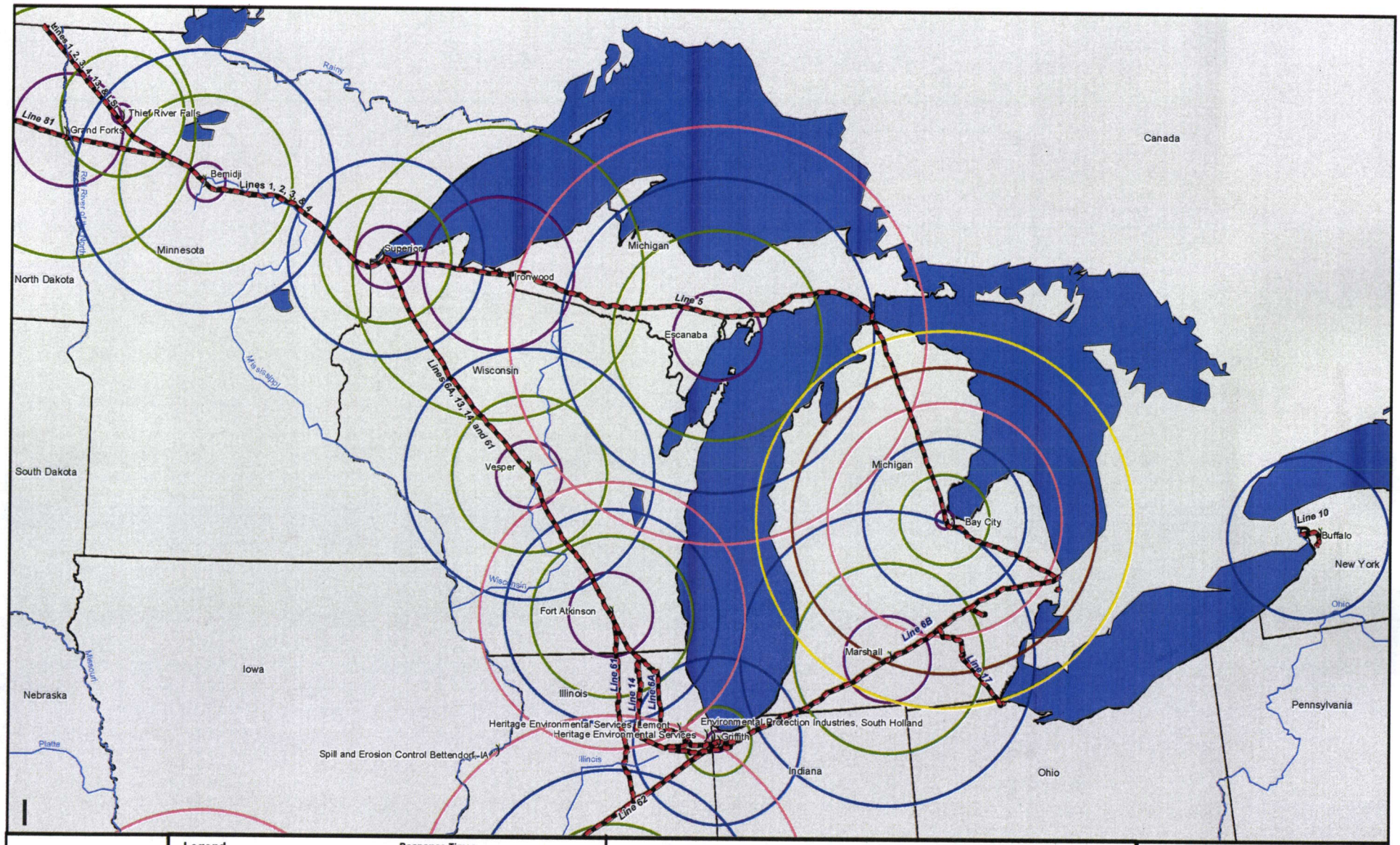
* Stationing was created in GIS starting at zero in Flangan and increasing north to Hartsdale

ENBRIDGE

Chicago 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 Begin Stationing	Diversion End Stationing	Segment Length (mile)	Approximate Milepost	Approximate Location	High Consequence Area
						Crude Oil:			
Mokena to Griffith (2,406,091 - 2,543,685)									
64	24-inch	2,420,109	2,420,909			0.15	458	Frankfort	Enbridge DW / Frankfort
64	24-inch	2,433,472	2,437,009			0.67	461	Frankfort	Enbridge DW / Frankfort
64	24-inch	2,438,349	2,440,299			0.37	462	Frankfort	Enbridge DW / Frankfort
64	24-inch	2,442,599	2,444,099			0.28	463	Frankfort	Enbridge DW / Frankfort
64	24-inch	2,467,576	2,475,105			1.43	468	Park Forest	Enbridge DW / Park Forest
64	24-inch	2,485,256	2,486,885			0.31	471	Chicago Heights	U.S. DW / Chicago Heights
64	24-inch	2,486,885	2,489,006			0.40	471	Chicago Heights	Enbridge DW / Chicago Heights
64	24-inch	2,490,206	2,492,286			0.39	472	Chicago Heights	U.S. DW / Chicago Heights
64	24-inch	2,508,351	2,511,353			0.57	475	Sauk Village	Enbridge DW / Sauk Village
64	24-inch	2,514,078	2,518,756			0.89	477	Lansing Ditch	Enbridge DW / Lansing Ditch



ENBRIDGE

Legend

- Response Facilities
- Rivers
- Pipeline

Response Times

- 1.0 Hour
- 2.0 Hours
- 3.0 Hours
- 4.0 Hours
- 5.0 Hours

Times derived from emergency response drills.

Enbridge Pipelines, Limited Partnership
Chicago Region Emergency Response Times

0 50 100 150 200 Miles

DATE ISSUED:	12/1/2004
DATE REVISED:	4/27/2009
SCALE:	1:4,000,000
DRAWN BY:	EJN
SERIES:	Emergency Response Times

Natural Resources Engineering Co.
715-395-5680

Level	Non-Critical Facilities: Pump Stations, Meter Sites, Remote Valve Sites, R-O-W, PLM Shops and Offices (Bay City/Fort Atkinson/Marshall/Vesper)
Low (Green)	***Alarms*** Locations equipped with alarms automatically contact Edmonton Control Center. The first/last employee to enter/leave the station at the start/end of the day is responsible to enable or disable alarms.
	Monitoring Semi annual or quarterly site security inspections must be completed using the Field Inspection form (for more information, see Book 2: Safety, 01-02-01, Section STANDARD Subject Field EH&S Inspections).
	Employee Awareness 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. Employees must be aware of vehicles frequently driving by or parking along roadways adjacent to company facilities. PLM Shops/Offices: 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).
Guarded (Blue)	**All of above, PLUS:** ***Employee Awareness*** Regional Manager is responsible to immediately notify employees when threat condition levels change (e.g., emails).
Elevated (Yellow)	**All of above, PLUS:** ***Access Control*** All unknown visitors must be escorted by an employee at all times. PLM Shops/Offices: Limit visitors, and confirm with an employee that the visitor is expected before allowing access.
	Buildings/Gates/Fences/Mainline Valves Gates should be locked or secured in the closed position at all times.
	Monitoring Pump Stations and Marysville: Employees must complete weekly yard and perimeter circle checks including valves, buildings and perimeter fencing (alter days and times). Valve sites, Meter Sites, Oregon, Samaria and deactivated stations: Employees must complete monthly yard and perimeter checks including valves, buildings and perimeter fencing (alter days and times). PLM Shops/Offices: Employees must complete weekly yard and perimeter circle checks, including inspections of buildings, yard areas and perimeter fencing (alter days and times).
	Employee Awareness Regional Manager is responsible to immediately notify employees when threat condition levels change (e.g., emails with follow-up phone call to supervisors), and review all company security standards and procedures. In addition, safety coordinators are responsible to ensure all company security standards and procedures are reviewed semi-annually with employees.
High (Orange)	**All of above, PLUS:** ***Access Control*** PLM Shops/Offices: Limit access to visitors who have a legitimate need to enter the facility, and confirm the purpose with an employee before allowing access. All visitors and contractors must be accompanied by an employee at all times. Pump Stations, Meter Sites, Valve Sites, and ROW: No visitors or contractors are permitted without approval from the regional manager.

Maps & References

Main Line Valves

Site Safety Plot Plan

Pipeline Information
- Miles of Mainline Pipe
- Release Alert

Pipeline System Map

HCA Overview Map
- HCA Tables

Emergency Response Map

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. Efficiency and control point mapping enhancements are made by qualified emergency response personnel.

Refer to Book 7: Emergency Response for criteria relevant to Control Point Mapping procedures.

Attached is a list of the Control Point Maps significant to this region. Full sets of Control Point Maps are maintained in the regional offices.

Chicago Region Control Point Maps Record-
Refer to Region Control Point Mapbooks

Line 6A & 14

Flambeau River (6A,14)	MP 100.16**
Little Jump River (6A,14)	MP 110.79**
Jump River (6A,14)	MP 111.89**
Yellow River (6A,14)	MP 123.92**
Eau Claire River North Fork (6A,14)	MP 132.50**
Popple River (6A,14)	MP 144.17**
Yellow River East Branch (6A,14)	MP 169.56**
Wisconsin River* (6A,14)	MP 201.70**
Fox River (6A,14)	MP 253.62**
Fox River (6A,14)	MP 261.43**
Crawfish River (6A,14)	MP 279.25**
Maunesha River (6A,14)	MP 291.54**
Rock River* (6A,14)	MP 313.03**
Fox River (6A)	MP 376.84
Ferry Creek (6A)	MP 404.74
Fox River (14)	MP 418.80
Des Plaines River* (6A)	MP 425.10
Des Plaines River* (14)	MP 444.95
Chicago Sanitary & Ship Canal (6A)	MP 425.40
Hickory Creek #1 (Arbury Hills) (6A)	MP 442.62
Hickory Creek #2 (Arbury Hills) (6A)	MP 447.30
Park Forest – Drain (6A)	MP 449.53
Park Forest – Wash (6A)	MP 450.20
Park Forest – Ditch (6A)	MP 451.19
Sauk Trail Lake (6A)	MP 453.59
Hart Ditch (Plum Creek) (6A)	MP 461.78
Dyer Ditch (6A)	MP 463.29
Griffith Tank Farm (6A)	MP 464.00

Line 6B

Turkey Creek	MP 471.43
Deep River - West	MP 475.15
Deep River - East	MP 475.22
St. Joseph River*	MP 533.02
Rocky River	MP 569.50
Portage River	MP 576.48
Kalamazoo River	MP 610.89
Grand River	MP 633.12

* Navigable Waterway

** Milepost for Ln 6A

Chicago Region Control Point Maps cont.

Line 6B cont.

Cedar River Middle Branch	MP 661.09
Red Cedar River	MP 664.44
Shiawassee River South Branch	MP 667.47
Flint River SW Branch	MP 708.16
Flint River South Branch	MP 708.54
Clinton River North Branch	MP 722.70
Belle River	MP 736.13
Pine River	MP 744.72
St. Clair River*	MP 751.72

Line 5

St. Clair River*	MP 1735.32
Little Pigeon River	MP 1521.86
Pigeon River	MP 1528.53
Au Sable River	MP 1561.98
Rifle River West Branch	MP 1591.74
Pine River Middle Branch	MP 1610.67
Pine River South Branch	MP 1611.78
Saganing River	MP 1616.41
Pinconning River	MP 1621.41
Kawkawlin River North Branch	MP 1631.59
Kawkawlin River	MP 1637.93
Saginaw River*	MP 1645.25
Quanicassee River	MP 1654.74
Cass River	MP 1668.52
Pine River #1	MP 1724.74
Pine River #2	MP 1725.93
Pine River #3	MP 1726.48
Pine River #4	MP 1727.35
Pine River #5	MP 1728.36
Pine River #6	MP 1728.52
Pine River #7	MP 1728.76

Line 10

Niagara West Branch*	MP 1928.78
Niagara East Branch*	MP 1933.61
Buffalo River*	MP 1951.70

* Navigable Waterway

Line 61- Stage II

Turtle Creek	MP 14.5
Beaver Creek	MP 27.5
Piscasaw Creek	MP 33
Coon Creek/ Kishwaukee River	MP 40
South Branch Kishwaukee River	MP 50.6
South Branch Kishwaukee River	MP 67
Fox River	MP 98
Illinois River*	MP 108.5
Mud Creek	MP 129

Streator to Manhattan (Line 13)

Jordan Creek	MP 7
Kankakee River	MP 11.12
Mazon River	MP 24.83
Johnny Run	MP 29.7
Thunder Creek	MP 34.5

* Navigable Waterway

Appendix - Information Summary

Operator Identification.....1

Response Zone Description.....1

Consistency with National and Area Contingency Plans.....4

Calculation of Worst-Case Discharge.....6

Environmentally Sensitive Areas.....8

Basis for Determination of Significant and Substantial Harm.....9

Vector Gas Pipeline Emergency Response Section

1.0 Introduction.....3
2.0 Emergency Response Summary.....5
3.0 Receiving, Identifying and Classifying Events.....7
4.0 Response to Emergencies.....11
4.1 General/ Emergency Shutdown.....11
4.2 Gas Inside or Near Building.....12
4.3 Fire Near or Involving Pipeline Facility.....13
4.4 Explosion Near or Involving Pipeline Facility.....14
4.5 Natural Disasters.....15
4.6 Emergencies Involving Other Pipeline Facility.....16
4.7 Arson/ Bomb Threats.....17
5.0 Restoration of Service.....22
System Map

Appendix

Appendix - Information Summary

Operator Identification.....1

Response Zone Description.....1

Consistency with National and Area Contingency Plans.....4

Calculation of Worst-Case Discharge.....6

Environmentally Sensitive Areas.....8

Basis for Determination of Significant and Substantial Harm.....9

Vector Gas Pipeline Emergency Response Section

System Map
1.0 Introduction.....3
2.0 Emergency Response Summary.....5
3.0 Receiving, Identifying and Classifying Events.....7
4.0 Response to Emergencies.....11
4.1 General/ Emergency Shutdown.....11
4.2 Gas Inside or Near Building.....12
4.3 Fire Near or Involving Pipeline Facility.....13
4.4 Explosion Near or Involving Pipeline Facility.....14
4.5 Natural Disasters.....15
4.6 Emergencies Involving Other Pipeline Facility.....16
4.7 Arson/ Bomb Threats.....17
5.0 Restoration of Service.....22

1. 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)
(800) 858-5253 (24 hr. Emergency Number)
(713) 653-8711 (Fax)

2. 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
- **Chicago Region**
- Cushing Region
- Enbridge Pipelines North Dakota

CHICAGO REGION RESPONSE ZONE

The Chicago Region response zone includes eleven pipelines (Lines 6A,13, 14, 61, 62, 64,6B, 5, 10, 17, and Mustang) and three terminal lines (Lines TL 1, GFHT 2 and GFHT 3) that transport crude, natural gas, and diluent liquids across Wisconsin, Illinois, Indiana, Michigan and New York. This section of response zone includes.

- Approximately 2,177.47 miles of pipeline, with pipe diameters ranging from 12 to 42 inches;
- 42 Pump Stations located along the pipe;
- The Chicago system also includes 23 tanks (11 tanks at Griffith; 9 tanks at Hartsdale; 3 tanks at Stockbridge). Breakout tanks are located at Griffith, IN (2.84 million barrels storage capacity), Hartsdale, IN (846,000 barrels storage capacity) and at Stockbridge, MI (440,000 barrels storage capacity).

Counties included in the Chicago Region response zone are:

Wisconsin	Illinois	Indiana	Michigan	New York
Rusk	McHenry	Lake	Crawford	Erie
Taylor	Kane	Porter	Ogemaw	
Chippewa	Cook	LaPorte	Arenac	
Clark	Dupage	St. Joseph	Bay	
Marathon	Kendall		Lapeer	
Wood	Will		St. Claire	
Adams	Kankakee		Berrion	
Marquette	Ford		Cass	
Columbia	Livingston		St. Joseph	
Dane	Champaign		Kalamazoo	
Jefferson	Piatt		Calhoun	
Rock	Boone		Livingston	
Walworth	DeKalb		Oakland	
	LaSalle		Tuscola	
	Grundy		Sagionaw	
	Will		Oscoda	
			Macomb	
			Ingham	
			Jackson	
			Washtenaw	

This response zone includes the following pipelines:

Line	Pipeline Sections	Begin Stationing	End Stationing	Miles	Pipeline Diameter	Product
5	Lewiston Pump Station to Sarnia, Ontario	2,378,371	3,364,529	186.77	30"	Crude Oil & Natural Gas Liquids
6A	Hwy 8 Ladysmith, WI to Mokena, IL	513,368	2,457,347	368.2	34"	Crude Oil & Natural Gas Liquids
6B	Griffith, IN to Sarnia, Ontario	0	1,509,516	285.9	30"	Crude Oil
10	Westover, Ontario to Grand Island, NY	0	3,484	.7	12"	Crude Oil
10	Grand Island, NY to East Niagara, NY	3,484	29,409	4.9	20"	Crude Oil
10	East Niagara, NY to Kiantone, NY Take-Off	29,409	119,975	17.3	12"	Crude Oil
13	Streator, IL to Manhatten, IL	0	237,710	45.02	20"	Diluent
13	Manhatten, IL to Delevan, WI	0	889,310	168.43	20"	Diluent
13	Delevan, WI to Ladysmith, WI	528,000	1,216,611	230.42	20"	Diluent
14	Hwy 8 Ladysmith, WI to Mokena, IL	512,719	2,434,861	364.0	24"	Crude Oil
17	Stockbridge, MI to Freedom Junction, MI	0	186,089	35.3	16"	Crude Oil
17	Freedom Junction, MI to Toledo, OH	0	279,047	52.9	16"	Crude Oil
61	Ladysmith, WI to Delevan, WI	523,170	1,703,457	223.54	42"	Crude Oil
61	Delevan, WI to LaSalle Livingston County Line	0	467,030	88.45	42"	Crude Oil
62*	IN State Line to Hartsdale, IL	363,296	398,336	6.5	22"	Crude Oil
64	Mokena, IL to Griffith, IN	2,406,091	2,543,685	26.1	24"	Crude Oil
TL1	Griffith, IN to Hartsdale, IN	0	3,171	.6	34"	Crude Oil
GFHT 2	Griffith, IN to Hartsdale, IN	0	4,090	.8	36"	Crude Oil
GFHT 3	Griffith, IN to Hartsdale, IN	0	4,128	.8	36"	Crude Oil
Mustang	Lockport Metering Station, IL to North of Interstate 74	0	10,001	1.9	18"	Crude Oil

* Stationing used is not As-Built- Begins at zero in Flanagan

3. CONSISTENCY WITH NATIONAL AND AREA CONTINGENCY PLANS

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 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), fire fighting 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 1 section 05-02-02, which covers specific duties in the Emergency Response Training Matrix, 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 O&MP Book 1 section 04 describes the company's procedures for maintenance of response training records for response personnel.

The O&MP Book section 05-02-02 describes the requirements for maintaining drill documentation for 3 years and ensuring the availability of such records for inspectors.

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.

Chicago Response Zone

USCG		EPA	
USCGv Ninth District 1240 E. 9th Street Cleveland, OH 44199	216-902-2045	EPA Region II 290 Broadway New York, NY 10007-1866	212-637-5000
USCG Marine Safety Office 1 Fuhrmann Blvd. Buffalo, NY 14203	716-843-9570	EPA Region V 77 W. Jackson Blvd. Chicago, IL 60604	312-886-3000
USCG Marine Safety Office 215 West 83rd St., Ste. D Burr Ridge, IL 60527	630-986-2155		
USCG Marine Safety Office 110 Mt. Elliott Ave. Detroit, MI 48207-4380	313-568-9490		
USCG Marine Safety Office 2424 S. Lincoln Memorial Dr. Milwaukee, WI 53207	414-747-7154		

4. Calculation of Worst Case Discharge

Worst Case Discharge Volume Calculation Methodology

The approach for calculating Worst Case Discharge (WCD) volume utilizes American Innovation's Integrity Assessment Program (IAP) software. The IAP 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 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.

IAP software and data is in custody of, and maintained by the Enbridge Liquid Pipelines Operational Risk Management Group.

<u>Maximum Initial Loss</u>

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

A full mainline rupture will show up as alarms on SCADA screens within 1 minute of its occurrence.

The Material Balance Leak Detection will recognize a rupture within 5 minutes of a rupture occurring (runs in a 5 minute cycle). The Material Balance Leak Detection is a backup to operator recognition.

The volume out calculation uses a time to recognize rupture of 5 minutes.

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.

Time to Isolate Line (Remote Controlled Valves Only)

The time to isolate a line is the time it takes to recognize the rupture plus the time it takes to close the remote-controlled mainline valves. For the Enbridge liquid mainline system this time is 8 minutes.

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 Worse Cast Discharge for Mainline Piping

	Line	Capacity (bbls/day)	Time to Isolate (min)	Worst Case Discharge (bbls)	Location (ft Stationing)	Location (MP)
	5	529,600	8	24,900	3,322,000	1727.27
	6A	656,660	8	30,126	1,337,755	253.36
	6B	323,930	8	33,627	1,462,918	742.65
	10	69,190	8	4,701	52,506	1938.72
	13 Stage 1	180,000	8	37,566	1,597,000	302.46
	13 Stage 2	180,000	8	16,350	141,090	26.72
	14	387,360	8	19,729	2,281,581	432.12
Toledo	17	105,930	8	8,954	140,400	26.59
Chicago Region	61 Stage 1	400,000	8	39,525	987,950	187.11
	61 Stage 2	400,000	8	33,912	456,050	86.37
	62	125,000	8	5,258	395,046	74.82
	64	387,360	8	8,013	2,538,095	936.39
(transfer line)	TL1	317,860	8	3,332	3,024	
(transfer line)	TL2	363,080	8	2,379	2,713 to 3,913	
(transfer line)	TL3	363,080	8	2,379	2,713 to 3,913	

Calculation of Worse 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
Maximum allowable credit		**75**

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

5. 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
- Environmentally sensitive areas identified through regional or field knowledge

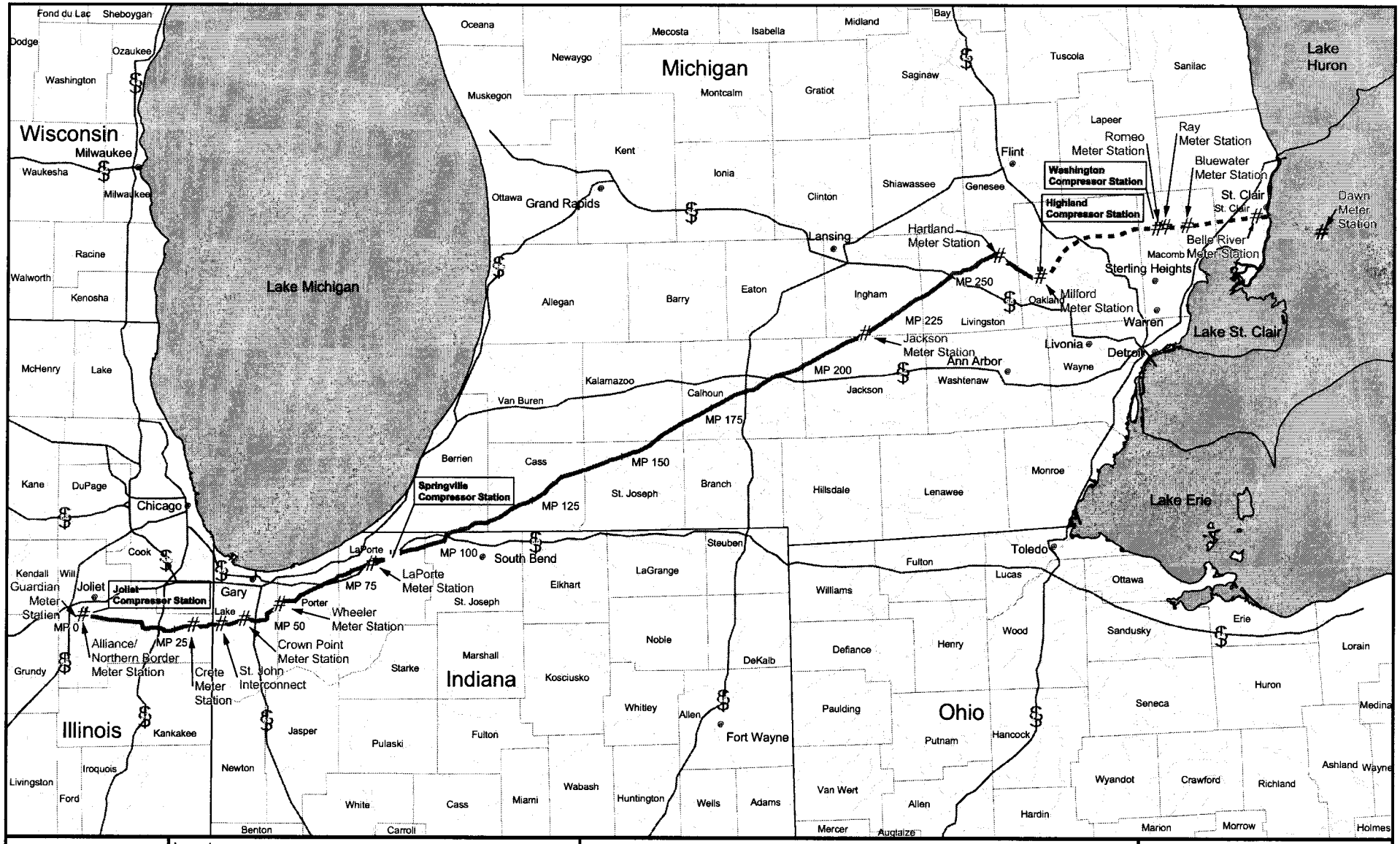
In addition, HCA's were identified that may be affected by a release from Enbridge pipelines via transport mechanisms. The types of transport mechanisms considered were:

- 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. Basis for Determination of "Significant and Substantial Harm"

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



ENBRIDGE
Vector Pipeline

Legend

- Vector 42" Gas Pipeline (operated by Enbridge)
- MichCon 36" Gas Pipeline (operated by MichCon; approximate location)
- Vector 36" Gas Pipeline (non-U.S. jurisdictional, operated by Union Gas; approximate location)
- ! Milepost
- # Meter Station
- " Compressor Station

VECTOR PIPELINE L.P.
Joliet, IL to St. Clair, MI
System Overview

DATE ISSUED: March 2009	
DATE REVISED:	
SCALE: 1:1,350,000	
DRAWN BY: JAI	
SERIES: Vector Pipeline	

Natural Resources Engineering Co.
715-395-5680

Vector Gas Pipeline Transmission

ENBRIDGE

Gas Pipeline Emergency Response Plan

Table of Contents

1.0		Introduction	3
2.0		Emergency Response Summary	5
3.0		Receiving, Identifying, and Classifying Events	7
4.0		Response to Emergencies	11
	4.1	General/Emergency Shutdown	11
	4.2	Gas Inside or Near a Building	12
	4.3	Fire Near or Involving a Pipeline Facility	13
	4.4	Explosion Near or Involving Pipeline Facility	14
	4.5	Natural Disasters	15
	4.6	Emergencies Involving Other Pipeline Facility	16
	4.7	Arson/Bomb Threats	17
	4.8		
5.0		Restoration of Service	22
6.0		Maps/Drawings	23

Gas Pipeline Emergency Response Plan

Introduction

Introduction

Enbridge has developed this Emergency Response Plan (ERP) to provide guidance when responding to emergency events. While every response during an emergency event cannot be fully anticipated, this provides guidance for responding to such events. The plan includes details on preparedness, internal and external communications, and prompt and effective responses with actions directed toward protecting people first, then the environment, and finally property.

Scope

The ERP is applicable to all Vector pipeline, compressor and meter station facilities located in the United States. In addition, the ERP provides coordination with the Enbridge Crisis Management Plan and Incident Command System.

Definitions

"Emergency" – Any unforeseen combination of circumstances or a disruption of normal operating conditions that poses a potential threat to human life, health, environment or property if not contained, controlled or eliminated.

- Gas Inside or Near a Building
- Fire Near or Involving a Pipeline Facility
- Explosion Near or Involving Pipeline Facility
- Natural Disasters
- Emergencies Involving Other Pipelines
- Arson/Bomb Threats

"Emergency Response" – is defined as the activities coordinated by the local Incident Commander in accordance with emergency plans.

"**Crisis Management**" is active management by the Crisis Management Team of crisis events beyond the resources of local emergency response.

"**First Responder**" – The first Enbridge employee to arrive at the scene of an incident or the first employee contacted by Gas Control to verify a reported incident.

"**Gas Control**" – The control center for pipeline operations.

"**Incident Commander**" – The on-scene commander in charge of coordinating Enbridge's field response to an emergency situation.

Maintenance/Revisions to the FERP

The Safety Department is responsible for maintenance and distribution of the ERP. Annually and not exceeding 15 months, Operations personnel shall formally review the ERP. If revisions are recommended, they shall be documented on the Revision Request Record form. The Safety Department is responsible for coordinating the revision process. If revisions are made to the ERP, it will be re-distributed and will include a list of revisions recorded on the Revision Record form.

ENBRIDGE

Gas Pipeline Emergency Response Plan

Emergency Response Summary

This Emergency Response Plan Summary is a quick reference guide to the rest of the ERP. There are four primary steps in the ERP.

1. **Receiving Incoming calls**:
   - Calls received during normal work hours or after hours will normally go to a Gas Control Operator or an Enbridge employee.
   - The Gas Control Operator shall use the appropriate form in the Gas Control Procedures.
   - If a Vector employee receives the initial call, he/she will immediately notify Gas Control and may notify the Regional Manager.
   - If a Gas Control Operator receives the initial call, in most instances he/she will call the Regional Manager and they will jointly assess whether or not the caller's information constitutes an emergency. If the event is determined to be an emergency, the VP Operations, Enbridge US, will be notified.

2. **Classifying Incidents:**
   - Individuals identified in the Gas Control Procedures Section: Emergency Declaration will determine whether or not the incident is an emergency.
   - If an emergency condition exists, these individuals will determine whether the Crisis Management Incident Screening Committee needs to be activated.

3. **Notifications:**
   - All external agency notifications will be made by the Regional Manager.

4. **Response:**
   - The Incident Commander is responsible for coordination of all on-site activities, emphasizing protecting people first, then the environment, and finally property including:
     - ► Securing the area
     - ► Accounting for personnel and the public
     - ► Taking actions depending on the type of emergency
     - ► May initiate ESD/Depressurization

ENBRIDGE

Gas Pipeline Emergency Response Plan

Receiving, Identifying, and Classifying Events

The first notifications of an emergency event may come from one of many sources. Gas Control or field offices may receive emergency calls from the general public, other pipeline operators, Enbridge Personnel, contractors, or external agencies.

1. Receiving calls

The first Enbridge Employee having knowledge of a potential emergency shall begin recording information on the Emergency Notification form. If an emergency is reported by telephone, an attempt should be made to keep the reporting person on the telephone long enough to obtain all the key information required on the form. Some or all of the following instructions may be communicated to the caller.

- Company employees will be there as soon as possible
- Do not allow anyone to go near the emergency site
- Do not attempt to shut off any valves or extinguish any fires
- Do not attempt to move equipment away from the emergency site
- Do not attempt to shut off running equipment or vehicles

2. Identifying the situation

The Enbridge Employee receiving the initial call shall immediately contact Gas Control and advise them of the situation. If there is any uncertainty about the need to declare an emergency, Gas Control shall contact the Regional Manager.

3. Event Classification and Internal Notification

During an incident with potential to be a crisis, Senior Management will activate the Crisis Management Incident Screening Committee, to analyze the incident, using information provided during the notification process. An example Crisis Criteria Form is shown which provides Operations Management guidance in gathering appropriate information for the Crisis Management Team.

ENBRIDGE

4.1 General

While responses to every emergency event cannot be fully anticipated, this section of the ERP provides guidance when responding to such events. When responding to any emergency situation, the goal of all Enbridge Personnel shall be to protect people first, then the environment, and finally property.

All Enbridge Personnel who respond to an emergency should start logging their activities on the Incident Event Log form.

The First Responder will act as a temporary Incident Commander until an Employee is designated as the Incident Commander. In most emergency situations the Incident Commander will be the Regional Manager. All additional personnel arriving at the scene of the incident will coordinate their response activities through the Incident Commander. If conditions dictate, additional employees will be dispatched to the emergency site to ensure site safety. The Incident Commander shall ensure that the appropriate fire, police, and other responders are notified and any potential actual responses from these resources are discussed.

Emergency Shutdown

For a station emergency, during off-duty hours, the First Responder to arrive at the emergency location will check to ensure that the emergency shutdown device (ESD) system has functioned properly where required. If the automatic ESD system has not functioned properly, the First Responder will activate the ESD system and bypass the station as dictated by the emergency condition. During normal duty hours, any employee, upon determining an emergency condition exists, will operate the system if it has not automatically operated. Typical drawings of facilities including main line valve location drawings are located in Tab 14.

Table 2, in this section, indicates the locations of Emergency Shutdown (ESD) devices at compressor and measurement stations.

The First Responder/Incident Commander will notify Gas Control of an emergency shutdown as soon as possible. When time allows, Gas Control and the Incident Commander will identify a safe, quick response option such as an emergency shutdown or pressure reduction. Below are possible actions for reducing the gas pressure when responding to an emergency:

- Close the nearest valve upstream of the incident, blocking gas flow and let the downstream compressor reduce the pressure.
- Close the nearest valve upstream of the incident and let the delivery sites downstream reduce the pressure.
- Close both the upstream and downstream block valves closest to the incident and reduce the pressure by venting pressure at the valve sites.

Other options could be identified and used depending on the response required.

4.2 Gas Inside or Near a Building

When approaching any building that may contain escaped gas, an employee should always look for and listen for any signs of escaped gas. If the LEL alarm level has been exceeded in the building, strobe lights will be activated on the outside of the building. Under no circumstances should an employee immediately open a building door if escaping gas is detected. If leaking gas is detected in a building, assess the nature of the problem, the potential danger to life or property and the actions required to bring the situation under control. The following actions to consider when faced with a leaking gas emergency:

1. Do not open any doors until explosive limits have been determined.
2. Return to vehicle and reposition upwind, blocking access to the location.
3. Evacuate people from adjacent buildings if they are close enough to be injured from an explosion or fire.
4. Contact Gas Control (1-888-427-7777).
5. Mobilize personnel with a portable gas detector(s).
6. Shut off electrical power to the building and attempt to eliminate other potential ignition sources (vehicles, telephones, and radios) in the area.
7. Isolate the building from gas sources if possible. Close service line valves on buildings receiving domestic gas service. On measurement buildings, close inlet and outlet block valves.
8. After gas sources are shut off, proceed to the building with a portable gas detector and check door seams for an explosive mixture.
9. If safe to enter, attempt to determine the cause of the leak.
10. Once the source of the leak has been determined, contact the appropriate personnel for repairs and restoration of service.
11. Keep Gas Control informed of response details at regular intervals.

4.3 Fire Near or Involving a Pipeline Facility

For gas fires and fires involving gas-containing facilities, First Responders should control the situation and coordinate with outside fire fighting personnel, as required. Guidelines for responding to this type of emergency are as follows:

1. Keep at a safe distance. Account for all personnel.

2. Secure the area and restrict access to trained personnel only. Evacuate any adjacent facilities or buildings that may be endangered.

3. Contact Gas Control (1-888-427-7777).

4. Wait for assistance before attempting control measures.

5. If the fire is to be contained by a fire department and the fire involves escaping gas or company facilities, inform the fire official in charge.

6. If the fire is due to escaping gas or some similar flammable material, isolate all fuel sources and/or threatened facilities and close doors. **Normally, natural gas fire should not be extinguished unless the fuel source can be safely eliminated.**

7. Only trained personnel with backup should operate fire extinguishers:

   - Test the fire extinguisher before attempting to extinguish the fire.
   - Do not fight fires beyond the incipient (initial) stage or beyond the level of training of personnel.
   - Approach the fire from the upwind side.
   - Never operate a fire extinguisher in such a manner that any part of the body of the extinguisher is located directly in front of the fill cap/top.
   - After the fire is extinguished, stand by to ensure there are no flashbacks.

8. Keep Gas Control informed of response details at regular intervals.

4.4 Explosion Near or Involving Pipeline Facilities

If one explosion has occurred, particularly where no fire is burning, be alert to the possibility of additional explosions.

General guidelines for responding to this type of emergency are as follows:

1. Keep at a safe distance. Account for all personnel.
2. Secure the area and restrict access to trained personnel only.
3. Contact Gas Control (1-888-427-7777).
4. Evacuate any adjacent facilities or building that may be endangered. If necessary, wait for assistance to arrive before attempting control measures.
5. Keep Gas Control informed of response details at regular intervals.

4.5 Natural Disasters

Whenever a natural disaster occurs such as an earthquake, flood, or tornado, the affected Vector facilities will be monitored during the disaster. Precautions will be taken to protect life first, then the environment, and finally property. If sufficient danger exists, the affected facilities should be shut in and may be blown down. If time permits, confer with the Regional Manager. Once the natural disaster has passed and it is safe to do so, immediately inspect the facilities for damage.

General guidelines for responding to natural disasters are:

- Monitor weather information. (A tornado watch means atmospheric conditions are favorable for tornados and a tornado warning means a tornado has been sighted.)
- If a "tornado warning for the area" is issued, assign an observer to watch storm conditions. If a tornado is sighted, notify all affected personnel. Take the following actions as time permits:
  - ► Notify Gas Control (1-888-427-7777) and the Regional Office. Advise them that your facility may be out of radio communication.
  - ► Extinguish all unnecessary fires and lights.

- ► Switch over to auxiliary power.
- ► Do not trip the ED system. It will function automatically if a fault occurs. Leave facilities in operation and seek shelter.

- When a tornado approaches personnel in vehicles they should:
  - ► If possible, drive at right angles, away from the tornado.
  - ► If the tornado cannot be avoided, seek shelter in a ditch or other low-lying area. Avoid locations under electrical power lines.

4.6 Emergencies Involving Other Pipelines

In emergencies involving other pipeline operators, utilities, or contractors, emergency response activities shall be coordinated with the other parties as follows:

- Verify that no Vector facilities/operations are involved or threatened. If potential for involvement/damage exists, begin the internal notification process.
- Exchange resources and information with other pipeline operators as necessary.
- Equipment and services of pipeline contractors located in the vicinity of the pipeline system shall be shared as deemed necessary.
- Upon request, Enbridge shall provide appropriate assistance, as fast as practical, to other pipeline companies, which have an emergency on their pipeline systems.
- Continue to monitor emergency until assured there is no potential impact on Vector operations.
- Keep Gas Control and the Crisis Manager updated of all actions taken.

4.7 Arson/Bomb Threats

In the event that a criminal threat (bomb, extortion, terrorist) is received, all evidence, i.e., mailed material, voice tape, notes taken, etc., should be preserved. If threats are received by telephone, utilize the Arson & Bomb Threat Call Checklist to document information. General guidelines for dealing with such threats are as follows:

- The Regional Manager should notify appropriate agencies, i.e., local law enforcement, ATF, etc.
- Alert the facility of a possible search, shutdown and/or evacuation.
- All searches should be conducted by law enforcement agencies.

ENBRIDGE

Gas Pipeline Emergency Response Plan

Restoration of Service

Following an emergency, precautions must be exercised in safety restoring service to avoid creating another emergency. Planning and coordination are just as important during this phase as it was during the emergency itself. Of particular importance is coordination with Gas Control on Valve positioning to assure that the system is efficiently restored.

Considerations shall be given to the following for safe restoration:

1. Purging and repressurizing the pipeline facilities (see gas purging procedures).
2. Re-survey of the area involved in an incident to check for additional leaks.
3. Coordinate with other companies when dealing with the activation or deactivation of customer facilities.
4, Refer to Gas Operations and Maintenance Procedures for startup and shutdown of facilities.
5. Any changes or completion of a task involving a valve must be coordinated through Gas Control.
6. If there are pipeline integrity issues, consult with Pipeline Integrity.

ENBRIDGE

Gas Pipeline Emergency Response Plan

Directions to Valve Sites & System Maps