

**ATTACHMENT 76 – ENBRIDGE ACCIDENT REPORT TO PHMSA, FEBRUARY 22, 2011 UPDATE**



associated with this Operator	
13e. General public	
13f. Total injuries (sum of above)	
14. Was the pipeline/facility shut down due to the Accident?	
- If No, Explain:	
- If Yes, complete Questions 14a and 14b: (use local time, 24-hr clock)	
14a. Local time and date of shutdown:	
14b. Local time pipeline/facility restarted:	
- Still shut down? (* Supplemental Report Required)	
15. Did the commodity ignite?	No
16. Did the commodity explode?	No
17. Number of general public evacuated:	
18. Time sequence (use local time, 24-hour clock):	
18a. Local time Operator identified Accident:	07/26/2010 11:41
18b. Local time Operator resources arrived on site:	07/26/2010 11:41
<b>PART B - ADDITIONAL LOCATION INFORMATION</b>	
1. Was the origin of Accident onshore?	Yes
<i>If Yes, Complete Questions (2-12)</i>	
<i>If No, Complete Questions (13-15)</i>	
<b>- If Onshore:</b>	
2. State:	Michigan
3. Zip Code:	49068
4. City	Marshall
5. County or Parish	Calhoun
6. Operator-designated location:	Milepost/Valve Station
Specify:	608.2452
7. Pipeline/Facility name:	Line 6B
8. Segment name/ID:	
9. Was Accident on Federal land, other than the Outer Continental Shelf (OCS)?	No
10. Location of Accident:	Pipeline Right-of-way
11. Area of Accident (as found):	Underground
Specify:	Under soil
- If Other, Describe:	
Depth-of-Cover (in):	60
12. Did Accident occur in a crossing?	No
- If Yes, specify below:	
- If Bridge crossing –	
Cased/ Uncased:	
- If Railroad crossing –	
Cased/ Uncased/ Bored/drilled	
- If Road crossing –	
Cased/ Uncased/ Bored/drilled	
- If Water crossing –	
Cased/ Uncased	
- Name of body of water, if commonly known:	
- Approx. water depth (ft) at the point of the Accident:	
- Select:	
<b>- If Offshore:</b>	
13. Approximate water depth (ft) at the point of the Accident:	
14. Origin of Accident:	
- In State waters - Specify:	
- State:	
- Area:	
- Block/Tract #:	
- Nearest County/Parish:	
- On the Outer Continental Shelf (OCS) - Specify:	
- Area:	
- Block #:	
15. Area of Accident:	
<b>PART C - ADDITIONAL FACILITY INFORMATION</b>	
1. Is the pipeline or facility:	Interstate
2. Part of system involved in Accident:	Onshore Pipeline, Including Valve Sites
- If Onshore Breakout Tank or Storage Vessel, Including Attached Appurtenances, specify:	
3. Item involved in Accident:	Pipe
- If Pipe, specify:	Pipe Body

3a. Nominal diameter of pipe (in):	30
3b. Wall thickness (in):	.25
3c. SMYS (Specified Minimum Yield Strength) of pipe (psi):	52,000
3d. Pipe specification:	API 5L
3e. Pipe Seam , specify:	DSAW
- If Other, Describe:	
3f. Pipe manufacturer:	Italsider(Siderius)
3g. Year of manufacture:	1969
3h. Pipeline coating type at point of Accident, specify:	Cold Applied Tape
- If Other, Describe:	
- If Weld, including heat-affected zone, specify:	
- If Other, Describe:	
- If Valve, specify:	
- If Mainline, specify:	
- If Other, Describe:	
3i. Manufactured by:	
3j. Year of manufacture:	
- If Tank/Vessel, specify:	
- If Other - Describe:	
- If Other, describe:	
4. Year item involved in Accident was installed:	1969
5. Material involved in Accident:	Carbon Steel
- If Material other than Carbon Steel, specify:	
6. Type of Accident Involved:	Other
- If Mechanical Puncture – Specify Approx. size:	
in. (axial) by	
in. (circumferential)	
- If Leak - Select Type:	
- If Other, Describe:	
- If Rupture - Select Orientation:	
- If Other, Describe:	
Approx. size: in. (widest opening) by	
in. (length circumferentially or axially)	
- If Other – Describe:	Subject to NTSB, PHMSA & Enbridge Investigations.
<b>PART D - ADDITIONAL CONSEQUENCE INFORMATION</b>	
1. Wildlife impact:	Yes
1a. If Yes, specify all that apply:	
- Fish/aquatic	Yes
- Birds	Yes
- Terrestrial	Yes
2. Soil contamination:	Yes
3. Long term impact assessment performed or planned:	Yes
4. Anticipated remediation:	Yes
4a. If Yes, specify all that apply:	
- Surface water	Yes
- Groundwater	Yes
- Soil	Yes
- Vegetation	Yes
- Wildlife	Yes
5. Water contamination:	Yes
5a. If Yes, specify all that apply:	
- Ocean/Seawater	
- Surface	Yes
- Groundwater	Yes
- Drinking water: (Select one or both)	
- Private Well	
- Public Water Intake	
5b. Estimated amount released in or reaching water (Barrels):	8,033.00
5c. Name of body of water, if commonly known:	Talmadge Creek and Kalamazoo River
6. At the location of this Accident, had the pipeline segment or facility been identified as one that "could affect" a High Consequence Area (HCA) as determined in the Operator's Integrity Management Program?	Yes
7. Did the released commodity reach or occur in one or more High Consequence Area (HCA)?	Yes
7a. If Yes, specify HCA type(s): (Select all that apply)	
- Commercially Navigable Waterway:	
Was this HCA identified in the "could affect" determination for this Accident site in the Operator's	

Integrity Management Program?	
- High Population Area:	
Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?	
- Other Populated Area	
Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?	Yes
- Unusually Sensitive Area (USA) - Drinking Water	
Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?	
- Unusually Sensitive Area (USA) - Ecological	
Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?	
8. Estimated Property Damage :	
8a. Estimated cost of public and non-Operator private property damage	\$ 0
8b. Estimated cost of commodity lost	\$ 0
8c. Estimated cost of Operator's property damage & repairs	\$ 0
8d. Estimated cost of Operator's emergency response	\$ 0
8e. Estimated cost of Operator's environmental remediation	\$ 0
8f. Estimated other costs	\$ 550,000,000
Describe:	See Part H - Narrative Description
8g. Total estimated property damage (sum of above)	\$ 550,000,000
<b>PART E - ADDITIONAL OPERATING INFORMATION</b>	
1. Estimated pressure at the point and time of the Accident (psig):	.00
2. Maximum Operating Pressure (MOP) at the point and time of the Accident (psig):	624.00
3. Describe the pressure on the system or facility relating to the Accident (psig):	Pressure did not exceed MOP
4. Not including pressure reductions required by PHMSA regulations (such as for repairs and pipe movement), was the system or facility relating to the Accident operating under an established pressure restriction with pressure limits below those normally allowed by the MOP?	Yes
- If Yes, Complete 4.a and 4.b below:	
4a. Did the pressure exceed this established pressure restriction?	No
4b. Was this pressure restriction mandated by PHMSA or the State?	Not mandated
5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2?	Yes
- If Yes - (Complete 5a. – 5f. below)	
5a. Type of upstream valve used to initially isolate release source:	Remotely Controlled
5b. Type of downstream valve used to initially isolate release source:	Remotely Controlled
5c. Length of segment isolated between valves (ft):	15,576
5d. Is the pipeline configured to accommodate internal inspection tools?	Yes
- If No, Which physical features limit tool accommodation? (select all that apply)	
- Changes in line pipe diameter	
- Presence of unsuitable mainline valves	
- Tight or mitered pipe bends	
- Other passage restrictions (i.e. unbarred tee's, projecting instrumentation, etc.)	
- Extra thick pipe wall (applicable only for magnetic flux leakage internal inspection tools)	
- Other -	
- If Other, Describe:	
5e. For this pipeline, are there operational factors which significantly complicate the execution of an internal inspection tool run?	No
- If Yes, Which operational factors complicate execution? (select all that apply)	
- Excessive debris or scale, wax, or other wall buildup	
- Low operating pressure(s)	

- Low flow or absence of flow	
- Incompatible commodity	
- Other -	
- If Other, Describe:	
5f. Function of pipeline system:	> 20% SMYS Regulated Trunkline/Transmission
6. Was a Supervisory Control and Data Acquisition (SCADA)-based system in place on the pipeline or facility involved in the Accident?	Yes
If Yes -	
6a. Was it operating at the time of the Accident?	Yes
6b. Was it fully functional at the time of the Accident?	Yes
6c. Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the detection of the Accident?	No
6d. Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the confirmation of the Accident?	Yes
7. Was a CPM leak detection system in place on the pipeline or facility involved in the Accident?	Yes
- If Yes:	
7a. Was it operating at the time of the Accident?	Yes
7b. Was it fully functional at the time of the Accident?	No
7c. Did CPM leak detection system information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the detection of the Accident?	No
7d. Did CPM leak detection system information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the confirmation of the Accident?	Yes
8. How was the Accident initially identified for the Operator?	Notification From Public
- If Other, Specify:	
8a. If "Controller", "Local Operating Personnel", including contractors, "Air Patrol", or "Guard Patrol by Operator or its contractor" is selected in Question 8, specify the following:	
9. Was an investigation initiated into whether or not the controller(s) or control room issues were the cause of or a contributing factor to the Accident?	Yes, but the investigation of the control room and/or controller actions has not yet been completed by the operator (Supplemental Report Required)
- If No, the Operator did not find that an investigation of the controller(s) actions or control room issues was necessary due to: <i>(provide an explanation for why the operator did not investigate)</i>	
- If Yes, specify investigation result(s): <i>(select all that apply)</i>	
- Investigation reviewed work schedule rotations, continuous hours of service (while working for the Operator), and other factors associated with fatigue	
- Investigation did NOT review work schedule rotations, continuous hours of service (while working for the Operator), and other factors associated with fatigue	
Provide an explanation for why not:	
- Investigation identified no control room issues	
- Investigation identified no controller issues	
- Investigation identified incorrect controller action or controller error	
- Investigation identified that fatigue may have affected the controller(s) involved or impacted the involved controller(s) response	
- Investigation identified incorrect procedures	
- Investigation identified incorrect control room equipment operation	
- Investigation identified maintenance activities that affected control room operations, procedures, and/or controller response	
- Investigation identified areas other than those above:	
Describe:	
<b>PART F - DRUG &amp; ALCOHOL TESTING INFORMATION</b>	

1. As a result of this Accident, were any Operator employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations? - If Yes:	Yes
1a. Specify how many were tested:	10
1b. Specify how many failed:	0
2. As a result of this Accident, were any Operator contractor employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations? - If Yes:	No
2a. Specify how many were tested:	
2b. Specify how many failed:	
<b>PART G – APPARENT CAUSE</b>	
<i>Select only one box from PART G in shaded column on left representing the APPARENT Cause of the Accident, and answer the questions on the right. Describe secondary, contributing or root causes of the Accident in the narrative (PART H).</i>	
<b>Apparent Cause:</b>	G8 - Other Incident Cause
<b>G1 - Corrosion Failure</b> - only one <b>sub-cause</b> can be picked from shaded left-hand column	
<b>External Corrosion:</b>	
<b>Internal Corrosion:</b>	
<b>- If External Corrosion:</b>	
1. Results of visual examination: - If Other, Describe:	
2. Type of corrosion: <i>(select all that apply)</i>	
- Galvanic	
- Atmospheric	
- Stray Current	
- Microbiological	
- Selective Seam	
- Other:	
- If Other, Describe:	
3. The type(s) of corrosion selected in Question 2 is based on the following: <i>(select all that apply)</i>	
- Field examination	
- Determined by metallurgical analysis	
- Other:	
- If Other, Describe:	
4. Was the failed item buried under the ground? - If Yes :	
<input type="checkbox"/> 4a. Was failed item considered to be under cathodic protection at the time of the Accident? If Yes - Year protection started:	
4b. Was shielding, tenting, or disbonding of coating evident at the point of the Accident?	
4c. Has one or more Cathodic Protection Survey been conducted at the point of the Accident? If "Yes, CP Annual Survey" – Most recent year conducted:	
If "Yes, Close Interval Survey" – Most recent year conducted:	
If "Yes, Other CP Survey" – Most recent year conducted:	
- If No:	
4d. Was the failed item externally coated or painted?	
5. Was there observable damage to the coating or paint in the vicinity of the corrosion?	
<b>- If Internal Corrosion:</b>	
6. Results of visual examination: - Other:	
7. Type of corrosion <i>(select all that apply):</i> -	
- Corrosive Commodity	
- Water drop-out/Acid	
- Microbiological	
- Erosion	
- Other:	
- If Other, Describe:	
8. The cause(s) of corrosion selected in Question 7 is based on the following <i>(select all that apply):</i> -	
- Field examination	

- Determined by metallurgical analysis	
- Other:	
- If Other, Describe:	
9. Location of corrosion (select all that apply): -	
- Low point in pipe	
- Elbow	
- Other:	
- If Other, Describe:	
10. Was the commodity treated with corrosion inhibitors or biocides?	
11. Was the interior coated or lined with protective coating?	
12. Were cleaning/dewatering pigs (or other operations) routinely utilized?	
13. Were corrosion coupons routinely utilized?	
<b>Complete the following if any Corrosion Failure sub-cause is selected AND the "Item Involved in Accident" (from PART C, Question 3) is Tank/Vessel.</b>	
14. List the year of the most recent inspections:	
14a. API Std 653 Out-of-Service Inspection	
- No Out-of-Service Inspection completed	
14b. API Std 653 In-Service Inspection	
- No In-Service Inspection completed	
<b>Complete the following if any Corrosion Failure sub-cause is selected AND the "Item Involved in Accident" (from PART C, Question 3) is Pipe or Weld.</b>	
15. Has one or more internal inspection tool collected data at the point of the Accident?	
15a. If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run: -	
- Magnetic Flux Leakage Tool	Most recent year:
- Ultrasonic	Most recent year:
- Geometry	Most recent year:
- Caliper	Most recent year:
- Crack	Most recent year:
- Hard Spot	Most recent year:
- Combination Tool	Most recent year:
- Transverse Field/Triaxial	Most recent year:
- Other	Most recent year:
Describe:	
16. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?	
If Yes -	
	Most recent year tested:
	Test pressure:
17. Has one or more Direct Assessment been conducted on this segment?	
- If Yes, and an investigative dig was conducted at the point of the Accident::	
	Most recent year conducted:
- If Yes, but the point of the Accident was not identified as a dig site:	
	Most recent year conducted:
18. Has one or more non-destructive examination been conducted at the point of the Accident since January 1, 2002?	
18a. If Yes, for each examination conducted since January 1, 2002, select type of non-destructive examination and indicate most recent year the examination was conducted:	
- Radiography	Most recent year conducted:
- Guided Wave Ultrasonic	Most recent year conducted:
- Handheld Ultrasonic Tool	Most recent year conducted:
- Wet Magnetic Particle Test	Most recent year conducted:
- Dry Magnetic Particle Test	Most recent year conducted:
- Other	Most recent year conducted:



Describe:	
<b>G2 - Natural Force Damage</b> - only one <b>sub-cause</b> can be picked from shaded left-handed column	
<b>Natural Force Damage – Sub-Cause:</b>	
<b>- If Earth Movement, NOT due to Heavy Rains/Floods:</b>	
1. Specify:	
	- If Other, Describe:
<b>- If Heavy Rains/Floods:</b>	
2. Specify:	
	- If Other, Describe:
<b>- If Lightning:</b>	
3. Specify:	
<b>- If Temperature:</b>	
4. Specify:	
	- If Other, Describe:
<b>- If High Winds:</b>	
<b>- If Other Natural Force Damage:</b>	
5. Describe:	
<b>Complete the following if any Natural Force Damage sub-cause is selected.</b>	
6. Were the natural forces causing the Accident generated in conjunction with an extreme weather event?	
6a. If Yes, specify: <i>(select all that apply)</i>	
- Hurricane	
- Tropical Storm	
- Tornado	
- Other	
	- If Other, Describe:
<b>G3 - Excavation Damage</b> - only one <b>sub-cause</b> can be picked from shaded left-hand column	
<b>Excavation Damage – Sub-Cause:</b>	
<b>- If Excavation Damage by Operator (First Party):</b>	
<b>- If Excavation Damage by Operator's Contractor (Second Party):</b>	
<b>- If Excavation Damage by Third Party:</b>	
<b>- If Previous Damage due to Excavation Activity:</b>	
<b>Complete Questions 1-5 ONLY IF the "Item Involved in Accident" (from PART C, Question 3) is Pipe or Weld.</b>	
1. Has one or more internal inspection tool collected data at the point of the Accident?	
1a. If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run: -	
- Magnetic Flux Leakage	
Most recent year conducted:	
- Ultrasonic	
Most recent year conducted:	
- Geometry	
Most recent year conducted:	
- Caliper	
Most recent year conducted:	
- Crack	
Most recent year conducted:	
- Hard Spot	
Most recent year conducted:	
- Combination Tool	
Most recent year conducted:	
- Transverse Field/Triaxial	
Most recent year conducted:	
- Other	
Most recent year conducted:	
Describe:	
2. Do you have reason to believe that the internal inspection was completed BEFORE the damage was sustained?	
3. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?	
- If Yes:	

Most recent year tested:	
Test pressure (psig):	
4. Has one or more Direct Assessment been conducted on the pipeline segment?	
- If Yes, and an investigative dig was conducted at the point of the Accident:	
Most recent year conducted:	
- If Yes, but the point of the Accident was not identified as a dig site:	
Most recent year conducted:	
5. Has one or more non-destructive examination been conducted at the point of the Accident since January 1, 2002?	
5a. If Yes, for each examination, conducted since January 1, 2002, select type of non-destructive examination and indicate most recent year the examination was conducted:	
- Radiography	
Most recent year conducted:	
- Guided Wave Ultrasonic	
Most recent year conducted:	
- Handheld Ultrasonic Tool	
Most recent year conducted:	
- Wet Magnetic Particle Test	
Most recent year conducted:	
- Dry Magnetic Particle Test	
Most recent year conducted:	
- Other	
Most recent year conducted:	
Describe:	
<b>Complete the following if Excavation Damage by Third Party is selected as the sub-cause.</b>	
6. Did the operator get prior notification of the excavation activity?	
6a. If Yes, Notification received from: <i>(select all that apply)</i> -	
- One-Call System	
- Excavator	
- Contractor	
- Landowner	
<b>Complete the following mandatory CGA-DIRT Program questions if any Excavation Damage sub-cause is selected.</b>	
7. Do you want PHMSA to upload the following information to CGA-DIRT ( <a href="http://www.cga-dirt.com">www.cga-dirt.com</a> )?	
8. Right-of-Way where event occurred: <i>(select all that apply)</i> -	
- Public	
- If "Public", Specify:	
- Private	
- If "Private", Specify:	
- Pipeline Property/Easement	
- Power/Transmission Line	
- Railroad	
- Dedicated Public Utility Easement	
- Federal Land	
- Data not collected	
- Unknown/Other	
9. Type of excavator:	
10. Type of excavation equipment:	
11. Type of work performed:	
12. Was the One-Call Center notified?	
12a. If Yes, specify ticket number:	
12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified:	
13. Type of Locator:	
14. Were facility locate marks visible in the area of excavation?	
15. Were facilities marked correctly?	
16. Did the damage cause an interruption in service?	
16a. If Yes, specify duration of the interruption (hours)	
17. Description of the CGA-DIRT Root Cause <i>(select only the one predominant first level CGA-DIRT Root Cause and then, where available as a choice, the one predominant second level CGA-DIRT Root Cause as well):</i>	
Root Cause:	
- If One-Call Notification Practices Not Sufficient, specify:	
- If Locating Practices Not Sufficient, specify:	
- If Excavation Practices Not Sufficient, specify:	
- If Other/None of the Above, explain:	
<b>G4 - Other Outside Force Damage</b> - only one <b>sub-cause</b> can be selected from the shaded left-hand column	

<b>Other Outside Force Damage – Sub-Cause:</b>	
<b>- If Nearby Industrial, Man-made, or Other Fire/Explosion as Primary Cause of Incident:</b>	
<b>- If Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation:</b>	
1. Vehicle/Equipment operated by:	
<b>- If Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equipment or Vessels Set Adrift or Which Have Otherwise Lost Their Mooring:</b>	
2. Select one or more of the following IF an extreme weather event was a factor:	
- Hurricane	
- Tropical Storm	
- Tornado	
- Heavy Rains/Flood	
- Other	
- If Other, Describe:	
<b>- If Routine or Normal Fishing or Other Maritime Activity NOT Engaged in Excavation:</b>	
<b>- If Electrical Arcing from Other Equipment or Facility:</b>	
<b>- If Previous Mechanical Damage NOT Related to Excavation:</b>	
<b>Complete Questions 3-7 ONLY IF the "Item Involved in Accident" (from PART C, Question 3) is Pipe or Weld.</b>	
3. Has one or more internal inspection tool collected data at the point of the Accident?	
3a. If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run:	
- Magnetic Flux Leakage	Most recent year conducted:
- Ultrasonic	Most recent year conducted:
- Geometry	Most recent year conducted:
- Caliper	Most recent year conducted:
- Crack	Most recent year conducted:
- Hard Spot	Most recent year conducted:
- Combination Tool	Most recent year conducted:
- Transverse Field/Triaxial	Most recent year conducted:
- Other	Most recent year conducted:
Describe:	
4. Do you have reason to believe that the internal inspection was completed BEFORE the damage was sustained?	
5. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?	
- If Yes:	
	Most recent year tested:
	Test pressure (psig):
6. Has one or more Direct Assessment been conducted on the pipeline segment?	
- If Yes, and an investigative dig was conducted at the point of the Accident:	
	Most recent year conducted:
- If Yes, but the point of the Accident was not identified as a dig site:	
	Most recent year conducted:
7. Has one or more non-destructive examination been conducted at the point of the Accident since January 1, 2002?	
7a. If Yes, for each examination conducted since January 1, 2002, select type of non-destructive examination and indicate most recent year the examination was conducted:	
- Radiography	Most recent year conducted:
- Guided Wave Ultrasonic	Most recent year conducted:
- Handheld Ultrasonic Tool	Most recent year conducted:
- Wet Magnetic Particle Test	Most recent year conducted:
- Dry Magnetic Particle Test	Most recent year conducted:

- Other	
Most recent year conducted:	
Describe:	
<b>- If Intentional Damage:</b>	
8. Specify:	
- If Other, Describe:	
<b>- If Other Outside Force Damage:</b>	
9. Describe:	
<b>G5 - Material Failure of Pipe or Weld</b> - only one <b>sub-cause</b> can be selected from the shaded left-hand column	
<b>Use this section to report material failures ONLY IF the "Item Involved in Accident" (from PART C, Question 3) is "Pipe" or "Weld."</b>	
<b>Material Failure of Pipe or Weld – Sub-Cause:</b>	
1. The sub-cause selected below is based on the following: <i>(select all that apply)</i>	
- Field Examination	
- Determined by Metallurgical Analysis	
- Other Analysis	
- If "Other Analysis", Describe:	
- Sub-cause is Tentative or Suspected; Still Under Investigation (Supplemental Report required)	
<b>- If Construction, Installation, or Fabrication-related:</b>	
2. List contributing factors: <i>(select all that apply)</i>	
- Fatigue or Vibration-related	
Specify:	
- If Other, Describe:	
- Mechanical Stress:	
- Other	
- If Other, Describe:	
<b>- If Original Manufacturing-related (NOT girth weld or other welds formed in the field):</b>	
2. List contributing factors: <i>(select all that apply)</i>	
- Fatigue or Vibration-related:	
Specify:	
- If Other, Describe:	
- Mechanical Stress:	
- Other	
- If Other, Describe:	
<b>- If Environmental Cracking-related:</b>	
3. Specify:	
- Other - Describe:	
<b>Complete the following if any Material Failure of Pipe or Weld sub-cause is selected.</b>	
4. Additional factors: <i>(select all that apply)</i> :	
- Dent	
- Gouge	
- Pipe Bend	
- Arc Burn	
- Crack	
- Lack of Fusion	
- Lamination	
- Buckle	
- Wrinkle	
- Misalignment	
- Burnt Steel	
- Other:	
- If Other, Describe:	
5. Has one or more internal inspection tool collected data at the point of the Accident?	
5a. If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run:	
- Magnetic Flux Leakage	Most recent year run:
- Ultrasonic	Most recent year run:
- Geometry	Most recent year run:
- Caliper	Most recent year run:
- Crack	Most recent year run:

- Hard Spot	
Most recent year run:	
- Combination Tool	
Most recent year run:	
- Transverse Field/Triaxial	
Most recent year run:	
- Other	
Most recent year run:	
Describe:	
6. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?	
- If Yes:	
Most recent year tested:	
Test pressure (psig):	
7. Has one or more Direct Assessment been conducted on the pipeline segment?	
- If Yes, and an investigative dig was conducted at the point of the Accident -	
Most recent year conducted:	
- If Yes, but the point of the Accident was not identified as a dig site -	
Most recent year conducted:	
8. Has one or more non-destructive examination(s) been conducted at the point of the Accident since January 1, 2002?	
8a. If Yes, for each examination conducted since January 1, 2002, select type of non-destructive examination and indicate most recent year the examination was conducted: -	
- Radiography	
Most recent year conducted:	
- Guided Wave Ultrasonic	
Most recent year conducted:	
- Handheld Ultrasonic Tool	
Most recent year conducted:	
- Wet Magnetic Particle Test	
Most recent year conducted:	
- Dry Magnetic Particle Test	
Most recent year conducted:	
- Other	
Most recent year conducted:	
Describe:	
<b>G6 – Equipment Failure</b> - only one <b>sub-cause</b> can be selected from the shaded left-hand column	
<b>Equipment Failure – Sub-Cause:</b>	
<b>- If Malfunction of Control/Relief Equipment:</b>	
1. Specify: <i>(select all that apply)</i> -	
- Control Valve	
- Instrumentation	
- SCADA	
- Communications	
- Block Valve	
- Check Valve	
- Relief Valve	
- Power Failure	
- Stopple/Control Fitting	
- ESD System Failure	
- Other	
- If Other – Describe:	
<b>- If Pump or Pump-related Equipment:</b>	
2. Specify:	
- If Other – Describe:	
<b>- If Threaded Connection/Coupling Failure:</b>	
3. Specify:	
- If Other – Describe:	
<b>- If Non-threaded Connection Failure:</b>	
4. Specify:	
- If Other – Describe:	
<b>- If Defective or Loose Tubing or Fitting:</b>	
<b>- If Failure of Equipment Body (except Pump), Tank Plate, or other Material:</b>	
<b>- If Other Equipment Failure:</b>	

5. Describe:	
<b>Complete the following if any Equipment Failure sub-cause is selected.</b>	
6. Additional factors that contributed to the equipment failure: <i>(select all that apply)</i>	
- Excessive vibration	
- Overpressurization	
- No support or loss of support	
- Manufacturing defect	
- Loss of electricity	
- Improper installation	
- Mismatched items (different manufacturer for tubing and tubing fittings)	
- Dissimilar metals	
- Breakdown of soft goods due to compatibility issues with transported commodity	
- Valve vault or valve can contributed to the release	
- Alarm/status failure	
- Misalignment	
- Thermal stress	
- Other	
- If Other, Describe:	
<b>G7 - Incorrect Operation</b> - only one <b>sub-cause</b> can be selected from the shaded left-hand column	
<b>Incorrect Operation – Sub-Cause:</b>	
<b>Damage by Operator or Operator's Contractor NOT Related to Excavation and NOT due to Motorized Vehicle/Equipment Damage</b>	No
<b>Tank, Vessel, or Sump/Separator Allowed or Caused to Overfill or Overflow</b>	No
1. Specify:	
- If Other, Describe:	
<b>Valve Left or Placed in Wrong Position, but NOT Resulting in a Tank, Vessel, or Sump/Separator Overflow or Facility Overpressure</b>	No
<b>Pipeline or Equipment Overpressured</b>	No
<b>Equipment Not Installed Properly</b>	No
<b>Wrong Equipment Specified or Installed</b>	No
<b>Other Incorrect Operation</b>	No
2. Describe:	
<b>Complete the following if any Incorrect Operation sub-cause is selected.</b>	
3. Was this Accident related to <i>(select all that apply)</i> : -	
- Inadequate procedure	
- No procedure established	
- Failure to follow procedure	
- Other:	
- If Other, Describe:	
4. What category type was the activity that caused the Accident?	
5. Was the task(s) that led to the Accident identified as a covered task in your Operator Qualification Program?	
5a. If Yes, were the individuals performing the task(s) qualified for the task(s)?	
<b>G8 - Other Accident Cause</b> - only one <b>sub-cause</b> can be selected from the shaded left-hand column	
<b>Other Accident Cause – Sub-Cause:</b>	Unknown
<b>- If Miscellaneous:</b>	
1. Describe:	

<b>- If Unknown:</b>	
2. Specify:	Still under investigation, cause of Accident to be determined* (*Supplemental Report required)

**PART H - NARRATIVE DESCRIPTION OF THE ACCIDENT**

On July 26, 2010, Enbridge confirmed a mainline rupture on Line 6B at MP608.2452. As this matter is under investigation with respect to this incident, Enbridge has used the  $\zeta$ accident $\zeta$  time as being 11:41 AM on July 26, 2010, which is the time that Enbridge confirmed seeing product on the ground. As such, the estimated pressure at 11:41 AM on July 26, 2010 was zero. Additionally, while Enbridge has a functioning CPM leak detection system, on July 26, at 11:41 AM, the line was shut down. In the circumstances that existed at that time, the CPM leak detection system would not be fully functional.

Of further note, while the telephonic report to the NRC is stated as 13:33 on July 26, 2010, Enbridge made a call to NRC and was on hold for a period of time. Enbridge then hung up the call and called again at which time it was on hold for a further period of time. The stated 13:33 reflects the time that Enbridge was able to provide verbal notification of the incident.

The release was initially estimated at 19,500 barrels of which an undetermined amount entered the Talmadge Creek and ultimately the Kalamazoo River. The amount of estimated product released in or reaching water has not yet been confirmed and is based upon a calculation provided by an external consultant. The amount of oil that reached water is subject to further investigation. Enbridge is currently reviewing several methodologies to calculate this volume, and will communicate the methodology and subsequent volume to PHMSA upon completion.

The section that failed has been sent to a laboratory for a metallurgical analysis, under the direction of NTSB. Pending the results of metallurgical testing and failure investigations, Enbridge is unable to provide complete and final data for this original report submission. Information contained in this report is to be considered estimated until supplemental and final reports are filed. NTSB, PHMSA and Enbridge investigations into this accident have commenced. As this investigation is ongoing, the primary and secondary cause(s) have not been finalized.

To date, Enbridge has not found any potable water sources (public or private) with drinking water contamination that has been verifiably linked to the Enbridge release. The assessment of all drinking water sources in the affected area is ongoing. Enbridge is in the process of sampling drinking water sources and is working directly with state and local public health officials in evaluating drinking water from potable wells to ensure public health.

Enbridge estimated that it will incur aggregate charges between \$300 million and \$400 million. These charges include emergency response, environmental remediation and cleanup activities associated with the crude oil release, costs to repair the pipeline and related inspection costs, potential claims by third parties, and lost revenue. We continue to work to accurately project the total cost of the leak and its remediation, however we are unable to break it down into the specific detail requested in this form due to the complexity of the efforts.

As further information becomes known, supplemental reports will be filed as required.

See attached uploaded file for supplemental narrative as of December 20, 2010.  
See attached uploaded file for supplemental narrative as of February 22, 2011.

<b>File Full Name</b>
<a href="#">20110222133050_Supplemental Narrative February 2011.pdf</a>
<a href="#">20101220142657_Supplemental Narrative Dec 2010.pdf</a>

**PART I - PREPARER AND AUTHORIZED SIGNATURE**

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