

6. Was a Supervisory Control and Data Acquisition (SCADA)-based system in place on the pipeline or facility involved in the Accident?

No

Yes ➔

6.a Was it operating at the time of the Accident? Yes No

6.b Was it fully functional at the time of the Accident? Yes No

6.c Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the detection of the Accident? Yes No

6.d Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the confirmation of the Accident? Yes No

7. Was a CPM leak detection system in place on the pipeline or facility involved in the Accident?

No

Yes ➔

7.a Was it operating at the time of the Accident? Yes No

7.b Was it fully functional at the time of the Accident? Yes No

7.c 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? Yes No

7.d 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 No

8. How was the Accident initially identified for the Operator? (select only one)

CPM leak detection system or SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations)

Static Shut-in Test or Other Pressure or Leak Test

Controller

Local Operating Personnel, including contractors

Air Patrol

Ground Patrol by Operator or its contractor

Notification from Public

Notification from Emergency Responder

Notification from Third Party that caused the Accident

Other _____

8.a If "Controller", "Local Operating Personnel, including contractors", "Air Patrol", or "Ground Patrol by Operator or its contractor" is selected in Question 8, specify the following: (select only one)

Operator employee Contractor working for the Operator

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? (select only one)

Yes, but the investigation of the control room and/or controller actions has not yet been completed by the Operator (Supplemental Report required)

No, the facility was not monitored by a controller(s) at the time of the Accident

No, the Operator did not find that an investigation of the controller(s) actions or control room issues was necessary due to: (provide an explanation for why the Operator did not investigate)

Yes, specify investigation result(s): (select all that apply)

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: _____

PART F – DRUG & ALCOHOL TESTING INFORMATION
<p>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?</p> <p><input type="radio"/> No</p> <p><input type="radio"/> Yes ⇨ *1.a Specify how many were tested: <u> / / / / </u></p> <p style="padding-left: 40px;">*1.b Specify how many failed: <u> / / / / </u></p> <p>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?</p> <p><input type="radio"/> No</p> <p><input type="radio"/> Yes ⇨ *2.a Specify how many were tested: <u> / / / / </u></p> <p style="padding-left: 40px;">*2.b Specify how many failed: <u> / / / / </u></p>

PART G – APPARENT CAUSE	<i>Select only one box from PART G in the shaded column on the 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>
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G1 - Corrosion Failure – *only one sub-cause can be picked from shaded left-hand column
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<input type="checkbox"/> External Corrosion	<p>1. Results of visual examination:</p> <p><input type="radio"/> Localized Pitting <input type="radio"/> General Corrosion</p> <p><input type="radio"/> Other _____</p> <p>2. Type of corrosion: <i>(select all that apply)</i></p> <p><input type="radio"/> Galvanic <input type="radio"/> Atmospheric <input type="radio"/> Stray Current <input type="radio"/> Microbiological <input type="radio"/> Selective Seam</p> <p><input type="radio"/> Other _____</p> <p>3. The type(s) of corrosion selected in Question 2 is based on the following: <i>(select all that apply)</i></p> <p><input type="radio"/> Field examination <input type="radio"/> Determined by metallurgical analysis</p> <p><input type="radio"/> Other _____</p> <p>4. Was the failed item buried under the ground?</p> <p><input type="radio"/> Yes ⇨ 4.a Was failed item considered to be under cathodic protection at the time of the Accident?</p> <p style="padding-left: 40px;"><input type="radio"/> Yes ⇨ Year protection started: <u> / / / / / </u></p> <p style="padding-left: 40px;"><input type="radio"/> No</p> <p style="padding-left: 40px;">4.b Was shielding, tenting, or disbonding of coating evident at the point of the Accident?</p> <p style="padding-left: 80px;"><input type="radio"/> Yes <input type="radio"/> No</p> <p style="padding-left: 40px;">4.c Has one or more Cathodic Protection Survey been conducted at the point of the Accident?</p> <p style="padding-left: 40px;"><input type="radio"/> Yes, CP Annual Survey ⇨ Most recent year conducted: <u> / / / / / </u></p> <p style="padding-left: 40px;"><input type="radio"/> Yes, Close Interval Survey ⇨ Most recent year conducted: <u> / / / / / </u></p> <p style="padding-left: 40px;"><input type="radio"/> Yes, Other CP Survey ⇨ Most recent year conducted: <u> / / / / / </u></p> <p style="padding-left: 40px;"><input type="radio"/> No</p> <p><input type="radio"/> No ⇨ 4.d Was the failed item externally coated or painted? <input type="radio"/> Yes <input type="radio"/> No</p> <p>5. Was there observable damage to the coating or paint in the vicinity of the corrosion?</p> <p><input type="radio"/> Yes <input type="radio"/> No</p>
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<input type="checkbox"/> Internal Corrosion	<p>6. Results of visual examination: <input type="radio"/> Localized Pitting <input type="radio"/> General Corrosion <input type="radio"/> Not cut open <input type="radio"/> Other _____</p> <p>7. Cause of corrosion: <i>(select all that apply)</i> <input type="radio"/> Corrosive Commodity <input type="radio"/> Water drop-out/Acid <input type="radio"/> Microbiological <input type="radio"/> Erosion <input type="radio"/> Other _____</p> <p>8. The cause(s) of corrosion selected in Question 7 is based on the following: <i>(select all that apply)</i> <input type="radio"/> Field examination <input type="radio"/> Determined by metallurgical analysis <input type="radio"/> Other _____</p> <p>9. Location of corrosion: <i>(select all that apply)</i> <input type="radio"/> Low point in pipe <input type="radio"/> Elbow <input type="radio"/> Other _____</p> <p>10. Was the commodity treated with corrosion inhibitors or biocides? <input type="radio"/> Yes <input type="radio"/> No</p> <p>11. Was the interior coated or lined with protective coating? <input type="radio"/> Yes <input type="radio"/> No</p> <p>12. Were cleaning/dewatering pigs (or other operations) routinely utilized? <input type="radio"/> Not applicable - Not mainline pipe <input type="radio"/> Yes <input type="radio"/> No</p> <p>13. Were corrosion coupons routinely utilized? <input type="radio"/> Not applicable - Not mainline pipe <input type="radio"/> Yes <input type="radio"/> No</p>
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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.

14. List the year of the most recent inspections:
- 14.a API Std 653 Out-of-Service Inspection / / / / / No Out-of-Service Inspection completed
- 14.b API Std 653 In-Service Inspection / / / / / No In-Service Inspection completed

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.

15. Has one or more internal inspection tool collected data at the point of the Accident?
 Yes No
- 15.a. If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run:
- Magnetic Flux Leakage Tool / / / / /
- Ultrasonic / / / / /
- Geometry / / / / /
- Caliper / / / / /
- Crack / / / / /
- Hard Spot / / / / /
- Combination Tool / / / / /
- Transverse Field/Triaxial / / / / /
- Other _____ / / / / /
16. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?
 Yes ⇨ Most recent year tested: / / / / / Test pressure (psig): / / / / /
 No
17. Has one or more Direct Assessment been conducted on this segment?
 Yes, and an investigative dig was conducted at the point of the Accident ⇨ Most recent year conducted: / / / / /
 Yes, but the point of the Accident was not identified as a dig site ⇨ Most recent year conducted: / / / / /
 No
18. Has one or more non-destructive examination been conducted at the point of the Accident since January 1, 2002?
 Yes No
- 18.a 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 / / / / /
- Guided Wave Ultrasonic / / / / /
- Handheld Ultrasonic Tool / / / / /
- Wet Magnetic Particle Test / / / / /
- Dry Magnetic Particle Test / / / / /
- Other _____ / / / / /

G2 - Natural Force Damage - *only one sub-cause can be picked from shaded left-hand column	
<input type="checkbox"/> Earth Movement, NOT due to Heavy Rains/Floods	1. Specify: <input type="radio"/> Earthquake <input type="radio"/> Subsidence <input type="radio"/> Landslide <input type="radio"/> Other _____
<input type="checkbox"/> Heavy Rains/Floods	2. Specify: <input type="radio"/> Washout/Scouring <input type="radio"/> Flotation <input type="radio"/> Mudslide <input type="radio"/> Other _____
<input type="checkbox"/> Lightning	3. Specify: <input type="radio"/> Direct hit <input type="radio"/> Secondary impact such as resulting nearby fires
<input type="checkbox"/> Temperature	4. Specify: <input type="radio"/> Thermal Stress <input type="radio"/> Frost Heave <input type="radio"/> Frozen Components <input type="radio"/> Other _____
<input type="checkbox"/> High Winds	
<input type="checkbox"/> Other Natural Force Damage	5. Describe: _____
Complete the following if any Natural Force Damage sub-cause is selected.	
6. Were the natural forces causing the Accident generated in conjunction with an extreme weather event? <input type="radio"/> Yes <input type="radio"/> No	
6.a If Yes, specify: (select all that apply) <input type="radio"/> Hurricane <input type="radio"/> Tropical Storm <input type="radio"/> Tornado <input type="radio"/> Other _____	

G3 – Excavation Damage - *only one sub-cause can be picked from shaded left-hand column																			
<input type="checkbox"/> Excavation Damage by Operator (First Party)																			
<input type="checkbox"/> Excavation Damage by Operator's Contractor (Second Party)																			
<input type="checkbox"/> Excavation Damage by Third Party																			
<input type="checkbox"/> Previous Damage due to Excavation Activity	<p>Complete Questions 1-5 ONLY IF the "Item Involved in Accident" (from PART C, Question 3) is Pipe or Weld.</p> <p>1. Has one or more internal inspection tool collected data at the point of the Accident? <input type="radio"/> Yes <input type="radio"/> No</p> <p>1.a If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run:</p> <table border="0"> <tr> <td><input type="radio"/> Magnetic Flux Leakage</td> <td>_____</td> </tr> <tr> <td><input type="radio"/> Ultrasonic</td> <td>_____</td> </tr> <tr> <td><input type="radio"/> Geometry</td> <td>_____</td> </tr> <tr> <td><input type="radio"/> Caliper</td> <td>_____</td> </tr> <tr> <td><input type="radio"/> Crack</td> <td>_____</td> </tr> <tr> <td><input type="radio"/> Hard Spot</td> <td>_____</td> </tr> <tr> <td><input type="radio"/> Combination Tool</td> <td>_____</td> </tr> <tr> <td><input type="radio"/> Transverse Field/Triaxial</td> <td>_____</td> </tr> <tr> <td><input type="radio"/> Other _____</td> <td>_____</td> </tr> </table> <p>2. Do you have reason to believe that the internal inspection was completed BEFORE the damage was sustained? <input type="radio"/> Yes <input type="radio"/> No</p> <p>3. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?</p> <p><input type="radio"/> Yes ⇒ Most recent year tested: _____ Test pressure (psig): _____</p> <p><input type="radio"/> No</p> <p>4. Has one or more Direct Assessment been conducted on the pipeline segment?</p> <p><input type="radio"/> Yes, and an investigative dig was conducted at the point of the Accident ⇒ Most recent year conducted: _____</p> <p><input type="radio"/> Yes, but the point of the Accident was not identified as a dig site ⇒ Most recent year conducted: _____</p> <p><input type="radio"/> No</p>	<input type="radio"/> Magnetic Flux Leakage	_____	<input type="radio"/> Ultrasonic	_____	<input type="radio"/> Geometry	_____	<input type="radio"/> Caliper	_____	<input type="radio"/> Crack	_____	<input type="radio"/> Hard Spot	_____	<input type="radio"/> Combination Tool	_____	<input type="radio"/> Transverse Field/Triaxial	_____	<input type="radio"/> Other _____	_____
<input type="radio"/> Magnetic Flux Leakage	_____																		
<input type="radio"/> Ultrasonic	_____																		
<input type="radio"/> Geometry	_____																		
<input type="radio"/> Caliper	_____																		
<input type="radio"/> Crack	_____																		
<input type="radio"/> Hard Spot	_____																		
<input type="radio"/> Combination Tool	_____																		
<input type="radio"/> Transverse Field/Triaxial	_____																		
<input type="radio"/> Other _____	_____																		

17. Description of the CGA-DIRT Root Cause (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):

One-Call Notification Practices Not Sufficient: (select only one)

- No notification made to the One-Call Center
- Notification to One-Call Center made, but not sufficient
- Wrong information provided

Locating Practices Not Sufficient: (select only one)

- Facility could not be found/located
- Facility marking or location not sufficient
- Facility was not located or marked
- Incorrect facility records/maps

Excavation Practices Not Sufficient: (select only one)

- Excavation practices not sufficient (other)
- Failure to maintain clearance
- Failure to maintain the marks
- Failure to support exposed facilities
- Failure to use hand tools where required
- Failure to verify location by test-hole (pot-holing)
- Improper backfilling

One-Call Notification Center Error

Abandoned Facility

Deteriorated Facility

Previous Damage

Data Not Collected

Other / None of the Above (explain) _____

	since January 1, 2002? <input type="radio"/> Yes <input type="radio"/> No 7.a 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: <input type="radio"/> Radiography / / / / / <input type="radio"/> Guided Wave Ultrasonic / / / / / <input type="radio"/> Handheld Ultrasonic Tool / / / / / <input type="radio"/> Wet Magnetic Particle Test / / / / / <input type="radio"/> Dry Magnetic Particle Test / / / / / <input type="radio"/> Other _____ / / / / /
<input type="checkbox"/> Intentional Damage	8. Specify: <input type="radio"/> Vandalism <input type="radio"/> Terrorism <input type="radio"/> Theft of transported commodity <input type="radio"/> Theft of equipment <input type="radio"/> Other _____
<input type="checkbox"/> Other Outside Force Damage	9. Describe: _____

G5 - Material Failure of Pipe or Weld	Use this section to report material failures ONLY IF the "Item Involved in Accident" (from PART C, Question 3) is "Pipe" or "Weld."
	*Only one sub-cause can be picked from shaded left-hand column

1. The sub-cause selected below is based on the following: <i>(select all that apply)</i> <input type="checkbox"/> Field Examination <input type="checkbox"/> Determined by Metallurgical Analysis <input type="checkbox"/> Other Analysis _____ <input type="checkbox"/> Sub-cause is Tentative or Suspected; Still Under Investigation <i>(Supplemental Report required)</i>	
<input type="checkbox"/> Construction-, Installation-, or Fabrication-related	2. List contributing factors: <i>(select all that apply)</i> <input type="checkbox"/> Fatigue- or Vibration-related: <input type="radio"/> Mechanically-induced prior to installation (such as during transport of pipe) <input type="radio"/> Mechanical Vibration <input type="radio"/> Pressure-related <input type="radio"/> Thermal <input type="radio"/> Other _____ <input type="checkbox"/> Mechanical Stress <input type="checkbox"/> Other _____
<input type="checkbox"/> Original Manufacturing-related (NOT girth weld or other welds formed in the field)	
<input type="checkbox"/> Environmental Cracking-related	3. Specify: <input type="radio"/> Stress Corrosion Cracking <input type="radio"/> Sulfide Stress Cracking <input type="radio"/> Hydrogen Stress Cracking <input type="radio"/> Other _____

Complete the following if any Material Failure of Pipe or Weld sub-cause is selected.

4. Additional factors: *(select all that apply)* Dent Gouge Pipe Bend Arc Burn Crack Lack of Fusion
 Lamination Buckle Wrinkle Misalignment Burnt Steel
 Other _____

5. Has one or more internal inspection tool collected data at the point of the Accident? Yes No

5.a If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run:

Magnetic Flux Leakage Tool / / / / /
 Ultrasonic / / / / /
 Geometry / / / / /
 Caliper / / / / /
 Crack / / / / /
 Hard Spot / / / / /
 Combination Tool / / / / /
 Transverse Field/Triaxial / / / / /
 Other _____ / / / / /

6. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?
 Yes ⇨ Most recent year tested: / / / / / Test pressure (psig): / / / / /
 No

7. Has one or more Direct Assessment been conducted on the pipeline segment?
 Yes, and an investigative dig was conducted at the point of the Accident ⇨ Most recent year conducted: / / / / /
 Yes, but the point of the Accident was not identified as a dig site ⇨ Most recent year conducted: / / / / /
 No

8. Has one or more non-destructive examination(s) been conducted at the point of the Accident since January 1, 2002?
 Yes No

8.a 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 / / / / /
 Guided Wave Ultrasonic / / / / /
 Handheld Ultrasonic Tool / / / / /
 Wet Magnetic Particle Test / / / / /
 Dry Magnetic Particle Test / / / / /
 Other _____ / / / / /

G6 - Equipment Failure - *only one **sub-cause** can be picked from shaded left-hand column

<input type="checkbox"/> Malfunction of Control/Relief Equipment	1. Specify: <i>(select all that apply)</i> <input type="radio"/> Control Valve <input type="radio"/> Instrumentation <input type="radio"/> SCADA <input type="radio"/> Communications <input type="radio"/> Block Valve <input type="radio"/> Check Valve <input type="radio"/> Relief Valve <input type="radio"/> Power Failure <input type="radio"/> Stopple/Control Fitting <input type="radio"/> ESD System Failure <input type="radio"/> Other _____
<input type="checkbox"/> Pump or Pump-related Equipment	2. Specify: <input type="radio"/> Seal/Packing Failure <input type="radio"/> Body Failure <input type="radio"/> Crack in Body <input type="radio"/> Appurtenance Failure <input type="radio"/> Other _____
<input type="checkbox"/> Threaded Connection/Coupling Failure	3. Specify: <input type="radio"/> Pipe Nipple <input type="radio"/> Valve Threads <input type="radio"/> Mechanical Coupling <input type="radio"/> Threaded Pipe Collar <input type="radio"/> Threaded Fitting <input type="radio"/> Other _____
<input type="checkbox"/> Non-threaded Connection Failure	4. Specify: <input type="radio"/> O-Ring <input type="radio"/> Gasket <input type="radio"/> Seal (NOT pump seal) or Packing <input type="radio"/> Other _____
<input type="checkbox"/> Defective or Loose Tubing or Fitting	
<input type="checkbox"/> Failure of Equipment Body (except Pump), Tank Plate, or other Material	
<input type="checkbox"/> Other Equipment Failure	5. Describe: _____ _____

Complete the following if any Equipment Failure sub-cause is selected.

6. Additional factors that contributed to the equipment failure: *(select all that apply)*
- 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 _____

G7 - Incorrect Operation - *only one **sub-cause** can be picked from shaded left-hand column

<input type="checkbox"/> Damage by Operator or Operator's Contractor NOT Related to Excavation and NOT due to Motorized Vehicle/Equipment Damage	
<input type="checkbox"/> Tank, Vessel, or Sump/Separator Allowed or Caused to Overfill or Overflow	1. Specify: <input type="radio"/> Valve misalignment <input type="radio"/> Incorrect reference data/calculation <input type="radio"/> Miscommunication <input type="radio"/> Inadequate monitoring <input type="radio"/> Other _____
<input type="checkbox"/> Valve Left or Placed in Wrong Position, but NOT Resulting in a Tank, Vessel, or Sump/Separator Overflow or Facility Overpressure	
<input type="checkbox"/> Pipeline or Equipment Overpressured	
<input type="checkbox"/> Equipment Not Installed Properly	
<input type="checkbox"/> Wrong Equipment Specified or Installed	
<input type="checkbox"/> Other Incorrect Operation	2. Describe: _____

Complete the following if any Incorrect Operation sub-cause is selected.

3. Was this Accident related to: *(select all that apply)*

- Inadequate procedure
- No procedure established
- Failure to follow procedure
- Other: _____

4. What category type was the activity that caused the Accident:

- Construction
- Commissioning
- Decommissioning
- Right-of-Way activities
- Routine maintenance
- Other maintenance
- Normal operating conditions
- Non-routine operating conditions (abnormal operations or emergencies)

5. Was the task(s) that led to the Accident identified as a covered task in your Operator Qualification Program? Yes No

5.a If Yes, were the individuals performing the task(s) qualified for the task(s)?

- Yes, they were qualified for the task(s)
- No, but they were performing the task(s) under the direction and observation of a qualified individual
- No, they were not qualified for the task(s) nor were they performing the task(s) under the direction and observation of a qualified individual

G8 – Other Accident Cause - *only one **sub-cause** can be picked from shaded left-hand column

<input type="checkbox"/> Miscellaneous	1. Describe: _____ _____
<input type="checkbox"/> Unknown	2. Specify: <input type="radio"/> Investigation complete, cause of Accident unknown <input type="radio"/> Still under investigation, cause of Accident to be determined* (*Supplemental Report required)

PART H – NARRATIVE DESCRIPTION OF THE ACCIDENT

(Attach additional sheets as necessary)

PART I – PREPARER AND AUTHORIZED SIGNATURE

Preparer's Name (type or print)

Preparer's Telephone Number

Preparer's Title (type or print)

Preparer's E-mail Address

Preparer's Facsimile Number

Authorized Signer's Name

Date

Authorized Signer Telephone Number

Authorized Signer's Title

Authorized Signer's E-mail Address