

**Edit Key**  
**Green** = Completely new item on the form.  
**Yellow** = Existing item in which the wording was either changed or expanded on the new form.  
**Blue** = Existing item that was slightly re-ordered or re-organized (not a lot of blue as this was very subjective) so most items are yellow and green.

NOTICE: This report is required by 49 CFR Part 195. Failure to report can result in a civil penalty not to exceed \$100,000 for each violation for each day that such violation persists except that the maximum civil penalty shall not exceed \$1,000,000 as provided in 49 USC 60122.

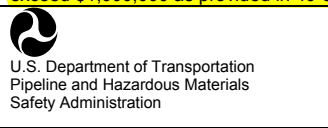
OMB NO: XXX

EXPIRATION

Report Date

No. \_\_\_\_\_

(DOT Form 610)



## ACCIDENT REPORT – HAZARDOUS LIQUID PIPELINE SYSTEMS

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is XXXX-XXXX. Public reporting for this collection of information is estimated to be approximately (X) minutes per response, including the time for reviewing instructions, gathering the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, PHMSA, Office of Pipeline Safety (PHP-30) 1200 New Jersey Avenue, SE, Washington, D.C. 20590.

**INSTRUCTIONS**

**Important:** Please read the separate instructions for completing this form before you begin. They clarify the information requested and provide specific examples. If you do not have a copy of the instructions, you can obtain one from the [PHMSA Pipeline Safety Community Web Page at http://www.phmsa.dot.gov/pipeline](http://www.phmsa.dot.gov/pipeline).

**PART A – KEY REPORT INFORMATION**

Report Type: (select all that apply)  Original  Supplemental  Final

1. Operator's OPS-issued Operator Identification Number (OPID): 0 0 0 0 0 0 0 0

2. Name of Operator: \_\_\_\_\_

3. Address of Operator:

3.a \_\_\_\_\_  
 (Street Address)

3.b \_\_\_\_\_  
 (City)

3.c State: 0 0 0

3.d Zip Code: 0 0 0 0 0 0 - 0 0 0 0 0 0

Moved physical address questions for the incident to Part B, items 2-4.

4. Local time (24-hr clock) and date of the Accident:  
 / / Hour / / Month / / Day / / Year

5. Location of Accident:  
 Latitude: / / . / / / / / / /  
 Longitude: - / / . / / / / / / /

6. National Response Center Report Number (if applicable):  
 / / / / / / / / / /

7. Local time (24-hr clock) and date of initial telephonic report to the National Response Center (if applicable):  
 0 0 0 0 0 0 / / / / / / / /

8. Commodity released: (select only one, based on predominant volume released)

- Crude Oil
- Refined and/or Petroleum Product (non-HVL) which is a Liquid at Ambient Conditions
  - Gasoline (non-Ethanol)  Diesel, Fuel Oil, Kerosene, Jet Fuel
  - Mixture of Refined Products (transmix or other mixture)
  - Other → Name: \_\_\_\_\_
- HVL or Other Flammable or Toxic Fluid which is a Gas at Ambient Conditions
  - Anhydrous Ammonia
  - LPG (Liquefied Petroleum Gas) / NGL (Natural Gas Liquid)
  - Other HVL → Name: \_\_\_\_\_
- CO<sub>2</sub> (Carbon Dioxide)
- Biofuel / Alternative Fuel (including ethanol blends)
  - Fuel Grade Ethanol  Ethanol Blend → % Ethanol: / / / /
  - Biodiesel → Blend (e.g. B2, B20, B100): B/ / / / /
  - Other → Name: \_\_\_\_\_

9. Estimated volume of commodity released unintentionally: 0 0 0 0 . 0 / / . / / / / / Barrels

10. Estimated volume of intentional and/or controlled release/blowdown: 0 0 0 0 . 0 / / . / / / / / Barrels

11. Estimated volume of commodity recovered: 0 0 0 0 . 0 / / . / / / / / Barrels

Existing item but expanded to provide clarity.

**12. Were there fatalities?**  Yes  No  
 If Yes, specify the number in each category:

12.a Operator employees / / / / / /  
 12.b Contractor employees working for the Operator / / / / / /  
 12.c Non-Operator emergency responders / / / / / /  
 12.d Workers working on the right-of-way, but NOT associated with this Operator / / / / / /  
 12.e General public / / / / / /  
 12.f Total fatalities (sum of above) / / / / / /

**13. Were there injuries requiring inpatient hospitalization?**  Yes  No  
 If Yes, specify the number in each category:

13.a Operator employees / / / / / /  
 13.b Contractor employees working for the Operator / / / / / /  
 13.c Non-Operator emergency responders / / / / / /  
 13.d Workers working on the right-of-way, but NOT associated with this Operator / / / / / /  
 13.e General public / / / / / /  
 13.f Total injuries (sum of above) / / / / / /

**14. Was the pipeline/facility shut down due to the Accident?**  
 Yes  No ⇨ Explain: \_\_\_\_\_

If Yes, complete Questions 14.a and 14.b: *(use local time, 24-hr clock)*

14.a Local time and date of shutdown / / / / / / / / / /  
 Hour Month Day Year

14.b Local time pipeline/facility restarted / / / / / / / / / /  Still shut down\*  
 Hour Month Day Year (\*Supplemental Report required)

15. Did the commodity ignite?  Yes  No

16. Did the commodity explode?  Yes  No

17. Number of general public evacuated: / / / / / / / / / /

18. Time sequence: *(use local time, 24-hour clock)*

18.a Local time Operator identified Accident / / / / / / / / / /  
 Hour Month Day Year

18.b Local time Operator resources arrived on site / / / / / / / / / /  
 Hour Month Day Year

**PART B – ADDITIONAL LOCATION INFORMATION**

1. Was the origin of the Accident onshore?  Yes (Complete Questions 2-12)  No (Complete Questions 13-15)

**If Onshore:**

2. State: / /

3. Zip Code: / / - / /

4. City 5. County or Parish

- 6. Operator-designated location: (select only one)
- Milepost/Valve Station (specify in shaded area below)
- Survey Station No. (specify in shaded area below)

7. Pipeline/Facility name:

8. Segment name/ID:

9. Was Accident on Federal land, other than the Outer Continental Shelf (OCS)?  Yes  No

- 10. Location of Accident: (select only one)
- Totally contained on Operator-controlled property
- Originated on Operator-controlled property, but then flowed or migrated off the property
- Pipeline right-of-way

- 11. Area of Accident (as found): (select only one)
- Tank, including attached appurtenances
- Underground (Specify: Under soil, Under a building, Under pavement, Exposed due to excavation, In underground enclosed space (e.g., vault), Other)
- Aboveground (Specify: Typical aboveground facility piping or appurtenance, Overhead crossing, In or spanning an open ditch, Inside a building, Inside other enclosed space, Other)
- Transition Area (Specify: Soil/air interface, Wall sleeve, Pipe support or other close contact area, Other)

- 12. Did Accident occur in a crossing?:  Yes  No
- If Yes, specify type below:
 - Bridge crossing (Specify: Cased, Uncased)
 - Railroad crossing (select all that apply: Cased, Uncased, Bored/drilled)
 - Road crossing (select all that apply: Cased, Uncased, Bored/drilled)
 - Water crossing (Specify: Cased, Uncased)
 - Name of body of water, if commonly known:
 - Approx. water depth (ft) at the point of the Accident:
 - (select only one of the following)
 - Shoreline/Bank crossing
 - Below water, pipe in bored/drilled crossing
 - Below water, pipe buried below bottom (NOT in bored/drilled crossing)
 - Below water, pipe on or above bottom

**If Offshore:**

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: (select only one)
- Shoreline/Bank crossing or shore approach
- Below water, pipe buried or jetted below seabed
- Below water, pipe on or above seabed
- Splash Zone of riser
- Portion of riser outside of Splash Zone, including riser bend
- Platform

**PART C – ADDITIONAL FACILITY INFORMATION**

1. Is the pipeline or facility:

- Interstate
- Intrastate

2. Part of system involved in Accident: (select only one)

- Onshore Breakout Tank or Storage Vessel, Including Attached Appurtenances  Atmospheric or Low Pressure  Pressurized
- Onshore Terminal/Tank Farm Equipment and Piping
- Onshore Equipment and Piping Associated with Belowground Storage
- Onshore Pump/Meter Station Equipment and Piping
- Onshore Pipeline, Including Valve Sites
- Offshore Platform/Deepwater Port, Including Platform-mounted Equipment and Piping
- Offshore Pipeline, Including Riser and Riser Bend

3. Item involved in Accident: (select only one)

- Pipe  Specify:  Pipe Body  Pipe Seam
  - 3.a Nominal diameter of pipe (in): / / / / / /
  - 3.b Wall thickness (in): / / / / / /
  - 3.c SMYS (Specified Minimum Yield Strength) of pipe (psi): / / / / / / / /
  - 3.d Pipe specification: \_\_\_\_\_
  - 3.e Pipe Seam  Specify:
 

<input type="radio"/> Longitudinal ERW - High Frequency	<input type="radio"/> Single SAW	<input type="radio"/> Flash Welded
<input type="radio"/> Longitudinal ERW - Low Frequency	<input type="radio"/> DSAW	<input type="radio"/> Continuous Welded
<input type="radio"/> Longitudinal ERW - Unknown Frequency		<input type="radio"/> Furnace Butt Welded
<input type="radio"/> Spiral Welded ERW	<input type="radio"/> Spiral Welded SAW	<input type="radio"/> Spiral Welded DSAW
<input type="radio"/> Lap Welded	<input type="radio"/> Seamless	<input type="radio"/> Other _____
  - 3.f Pipe manufacturer: \_\_\_\_\_
  - 3.g Year of manufacture: / / / / / /
  - 3.h Pipeline coating type at point of Accident  Specify:
 

<input type="radio"/> Fusion Bonded Epoxy	<input type="radio"/> Coal Tar	<input type="radio"/> Asphalt	<input type="radio"/> Polyolefin
<input type="radio"/> Extruded Polyethylene	<input type="radio"/> Field Applied Epoxy	<input type="radio"/> Cold Applied Tape	<input type="radio"/> Paint
<input type="radio"/> Composite	<input type="radio"/> None	<input type="radio"/> Other _____	
  - Weld, including heat-affected zone  Specify:  Pipe Girth Weld  Other Butt Weld  Fillet Weld  Other \_\_\_\_\_
  - Valve  Mainline  Specify:  Butterfly  Check  Gate  Plug  Ball  Globe
    - Other \_\_\_\_\_
    - 3.i Mainline valve manufacturer: \_\_\_\_\_
    - 3.j Year of manufacture: / / / / / /
    - Relief Valve
    - Auxiliary or Other Valve
- Pump
- Meter/Prover
- Scraper/Pig Trap
- Sump/Separator
- Repair Sleeve or Clamp
- Hot Tap Equipment
- Stoppie Fitting
- Flange
- Relief Line
- Auxiliary Piping (e.g. drain lines)
- Tubing
- Instrumentation
- Tank/Vessel  Specify:
 

<input type="radio"/> Single Bottom System	<input type="radio"/> Double Bottom System	<input type="radio"/> Tank Shell	<input type="radio"/> Chime
<input type="radio"/> Roof/Roof Seal	<input type="radio"/> Roof Drain System	<input type="radio"/> Mixer	<input type="radio"/> Pressure Vessel Head or Wall
<input type="radio"/> Appurtenance	<input type="radio"/> Other _____		
- Other \_\_\_\_\_

4. Year item involved in Accident was installed: / / / / / /

5. Material involved in Accident: (select only one)

Carbon Steel

Material other than Carbon Steel → Specify: \_\_\_\_\_

6. Type of Accident involved: (select only one)

Mechanical Puncture → Approx. size: /\_/\_/\_/\_/\_/\_/\_/\_/ in. (axial) by /\_/\_/\_/\_/\_/\_/\_/\_/ in. (circumferential)

Leak → Select Type:     Pinhole     Crack     Connection Failure     Seal or Packing     Other

Rupture → Select Orientation:     Circumferential     Longitudinal     Other \_\_\_\_\_

Approx. size: /\_/\_/\_/\_/\_/\_/\_/\_/ in. (widest opening) by /\_/\_/\_/\_/\_/\_/\_/\_/ in. (length circumferentially or axially)

Overfill or Overflow

Other → Describe: \_\_\_\_\_

**PART D – ADDITIONAL CONSEQUENCE INFORMATION**

1. Wildlife impact:  Yes  No

1.a If Yes, specify all that apply:

- Fish/aquatic
- Birds
- Terrestrial

Deleted - If yes, estimated number of cubic yards.

2. Soil contamination:  Yes  No

3. Long term impact assessment performed or planned:  Yes  No

4. Anticipated remediation:  Yes  No (not needed)

4.a If Yes, specify all that apply:

- Surface water
- Groundwater
- Soil
- Vegetation
- Wildlife

5. Water contamination:  Yes  (Complete 5.a – 5.c below)  No

5.a Specify all that apply:

- Ocean/Seawater
- Surface
- Groundwater
- Drinking water  (Select one or both)  Private Well  Public Water Intake

5.b Estimated amount released in or reaching water:   1     1     1     1,1     1     /     /     /     /   / Barrels

5.c Name of body of water, if commonly known: \_\_\_\_\_

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  No

7. Did the released commodity reach or occur in one or more High Consequence Area (HCA)?

Yes  No

7.a 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?  
 Yes  No
- High Population Area  
Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?  
 Yes  No
- Other Populated Area  
Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?  
 Yes  No
- 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?  
 Yes  No
- 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?  
 Yes  No

8. Estimated cost to Operator:

8.a Estimated cost of public and non-Operator private property damage paid/reimbursed by the Operator	\$ <u>  1  </u> <u>  1  </u> <u>  1  </u> <u>  1,1  </u> <u>  1  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u>
8.b Estimated cost of commodity lost	\$ <u>  1  </u> <u>  1  </u> <u>  1  </u> <u>  1,1  </u> <u>  1  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u>
8.c Estimated cost of Operator's property damage & repairs	\$ <u>  1  </u> <u>  1  </u> <u>  1  </u> <u>  1,1  </u> <u>  1  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u>
8.d Estimated cost of Operator's emergency response	\$ <u>  1  </u> <u>  1  </u> <u>  1  </u> <u>  1,1  </u> <u>  1  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u>
8.e Estimated cost of Operator's environmental remediation	\$ <u>  1  </u> <u>  1  </u> <u>  1  </u> <u>  1,1  </u> <u>  1  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u>
8.f Estimated other costs	\$ <u>  1  </u> <u>  1  </u> <u>  1  </u> <u>  1,1  </u> <u>  1  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u>
Describe _____	
8.g Estimated total costs (sum of above)	\$ <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u> <u>  /  </u>



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

Air Patrol

Notification from Public

Notification from Third Party that caused the Accident

Local Operating Personnel, including contractors

Ground Patrol by Operator or its contractor

Notification from Emergency Responder

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**

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?

No

Yes ⇨ 1.a Specify how many were tested: / / /

1.b Specify how many failed: / / /

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?

No

Yes ⇨ 2.a Specify how many were tested: / / /

2.b Specify how many failed: / / /

PART G – APPARENT CAUSE

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).

G1 - Corrosion Failure – only one sub-cause can be picked from shaded left-hand column

External Corrosion

1. Results of visual examination:  
 Localized Pitting     General Corrosion  
 Other \_\_\_\_\_
2. Type of corrosion: (select all that apply)  
 Galvanic     Atmospheric     Stray Current     Microbiological     Selective Seam  
 Other \_\_\_\_\_
3. The type(s) of corrosion selected in Question 2 is based on the following: (select all that apply)  
 Field examination     Determined by metallurgical analysis  
 Other \_\_\_\_\_
4. Was the failed item buried under the ground?  
 Yes ⇒ 4.a Was failed item considered to be under cathodic protection at the time of the Accident?  
 Yes ⇒ Year protection started: / / / / /  
 No  
 No ⇒ 4.b Was shielding, tenting, or disbonding of coating evident at the point of the Accident?  
 Yes     No  
 No ⇒ 4.c Has one or more Cathodic Protection Survey been conducted at the point of the Accident?  
 Yes, CP Annual Survey ⇒ Most recent year conducted: / / / / /  
 Yes, Close Interval Survey ⇒ Most recent year conducted: / / / / /  
 Yes, Other CP Survey ⇒ Most recent year conducted: / / / / /  
 No  
 No ⇒ 4.d Was the failed item externally coated or painted?  Yes     No
5. Was there observable damage to the coating or paint in the vicinity of the corrosion?  
 Yes     No

Listed as "cause of corrosion" on current form. Deleted - Cathodic protection disrupted & stress corrosion cracking

Internal Corrosion

6. Results of visual examination:  
 Localized Pitting     General Corrosion     Not cut open  
 Other \_\_\_\_\_
7. Cause of corrosion: (select all that apply)  
 Corrosive Commodity     Water drop-out/Acid     Microbiological     Erosion  
 Other \_\_\_\_\_
8. The cause(s) of corrosion selected in Question 7 is based on the following: (select all that apply)  
 Field examination     Determined by metallurgical analysis  
 Other \_\_\_\_\_
9. Location of corrosion: (select all that apply)  
 Low point in pipe     Elbow     Other \_\_\_\_\_
10. Was the commodity treated with corrosion inhibitors or biocides?  Yes     No
11. Was the interior coated or lined with protective coating?  Yes     No
12. Were cleaning/dewatering pigs (or other operations) routinely utilized?  
 Not applicable - Not mainline pipe     Yes     No
13. Were corrosion coupons routinely utilized?  
 Not applicable - Not mainline pipe     Yes     No

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 \_\_\_\_\_ / / / / /

15 & 15a are similar to Part C 3f & g on the current form.

16. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?

Yes  No      Most recent year tested: / / / / /      Test pressure (psig): / / / / /

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       No      Most recent year conducted: / / / / /

Yes, but the point of the Accident was not identified as a dig site       No      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 checked="" 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: _____

Separate item on current form.

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?  Yes  No

6.a. If Yes, specify: (select all that apply)  Hurricane  Tropical Storm  Tornado  Other \_\_\_\_\_

**G3 – Excavation Damage** - only one **sub-cause** can be picked from shaded left-hand column

- Excavation Damage by Operator (First Party)
- Excavation Damage by Operator's Contractor (Second Party)
- Excavation Damage by Third Party

New to "Excavation Damage" cause category but similar questions appear on current liquid accident form.

**Complete Questions 1-5 ONLY IF the "Item Involved in Accident" (from PART C, Question 3) is Pipe or Weld.**

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

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

<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 _____	/	/	/	/	/

2. Do you have reason to believe that the internal inspection was completed BEFORE the damage was sustained?  Yes  No

3. 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

4. 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

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

5.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 _____	/	/	/	/	/

**Complete the following if Excavation Damage by Third Party is selected as the sub-cause.**

6. Did the Operator get prior notification of the excavation activity?  Yes  No

6.a If Yes, Notification received from: (select all that apply)  One-Call System  Excavator  Contractor  Landowner

Date of notification was removed.



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)

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**G4 - Other Outside Force Damage** - only one sub-cause can be picked from shaded left-hand column

<input type="checkbox"/> <b>Nearby Industrial, Man-made, or Other Fire/Explosion as Primary Cause of Accident</b>																																																																																											
<input type="checkbox"/> <b>Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation</b>	1. <b>Vehicle/Equipment operated by: (select only one)</b> <input type="radio"/> Operator <input type="radio"/> Operator's Contractor <input type="radio"/> Third Party																																																																																										
<input type="checkbox"/> <b>Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equipment or Vessels Set Adrift or Which Have Otherwise Lost Their Mooring</b>	2. <b>Select one or more of the following IF an extreme weather event was a factor:</b> <input type="radio"/> Hurricane <input type="radio"/> Tropical Storm <input type="radio"/> Tornado <input type="radio"/> Heavy Rains/Flood <input type="radio"/> Other _____																																																																																										
<input type="checkbox"/> <b>Routine or Normal Fishing or Other Maritime Activity NOT Engaged in Excavation</b>																																																																																											
<input type="checkbox"/> <b>Electrical Arcing from Other Equipment or Facility</b>																																																																																											
<input type="checkbox"/> <b>Previous Mechanical Damage NOT Related to Excavation</b>	<p><b>Complete Questions 3-7 ONLY IF the "Item Involved in Accident" (from PART C, Question 3) is Pipe or Weld.</b></p> <p>3. <b>Has one or more internal inspection tool collected data at the point of the Accident?</b>  <input type="radio"/> Yes    <input type="radio"/> No</p> <p>3.a <b>If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run:</b></p> <table border="0"> <tr> <td><input type="radio"/> Magnetic Flux Leakage</td> <td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td> </tr> <tr> <td><input type="radio"/> Ultrasonic</td> <td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input 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<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/></p> <p><b>Test pressure (psig):</b>    <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/></p> <p><input type="radio"/> No</p> <p>6. <b>Has one or more Direct Assessment been conducted on the pipeline segment?</b></p> <p><input type="radio"/> Yes, and an investigative dig was conducted at the point of the Accident          ⇒ <b>Most recent year conducted:</b>    <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/></p> <p><input type="radio"/> Yes, but the point of the Accident was not identified as a dig site          ⇒ <b>Most recent year conducted:</b>    <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/></p> <p><input type="radio"/> No</p> <p><i>(This section continued on next page with Question 7.)</i></p>	<input type="radio"/> Magnetic Flux Leakage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Ultrasonic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Geometry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Caliper	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Crack	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Hard Spot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Combination Tool	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Transverse Field/Triaxial	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Other _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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New to "Other Outside Force Damage" cause category but similar questions appear on current form.





Listed as "Material and Welds" on current form.

**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: (select all that apply)

- Field Examination
- Determined by Metallurgical Analysis
- Other Analysis
- Sub-cause is Tentative or Suspected; Still Under Investigation (Supplemental Report required)

Construction-, Installation-, or Fabrication-related

Original Manufacturing-related (NOT girth weld or other welds formed in the field)

2. List contributing factors: (select all that apply)

- Fatigue- or Vibration-related
  - Mechanically-induced prior to installation (such as during transport of pipe)
  - Mechanical Vibration
  - Pressure-related
  - Thermal
  - Other
- Mechanical Stress
- Other

Environmental Cracking-related

3. Specify:  Stress Corrosion Cracking  Sulfide Stress Cracking  
 Hydrogen Stress Cracking  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  No Most recent year tested:       Test pressure (psig):

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"/> <b>Malfunction of Control/Relief Equipment</b>	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"/> <b>Pump or Pump-related Equipment</b>	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"/> <b>Threaded Connection/Coupling Failure</b>	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"/> <b>Non-threaded Connection Failure</b>	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"/> <b>Defective or Loose Tubing or Fitting</b>	<div style="border: 1px solid red; padding: 2px; display: inline-block;">Replaced "Seal Failure" on current liquid form.</div>
<input type="checkbox"/> <b>Failure of Equipment Body (except Pump), Tank Plate, or other Material</b>	
<input type="checkbox"/> <b>Other Equipment Failure</b>	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"/> <b>Damage by Operator or Operator's Contractor NOT Related to Excavation and NOT due to Motorized Vehicle/Equipment Damage</b>	
<input type="checkbox"/> <b>Tank, Vessel, or Sump/Separator Allowed or Caused to Overfill or Overflow</b>	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"/> <b>Valve Left or Placed in Wrong Position, but NOT Resulting in a Tank, Vessel, or Sump/Separator Overflow or Facility Overpressure</b>	
<input type="checkbox"/> <b>Pipeline or Equipment Overpressured</b>	
<input type="checkbox"/> <b>Equipment Not Installed Properly</b>	
<input type="checkbox"/> <b>Wrong Equipment Specified or Installed</b>	
<input type="checkbox"/> <b>Other Incorrect Operation</b>	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: \_\_\_\_\_

Items 3-5.a are new; however, on the current form, "inadequate procedure" & "failure to follow procedure" appear as a type of incorrect operation.

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"/> <b>Miscellaneous</b>	1. Describe: _____ _____
<input type="checkbox"/> <b>Unknown</b>	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)

