

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: 2137-0047  
EXPIRATION DATE 1 /31/2023



U.S. Department of Transportation  
Pipeline and Hazardous Materials  
Safety Administration

### ACCIDENT REPORT – HAZARDOUS LIQUID AND CARBON DIOXIDE PIPELINE SYSTEMS

Report Date \_\_\_\_\_

No. \_\_\_\_\_  
(DOT Use Only)

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 2137-0047. Public reporting for this collection of information is estimated to be approximately 12 hours 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 <https://www.phmsa.dot.gov/pipeline/library/forms>.

**PART A – KEY REPORT INFORMATION**

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

A1. Operator's OPS-issued Operator Identification Number (OPID): / / / / / / / /

A2. Name of Operator: \_\_\_\_ auto-populated based on OPID \_\_\_\_\_

A3. Address of Operator:

A3a. \_\_\_\_ auto-populated based on OPID \_\_\_\_\_  
(Street Address)

A3b. \_\_\_\_ auto-populated based on OPID \_\_\_\_\_  
(City)

A3c. State: auto-populated based on OPID / / /

A3d. Zip Code: auto-populated based on OPID / / / / / - / / / / /

A4. Earliest local time (24-hr clock) and date an accident reporting criteria was met:

/ / / / / / / / / / / / / /  
Hour Month Day Year

A4a. Time Zone for local time (select only one)  Alaska  Eastern  Central  Hawaii-Aleutian  Mountain  Pacific.

A4b. Daylight Saving in effect?  Yes  No

A5. Location of Accident:

Latitude: / / / . / / / / / / / /

Longitude: - / / / / . / / / / / / / /

A6. 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: \_\_\_\_\_

A7. Estimated volume of commodity released unintentionally: / / / / / / / / / / Barrels

A8. Estimated volume of intentional and/or controlled release/blowdown: / / / / / / / / / / Barrels  
(only reported for HVL and CO<sub>2</sub> Commodities)

A9. Estimated volume of commodity recovered / / / / / / / / / / Barrels

A10. Were there fatalities?  Yes  No

If Yes, specify the number in each category:

A10a. Operator employees   /  /  /  /  /  

A10b. Contractor employees  
working for the Operator   /  /  /  /  /  

A10c. Non-Operator  
emergency responders   /  /  /  /  /  

A10d. Workers working on the  
right-of-way, but NOT  
associated with this Operator   /  /  /  /  /  

A10e. General public   /  /  /  /  /  

A10f. Total fatalities (sum of above) *calculated*

A11. Were there injuries requiring inpatient hospitalization?  Yes  No

If Yes, specify the number in each category:

A11a. Operator employees   /  /  /  /  /  

A11b. Contractor employees  
working for the Operator   /  /  /  /  /  

A11c. Non-Operator  
emergency responders   /  /  /  /  /  

A11d. Workers working on the  
right-of-way, but NOT  
associated with this Operator   /  /  /  /  /  

A11e. General public   /  /  /  /  /  

A11f. Total injuries (sum of above) *calculated*

A12. formerly E8. What was the Operator's initial indication of the Failure? (select only one)

- CPM leak detection system
- 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 \_\_\_\_\_

A12a. formerly E8.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

A13. Formerly A18.a Local time Operator identified failure \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
Hour Month Day Year

A14. formerly C2 Part of system involved in Accident: (select only one)

- Onshore Breakout Tank or Storage Vessel, Including Attached Appurtenances
- 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

A15. formerly B1 Auto-populated based on A14 Was the origin of the Accident onshore?

- Yes (Complete Questions B3-B12)
- No (Complete Questions B13-B15)

A16. Operational Status at time Operator identified failure (select only one)

- Post-Construction Commissioning
- Post-Maintenance/Repair
- Routine Start-Up
- Routine Shutdown
- Normal Operation, include pauses between batches and during maintenance
- Idle

A17. formerly A14. If Operational Status = Routine Start-Up or Normal Operation, was the pipeline/facility shut down due to the Accident?

- Yes
- No
- Explain: \_\_\_\_\_

If Yes, complete Questions A17.a and A17.b: (use local time, 24-hr clock)

A17a. formerly A14.a Local time and date of shutdown \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
Hour Month Day Year

A17b. formerly A14.b Local time pipeline/facility restarted \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  Still shut down\*  
Hour Month Day Year  
\*Supplemental Report required

If A12 = Notification from Emergency Responder, skip A18.a through A18.c.

A18a. Did the operator communicate with Local, State, or Federal Emergency Responders about the accident?  Yes  No

If No, skip A18b. and A18c

A18b. Which party initiated communication about the accident?  Operator  Local/State/Federal Emergency Responder

A18c. Local time of initial Operator and Local/State/Federal Emergency Responder communication

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
Hour Month Day Year

A19. formerly A18.b Local time Operator responders arrived on site \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
Hour Month Day Year

A20. Local time of confirmed discovery \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
Hour Month Day Year

A21a. formerly A7. Local time (24-hr clock) and date of initial operator report to the National Response Center :

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
Hour Month Day Year

A21b. formerly A6. Initial Operator National Response Center Report Number OR  NRC Notification Not Required OR  NRC Notification Required But Not Made

A21c. Additional NRC Report numbers submitted by the operator: \_\_\_\_\_

A22. formerly A15. Did the commodity ignite?  Yes  No If Yes, answer A22.a through d:



**PART B – ADDITIONAL LOCATION INFORMATION**

B1. formerly B7. Pipeline/Facility name: \_\_\_\_\_

B2. formerly B8. Segment name/ID: \_\_\_\_\_

**If Onshore:**

B3. State: / / /

B4. Zip Code: / / / / - / / / / /

B5. \_\_\_\_\_ B6. \_\_\_\_\_  
City County or Parish

B7. Operator-designated location: (select only one)  Milepost (specify in shaded area below)  
 Survey Station No. (specify in shaded area below)

B8 /

B9. Was this onshore Accident on Federal land?  Yes  No

B10. Location of Accident: (select only one)

- Totally contained on Operator-controlled property  Pipeline right-of-way
- Originated on Operator-controlled property, but then flowed or migrated off the property

B11. 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  
 Exposed due to loss of cover  In underground enclosed space (e.g., vault)  Other \_\_\_\_\_

B11a. Depth-of-Cover (in): / / / / / / OR  Unknown

- Aboveground ⇨ Specify:  Typical aboveground facility piping or appurtenance  Overhead crossing  Inside a building  
 In or spanning an open ditch  Inside other enclosed space  Other \_\_\_\_\_
- Transition Area ⇨ Specify:  Soil/air interface  Wall sleeve  Pipe support or other close contact area  Other \_\_\_\_\_

B12. Did the Accident occur in a crossing?:  Yes  No If B12 is Yes, specify type:

- 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: / / / / / / OR  Unknown

(select only one of the following)

- Shoreline/Bank/Marsh crossing
- Below water, pipe buried below bottom (NOT in bored/drilled crossing)
- Below water, pipe in bored/drilled crossing
- Below water, pipe on or above bottom

Is this water crossing 100 feet or more in length from high water mark to high water mark?  Yes  No

**If Offshore:**

B13. Approximate water depth (ft.) at the point of the Accident: / / / / / / / /

B14. Origin of Accident:  In State waters  
Specify: State: \_\_\_\_\_ Area: \_\_\_\_\_ Block/Tract #: / / / / / / / / Nearest County/Parish: \_\_\_\_\_  
 On the Outer Continental Shelf (OCS) (select only one)  OCS – Alaska  OCS- Atlantic  
 OCS-Gulf of Mexico  OCS – Pacific  
Specify: Area: \_\_\_\_\_ Block/Tract #: / / / / / / / /

B15. Area of Accident: (select only one)

- Shoreline/Bank/Marsh 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**

C1. Is the pipeline or facility:  
 Interstate  
 Intrastate

C2. reserved

C3. Item involved in Accident: *(select only one)*  
 Pipe ⇨ Specify:  Pipe Body  Pipe Seam  
If Pipe Body: Was this a puddle/spot weld?  Yes  No  
C3a. Nominal Pipe Size:  / / // / /  C3.b Wall thickness (in):  / // / / / /   
C3c. SMYS (Specified Minimum Yield Strength) of pipe (psi):  / / / // / / / /   
C3d. Pipe specification: \_\_\_\_\_ OR  Unknown  
C3e. Pipe Seam ⇨ Specify:  ERW - High Frequency  Single SAW  Flash Welded  
 ERW - Low Frequency  DSAW  Continuous Welded  Longitudinal ERW – Unknown Frequency  
 Furnace Butt Welded  Spiral Welded  Lap Welded  Seamless  
 Other, describe: \_\_\_\_\_  
C3f. Pipe manufacturer: \_\_\_\_\_ OR  Unknown  
C3g formerly C3.h Pipeline coating type at point of Accident  
⇨ Specify:  Fusion Bonded Epoxy (FBE)  Coal Tar  Asphalt  Polyolefin  Extruded Polyethylene  
 Epoxy other than FBE  Cold Applied Tape  Paint  Composite  None  Other, describe: \_\_\_\_\_  
C3h. Coating field applied?  Yes  No  Unknown  
 Weld, including heat-affected zone ⇨ Specify:  Pipe Girth Weld  Other Butt Weld  Fillet Weld  
If Pipe Girth Weld is selected, complete items C3a through h above. Are any of the C3b through h values different on either side of the girth weld?  Yes  No  
If Yes, enter the different value(s) below:  
C3i. Wall thickness (in):  / // / / / /   
C3j. SMYS (Specified Minimum Yield Strength) of pipe (psi):  / / / // / / / /   
C3k. Pipe specification: \_\_\_\_\_ OR  Unknown  
C3l. Pipe Seam ⇨ Specify:  ERW - High Frequency  Single SAW  Flash Welded  
 ERW - Low Frequency  DSAW  Continuous Welded  ERW – Unknown Frequency  
 Furnace Butt Welded  Spiral Welded  Lap Welded  Seamless  
 Other, describe: \_\_\_\_\_  
C3m. Pipe manufacturer: \_\_\_\_\_ OR  Unknown  
C3n. Pipeline coating type at point of Accident  
⇨ Specify:  Fusion Bonded Epoxy (FBE)  Coal Tar  Asphalt  Polyolefin  Extruded Polyethylene  
 Epoxy other than FBE  Cold Applied Tape  Paint  Composite  None  Other, describe: \_\_\_\_\_  
C3o. Coating field applied?  Yes  No  Unknown  
 Valve  Mainline ⇨ Specify:  Butterfly  Check  Gate  Plug  Ball  Globe  Other, describe: \_\_\_\_\_  
C3p. formerly C3.i Mainline valve manufacturer: \_\_\_\_\_ OR  Unknown  
 Relief Valve – including thermal and pressure. Report tank relief valves under the Tank/Vessel, Relief Valve  
 Auxiliary or Other Valve – report auxiliary valves on tanks under Tank/Vessel, Appurtenance  
 Pump, including auxiliary piping, connections, and equipment, but excluding product drain lines and tubing.  
C3q. Type of pump  
 Positive displacement  
 Centrifugal  
 Gear  
 Other (specify): \_\_\_\_\_  
C3r. Type of service  
 Mainline  
 Injection  
 Truck rack (if on terminal side of truck rack canopy)  
 Other (specify): \_\_\_\_\_  
 Meter/Prover, including auxiliary piping, connections, and equipment, but excluding product drain lines and tubing.  
 Scraper/Pig Trap, including auxiliary piping, connections, and equipment, but excluding product drain lines and tubing.  
 Sump, including auxiliary piping, connections, and equipment, but excluding product drain lines and tubing.

Filter, Strainer, Separator, including auxiliary piping, connections, and equipment, but excluding product drain lines and tubing.  
 Repair Sleeve or Clamp  
 Tapping Equipment  
 Tap Fitting (stopple, thread-o-ring, weld-o-let, etc.)  
 Flange Assembly, including Gaskets  
 Relief Lines and Relief Equipment  
 Drain Lines  
 Tubing, including Fittings  
   C3s. Tubing material  
      Stainless steel  
      Carbon steel  
      Copper  
      Other  
   C3t. Type of tubing  
      Rigid  
      Flexible  
 Instrumentation, including Programmable Logic Controllers and Controls  
 Tank/Vessel ⇒ C3u. Specify:    Single Bottom System    Double Bottom System    Tank Shell    Chime    Roof/Roof Seal  
    Roof Drain System    Mixer    Pressure Vessel Head or Wall    Appurtenance  
    Relief Valve        Other, describe: \_\_\_\_\_  
   C3v. formerly part of C2. Tank Type    Atmospheric    Pressurized  
 If C3v. = Pressurized:  
   C3v1. Tank Maximum Operating Pressure \_\_\_\_\_  
   C3v2. What is the set point of the primary pressure relief device on the tank? \_\_\_\_\_  
   C3v3. Did the thermal or pressure relief valve activate?    Yes    No  
   C3v4. Was the MOP of the tank exceeded?    Yes    No  
 If C3v = Atmospheric or Low Pressure:  
   C3v5. Safe-Fill-Level (in feet) at the time of the accident? \_\_\_\_\_  
   C3v6. Was the SafeFill-Level exceeded?    Yes    No  
   C3v7. formerly G1, 14.a Year of most recent API Std 653 Out-of-Service Inspection /\_/\_/\_/\_/\_/\_/ OR  None  
   C3v8. formerly G1, 14.b API Std 653 In-Service Inspection /\_/\_/\_/\_/\_/\_/ OR  No In-Service Inspection completed  
 Other \_\_\_\_\_ mandatory text field \_\_\_\_\_  
 C4. Year item involved in Accident was installed: /\_/\_/\_/\_/\_/\_/ OR  Unknown  
 C4a. Year item involved in Accident was manufactured: /\_/\_/\_/\_/\_/\_/ OR  Unknown

C5. Material involved in Accident: (*select only one*)  
 Carbon Steel  
 Material other than Carbon Steel ⇒ Specify: \_\_\_\_\_  
 C6. 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: \_\_\_\_\_

<b>PART D – ADDITIONAL CONSEQUENCE INFORMATION</b>
<p>D1. Wildlife impact:       <input type="radio"/> Yes   <input type="radio"/> No            D1a If Yes, specify all that apply:  <input type="checkbox"/> Fish/aquatic  <input type="checkbox"/> Birds  <input type="checkbox"/> Terrestrial</p> <p>D2. Soil contamination:   <input type="radio"/> Yes   <input type="radio"/> No</p> <p>D3. Long term impact assessment performed or planned:   <input type="radio"/> Yes   <input type="radio"/> No</p> <p>D4. Anticipated remediation:   <input type="radio"/> Yes   <input type="radio"/> No (not needed)            D4a. If Yes, specify all that apply:  <input type="checkbox"/> Surface water   <input type="checkbox"/> Groundwater   <input type="checkbox"/> Soil   <input type="checkbox"/> Vegetation   <input type="checkbox"/> Wildlife</p> <p>D5. Water contamination:   <input type="radio"/> Yes ⇒ (<i>Complete 5a – 5c below</i>)       <input type="radio"/> No</p> <p>D5a. Specify all that apply:  <input type="checkbox"/> Ocean/Seawater</p>





E1. Estimated pressure at the point and time of the Accident (psig):   /  /  /  /  /  /  /  /  /  

If C3. Is Tank/Vessel and C3v. is Atmospheric, do not answer E2. and E3.

E2. Maximum Operating Pressure (MOP) at the point and time of the Accident (psig) :   /  /  /  /  /  /  /  /  /  

E2a. Limiting factor establishing MOP (select only one):

- Internal Design Pressure §195.406(a)(1)
- Component Design Pressure §195.406(a)(2)
- SubPart E Pressure Test §195.406(a)(3)
- Excepted Component Pressure Test §195.406(a)(4)
- Four Hour Test or Operation §195.406(a)(5)
- Other; describe: \_\_\_\_\_

E2b. Date MOP established \_\_\_\_\_

E2c. Was the MOP established in conjunction with a reversal of flow direction?  Yes  No  Bi-Directional

If E2c = Yes, E2d. What is the date of the most recent surge analysis performed at the point of the Accident? \_\_\_\_\_

E3. Describe the pressure on the system or facility relating to the Accident: (*calculated*)

- Pressure did not exceed MOP
- Pressure exceeded MOP, but did not exceed 110% of MOP
- Pressure exceeded 110% of MOP

E4. 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?

- No
- Yes ⇨ (*Complete 4.a and 4.b below*)

E4a. Did the pressure exceed this established pressure restriction?  Yes  No

E4b. Was this pressure restriction mandated by PHMSA or the State?  PHMSA  State  Not mandated

If A14. is "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend", complete E5 through E7

E5. formerly E5.c Answer E5 only when both A23a and A23d are Valve Closure

Length of segment initially isolated between valves (ft):   /  /  /  /  

E6. formerly E5.d Is the pipeline configured to accommodate internal inspection tools?

- Yes
- 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 ⇨ Describe: \_\_\_\_\_

E7. formerly E5.e For this pipeline, are there operational factors which significantly complicate the execution of an internal inspection tool run?

- No
- Yes ⇨ Which operational factors complicate execution? (*select all that apply*)
  - Excessive debris or scale, wax, or other wall build-up
  - Low operating pressure(s)
  - Low flow or absence of flow
  - Incompatible commodity
  - Other ⇨ Describe: \_\_\_\_\_

E8. formerly E5.f Function of pipeline system: (*select only one*)

- > 20% SMYS Regulated Transmission  > 20% SMYS Regulated Gathering
- ≤ 20% SMYS Regulated Transmission  ≤ 20% SMYS Regulated Gathering

E9. Was a Supervisory Control and Data Acquisition (SCADA)-based system in place on the pipeline or facility involved in the Accident?

No

Yes ➔

E9a. Was it operating at the time of the Accident?  Yes  No

E9b. Was it fully functional at the time of the Accident?  Yes  No

E9c. Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the initial indication of the Accident?  Yes  No

E9d. Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the confirmed discovery of the Accident?  Yes  No

E10. Was a CPM leak detection system in place on the pipeline or facility involved in the Accident?

No

Yes ➔

E10a. Was it operating at the time of the Accident?  Yes  No

E10b. Was it fully functional at the time of the Accident?  Yes  No

E10c. Did CPM leak detection system information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the initial indication of the Accident?  Yes  No

E10d. Did CPM leak detection system information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the confirmed discovery of the Accident?  Yes  No

E11. 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: \_\_\_\_\_

<b>PART F – DRUG &amp; ALCOHOL TESTING INFORMATION</b>
<p>F1. As a result of this Accident, were any Operator employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug &amp; Alcohol Testing regulations?</p> <p><input type="radio"/> No</p> <p><input type="radio"/> Yes ⇨ F1a. Specify how many were tested: <u>  /  /  /  </u></p> <p style="padding-left: 40px;">F1b. Specify how many failed: <u>  /  /  /  </u></p> <p>F2. 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 &amp; Alcohol Testing regulations?</p> <p><input type="radio"/> No</p> <p><input type="radio"/> Yes ⇨ F2a. Specify how many were tested: <u>  /  /  /  </u></p> <p style="padding-left: 40px;">F2b. Specify how many failed: <u>  /  /  /  </u></p>

<b>PART G – APPARENT CAUSE</b>	<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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<b>G1 - Corrosion Failure</b> – *only one sub-cause can be picked from shaded left-hand column
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<input type="checkbox"/> <b>External Corrosion</b>	<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>2a. If 2 is Stray Current, specify <input type="radio"/> Alternating Current    <input type="radio"/> Direct Current    AND</p> <p>2b. Describe the stray current source: _____</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 or submerged?</p> <p><input type="radio"/> Yes ⇨ 4a. 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;">4b. 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;">4c. Has one or more Cathodic Protection Survey been conducted at the point of the Accident? <i>(select all that apply)</i></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: 80px;">Describe other CP survey _____</p> <p style="padding-left: 40px;"><input type="radio"/> No</p> <p style="padding-left: 40px;"><input type="radio"/> No ⇨ 4d. 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    <input type="radio"/> N/A Bare/Ineffectively Coated Pipe</p>
--	--

<input type="checkbox"/> <b>Internal Corrosion</b>	<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"/> Dead-Leg    <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>
--	---

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

<b>G3 – Excavation Damage</b> - *only one <b>sub-cause</b> can be picked from shaded left-hand column	
<input type="checkbox"/> <b>Excavation Damage by Operator (First Party)</b>	
<input type="checkbox"/> <b>Excavation Damage by Operator's Contractor (Second Party)</b>	
<input type="checkbox"/> <b>Excavation Damage by Third Party</b>	
<input type="checkbox"/> <b>Previous Damage due to Excavation Activity</b>	
<p><b>Complete the following if Excavation Damage by Third Party is selected as the sub-cause.</b></p> <p>1. Did the Operator get prior notification of the excavation activity?    <input type="radio"/> Yes    <input type="radio"/> No</p>	

- 1a. If Yes, Notification received from: *(select all that apply)*  One-Call System  Excavator  Contractor  Landowner  
1b. Per the primary Accident Investigator results, did State law exempt the excavator from notifying the one-call center?  
 Yes  No  Unknown  
If yes, answer 1c through 1e.  
1c. select one of the following:  
 Excavator is exempt  
 Activity is exempt and did not exceed the limits of the exemption  
 Activity is exempt and exceeded the limits of the exemption  
 Other mandatory text field:  
1d. Exempting authority: \_\_\_\_\_  
1e. Exempting criteria: \_\_\_\_\_

**Complete the following mandatory CGA-DIRT Program questions if any Excavation Damage sub-cause is selected.**

2. Do you want PHMSA to upload the following information to CGA-DIRT (www.cga-dirt.com)?  Yes  No
3. Right-of-Way where event occurred: *(select all that apply)*
- Public ➔ Specify:  City Street  State Highway  County Road  Interstate Highway  Other  
 Private ➔ Specify:  Private Landowner  Private Business  Private Easement  
 Pipeline Property/Easement  
 Power/Transmission Line  
 Railroad  
 Dedicated Public Utility Easement  
 Federal Land  
 Unknown/Other
- 4 Was the facility part of a Joint Trench?  Yes  No
5. Did this event involve a Cross Bore?  Yes  No
6. Measured Depth from Grade
- Embedded in Concrete/Asphalt Pavement  <18" /46 cm  18" – 36" /46 cm – 91 cm  > 36" / 91 cm  
 Measured depth From Grade \_\_\_\_\_ in/cm
7. Type of excavator: *(select only one)*
- Contractor  County  Developer  Farmer  Municipality  Occupant  
 Railroad  State  Utility  Unknown/Other
8. Type of excavation equipment: *(select only one)*
- Auger  Backhoe/Trackhoe  Boring  Drilling  Directional Drilling  
 Explosives  Farm Equipment  Grader/Scraper  Hand Tools  Milling Equipment  
 Probing Device  Trencher  Vacuum Equipment  Bulldozer  Unknown/Other
9. Type of work performed: *(select only one)*
- Agriculture  Cable TV  Curb/Sidewalk  Building Construction  Building Demolition  
 Drainage  Driveway  Electric  Engineering/Surveying  Fencing  
 Grading  Irrigation  Landscaping  Liquid Pipeline  Milling  
 Natural Gas  Pole  Public Transit Authority  Railroad Maintenance  Road Work  
 Sewer (Sanitary/Storm)  Site Development  Steam  Storm Drain/Culvert  Street Light  
 Telecommunications  Traffic Signal  Traffic Sign  Water  Waterway Improvement  
 Data not collected  Unknown/Other
10. Was the One-Call Center notified?  Yes  No If No, skip to question 11  
\*10a. If Yes, specify ticket number: \_\_\_\_\_  
\*10b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified:  
\*10 c. Was work area white lined?  No  Yes  Unknown
- \_\_\_\_\_
11. Type of Locator:  Facility Owner  Contract Locator  Unknown/Other
12. Were facility locate marks visible in the area of excavation ?  No  Yes  Unknown/
13. Did the damage cause an interruption in service?  No  Yes  Unknown/Other  
11a. If Yes, specify duration of the interruption: \_\_\_\_/\_\_\_\_/\_\_\_\_/\_\_\_\_ hours
14. 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):*

**Notification Issue**

- No notification made to the One-Call Center/811
- Excavator dug outside area described on ticket
- Excavator dug prior to valid start date/time
- Excavator dug after valid ticket expired
- Excavator provided incorrect notification information

**Excavation Issue**

- Excavator dug prior to verifying marks by test-hole (pothole)
- Excavator failed to maintain clearance after verifying marks
- Excavator failed to protect/shore/support facilities
- Improper backfilling practices
- Marks faded or not maintained
- Improper excavation practice not listed above

**Locating Issue**

Facility not marked due to:

- Abandoned facility
- Incorrect facility records/maps
- Locator error
- No response from operator/contract locator
- Incomplete marks at damage location
- Tracer wire issue
- Unlocatable Facility

Facility marked inaccurately due to:

- Abandoned facility
- Incorrect facility records/maps
- Locator error
- Tracer wire issue

**Miscellaneous Root Causes**

- Deteriorated facility
- One Call Center Error
- Previous damage
- Root Cause not listed (comment required) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**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. Vehicle/Equipment operated by: <i>(select only one)</i> <input type="radio"/> Operator <input type="radio"/> Operator's Contractor <input type="radio"/> Third Party If this sub-section is picked, please complete questions 5-11 below
<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. Select one or more of the following IF an extreme weather event was a factor: <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>	
<input type="checkbox"/> <b>Intentional Damage</b>	3. Specify: <input type="checkbox"/> Vandalism <input type="checkbox"/> Terrorism <input type="checkbox"/> Theft of transported commodity <input type="checkbox"/> Theft of equipment <input type="checkbox"/> Other _____
<input type="checkbox"/> <b>Other Outside Force Damage</b>	4. Describe: _____

**Complete the following if Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation sub-cause is selected.**

5. Was the driver of the vehicle or equipment issued one or more citations related to the accident?    Yes    No    Unknown  
If 5 is Yes, what was the nature of the citations (select all that apply)  
5a. Excessive Speed  
5b. Reckless Driving  
5c. Driving Under the Influence  
5e. Other, describe: \_\_\_\_\_
6. Was the driver under control of the vehicle at the time of the collision?    Yes    No    Unknown
7. Estimated speed of the vehicle at the time of impact (miles per hour)? \_\_\_\_\_ or  Unknown
8. Type of vehicle? (select only one)    Motorcycle/ATV    Passenger Car    Small Truck    Bus    Large Truck
9. Where did the vehicle travel from to hit the pipeline facility? (select only one)  
 Roadway    Driveway    Parking Lot    Loading Dock    Off-Road
10. Shortest distance from answer in 9. to the damaged pipeline facility (in feet): \_\_\_\_\_
11. At the time of the accident, were protections installed to protect the damaged pipeline facility from vehicular damage?    Yes    No  
If 11 is Yes, specify type of protection (select all that apply):  
11a. Bollards/Guard Posts  
11b. Barricades – include Jersey barriers and fences in instructions  
11c. Guard Rails  
11d. Other, describe: \_\_\_\_\_

<b>G5 - Material Failure of Pipe or Weld</b>		<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>	
		*Only one <b>sub-cause</b> 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"/> <b>Design-, Construction-, Installation-, or Fabrication-related</b>	2. List contributing factors: <i>(select all that apply)</i> <input type="checkbox"/> Fatigue- or Vibration-related: <input type="checkbox"/> Mechanically-induced prior to installation (such as during transport of pipe) <input type="checkbox"/> Mechanical Vibration <input type="checkbox"/> Pressure-related <input type="checkbox"/> Thermal <input type="checkbox"/> Other _____ <input type="checkbox"/> Mechanical Stress <input type="checkbox"/> Other _____		
<input type="checkbox"/> <b>Original Manufacturing-related (NOT girth weld or other welds formed in the field)</b>			
<input type="checkbox"/> <b>Environmental Cracking-related</b>	3. Specify: <input type="checkbox"/> Stress Corrosion Cracking <input type="checkbox"/> Sulfide Stress Cracking <input type="checkbox"/> Hydrogen Stress Cracking <input type="checkbox"/> Hard Spot <input type="checkbox"/> Other _____		
<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> <input type="checkbox"/> Dent <input type="checkbox"/> Gouge <input type="checkbox"/> Pipe Bend <input type="checkbox"/> Arc Burn <input type="checkbox"/> Crack <input type="checkbox"/> Lack of Fusion <input type="checkbox"/> Lamination <input type="checkbox"/> Buckle <input type="checkbox"/> Wrinkle <input type="checkbox"/> Misalignment <input type="checkbox"/> Burnt Steel <input type="checkbox"/> 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"/> Stopples/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>	
<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
  - Improper maintenance
  - 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
  - Erosion/Abnormal Wear
  - 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: \_\_\_\_\_
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
- 5a. 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: comment field: <input type="radio"/> Investigation complete, cause of Accident unknown. Mandatory <input type="radio"/> Still under investigation, cause of Accident to be determined* (*Supplemental Report required)

**PART J – COMPLETED INTEGRITY INSPECTIONS**

Formerly at multiple locations in Part G

Complete the following if the "Item Involved in Accident" (from PART C, Question 3) is Pipe or Weld and the "Cause" (from Part G) is: Corrosion (any subCause in Part G1); or Previous Damage due to Excavation Activity (subCause in Part G3); or Previous Mechanical Damage NOT Related to Excavation (subCause in Part G4); or Material Failure of Pipe or Weld (any subCause in Part G5)

J1. Have internal inspection tools collected data at the point of the Accident?

Yes  No

J1a. If Yes, for each tool and technology used provide the information below for the most recent and previous tool runs:

Axial Magnetic Flux Leakage

Most recent run Year: \_\_\_\_\_

Most recent run Propulsion Method (select only one):  Free Swimming  Tethered

Most recent run Attuned to Detect (select only one):  Metal Loss  Hard Spots  Girth Weld Anomalies

Other Describe: \_\_\_\_\_

If Metal Loss, specify (select only one):  High Resolution  Standard Resolution

Other Describe: \_\_\_\_\_

Previous run Year: \_\_\_\_\_

Previous run Propulsion Method (select only one):  Free Swimming  Tethered

Previous run Attuned to Detect (select only one):  Metal Loss  Hard Spots  Girth Weld Anomalies

Other Describe: \_\_\_\_\_

If Metal Loss, specify (select only one):  High Resolution  Standard Resolution

Other Describe: \_\_\_\_\_

Circumferential/Transverse Wave Magnetic Flux Leakage

Most recent run Year: \_\_\_\_\_

Most recent run Propulsion Method (select only one):  Free Swimming  Tethered

Most recent run Resolution (select only one):  High Resolution  Standard Resolution

Other Describe: \_\_\_\_\_

Previous run Year: \_\_\_\_\_

Previous run Propulsion Method (select only one):  Free Swimming  Tethered

Previous run Resolution (select only one):  High Resolution  Standard Resolution

Other Describe: \_\_\_\_\_

Ultrasonic

Most recent run Year: \_\_\_\_\_

Most recent run Propulsion Method (select only one):  Free Swimming  Tethered

Most recent run Attuned to (select only one)  Wall Measurement  Crack

Other Describe: \_\_\_\_\_

If Attuned to Wall Measurement, most recent run Metal Loss Resolution (select only one):

Standard Resolution  Other Describe: \_\_\_\_\_

Previous run Year: \_\_\_\_\_

Previous run Propulsion Method (select only one):  Free Swimming  Tethered

Most recent run Attuned to (select only one)  Wall Measurement  Crack

Other Describe: \_\_\_\_\_

If Attuned to Wall Measurement, most recent run Metal Loss Resolution (select only one):

Standard Resolution  Other Describe: \_\_\_\_\_

Geometry/Deformation

Most recent run Year: \_\_\_\_\_

Most recent run Propulsion Method (select only one):  Free Swimming  Tethered

Most recent run Resolution (select only one):  High Resolution  Standard Resolution

Other Describe: \_\_\_\_\_

Most recent run Measurement Cups (select only one):  Inside ILI Cups  No Cups

Previous run Year: \_\_\_\_\_

Previous run Propulsion Method (select only one):  Free Swimming  Tethered

Previous run Resolution (select only one):  High Resolution  Standard Resolution

Other Describe: \_\_\_\_\_

Previous run Measurement Cups (select only one):  Inside ILI Cups  No Cups

- Electromagnetic Acoustic Transducer (EMAT)
  - Most recent run Year: \_\_\_\_\_
  - Most recent run Propulsion Method (select only one):  Free Swimming  Tethered
  - Previous run Year: \_\_\_\_\_
  - Previous run Propulsion Method (select only one):  Free Swimming  Tethered
  
- Cathodic Protection Current Measurement (CPCM)
  - Most recent run Year: \_\_\_\_\_
  - Most recent run Propulsion Method (select only one):  Free Swimming  Tethered
  - Previous run Year: \_\_\_\_\_
  - Previous run Propulsion Method (select only one):  Free Swimming  Tethered
  
- Other, specify tool: \_\_\_\_\_
  - Most recent run Year: \_\_\_\_\_
  - Most recent run Propulsion Method (select only one):  Free Swimming  Tethered
  - Previous run Year: \_\_\_\_\_
  - Previous run Propulsion Method (select only one):  Free Swimming  Tethered

**Answer J1.b only when the cause is:  
 Previous Damage due to Excavation Activity (subCause in Part G3); or  
 Previous Mechanical Damage NOT Related to Excavation (subCause in Part G4)**

J1b. Do you have reason to believe that the internal inspection was completed BEFORE the damage was sustained?  Yes  No

J2. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?  
 (initial post construction pressure test is NOT reported here)

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

J3. Has 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

If J3 is Yes, J3a. For each type, indicate the year of the most recent assessment:

External Corrosion Direct Assessment (ECDA) / / / / /  
 Other, specify type: / / / / /

J4. Has one or more non-destructive examination been conducted prior to the Accident at the point of the Accident since January 1, 2002?

- Yes  No

J4a. If Yes, for each examination conducted, 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, specify type / / / / /

**PART K – CONTRIBUTING FACTORS**

The Apparent Cause of the accident is contained in Part G. Do not report the Apparent Cause again in this Part K. If Contributing Factors were identified during a root cause analysis, select all that apply below and explain each in the Narrative:

**External Corrosion**

- External Corrosion, Galvanic
- External Corrosion, Atmospheric
- External Corrosion, Stray Current Induced
- External Corrosion, Microbiologically Induced
- External Corrosion, Selective Seam

**Internal Corrosion**

- Internal Corrosion, Corrosive Commodity
- Internal Corrosion, Water drop-out/Acid
- Internal Corrosion, Microbiological
- Internal Corrosion, Erosion

**Pipe/Weld Failure**

- Design-related
- Construction-related
- Installation-related
- Fabrication-related
- Original Manufacturing-related
- Environmental Cracking-related, Stress Corrosion Cracking
- Environmental Cracking-related, Sulfide Stress Cracking
- Environmental Cracking-related, Hydrogen Stress Cracking
- Environmental Cracking-related, Hard Spot

<p><b>Natural Forces</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Earth Movement, NOT due to Heavy Rains/Floods</li> <li><input type="checkbox"/> Heavy Rains/Floods</li> <li><input type="checkbox"/> Lightning</li> <li><input type="checkbox"/> Temperature</li> <li><input type="checkbox"/> High Winds</li> <li><input type="checkbox"/> Tree/Vegetation Root</li> </ul> <p><b>Excavation Damage</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Excavation Damage by Operator (First Party)</li> <li><input type="checkbox"/> Excavation Damage by Operator's Contractor (Second Party)</li> <li><input type="checkbox"/> Excavation Damage by Third Party</li> <li><input type="checkbox"/> Previous Damage due to Excavation Activity</li> </ul> <p><b>Other Outside Force</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Nearby Industrial, Man-made, or Other Fire/Explosion</li> <li><input type="checkbox"/> Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation</li> <li><input type="checkbox"/> Damage by Boats, Barges, Drilling Rigs, or Other Adrift Maritime Equipment</li> <li><input type="checkbox"/> Routine or Normal Fishing or Other Maritime Activity NOT Engaged in Excavation</li> <li><input type="checkbox"/> Electrical Arcing from Other Equipment or Facility</li> <li><input type="checkbox"/> Previous Mechanical Damage NOT Related to Excavation</li> <li><input type="checkbox"/> Intentional Damage</li> </ul>	<p><b>Equipment Failure</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Malfunction of Control/Relief Equipment</li> <li><input type="checkbox"/> Pump or Pump-related Equipment</li> <li><input type="checkbox"/> Threaded Connection/Coupling Failure</li> <li><input type="checkbox"/> Non-threaded Connection Failure</li> <li><input type="checkbox"/> Defective or Loose Tubing or Fitting</li> <li><input type="checkbox"/> Failure of Equipment Body (except Compressor), Vessel Plate, or other Material</li> </ul> <p><b>Incorrect Operation</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Damage by Operator or Operator's Contractor NOT Excavation and NOT Vehicle/Equipment Damage</li> <li><input type="checkbox"/> Tank, Vessel, or Sump/Separator Allowed or Caused to Overfill or Overflow</li> <li><input type="checkbox"/> Valve Left or Placed in Wrong Position, but NOT Resulting in Overpressure</li> <li><input type="checkbox"/> Pipeline or Equipment Overpressured</li> <li><input type="checkbox"/> Equipment Not Installed Properly</li> <li><input type="checkbox"/> Wrong Equipment Specified or Installed</li> <li><input type="checkbox"/> Inadequate Procedure</li> <li><input type="checkbox"/> No procedure established</li> <li><input type="checkbox"/> Failure to follow procedures</li> </ul>
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**PART H – NARRATIVE DESCRIPTION OF THE ACCIDENT**

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**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
Local Contact Name: optional Local Contact Email: optional Local Contact Phone: optional	
Authorized Signer's Name	<b>Date</b> Authorized Signer Telephone Number
Authorized Signer's Title	Authorized Signer's E-mail Address

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## GENERAL INSTRUCTIONS

Each operator of a hazardous liquid or carbon dioxide pipeline system shall file Form PHMSA F7000-1 for an accident that meets the criteria in 49 CFR §195.50 as soon as practicable but not more than 30 days after discovery of the accident. Requirements for submitting reports are in §195.54 and §195.58.

Releases during maintenance activities are not to be reported if the spill was less than 5 barrels, not otherwise reportable under 49 CFR §195.50, did not result in water pollution as described by 49 CFR §195.52(a)(4), was confined to company property or pipeline right-of-way, and was cleaned up promptly. Any spill of 5 gallons or more to water during a maintenance activity is required to be reported.

Form PHMSA F 7000-1 and these instructions can be found on <http://phmsa.dot.gov/pipeline/library/forms>. The applicable documents are included in the section titled Accidents/Incidents/Annual Reporting Forms.

## ONLINE REPORTING REQUIREMENTS

Accident Reports must be submitted online through the PHMSA Portal at <https://portal.phmsa.dot.gov/portal>, unless an alternate method is approved (see Alternate Reporting Methods below).

You will not be able to submit reports until you have met all of the Portal registration requirements – see [http://opsweb.phmsa.dot.gov/portal\\_message/PHMSA\\_Portal\\_Registration.pdf](http://opsweb.phmsa.dot.gov/portal_message/PHMSA_Portal_Registration.pdf). Completing these registration requirements could take several weeks. Plan ahead and register well in advance of the report due date.

Use the following procedure for online reporting:

1. Go to the PHMSA Portal at <https://portal.phmsa.dot.gov/portal>
2. Enter PHMSA Portal Username and Password ; press *enter*
3. Select OPID; press “*continue*” button.
4. On the left side menu under “Incident/accident (2010 to present)” select “**ODES 2.0**”
5. Under “**Create Reports**” on the left side of the screen, select “Hazardous Liquid” and proceed with entering your data.
6. Click “**Submit**” when finished with your data entry to have your report uploaded to PHMSA’s database as an official submission of an Accident Report; or click

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“**Save**” which doesn’t submit the report to PHMSA but stores it in a draft status to allow you to come back to complete your data entry and report submission at a later time. *Note: The “Save” feature will allow you to start a report and save a draft of it which you can print out and/or save as a PDF to email to colleagues in order to gather additional information and then come back to accurately complete your data entry before submitting it to PHMSA.*

7. Once you click “**Submit**”, the system will check if all applicable portions of the report have been completed. If portions are incomplete, a listing of these portions will appear above the row of Parts, and the report will not be submitted until all required items are complete. If all applicable portions have been completed, the system will show your Saved Incident/Accident Reports in the top portion of the screen and your Submitted Incident/Accident Reports in the bottom portion of the screen. *Note: To confirm that your report was successfully submitted to PHMSA, look for it in the bottom portion of the screen where you can also view a PDF of what you submitted.*

**Supplemental Report Filing** – Follow Steps 1 through 4 above, and double-click a submitted report from the Submitted Incident/Accident Reports list. The report will default to a “Read Only” mode that is pre-populated with the data you submitted previously. To create a supplemental report, click on “Create Supplemental” found in the upper right corner of the screen. At this point, you can amend your data and make an official submission of the report to PHMSA as either a Supplemental Report or as a Supplemental Report *plus* Final Report (see “Specific Instructions, PART A, Report Type”), or you can use the “**Save**” feature to create a draft of your Supplemental Report to be submitted at some future date.

#### **Alternate Reporting Methods**

Operators for whom electronic reporting imposes an undue burden and hardship may submit a written request for an alternate reporting method. Operators must follow the requirements in §195.58(d) to request an alternate reporting method and must comply with any conditions imposed as part of PHMSA’s approval of an alternate reporting method.

### **RETRACTING A 30-DAY WRITTEN REPORT**

An operator who reports an accident in accordance with §195.54 (oftentimes referred to as a 30-day written report) and upon subsequent investigation determines that the event did not meet the criteria in §195.50 may request that the report be retracted. Requests to retract a 30-day written report are to be emailed to [InformationResourcesManager@dot.gov](mailto:InformationResourcesManager@dot.gov). Requests are to include the following information:

- a. The Report ID (the unique 8-digit identifier assigned by PHMSA)
- b. Operator name
- c. PHMSA-issued OPID number
- d. The number assigned by the National Response Center (NRC) when an immediate notice was made in accordance with §195.52. If Supplemental Reports were made to the NRC for the event, list all NRC report numbers associated with the event.



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- e. Date of the event
- f. Location of the event
- g. A brief statement as to why the report should be retracted.

Note: PHMSA no longer requests that operators rescind erroneously reported “Immediate Notices” filed with the NRC in accordance with §195.52 (oftentimes referred to as “Telephonic Reports”).

## SPECIAL INSTRUCTIONS

Certain data fields must be completed before an Original Report will be accepted. An Original Report will not be able to be submitted online until the required information has been provided, although your partially completed form can be saved online so that you can return at a later time to provide the missing information.

1. An entry should be made in each applicable space or check box, unless otherwise directed by the section instructions.
2. If the data is unavailable, enter “Unknown” for text fields and leave numeric fields and fields using check boxes or “radio” buttons blank.
3. Estimate data only if necessary. Provide an estimate in lieu of answering a question with “Unknown” or leaving the field blank. Estimates should be based on best-available information and reasonable effort.
4. For unknown or estimated data entries, the operator should file a Supplemental Report when additional information becomes available.
5. If the question is not applicable, please enter “N/A” for text fields and leave numeric fields and fields using check boxes or “radio” buttons blank. Do not enter zero unless this is the actual value being submitted for the data in question.
6. If **OTHER** is checked for any answer to a question, include an explanation or description on the line provided, making it clear why “Other” was the necessary selection.
7. Pay close attention to each question for the phrase:
  - a. *(select all that apply)*
  - b. *(select only one)*

If the phrase does not exist for a given question, then “select only one” should apply. “Select only one” means that you should select the single, primary, or most applicable answer. **DO NOT SELECT MORE ANSWERS THAN REQUESTED.** “Select all that apply” requires that all applicable answers (one or more than one) be selected.

8. **Date format** = mm/dd/yy or for year = /yyyy/

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9. **Time format:** All times are reported as a 24-hour clock:

**Time format Examples:**

- a. (0000) = midnight = /0/0/0/0/
- b. (0800) = 8:00 a.m. = /0/8/0/0/
- c. (1200) = Noon = /1/2/0/0/
- d. (1715) = 5:15 p.m. = /1/7/1/5/
- e. (2200) = 10:00 p.m. = /2/2/0/0/

**Local time** always refers to time at the site of the accident. Note that time zones at the accident site may be different than the time zone for the person discovering or reporting the event. For example, if a release occurs at a facility in Denver, Colorado at 2:00 pm MST, but an individual located in Houston is filing the report after having been notified at 3:00 pm CST, the time of the accident is to be reported as 1400 hours based on the time in Denver, which is the physical site of the accident.

**PART A – GENERAL REPORT INFORMATION**

**Report Type: (select all that apply)**

Select the appropriate report box or boxes to indicate the type of report being filed. Depending on the descriptions below, the following combinations of boxes - and only one of these combinations - may be selected:

- Original Report only
- Original Report *plus* Final Report
- Supplemental Report only
- Supplemental Report *plus* Final Report

**Original Report**

Select if this is the **FIRST** report filed for this accident and you expect that additional or updated information will be provided later.

**Original Report** *plus*  **Final Report**

Select **both** Original Report and Final Report if **ALL** of the information requested is known and can be provided at the time the initial report is filed, including final property damage costs and apparent failure cause information. If new, updated, and/or corrected information becomes available, you are still able to file a Supplemental Report.

**Supplemental Report**

Select only if you have already filed an Original Report **AND** you are now providing new, updated, and/or corrected information, but you are not yet ready to submit a Final Report.

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Multiple Supplemental Reports are to be submitted, as necessary, in order to provide new, updated, and/or corrected information *when it becomes available* and, per §195.54(b)15(c), each Supplemental Report containing new, updated, and/or corrected information is to be filed within 30 days. Submission of new, updated, and/or corrected information is NOT to be delayed in order to accumulate “enough” to “warrant” a Supplemental Report, or to complete a Final Report. ***Supplemental Reports must be filed within 30 days following the Operator’s awareness of new, updated, and/or corrected information.*** Failure to comply with these requirements can result in enforcement actions, including the assessment of civil penalties as provided in 49 USC 60122.

In cases where an accident results in long-term remediation, an operator may cease filing Supplemental Reports in the following situations and, instead, file a Final Report even when additional remediation costs and recovery of released commodity are still occurring:

1. When the accident response consists only of long-term remediation and/or monitoring which is being conducted under the auspices of an authorized governmental agency or entity.
2. When the estimated final costs and volume of commodity recovered can be predicted with a reasonable degree of certainty.
3. When the volume of commodity recovered over time is consistently decreasing to the point where an estimated total volume of commodity recovered can be predicted with a reasonable degree of accuracy.
4. When the operator can justify (and explain in the Part H – Narrative) that the continuation of Supplemental Report filings in the future will not provide any essential information which will be critically different than that contained in a Final Report filed currently.

In any of these cases, though, if the reported total volume of commodity released or other previously reported data other than “Estimated cost of Operator’s environmental remediation” or “Estimated volume of commodity recovered” is found to be inaccurate, a Supplemental Report is still required.

For Supplemental Reports filed online, all data previously submitted will automatically populate in the form. Page through the form to make edits and additions where needed.

**Supplemental Report**    *plus*     **Final Report**

If an Original Report has already been filed AND new, updated, and/or corrected information is now being submitted via a Supplemental Report AND the operator is reasonably certain that no further information will be forthcoming, then Final Report is to also be selected along with Supplemental Report.

If you subsequently find that new, updated, and/or corrected information needs to be provided, submit another Supplemental Report.

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**A1. Operator’s OPS -Issued Operator Identification Number (OPID)**

For online entries, the OPID will automatically populate based on the selection you made when entering the Portal. If you have log-in credentials for multiple OPID, be sure the report is being created for the appropriate OPID. Contact PHMSA’s Information Resources Manager at 202-366-8075 if you need assistance with an OPID. Business hours are 8:30 AM to 5:00 PM Eastern Time.

**A2. Name of Operator**

This is the company name associated with the OPID. For online entries, the name will automatically populate based on the OPID entered in A1. If the name that appears is not correct, you need to submit an Operator Name Change (Type A) Notification.

**A3. Address of Operator**

This is the headquarters address associated with the OPID. For online entries, the address will automatically populate based on the OPID entered in A1. If the address that appears is not correct, you need to change it in the online Contacts module.

**A4. Earliest local time (24-hour clock) and date an accident reporting criteria was met.**

Enter the earliest local date/time an accident reporting criteria was met. In most cases this time will be the same as when the operator identified the failure, which is reported in A13. In some cases, this date/time will be prior to the operator’s identification of the failure and must be estimated based on information gathered during the investigation. For example, if a small leak was undetectable by SCADA or leak detection systems and was not identified by the Operator until there were visible signs on the ground surface, the date/time a reporting criteria was met must be estimated.

See “Special Instructions”, numbers 8 and 9 for examples of **Date format** and **Time format** expressed as a 24-hour clock.

A4a. Select the local time zone where the Accident occurred (select only one).

A4b. Select “Yes” if Daylight Saving was in effect at the time of the Accident, or “No” if it was not.

**A5. Location of Accident**

The latitude and longitude of the accident are to be reported as Decimal Degrees with a minimum of 5 decimal places (e.g. Lat: 38.89664 Long: -77.04327), using the WGS84 datums.

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If you have coordinates in degrees/minutes or degrees/minutes/seconds use the formula below to convert to decimal degrees:

$$\text{degrees} + (\text{minutes}/60) + (\text{seconds}/3600) = \text{decimal degrees}$$

e.g.  $38^{\circ} 53' 47.904'' = 38 + (53/60) + (47.904/3600) = 38.89664^{\circ}$

All locations in the United States will have a negative longitude coordinate, **which has already been included on the data entry form so that operators do not have to enter the negative sign.**

If you cannot locate the accident with a GPS or some other means, there are online tools that may assist you at <http://viewer.nationalmap.gov/viewer/>.

#### A6. formerly A8. **Commodity Released**

Select only one primary description of the commodity and then, where applicable, the secondary description of the commodity, based on the predominant volume released. Only releases of transported commodities are reportable.

**Crude Oil**

**Refined and/or Petroleum Product (non-HVL) which is a Liquid at Ambient Conditions**

**Refined and/or Petroleum Product** includes gasoline, diesel, jet fuel, kerosene, fuel oils, or other refined or petroleum products which are a liquid at ambient conditions. They are flammable, toxic, or corrosive products obtained from distilling or processing of crude oil, unfinished oils, natural gas liquids, blend stocks, and other miscellaneous hydrocarbon compounds. For a non-HVL petrochemical feedstock, such as propylene, report as “other” and specify the name of the commodity (e.g., “propylene”) in the space provided.

**HVL or Other Flammable or Toxic Fluid which is a Gas at Ambient Conditions**

**Highly Volatile Liquids (HVLs)** are hazardous liquids or liquid mixtures which will form a vapor cloud when released to the atmosphere and have a vapor pressure exceeding (40 psia) 276 kPa at 37.8 C.

**Other Flammable or Toxic Fluids** are those defined under 49 CFR 173.120 Class 3—Definitions

Other flammable or toxic fluids which fall under this category include gases at ambient conditions, such as anhydrous ammonia (NH<sub>3</sub>) and propane. For a petrochemical feedstock, such as ethane or ethylene, which is also classified as a highly volatile liquid, report as “Other HVL” and specify the appropriate name (e.g., “ethane” or “ethylene”) in the space provided.

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**CO<sub>2</sub> (Carbon Dioxide)**

**Biofuel/Alternate Fuel (including ethanol blends)**

Fuel Grade Ethanol is denatured ethanol before it has been mixed with a petroleum product or other hydrocarbon; sometimes also referred to as neat ethanol.

Ethanol Blend is ethanol plus a petroleum product such as gasoline. Such mixtures may be referred to as E10 or E85, for example, representing a 10% or 85% blend respectively. In the space provided, specify the percentage of ethanol in the mixture. Blends greater than 95% ethanol should be reported as Fuel Grade Ethanol.

Biodiesel is a diesel liquid distilled from biological feedstocks vs. crude oil. Biodiesel is typically shipped as a blend mixed with a petroleum product. Report the percentage biodiesel in the blend as shown. For pure biodiesel, report 100.

**General Information for Questions 7, 8, and 9:**

**Estimate volumes in barrels.** Barrel means a unit of measurement equal to 42 U.S. standard gallons. If less than 1 barrel, report to 1 decimal place using the conversion table below. Small volumes, including but not limited to those which result in some form of ignition, are to be reported as 0.1 barrels.

If estimated volume is	Report	If estimated volume is	Report
<5 gallons	<b>0.1</b> barrels	24-27 gallons	<b>0.6</b> barrels
5-10 gallons	<b>0.2</b> barrels	28-31 gallons	<b>0.7</b> barrels
11-14 gallons	<b>0.3</b> barrels	32-35 gallons	<b>0.8</b> barrels
15-18 gallons	<b>0.4</b> barrels	36-39 gallons	<b>0.9</b> barrels
19-23 gallons	<b>0.5</b> barrels	40-42 gallons	<b>1.0</b> barrels

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**A7. formerly A9. Estimated volume of commodity released unintentionally**

Estimate the amount of commodity released from the pipeline system at the failure site. If the product is consumed by fire inside a tank, do not include the volume consumed by fire in the spill volume, but do include the cost of this commodity in D8. An estimate of the volume released may be based on a variety and/or combination of inputs, including:

- calculations made by hydraulic engineers
- volume added to the pipeline segment to repack the line when the line is placed back in service
- measured volume of free phase commodity recovered, with allowances for commodity that is not recovered.
- volume calculated to be absorbed by soil or water
- volume calculated to have been lost to evaporation (e.g., for gasoline spills)

**A8. formerly A10. Estimated volume of intentional and/or controlled release/blowdown**

This section is completed only for HVL and CO2 releases. Estimate the amount of commodity that was released during any intentional release or controlled blowdown conducted as part of responding to or recovering from the accident. Intentional and controlled blowdown implies a level of control of the site and situation by the operator such that the area and the public are protected during the controlled release.

**A9. formerly A11. Estimated volume of commodity recovered**

**Recovered** means the commodity is no longer in the environment. The commodity could have been removed by: absorbent pads or similar mechanisms; transferring to temporary storage such as a vacuum truck, a frac tank, or similar vessel; soil removal; bio-remediation; or other similar means of removal or recovery. The volume recovered can be estimated based on a variety or combination of the measurement of free phase commodity recovered, the amount calculated to be absorbed by soil or water that was removed from the environment, measurement of oil extracted from absorbent pads, etc.

**A10. formerly A12. Were there fatalities?**

If a person dies at the time of the accident or within 30 days of the initial accident date due to injuries sustained as a result of the accident, report as a fatality. If a person dies subsequent to an injury more than 30 days past the accident date, report as an injury. (Note: This aligns with the Department of Transportation's general guidelines for all jurisdictional transportation modes for reporting deaths and injuries.)

Select “Yes” or “No” and if “Yes” is selected, enter the category of person(s) and number of fatalities resulting from the Accident.

**Contractor employees working for the operator** are individuals hired to work for or on behalf of the operator of the pipeline. These individuals are not to be reported as “Operator employees”.

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**Non-Operator emergency responders** are individuals responding to render professional aid at the accident scene including on-duty and volunteer fire fighters, rescue workers, EMTs, police officers, etc. “Good Samaritans” that stop to assist should be reported as “General public.”

**Workers Working on the Right of Way, but NOT Associated with this Operator** means people authorized to work in or near the right-of-way, but not hired by or working on behalf of the operator of the pipeline. This includes all work conducted within the right-of-way including work associated with other underground facilities sharing the right-of-way, building/road construction in or across the right-of-way, or farming. This category most often includes employees of other pipelines or underground facilities operators, or their contractors, working in or near a shared right-of-way. Workers performing work near, but not on, the right-of-way and who are affected should be reported as “General public”.

**A11. formerly A13. Were there injuries requiring inpatient hospitalization?**

Injuries requiring inpatient hospitalization are injuries sustained as a result of the accident which require both hospital admission *and* at least one overnight stay.

Select “Yes” or “No” and if “Yes” is selected, enter the category of person(s) injured, and number of persons injured resulting from the Accident

See Question 12 for additional definitions that apply.

**A12. formerly E8. What was the Operator’s initial indication of the Failure? (*select only one*)**

Select the option best describing how the operator first became aware of the failure resulting in this accident report. When the selection in A12 is operator staff, indicate whether the staff are employed by the operator or working as a contractor in A12a.

**Controller** per the definition in API RP 1168 means a qualified individual whose function within a shift is to remotely monitor and/or control the operations of entire or multiple sections of pipeline systems via a SCADA system from a pipeline control room, and who has operational authority and accountability for the daily remote operational functions of pipeline systems.

**Local Operating Personnel including contractors** means employees or contractors working on behalf of the operator outside the control room.

**A13. formerly A18a.** Enter the date/time of the event reported in A12. The earliest date/time than an accident reporting criteria was met is reported in item A4. In some cases, the operator may become aware of a failure before an accident reporting criteria is met. In other cases, one of more accident reporting criteria may be met before the operator becomes aware of the failure.



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**A14. formerly C2 Part of system involved in the Accident (select only one)**

Select the best description of the part of the pipeline system that was involved in the accident. Report pumps under the type of system powered. For example, tank booster pumps are reported as “Onshore Terminal/Tank Farm Equipment and Piping.” For pumps powering belowground storage, select “Onshore Equipment and Piping Associated with Belowground Storage.”

**A15. formerly B1. Was the origin of the accident onshore?**

The answer to A14. will automatically populate this field with Yes or No.

**A16. Operational Status at time Operator identified failure (select only one)**

Select the best description of the operating status of the pipeline system at the date/time reported in A4.

**Post-Construction Commissioning** means the introduction of product, testing and commissioning of the pipeline prior to the start of commercial operations.

**Post-Maintenance/Repair** means purging and packing of the pipeline when returning it to service from maintenance or repairs.

**Routine Start-Up** means the start-up of the pipeline, facility or system in normal operations, or returning from maintenance or other idle status following a time of no flow, but the where the pipeline remained liquid full, and the start-up was being conducted under normal start-up procedures.

**Routine Shutdown** means the stoppage of equipment or the system from a normal operation status.

**Normal Operation, include pauses between batches and during maintenance** means the pipeline is operating normally, and any of the maintenance that is occurring does not require product to be removed from the pipeline or system. Product sampling, inhibitor injection, in-line inspection, installation of repairs, and other activities covered by the operator’s Operation and Maintenance Procedures are examples of the maintenance included in this category.

**Idle** means that the pipeline has been removed from service for commercial reasons or to make repairs. The pipeline may contain product, an inert gas, or be empty. When residual product accumulates in an excavation and ignites, Idle is the proper status.

**A17. formerly A14. Shutdown**

If A16. is Routine Start-Up or Normal Operation, was the pipeline/facility shut down due to the Accident? Select Yes for any shutdowns that occur as a result of the accident, including but not limited to those required for damage assessment, temporary repair, permanent repair, and clean-up. Do not include equipment shutdowns that do not affect the pipeline or system operation. For example, if a pump shutdown occurred as part of the accident, but the pipeline was able to continue operating, select No. If No is selected, explain the reason that no shutdown was needed in the space provided. A

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possible explanation for the example above would be “The pipeline continued to operate through the station bypass piping and did not require a pipeline shutdown.”

If Yes is selected, complete questions 17a. and 17b.

**17a. Local time (24hr clock) and date of shutdown**  
**17b. Local time pipeline/facility restarted**

The time is to be shown by 24-hour clock notation, and is to reflect the time in the time zone where the accident was physically located. (See “Special Instructions”, numbers 9 and 10.) Enter the time and date the pipeline was isolated or equipment stopped in 17a. The affected facilities may still contain commodity at this time. Enter the time and date of restart in 17b. The intent with this data is to capture the total time that the pipeline or facility is shutdown due to the accident. If the pipeline or facility has not been restarted at the time of reporting, select “Still shut down” for Question 17b and then include the restart time and date in a future Supplemental Report.

**A18. Operator Communication with Local, State, or Federal Emergency Responders**

In an Advisory Bulletin dated October 11, 2012, PHMSA reminded Operators of the need to communicate with Emergency Responders in the early stages of a potential Accident. This is typically accomplished by contacting Public Safety Access Points (PSAPs) along the pipeline route. The purpose of the communication is to assist in the identification, location and planning for response to pipeline Accidents through coordination and information sharing.

A18a. Select Yes if there was communication about the accident. If A12 is “Notification from Emergency Responder”, A18a. will automatically populate with Yes.

If 18a. is no, skip 18b. and 18c.

A18b. Select the party initiating the communication. If A12. is “Notification from Emergency Responder”, A18b. will automatically populate with “Local/State/Federal Emergency Responder”.

A18c. Enter the local date and time of the initial communication. If A12. is “Notification from Emergency Responder”, A18c. will automatically populate with the value in A13.

**A19. formerly A18b.** Enter the date/time operator responders, company or contract, arrived on site. Chronologically, A19. must be concurrent with or later than A13. These times are to be shown by 24-hour clock notation and reported in the time zone where the accident occurred. (See “Special Instructions”, numbers 8 and 9.) PHMSA will use this data to calculate accident response times.

**A20.** Enter local time and date of Confirmed Discovery as defined in 49 CFR [§195.2](#)

**A21a. formerly A7. Local time (24-hr clock) and date of initial operator report to the National Response Center**

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Enter the time and date of the initial Immediate Notice of the accident to the NRC. The time is to be shown by 24-hour clock notation in the time zone where the incident occurred. All NRC Reports are time stamped for the eastern time zone. Be sure to convert to local time if the accident did not occur in the eastern time zone. (See “Special Instructions”, numbers 9 and 10.)

**A21b. formerly A6. Initial Operator National Response Center (NRC) Report Number**

Accidents meeting the criteria outlined in §195.52 are to be reported directly to the **24-hour National Response Center (NRC) at 1-800-424-8802** at the earliest practicable moment. The NRC assigns numbers to each call. Enter the number assigned to the operator’s initial Immediate Notice (sometimes referred to as the “Telephonic Report”). If a NRC report was not made, select the option that best describes why: NRC Notification Not Required or NRC Notification Required But Not Made.

**A21c. Additional NRC Report Numbers**

If the operator made more than one call to the NRC, enter each additional NRC report number.

**A22. formerly A15. Did the Commodity Ignite?**

**If Yes, answer A22a. through A22d.**

**Ignite** means the released commodity (including liquid vapors) caught fire (including flash fires). If the answer is “Yes,” enter the time and date of the ignition in 22a. The time is to be shown by 24-hour clock notation in the time zone where the accident occurred. If the fire was extinguished, select “Operator/Contractor” or “Local/State/Federal Emergency Responder,” to indicate who extinguished the fire, or select “Allowed to Burn Out,” if it was not extinguished, in 22b.

Enter the estimated volume of commodity consumed by fire in thousand standard cubic feet (mcf) in A22c.

If the accident resulted in an explosion, select Yes in A22d. formerly A16. **Did the Commodity Explode?** Explode means ignition of the commodity, or its vapor, with a sudden and violent release of energy.

**A23. Flow Control formerly E5 Pipeline Glossary of terms, including valves are available [here](#)**

**If A14. is “Onshore Pipeline, Including Valve Sites” OR “Offshore Pipeline, Including Riser and Riser Bend”, answer A23a through f.**

The initial response to pipeline emergencies is typically understood to be isolation of the Accident location from the source of the commodity. However, sometimes there are operational means other than valve closures to achieve this goal. These questions are intended to understand the response actions and the time of valve closures intended to isolate

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the accident location. Valve data is for the first upstream or downstream valve selected by the operator to minimize the release volume but may not be the closest to the accident site or the one that was eventually used for the final isolation of the release site for repair.

Upstream of Failure - If an action other than valve closure was taken to isolate the accident site from the upstream pipeline, select “Operational Control” for 23a. and provide a description of the operation control employed.

If 23a. is “Valve Closure”, complete 23b. and 23c.

A23b. Enter the time of the valve closure that achieved isolation of the accident location from upstream piping.

A23c. formerly E5a. Identify the type of valve used to initially isolate the release on the upstream side.

Downstream of Failure - If an action other than valve closure was taken to isolate the accident site from the downstream pipeline, select “Operational Control” for 23d. and provide a description of the operation control employed.

If 23d. is “Valve Closure”, complete 23e. and 23f.

A23e. Enter the time of the valve closure that achieved isolation of the accident location from downstream piping.

A23f. formerly E5b. Identify the type of valve used to initially isolate the release on the downstream side.

#### **A24. Oil Spill Response**

If A6. is “Crude Oil”, “Refined and/or Petroleum Product (non-HVL) which is a Liquid at Ambient Conditions”, or “Biofuel / Alternative Fuel (including ethanol blends)” AND A15. is Onshore, answer questions A24a. and A24b.

A24a. Did the operator notify a “qualified individual” in the Onshore Oil Spill Response Plan? Select Yes. Otherwise, select No. If Yes, supply the Local time.

In accordance with §194.5 *Qualified individual* means an English-speaking representative of an operator, located in the United States, available on a 24-hour basis, with full authority to: activate and contract with required oil spill removal organization(s); activate personnel and equipment maintained by the operator; act as liaison with the OSC; and obligate any funds required to carry out all required or directed oil response activities.

A24b. Did the operator activate an Oil Spill Removal Organization (OSRO)?

If an Oil Spill Response Organization (OSRO) was activated in response to the accident, select Yes. Otherwise, select No. If Yes, enter the time the OSRO was activated and the time the OSRO arrived on site in A24c and A24d.

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**A25. formerly A17. Number of general public evacuated**

The number of people evacuated is to be estimated based on operator knowledge, or police, fire department, or other emergency responder reports. If there was no evacuation involving the general public, report zero (0).

**PART B – ADDITIONAL LOCATION INFORMATION**

**B1. formerly B7. Pipeline/Facility Name**

Multiple pipeline systems and/or facilities are often operated by a single operator. This information identifies the particular pipeline system or pipeline facility name commonly used by the operator on which the accident occurred, for example, the “West Line 24” Pipeline”, or “Gulf Coast Pipeline”, or “Wooster Terminal”.

**B2. formerly B8. Segment name/ID**

Within a given pipeline system and/or facility, there are typically multiple segment or station identifiers, names, or ID’s which are commonly used by the operator. The information reported here helps locate and/or record the more precise accident location, for example, “Segment 4-32”, or “MP 4.5 to Wayne County Line”, or “Dublin Pump Station”, or “Witte Meter Station”. Preferably, report the segment name that is reported to PHMSA’s National Pipeline Mapping System (NPMS).

**If Onshore**

**B3. – B6. Accident Location**

Provide the state, zip code, city, and county/parish in which the accident occurred. If the accident did not occur within a municipality, select Not Within Municipality in the City field.

**B7. and B8. formerly B6. Operator-designated Location**

This is intended to be the designation that the operator would use to identify the location of the accident on its pipeline system. Enter the appropriate milepost, survey station number, or site name. This designator is intended to allow PHMSA personnel to refer to the physical location of the accident using the operator’s maps and records.

**B9. Was this onshore Accident on Federal Land?**

Federal Lands means all lands the United States owns, including military reservations, except lands in National Parks and lands held in trust for Native Americans. Accidents at Federal buildings, such as Federal Court Houses, Custom Houses, and other Federal office buildings and warehouses, are NOT to be reported as being on Federal Lands.

**B10. Location of Accident (select only one)**

**Operator-controlled Property** would normally apply to an operator’s facility, which may or may not have controlled access, but which is often fenced or otherwise marked with

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discernible boundaries. This “operator-controlled property” does not refer to the pipeline right-of-way, which is a separate choice for this question.

**B11. Area of Accident (as found)**

This refers to the location on the pipeline at which commodity was released, resulting in the accident. It does not refer to adjacent locations in which released commodity may have accumulated or ignited.

**Underground** means pipe, components, or other facilities installed below the natural ground level, road bed, or below the underwater natural bottom.

**Under pavement** includes under streets, sidewalks, paved roads, driveways, and parking lots.

**Exposed due to Excavation** means that a normally buried pipeline had been exposed by any party (operator, operator’s contractor, or third party) preparatory to or as a result of excavation. The cause of the release, however, may or may not necessarily be related to excavation damage. This category could include a corrosion leak not previously evidenced by stained vegetation, but found during an ILI dig, or a release caused by a non-excavation vehicle where contact happened to occur while the pipeline was exposed for a repair or examination. Natural forces might also damage a pipeline that happened to be temporarily exposed. In each case, the cause should be appropriately reported in PART G of this form.

**Exposed due to loss of cover** means that erosion, flooding, farming or some other action has removed the cover that was previously over the pipeline, leaving it exposed. This loss of cover may be previously known or unknown by the pipeline operator, but is to be reported in this category if it is believed to have been exposed immediately prior to the Accident. **Loss of cover solely as a result of the Accident should not be reported under this category. For example** – if a pipeline was buried below ground immediately prior to a failure, and the force of the failure unearthed the pipeline – it should still be reported as “Under soil” in this report.

B11a. Report the depth of cover in inches that was over the pipeline at the time of the Accident, which may have to be estimated in some cases.

**Aboveground** means pipe, components, or other facilities that are above the natural grade.

**Typical aboveground facility piping** includes any pipe or components installed aboveground such as those at pump stations, storage facilities, valve sites, and breakout tank farms.

**Transition area** means the junction of differing material or media between pipes, components, or facilities such as those installed at a belowground-aboveground junction (soil/air interface), another environmental interface, or in close contact to supporting elements such as those at water crossings, pump stations, launchers and receivers, and breakout tank farms.

**B12. Did Accident occur in a crossing?**

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If Yes, select the type of crossing.

Use **Bridge Crossing** if the pipeline is suspended above a body of water or roadway, railroad right-of-way, etc., either on a separately designed pipeline bridge or as a part of or connected to a road, railroad, or passenger bridge.

Use **Railroad Crossing** or **Road Crossing**, as appropriate, if the pipeline is buried beneath rail bed or road bed.

Use **Water Crossing** if the pipeline is in the water, beneath the water, in contact with the natural ground of the lake bed, etc., or buried beneath the bed of a lake, reservoir, stream or creek, whether the crossing happens to be flowing water at the time of the accident or not.

If Water Crossing is selected, answer the remaining questions about the crossing. The name of the body of water should be provided if it is commonly known and understood among the local population. The purpose of this information is to allow persons familiar with the area in which the accident occurred to identify the location and understand it in its local context. Research to identify names that are not commonly used is not necessary since such names would not fulfill the intended purpose. If a body of water does not have a name that is commonly used and understood in the local area, this field may be left blank. For **Approximate Water Depth (ft)** of the lake, reservoir, etc., estimate the typical water depth at the location of the accident, ignoring seasonal, weather-related, and other factors which may affect the water depth from time to time. Pick the best description of the failure location within the water crossing. If the water crossing is 100 ft or more from high water mark to high water mark, indicate yes for the last question.

**If Offshore**

**B13. Approximate water depth (ft.), at the point of the Accident**

This is be the estimated depth from the surface of the water to the seabed at the point of the accident regardless of whether the pipeline is below/on the bottom, underwater but suspended above the bottom, or above the surface (e.g., on a platform).

**B14. Origin of the Accident**

Area and Tract/Block numbers are to be provided for either State or OCS waters, whichever is applicable. For Nearest County/Parish the data collected is intended to allow persons familiar with the area in which the accident occurred to identify the location and understand it in its local context. Accordingly, it is not necessary to take measurements to determine which county/parish is “nearest” in cases where the accident location is approximately equidistant from two (or more). In such cases, the name of one of the nearby counties/parishes is to be provided. For accidents on the Outer Continental Shelf (OCS) identify the region where the accident occurred by selecting one of the four options listed.

**B15. Area of the Accident**

For all Offshore Accidents, specify the area of the Accident by selecting the best description of the area.

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**PART C – ADDITIONAL FACILITY INFORMATION**

**C1. Is the pipeline or facility [Interstate or Intrastate]?**

As defined in section 195.2, **Interstate pipeline** means a pipeline or that part of a pipeline that is used in transportation of hazardous liquids or carbon dioxide in interstate or foreign commerce. A pipeline may be entirely within a single state and be interstate. As defined in section 195.2, **Intrastate pipeline** means a pipeline or that part of a pipeline to which Part 195 applies that is not an interstate pipeline. Operators may refer to Appendix A of Part 195 for further guidance. The value reported here should match both the Annual Report and NPMS submittal value.

**C2. Reserved**

**C3. Item involved in Accident**

**Pipe** (whether pipe body or pipe seam) means the pipe through which the commodity is transported, not including auxiliary piping, tubing or instrumentation.

**Nominal pipe size.** It is the diameter in whole number inches (except for pipe less than 5”) used to describe the pipe size; for example, 8-5/8” outside diameter pipe has a nominal pipe size of 8. Decimals are unnecessary for this measure (except for pipe with an outside diameter less than 5”). For more details, see [http://en.wikipedia.org/wiki/Nominal\\_Pipe\\_Size](http://en.wikipedia.org/wiki/Nominal_Pipe_Size)

Enter **pipe wall thickness** in inches. Wall thickness is typically less than an inch. Accordingly, use three decimal places to report wall thickness: 0.312, 0.281, etc.

**SMYS** means specified minimum yield strength and is the yield strength prescribed by the specification under which the material is purchased from the manufacturer. If the SMYS is unknown, and the Operator has designated it as 24,000 for the purposes of MAOP calculations, enter 24,000.

**Pipe Specification** is the specification to which the pipe was manufactured, such as API 5L or ASTM A106.

**Pipe seam** means the longitudinal seam (longitudinal or spiral weld) created during manufacture of the joint of pipe.

**Pipe Seam Type Abbreviations**

**SAW** means submerged arc weld

**ERW** means electric-resistance weld

**DSAW** means double submerged arc weld

If the frequency of the ERW pipe seam is unknown, and the pipe was manufactured after 1980, select Longitudinal ERW – High Frequency. Almost all ERW pipe manufactured prior to 1960 is Low Frequency, and both High and Low Frequency ERW pipe was



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manufactured between 1960 and 1980. If the pipe seam type is ERW, and the manufacture date is unknown, select “Longitudinal ERW – Unknown Frequency” for the seam type.

If a Girth Weld failure occurs, enter the pipe properties in 3b thru 3h. If a Girth Weld failure occurs between two different pipe materials, enter the first set of pipe properties in 3b thru 3h and any different values in 3i through 3o.

If the accident occurred on an item not listed in this section, select “Other” and specify the item that failed in the space provided. **Make every effort to find an item category and avoid the use of “Other” when reporting the Type of Item involved in the accident.**

**C4. Year Item Involved Installed**

**Enter the year the item was installed or select Unknown. In C4a, enter the year the item involved was manufactured or select Unknown.**

**C5. Material Involved in Accident**

Enter the material involved in the accident. If the material is other than Carbon Steel or Plastic, select “Material other than Carbon Steel or Plastic” and specify the type of material in the space provided.

**C6. Type of Accident involved (*select only one*)**

**Mechanical puncture** means a puncture of the pipeline, typically by a piece of equipment such as would occur if the pipeline were pierced by directional drilling or a backhoe bucket tooth. Not all excavation-related damage will be a “mechanical puncture.” (Precise measurement of size – e.g., micrometer – is not needed. Approximate measurements can be provided in inches and one decimal.)

**Leak** means a failure resulting in an unintentional release of the transported commodity that is often small in size, usually resulting in a low flow release of low volume, although large volume leaks can and do occur on occasion. A leak may be a hole or a crack, and includes separation of materials, pullout and loose connections. Typically, a **Leak** can be repaired, whereas a **Rupture** results in the complete failure of the pipeline.

**Rupture** means the pipeline facility has burst, split, or broken and the operation of the pipeline facility is immediately impaired and no longer serviceable. The terms “circumferential” and “longitudinal” refer to the general direction or orientation of the rupture relative to the pipe’s axis. For example; a rupture of a girth weld would be circumferential, whereas a split that followed the length of the pipe (whether in the seam, or not) would be longitudinal. (Precise measurement of size – e.g., micrometer – is not needed. Approximate measurements can be provided in inches and one decimal.)

**PART D – ADDITIONAL CONSEQUENCE INFORMATION**

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**High Consequence Area is defined in §195.450.**

D1. If wildlife was impacted, select Yes and indicate the type in D1a. Otherwise, select No.

D2. If the spill contaminated soil, select Yes. Otherwise, select No.

D3. If a long-term impact assessment is planned or performed, select Yes. Otherwise, select No.

D4. If remediation is anticipated, select Yes and select all of the types of remediation anticipated in D4.a. Otherwise, select No.

D5. If water was contaminated, select Yes and answer D5.a through D5.c. Otherwise, select No. Surface water can be intermittent, especially in arid portions of the country. If a surface waterbody were dry and spilled product entered the surface body, the operator should report no water contamination. Rain water caught in a berm is not a surface waterbody.

D5a. Select all of the types of water contaminated. If “Drinking water” is selected, indicate the subtype(s) contaminated.

**D5b. Estimated amount released in or reaching water**

An estimate of the volume released in or reaching water may be based on a variety and/or combination of inputs, including those mentioned above for PART A, Questions 7 and 8.

**D5c. Name of body of water, if commonly known:**

The name of the body of water should be provided if it is commonly known and understood among the local population. The purpose of this information is to allow persons familiar with the area in which the accident occurred to identify the location and understand it in its local context. Research to identify names that are not commonly used is not necessary since such names would not fulfill the intended purpose. If a body of water does not have a name that is commonly used and understood in the local area, this field should be left blank.

**D6. 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?**

This question should be answered based on the classification of the involved segment in the operator’s integrity management (IM) program at the time of the accident, whether or not consequences to an HCA ensued. It is possible that a release on a pipeline segment that “could affect” an HCA might not actually affect an HCA. It is also possible that releases from segments thought not able to affect an HCA might have such an affect. This could indicate a deficiency in the operator’s IM program for identifying segments that can affect HCAs, and all of this information is useful for PHMSA’s overall evaluations concerning the efficacy of IM regulation.

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**D7. Did the released commodity reach or occur in one or more High Consequence Area (HCA)?**

Generally, a spilled commodity will have “reached” an HCA if the spill zone intersects the boundaries of the HCA polygon as mapped by the National Pipeline Mapping System. The HCA maps should be available as a part of each operator’s Integrity Management Program as per §195.452.

Guidance from the Pipeline Performance Tracking System (PPTS) is available at <http://www.api.org/oil-and-natural-gas-overview/transporting-oil-and-natural-gas/pipeline-performance-ppts/ppts-related-files.aspx>, specifically PPTS Advisory 2004-1.

**7a. HCA Type (select all that apply)**

Refer to the definitions in §195.450 listed at the start of Part D. Leave this question blank if the released commodity did not reach or occur in a High Consequence Area.

**D8. Estimated Property Damage**

All relevant costs available at the time of submission must be included on the initial written Accident Report as well as being updated as needed on Supplemental Reports. This includes (but is not limited to) costs due to property damage to the operator’s facilities and to the property of others, commodity lost, facility repair and replacement, and environmental cleanup and damage. Do NOT include costs incurred for facility repair, replacement, or change that are NOT related to the accident and which are typically done solely for convenience. An example of doing work solely for convenience is working on non-leaking facilities unearthed because of the accident. Litigation and other legal expenses related to the accident are not reportable.

Operators are to report costs based on the best estimate available at the time a report is submitted. It is likely that an estimate of final repair costs may not be available when the initial report must be submitted (30 days, per §195.54). The best available estimate of these costs should be included in the initial report. For convenience, this estimate can be revised, if needed, when Supplemental Reports are filed for other reasons, however, when no other changes are forthcoming, Supplemental Reports are to be filed as new cost information becomes available. If Supplemental Reports are not submitted for other reasons, a Supplemental Report is to be filed for the purpose of updating or correcting the estimated cost if these costs differ from those already reported by 20 percent or \$20,000, whichever is greater.

**Public and Non-operator private property damage** estimates generally include physical damage to the property of others, the cost of environmental investigation and remediation of a site not owned or operated by the operator, laboratory costs, third party expenses such as engineers or scientists, and other reasonable costs, excluding litigation and other legal expenses related to the accident.

**Cost of commodity lost** includes the cost of the commodity not recovered and/or the cost of recovered commodity downgraded to a lower value or re-processed, and is to be based

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on the volume reported in PART A, Questions 7 and 9. The volume of commodity consumed by fire inside a tank is not included in A7, but the cost of the commodity should be included in this section.

**Operator's property damage** estimates generally include physical damage to the property of the operator or owner company such as the estimated installed or replacement value of the damaged pipe, coating, component, materials, or equipment due to the accident, excluding litigation and other legal expenses related to the accident.

When estimating the **Cost of repairs** to company facilities, the standard shall be the cost necessary to safely restore pipeline facilities to the pre-accident level of service. Cost of repairs include the cost to access, excavate, and repair the pipeline using methods, materials, and labor necessary to re-establish operations. These costs may include the cost of repair sleeves or clamps, re-routing of piping, or the removal from service of an appurtenance, tank, or pipeline component. When more comprehensive repairs or improvements are justified but not required for continued operation, the cost of such repairs or replacement is not attributable to the accident. Costs associated with improvements to the pipeline or other facilities to mitigate the risk of future failures are not included.

Estimated costs of **emergency response** include emergency response operations necessary to return the accident site to a safe state, actions to minimize the volume of commodity released, conduct reconnaissance, identify the extent of accident impacts, and contain, control, mitigate, recover, and remove the commodity from the environment, to the maximum extent practicable. They include materials, supplies, labor, and benefits. Costs related to stakeholder outreach, media response, etc. are not to be included. The estimated costs of long-term remediation activities should be included in Environmental Remediation estimates.

**Environmental remediation** includes the estimated cost to remediate a site such as those associated with engineering, scientists, laboratory costs, and the installation, operation, and maintenance of long-term recovery systems, etc.

**Other costs** are to include any and all costs which are not included above. Operators are to NOT use this category to report any costs which belong in cost categories separately listed above.

**Costs** are to be reported in only one category and are not to be double-counted. Costs can be split between two or more categories when they overlap more than one reporting category.

**Injured persons not included in A11.** The number of persons injured, admitted to a hospital, and remaining in the hospital for at least one overnight are reported in A11. **If a person is included in A11, do not include them in D9.**

D9. Estimated number of persons with injuries requiring treatment in a medical facility but not requiring overnight in-patient hospitalization.

**If a person is included in D9, do not include them in D10.**

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D10. Estimated number of persons with injuries requiring treatment by EMTs at the site of accident.

**Buildings Affected** The term ‘affected’ means the building was either evacuated or required repair.

D11. Enter the number of residential buildings affected.

D12. Enter the number of commercial and industrial buildings affected.

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**PART E – ADDITIONAL OPERATING INFORMATION**

**E1. Estimated Pressure**

Enter the operating pressure, in psig, at the location and time of the accident.

**E2. Maximum Operating Pressure (MOP)**

Enter the MOP, in psig, at the point and time of the accident. E2a. Select the response from §195.406(a) that describes the limiting factor for establishing the MOP at the accident site.

E2b. Enter the date MOP was established.

E2c. If the MOP was established in conjunction with a flow direction reversal, select Yes. If the system is designed for bi-directional flow, select Bi-Directional.. Otherwise, select No.

If E2c is Yes, enter the year of the most recent surge analysis in E2d.

**E3. Pressure Description**

The online reporting software will select the appropriate value for E3 based upon the responses to E1 and E2.

**E4. 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?**

Consider both voluntary and mandated pressure restrictions. A pressure restriction is to be considered mandated by PHMSA or a state regulator if it was required by an Order, enforcement action, or other formal correspondence from PHMSA.

An “established pressure restriction” is defined as a temporary reduction in the MOP that also requires a revision to the setpoints in the operator’s safety devices, processes or controls to ensure the pressure restriction is not exceeded.

Pressure reductions taken by the operator as a result of a procedural or regulatory requirement, e.g., pipeline repairs, movement, investigations, or a pressure reduction taken because an anomaly identified during an IM assessment could not be repaired within the required schedule (§195.452(h)(3)), are not considered “mandated by PHMSA.”

**E5. Length of segment isolated between valves (ft)**

If A23.a and A23.d are both “Valve Closure”, enter the length in feet between the valves.

E6. and E7. Respond to the questions about internal inspection tools.

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**E8. formerly E5.f. Function of pipeline system**

**Gathering** means a crude oil pipeline 8-5/8 inches or less nominal outside diameter that transports petroleum from a production facility.

**Transmission** means all other pipeline assets not meeting the gathering definition.

**% SMYS** means at the maximum operating pressure, the hoop stress created as a percentage of the specified minimum yield strength (SMYS) of the pipe.

**E9. formerly E6. Was a Supervisory Control and Data Acquisition (SCADA)-based system in place on the pipeline or facility involved in the Accident?**

This does not mean a system designed or used exclusively for leak detection.

**E9a. Was it operating at the time of the Accident?**

Was the SCADA system in operation at the time of the accident?

**E9b. Was it fully functional at the time of the Accident?**

Was the SCADA system capable of performing all of its functions, whether or not it was actually in operation at the time of the accident? If No, describe functions that were not operational in PART H – Narrative Description of the Accident.

**E9c and d. Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the initial indication (or confirmed discovery) of the Accident?**

Select Yes if SCADA-based information was used for confirmed discovery of the accident even if the initial indication may have come from other sources. Use of SCADA data for subsequent estimation of amount of commodity lost, etc. is not considered use to confirm the accident.

Select No if SCADA-based information was not used to assist with identification of the accident.

**E10. formerly E7. Was a CPM leak detection system in place on the pipeline or facility involved in the Accident?**

This means a system designed and used exclusively for leak detection.

Follow instructions for E9. above.

**E11. formerly E9. 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?**

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Select only one of the choices to indicate whether an investigation was/is being conducted (Yes) or was not conducted (No). If an investigation has been completed, select all the factors that apply in describing the results of the investigation.

**Cause** means an action or lack of action that directly led to or resulted in the pipeline accident.

**Contributing factor** means an action or lack of action that when added to the existing pipeline circumstances heightened the likelihood of the release or added to the impact of the release.

**Controller Error** means that the controller failed to identify a circumstance indicative of a release event, such as an abnormal operating condition, alarm, pressure drop, change in flow rate, or other similar event.

**Incorrect Controller action** means that the controller errantly operated the means for controlling an event. Examples include opening or closing the wrong valve, or hitting the wrong switch or button.

**PART F – DRUG & ALCOHOL TESTING INFORMATION**

Requirements for post-accident drug and alcohol tests are in 49 CFR §199.105 and §199.225 respectively. If the accident circumstances were such that tests were not required by these regulations, and if no tests were conducted, select No. If tests were administered, select Yes and report separately the number of operator employees and number of contractors working for the operator who were tested and the number of each that failed such tests.



**PART G – APPARENT CAUSE**

**PART G – Apparent Cause**

Select the one, single sub-cause listed under sections G1 thru G8 that best describes the apparent cause of the Accident. These sub-causes are contained in the shaded column on the left under each main cause category. Answer the corresponding questions that accompany your selected sub-cause, and enter any secondary, contributing, or root causes of the Accident in Part K – Contributing Factors. Make every effort to find a category that fits the Accident’s Apparent Cause and avoid the use of Other and Unknown when possible. Use of Unknown as an Apparent Cause will require the submittal of a Supplemental Report to revise the Apparent Cause when it becomes known.

**G1 – Corrosion Failure**

**Corrosion** includes a release or failure caused by galvanic, atmospheric, stray current, microbiological, selective seam, or other corrosive action. A corrosion release or failure is not limited to a hole in the pipe or other piece of equipment. If the bonnet or packing gland on a valve or flange on piping deteriorates or becomes loose and leaks due to corrosion and failure of bolts, it is to be classified as Corrosion. (Note: If the bonnet, packing, or other gasket has deteriorated to failure, whether before or after the end of its expected life, but not due to corrosive action, it is to be classified under G6 - Equipment Failure.)

**External Corrosion**

**2. Type of corrosion** – NOTE: Stress Corrosion Cracking (SCC) is no longer an option for the type of corrosion. SCC failures are to be reported under cause G5, with a sub-cause of Environmental Cracking-related.

If Stray Current corrosion is selected, specify whether alternating or direct current was involved and describe the source of the stray current.

**4a. Under cathodic protection** means cathodic protection in accordance with §195.563 or §195.573(b). Recognizing that older pipelines may have had cathodic protection added over a number of years, provide an estimate if the exact year cathodic protection started is unknown.

**Internal Corrosion**

**9. Location of corrosion**

A **low point in pipe** includes portions of the pipe contour in which water might settle out. This includes, but is not limited to, the low point of vertical bends at a crossing of a foreign line or road/railroad, etc., an elbow, a drop out or low point drain.

**10. Was the commodity treated with corrosion inhibitors or biocides?**

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Select Yes if corrosion inhibitors or biocides were included in the commodities transported.

**12. Were cleaning/dewatering pigs (or other operations) routinely utilized?**

**13. Were corrosion coupons routinely utilized?**

For purposes of these Questions 12 and 13, “routinely” refers to an action that is performed on more than a sporadic or one-time basis as part of a regular program with the intent to ensure that water build-up and/or settling and internal corrosion do not occur.

**G2 – Natural Force Damage**

**Natural Force Damage** includes an accident resulting from earth movement, earthquakes, landslides, subsidence, lightning, heavy rains/floods, washouts, flotation, mudslide, scouring, temperature, frost heave, frozen components, high winds, or similar natural causes.

**Earth Movement, NOT due to Heavy Rains/Floods** refers to accidents caused by land shifts such as earthquakes, subsidence, or landslides, but not mudslides which are presumed to be initiated by heavy rains or floods.

**Heavy Rains/Floods** refer to all water-related natural force causes. While mudslides involve earth movement, report them here since typically they are a result of heavy rains or floods.

**Lightning** includes both damage and/or fire caused by a direct lightning strike and damage and/or fire as a secondary effect from a lightning strike in the area. An example of such a secondary effect would be a forest fire started by lightning that results in damage to a pipeline system asset which results in an accident.

**Temperature** includes weather-related temperature and thermal stress effects, either heat or cold, where temperature was the initiating cause.

**Thermal stress** refers to mechanical stress induced in a pipe or component when some or all of its parts are not free to expand or contract in response to changes in temperature.

**Frozen components** would include accidents where components are inoperable because of freezing and those due to cracking of a piece of equipment due to expansion of water during a freeze cycle.

**High Winds** includes damage caused by wind-induced forces. Select this category if the damage is due to the force of the wind itself. Damage caused by impact from objects blown by wind would be reported under G4 - Other Outside Force Damage.

**Tree/Vegetation Root** includes damages caused by tree and vegetation roots.

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**Snow/Ice impact or Accumulation** should be indicated when snow and/or ice caused damage to the hazardous liquid pipeline asset which results in an accident.

**Other Natural Force Damage.** Select this sub-cause for types of Natural Force Damage not included otherwise, and describe in the space provided. If necessary, provide additional explanation in PART H – Narrative Description of the Accident.

Answer Questions 6 and 6a if the accident occurred in conjunction with an extreme weather event such as a hurricane, tropical storm, or tornado. If an extreme weather event related to something other than a hurricane, tropical storm, or tornado was involved, indicate Other and describe the event in the space provided.

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**G3 – Excavation Damage**

**Excavation Damage** includes a release or failure resulting directly from excavation damage by operator's personnel (oftentimes referred to as “first party” excavation damage) or by the operator’s contractor (oftentimes referred to as “second party” excavation damage) or by people or contractors not associated with the operator (oftentimes referred to as “third party” excavation damage). Also, this section includes a release or failure determined to have resulted from previous damage due to excavation activity. For damage from outside forces OTHER than excavation which results in a release, use G2 - Natural Force Damage or G4 - Other Outside Force, as appropriate. Also, for a strike, physical contact, or other damage to a pipeline or facility that apparently was NOT related to excavation and that results in a delayed or eventual release, report the accident under G4 as “Previous Mechanical Damage NOT related to Excavation.”

**Excavation Damage by Operator (First Party)** refers to accidents caused as a result of excavation by a direct employee of the operator.

**Excavation Damage by Operator’s Contractor (Second Party)** refers to accidents caused as a result of excavation by the operator’s contractor or agent or other party working for the operator.

**Excavation Damage by Third Party** refers to accidents caused by excavation damage resulting from actions by personnel or other third parties not working for or acting on behalf of the operator or its agent.

**Previous Damage due to Excavation Activity** refers to accidents that were apparently caused by prior excavation activity and that then resulted in a delayed or eventual release. Indications of prior excavation activity might come from the condition of the pipe when it is examined, or from records of excavation at the site, or through metallurgical analysis or other inspection and/or testing methods. Dents and gouges in the 10:00-to-2:00 o’clock positions on the pipe, for instance, may indicate an earlier strike, as might marks from the bucket or tracks of an earth moving machine or similar pieces of equipment.

**If Excavation Damage by Third Party is selected, answer question 1**

**1. and 1a. Prior Notification** Indicate whether you received prior notification of the excavation activity. If yes, indicate all of the notification sources.

**1b. through 1e. One-Call State Law Exemptions** Per the primary Accident Investigator results, indicate whether State law exempted the excavator from notifying a one-call center. If yes, select the type of exemption from the list. If “Other” is selected, enter text describing the exemption. Describe the exempting authority and exempting criteria.

**2. – 14.** Complete these questions for any excavation damage sub-cause. Instructions for answering these questions can be found at CGA’s web site, <https://www.cga-dirt.com/dr/html/userGuide.html>

**NOTE: If you have or will be reporting the information in questions 2 thru 14 to CGA-DIRT, select “No” in question 2 to avoid duplication of data submitted to CGA.**

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**G4 – Other Outside Force Damage**

**Other Outside Force Damage** includes, but is not limited to, a release or failure resulting from non-excavation-related outside forces, such as nearby industrial, man-made, or other fire or explosion; damage by vehicles or other equipment; failures due to mechanical damage; and, intentional damage including vandalism and terrorism.

**Nearby Industrial, Man-made or other Fire/Explosion as Primary Cause of Accident** applies to situations where the fire occurred before - and *caused* - the release. Examples of such an accident would be an explosion or fire at a neighboring facility or installation (chemical plant, tank farm, other industrial facility) or structure, debris, or brush/trees that results in a release at the operator's pipeline or facility. This includes forest, brush, or ground fires that are caused by human activity. If the fire, however, is known to have been started as a result of a lightning strike, the accident's cause is to be classified under G2 - Natural Force Damage. Arson events directed at harming the pipeline or the operator should be reported as G4 - Intentional Damage (see below).

**Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation.** An example of this sub-cause would be a stopple tee that releases commodity when damaged by a pickup truck maneuvering near the pipeline. Other motorized vehicles or equipment include tractors, backhoes, bulldozers and other tracked vehicles, and heavy equipment that can move. Include under this sub-cause accidents caused by vehicles operated by the pipeline operator, the pipeline operator's contractor, or a third party, and specify the vehicle/equipment operator's affiliation from one of these three groups. Pipeline accidents resulting from vehicular traffic loading or other contact should also be reported in this category. If the activity that caused the release involved digging, drilling, boring, grading, cultivation or similar activities, report under G3 - Excavation Damage.

**Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equipment or Vessels Set Adrift or Which Have Otherwise Lost Their Mooring.** This sub-cause includes impacts by maritime equipment or vessels (including their anchors or anchor chains or other attached equipment) that have lost their moorings and are carried into the pipeline facility by the current. This sub-cause also includes maritime equipment or vessels set adrift as a result of severe weather events and carried into the pipeline facility by waves, currents, or high winds. In such cases, also indicate the type of severe weather event. Do NOT report in this sub-cause accidents which are caused by the impact of maritime equipment or vessels while they are engaged in their normal or routine activities; such accidents are to be reported as "Routine or Normal Fishing or Other Maritime Activity NOT Engaged in Excavation" under this section G4 (see below) so long as those activities are not excavation activities. If those activities are excavation activities such as dredging or bank stabilization or renewal, the accident is to be reported under G3 - Excavation Damage.

**Routine or Normal Fishing or Other Maritime Activity NOT Engaged in Excavation.** This sub-cause includes accidents due to shrimping, purse seining, oil drilling, or oilfield workover rigs, including anchor strikes, and other routine or normal maritime-related activities UNLESS the movement of the maritime asset was due to a severe weather event

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(this type of accident should be reported under “Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equipment or Vessels Set Adrift or Which Have Otherwise Lost Their Mooring” in this section G4); or the accident was caused by excavation activity such as dredging of waterways or bodies of water (this type of accident is to be reported under G3 - Excavation Damage).

**Electrical Arcing from Other Equipment or Facility** such as a pole transformer or adjacent facility’s electrical equipment.

**Previous Mechanical Damage NOT Related to Excavation.** This sub-cause covers accidents where damage occurred at some time prior to the release that was apparently NOT related to excavation activities, and would include prior outside force damage of an unknown nature, prior natural force damage, prior damage from other outside forces, and any other previous mechanical damage other than that which was apparently related to prior excavation. Accidents resulting from previous damage sustained during construction, installation, or fabrication of the pipe or weld from which the release eventually occurred are to be reported under G5 - Material Failure of Pipe or Weld. (See this sub-cause for typical indications of previous construction, installation, or fabrication damage.) Accidents resulting from previous damage sustained as a result of excavation activities should be reported under G3 – Previous Damage due to Excavation Activity. (See this sub-cause for typical indications of prior excavation activity.)

### **Intentional Damage**

**Vandalism** means willful or malicious destruction of the operator’s pipeline facility or equipment. This category would include arson, pranks, systematic damage inflicted to harass the operator, motor vehicle damage that was inflicted intentionally, and a variety of other intentional acts.

**Terrorism**, per 28 CFR §0.85 General Functions, includes the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives. Operators selecting this item are encouraged to also notify the FBI.

**Theft of commodity or Theft of equipment** means damage by any individual or entity, by any mechanism, specifically to steal, or attempt to steal, the transported commodity or pipeline equipment.

**Other** Describe in the space provided and, if necessary, provide additional explanation in PART H – Narrative Description of the Accident.

**Other Outside Force Damage.** Select this sub-cause for types of Other Outside Force Damage not included otherwise, and describe in the space provided. If necessary, provide additional explanation in PART H – Narrative Description of the Accident.

### **5 – 11 Additional Data for Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation**

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When answering the questions, include information that can be substantiated from police reports or other investigative reports.

The following definitions apply for reporting the type of motorized vehicle in Question 10:

**Motorcycle/All-Terrain Vehicle (ATV)** - All two or three-wheeled motorized vehicles, and some four-wheeled vehicles are to be reported in this category. Typical vehicles in this category have saddle type seats and are steered by handlebars rather than steering wheels. This category includes motorcycles, motor scooters, mopeds, motor-powered bicycles, and three-wheel motorcycles. Additionally, four-wheeled off-road and all-terrain vehicles (sometimes referred to as “four-wheelers”) are to be reported under this category.

**Passenger Car** -- All sedans, coupes, and station wagons manufactured primarily for the purpose of carrying passengers and including those passenger cars pulling recreational or other light trailers.

**Small Truck** - All two-axle, four-tire, vehicles, other than passenger cars. Included in this classification are pickups, panels, vans, and other vehicles such as campers, motor homes, ambulances, hearses, carryalls, and minibuses.

**Bus** - All vehicles manufactured as traditional passenger-carrying buses with two axles and six tires or three or more axles. This category includes only traditional buses (including school buses) functioning as passenger-carrying vehicles. Modified buses should be considered to be a truck and should be appropriately classified.

**Large Truck** - All vehicles on a single frame including trucks, camping and recreational vehicles, motor homes, etc., with two or more axles and at least two rear wheels on each side

When specifying the type of protection in Question 13; select the category “Barricades” for Jersey barriers, fencing, and other structures that are other than Guard Rails or Bollards/Guard Posts. If “Other” is selected, enter text describing the protection.

### **G5 – Material Failure of Pipe or Weld**

Use this section to report material failures **only if** “Item Involved in accident” (PART C, Question 3) is “**Pipe**” (whether “**Pipe Body**” or “**Pipe Seam**”) or “**Weld**.” Indicate how the sub-cause was determined or if the sub-cause is still being investigated.

This section includes releases in or failures from defects or anomalies within the material of the pipe body or within the pipe seam or other weld due to manufacturing processes, material imperfections, defects resulting from poor construction, installation, or fabrication practices, and in-service stresses such as vibration, fatigue, and environmental cracking.

**Design-, Construction-, Installation-, or Fabrication-related** includes a release or failure caused by improper design practices, a dent, gouge, excessive stress, or some other defect or anomaly introduced during the process of constructing, installing, or fabricating pipe and

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pipe welds in the field, including welding or other activities performed at the construction job site. Included are releases from or failures of wrinkle bends, field welds, and damage sustained in transportation to the construction or fabrication site. Not included are failures due to seam defects, which are to be reported as Original Manufacturing-related (see below). If a river crossing were directionally drilled and tied into a buried pipeline without adequate accommodation for expansion and contraction of the pipe in the drill hole and the pipeline facility fails at the tie-in, this represents an improper design practice. Select “Design-, Construction-, Installation-, or Fabrication-related” as the sub-cause.

**Original Manufacturing-related (NOT girth weld or other welds formed in the field)** includes a release or failure caused by a defect or anomaly introduced during the process of manufacturing pipe, including manufacturing and handling of the plate materials, seam defects and defects in the pipe body. This option is not appropriate for wrinkle bends, field welds, girth welds, or other joints fabricated in the field. Use this option for failures such as those due to defects of the longitudinal weld or inclusions in the pipe body. If the girth welds were completed at the pipe mill (such as in the case of double joints welded prior to delivery to the jobsite) report those failures in this category.

**Environmental Cracking-related** includes failures by Stress Corrosion Cracking, Sulfide Stress Cracking, Hydrogen Stress Cracking, Hard Spots or other environmental cracking mechanism.

If Design-, Construction, Installation, Fabrication-related or Original Manufacturing-related is selected, then select any contributing factors. Examples of Mechanical Stress include failures related to overburden or loss of support.

### **G6 – Equipment Failure**

This section applies to failures of items **other than “Pipe” (“Pipe Body” or “Pipe Seam”) or “Weld”**.

**Equipment Failure** includes a release or failure resulting from: malfunction of control/relief equipment including valves, regulators, or other instrumentation; failures of compressors, or compressor-related equipment; failures of various types of connectors, connections, and appurtenances; failures of the body of equipment, vessel plate, or other material (including those caused by construction-, installation-, or fabrication-related and original manufacturing-related defects or anomalies); and, all other equipment-related failures.

**Malfunction of Control/Relief Equipment.** Examples of this type of accident cause include: overpressurization resulting from malfunction of a control or alarm device; relief valve malfunction; valves failing to open or close on command; or valves which opened or closed when not commanded to do so. If overpressurization or some other aspect of this accident was caused by incorrect operation involving human error, the accident should be reported under G7 - Incorrect Operation.

**ESD System Failure** means failure of an emergency shutdown system.



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**Other Equipment Failure.** Select this sub-cause for types of Equipment Failure not included otherwise, and describe in the space provided. If necessary, provide additional explanation in PART H – Narrative Description of the Accident.

**G7 – Incorrect Operation**

**Incorrect Operation** includes a release or failure resulting from operating, maintenance, repair, or other errors by facility personnel or pipeline controllers, including, but not limited to improper valve selection or operation, inadvertent overpressurization, or improper selection or installation of equipment in the field. If the failure occurs in the pipe body or weld, and is a result of inadequate design or a design error, the accident is to be reported under G5 – Material Failure of Pipe or Weld, Design-, Construction-, Installation-, or Fabrication-related.

**Other Incorrect Operation.** Select this sub-cause for types of Incorrect Operation not included otherwise, and describe in the space provided. If necessary, provide additional explanation in PART H – Narrative Description of the Accident.

**G8 – Other Accident Cause**

This section is provided for accidents whose cause is currently unknown, or where investigation into the cause has been exhausted and the final judgment as to the cause remains unknown, or where a cause has been determined which does not fit into any of the main cause categories listed in sections G1 thru G7. PHMSA will review all G-8 cause selections and determine if it meets the definition of any category listed in G1 thru G7 before a Final Report is accepted for closure. All sub cause categories of “Unknown” require a Supplemental Report to be filed before being accepted as Final.

If the accident cause is known but doesn’t fit into any category in sections G1 thru G7, select **Miscellaneous** and enter a description of the accident cause, continuing with a more thorough explanation in PART H - Narrative Description of the Accident.

If the accident cause is unknown at the time of filing this report, select **Unknown** in this section and specify one reason from the accompanying two choices. Once the operator’s investigation into the accident cause is completed, the operator is to file a Supplemental Report as soon as practicable either reporting the apparent cause or stating definitively that the cause remains Unknown, along with any other new, updated, and/or corrected information pertaining to the accident. This Supplemental Report is to include all new, updated, and/or corrected information pertaining to *all* portions of the report form known at this time, and not only that information related to the apparent cause.

**Important Note:** Whether the investigation is completed or not, or if the cause continues to be unknown, Supplemental Reports are to be filed reflecting new, updated, and/or corrected information ***as and when this information becomes available***. In those cases in which investigations are ongoing for an extended period of time, operators are to file a Supplemental Report within one year of their last report for the accident even in those

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instances where no new, updated, and/or corrected information has been obtained, with an explanation that the cause remains under investigation in PART H – Narrative Description of Accident. Additionally, final determination of the apparent cause and/or closure of the investigation does NOT preclude the need for the operator’s filing of additional Supplemental Reports as and when new, updated, and/or corrected information becomes available.

**PART J – COMPLETED INTEGRITY INSPECTIONS**

**Complete the following if the “Item Involved in Accident” (from PART C, Question 3) is Pipe or Weld and the “Cause” (from Part G) is:**

- Corrosion (any subCause in Part G1); or**
- Previous Damage due to Excavation Activity (subCause in Part G3); or**
- Previous Mechanical Damage NOT Related to Excavation (subCause in Part G4); or**
- Material Failure of Pipe or Weld (any subCause in Part G5)**

**J1. Internal Inspection Tools**

**If Yes, for each tool and technology used, select type of internal inspection tool and technology and indicate year of most recent and previous runs.**

**Axial Magnetic Flux Leakage (MFL)** is an in-line inspection (ILI) tool that uses a non-destructive testing (NDT) method of imposing a magnetic flux in the steel pipe for the detection of corrosion and pitting. The basic principle behind MFL ILI involves magnetizing the steel pipe to a saturation level with a magnetic field. MFL ILI tools can be either low- and high-resolution tools, with more modern tools being high-resolution MFL ILI tools.

**Circumferential/Transverse Wave Magnetic Flux Leakage (MFL)** is an in-line inspection (ILI) tool that induces the magnetic flux field into the steel pipe in the circumferential direction, which allows the measurement of longitudinally oriented anomalies such as tunnel corrosion and longitudinal weld anomalies.

**Ultrasonic** is an in-line inspection (ILI) tool that introduces a shear wave ultrasound beam into the steel pipeline inspection area at an angle, which allows detection of abnormalities based on the reflection and refraction of the beam. Can be used to detect and size planar (crack and crack-like) anomalies or measure wall thickness and detect instances of wall loss.

**Geometry/Deformation** is an in-line inspection (ILI) tool designed to record mechanical or geometric conditions such as changes in the pipe internal diameter, including dents, ovalities, wrinkles, expansions, and misalignments.

**Electromagnetic Acoustic Transducer (EMAT)** is an in-line inspection (ILI) tool that generates an ultrasonic pulse within the steel pipe without a liquid couplant. EMAT ILI consists of a magnet and an electrical coil, which uses electro-magnetic forces to introduce sound energy into the steel pipe. EMAT ILI is used to detect cracking flaws in steel pipe.

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**Cathodic Protection Current Measurement (CPCM)** is an in-line inspection (ILI) tool capable of reading and recording the magnitude and polarity of current supplied by cathodic protection (CP). CPCM ILI measures direct current (DC) and alternating current (AC) voltage gradients from CP current or induced AC as the CPCM ILI tool traverses along the pipeline.

**Complete J1b. only when the “Cause” (from Part G) is:**

**Previous Damage due to Excavation Activity (subCause in Part G3); or  
Previous Mechanical Damage NOT Related to Excavation (subCause in Part  
G4)**

J1b. Indicate if you have reason to believe the internal inspections were completed before the damage was sustained.

**J2. Hydrotest**

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

Information from the initial post-construction hydrostatic test is NOT reported in J2.

**J3. Direct Assessment**

**Has Direct Assessment been conducted on this segment?**

This refers to direct assessment as defined in §195.553. Instances in which one or more indirect monitoring tools (e.g., close interval survey, DCVG) have been used that might be used as part of direct assessment but which were not used as part of the direct assessment process defined in §195.553 do NOT constitute a Direct Assessment for purposes of this question.

If J3 is yes, enter the year of the most recent assessment(s) in J3a.

**J4. Non-destructive Examination**

Indicate if one or more non-destructive examination been conducted prior to the Accident at the point of the Accident since January 1, 2002. If Yes, enter the most recent year of the examination(s) in J4a.

**PART K – CONTRIBUTING FACTORS**

**Contributing factor** means an action or lack of action that when added to the existing circumstances heightened the likelihood of the release or added to the impact of the release. The Apparent Cause of the accident is contained in Part G. Do not report the Apparent Cause again in this Part K. If Contributing Factors were identified during a root cause analysis, select all that apply and explain each in the Narrative.

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

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Concisely describe the accident, including the facts, circumstances, and conditions that may have contributed directly or indirectly to causing the accident. Include secondary, contributing, or root causes when possible, or any other factors associated with the cause that are deemed pertinent. Use this section to clarify or explain unusual conditions and to explain any estimated data.

If you selected Miscellaneous in section G8, the narrative is to describe the accident in detail, including all known or suspected causes and possible contributing factors.

**PART I – PREPARER AND AUTHORIZED PERSON**

The Preparer is the person who compiled the data and prepared the responses to the report and who is to be contacted for more information (preferably the person most knowledgeable about the information in the report or who knows how to contact the person most knowledgeable). Enter the Preparer's e-mail address if the Preparer has one, and the phone and fax numbers used by the Preparer.

The Authorized Person is responsible for assuring the accuracy and completeness of the reported data. In addition to their title, a phone number and email address are to be provided for the Authorized Person.