

 U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration	INCIDENT REPORT – GAS TRANSMISSION AND GATHERING 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 2137-0635. 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 <http://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. Street Address: auto-populated based on OPID

A3b. City: auto-populated based on OPID

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 incident 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 Incident:

Latitude: / / / . / / / / /

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

A6. Gas released: (select only one, based on predominant volume released)

☐ Natural Gas

☐ Propane Gas

☐ Synthetic Gas

☐ Hydrogen Gas

☐ Landfill Gas

☐ Other Gas ➡ Name: _____

A7. Estimated volume of gas released unintentionally: / / / / / / / thousand standard cubic feet (mcf)

A8. Estimated volume of intentional and controlled release/blowdown : / / / / / / / thousand standard cubic feet (mcf)

A9. Estimated volume of accompanying liquid released: / / / / / / 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. What was the Operator's initial indication of the Failure? (*select only one*)

☐ 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 Incident

☐ Local Operating Personnel, including contractors

☐ Ground Patrol by Operator or its contractor

☐ Notification from Emergency Responder

☐ Other _____

A12a. If "Controller", "Local Operating Personnel, including contractors", "Air Patrol", or "Ground Patrol by Operator or its contractor" is selected in Question 12, specify the following: (*select only one*)

☐ Operator employee

☐ Contractor working for the Operator

A13. Local time Operator identified failure / / / / / / / / / / / / / /
Hour Month Day Year

A14. Part of system involved in Incident: (*select only one*)

☐ Belowground Storage, Including Associated Equipment and Piping

☐ Aboveground Storage, Including Associated Equipment and Piping

☐ Onshore Compressor Station Equipment and Piping

☐ Onshore Regulator/Metering Station Equipment and Piping

☐ Onshore Pipeline, Including Valve Sites

☐ Offshore Platform, Including Platform-mounted Equipment and Piping

☐ Offshore Pipeline, Including Riser and Riser Bend

A15. Operational Status at time Operator identified failure (*select only one*)

☐ Post-Construction Commissioning

☐ Post-Maintenance/Repair

☐ Routine Start-Up

☐ Routine Shutdown

☐ Normal Operation, includes pauses during maintenance

☐ Idle

A16. If A15 = Routine Start-Up or Normal Operation, was the pipeline/facility shut down due to the incident?

☐ Yes ☐ No ➡ Explain: _____

If Yes, complete Questions A16.a and A16.b: (*use local time, 24-hr clock*)

A16a. Local time and date of shutdown / / / / / / / / / / / / / /
Hour Month Day Year

A16b. Local time pipeline/facility restarted / / / / / / / / / / / / / / ☐ Still shut down*
Hour Month Day Year *Supplemental Report required

If A12. = Notification from Emergency Responder, skip A17.

A17a. Did the operator communicate with Local, State, or Federal Emergency Responders about the incident? ☐ Yes ☐ No

If No, skip A17b and c.

A17b. Which party initiated communication about the incident? ☐ Operator ☐ Local/State/Federal Emergency Responder

A17c. Local time of initial Operator and Local/State/Federal Emergency Responder communication
 / / / / / / / / / / / / / /
Hour Month Day Year

A18. Local time operator resources arrived on site / / / / / / / / / / / / / /
Hour Month Day Year

A19. reserved

A20a. Local time (24-hr clock) and date of initial operator report to the National Response Center :

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

A20b. Initial Operator National Response Center Report Number _____ OR

☐ NRC Notification Required But Not Made

A20c. Additional NRC Report numbers submitted by the operator: _____

A21. Did the gas ignite? ☐ Yes ☐ No

If A21 = Yes, then answer A21a through d:

A21a. Local time of ignition / / / / / / / /
Hour Month Day Year

A21b. How was the fire extinguished?

☐ Operator/Contractor ☐ Local/State/Federal Emergency Responder ☐ Allowed to burn out ☐ Other, specify: _____

A21c. Estimated volume of gas consumed by fire (mcf): _____ (must be less than or equal to A7.)

A21d. Did the gas explode? ☐ Yes ☐ No

If A14. is "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend", answer A22a through f

A22a. Initial action taken to control flow upstream of failure location ☐ Valve Closure ☐ Operational Control - mandatory text field

If Valve Closure, answer A22.b and c:

A22b. Local time of final upstream valve closure / / / / / / / /
Hour Month Day Year

A22c. Type of upstream valve used to complete upstream isolation of release source:

☐ Manual ☐ Automatic ☐ Remotely Controlled

A22d. Initial action taken to control flow downstream of failure location ☐ Valve Closure ☐ Operational Control - mandatory text field

If Valve Closure, answer A22e and f.:

A22e. Local time of final downstream valve closure / / / / / / / /
Hour Month Day Year

A22f. Type of downstream valve used to complete downstream isolation of release source:

☐ Manual ☐ Automatic ☐ Remotely Controlled ☐ Check Valve

A23. Number of general public evacuated: / / / / / / / /

D7. Estimated Property Damage:

D7a. Estimated cost of public and non-Operator private property damage \$ / / / , / / / , / / /

D7b. Estimated cost of Operator's property damage & repairs \$ / / / , / / / , / / / /

D7c. Estimated cost of emergency response \$ / / / , / / / , / / / /

D7d. Estimated other costs \$ _____

Describe: _____

D7e. Total estimated property damage (sum of above) \$ *calculated*

Cost of Gas Released

Cost of Gas in \$ per thousand standard cubic feet (mcf): _____

D7f. Estimated cost of gas released unintentionally	\$ <i>calculated</i>
---	----------------------

D7g. Estimated cost of gas released during intentional and controlled blowdown	\$ <i>calculated</i>
--	----------------------

D7h. Total estimated cost of gas released (sum of 7.f & 7.g above) \$ *calculated*

D7i. Estimated Total Cost (sum of D7e and D7h) \$ *calculated*

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 D8.***

D8. 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 D8, do not include them in D9.

D9. Estimated number of persons with injuries requiring treatment by EMTs at the site of incident: _____

Buildings Affected

D10. Number of residential buildings affected (evacuated or required repair or gas service interrupted): _____

D11. Number of business buildings affected (evacuated or required repair or gas service interrupted): _____

D12. Wildlife impact: ☐ Yes ☐ No

D12a. If Yes, specify all that apply:

☐ Fish/aquatic☐ Birds☐ Terrestrial

E1. Estimated pressure at the point and time of the Incident (psig): _____

E2. Maximum Allowable Operating Pressure (MAOP) at the point and time of the Incident (psig) : 1 / 1 / 1 / 1 / 1 / 1

☐ 192.619 (a)(1) ☐ 192.619 (a)(2) ☐ 192.619 (a)(3) ☐ 192.619 (a)(4) ☐ 192.619 (c) ☐ 192.619 (d)
☐ 192.624 (c)(1) ☐ 192.624(c)(2) ☐ 192.624 (c)(3) ☐ 192.624 (c)(4) ☐ 192.624(c)(5) ☐ 192.624 (c)(6)
☐ Other Specify Other: _____

E2c. Was the MAOP in E2a and b established in conjunction with a reversal of flow direction? ☐ Yes ☐ No ☐ Bi-Directional

☐ Pressure did not exceed MAOP

☐ Pressure exceeded MAOP, but did not exceed the applicable allowance in §192.201

☐ Pressure exceeded the applicable allowance in §192.201

☐ No ☐ Yes ➡ (Complete E4.a and E4.b below)

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

If yes, Was the gas at the point of failure odorized in accordance with §192.625? ☐ Yes ☐ No

E6. Length of segment between upstream and downstream shut-off valves closest to failure location (ft): 1 / / / 1 / / /

☐ 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: _____

☐ Yes $\Rightarrow$ 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:

- ☐ Transmission System
- ☐ Type A Gathering
- ☐ Transmission in Storage Field
- ☐ Transmission Line of Distribution System
- ☐ Type B Gathering
- ☐ Offshore Gathering

E10 Was a Supervisory Control and Data Acquisition (SCADA)-based system in place on the pipeline or facility involved in the Incident?

☐ No

☐ Yes ➡

E10.a Was it operating at the time of the Incident?

☐ Yes ☐ No

E10.b Was it fully functional at the time of the Incident?

☐ Yes ☐ No

E10.c Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume or pack calculations) assist with the initial indication of the Incident?

☐ Yes ☐ No

E10.d Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the confirmed discovery of the Incident?

☐ 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 Incident? (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 Incident

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

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

☐ Investigation reviewed work schedule rotations, continuous hours of service (while working for the Operator) and other factors associated with fatigue

☐ Investigation did NOT review work schedule rotations, continuous hours of service (while working for the Operator) and other factors associated with fatigue (provide an explanation for why not): _____

☐ Investigation identified no control room issues

☐ Investigation identified no controller issues

☐ Investigation identified incorrect controller action or controller error

☐ Investigation identified that fatigue may have affected the controller(s) involved or impacted the involved controller(s) response

☐ Investigation identified incorrect procedures

☐ Investigation identified incorrect control room equipment operation

☐ Investigation identified maintenance activities that affected control room operations, procedures, and/or controller response

☐ Investigation identified areas other than those above ➡ Describe: _____

PART F – DRUG & ALCOHOL TESTING INFORMATION

F1. As a result of this Incident, were any Operator employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations?

☐ No

☐ Yes ➡ F1a. Specify how many were tested: / / /

F1b. Specify how many failed: / / /

F2. As a result of this Incident, were any Operator contractor employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations?

☐ No

☐ Yes ➡ F2a. Specify how many were tested: / / /

F2b. Specify how many failed: / / /

PART G – APPARENT CAUSE

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

☐ **External Corrosion**

☐ **Internal Corrosion**

Select only one box from PART G in the shaded column on the left representing the APPARENT Cause of the Incident, and answer the questions on the right. Enter secondary, contributing, or root causes of the Incident in Part K – Contributing Factors.

1. Results of visual examination:

- ☐ Localized Pitting ☐ General Corrosion
☐ Other

2. Type of corrosion: (select all that apply)

- ☐ Galvanic ☐ Atmospheric ☐ Stray Current ☐
Microbiological ☐ Selective Seam
☐ Other

2a. If 2 is Stray Current, specify ☐ Alternating Current ☐ Direct Current AND

2b. Describe the stray current source:

3. The type(s) of corrosion selected in Question 2 is based on the following: (select all that apply)

- ☐ Field examination ☐ Determined by metallurgical analysis
☐ Other

4. Was the failed item buried or submerged?

- ☐ Yes ☐ No 4a. Was failed item considered to be under cathodic protection at the time of the incident?

☐ Yes ☐ No Year protection started: / / / /
/ / / /

☐ No

4b. Was shielding, tenting, or disbonding of coating evident at the point of the incident?

- ☐ Yes ☐ No

4c. Has one or more Cathodic Protection Survey been conducted at the point of the incident? (select all that apply)

- ☐ Yes, CP Annual Survey ☐ Most recent year conducted: / / / /
☐ Yes, Close Interval Survey ☐ Most recent year conducted: / / / /
☐ Yes, Other CP Survey ☐ Most recent year conducted: / / / /
Describe other CP survey

☐ No

- ☐ No ☐ Yes 4d. Was the failed item externally coated or painted?
☐ Yes ☐ No

5. Was there observable damage to the coating or paint in the vicinity of the corrosion?

- ☐ Yes ☐ No ☐ N/A Bare/Ineffectively Coated Pipe

6. Results of visual examination:

- ☐ Localized Pitting ☐ General Corrosion ☐ Not cut open
☐ Other

7. Cause of corrosion: (select all that apply)

- ☐ Corrosive Commodity ☐ Water drop-out/Acid ☐
Microbiological ☐ Erosion
☐ Other

8. The cause(s) of corrosion selected in Question 7 is based on the following: *(select all that apply)*
- ☐ Field examination ☐ Determined by metallurgical analysis
☐ Other
-

9. Location of corrosion: *(select all that apply)*
- ☐ Low point in pipe ☐ Elbow ☐ Drop-out ☐ Dead-Leg
☐ Other
-

10. Was the gas/fluid treated with corrosion inhibitors or biocides?
☐ Yes ☐ No

11. Was the interior coated or lined with protective coating? ☐ Yes
☐ No

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

☐ Not applicable - Not mainline pipe ☐ Yes ☐ No

13. Were corrosion coupons routinely utilized?

☐ Not applicable - Not mainline pipe ☐ Yes ☐ No

G2 - Natural Force Damage - only one **sub-cause** can be picked from shaded left-hand column

☐ Earth Movement, NOT due to Heavy Rains/Floods

☐ Heavy Rains/Floods

☐ Lightning

☐ Temperature

☐ High Winds

☐ Trees/Vegetation Roots

☐ Snow/Ice impact or Accumulation

☐ Other Natural Force Damage

1. Specify: ☐ Earthquake ☐ Subsidence ☐ Landslide
☐ Other _____

2. Specify: ☐ Washout/Scouring ☐ Flotation ☐ Mudslide ☐ Other _____

3. Specify: ☐ Direct hit ☐ Secondary impact such as resulting nearby fires

4. Specify: ☐ Thermal Stress ☐ Frost Heave
☐ Frozen Components ☐ Other

5. Describe: _____

Complete the following if any Natural Force Damage sub-cause is selected.

6. Were the natural forces causing the Incident generated in conjunction with an extreme weather event? ☐ Yes ☐ No

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

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

- ☐ **Excavation Damage by Operator (First Party)**
- ☐ **Excavation Damage by Operator's Contractor (Second Party)**
- ☐ **Excavation Damage by Third Party**
- ☐ **Previous Damage due to Excavation Activity**

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

1. Did the operator get prior notification of the excavation activity? ☐ Yes ☐ No
- 1a. If Yes, Notification received from: *(select all that apply)* ☐ One-Call System ☐ Excavator ☐ Contractor ☐ Landowner
- 1b. Per the primary Incident 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
 - ☐ Data not collected
 - ☐ Unknown/Other
4. Type of excavator: *(select only one)*
- ☐ Contractor ☐ County ☐ Developer ☐ Farmer ☐ Municipality ☐ Occupant
 - ☐ Railroad ☐ State ☐ Utility ☐ Data not collected ☐ Unknown/Other
5. 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 ☐ Data not collected ☐ Unknown/Other
6. 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

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

☐ **Nearby Industrial, Man-made, or Other Fire/Explosion as Primary Cause of Incident**

☐ **Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation**

☐ **Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equipment or Vessels Set Adrift or Which Have Otherwise Lost Their Mooring**

☐ **Routine or Normal Fishing or Other Maritime Activity NOT Engaged in Excavation**

☐ **Electrical Arcing from Other Equipment or Facility**

☐ **Previous Mechanical Damage NOT Related to Excavation**

☐ **Intentional Damage**

☐ **Other Outside Force Damage**

1. Vehicle/Equipment operated by: (*select only one*)

☐ Operator ☐ Operator's Contractor ☐

Third Party

If this sub-section is picked, please complete questions 5-11 below

2. Select one or more of the following IF an extreme weather event was a factor:

☐ Hurricane ☐ Tropical Storm ☐

Tornado

☐ Heavy Rains/Flood ☐ Other

3. Specify:

☐ Vandalism ☐ Terrorism
☐ Theft of transported commodity ☐ Theft of equipment
☐ Other _____

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 incident? ☐ 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 Incident, 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: _____

G5 - Material Failure of Pipe or Weld

Use this section to report material failures ONLY IF the "Item Involved in Incident" (from PART C, Question 3) is "Pipe" or "Weld."

Only one **sub-cause** can be picked from shaded left-hand column

1. The sub-cause selected below is based on the following: *(select all that apply)*

☐ Field Examination ☐ Determined by Metallurgical Analysis ☐ Other Analysis _____

☐ Sub-cause is Tentative or Suspected; Still Under Investigation *(Supplemental Report required)*

☐ **Design-, Construction-, Installation-, or Fabrication-related**

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

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

☐ Fatigue- or Vibration-related:

☐ Mechanically-induced prior to installation (such as during transport of pipe)

☐ Mechanical Vibration

☐ Pressure-related

☐ Thermal

☐ Other _____

☐ Mechanical Stress

☐ Other _____

☐ **Environmental Cracking-related**

3. Specify: ☐ Stress Corrosion Cracking ☐ Sulfide Stress Cracking

☐ Hydrogen Stress Cracking ☐ Hard Spot

☐ Other _____

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

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

5. Post-construction pressure test value (psig) / / / / / OR ☐ Unknown

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

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

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

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

- ☐ Excessive vibration
- ☐ Overpressurization
- ☐ No support or loss of support
- ☐ Manufacturing defect
- ☐ Loss of electricity
- ☐ Improper installation
- ☐ Improper maintenance
- ☐ Mismatched items (different manufacturer for tubing and tubing fittings)
- ☐ Dissimilar metals
- ☐ Breakdown of soft goods due to compatibility issues with transported gas/fluid
- ☐ 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

☐ **Damage by Operator or Operator's Contractor NOT Related to Excavation and NOT due to Motorized Vehicle/Equipment Damage**

☐ **Underground Gas Storage, Pressure Vessel, or Cavern Allowed or Caused to Overpressure**

1. Specify: ☐ Valve Misalignment ☐ Incorrect Reference
Data/Calculation ☐ Miscommunication ☐ Inadequate Monitoring
☐ Other _____

☐ **Valve Left or Placed in Wrong Position, but NOT Resulting in an Overpressure**

☐ **Pipeline or Equipment Overpressured**

☐ **Equipment Not Installed Properly**

☐ **Wrong Equipment Specified or Installed**

☐ **Other Incorrect Operation**

2. Describe: _____

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

3. Was this Incident 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 Incident:

- ☐ 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 Incident 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 Incident Cause - only one **sub-cause** can be picked from shaded left-hand column

☐ **Miscellaneous**

1. Describe: _____

☐ **Unknown**

2. Specify: ☐ Investigation complete, cause of Incident unknown
Mandatory comment field:

☐ Still under investigation, cause of Incident to be determined*
*(*Supplemental Report required)*

PART J – 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. Have internal inspection tools collected data at the point of the Incident?

☐ 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 J1b 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 Incident?
 (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 Yes, J3a. For each type, indicate the year of the most recent assessment:

External Corrosion Direct Assessment (ECDA) / / / / /
 Internal Corrosion Direct Assessment (ICDA) / / / / /
 Stress Corrosion Cracking Direct Assessment (SCCDA) / / / / /
 Confirmatory Direct Assessment / / / / /
 Other, specify type: _____ / / / / /

J4. Has one or more non-destructive examination been conducted prior to the Incident at the point of the Incident 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, 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

Natural Forces

- ☐ Earth Movement, NOT due to Heavy Rains/Floods
- ☐ Heavy Rains/Floods
- ☐ Lightning
- ☐ Temperature
- ☐ High Winds
- ☐ Tree/Vegetation Root

Excavation Damage

- ☐ Excavation Damage by Operator (First Party)
- ☐ Excavation Damage by Operator's Contractor (Second Party)
- ☐ Excavation Damage by Third Party
- ☐ Previous Damage due to Excavation Activity

Other Outside Force

- ☐ Nearby Industrial, Man-made, or Other Fire/Explosion
- ☐ Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation
- ☐ Damage by Boats, Barges, Drilling Rigs, or Other Adrift Maritime Equipment
- ☐ Routine or Normal Fishing or Other Maritime Activity NOT Engaged in Excavation
- ☐ Electrical Arcing from Other Equipment or Facility
- ☐ Previous Mechanical Damage NOT Related to Excavation
- ☐ Intentional Damage
- ☐ Other underground facilities buried within 12 inches of the failure location

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

Equipment Failure

- ☐ Malfunction of Control/Relief Equipment
- ☐ Compressor or Compressor-related Equipment
- ☐ Threaded Connection/Coupling Failure
- ☐ Non-threaded Connection Failure
- ☐ Defective or Loose Tubing or Fitting
- ☐ Failure of Equipment Body (except Compressor), Vessel Plate, or other Material

Incorrect Operation

- ☐ Damage by Operator or Operator's Contractor NOT Excavation and NOT Vehicle/Equipment Damage
- ☐ Valve Left or Placed in Wrong Position, but NOT Resulting in Overpressure
- ☐ Pipeline or Equipment Overpressured
- ☐ Equipment Not Installed Properly
- ☐ Wrong Equipment Specified or Installed
- ☐ Inadequate Procedure
- ☐ No procedure established
- ☐ Failure to follow procedures

(Attach additional sheets as necessary)

PART I – PREPARER AND AUTHORIZED PERSON