



A11. 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 or pack calculations)
- Static Shut-in Test or Other Pressure or Leak Test       Controller       Local Operating Personnel, including contractors
- Air Patrol       Ground Patrol by Operator or its contractor       Notification from Public
- Notification from Emergency Responder       Notification from Third Party that caused the Incident       Other: \_\_\_\_\_

A11a. If "Controller", "Local Operating Personnel, including contractors", "Air Patrol", or "Ground Patrol by Operator or its contractor" is selected in Question A11, specify the following: (select only one)       Operator employee       Contractor working for the Operator

A12. Local time operator identified failure

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

If A11 = Notification from Emergency Responder, skip questions A13 through A15.

A13. Did the operator communicate with Local, State, or Federal Emergency Responders about the incident?       Yes       No

If No, skip A14 and A15

A14. Which party initiated communication about the incident?       Operator       Local/State/Federal Emergency Responder

A15. Local time of initial Operator and Local/State/Federal Emergency Responder communication

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

A16. Local time operator resources arrived on site

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

A17. reserved

A18. Local time (24-hr clock) and date of initial operator report to the National Response Center:

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

A19. Initial Operator National Response Center Report Number OR       NRC Notification Required But Not Made

A19a. Additional NRC Report numbers submitted by the operator: \_\_\_\_\_

A20. Method of Flow Control (select all that apply)

- "Key/Critical" Valve – inspected in accordance with Part 192.747       Main Valve other than "Key/Critical"
- Service (curb) Valve       Meter/Regulator shut-off Valve       Excess flow valve
- Squeeze-Off       Stopple fitting       Other: \_\_\_\_\_

A21. Did the gas ignite?       Yes       No

If A21 = Yes, answer A21a through A21d.

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

A22. Number of general public evacuated: \_\_\_\_\_









**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** 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 J – Contributing Factors

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

**External Corrosion**

1. Results of visual examination:
  - Localized Pitting       General Corrosion       Other \_\_\_\_\_
2. Type of corrosion: (select all that apply):
  - Galvanic       Atmospheric       Stray Current       Microbiological       Selective Seam
  - Other \_\_\_\_\_
- 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 ⇨
    - 4a. Was failed item considered to be under cathodic protection at the time of the incident?
      - Yes ⇨ 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 ⇨
    - 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. Pipeline coating type, if steel pipe is involved: (select only one)
  - Epoxy       Coal Tar       Asphalt       Polyolefin       Extruded Polyethylene
  - Cold Applied Tape       Paint       Composite       None       Other \_\_\_\_\_
  - Unknown
- 6a. Field Applied?    Y, N, or Unknown



**Internal Corrosion**

7. Results of visual examination:
  - Localized Pitting
  - General Corrosion
  - Not cut open
  - Other \_\_\_\_\_
8. Cause of corrosion: *(select all that apply)*
  - Corrosive Commodity
  - Water drop-out/Acid
  - Microbiological
  - Erosion
  - Other \_\_\_\_\_
9. The cause(s) of corrosion selected in Question 8 is based on the following; *(select all that apply)*
  - Field examination
  - Determined by metallurgical analysis
  - Other \_\_\_\_\_
10. Location of corrosion: *(select all that apply)*
  - Low point in pipe
  - Elbow
  - Drop-out
  - Other \_\_\_\_\_
11. Was the gas/fluid treated with corrosion inhibitors or biocides?  Yes  No
12. Were any liquids found in the distribution system where the Incident occurred?  Yes  No

**Complete the following if any Corrosion Failure sub-cause is selected AND the "Part of system involved in Incident" (from PART C, Question 2) is Main, Service, or Service Riser.**

13. Date of the most recent Leak Survey conducted:     / /     / /     / /  
   Month     Day     Year

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

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

**Earth Movement, NOT due to Heavy Rains/Floods**

1. Specify:  Earthquake      Subsidence      Landslide  
 Other \_\_\_\_\_

**Heavy Rains/Floods**

2. Specify:  Washouts/Scouring      Flotation      Mudslide  
 Other \_\_\_\_\_

**Lightning**

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

**Temperature**

4. Specify:  Thermal Stress      Frost Heave      Frozen Components  
 Other \_\_\_\_\_

**High Winds**

**Tree/Vegetation Roots**

**Damage from Snow/Ice Impact or Accumulation**

- Other Natural Force Damage**     5. Describe: \_\_\_\_\_

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

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

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

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

Excavation Damage by Operator (First Party)

Excavation Damage by Operator’s Contractor (Second Party)

Excavation Damage by Third Party

Previous Damage due to Excavation Activity **Complete the following ONLY IF the “Part of system involved in Incident” (from PART C, Question 2) is Main, Service, or Service Riser.**

1. Date of the most recent Leak Survey conducted:    /   /       /   /       /   /     
Month Day Year

2. Has one or more pressure test been conducted since original construction at the point of the Incident?

Yes ⇒ Most recent year tested:    /   /   /   /   /   

Test pressure (psig):    /   /   /   /   /   

No

**Complete the following if Excavation Damage by Third Party is selected.**

3. Did the operator get prior notification of the excavation activity?  Yes  No

3a. If Yes, Notification received from: (select all that apply)  One-Call System  Excavator  Contractor  Landowner

3b. Per the primary Incident Investigator report, did State law exempt the excavator from notifying the one-call center?  Yes  No  Unknown  
If yes, answer 3c through 3e.

- 3c. (select only one)
- 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:

3d. Exempting Authority: \_\_\_\_\_

3e. Exempting Criteria: \_\_\_\_\_

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

4. Do you want PHMSA to upload the following information to CGA-DIRT (www.cga-dirt.com)?  Yes  No

5. 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

6. Type of excavator: (select only one)

Contractor  County  Developer  Farmer  Municipality  Occupant

Railroad  State  Utility  Data not collected  Unknown/Other

7. 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

8. 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

9. Was the One-Call Center notified?  Yes  No If No, skip to question 13

9a. If Yes, specify ticket number: / / / / / / / / / / / / / / / / / / /

9b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified:  
\_\_\_\_\_

10. Type of Locator:  Utility Owner  Contractor Locator  Data not collected  Unknown/Other

11. Were facility locate marks visible in the area of excavation?  No  Yes  Data not collected  Unknown/Other

12. Were facilities marked correctly?  No  Yes  Data not collected  Unknown/Other

13. Did the damage cause an interruption in service?  No  Yes  Data not collected  Unknown/Other

13a. 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):

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

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

Locating Practices Not Sufficient: (select only one)

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

Excavation Practices Not Sufficient: (select only one)

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

One-Call Notification Center Error

Abandoned Facility

Deteriorated Facility

Previous Damage

Data Not Collected

Other / None of the Above (explain)

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

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

1. Vehicle/Equipment operated by: (*select only one*)  
 Operator       Operator's Contractor       Third Party

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

If this sub-cause is picked, complete questions 7-13 below.

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

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

Hurricane       Tropical Storm       Tornado  
 Heavy Rains/Flood       Other

\_\_\_\_\_

**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**

**Complete the following ONLY IF the "Part of system involved in Incident" (from PART C, Question 2) is Main, Service, or Service Riser.**

3. Date of the most recent Leak Survey conducted:   /  /   /   /  /  

Month      Day      Year

4. Has one or more pressure test been conducted since original construction at the point of the Incident?

Yes     Most recent year tested:   /  /   /   /  /  

Test pressure (psig):   /  /   /   /  /  

No

5. Specify:

Vandalism       Terrorism  
 Theft of transported commodity     Theft of equipment  
 Other \_\_\_\_\_

**Intentional Damage**

6. Describe: \_\_\_\_\_

**Erosion of Support Due to Other Utilities**

**Other Outside Force Damage**

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

7. Was the driver of the vehicle or equipment issued one or more citations related to the incident?     Yes     No     Unknown

If 7. is Yes, what was the nature of the citations (select all that apply)

- 7a. Excessive Speed
- 7b. Reckless Driving
- 7c. Driving Under the Influence
- 7d. Other, describe: \_\_\_\_\_

8. Was the driver under control of the vehicle at the time of the collision?     Yes     No     Unknown

9. Estimated speed of the vehicle at the time of impact (miles per hour)? \_\_\_\_\_ or  Unknown

10. Type of vehicle? (select only one)     Motorcycle/ATV     Passenger Car     Small Truck     Bus     Large Truck

11. Where did the vehicle travel from to hit the pipeline facility? (select only one)  
 Roadway     Driveway     Parking Lot     Loading Dock     Off-Road

12. Shortest distance from answer in 11. to the damaged pipeline facility (in feet): \_\_\_\_\_

13. At the time of the incident, were protections installed to protect the damaged pipeline facility from vehicular damage?     Yes     No

If 13. is Yes, specify type of protection (select all that apply):

- 13a. Bollards/Guard Posts
- 13b. Barricades, including "jersey" barriers and fences
- 13c. Guard Rails
- 13d. Meter Box
- 13e. Ingress or Regress at a Residence
- 13f. Other, describe: \_\_\_\_\_

**G5 – Pipe, Weld, or Joint Failure** – only one **sub-cause** can be selected from the shaded left-hand column

- Body of Pipe**
  - 1. Specify:  Dent  Gouge  Bend  Arc Burn  Crack  Other \_\_\_\_\_
- Butt Weld**
  - 2. Specify:  Pipe  Fabrication  Other \_\_\_\_\_
- Fillet Weld**
  - 3. Specify:  Branch  Hot Tap  Fitting  Repair Sleeve  Other \_\_\_\_\_
- Pipe Seam**
  - 4. Specify:  LF ERW  HF ERW  Flash Weld  DSAW  SAW  Spiral  Other - \_\_\_\_\_
- Threaded Metallic Pipe**
- Mechanical Joint Failure - required to submit PHMSA F 7100.1-2**
  - 5. Report ID for PHMSA F 7100.1-2 \_\_\_\_\_ or  Report Pending
- Fusion Joint**
  - 6. Specify:  Butt, Heat Fusion  Butt, Electrofusion  Saddle, Heat Fusion  Saddle, Electrofusion  Socket, Heat Fusion  Socket, Electrofusion  Other \_\_\_\_\_
  - 7. Year installed: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_
  - 8. Other attributes: \_\_\_\_\_
  - 9. Specify the two materials being joined:
    - 9a. First material being joined:
      - Polyvinyl Chloride (PVC)  Polyethylene (PE)
      - Cross-linked Polyethylene (PEX)  Polybutylene (PB)
      - Polypropylene (PP)  Acrylonitrile Butadiene Styrene (ABS)
      - Polyamide (PA)  Cellulose Acetate Butyrate (CAB)
      - Other ⇒ Specify: \_\_\_\_\_
    - 9b. Second material being joined:
      - Polyvinyl Chloride (PVC)  Polyethylene (PE)
      - Cross-linked Polyethylene (PEX)  Polybutylene (PB)
      - Polypropylene (PP)  Acrylonitrile Butadiene Styrene (ABS)
      - Polyamide (PA)  Cellulose Acetate Butyrate (CAB)
      - Other ⇒ Specify: \_\_\_\_\_
  - 10. Describe: \_\_\_\_\_
- Other Pipe, Weld, or Joint Failure**

**Complete the following if any Pipe, Weld, or Joint Failure sub-cause is selected.**

11. Additional Factors: (select all that apply)  Dent  Gouge  Pipe Bend  Arc Burn  Crack  Lack of Fusion  
 Lamination  Buckle  Wrinkle  Misalignment  Burnt Steel  
 Other \_\_\_\_\_

12. Was the Incident a result of:  
 Construction defect, specify: ⇒  Poor workmanship  Procedure not followed  Poor construction/installation procedures  
 Material defect, specify: ⇒  Long seam  Other \_\_\_\_\_  
 Design defect  
 Previous damage

13. Has one or more pressure test been conducted since original construction at the point of the Incident?  
 Yes ⇒ Most recent year tested: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_ Test pressure (psig): \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
 No

**G6 – Equipment Failure**— only one **sub-cause** can be selected from the shaded left-hand column

**Malfunction of Control/Relief Equipment**

1. Specify: *(select all that apply)*

Control Valve       Instrumentation     

SCADA

Communications       Block Valve     

Check Valve

Relief Valve       Power Failure     

Stopple/Control Fitting       Pressure Regulator

Other \_\_\_\_\_

**Threaded Connection Failure**

2. Specify:  Pipe Nipple       Valve Threads       Threaded Pipe Collar

Threaded Fitting       Other

\_\_\_\_\_

**Non-threaded Connection Failure**

3. Specify:  O-Ring       Gasket       Other Seal or Packing

Other \_\_\_\_\_

**Valve**

4. Specify:  Manufacturing defect       Other

\_\_\_\_\_

4a. Valve type:

\_\_\_\_\_

4b. Manufactured by:

\_\_\_\_\_

4c. Year manufactured: / / / / / or  Unknown

4d. Valve Material:  Steel     Plastic     Cast/Wrought Iron     Ductile Iron

Other, specify: *mandatory text*

field \_\_\_\_\_

**Other Equipment Failure**

5. Describe:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**G7 – Incorrect Operation** – \*only one **sub-cause** can be selected from the shaded left-hand

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

1. Describe: \_\_\_\_\_

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

2. Was this Incident related to: *(select all that apply)*

- Inadequate procedure
- No procedure established
- Failure to follow procedure
- Other:\* \_\_\_\_\_

3. 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)

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

4a. 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 selected from the 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 – CONTRIBUTING FACTORS

The Apparent Cause of the accident is contained in Part G. Do not report the Apparent Cause again in this Part J. 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
- Snow/Ice
- 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

### Equipment Failure

- Malfunction of Control/Relief Equipment
- Threaded Connection/Coupling Failure
- Non-threaded Connection Failure
- Valve Failure

### 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



