

PART B – ADDITIONAL LOCATION INFORMATION

1. Was the Incident on Federal land? Yes No **FEDERAL**

2. Location of Incident: *(select only one)* **LOCATION_TYPE**

- Operator-controlled property
- Public property
- Private property
- Utility Right-of-Way / Easement

3. Area of Incident: *(select only one)* **INCIDENT_AREA_TYPE**

INCIDENT_AREA_SUBTYPE

- Underground Specify: Under soil Under a building Under pavement
 Exposed due to excavation In underground enclosed space (e.g., vault)
 Other **INCIDENT_AREA_DETAILS**

Depth-of-Cover (in): / / / / / / **DEPTH_OF_COVER**

- Aboveground Specify: Typical aboveground facility piping or appurtenance (e.g. valve or regulator station, outdoor meter set)
 Overhead crossing
 In or spanning an open ditch Inside a building
 In other enclosed space Other **INCIDENT_AREA_DETAILS**

- Transition Area Specify: Soil/air interface Wall sleeve Pipe support or other close contact area
 Other **INCIDENT_AREA_DETAILS**

CROSSING

4. Did Incident occur in a crossing? Yes No

If Yes, specify type below:

- Bridge crossing ⇨ Specify: Cased Uncased **BRIDGE_CROSSING_IND, BRIDGE_TYPE**
- Railroad crossing ⇨ *(Select all that apply)* Cased Uncased Bored/drilled **RAILROAD_CROSSING_IND, RAILROAD_TYPE**
- Road crossing ⇨ *(Select all that apply)* Cased Uncased Bored/drilled **ROAD_CROSSING_IND, ROAD_TYPE**
- Water crossing ⇨ *(Select all that apply)* Cased Uncased Bored/drilled **WATER_CROSSING_IND, WATER_TYPE**

Name of body of water (If commonly known): **WATER_NAME**

Approx. water depth (ft): / / / / / / **WATER_DEPTH**

PART C – ADDITIONAL FACILITY INFORMATION

1. Indicate the type of pipeline system:

- privately owned **PIPE_FACILITY_TYPE**
- municipally owned
- investor owned
- cooperative
- Other ⇒ Specify: **PIPE_TYPE_OTHER** _____

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

- Main Service Service Riser Outside Meter/Regulator set
- Inside Meter/Regulator set Farm Tap Meter/Regulator set
- District Regulator/Metering Station
- Other **SYSTEM_PART_DETAILS**

2.a. Year "Part of system involved in Incident" was installed: **INSTALLATION_YEAR** / / / / / or Unknown **INSTALLATION_YEAR_UNKNOWN_IND**

3. When "Main" or "Service" is selected as the "Part of system involved in Incident" (from PART C, Question 2), provide the following:

*3.a Nominal diameter of pipe (in): / / / / / **PIPE_DIAMETER**

*3.b Pipe specification (e.g., API 5L, ASTM D2513): **PIPE_SPECIFICATION**

3.c Pipe manufacturer: **PIPE_MANUFACTURER** or Unknown **PIPE_MFRR_UNKNOWN_IND**

3.d Year of manufacture: / / / / / or Unknown **PIPE_MFR_YEAR_UNKNOWN_IND**
PIPE_MANUFACTURE_YEAR

MATERIAL_INVOLVED

4. Material involved in Incident: Steel Cast/Wrought Iron Ductile Iron Copper Plastic
 Reconditioned Cast Iron Unknown
 Other ⇒ Specify: **MATERIAL_DETAILS** _____

4.a. If Steel ⇒ Specify seam type: **MATERIAL_SEAM_TYPE** or None or Unknown **SEAM_TYPE_UNKNOWN_IND**

4.b. If Steel ⇒ Specify wall thickness (inches): / / / / / or Unknown **WT_STEEL**
WT_STEEL_UNKNOWN_IND
PLASTIC_TYPE

- 4.c. If Plastic ⇒ Specify type: Polyvinyl Chloride (PVC) Polyethylene (PE) Cross-linked Polyethylene (PEX)
 Polybutylene (PB) Polypropylene (PP) Acrylonitrile Butadiene Styrene (ABS)
 Polyamide (PA) Cellulose Acetate Butyrate (CAB)
 Other **PLASTIC_DETAILS** _____
 Unknown

4.d. If Plastic ⇒ Specify Standard Dimension Ratio (SDR): **PLASTIC_SDR** / / / / / or wall thickness: / / / / / or Unknown **WT_PLASTIC**
WT_PLASTIC_UNKNOWN_IND

4.e. If Polyethylene (PE) is selected as the type of plastic in PART C, Question 4.c ⇒
Specify PE Pipe Material Designation Code (i.e., 2406, 3408, etc.) **MATERIAL_PE_PIPE_CODE** PE / / / / / or Unknown **PLASTIC_PE_UNKNOWN_IND**

5. Type of release involved: (select only one)

- Mechanical Puncture ⇒ Approx. size: / / / / / / / / / / / in. (axial) by / / / / / / / / / / / in. (circumferential) **PUNCTURE_AXIAL** **PUNCTURE_CIRCUM** **LEAK_TYPE_OTHER**
- Leak ⇒ Select Type: Pinhole Crack Connection Failure Seal or Packing Other **LEAK_TYPE**
- Rupture ⇒ Select Orientation: Circumferential Longitudinal Other **RUPTURE_ORIENT** **RUPTURE_DETAILS**
Approx. size: / / / / / / / / / / / in. (widest opening) by / / / / / / / / / / / in. (length circumferentially or axially) **RUPTURE_LENGTH** **RUPTURE_WIDTH**
- Other ⇒ *Describe: **RELEASE_TYPE_DETAILS** _____

PART D – ADDITIONAL CONSEQUENCE INFORMATION

1. Class Location of Incident: *(select only one)* **CLASS_LOCATION_TYPE**

- Class 1 Location
- Class 2 Location
- Class 3 Location
- Class 4 Location

2. Estimated Property Damage :

2.a Estimated cost of public and non-Operator private property damage \$ / **EST_COST_OPER_PAID**

2.b Estimated cost of Operator's property damage & repairs \$ / **EST_COST_PROP_DAMAGE**

2.c Estimated cost of Operator's emergency response \$ / **EST_COST_EMERGENCY**

2.d Estimated other costs \$ / **EST_COST_OTHER**

Describe: **EST_COST_OTHER_DETAILS** **PRPTY**

2.e Total estimated property damage (sum of above) \$ /

Cost of Gas Released

2.f Estimated cost of gas released \$ / **EST_COST_GAS_RELEASED**

3. Estimated number of customers out of service:

3.a Commercial entities / / / / / **COMMERCIAL_AFFECTED**

3.b Industrial entities / / / / / **INDUSTRIAL_AFFECTED**

3.c Residences / / / / / **RESIDENCES_AFFECTED**

PART E – ADDITIONAL OPERATING INFORMATION

- 1. Estimated pressure at the point and time of the Incident (psig): _____ **ACCIDENT_PSIG**
- 2. Normal operating pressure at the point and time of the Incident (psig): _____ **NORMAL_PSIG**
- 3. Maximum Allowable Operating Pressure (MAOP) at the point and time of the Incident (psig): _____ **MOP_PSIG**
- 4. Describe the pressure on the system relating to the Incident: *(select only one)* **ACCIDENT_PRESSURE**
 - Pressure did not exceed MAOP
 - Pressure exceeded MAOP, but did not exceed 110% of MAOP
 - Pressure exceeded 110% of MAOP

- 5. Was a Supervisory Control and Data Acquisition (SCADA)-based system in place on the pipeline or facility involved in the Incident?
 - No **SCADA_IN_PLACE_IND**
 - Yes ⇒
 - 5.a Was it operating at the time of the Incident? Yes No **SCADA_OPERATING_IND**
 - 5.b Was it fully functional at the time of the Incident? Yes No **SCADA_FUNCTIONAL_IND**
 - 5.c Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume or pack calculations) assist with the detection of the Incident? Yes No **SCADA_DETECTION_IND**
 - 5.d Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the confirmation of the Incident? Yes No **SCADA_CONF_IND**

- 6. How was the Incident initially identified for the Operator? *(select only one)* **ACCIDENT_IDENTIFIER**
 - 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 _____ **ACCIDENT_DETAILS**

6.a If "Controller", "Local Operating Personnel, including contractors", "Air Patrol", or "Ground Patrol by Operator or its contractor" is selected in Question 6, specify the following: *(select only one)* **OPERATOR_TYPE**

Operator employee Contractor working for the Operator

- 7. 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)* **INVESTIGATION_STATUS**
 - 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)* _____ **INVESTIGATION_STATUS_DETAILS**

- Yes, Specify investigation result(s): *(select all that apply)* **INVEST_SCHEDULE_IND**
 - 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)* **INVEST_NO_SCHEDULE_IND** _____ **INVEST_NO_SCHEDULE_IND_DETAILS**
- Investigation identified no control room issues **INVEST_NO_CONTROL_ROOM_IND**
- Investigation identified no controller issues **INVEST_NO_CONTROLLER_IND**
- Investigation identified incorrect controller action or controller error **INVEST_INCORRECT_ACTION_IND**
- Investigation identified that fatigue may have affected the controller(s) involved or impacted the involved controller(s) response **INVEST_FATIGUE_IND**
- Investigation identified incorrect procedures **INVEST_INCORRECT_PROCEDURE_IND**
- Investigation identified incorrect control room equipment operation **INVEST_INCORRECT_CONTROL_IND** **INVEST_MAINT_IND**
- Investigation identified maintenance activities that affected control room operations, procedures, and/or controller response
- Investigation identified areas other than those above ⇒ Describe: _____ **INVEST_OTHER_IND** _____ **INVEST_OTHER_IND_DETAILS**

PART F – DRUG & ALCOHOL TESTING INFORMATION

1. 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? **EMPLOYEE_DRUG_TEST_IND**

No

Yes ⇒ 1.a Specify how many were tested: / / **NUM_EMPLOYEES_TESTED**

1.b Specify how many failed: / / **NUM_EMPLOYEES_FAILED**

2. 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? **CONTRACTOR_DRUG_TEST_IND**

No

Yes ⇒ 2.a Specify how many were tested: / / **NUM_CONTRACTORS_TESTED**

2.b Specify how many failed: / / **NUM_CONTRACTORS_FAILED**

PART G – APPARENT CAUSE
CAUSE, CAUSE_DETAILS

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. Describe secondary, contributing, or root causes of the Incident in the narrative (PART H).

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

External Corrosion

1. Results of visual examination: **VISUAL_EXAM_RESULTS**
 Localized Pitting General Corrosion
 Other _____ **VISUAL_EXAM_DETAILS**
2. Type of corrosion: (select all that apply)
GALVANIC_CORROSION_IND, ATMOSPHERE_CORROSION_IND, STRAY_CURRENT_CORROSION_IND
MICROBIOLOGICAL_CORROSION_IND, SELECTIVE_SEAM_CORROSION_IND
 Galvanic Atmospheric Stray Current Microbiological Selective Seam
 Other _____ **OTHER_CORROSION_IND, CORROSION_TYPE_DETAILS**
3. The type(s) of corrosion selected in Question 2 is based on the following: (select all that apply) **FIELD_EXAM_BASIS_IND METALLURGICAL_BASIS_IND**
 Field examination Determined by metallurgical analysis
 Other _____ **OTHER_BASIS_IND, CORROSION_BASIS_DETAILS**
4. Was the failed item buried under the ground? **UNDERGROUND_LOCATION**
 Yes ⇒ 4.a Was failed item considered to be under cathodic protection at the time of the incident? **UNDER_CATHODIC_PROTECTION_IND, CATHODIC_PRO_START_YEAR**
 Yes ⇒ Year protection started: ____/____/____
 No
4.b Was shielding, tenting, or disbonding of coating evident at the point of the incident? **SHIELDING_EVIDENT**
 Yes No
4.c Has one or more Cathodic Protection Survey been conducted at the point of the incident? **CATHODIC_SURVEY_TYPE**
 Yes, CP Annual Survey ⇒ Most recent year conducted: **CP_ANNUAL_SURVEY_IND CP_ANNUAL_SURVEY_YEAR**
 Yes, Close Interval Survey ⇒ Most recent year conducted: **CLOSE_INTERVAL_SURVEY_IND CLOSE_INTERVAL_SURVEY_YEAR**
 Yes, Other CP Survey ⇒ Most recent year conducted: **OTHER_CP_SURVEY_IND OTHER_CP_SURVEY_YEAR**
 No
 No ⇒ 4.d Was the failed item externally coated or painted? **EXTERNALLY_COATED** Yes No
5. Was there observable damage to the coating or paint in the vicinity of the corrosion?
 Yes No **PRIOR_DAMAGE**
6. Pipeline coating type, if steel pipe is involved: (select only one) **COATING_TYPE**
 Fusion Bonded Epoxy Coal Tar Asphalt
 Polyolefin Extruded Polyethylene Field Applied Epoxy
 Cold Applied Tape Paint Composite None
 Other _____ **COATING_TYPE_DETAILS**
 Unknown

Internal Corrosion

7. Results of visual examination: **INT_VISUAL_EXAM_RESULTS**
 Localized Pitting General Corrosion Not cut open
 Other _____ **INT_VISUAL_EXAM_DETAILS**
8. Cause of corrosion: (select all that apply)
INT_CORROSIVE_COMMODITY_IND, INT_WATER_ACID_IND, INT_MICROBIOLOGICAL_IND
 Corrosive Commodity Water drop-out/Acid Microbiological Erosion
 Other _____ **INT_EROSION_IND, INT_OTHER_CORROSION_IND, INT_CORROSION_TYPE_DETAILS**
9. The cause(s) of corrosion selected in Question 8 is based on the following; (select all that apply) **INT_FIELD_EXAM_BASIS_IND INT_METALLURGICAL_BASIS_IND**
 Field examination Determined by metallurgical analysis
 Other _____ **INT_OTHER_BASIS_IND, INT_CORROSION_BASIS_DETAILS**
10. Location of corrosion: (select all that apply)
INT_LOW_POINT_PIPE_LOC_IND, INT_ELBOW_LOC_IND, INT_DROP_OUT_LOC_IND
 Low point in pipe Elbow Drop-out
 Other _____ **INT_OTHER_LOC_IND, CORROSION_LOCATION_DETAILS**
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 **LIQUID_FOUND**

CORROSION_INHIBITORS

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: **COR_HYDROTEST_LEAK_SURVEY_DATE**
 ___/___/___
 Month Day Year

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

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

<input type="checkbox"/> NATURAL_FORCE_TYPE Earth Movement, NOT due to Heavy Rains/Floods	EARTH_SUBTYPE 1. Specify: <input type="radio"/> Earthquake <input type="radio"/> Subsidence <input type="radio"/> Landslide <input type="radio"/> Other NF_OTHER_DETAILS
<input type="checkbox"/> Heavy Rains/Floods	HEAVY_RAINS_SUBTYPE 2. Specify: <input type="radio"/> Washouts/Scouring <input type="radio"/> Flotation <input type="radio"/> Mudslide <input type="radio"/> Other NF_OTHER_DETAILS
<input type="checkbox"/> Lightning	LIGHTNING_SUBTYPE 3. Specify: <input type="radio"/> Direct hit <input type="radio"/> Secondary impact such as resulting nearby fires
<input type="checkbox"/> Temperature	TEMPERATURE_SUBTYPE 4. Specify: <input type="radio"/> Thermal Stress <input type="radio"/> Frost Heave <input type="radio"/> Frozen Components <input type="radio"/> Other NF_OTHER_DETAILS
<input type="checkbox"/> High Winds	
<input type="checkbox"/> Other Natural Force Damage	5. Describe: NF_OTHER_DETAILS

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? **NF_EXTREME_WEATHER_IND** Yes No
NF_HURRICANE_IND, NF_TROPICAL_STORM_IND, NF_TORNADO_IND
 6.a. If Yes, specify: (select all that apply) Hurricane Tropical Storm Tornado
 Other **NF_OTHER_IND, NF_EXTREME_WEATHER_DETAILS**

9. Was the One-Call Center notified? Yes No **ONE_CALL_NOTIFIED_IND**

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

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

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

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

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

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

13.a If Yes, specify duration of the interruption: / / / / / / / / hours **SERVICE_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):
ROOT_CAUSE

ONE_CALL_SUBTYPE
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_SUBTYPE
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_SUBTYPE
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) **ROOT_CAUSE_OTHER**

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

<input type="checkbox"/> Body of Pipe	<p>PWJF_FAILURE_TYPE</p> <p>PIPE_BODY_SUBTYPE</p> <p>1. Specify: <input type="radio"/> Dent <input type="radio"/> Gouge <input type="radio"/> Bend <input type="radio"/> Arc Burn <input type="radio"/> Crack <input type="radio"/> Other <u>PIPE_BODY_DETAILS</u></p>
<input type="checkbox"/> Butt Weld	<p>BUTT_WELD_SUBTYPE</p> <p>2. Specify: <input type="radio"/> Pipe <input type="radio"/> Fabrication <input type="radio"/> Other <u>BUTT_WELD_DETAILS</u></p>
<input type="checkbox"/> Fillet Weld	<p>FILLET_WELD_SUBTYPE</p> <p>3. Specify: <input type="radio"/> Branch <input type="radio"/> Hot Tap <input type="radio"/> Fitting <input type="radio"/> Repair Sleeve <input type="radio"/> Other <u>FILLET_WELD_DETAILS</u></p>
<input type="checkbox"/> Pipe Seam	<p>PIPE_SEAM_SUBTYPE</p> <p>4. Specify: <input type="radio"/> LF ERW <input type="radio"/> HF ERW <input type="radio"/> Flash Weld <input type="radio"/> DSAW <input type="radio"/> SAW <input type="radio"/> Spiral <input type="radio"/> Other <u>PIPE_SEAM_DETAILS</u></p>
<input type="checkbox"/> Threaded Metallic Pipe	
<input type="checkbox"/> Mechanical Fitting	<p>5. Specify the mechanical fitting involved: MECHANICAL_FITTING_INVOLVED <input type="radio"/> Stub type fitting <input type="radio"/> Nut follower type fitting <input type="radio"/> Bolted type fitting <input type="radio"/> Other <u>MEC_FITTING_OTHER</u></p> <p>6. Specify the type of mechanical fitting: MECHANICAL_FITTING_TYPE <input type="radio"/> Service Tee <input type="radio"/> Coupling <input type="radio"/> Service Head Adapter <input type="radio"/> Basement Adapter <input type="radio"/> Riser <input type="radio"/> Elbow <input type="radio"/> Other <u>MEC_FITTING_TYPE_OTHER</u></p> <p>7. Manufacturer: <u>MPW_MANUFACTURER</u></p> <p>8. Year manufactured: <u> </u> / <u> </u> / <u> </u> / <u> </u> / <u> </u> MPW_MANUFACTURE_YEAR</p> <p>9. Year installed: <u> </u> / <u> </u> / <u> </u> / <u> </u> / <u> </u> MPW_INSTALLED_YEAR</p> <p>10. Other attributes: <u>MPW_OTHER_ATTR</u></p> <p>11. Specify the two materials being joined: MPW_FIRST_MAT_JOINED_STEEL MPW_FIRST_MAT_JOINED_CAST MPW_FIRST_MAT_JOINED_IRON MPW_FIRST_MAT_JOINED_COPPER MPW_FIRST_MAT_JOINED_PLASTIC MPW_FIRST_MAT_JOINED_UNKNOWN MPW_FIRST_MAT_JOINED_OTHER_IND</p> <p>11.a First material being joined: <input type="checkbox"/> Steel <input type="checkbox"/> Cast/Wrought Iron <input type="checkbox"/> Ductile Iron <input type="checkbox"/> Copper <input type="checkbox"/> Plastic <input type="checkbox"/> Unknown <input type="checkbox"/> Other ⇒ Specify: <u>MPW_FIRST_MAT_JOINED_OTHER</u> MPW_FIRST_PLASTIC_TYPE</p> <p>11.b If Plastic ⇒ Specify: <input type="radio"/> Polyvinyl Chloride (PVC) <input type="radio"/> Polyethylene (PE) <input type="radio"/> Cross-linked Polyethylene (PEX) <input type="radio"/> Polybutylene (PB) <input type="radio"/> Polypropylene (PP) <input type="radio"/> Acrylonitrile Butadiene Styrene (ABS) <input type="radio"/> Polyamide (PA) <input type="radio"/> Cellulose Acetate Butyrate (CAB) <input type="radio"/> Other ⇒ Specify: <u>MPW_FIRST_PLASTIC_TYPE_OTHER</u></p> <p>11.c Second material being joined: MPW_SECOND_MAT_JOINED_STEEL MPW_SECOND_MAT_JOINED_CAST MPW_SECOND_MAT_JOINED_IRON MPW_SECOND_MAT_JOINED_COPPER MPW_SECOND_MAT_JOINED_PLASTIC MPW_SECOND_MAT_JOINED_UNKNOWN MPW_SEC_MAT_JOINED_OTHER_IND</p> <p><input type="checkbox"/> Steel <input type="checkbox"/> Cast/Wrought Iron <input type="checkbox"/> Ductile Iron <input type="checkbox"/> Copper <input type="checkbox"/> Plastic <input type="checkbox"/> Unknown <input type="checkbox"/> Other ⇒ Specify: <u>MPW_SECOND_MAT_JOINED_OTHER</u> MPW_SECOND_PLASTIC_TYPE</p> <p>11.d If Plastic ⇒ Specify: <input type="radio"/> Polyvinyl Chloride (PVC) <input type="radio"/> Polyethylene (PE) <input type="radio"/> Cross-linked Polyethylene (PEX) <input type="radio"/> Polybutylene (PB) <input type="radio"/> Polypropylene (PP) <input type="radio"/> Acrylonitrile Butadiene Styrene (ABS) <input type="radio"/> Polyamide (PA) <input type="radio"/> Cellulose Acetate Butyrate (CAB) <input type="radio"/> Other ⇒ Specify: <u>MPW_SECOND_PLASTIC_TYPE_OTHER</u></p> <p>12. If used on plastic pipe, did the fitting – as designed by the manufacturer – include restraint? INCLUDE_RESTRAINT_IND <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown INCLUDE_RESTRAINT</p> <p>12.a If Yes, specify: <input type="radio"/> Cat. I <input type="radio"/> Cat. II <input type="radio"/> Cat. III <input type="radio"/> DOT 192.283</p>

<input type="checkbox"/> Compression Fitting	<p>13. Fitting type: <u>CPW_FITTING_TYPE</u></p> <p>14. Manufacturer: <u>CPW_MANUFACTURER</u></p> <p>15. Year manufactured: <u> / / / / </u> CPW_MANUFACTURE_YEAR</p> <p>16. Year installed: <u> / / / / </u> CPW_INSTALLED_YEAR</p> <p>17. Other attributes <u>CPW_OTHER_ATTR</u></p> <p>18. Specify the two materials being joined: CPW_FIRST_MAT_JOINED_STEEL CPW_FIRST_MAT_JOINED_CAST</p> <p>18.a First material being joined: CPW_FIRST_MAT_JOINED_IRON CPW_FIRST_MAT_JOINED_COPPER CPW_FIRST_MAT_JOINED_PLASTIC CPW_FIRST_MAT_JOINED_UNKNOWN CPW_FIRST_MAT_JOINED_OTHER_IND</p> <p><input type="checkbox"/> Steel <input type="checkbox"/> Cast/Wrought Iron <input type="checkbox"/> Ductile Iron <input type="checkbox"/> Copper <input type="checkbox"/> Plastic <input type="checkbox"/> Unknown <input type="checkbox"/> Other ⇒ Specify: <u>CPW_FIRST_MAT_JOINED_OTHER</u> CPW_FIRST_PLASTIC_TYPE</p> <p>18.b If Plastic ⇒ Specify : <input type="radio"/> Polyvinyl Chloride (PVC) <input type="radio"/> Polyethylene (PE) <input type="radio"/> Cross-linked Polyethylene (PEX) <input type="radio"/> Polybutylene (PB) <input type="radio"/> Polypropylene (PP) <input type="radio"/> Acrylonitrile Butadiene Styrene (ABS) <input type="radio"/> Polyamide (PA) <input type="radio"/> Cellulose Acetate Butyrate (CAB) <input type="radio"/> Other ⇒ Specify: <u>CPW_FIRST_PLASTIC_TYPE_OTHER</u></p> <p>18.c Second material being joined: CPW_SECOND_MAT_JOINED_STEEL CPW_SECOND_MAT_JOINED_CAST CPW_SECOND_MAT_JOINED_IRON CPW_SECOND_MAT_JOINED_COPPER CPW_SECOND_MAT_JOINED_PLASTIC CPW_SECOND_MAT_JOINED_UNKNOWN CPW_SEC_MAT_JOINED_OTHER_IND</p> <p><input type="checkbox"/> Steel <input type="checkbox"/> Cast/Wrought Iron <input type="checkbox"/> Ductile Iron <input type="checkbox"/> Copper <input type="checkbox"/> Plastic <input type="checkbox"/> Unknown <input type="checkbox"/> Other ⇒ Specify: <u>CPW_SECOND_MAT_JOINED_OTHER</u> CPW_SECOND_PLASTIC_TYPE</p> <p>18.d If Plastic ⇒ Specify: <input type="radio"/> Polyvinyl Chloride (PVC) <input type="radio"/> Polyethylene (PE) <input type="radio"/> Cross-linked Polyethylene (PEX) <input type="radio"/> Polybutylene (PB) <input type="radio"/> Polypropylene (PP) <input type="radio"/> Acrylonitrile Butadiene Styrene (ABS) <input type="radio"/> Polyamide (PA) <input type="radio"/> Cellulose Acetate Butyrate (CAB) <input type="radio"/> Other ⇒ Specify: <u>CPW_SECOND_PLASTIC_TYPE_OTHER</u></p>
<input type="checkbox"/> Fusion Joint	<p>19. Specify: <input type="radio"/> Butt, Heat Fusion <input type="radio"/> Butt, Electrofusion <input type="radio"/> Saddle, Heat Fusion <input type="radio"/> Saddle, Electrofusion <input type="radio"/> Socket, Heat Fusion <input type="radio"/> Socket, Electrofusion <input type="radio"/> Other PLASTIC_JOINT_DETAILS</p> <p>20. Year installed: <u> / / / / </u> FPW_INSTALLED_YEAR</p> <p>21. Other attributes: <u>FPW_OTHER_ATTR</u></p> <p>22. Specify the two materials being joined:</p> <p>22.a First material being joined: FPW_FIRST_PLASTIC_TYPE <input type="radio"/> Polyvinyl Chloride (PVC) <input type="radio"/> Polyethylene (PE) <input type="radio"/> Cross-linked Polyethylene (PEX) <input type="radio"/> Polybutylene (PB) <input type="radio"/> Polypropylene (PP) <input type="radio"/> Acrylonitrile Butadiene Styrene (ABS) <input type="radio"/> Polyamide (PA) <input type="radio"/> Cellulose Acetate Butyrate (CAB) <input type="radio"/> Other ⇒ Specify: <u>FPW_FIRST_PLASTIC_TYPE_OTHER</u></p> <p>22.b Second material being joined: FPW_SECOND_PLASTIC_TYPE <input type="radio"/> Polyvinyl Chloride (PVC) <input type="radio"/> Polyethylene (PE) <input type="radio"/> Cross-linked Polyethylene (PEX) <input type="radio"/> Polybutylene (PB) <input type="radio"/> Polypropylene (PP) <input type="radio"/> Acrylonitrile Butadiene Styrene (ABS) <input type="radio"/> Polyamide (PA) <input type="radio"/> Cellulose Acetate Butyrate (CAB) <input type="radio"/> Other ⇒ Specify: <u>FPW_SECOND_PLASTIC_TYPE_OTHER</u></p>
<input type="checkbox"/> Other Pipe, Weld, or Joint Failure	<p>23. Describe: <u>PWJF_FAILURE_DETAILS</u></p>

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

ADDITIONAL_DENT_IND, ADDITIONAL_GOUGE_IND, ADDITIONAL_PIPE_BEND_IND, ADDITIONAL_ARC_BURN_IND, ADDITIONAL_CRACK_IND,
 ADDITIONAL_LACK_FUSION_IND, ADDITIONAL_LAMINATION_IND, ADDITIONAL_BUCKLE_IND, ADDITIONAL_WRINKLE_IND,
 ADDITIONAL_MISALIGNMENT_IND, ADDITIONAL_BURNT_STEEL_IND, ADDITIONAL_OTHER_IND, ADDITIONAL_OTHER_DETAILS

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

25. Was the Incident a result of: **RESULT_CONSTRUCTION_IND, RESULT_CONSTRUCTION_SUBTYPE**
 Construction defect, specify: ⇒ Poor workmanship Procedure not followed Poor construction/installation procedures
 Material defect, specify: ⇒ Long seam Other **RESULT_MATERIAL_IND, RESULT_MATERIAL_SUBTYPE**
 Design defect **RESULT_DESIGN_IND**
 Previous damage **RESULT_PREVIOUS_IND**

26. Has one or more pressure test been conducted since original construction at the point of the Incident? **HYDROTEST_CONDUCTED_IND**
 Yes ⇒ Most recent year tested: / / / / / Test pressure (psig): / / / / /
 No **HYDROTEST_CONDUCTED_YEAR** **HYDROTEST_PRESSURE**

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

<input type="checkbox"/> EQ_FAILURE_TYPE Malfunction of Control/Relief Equipment	CONTROL_VALVE_IND, INSTRUMENTATION_IND, SCADA_IND, COMMUNICATIONS_IND, BLOCK_VALVE_IND, CHECK_VALVE_IND, RELIEF_VALVE_IND, POWER_FAILURE_IND STOPPLE_CONTROL_FITTING_IND 1. Specify: (select all that apply) <input type="radio"/> Control Valve <input type="radio"/> Instrumentation <input type="radio"/> SCADA <input type="radio"/> Communications <input type="radio"/> Block Valve <input type="radio"/> Check Valve <input type="radio"/> Relief Valve <input type="radio"/> Power Failure <input type="radio"/> Stopple/Control Fitting <input type="radio"/> Pressure Regulator PRESSURE_REGULATOR_IND <input type="radio"/> Other <u> </u> OTHER_CONTROL_RELIEF_IND, OTHER_CONTROL_RELIEF_DETAILS
<input type="checkbox"/> Threaded Connection Failure	OTHER_STRIPPED_IND 2. Specify: <input type="radio"/> Pipe Nipple <input type="radio"/> Valve Threads <input type="radio"/> Threaded Pipe Collar <input type="radio"/> Threaded Fitting <input type="radio"/> Other <u> </u> OTHER_STRIPPED_DETAILS
<input type="checkbox"/> Non-threaded Connection Failure	OTHER_NON_THREADED_IND 3. Specify: <input type="radio"/> O-Ring <input type="radio"/> Gasket <input type="radio"/> Other Seal or Packing <input type="radio"/> Other <u> </u> OTHER_NON_THREADED_DETAILS
<input type="checkbox"/> Valve	VALVE_OTHER_IND 4. Specify: <input type="radio"/> Manufacturing defect <input type="radio"/> Other <u> </u> VALVE_OTHER_DETAILS 4.a Valve type: <u> </u> VALVE_TYPE 4.b Manufactured by: <u> </u> EQ_MANUFACTURER 4.c Year manufactured: / / / / / EQ_MANUFACTURE_YEAR
<input type="checkbox"/> Other Equipment Failure	5. Describe: <u> </u> EQ_FAILURE_DETAILS

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

<input type="checkbox"/> OPERATION_TYPE Damage by Operator or Operator's Contractor NOT Related to Excavation and NOT due to Motorized Vehicle/Equipment Damage	
<input type="checkbox"/> Valve Left or Placed in Wrong Position, but NOT Resulting in an Overpressure	
<input type="checkbox"/> Pipeline or Equipment Overpressured	
<input type="checkbox"/> Equipment Not Installed Properly	
<input type="checkbox"/> Wrong Equipment Specified or Installed	
<input type="checkbox"/> Other Incorrect Operation	1. Describe: _____ OPERATION_DETAILS

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

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

- Inadequate procedure **RELATED_INADEQUATE_PROC_IND**
- No procedure established **RELATED_NO_PROC_IND**
- Failure to follow procedure **RELATED_FAILURE_FOLLOW_IND**
- Other:* _____ **RELATED_OTHER_IND OPERATION_RELATED_DETAILS**

3. What category type was the activity that caused the Incident: **CATEGORY_TYPE**

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

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

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

- 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

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

Note: Field names not on the form are as following:

Field Name	Field Name Description
DATAFILE_AS_OF	<i>Data as of date</i>
FF	<i>Identify if incident was cause by fire first or not</i>
SIGNIFICANT	<i>Identify if record meets the significant criteria or not: If there was fatality, injury, or total property damage is \$50K or more in 1984 dollars, then SIGNIFICANT='YES'; else SIGNIFICANT='NO'.If FF criteria is true then SIGNIFICANT = 'NO'.</i>
IYEAR	<i>Year incident occurred, derived from incident date</i>
EST_COST_OPER_PAID_CURRENT	<i>Converted Property Damage to Current Year dollars</i>
EST_COST_GAS_RELEASED_CURRENT	<i>Converted Property Damage to Current Year dollars</i>
EST_COST_PROP_DAMAGE_CURRENT	<i>Converted Property Damage to Current Year dollars</i>
EST_COST_EMERGENCY_CURRENT	<i>Converted Property Damage to Current Year dollars</i>
EST_COST_OTHER_CURRENT	<i>Converted Property Damage to Current Year dollars</i>
PRPTY_CURRENT	<i>Converted Property Damage to Current Year dollars</i>
MAP_CAUSE	<i>Cause by PHMSA for 20 year incident trending</i>
MAP_SUBCAUSE	<i>SubCause by PHMSA for 20 year incident trending</i>
SERIOUS	<i>Identify if record meets the SERIOUS criteria or not: If there was fatality or injury and if FF criteria is false then SERIOUS = 'YES' else SERIOUS = 'NO'.</i>