

COMMODITY_RELEASED_TYPE

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

- ☐ Natural Gas
☐ Propane Gas
☐ Synthetic Gas
☐ Hydrogen Gas
☐ Landfill Gas
☐ Other Gas ➡ *Name: **COMMODITY_DETAILS**

A7. Estimated volume of gas released unintentionally: **UNINTENTIONAL_RELEASE** / / / / / thousand standard cubic feet (mcf)A8. Estimated volume of intentional and controlled release/blowdown: **INTENTIONAL_RELEASE** / / / / / thousand standard cubic feet (mcf)A9. Were there fatalities? ☐ Yes ☐ No **FATALITY_IND**

If Yes, specify the number in each category:

- A9a. Operator employees **NUM_EMP_FATALITIES** / / / / /
A9b. Contractor employees **NUM_CONTR_FATALITIES** / / / / /
working for the Operator
A9c. Non-Operator **NUM_ER_FATALITIES** / / / / /
emergency responders
A9d. Workers working on the **NUM_WORKER_FATALITIES** / / / / /
right-of-way, but NOT
associated with this Operator **NUM_GP_FATALITIES** / / / / /
A9e. General public
A9f. Total fatalities (sum of above) **calculated FATAL**

A10. Were there injuries requiring inpatient hospitalization? ☐ Yes ☐ No **INJURY_IND**

If Yes, specify the number in each category:

- A10a. Operator employees **NUM_EMP_INJURIES** / / / / /
A10b. Contractor employees **NUM_CONTR_INJURIES** / / / / /
working for the Operator
A10c. Non-Operator **NUM_ER_INJURIES** / / / / /
emergency responders
A10d. Workers working on the **NUM_WORKER_INJURIE** / / / / /
right-of-way, but NOT
associated with this Operator **NUM_GP_INJURIES** / / / / /
A10e. General public
A10f. Total injuries (sum of above) **calculated INJURE**

A11. What was the Operator's initial indication of the Failure? (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
☐ 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 **ACCIDENT_DETAILS**

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_TYPE**

- ☐ Operator employee
☐ Contractor working for the Operator

A12. Local time operator identified failure **INCIDENT_IDENTIFIED_DATETIME** / / / / /
Hour Month Day YearIf A11 = Notification from Emergency Responder, skip questions A13 through A15. **COMMUNICATION_STATE_FED_IND**A13. Did the operator communicate with Local, State, or Federal Emergency Responders about the incident? ☐ Yes ☐ NoIf No, skip A14 and A15 **PARTY_INITIATED_COMMUNICATION**A14. Which party initiated communication about the incident? ☐ Operator ☐ Local/State/Federal Emergency ResponderA15. Local time of initial Operator and Local/State/Federal Emergency Responder communication **INITIAL_RESPONDER_COM_DATETIME** / / / / /
Hour Month Day YearA16. Local time operator resources arrived on site **ON_SITE_DATETIME** / / / / /
Hour Month Day YearA17. Local time of confirmed discovery **CONFIRMED_DISCOVERY_DATETIME** / / / / /
Hour Month Day Year

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

/ / / / / **NRC_RPT_DATETIME**
Hour Month Day Year**NRC_RPT_NUM**

A19. Initial Operator National Response Center Report Number OR

☐ NRC Notification Required But Not MadeA19a. Additional NRC Report numbers submitted by the operator: **ADDITIONAL_NRC_REPORT_NUMBERS**

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

- ☐ "Key/Critical" Valve – inspected in accordance with Part 192.747 **FLOW_CONT_KEY_CRIT_IND**
☐ Main Valve other than "Key/Critical" **FLOW_CONT_MAIN_VALVE_IND**
☐ Service (curb) Valve **FLOW_CONT_SERVICE_VALVE_IND**
☐ Meter/Regulator shut-off Valve **FLOW_CONT_METER_REG_IND**
☐ Excess flow valve **FLOW_CONT_EXCESS_FLOW_IND**
☐ Squeeze-Off **FLOW_CONT_SQUEEZE_OFF_IND**
☐ Stopple fitting **FLOW_CONT_STOPPLE_FITNG_IND**
☐ Other – mandatory text field **FLOW_CONT_OTHER_IND** **FLOW_CONT_OTHER_DETAIL**

A21. Did the gas ignite? ☐ Yes ☐ No **IGNITE_IND**

If A21 = Yes, answer A21a through A21d.

A21a. Local time of ignition **IGNITE_DATETIME**
____/____/____ Hour ____/____/____ Month ____/____/____ Day ____/____/____ Year

A21b. How was the fire extinguished? **HOW_EXTINGUISHED** **HOW_EXTINGUISHED_OTHER_DETAIL**

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

GAS_CONSUMED_BY_FIRE_IN_MCF

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

A21d. Did the gas explode? ☐ Yes ☐ No **EXPLODE_IND**

A22. Number of general public evacuated: ____/____/____/____/____/____/____ **NUM_PUB_EVACUATED**

PART B – ADDITIONAL LOCATION INFORMATIONB1. Was the Incident on Federal land? ☐ Yes ☐ No **FEDERAL**B2. Location of Incident: *(select only one)* **LOCATION_TYPE**

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

B3. 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)
- ☐ Exposed due to loss cover ☐ Other **INCIDENT_AREA_DETAILS**

B3a. Depth-of-Cover (in): / / / / / **DEPTH_OF_COVER****OTHER_UNDERGROUND_FACILITIES**B3b. Were other underground facilities found within 12 inches of the failure location? ☐ Yes ☐ No

- ☐ 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**

CROSSINGB4. Did Incident occur in a crossing? ☐ Yes ☐ No

If Yes, specify type below:

BRIDGE_CROSSING_IND☐ Bridge crossing ➡ Specify: ☐ Cased ☐ Uncased **BRIDGE_TYPE****RAILROAD_CROSSING_IND**☐ Railroad crossing ➡ *(Select all that apply)* ☐ Cased ☐ Uncased ☐ Bored/drilled **RAILROAD_TYPE****ROAD_CROSSING_IND**☐ Road crossing ➡ *(Select all that apply)* ☐ Cased ☐ Uncased ☐ Bored/drilled **ROAD_TYPE****WATER_CROSSING_IND**☐ Water crossing ➡ *(Select all that apply)* ☐ Cased ☐ Uncased ☐ Bored/drilled **WATER_TYPE**Name of body of water (If commonly known): **WATER_NAME**Approx. water depth at time and location of Incident (ft): **WATER_DEPTH** / / / / / or ☐ Unknown*(select only one of the following)* **WATER_SUBTYPE**

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

C1. Indicate the type of pipeline system: **PIPE_FACILITY_TYPE**

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

SYSTEM_PART_INVOLVED

C2. Part of system involved in Incident: *(select only one)*

- ☐ Main
 ☐ Main Valve
 ☐ Service
 ☐ Service Valve
 ☐ Service Riser
 ☐ Outside Meter/Regulator set
 ☐ Inside Meter/Regulator set
 ☐ Farm Tap Meter/Regulator set
 ☐ District Regulator/Metering Station
 ☐ Other *mandatory text field* **SYSTEM_PART_DETAILS**

C2a. Year item involved in the incident was installed: / / / / or ☐ Unknown

MANUFACTURED YEAR

C2b. Year item involved in the incident was manufactured: / / / / or ☐ Unknown

When C2.is any value other than "Main", "Main Valve", "District Regulator/Metering Station", or "Other": **CUSTOMER_TYPE**

C2c. Indicate the customer type: (*select only one*) ☐ Single Family Residential ☐ Multi-Family Residential

☐ Non-Residential with Meter capacity less than 1,000 scfh ☐ Non-Residential with Meter Capacity 1,000 scfh of higher

C2d. Was an EFV installed on the service line before the time of the incident? ☐ Yes ☒ No **WAS EFV INSTALLED BEFORE IND**

If C2d = Yes, then C2e. Did the EFV activate? ☐ Yes ☐ No ☐ Unable to determine **EFV ACTIVATION IND**

C2f. Was a curb valve installed on the service line before the time of the incident? ☐ Yes ☐ No
CURB VALVE INST BEFORE INC IND

C3. When C2. is "Main" or "Service" answer C3a through c and C4:

C3a. Nominal Pipe Size: / / / / / / **PIPE_DIAMETER**

C3b. Pipe specification (e.g., API 5L, ASTM D2513): **PIPE_SPECIFICATION** OR ☐ Unknown

C3c. Pipe manufacturer: **PIPE_MANUFACTURER** or ☐ Unknown

MATERIAL INVOLVED

C4. Material involved in Incident: ☐ Steel ☐ Cast/Wrought Iron ☐ Ductile Iron ☐ Copper ☐ Plastic
☐ Reconditioned Cast Iron ☐ Unknown ☐ Other **MATERIAL_DETAILS**

C4a. If Steel \Rightarrow Specify seam type: **STEEL SEAM TYPE**

☐ Longitudinal ERW - High Frequency ☐ Single SAW ☐ Flash Welded ☐ DSAW ☐ Longitudinal ERW - Low Frequency
☐ Continuous Welded ☐ Furnace Butt Welded ☐ Longitudinal ERW – Unknown Frequency ☐ Spiral Welded ☐ Lap Welded
☐ Seamless ☐ Other ➡ Specify: **STEEL_SEAM_TYPE_DETAILS**

WT STEEL

C4b. If Steel \Rightarrow Specify wall thickness (inches): 1 1 1 1 1 or ☐ Unknown

PLASTIC TYPE

C4c. If Plastic \Rightarrow 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 \Rightarrow Specify: PLASTIC_DETAILS
☐ Unknown

PLASTIC SDR

WT PLASTIC

C4d. If Plastic \Rightarrow Specify Standard Dimension Ratio (SDR): / / / or wall thickness: / / / or ☐ Unknown
WT PLASTIC UNKNOWN IND

C4e. If Polyethylene (PE) is selected as the type of plastic in PART C, Question 4.c ⇒ **MATERIAL_PE_PIPE_CODE**
Specify PE Pipe Material Designation Code (i.e., 2406, 3408, etc.) PE / / / / / or ○ Unknown

RELEASE TYPE

C5. Type of release involved: (select only one)

PUNCTURE AXIAL

PUNCTURE CIRCUM

☐ Mechanical Puncture ⇒ Approx. size: / / / / / / /in. (axial) by / / / / / / /in. (circumferential)

LEAK TYPE

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

RUPTURE ORIENT

☐ Rupture Select Orientation: ☐ Circumferential ☐ Longitudinal ☐ Other RUPTURE_DETAILS

RUPTURE LENGTH

RUPTURE WIDTH

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

☐ Other *Describe: **RELEASE_TYPE_DETAIL**

PART D – ADDITIONAL CONSEQUENCE INFORMATIOND1. Class Location of Incident: (select only one) **CLASS_LOCATION_TYPE**

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

D2. Estimated Property Damage :

D2a. Estimated cost of public and non-Operator private property damage \$ **EST_COST_OPER_PAID**D2b. Estimated cost of Operator's property damage & repairs \$ **EST_COST_PROP_DAMAGE**D2c. Estimated cost of emergency response \$ **EST_COST_EMERGENCY**D2d. Estimated other costs \$ **EST_COST_OTHER**Describe: **EST_COST_OTHER_DETAILS**D2e. Total estimated property damage (sum of above) \$ *calculated*

Cost of Gas Released

Cost of Gas in \$ per thousand standard cubic feet (mcf): **GAS_COST_IN_MCF**D2f. Estimated cost of gas released unintentionally **EST_COST_UNINTENTIONAL_RELEASE** \$ *calculated*D2g. Estimated cost of gas released intentionally during controlled release/blowdown **EST_COST_INTENTIONAL_RELEASE** \$ *calculated*D2h. Total estimated cost of gas released (sum of D2f and g) \$ *calculated*D2i. Estimated Total Cost (sum of D2e and D2h) **TOTAL_COST** \$ *calculated*

D3. Estimated number of customers out of service:

D3a. Commercial entities **COMMERCIAL_AFFECTED** D3b. Industrial entities **INDUSTRIAL_AFFECTED** D3c. Residences **RESIDENCES_AFFECTED**

Injured Persons not included in A10 The number of persons injured, admitted to a hospital, and remaining in the hospital for at least one overnight are reported in A10. **If a person is included in A10, do not include them in D4.**

NUM_PERSONS_HOSP_NOT_OVNIGHTD4. 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 D4, do not include them in D5.**D5. Estimated number of persons with injuries requiring treatment by EMTs at the site of incident: **NUM_INJURED_TREATED_BY_EMT** **Buildings Affected**D6. Number of residential buildings affected (evacuated or required repair or had gas service interrupted): **NUM_RESIDENT_BUILDING_AFFCTD** D7. Number of business buildings affected (evacuated or required repair or had gas service interrupted): **NUM_BUSINESS_BUILDING_AFFCTD**

PART E – ADDITIONAL OPERATING INFORMATIONE1. Estimated pressure at the point and time of the Incident (psig): / / / / **ACCIDENT_PSIG**E2. Normal operating pressure at the point and time of the Incident (psig): / / / / **NORMAL_PSIG**E3. Maximum Allowable Operating Pressure (MAOP) at the point and time of the Incident (psig): / / / / **MOP_PSIG**E3a. MAOP established by 49 CFR section: **MOP_CFR_SECTION**☐ 192.619 (a)(1) ☐ 192.619 (a)(2) ☐ 192.619 (a)(3) ☐ 192.619 (a)(4) ☐ 192.619 (c)☐ 192.621m ☐ 192.623**MAOP_ESTABLISHED_DATE**E3b. Date MAOP established: / /
Month Day Year**ACCIDENT_PRESSURE**E4. Describe the pressure on the system relating to the Incident: *(select only one)*☐ 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**GAS_ODORIZED_SYSTEM_TYPE**

E5. Type of odorization system for gas at the point of failure:

☐ none ☐ drip ☐ injection pump ☐ by-pass ☐ wick☐ combination of odorization types ☐ odorized by others ☐ Other, specify: **GAS_ODORIZED_SYS_OTHER_DETAIL****GAS_ODORIZED_LEVEL**E6. Odorant level near the point of failure measured after the failure: %LEL OR ☐ Not Measured **GAS_ODORIZED_LVL_NOT_MSRD_IND**

E7. 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 ➡ E7a. Was it operating at the time of the Incident? ☐ Yes ☐ No **SCADA_OPERATING_IND**E7b. Was it fully functional at the time of the Incident? ☐ Yes ☐ No **SCADA_FUNCTIONAL_IND**E7c. 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 **SCADA_DETECTION_IND**E7d. 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 **SCADA_CONF_IND**E8. 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 **INVEST_NO_SCHEDULE_IND**☐ 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_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**☐ Investigation identified maintenance activities that affected control room operations, procedures, and/or controller response **INVEST_MAINT_IND**☐ Investigation identified areas other than those above ➡ Describe: **INVEST_OTHER_IND****INVEST_OTHER_IND_DETAILS**

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? **EMPLOYEE_DRUG_TEST_IND**

☐ No

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

F1b. Specify how many failed: / / **NUM_EMPLOYEES_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? **CONTRACTOR_DRUG_TEST_IND**

☐ No

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

F2b. 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. 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

INTERNAL_EXTERNAL

☐ External Corrosion**VISUAL_EXAM_RESULTS**

1. Results of visual examination:

☐ 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****STRAY_CURRENT_TYPE**2a. If 2. is Stray Current, specify ☐ Alternating Current ☐ Direct Current AND2b. Describe the stray current source: **STRAY_CURRENT_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 or submerged? **UNDERGROUND_LOCATION**☐ Yes ⇨ 4a. Was failed item considered to be under cathodic protection at the time of the incident? **UNDER_CATHODIC_PROTECTION_IND**☐ Yes ⇨ Year protection started: / / / / / **CATHODIC_PRO_START_YEAR**☐ No**SHIELDING_EVIDENT**

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

☐ Yes ☐ No**CATHODIC_SURVEY_TYPE**

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: / / / / / **CP_ANNUAL_SURVEY_YEAR**☐ Yes, Close Interval Survey ⇨ Most recent year conducted: / / / / / **CLOSE_INTERVAL_SURVEY_YEAR**☐ Yes, Other CP Survey ⇨ Most recent year conducted: / / / / / **OTHER_CP_SURVEY_YEAR**Describe Other CP Survey: **OTHER_CP_SURVEY_DETAILS**☐ No**EXTERNALLY_COATED**☐ No ⇨ 4d. Was the failed item externally coated or painted? ☐ Yes ☐ No**PRIOR_DAMAGE**

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)

COATING_TYPE ☐ Epoxy ☐ Coal Tar ☐ Asphalt☐ Polyolefin ☐ Extruded Polyethylene☐ Cold Applied Tape ☐ Paint ☐ Composite ☐ None☐ Other **COATING_TYPE_DETAILS**☐ Unknown6a. Field Applied? Y, N, or Unknown **FIELD_APPLIED_IND**

<input type="checkbox"/> Internal Corrosion	INT_VISUAL_EXAM_RESULTS 7. Results of visual examination: <input type="radio"/> Localized Pitting <input type="radio"/> General Corrosion <input type="radio"/> Not cut open <input type="radio"/> Other INT_VISUAL_EXAM_DETAILS
	8. Cause of corrosion: (select all that apply) INT_CORROSIVE_COMMODITY_IND INT_WATER_ACID_IND INT_MICROBIOLOGICAL_IND INT_EROSION_IND <input type="radio"/> Corrosive Commodity <input type="radio"/> Water drop-out/Acid <input type="radio"/> Microbiological <input type="radio"/> Erosion <input type="radio"/> Other 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 <input type="radio"/> Field examination <input type="radio"/> Determined by metallurgical analysis <input type="radio"/> 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 <input type="radio"/> Low point in pipe <input type="radio"/> Elbow <input type="radio"/> Drop-out <input type="radio"/> Other INT_OTHER_LOC_IND CORROSION_LOCATION_DETAILS CORROSION_INHIBITOR
	11. Was the gas/fluid treated with corrosion inhibitors or biocides? <input type="radio"/> Yes <input type="radio"/> No LIQUID_FOUND 12. Were any liquids found in the distribution system where the Incident occurred? <input type="radio"/> Yes <input type="radio"/> 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: **COR_HYDROTEST_LEAK_SURVEY_DATE**
 _____ / _____ / _____
 _____ Month _____ Day _____ Year
COR_HYDROTEST_CONDUCTED_IND

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 **COR_HYDROTEST_CONDUCTED_YEAR** **COR_HYDROTEST_PRESSURE**

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

NATURAL_FORCE_TYPE

<input type="checkbox"/> 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 NF_OTHER_DETAILS 2. Specify: <input type="radio"/> Washouts/Scouring <input type="radio"/> Flotation <input type="radio"/> Mudslide <input type="radio"/> Other _____
<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"/> Tree/Vegetation Roots	
<input type="checkbox"/> Damage from Snow/Ice Impact or Accumulation	
<input type="checkbox"/> Other Natural Force Damage	5. Describe: NF_OTHER_DETAILS _____

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

NF_EXTREME_WEATHER_IND
 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) **NF_HURRICANE_IND** **NF_TROPICAL_STORM_IND** **NF_TORNADO_IND**
☐ Hurricane ☐ Tropical Storm ☐ Tornado
☐ Other **NF_OTHER_IND** **NF_EXTREME_WEATHER_DETAILS**

PARTY TYPE

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☐ **Miscellaneous Root Causes**

- ☐ Deteriorated facility
- ☐ One Call Center Error
- ☐ Previous damage
- ☐ Root Cause not listed (comment required): ROOT_CAUSE_TYPE_OTHER

OUTSIDE_FORCE_TYPE

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

<input type="checkbox"/> Body of Pipe	PIPE_BODY_SUBTYPE 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 PIPE_BODY_DETAILS
<input type="checkbox"/> Butt Weld	BUTT_WELD_SUBTYPE 2. Specify: <input type="radio"/> Pipe <input type="radio"/> Fabrication <input type="radio"/> Other BUTT_WELD_DETAILS
<input type="checkbox"/> Fillet Weld	FILLET_WELD_SUBTYPE 3. Specify: <input type="radio"/> Branch <input type="radio"/> Hot Tap <input type="radio"/> Fitting <input type="radio"/> Repair Sleeve <input type="radio"/> Other FILLET_WELD_DETAILS
<input type="checkbox"/> Pipe Seam	PIPE_SEAM_SUBTYPE 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 PIPE_SEAM_DETAILS
<input type="checkbox"/> Threaded Metallic Pipe	
<input type="checkbox"/> Mechanical Joint Failure	MEC_FITTING_INVOLVED 5a. Specify the Mechanical Fitting Involved (<i>select only one</i>) <input type="checkbox"/> Stab <input type="checkbox"/> Nut Follower <input type="checkbox"/> Bolted <input type="checkbox"/> Other Compression Type Fitting (<i>specify</i>): MEC_FITTING_INVOLVD_DTL MEC_FITTING_TYPE 5b. Specify the Type of Mechanical Fitting (<i>select only one</i>) <input type="checkbox"/> Service or Main Tee <input type="checkbox"/> Tapping Tee <input type="checkbox"/> Transition Fitting <input type="checkbox"/> Coupling <input type="checkbox"/> Riser <input type="checkbox"/> Adapter <input type="checkbox"/> Valve <input type="checkbox"/> Sleeve <input type="checkbox"/> End Cap <input type="checkbox"/> Other (<i>specify</i>): MEC_FITTING_TYPE_DETAIL 5c. Fitting Manufacturer: MEC_MANUFACTURER or <input type="checkbox"/> Unknown 5d. Part or Model Number: MEC_PART_NUMBER or <input type="checkbox"/> Unknown 5e. Fitting Material (<i>select only one</i>) MEC_FITTING_MATERIAL <input type="checkbox"/> Steel <input type="checkbox"/> Plastic <input type="checkbox"/> Brass <input type="checkbox"/> Combination Plastic and Steel <input type="checkbox"/> Unknown <input type="checkbox"/> Other (<i>specify</i>): MEC_FITTING_MATERIAL_DETAIL MEC_HOW_FAILURE_OCCURED 5f. How did the joint failure occur? (<i>select only one</i>) <input type="checkbox"/> Leaked Through Seal <input type="checkbox"/> Leaked Through Body <input type="checkbox"/> Pulled Out <input type="checkbox"/> Other (<i>specify</i>): MEC_HOW_FAILURE_OCCURED_DTL
<input type="checkbox"/> Fusion Joint	PLASTIC_JOINT_SUBTYPE 6. 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 7. Year installed: FPW_INSTALLED_YEAR 8. Other attributes: FPW_OTHER_ATTR 9. Specify the two materials being joined: 9a. 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: FPW_FIRST_PLASTIC_TYPE_OTHER 9b. 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: FPW_SECOND_PLASTIC_TYPE_OTHER
<input type="checkbox"/> Other Pipe, Weld, or Joint Failure	10. Describe: PWJF_FAILURE_DETAILS

Complete the following if any Pipe, Weld, or Joint Failure sub-cause is selected. **ADDITIONAL_ARC** **ADDITIONAL_CRACK_IND** **ADDITIONAL_LACK_FUSION_IND**
ADDITIONAL_DENT_IND, ADDITIONAL_GOUGE_IND, ADDITIONAL_PIPE_BEND_IND, BURN_IND,

ADDITIONAL_LAMINATION_IND, ADDITIONAL_BUCKLE_IND, ADDITIONAL_WRINKLE_IND, ADDITIONAL_MISALIGNMENT_IND

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

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

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 **HYDROTEST_CONDUCTED_YEAR** **HYDROTEST_PRESSURE**

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

<input type="checkbox"/> Malfunction of Control/Relief Equipment	1. Specify: (select all that apply) INSTRUMENTATION_IND SCADA_IND <input type="radio"/> Control Valve <input type="radio"/> Instrumentation <input type="radio"/> SCADA CONTROL_VALVE_IND BLOCK_VALVE_IND CHECK_VALVE_IND <input type="radio"/> Communications <input type="radio"/> Block Valve <input type="radio"/> Check Valve COMMUNICATIONS_IND POWER_FAILURE_IND STOPPLE_CONTROL_FITTING_IND <input type="radio"/> Relief Valve <input type="radio"/> Power Failure <input type="radio"/> Stopple/Control Fitting RELIEF_VALVE_IND STOPPLE_CONTROL_FITTING_IND <input type="radio"/> Pressure Regulator STOPPLE_CONTROL_FITTING_IND PRESSURE_REGULATOR_IND STOPPLE_CONTROL_FITTING_IND <input type="radio"/> Other 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 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 OTHER_NON_THREADED_DETAILS
<input type="checkbox"/> Valve	VALVE_OTHER_IND 4. Specify: <input type="radio"/> Manufacturing defect <input type="radio"/> Other VALVE_OTHER_DETAILS 4a. Valve type: VALVE_TYPE 4b. Manufactured by: EQ_MANUFACTURER 4c. Year manufactured: ____/____/____/____/____ or <input type="radio"/> Unknown EQ_MANUFACTURE_YEAR VALVE_MATERIAL 4d. Valve Material: <input type="checkbox"/> Steel <input type="checkbox"/> Plastic <input type="checkbox"/> Cast/Wrought Iron <input type="checkbox"/> Ductile Iron <input type="checkbox"/> Other, specify: mandatory text field VALVE_MATERIAL_DETAILS
<input type="checkbox"/> Other Equipment Failure	5. Describe: EQ_FAILURE_DETAILS _____ _____

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

<input type="checkbox"/> 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: <u>OPERATION_DETAILS</u>

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)

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)? **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
OTHER_TYPE

<input type="checkbox"/> Miscellaneous	1. Describe: <u>MISC_DETAILS</u>
<input type="checkbox"/> Unknown	UNKNOWN_SUBTYPE 2. Specify: <ul style="list-style-type: none"> <input type="radio"/> Investigation complete, cause of Incident unknown Mandatory comment field: <u>INCIDENT_UNKNOWN_COMMENTS</u> <input type="radio"/> 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:

<div>External Corrosion EXTRNL_COR_GALVANIC_IND</div> <div><input type="checkbox"/> External Corrosion, Galvanic EXTRNL_COR_GALVANIC_IND</div> <div><input type="checkbox"/> External Corrosion, Atmospheric EXTRNL_COR_ATMOSPHERIC_IND</div> <div><input type="checkbox"/> External Corrosion, Stray Current Induced EXTRNL_COR_STRAY_CURRENT_IND</div> <div><input type="checkbox"/> External Corrosion, Microbiologically Induced EXTRNL_COR_MICROBIOLOGIC_IND</div> <div><input type="checkbox"/> External Corrosion, Selective Seam EXTRNL_COR_SELECTIVE_SEAM_IND</div> <div>Internal Corrosion INTRNL_COR_CORROSIVE_CMDTY_IND</div> <div><input type="checkbox"/> Internal Corrosion, Corrosive Commodity INTRNL_COR_CORROSIVE_CMDTY_IND</div> <div><input type="checkbox"/> Internal Corrosion, Water drop-out/Acid INTRNL_COR_WTR_DRPOUT_ACID_IND</div> <div><input type="checkbox"/> Internal Corrosion, Microbiological INTRNL_COR_MICROBIOLOGIC_IND</div> <div><input type="checkbox"/> Internal Corrosion, Erosion INTRNL_COR_EROSION_IND</div> <div>Natural Forces NF_EARTH_MOVEMENT_IND</div> <div><input type="checkbox"/> Earth Movement, NOT due to Heavy Rains/Floods NF_EARTH_MOVEMENT_IND</div> <div><input type="checkbox"/> Heavy Rains/Floods NF_HEAVY_RAINS_IND</div> <div><input type="checkbox"/> Lightning NF_LIGHTNING_IND</div> <div><input type="checkbox"/> Temperature NF_TEMPERATURE_IND</div> <div><input type="checkbox"/> High Winds NF_HIGH_WINDS_IND</div> <div><input type="checkbox"/> Snow/Ice NF_SNOW_ICE_IND</div> <div><input type="checkbox"/> Tree/Vegetation Root NF_VEGITATION_ROOT_IND</div> <div>Excavation Damage EXCVTN_DMKG_OPERATOR_IND</div> <div><input type="checkbox"/> Excavation Damage by Operator (First Party) EXCVTN_DMKG_OPERATOR_IND</div> <div><input type="checkbox"/> Excavation Damage by Operator's Contractor (Second Party) EXCVTN_DMKG_OPERATOR_CONTRACTOR_IND</div> <div><input type="checkbox"/> Excavation Damage by Third Party EXCVTN_DMKG_THIRD_PARTY_IND</div> <div><input type="checkbox"/> Previous Damage due to Excavation Activity EXCVTN_DMKG_PREVIOUS_DAMAGE_IND</div> <div>Other Outside Force OSF_NEARBY_INDUSTRIAL_IND</div> <div><input type="checkbox"/> Nearby Industrial, Man-made, or Other Fire/Explosion OSF_NEARBY_INDUSTRIAL_IND</div> <div><input type="checkbox"/> Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation OSF_VEHICLE_IND</div> <div><input type="checkbox"/> Damage by Boats, Barges, Drilling Rigs, or Other Adrift Maritime Equipment OSF_BOAT_IND</div> <div><input type="checkbox"/> Routine or Normal Fishing or Other Maritime Activity NOT Engaged in Excavation OSF_OTHER_MARITIME_IND</div> <div><input type="checkbox"/> Electrical Arcing from Other Equipment or Facility OSF_ELECTRICAL_ARCING_IND</div> <div><input type="checkbox"/> Previous Mechanical Damage NOT Related to Excavation OSF_PREVIOUS_MECHANICAL_IND</div> <div><input type="checkbox"/> Intentional Damage OSF_INTENTIONAL_IND</div> <div><input type="checkbox"/> Other underground facilities buried within 12 inches of the failure location OSF_OTHER_UNDERGROUND_IND</div>	<div>Pipe/Weld Failure</div> <div><input type="checkbox"/> Design-related PWF_DESIGN_IND</div> <div><input type="checkbox"/> Construction-related PWF_CONSTRUCTION_IND</div> <div><input type="checkbox"/> Installation-related PWF_INSTALLATION_IND</div> <div><input type="checkbox"/> Fabrication-related PWF_FABRICATION_IND</div> <div><input type="checkbox"/> Original Manufacturing-related PWF_MANUFACTURING_IND</div> <div>Equipment Failure EQF_CONTROL_RELIEF_IND</div> <div><input type="checkbox"/> Malfunction of Control/Relief Equipment EQF_CONTROL_RELIEF_IND</div> <div><input type="checkbox"/> Threaded Connection/Coupling Failure EQF_THREADED_COUPLING_IND</div> <div><input type="checkbox"/> Non-threaded Connection Failure EQF_NON_THREADED_IND</div> <div><input type="checkbox"/> Valve Failure EQF_VALVE_FAILURE_IND</div> <div>Incorrect Operation IO_DAMAGE_BY_OPERATOR_IND</div> <div><input type="checkbox"/> Damage by Operator or Operator's Contractor NOT Excavation and NOT Vehicle/Equipment Damage IO_DAMAGE_BY_OPERATOR_IND</div> <div><input type="checkbox"/> Valve Left or Placed in Wrong Position, but NOT Resulting in Overpressure IO_VALVE_POSITION_IND</div> <div><input type="checkbox"/> Pipeline or Equipment Overpressured IO_EQUIPMENT_OVERPRESSURE_IND</div> <div>IO_NOT_INSTALLED_PROPERLY_IND</div> <div><input type="checkbox"/> Equipment Not Installed Properly IO_NOT_INSTALLED_PROPERLY_IND</div> <div><input type="checkbox"/> Wrong Equipment Specified or Installed IO_WRONG_EQUIPMENT_IND</div> <div><input type="checkbox"/> Inadequate Procedure IO_INADEQUATE_PROCEDURE_IND</div> <div><input type="checkbox"/> No procedure established IO_NO_PROCEDURE_IND</div> <div><input type="checkbox"/> Failure to follow procedures IO_FOLLOW_PROCEDURE_IND</div>
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[illegible]

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

Field Name	Field Name Description
IYEAR	<i>Year incident occurred, derived from accident date</i>