NOTICE: This report is required by 49 CFR Part 191. Failure to report can result in a civil penalty as provided in 49 USC 60122.

OMB NO: 2137-0635

EXPIRATION DATE: 4/30/2022

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

INCIDENT REPORT – GAS DISTRIBUTION SYSTEM

Report Date REPORT_RECEIVED_DATE
REPORT_NUMBER
No. SUPPLEMENTAL_NUMBER
(DOT Use Only)

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2137-0635. Public reporting for this collection of information is estimated to be approximately 12 hours per response, including the time for reviewing instructions, gathering the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, PHMSA, Office of Pipeline Safety (PHP-30) 1200 New Jersey Avenue, SE, Washington, D.C. 20590.

INSTRUCTIONS

Important: *Please read the separate instructions for completing this form before you begin. They clarify the information requested and provide specific examples. If you do not have a copy of the instructions, you can obtain one from the PHMSA Pipeline Safety Community Web Page at http://www.phmsa.dot.gov/pipeline/library/forms.*

PART A – KEY REPORT INFORMATION

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

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

A2. Name of Operator: _____*auto-populated based on OPID*_____ NAME

A3. Address of Operator:

A3a. _____ *auto-populated based on OPID* _____ OPERATOR_STREET_ADDRESS
(Street Address)

A3b. _____ *auto-populated based on OPID* _____ OPERATOR_CITY_NAME
(City)

A3c. State: *auto-populated based on OPID* /___/___/ OPERATOR_STATE_ABBREVIATION

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

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

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

TIME_ZONE

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

A4b. Daylight Saving in effect? ○ Yes ○ No DAYLIGHT_SAVINGS_IND

A5. Location of Incident:

A5a. _____ LOCATION_STREET_ADDRESS (Street Address or location description)

A5b. _____ LOCATION_CITY_NAME (City)

A5c. _____ LOCATION_COUNTY_NAME (County or Parish)

A5d. State: /___/___/ LOCATION_STATE_ABBREVIATION

A5e. Zip Code: /___/___/___/___/___/- /___/___/___/___/ LOCATION_POSTAL_CODE

A5f. Latitude: /___/___/. /___/___/___/___/ LOCATION_LATITUDE

Longitude: - /___/___/___/. /___/___/___/___/ LOCATION_LONGITUDE

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

UNINTENTIONAL_RELEASE

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

INTENTIONAL_RELEASE

A8. Estimated volume of intentional and controlled release/blowdown: /___/___/,/___/___/___/ 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 working for the Operator NUM_CONTR_FATALITIES /___/___/___/___/

A9c. Non-Operator emergency responders NUM_ER_FATALITIES /___/___/___/___/

A9d. Workers working on the right-of-way, but NOT associated with this Operator NUM_WORKER_FATALITIES /___/___/___/___/

A9e. General public NUM_GP_FATALITIES /___/___/___/___/

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 working for the Operator NUM_CONTR_INJURIES /___/___/___/___/

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

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

A10e. General public NUM_GP_INJURIES /___/___/___/___/

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

INCIDENT_IDENTIFIED_DATETIME

A12. Local time operator identified failure /___/___/___/___/___/ Hour /___/___/ Month /___/___/ Day /___/___/ Year

If 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 ○ No

If No, skip A14 and A15 PARTY_INITIATED_COMMUNICATION

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

INITIAL_RESPONDER_COM_DATETIME

A15. Local time of initial Operator and Local/State/Federal Emergency Responder communication /___/___/___/___/___/ Hour /___/___/ Month /___/___/ Day /___/___/ Year

ON_SITE_DATETIME

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 NRC_RPT_DATETIME

NRC_RPT_NUM

A19. Initial Operator National Response Center Report Number OR

○ NRC Notification Required But Not Made

A19a. 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: _____

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

A21d. Did the gas explode? ○ Yes ○ No EXPLODE_IND

A22. Number of general public evacuated: /___/___/, /___/___/___/ NUM_PUB_EVACUATED

PART B – ADDITIONAL LOCATION INFORMATION

B1. 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

CROSSING

B4. 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): /__/,/__/__/__/ or WATER_DEPTH ○ 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

PART C – ADDITIONAL FACILITY INFORMATION

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

INSTALLATION_YEAR

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 EVF_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 ⇨ Specify: MATERIAL_DETAILS

C4a. If Steel ⇨ 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 ⇨ Specify wall thickness *(inches)*: /__/./__/__/__/ or ☐ Unknown

PLASTIC_TYPE

C4c. 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 ⇨ Specify: PLASTIC_DETAILS
○ Unknown

PLASTIC_SDR WT_PLASTIC

C4d. If Plastic ⇨ 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)*

☐ Mechanical Puncture ⇨ Approx. size: /__/__/__/__/./__/in. (axial) by /__/__/__/__/./__/in. (circumferential) PUNCTURE_AXIAL PUNCTURE_CIRCUM

LEAK_TYPE LEAK_TYPE_OTHER

☐ 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_DETAILS

PART D – ADDITIONAL CONSEQUENCE INFORMATION

D1. 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.***

D4. Estimated number of persons with injuries requiring treatment in a medical facility but not requiring overnight in-patient hospitalization: NUM_PERSONS_HOSP_NOT_OVNGHT _____

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 INFORMATION

E1. 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

INVEST_INCORRECT_PROCEDURE_IND

○ Investigation identified incorrect procedures INVEST_INCORRECT_CONTROL_IND

○ Investigation identified incorrect control room equipment operation 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	

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 AND

2b. 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)

CP_ANNUAL_SURVEY_IND CP_ANNUAL_SURVEY_YEAR
- ○ Yes, CP Annual Survey ⇨ Most recent year conducted: /___/___/___/___/

CLOSE_INTERVAL_SURVEY_IND CLOSE_INTERVAL_SURVEY_YEAR
- ○ Yes, Close Interval Survey ⇨ Most recent year conducted: /___/___/___/___/

OTHER_CP_SURVEY_IND OTHER_CP_SURVEY_YEAR
- ○ Yes, Other CP Survey ⇨ Most recent year conducted: /___/___/___/___/
  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
   - ○ Unknown

6a. Field Applied? Y, N, or Unknown FIELD_APPLIED_IND

☐ **Internal Corrosion**

INT_VISUAL_EXAM_RESULTS

7. Results of visual examination:
   ○ 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 INT_EROSION_IND

   ○ Corrosive Commodity ○ Water drop-out/Acid ○ Microbiological ○ Erosion
   ○ 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
   ○ 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

CORROSION_INHIBITORS

11. Was the gas/fluid treated with corrosion inhibitors or biocides? ○ Yes ○ No

LIQUID_FOUND

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.

COR_HYDROTEST_LEAK_SURVEY_DATE

13. Date of the most recent Leak Survey conducted: __/__/__ (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

☐ **Earth Movement, NOT due to Heavy Rains/Floods**	EARTH_SUBTYPE 1. Specify: ○ Earthquake ○ Subsidence ○ Landslide ○ Other NF_OTHER_DETAILS
☐ **Heavy Rains/Floods**	HEAVY_RAINS_SUBTYPE 2. Specify: ○ Washouts/Scouring ○ Flotation ○ Mudslide ○ Other NF_OTHER_DETAILS
☐ **Lightning**	LIGHTNING_SUBTYPE 3. Specify: ○ Direct hit ○ Secondary impact such as resulting nearby fires
☐ **Temperature**	TEMPERATURE_SUBTYPE 4. Specify: ○ Thermal Stress ○ Frost Heave ○ Frozen Components ○ Other NF_OTHER_DETAILS
☐ **High Winds**	
☐ **Tree/Vegetation Roots**	
☐ **Damage from Snow/Ice Impact or Accumulation**	
☐ **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

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

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

PARTY_TYPE

☐ **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.** EX_HYDROTEST_LEAK_SURVEY_DATE 1. Date of the most recent Leak Survey conducted: / / / / / / / / / (Month / Day / Year) EX_HYDROTEST_CONDUCTED_IND 2. Has one or more pressure test been conducted since original construction at the point of the Incident? EX_HYDROTEST_CONDUCTED_YEAR ○ Yes ⇨ Most recent year tested: / / / / Test pressure (psig): / / / / / EX_HYDROTEST_PRESSURE ○ No

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

PRIOR_NOTIFICATION_IND

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

ONE_CALL_SYSTEM_IND EXCAVATOR_IND CONTRACTOR_IND LANDOWNER_IND

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

STATE_LAW_EXEMPT_IND

If yes, answer 3c through 3e.

STATE_LAW_EXEMPT_TYPE

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: STATE_LAW_EXEMPT_DETAIL

3d. Exempting Authority: STATE_LAW_EXEMPT_AUTHORITY

3e. Exempting Criteria: STATE_LAW_EXEMPT_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 NOTIFY_CGA_DIRT

5. Right-of-Way where event occurred: *(select all that apply)*

PUBLIC_ROW_IND PUBLIC_SUBTYPE

☐ Public ⇨ Specify: ○ City Street ○ State Highway ○ County Road ○ Interstate Highway ○ Other

PRIVATE_ROW_IND PRIVATE_SUBTYPE

☐ Private ⇨ Specify: ○ Private Landowner ○ Private Business ○ Private Easement

☐ Pipeline Property/Easement PIPELINE_EASEMENT_ROW_IND
☐ Power/Transmission Line POWER_TRANSMISSION_ROW_IND
☐ Railroad RAILROAD_ROW_IND
☐ Dedicated Public Utility Easement PUBLIC_UTIL_EASEMENT_ROW_IND
☐ Federal Land FEDERAL_LAND_ROW_IND
☐ Data not collected DATA_NOT_COLLECTED_ROW_IND
☐ Unknown/Other UNKNOWN_ROW_IND

6. Type of excavator: *(select only one)* EXCAVATOR_TYPE

○ Contractor ○ County ○ Developer ○ Farmer ○ Municipality ○ Occupant
○ Railroad ○ State ○ Utility ○ Data not collected ○ Unknown/Other

7. Type of excavation equipment: *(select only one)* EXCAVATOR_EQUIPMENT

○ 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)* WORK_PERFORMED

○ Agriculture ○ Cable TV ○ Curb/Sidewalk ○ Building Construction ○ Building Demolition
○ Drainage ○ Driveway ○ Electric ○ Engineering/Surveying ○ Fencing
○ Grading ○ Irrigation ○ Landscaping ○ Liquid Pipeline ○ Milling

O Natural Gas O Pole O Public Transit Authority O Railroad Maintenance O Road Work
O Sewer (Sanitary/Storm) O Site Development O Steam O Storm Drain/Culvert O Street Light
O Telecommunications O Traffic Signal O Traffic Sign O Water O Waterway Improvement
O Data not collected O Unknown/Other

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

ONE_CALL_TICKET_NU
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:
ONE_CALL_CENTER_NAME
_____

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

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

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

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

SERVICE_INTERRUPTION_HOURS
13a. If Yes, specify duration of the interruption: /___/___/___/___/ hours

ROOT_CAUSE
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_SUBTYPE
☐ One-Call Notification Practices Not Sufficient: *(select only one)*
- O No notification made to the One-Call Center
- O Notification to One-Call Center made, but not sufficient
- O Wrong information provided

LOCATING_SUBTYPE
☐ Locating Practices Not Sufficient: *(select only one)*
- O Facility could not be found/located
- O Facility marking or location not sufficient
- O Facility was not located or marked
- O Incorrect facility records/maps

EXCAVATION_SUBTYPE
☐ Excavation Practices Not Sufficient: *(select only one)*
- O Excavation practices not sufficient (other)
- O Failure to maintain clearance
- O Failure to maintain the marks
- O Failure to support exposed facilities
- O Failure to use hand tools where required
- O Failure to verify location by test-hole (pot-holing)
- O 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
_____
_____
_____

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

OUTSIDE_FORCE_TYPE

☐ **Nearby Industrial, Man-made, or Other Fire/Explosion as Primary Cause of Incident**	
☐ **Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation**	VEHICLE_SUBTYPE 1. Vehicle/Equipment operated by: *(select only one)* ○ Operator ○ Operator's Contractor ○ Third Party 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: OSF_HURRICANE_IND OSF_TROPICAL_STORM_IND OSF_TORNADO_IND ○ Hurricane ○ Tropical Storm ○ Tornado ○ Heavy Rains/Flood ○ Other OSF_OTHER_WEATHER_IND _____ OSF_HEAVY_RAINS_IND OSF_OTHER_WEATHER_DETAILS
☐ **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.** OSF_HYDROTEST_LEAK_SURVEY_DATE 3. Date of the most recent Leak Survey conducted: ___/___/___ ___/___/___ ___/___/___ OSF_HYDROTEST_CONDUCTED_IND Month Day Year 4. Has one or more pressure test been conducted since original construction at the point of the Incident? OSF_HYDROTEST_CONDUCTED_YEAR ○ Yes ⇨ Most recent year tested: ___/___/___/___/___ Test pressure (psig): ___/___/___/___/___/___ ○ No OSF_HYDROTEST_PRESSURE
☐ **Intentional Damage**	5. Specify: INTENTIONAL_SUBTYPE ○ Vandalism ○ Terrorism ○ Theft of transported commodity ○ Theft of equipment ○ Other INTENTIONAL_DETAILS _____
☐ **Erosion of Support Due to Other Utilities**	
☐ **Other Outside Force Damage**	6. Describe: OSF_OTHER_DETAILS _____

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

DRIVER_ISSUED_CITATION_IND

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 CITATION_SPEED_IND
- ○ 7b. Reckless Driving CITATION_RECKLESS_IND
- ○ 7c. Driving Under the Influence CITATION_DUI_IND
- ○ 7d. Other, describe: CITATION_OTHER_IND _____ CITATION_OTHER_DETAIL

DRIVER_IN_CONTROL_IND

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

ESTIMATED_SPEED

9. Estimated speed of the vehicle at the time of impact (miles per hour)?_____or ○ Unknown

VEHICLE_TYPE

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

VEHICLE_TRAVEL_FROM

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

VEHICLE_TRAVEL_DISTANCE_FT

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

PROTECTIONS_INSTALLED_IND

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 PROTECTION_BOLLARDS_POST_IND
- ○ 13b. Barricades, including "jersey" barriers and fences PROTECTION_BARRICADES_IND
- ○ 13c. Guard Rails PROTECTION_GUARD_RAILS_IND
- ○ 13d. Meter Box PROTECTION_METER_BOX_IND
- ○ 13e. Ingress or Regress at a Residence PROTECTION_INGRESS_REGRESS_IND
- ○ 13f. Other, describe: PROTECTION_OTHER_IND _____ PROTECTION_OTHER_DETAIL

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

PWJF_FAILURE_TYPE

☐ **Body of Pipe**	PIPE_BODY_SUBTYPE 1. Specify: ○ Dent ○ Gouge ○ Bend ○ Arc Burn ○ Crack ○ Other PIPE_BODY_DETAILS
☐ **Butt Weld**	BUTT_WELD_SUBTYPE 2. Specify: ○ Pipe ○ Fabrication ○ Other BUTT_WELD_DETAILS
☐ **Fillet Weld**	FILLET_WELD_SUBTYPE 3. Specify: ○ Branch ○ Hot Tap ○ Fitting ○ Repair Sleeve ○ Other FILLET_WELD_DETAILS
☐ **Pipe Seam**	PIPE_SEAM_SUBTYPE 4. Specify: ○ LF ERW ○ HF ERW ○ Flash Weld ○ DSAW ○ SAW ○ Spiral ○ Other PIPE_SEAM_DETAILS
☐ **Threaded Metallic Pipe**	
☐ **Mechanical Joint Failure**	MEC_FITTING_INVOLVED 5a. Specify the Mechanical Fitting Involved *(select only one)* ☐ Stab ☐ Nut Follower ☐ Bolted ☐ Other Compression Type Fitting *(specify):* MEC_FITTING_INVLVD_DTL MEC_FITTING_TYPE 5b. Specify the Type of Mechanical Fitting *(select only one)* ☐ Service or Main Tee ☐ Tapping Tee ☐ Transition Fitting ☐ Coupling ☐ Riser ☐ Adapter ☐ Valve ☐ Sleeve ☐ End Cap ☐ Other *(specify):* MEC_FTTING_TYPE_DETAIL 5c. Fitting Manufacturer: MEC_MANUFACTURER or ☐ Unknown 5d. Part or Model Number: MEC_PART_NUMBER or ☐ Unknown 5e. Fitting Material *(select only one)* MEC_FITTING_MATERIAL ☐ Steel ☐ Plastic ☐ Brass ☐ Combination Plastic and Steel ☐ Unknown ☐ Other *(specify):* MEC_FITTING_MATERIAL_DETAIL MEC_HOW_FAILURE_OCCURED 5f. How did the joint failure occur? *(select only one)* ☐ Leaked Through Seal ☐ Leaked Through Body ☐ Pulled Out ☐ Other *(specify):* MEC_HOW_FAILURE_OCCURED_DTL
☐ **Fusion Joint**	PLASTIC_JOINT_SUBTYPE 6. Specify: ○ Butt, Heat Fusion ○ Butt, Electrofusion ○ Saddle, Heat Fusion ○ Saddle, Electrofusion ○ Socket, Heat Fusion ○ Socket, Electrofusion ○ 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 ○ 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: FPW_FIRST_PLASTIC_TYPE_OTHER 9b. Second material being joined: FPW_SECOND_PLASTIC_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 ⇨ Specify: FPW_SECOND_PLASTIC_TYPE_OTHER
☐ **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_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

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
☐ Material defect, specify: ⇨ ○ Long seam ○ Other _____ RESULT_MATERIAL_DETAILS
☐ 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

☐ **Malfunction of Control/Relief Equipment**	1. Specify: *(select all that apply)* CONTROL_VALVE_IND ○ Control Valve COMMUNICATIONS_IND ○ Communications RELIEF_VALVE_IND ○ Relief Valve PRESSURE_REGULATOR_IND ○ Pressure Regulator INSTRUMENTATION_IND ○ Instrumentation BLOCK_VALVE_IND ○ Block Valve POWER_FAILURE_IND ○ Power Failure SCADA_IND ○ SCADA CHECK_VALVE_IND ○ Check Valve STOPPLE_CONTROL_FITTING_IND ○ Stopple/Control Fitting ○ Other OTHER_CONTROL_RELIEF_IND _____ OTHER_CONTROL_RELIEF_DETAILS
☐ **Threaded Connection Failure**	OTHER_STRIPPED_IND 2. Specify: ○ Pipe Nipple ○ Valve Threads ○ Threaded Pipe Collar ○ Threaded Fitting ○ Other OTHER_STRIPPED_DETAILS _____
☐ **Non-threaded Connection Failure**	OTHER_NON_THREADED_IND 3. Specify: ○ O-Ring ○ Gasket ○ Other Seal or Packing ○ Other OTHER_NON_THREADED_DETAILS _____
☐ **Valve**	VALVE_OTHER_IND 4. Specify: ○ Manufacturing defect ○ Other VALVE_OTHER_DETAILS _____ 4a. Valve type: VALVE_TYPE _____ 4b. Manufactured by: EQ_MANUFACTURER _____ EQ_MANUFACTURE_YEAR 4c. Year manufactured: /___/___/___/___/ or ○ Unknown VALVE_MATERIAL 4d. Valve Material: ☐ Steel ☐ Plastic ☐ Cast/Wrought Iron ☐ Ductile Iron ☐ Other, specify: *mandatory text field* VALVE_MATERIAL_DETAILS _____
☐ **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

☐ **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: 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

   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

☐ **Miscellaneous**	1. Describe: MISC_DETAILS
☐ **Unknown**	UNKNOWN_SUBTYPE 2. Specify: ○ Investigation complete, cause of Incident unknown Mandatory comment field: INCIDENT_UNKNOWN_COMMENTS ○ 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 EXTRNL_COR_GALVANIC_IND
- ☐ External Corrosion, Galvanic EXTRNL_COR_ATMOSPHERIC_IND
- ☐ External Corrosion, Atmospheric EXTRNL_COR_STRAY_CURRENT_IND
- ☐ External Corrosion, Stray Current Induced EXTRNL_COR_MICROBIOLOGIC_IND
- ☐ External Corrosion, Microbiologically Induced EXTRNL_COR_SELECTIVE_SEAM_IND
- ☐ External Corrosion, Selective Seam

Internal Corrosion INTRNL_COR_CORROSIVE_CMDTY_IND
- ☐ Internal Corrosion, Corrosive Commodity INTRNL_COR_WTR_DRPOUT_ACID_IND
- ☐ Internal Corrosion, Water drop-out/Acid INTRNL_COR_MICROBIOLOGIC_IND
- ☐ Internal Corrosion, Microbiological INTRNL_COR_EROSION_IND
- ☐ Internal Corrosion, Erosion

Natural Forces NF_EARTH_MOVEMENT_IND
- ☐ Earth Movement, NOT due to Heavy Rains/Floods NF_HEAVY_RAINS_IND
- ☐ Heavy Rains/Floods NF_LIGHTNING_IND
- ☐ Lightning NF_TEMPERATURE_IND
- ☐ Temperature NF_HIGH_WINDS_IND
- ☐ High Winds NF_SNOW_ICE_IND
- ☐ Snow/Ice NF_VEGITATION_ROOT_IND
- ☐ Tree/Vegetation Root

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

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

Pipe/Weld Failure
- ☐ Design-related PWF_DESIGN_IND
- ☐ Construction-related PWF_CONSTRUCTION_IND
- ☐ Installation-related PWF_INSTALLATION_IND
- ☐ Fabrication-related PWF_FABRICATION_IND
- ☐ Original Manufacturing-related PWF_MANUFACTURING_IND

Equipment Failure EQF_CONTROL_RELEAF_IND
- ☐ Malfunction of Control/Relief Equipment EQF_THREADED_COUPLING_IND
- ☐ Threaded Connection/Coupling Failure EQF_NON_THREADED_IND
- ☐ Non-threaded Connection Failure EQF_VALVE_FAILURE_IND
- ☐ Valve Failure

Incorrect Operation IO_DAMAGE_BY_OPERATOR_IND
- ☐ Damage by Operator or Operator's Contractor NOT Excavation and NOT Vehicle/Equipment Damage IO_VALVE_POSITION_IND
- ☐ Valve Left or Placed in Wrong Position, but NOT Resulting in Overpressure IO_EQUIPMENT_OVERPRESSURE_IND
- ☐ Pipeline or Equipment Overpressured

IO_NOT_INSTALLED_PROPERLY_IND
- ☐ Equipment Not Installed Properly IO_WRONG_EQUIPMENT_IND
- ☐ Wrong Equipment Specified or Installed IO_INADEQUATE_PROCEDURE_IND
- ☐ Inadequate Procedure IO_NO_PROCEDURE_IND
- ☐ No procedure established IO_FOLLOW_PROCEDURE_IND
- ☐ Failure to follow procedures

PART H – NARRATIVE DESCRIPTION OF THE INCIDENT

(Attach additional sheets as necessary)

NARRATIVE

PART I – PREPARER AND AUTHORIZED PERSON

PREPARER_NAME

Preparer's Name (type or print)

PREPARER_TELEPHONE

Preparer's Telephone Number

PREPARER_TITLE

Preparer's Title (type or print)

PREPARER_EMAIL

Preparer's E-mail Address

PREPARER_FAX

Preparer's Facsimile Number

Local Contact Name: optional LOCAL_CONTACT_NAME
Local Contact Email: optional LOCAL_CONTACT_EMAI
Local Contact Phone: optional LOCAL_CONTACT_TELEPHONE

AUTHORIZER_NAME

Authorized Signer

AUTHORIZER_TELEPHONE

Authorized Signer Telephone Number

AUTHORIZER_TITLE

Authorized Signer's Title

AUTHORIZER_EMAIL

Authorized Signer's E-mail Address

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

Field Name	Field Name Description
IYEAR	*Year incident occurred, derived from accident date*