

PART C – ORIGIN OF THE ACCIDENT (Check all that apply)

- 1. Additional location information
 - a. Line segment name or ID _____
 - b. Accident on Federal land other than Outer Continental Shelf Yes No
 - c. Is pipeline interstate? Yes No

- Offshore: Yes No (complete d if offshore)
- d. Area _____ Block # _____
- State ____/____/____ or Outer Continental Shelf

- 2. Location of system involved (check all that apply)
 - Operator's Property
 - Pipeline Right of Way
 - High Consequence Area (HCA)? Describe HCA _____

- 3. Part of system involved in accident
 - Above Ground Storage Tank
 - Cavern or other below ground storage facility
 - Pump/meter station; terminal/tank farm piping and equipment, including sumps
 - Other Specify: _____
 - Onshore **pipeline**, including valve sites
 - Offshore **pipeline**, including platforms

If failure occurred on **Pipeline**, complete items a - g:

- 4. Failure occurred on
 - Body of Pipe Pipe Seam Scraper Trap
 - Pump Sump Joint
 - Component Valve Metering Facility
 - Repair Sleeve Welded Fitting Bolted Fitting
 - Girth Weld
 - Other (specify) _____

Year the component that failed was installed: ____/____/____/____/____/____

- 5. Maximum operating pressure (MOP)
 - a. Estimated pressure at point and time of accident: _____ PSIG
 - b. MOP at time of accident: _____ PSIG
 - c. Did an overpressurization occur relating to the accident? Yes No

- a. Type of leak or rupture
 - Leak: Pinhole Connection Failure (complete sec. H5)
 - Puncture, diameter (inches) _____
 - Rupture: Circumferential – Separation
 - Longitudinal – Tear/Crack, length (inches) _____
 - Propagation Length, total, both sides (feet) _____
 - N/A
 - Other _____

- b. Type of block valve used for isolation of immediate section:
 - Upstream: Manual Automatic Remote Control
 - Check Valve
 - Downstream: Manual Automatic Remote Control
 - Check Valve

- c. Length of segment isolated _____ ft
- d. Distance between valves _____ ft
- e. Is segment configured for internal inspection tools? Yes No
- f. Had there been an in-line inspection device run at the point of failure? Yes No Don't Know
 - Not Possible due to physical constraints in the system
- g. If Yes, type of device run (check all that apply)
 - High Resolution Magnetic Flux tool Year run: _____
 - Low Resolution Magnetic Flux tool Year run: _____
 - UT tool Year run: _____
 - Geometry tool Year run: _____
 - Caliper tool Year run: _____
 - Crack tool Year run: _____
 - Hard Spot tool Year run: _____
 - Other tool Year run: _____

PART D – MATERIAL SPECIFICATION

- 1. Nominal pipe size (NPS) ____/____/____/____/____ in.
- 2. Wall thickness ____/____/____/____/____ in.
- 3. Specification _____ SMYS ____/____/____/____/____/____
- 4. Seam type _____
- 5. Valve type _____
- 6. Manufactured by _____ in year ____/____/____/____/____

PART E – ENVIRONMENT

- 1. Area of accident In open ditch Under pavement Underground Inside/under building Above ground Under water Other _____
- 2. Depth of cover: _____ inches

PART F – CONSEQUENCES

- 1. Consequences (check and complete all that apply)
 - a.

	Fatalities	Injuries
Number of operator employees:	_____	_____
Contractor employees working for operator:	_____	_____
General public:	_____	_____
Totals:	_____	_____
 - b. Was pipeline/segment shutdown due to leak? Yes No
If Yes, how long? _____ days _____ hours _____ minutes

- c. Product ignited Yes No
- d. Explosion Yes No
- e. Evacuation (general public only) ____/____/____/____/____ people
Reason for Evacuation:
 - Precautionary by company
 - Evacuation required or initiated by public official
- f. Elapsed time until area was made safe: ____/____/____ hr. ____/____/____ min.

2. Environmental Impact

- a. Wildlife Impact:
 - Fish/aquatic Yes No
 - Birds Yes No
 - Terrestrial Yes No
- b. Soil Contamination Yes No
If Yes, estimated number of cubic yards: _____
- c. Long term impact assessment performed: Yes No
- d. Anticipated remediation Yes No
If Yes, check all that apply: Surface water Groundwater Soil Vegetation Wildlife

- e. Water Contamination: Yes No (If Yes, provide the following)
 - Amount in water _____ barrels
 - Ocean/Seawater No Yes
 - Surface No Yes
 - Groundwater No Yes
 - Drinking water No Yes (If Yes, check below.)
 - Private well Public water intake

PART G – LEAK DETECTION INFORMATION

1. Computer based leak detection capability in place? Yes No
2. Was the release initially detected by? (check one): CPM/SCADA-based system with leak detection
 Static shut-in test or other pressure or leak test
 Local operating personnel, procedures or equipment
 Remote operating personnel, including controllers
 Air patrol or ground surveillance
 A third party Other (specify) _____
3. Estimated leak duration days ____ hours ____

PART H – APPARENT CAUSE

Important: There are 25 numbered causes in this Part H. Check the box corresponding to the primary cause of the accident. Check one circle in each of the supplemental categories corresponding to the cause you indicate. See the instructions for guidance.

H1 – CORROSION

1. External Corrosion
2. Internal Corrosion

- a. Pipe Coating Bare Coated
- b. Visual Examination Localized Pitting
 General Corrosion
 Other _____
- c. Cause of Corrosion Galvanic Atmospheric
 Stray Current Microbiological
 Cathodic Protection Disrupted
 Stress Corrosion Cracking
 Selective Seam Corrosion
 Other _____
- d. Was corroded part of pipeline considered to be under cathodic protection prior to discovering accident?
 No Yes, Year Protection Started: ____ / ____ / ____ / ____ / ____
- e. Was pipe previously damaged in the area of corrosion?
 No Yes ⇒ Estimated time prior to accident: ____ / ____ / ____ years ____ / ____ / ____ months Unknown

(Complete items a – e where applicable.)

H2 – NATURAL FORCES

3. Earth Movement ⇒ Earthquake Subsidence Landslide Other _____
4. Lightning
5. Heavy Rains/Floods ⇒ Washouts Flotation Mudslide Scouring Other _____
6. Temperature ⇒ Thermal stress Frost heave Frozen components Other _____
7. High Winds

H3 – EXCAVATION DAMAGE

8. Operator Excavation Damage (including their contractors/Not Third Party)
9. Third Party (complete a-f)
- a. Excavator group
 General Public Government Excavator other than Operator/subcontractor
- b. Type: Road Work Pipeline Water Electric Sewer Phone/Cable
 Landowner-not farming related Farming Railroad
 Other liquid or gas transmission pipeline operator or their contractor
 Nautical Operations Other _____
- c. Excavation was: Open Trench Sub-strata (boring, directional drilling, etc...)
- d. Excavation was an ongoing activity (Month or longer) Yes No If Yes, Date of last contact ____ / ____ / ____
- e. Did operator get prior notification of excavation activity?
 Yes; Date received: ____ / ____ / ____ mo. ____ / ____ / ____ day ____ / ____ / ____ yr. No
 Notification received from: One Call System Excavator Contractor Landowner
- f. Was pipeline marked as result of location request for excavation? No Yes (If Yes, check applicable items i - iv)
- i. Temporary markings: Flags Stakes Paint
- ii. Permanent markings:
- iii. Marks were (check one) : Accurate Not Accurate
- iv. Were marks made within required time? Yes No

H4 – OTHER OUTSIDE FORCE DAMAGE

10. Fire/Explosion as primary cause of failure ⇒ Fire/Explosion cause: Man made Natural
11. Car, truck or other vehicle not relating to excavation activity damaging pipe
12. Rupture of Previously Damaged Pipe
13. Vandalism

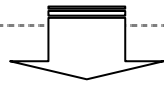
H5 – MATERIAL AND/OR WELD FAILURES

Material

- 14. Body of Pipe ⇒ Dent Gouge Bend Arc Burn Other _____
- 15. Component ⇒ Valve Fitting Vessel Extruded Outlet Other _____
- 16. Joint ⇒ Gasket O-Ring Threads Other _____

Weld

- 17. Butt ⇒ Pipe Fabrication Other _____
- 18. Fillet ⇒ Branch Hot Tap Fitting Repair Sleeve Other _____
- 19. Pipe Seam ⇒ LF ERW DSAW Seamless Flash Weld Other _____
- HF ERW SAW Spiral Other _____



Complete a-g if you indicate **any** cause in part H5.

- a. Type of failure:
 - Construction Defect ⇒ Poor Workmanship Procedure not followed Poor Construction Procedures
 - Material Defect
- b. Was failure due to pipe damage sustained in transportation to the construction or fabrication site? Yes No
- c. Was part which leaked pressure tested before accident occurred? Yes, complete d-g No
- d. Date of test: / / / yr. / / / mo. / / / day
- e. Test medium: Water Inert Gas Other _____
- f. Time held at test pressure: / / / hr.
- g. Estimated test pressure at point of accident: _____ PSIG

H6 – EQUIPMENT

- 20. Malfunction of Control/Relief Equipment ⇒ Control valve Instrumentation SCADA Communications
 Block valve Relief valve Power failure Other _____
- 21. Threads Stripped, Broken Pipe Coupling ⇒ Nipples Valve Threads Dresser Couplings Other _____
- 22. Seal Failure ⇒ Gasket O-Ring Seal/Pump Packing Other _____

H7 – INCORRECT OPERATION

- 23. Incorrect Operation
 - a. Type: Inadequate Procedures Inadequate Safety Practices Failure to Follow Procedures
 Other _____
 - b. Number of employees involved who failed a post-accident test: drug test: / / / / alcohol test / / / /

H8 – OTHER

- 24. Miscellaneous, describe: _____
- 25. Unknown
 - Investigation Complete Still Under Investigation (submit a supplemental report when investigation is complete)

PART I – NARRATIVE DESCRIPTION OF FACTORS CONTRIBUTING TO THE EVENT

(Attach additional sheets as necessary)

Large empty rectangular box for narrative description.