DOTUS Department of TransportationPHMSAPipelines and Hazardous Materials Safety AdministrationOPSOffice of Pipeline Safety
Southwest Region

Principal Investigator	Gene Roberson
Region Director	R. M. Seeley
Date of Report	09/12/2013
Subject	Failure Investigation Report – Enterprise Products Pipeline – Rio Grande PL Girth Weld Failure

Operator, Location, & Consequences

Date of Failure	12/27/2011
Commodity Released	LPG Products (Propane/Butane)
City/County & State	Kermit/Loving County, Texas
OPID & Operator Name	31618 Enterpise Products Operating LLC
Unit # & Unit Name	16024 Rio Grande Pipeline
SMART Activity #	137399
Milepost / Location	MP 50.16
Type of Failure	Girth weld failure (complete separation of circumference of weld)
Fatalities	None
Injuries	1 requiring hospitalization (flash fire during repair)
Description of Area Impacted	Rural area, within a production field
Property Damage	\$230,000

Executive Summary

At approximately 9:00 p.m. central standard time (CST), December 27, 2011, Enterprise Products Operating, LLC (Enterprise) controllers received an alarm indicating a pressure drop on several transmitters along their 8-inch-diameter Rio Grande Pipeline liquefied petroleum gas (LPG) system and proceeded to shut the system down. Enterprise notified the National Response Center (NRC) of the release at 10:42 p.m. on December 27, 2011. At approximately 3:00 a.m. on December 28, 2011, responding personnel confirmed the line rupture near mile post (MP) 50.16 in Loving County, Texas. During the pipeline repair, a flash fire involving residual pipeline product in the soil occurred, injuring 3 employees, one of whom required in-patient hospitalization. Enterprise had performed one cold cut of the pipeline and was preparing to cut off the other side of the failed pipe when the flash fire occurred. The rupture was attributed to the complete circumferential separation of an acetylene girth weld, and the flash fire was attributed to operator error. No additional product was released from the pipe.



Failed Girth Weld

System Details

Enterprise's 8-inch Rio Grande pipeline system transports LPG products 223 miles from Odessa, Texas, to San Elizario, Texas. The pipeline has three operating segments: Lawson Junction to Pecos River, Pecos River to Delaware, and Delaware to San Elizario. The failure occurred in the Lawson Junction to Pecos River segment at MP 50.16.

The Lawson Junction to Pecos River segment (MP 0 to MP 71) was installed in 1952. The pipeline has an maximum operating pressure (MOP) of 1,440 pounds per square inch gage (psig) and was operating at approximately 1,300 psig at the time of failure. A hydro test was performed in 1996 to 71 percent of specified minimum yield strength (SMYS) in the area of the failure.

During the 1952 construction project, portions of a 1928, 8.625-inch outer diameter (OD), 0.277-inch wall thickness, Grade B seamless line pipe with acetylene girth welds were tied into the Rio Grande Pipeline from MP 31 to MP 70 (vintage section).

Within the vintage section, there have been some replacements of the acetylene welded pipe.

1996	1 mile	MP 70 (sinkhole activity)
1996	All road casings + 100 feet	Between MP 31 to 70
1996	168 feet	MP 50 (47 feet upstream of failure)

Events Leading up to the Failure

The Enterprise Rio Grande Pipeline was operating normally prior to the incident until just prior to the release, on December 27, 2011, at 8:14 p.m., the Delaware pumping unit of the Rio Grande Pipeline experienced a power failure and shut down. The maximum discharge pressure from the Lawson pump station was 1,337 pounds per square inch (psi) at 8:27 p.m., and at 9:10 p.m., the discharge pressure was 731 psi. At 9:00 p.m., a pipeline leak monitor alarm was received, and at 9:28 p.m. the pipeline controller shut down the Lawson unit in response to the pressure drop. The controller closed the Lawson Junction block valve at 9:32 p.m. and closed the MP 159 block valve at 9:41 p.m. The estimated time of the failure was 9:00 p.m., which corresponded to the time the alarms were received in the control room followed by the drop in line pressure from 1,337 to 731 psi.

Emergency Response

The Enterprise Control Center responded to a rapid pressure drop on the Rio Grande Pipeline system from an operating pressure of 1,300 psi to 469 psi at approximately 9:30 p.m. on December 27, 2011. Upon recieving the alarms, the Control Center began the shut down sequence for the pipeline system and notified the local Sheriff's department of a possible pipeline rupture in the area. Enterprise technicians were dispatched to the area to investigate.

Enterprise reported the release to the NRC (#999086) at approximately 10:42 p.m. CST on December 27, 2011 (Appendix A).

Enterprise personnel confirmed the exact location of the rupture, MP 50.5, at approximately 3:00 a.m. on December 28, 2011. Once isolated, the pipeline was blown down and the released product dissipated. No local emergency or fire personnel responded to the scene. Due to the remoteness of the failure location, no roads were closed and no residents were evacuated. PHMSA did not respond to the accident site.

Summary of Return-to-Service

Following the emergency response, Enterprise isolated the pipeline. Enterprise secured the area and began taking steps to clear and repair the line segment. The residual hydrocarbons were purged with nitrogen from the upstream and downstream valve locations. The area was excavated with a backhoe to expose enough pipe to facilitate the repair. After the line was confirmed to be free of hydrocarbons, on-site contractors proceeded to cold cut the east side of the line. The first cold cut was successful, and approximately 20 feet of pipe was removed.

At approximately 5:00 p.m. on December 28, 2011, a flash fire occurred in the trench when a concentration of hydrocarbons exceeding the Lower Flammability Limit (LFL) for the hydrocarbon mixture ignited. Two Enterprise employees and four contractors were in the trench working on various tasks, such as removing additional soil with shovels, taking measurements, and evaluating the amount of additional pipe that needed to be removed from the west side of the weld failure, when the flash fire occurred. Three individuals were injured as a result of the flash fire. Enterprise discontinued all repair activities.

On December 30, 2011, following the development and implementation of a work plan and work permits, the failed section was cut out and replaced with 24 feet of new pipe. The pipeline was then purged and returned to service at 80 percent of the operating pressure at the time of the incident while the investigation continued into the cause of the failure. The removed pipe was then sent to Kiefner and Associates, Inc. for metallurgical analysis.



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After receipt and analysis of the metallurgical report, and a subsidence hazard assessment performed as part of the accident investigation, the pressure restriction was removed from the system in December 2012.

Investigation Details

At approximately 10:42 p.m. CST, December 27, 2011, Enterprise Products reported, to the NRC, a release of LPG in Loving County, Texas. PHMSA's Southwest Region received the incident notification and began communicating with the operator. Upon isolation of the valve section, the area was made safe and the repair began. Cold cuts were being used to remove the section of old pipe, and one piece had been removed from the line. With multiple employees around the area, at 5:00 p.m., on December 28, 2011, a flash fire occurred due to product saturation in the soil around the bell hole. Due to the fire, 3 employees received minor burns. One of the three injured employees required in-patient hospitalization. The repair activities were stopped so that Enterprise could respond to the injuries and reassess the project. A maintenance crew from another location was dispatched to complete the repair. PHMSA then scheduled a meeting to investigate the actions taken due to the flash fire. Findings from this meeting indicated the initial area crew did not establish a job plan as required by Enterprise. Before performing the subsequent repair, a copy of the work plan (form SF20) was furnished to PHMSA investigators, upon request, from Enterprise, with all additional safety forms attached. Repairs were then completed.



Site After Flash Fire

Following the accident, the pipeline was returned to service at a reduced operating pressure. PHMSA requested additional testing and investigation into the cause of the failure. Enterprise's final report determined external stresses were exerted on the acetylene weld. Based on this finding, Enterprise initiated a study to the review the possibility of this event reoccurring in other sections of the acetylene pipe that remained within the MP 31 to MP 70 sections. Golder Associates conducted a Subsidence Hazards Assessemnt of the Rio Grande Pipeline and presented their results to Enterprise in September

2012. The information was also reviewed with PHMSA, and additional information was provided by Enterprise. A final meeting was held in December 2012, and the pipeline was returned to full service.

Metallurgical Analysis

The failed girth weld and associated pipe was sent to Kiefner & Associates, Inc., in Worthington, Ohio, for metallurgical analysis.

The conclusions of the analysis were:

- The fracture initiated at an area of incomplete penetration in the acetylene weld, in a ductile manner, and propagated within and around the circumferential weld.
- The cause of the girth weld failure was due to external stresses on the pipeline. This was the conclusion since no evidence of time-dependent degradation was identified on the pipe.
- The failure mechanism was longitudinal in nature (geotechnical soil shift/ thermal expansion).
- No failure would have occurred in the girth weld without the applied longitudinal stresses.

Mechanical Analysis

There was no mechanical analysis to be made.

Geotechnical Analysis

A Subsidence Hazards Assessment was performed by Golder Associates on the Lawson Junction to Pecos River segment of the Rio Grande Pipeline. The assessment identified a possible subsidence feature that could have contributed to the external forces that caused the failure. External forces could also have been caused by the 1996 pipeline rehabilitation project that replaced 168 feet of pipeline just 47 feet upstream of the failure location. No other actions were identified by the Assessment that required action on the pipeline segment.

Conclusion

A failure occurred in an acetylene girth weld that completely separated from the 8-inch Rio Grande Pipeline. The separation began in a location of incomplete penetration within the weld due to the application of external forces on the pipeline. The flash fire and injuries were a result of incorrect operation and failing to follow procedures associated with hot work on the pipeline.

Appendices

- A Telephonics Notice Report NRC # 999086
- B Operator Accident Report ODES # 20120023 Girth Weld Failure
- C Operator Accident Report ODES # 20120070 Flash Fire from Soil
- D Operator Incident Investigation Report #11856/SF-108

APPENDIX A

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APPENDIX B

NOTICE: This report is required by 49 CFR Part 195. Failure to report can result exceed \$100,000 for each violation for each day that such violation persists exce penalty shall not exceed \$1,000,000 as provided in 49 USC 60122.	in a civil penalty not to pt that the maximum civil	OMB NO: 2137-0047 EXPIRATION DATE: 01/3	1/2013
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to be approximately 10 hours per response (5 hours for a small release), includin completing and reviewing the collection of information. All responses to this colle burden estimate or any other aspect of this collection of information, including su Officer, PHMSA, Office of Pipeline Safety (PHP-30) 1200 New Jersey Avenue, S	g the time for reviewing insti- oction of information are mar ggestions for reducing this b E, Washington, D.C. 20590.	ructions, gathering the data ne adatory. Send comments rega urden to: Information Collectio	eeded, and arding this on Clearance
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Important: Please read the separate instructions for completing this form before examples. If you do not have a copy of the instructions, you can obtain one from http://www.phmsa.dot.gov/pipeline .	you begin. They clarify the the PHMSA Pipeline Safety	information requested and pr Community Web Page at	ovide specific
PART A - KEY REPORT INFORMATION	* tyj*		
Report Type: (select all that apply)	Original:	Supplemental:	Final:
	00/04/0040	Yes	Yes
Last Revision Date:	03/21/2012		
Operator's OPS-issued Operator Identification Number (OPID): Nome of Operator		DUCTS ODEDATING LL	<u></u>
Address of Operator	ENTERPRISE PRO	DUCIS OPERATING LL	0
3a Street Address	1100 Louisiana Str	oot	
3h City	HOUSTON	661	
3c State	Texas		
3d. Zip Code	77002		
4. Local time (24-hr clock) and date of the Accident:	12/27/2011 21:00		
5. Location of Accident:			
Latitude:	31.78341		
Longitude:	-103.46442		
6. National Response Center Report Number (if applicable):	999086		
7. Local time (24-hr clock) and date of initial telephonic report to the National Response Center (if applicable):	12/27/2011 21:10		
8. Commodity released: (select only one, based on predominant volume released)	HVL or Other Flam Ambient Conditions	mable or Toxic Fluid which	n is a Gas at
- Specify Commodity Subtype:	Other HVL		
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 9. Estimated volume of commodity released unintentionally (Barrels): 10. Estimated volume of intentional and/or controlled release/blowdow (Barrels): 	3,283.00 /n		
11. Estimated volume of commodity recovered (Barrels):			
12. Were there fatalities?	No		
- If Yes, specify the number in each category:			
12a. Operator employees			
120. Contractor emproyees working for the Operator			
12d. Workers working on the right-of-way, but NOT			
12e. General public			
12f. Total fatalities (sum of above)			
13. Were there injuries requiring inpatient hospitalization?	No		
- If Yes, specify the number in each category:			
13a. Operator employees			
13b. Contractor employees working for the Operator			
13c. Non-Operator emergency responders			
13a. workers working on the right-of-way, but NOT			

Page 1 of 14

associated with this Operator	
13e. General public	
13f. Total injuries (sum of above)	
14. Was the pipeline/facility shut down due to the Accident?	Yes
- If No, Explain:	
- If Yes, complete Questions 14a and 14b: (use local time, 24-hr clock)	
14a. Local time and date of shutdown:	12/27/2011 21:30
14b. Local time pipeline/facility restarted:	01/12/2012 10:55
- Still shut down? (* Supplemental Report Required)	
15. Did the commodity ignite?	No
16. Did the commodity explode?	No
17. Number of general public evacuated:	0
18. Time sequence (use local time, 24-hour clock):	
18a. Local time Operator identified Accident:	12/27/2011 23:02
18b. Local time Operator resources arrived on site:	12/28/2011 00:28
PART B - ADDITIONAL LOCATION INFORMATION	
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o. Operator-designated location.	
Specify:	50.16 Di Quala Dia lia
7. Pipeline/Facility name:	Rio Grande Pipeline
8. Segment name/ID:	LID 1058
9. Was Accident on Federal land, other than the Outer Continental Shelf (OCS)?	No
10. Location of Accident:	Pipeline Right-of-way
11. Area of Accident (as found):	Underground
Specify:	Under soil
- If Other, Describe:	
Depth-of-Cover (in):	22
12. Did Accident occur in a crossing?	No
- If Yes, specify below:	
- If Bridge crossing -	
Cased/ Uncased:	
- If Railroad crossing -	
Cased/ Uncased/ Bored/drilled	
- If Road crossing -	
Cased/ Uncased/ Bored/drilled	
- If Water crossing -	
Cased/Uncased	
- Name of body of water if commonly known:	
- Approx water depth (ft) at the point of the Accident:	
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If Offshore: 13. Approximate water depth (ft) at the point of the Accident: 14. Origin of Accident: - In State waters - Specify: - State: - State: - Area: - Block/Tract #: - Nearest County/Parish: - On the Outer Continental Shelf (OCS) - Specify: - Area: - Area:	
If Offshore: 13. Approximate water depth (ft) at the point of the Accident: 14. Origin of Accident: - In State waters - Specify: - State: - State: - Area: - Block/Tract #: - On the Outer Continental Shelf (OCS) - Specify: - Area: - Block #:	
If Offshore: 13. Approximate water depth (ft) at the point of the Accident: 14. Origin of Accident: - In State waters - Specify: - State: - State: - Area: - Block/Tract #: - On the Outer Continental Shelf (OCS) - Specify: - Area: - Block #: 15. Area of Accident:	
If Offshore: 13. Approximate water depth (ft) at the point of the Accident: 14. Origin of Accident: - In State waters - Specify: - State: - Area: - Block/Tract #: - Nearest County/Parish: - On the Outer Continental Shelf (OCS) - Specify: - Area: - Block #: - State: - Block #: 15. Area of Accident: PART C - ADDITIONAL FACILITY INFORMATION	
If Offshore: 13. Approximate water depth (ft) at the point of the Accident: 14. Origin of Accident: - In State waters - Specify: - State: - Area: - Block/Tract #: - Nearest County/Parish: - On the Outer Continental Shelf (OCS) - Specify: - Area: - Block #: 15. Area of Accident: PART C - ADDITIONAL FACILITY INFORMATION	
If Offshore: 13. Approximate water depth (ft) at the point of the Accident: 14. Origin of Accident: - In State waters - Specify: - State: - Area: - Block/Tract #: - Nearest County/Parish: - On the Outer Continental Shelf (OCS) - Specify: - Area: - Block #: 15. Area of Accident: PART C - ADDITIONAL FACILITY INFORMATION 1. Is the pipeline or facility: 2. Determinental A state	
- If Offshore: 13. Approximate water depth (ft) at the point of the Accident: 14. Origin of Accident: - In State waters - Specify: - State: - Area: - Block/Tract #: - Nearest County/Parish: - On the Outer Continental Shelf (OCS) - Specify: - Area: - Block #: 15. Area of Accident: PART C - ADDITIONAL FACILITY INFORMATION 1. Is the pipeline or facility: 2. Part of system involved in Accident:	Interstate Onshore Pipeline, Including Valve Sites
If Offshore: 13. Approximate water depth (ft) at the point of the Accident: 14. Origin of Accident: - In State waters - Specify: - State: - State: - Area: - Block/Tract #: - Nearest County/Parish: - On the Outer Continental Shelf (OCS) - Specify: - Area: - Block #: 15. Area of Accident: PART C - ADDITIONAL FACILITY INFORMATION 1. Is the pipeline or facility: 2. Part of system involved in Accident: - If Onshore Breakout Tank or Storage Vessel, Including Attached Auter and Accident	Interstate Onshore Pipeline, Including Valve Sites
If Offshore: 13. Approximate water depth (ft) at the point of the Accident: 14. Origin of Accident: - In State waters - Specify: - State: - State: - Area: - Block/Tract #: - Nearest County/Parish: - On the Outer Continental Shelf (OCS) - Specify: - Area: - Block #: 15. Area of Accident: PART C - ADDITIONAL FACILITY INFORMATION 1. Is the pipeline or facility: 2. Part of system involved in Accident: - If Onshore Breakout Tank or Storage Vessel, Including Attached Appurtenances, specify: Area involved in Accident: - If Onshore Breakout Tank or Storage Vessel, Including Attached Appurtenances, specify: - State involved in Accident: - If Onshore Breakout Tank or Storage Vessel, Including Attached Appurtenances, specify: - State of Accident: - If Onshore Breakout Tank or Storage Vessel, Including Attached Appurtenances, specify: - State of Accident: - If Onshore Breakout Tank or Storage Vessel, Including Attached Appurtenances, specify: - State Accident: - If Onshore Breakout Tank or Storage Vessel, Including Attached Appurtenances, specify: - State Accident: - If Onshore Breakout Tank or Storage Vessel, Including Attached Appurtenances, Specify: - State Accident: - If Onshore Breakout Tank or Storage Vessel, Including Attached Appurtenances Accident: - If Onshore Breakout Tank or Storage Vessel, Including Attached - Appurtenances Accident: - If Onshore Breakout Tank or Storage Vessel, Including Attached - Appurtenances Accident: - Accident	Interstate Onshore Pipeline, Including Valve Sites

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3a. Nominal diameter of pipe (in):	
3b. Wall thickness (in):	
3c. SMYS (Specified Minimum Yield Strength) of pipe (psi):	
3d. Pipe specification:	
3e. Pipe Seam , specify:	
- If Other, Describe:	
3f. Pipe manufacturer:	
3g. Year of manufacture:	
3h. Pipeline coating type at point of Accident, specify:	
- If Other, Describe:	
- If Weld, including heat-affected zone, specify:	Pipe Girth Weld
- If Other, Describe:	
- If Valve, specify:	
- If Mainline, specify:	
- If Other, Describe:	
3i. Manufactured by:	
3j. Year of manufacture:	
- If Tank/Vessel, specify:	
- If Other - Describe:	
- If Other, describe:	
4. Year item involved in Accident was installed:	1929
5. Material involved in Accident:	Material other than Carbon Steel
- If Material other than Carbon Steel, specify:	Acetviene Weld
6. Type of Accident Involved:	Rupture
- If Mechanical Puncture - Specify Approx, size:	
in (axial) by	
in (circumferential)	
- If Leak - Select Type:	
- If Other Describe:	
- If Rupture - Select Orientation:	Circumferential
- If Other Describe:	onounneronnar
Approx size: in (widest opening) by	4
in (length circumferentially or axially)	4
- If Other - Describe:	
PART D - ADDITIONAL CONSEQUENCE INFORMATION	
PART D - ADDITIONAL CONSEQUENCE INFORMATION	
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact:	No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply:	No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic	No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds	No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial	No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination:	No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned:	No Yes No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticinated remediation:	No Yes No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply:	No Yes No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply:	No Yes No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact:	No Yes No No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact:	No Yes No No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation	No Yes No No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation	No Yes No No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination:	No Yes No No No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination:	No Yes No No No No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: - Sa If Yes, specify all that apply: - Cocean/Seawater	No Yes No No No No No No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Soil - Vegetation - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface	No Yes No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface	No Yes No No No No No No No No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater	No Yes No No No No No No No No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Drinking water: (Select one or both)	No Yes No No No No No No No No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Dirinking water: (Select one or both) - Private Well	No Yes No No No No No No No No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Surface - Drinking water: (Select one or both) - Private Well - Public Water Intake	No Yes No No No No No No No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Surface - Private Well - Private Well - Public Water Intake 5b. Estimated amount released in or reaching water (Barrels):	No Yes No No No No No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Surface - Private Well - Private Well - Public Water Intake 5b. Estimated amount released in or reaching water (Barrels): 5c. Name of body of water, if commonly known:	No Yes No No No No No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Surface - Drinking water: (Select one or both) - Private Well - Public Water Intake 5b. Estimated amount released in or reaching water (Barrels): 5c. Name of body of water, if commonly known: 6. At the location of this Accident, had the pipeline segment or facility	No Yes No No No No No No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Frivate Well - Drinking water: (Select one or both) - Private Well - Public Water Intake 5b. Estimated amount released in or reaching water (Barrels): 5c. Name of body of water, if commonly known: 6. At the location of this Accident, had the pipeline segment or facility been identified as one that "could affect" a High Consequence Area	No Yes No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Surface - Private Well - Drinking water: (Select one or both) - Private Well - Public Water Intake 5b. Estimated amount released in or reaching water (Barrels): 5c. Name of body of water, if commonly known: 6. At the location of this Accident, had the pipeline segment or facility been identified as one that "could affect" a High Consequence Area (HCA) as determined in the Operator's Integrity Management Program?	No Yes No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Surface - Private Well - Drinking water: (Select one or both) - Private Well - Public Water Intake 5b. Estimated amount released in or reaching water (Barrels): 5c. Name of body of water, if commonly known: 6. At the location of this Accident, had the pipeline segment or facility been identified as one that "could affect" a High Consequence Area (HCA) as determined in the Operator's Integrity Management Program? 7. Did the released commodity reach or occur in one or more High Consequence Area	No Yes No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Surface - Private Well - Private Well - Private Well - Public Water Intake 5b. Estimated amount released in or reaching water (Barrels): 5c. Name of body of water, if commonly known: 6. At the location of this Accident, had the pipeline segment or facility been identified as one that "could affect" a High Consequence Area (HCA) as determined in the Operator's Integrity Management Program? 7. Did the released commodity reach or occur in one or more High Consequence Area (HCA):	No Yes No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Surface - Ocean/Seawater - Surface - Drinking water: (Select one or both) - Private Weil - Public Water Intake 5b. Estimated amount released in or reaching water (Barrels): 5c. Name of body of water, if commonly known: 6. At the location of this Accident, had the pipeline segment or facility been identified as one that "could affect" a High Consequence Area (HCA)? 7. Did the released commodity reach or occur in one or more High Consequence Area (HCA)? 7a. If Yes, specify HCA type(s): (Select all that apply)	No Yes No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Groundwater - Soil - Vegetation - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Surface - Groundwater - Surface - Private Well - Public Water Intake 5b. Estimated amount released in or reaching water (Barrels): 5c. Name of body of water, if commonly known: 6. At the location of this Accident, had the pipeline segment or facility been identified as one that "could affect" a High Consequence Area (HCA) as determined in the Operator's Integrity Management Program? 7. Did the released commodity reach or occur in one or more High Consequence Area (HCA)? 7a. If Yes, specify HCA type(s): (Select all that apply) - Commercially Navigable Waterway: Work the Vel (A idontified in the "secure of the operator")	No Yes No No
PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact:	No Yes No No

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integrity Management Program?	
- High Population Area:	
Was this HCA identified in the "could affect"	
determination for this Accident site in the Operator's	
Integrity Management Program?	
- Other Populated Area	
Was this HCA identified in the "could affect" determination	
for this Accident site in the Operator's Integrity	
Management Program?	
 Unusually Sensitive Area (USA) - Drinking Water 	
Was this HCA identified in the "could affect" determination	
for this Accident site in the Operator's Integrity	
Management Program?	
 Unusually Sensitive Area (USA) - Ecological 	
Was this HCA identified in the "could affect" determination	
for this Accident site in the Operator's Integrity	
Management Program?	
8. Estimated Property Damage:	
 8a. Estimated cost of public and non-Operator private property 	\$ 0
damage	φ 0
8b. Estimated cost of commodity lost	\$ 100,000
8c. Estimated cost of Operator's property damage & repairs	\$ 105,000
8d. Estimated cost of Operator's emergency response	\$ 12,000
8e. Estimated cost of Operator's environmental remediation	\$ 0
8f. Estimated other costs	\$ 0
Describe:	
8g. Total estimated property damage (sum of above)	\$ 217,000
	e even and a subministration and a start of the second start of th
PART E - ADDITIONAL OPERATING INFORMATION	
Construction of the constr	
 Estimated pressure at the point and time of the Accident (psig): 	1,338.00
2. Maximum Operating Pressure (MOP) at the point and time of the	1 440 00
Accident (psig):	1,440.00
Describe the pressure on the system or facility relating to the	Pressure did not exceed MOP
Accident (psig):	
Not including pressure reductions required by PHMSA regulations	
(such as for repairs and pipe movement), was the system or facility	
relating to the Accident operating under an established pressure	No
restriction with pressure limits below those normally allowed by the	
MOP?	
- If Yes, Complete 4.a and 4.b below:	
4a. Did the pressure exceed this established pressure	
restriction?	
4b. Was this pressure restriction mandated by PHMSA or the	
4b. Was this pressure restriction mandated by PHMSA or the State?	
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore 	
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 22 	Yes
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? 	Yes
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 	Yes
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 5a. Type of upstream valve used to initially isolate release 	Yes Remotely Controlled
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source: 	Yes Remotely Controlled
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source; 5b. Type of downstream valve used to initially isolate release 	Yes Remotely Controlled Manual
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source: 5b. Type of downstream valve used to initially isolate release source: 	Yes Remotely Controlled Manual
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source: 5b. Type of downstream valve used to initially isolate release source: 5c. Length of segment isolated between valves (ft): 	Yes Remotely Controlled Manual 63,589
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source: 5b. Type of downstream valve used to initially isolate release source: 5c. Length of segment isolated between valves (ft): 5d. Is the pipeline configured to accommodate internal 	Yes Remotely Controlled Manual 63,589 Yes
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source: 5b. Type of downstream valve used to initially isolate release source: 5c. Length of segment isolated between valves (ft): 5d. Is the pipeline configured to accommodate internal inspection tools? 	Yes Remotely Controlled Manual 63,589 Yes
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source: 5b. Type of downstream valve used to initially isolate release source: 5c. Length of segment isolated between valves (ft): 5d. Is the pipeline configured to accommodate internal inspection tools? If No, Which physical features limit tool accommodation? 	Yes Remotely Controlled Manual 63,589 Yes (select all that apply)
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source: 5b. Type of downstream valve used to initially isolate release source: 5c. Length of segment isolated between valves (ft): 5d. Is the pipeline configured to accommodate internal inspection tools? If No, Which physical features limit tool accommodation? Changes in line pipe diameter 	Yes Remotely Controlled Manual 63,589 Yes (select all that apply)
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source: 5b. Type of downstream valve used to initially isolate release source: 5c. Length of segment isolated between valves (ft): 5d. Is the pipeline configured to accommodate internal inspection tools? If No, Which physical features limit tool accommodation? Changes in line pipe diameter Presence of unsuitable mainline valves 	Yes Remotely Controlled Manual 63,589 Yes (select all that apply)
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source: 5b. Type of downstream valve used to initially isolate release source: 5c. Length of segment isolated between valves (ft): 5d. Is the pipeline configured to accommodate internal inspection tools? If No, Which physical features limit tool accommodation? Changes in line pipe diameter Presence of unsuitable mainline valves Tight or mitered pipe bends 	Yes Remotely Controlled Manual 63,589 Yes (select all that apply)
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source: 5b. Type of downstream valve used to initially isolate release source: 5c. Length of segment isolated between valves (ft): 5d. Is the pipeline configured to accommodate internal inspection tools? If No, Which physical features limit tool accommodation? Changes in line pipe diameter Presence of unsuitable mainline valves Tight or mitered pipe bends Other passage restrictions (i.e. unbarred tee's, 	Yes Remotely Controlled Manual 63,589 Yes (select all that apply)
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source: 5b. Type of downstream valve used to initially isolate release source: 5c. Length of segment isolated between valves (ft): 5d. Is the pipeline configured to accommodate internal inspection tools? If No, Which physical features limit tool accommodation? Changes in line pipe diameter Presence of unsuitable mainline valves Tight or mitered pipe bends Other passage restrictions (i.e. unbarred tee's, projecting instrumentation, etc.) 	Yes Remotely Controlled Manual 63,589 Yes (select all that apply)
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source: 5b. Type of downstream valve used to initially isolate release source: 5c. Length of segment isolated between valves (ft): 5d. Is the pipeline configured to accommodate internal inspection tools? If No, Which physical features limit tool accommodation? Changes in line pipe diameter Presence of unsuitable mainline valves Tight or mitered pipe bends Other passage restrictions (i.e. unbarred tee's, projecting instrumentation, etc.) Extra thick pipe wall (applicable only for magnetic 	Yes Remotely Controlled Manual 63,589 Yes (select all that apply)
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 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source: 5b. Type of downstream valve used to initially isolate release source: 5c. Length of segment isolated between valves (ft): 5d. Is the pipeline configured to accommodate internal inspection tools? If No, Which physical features limit tool accommodation? Changes in line pipe diameter Presence of unsuitable mainline valves Tight or mitered pipe bends Other passage restrictions (i.e. unbarred tee's, projecting instrumentation, etc.) Extra thick pipe wall (applicable only for magnetic flux leakage internal inspection tools) Other - 	Yes Remotely Controlled Manual 63,589 Yes (select all that apply)
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 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source: 5b. Type of downstream valve used to initially isolate release source: 5c. Length of segment isolated between valves (ft): 5d. Is the pipeline configured to accommodate internal inspection tools? If No, Which physical features limit tool accommodation? Changes in line pipe diameter Presence of unsuitable mainline valves Tight or mitered pipe bends Other passage restrictions (i.e. unbarred tee's, projecting instrumentation, etc.) Extra thick pipe wall (applicable only for magnetic flux leakage internal inspection tools) Other - 	Yes Remotely Controlled Manual 63,589 Yes (select all that apply)
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (Complete 5a 5f. below) 5a. Type of upstream valve used to initially isolate release source: 5b. Type of downstream valve used to initially isolate release source: 5c. Length of segment isolated between valves (ft): 5d. Is the pipeline configured to accommodate internal inspection tools? If No, Which physical features limit tool accommodation? Changes in line pipe diameter Presence of unsuitable mainline valves Tight or mitered pipe bends Other passage restrictions (i.e. unbarred tee's, projecting instrumentation, etc.) Extra thick pipe wall (applicable only for magnetic flux leakage internal inspection tools) Other - 	Yes Remotely Controlled Manual 63,589 Yes (select all that apply)
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source: 5b. Type of downstream valve used to initially isolate release source: 5c. Length of segment isolated between valves (ft): 5d. Is the pipeline configured to accommodate internal inspection tools? If No, Which physical features limit tool accommodation? Changes in line pipe diameter Presence of unsuitable mainline valves Tight or mitered pipe bends Other passage restrictions (i.e. unbarred tee's, projecting instrumentation, etc.) Extra thick pipe wall (applicable only for magnetic flux leakage internal inspection tools) Other - 	Yes Remotely Controlled Manual 63,589 Yes (select all that apply) No
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source: 5b. Type of downstream valve used to initially isolate release source: 5c. Length of segment isolated between valves (ft): 5d. Is the pipeline configured to accommodate internal inspection tools? If No, Which physical features limit tool accommodation? Changes in line pipe bends Tight or mitered pipe bends Other passage restrictions (i.e. unbarred tee's, projecting instrumentation, etc.) Extra thick pipe wall (applicable only for magnetic flux leakage internal inspection tools) Other - If Other, Describe: 5e. For this pipeline, are there operational factors which significantly complicate the execution of an internal inspection tool run? If Yes, Which operational factors complicate execution? (select all that applicable only for construction of an internal inspection tool run? 	Yes Remotely Controlled Manual 63,589 Yes (select all that apply) No Dely)
 4b. Was this pressure restriction mandated by PHMSA or the State? 5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2? If Yes - (<i>Complete 5a. – 5f. below</i>) 5a. Type of upstream valve used to initially isolate release source: 5b. Type of downstream valve used to initially isolate release source: 5c. Length of segment isolated between valves (ft): 5d. Is the pipeline configured to accommodate internal inspection tools? If No, Which physical features limit tool accommodation? Changes in line pipe bends Tight or mitered pipe bends Other passage restrictions (i.e. unbarred tee's, projecting instrumentation, etc.) Extra thick pipe wall (applicable only for magnetic flux leakage internal inspection tools) Other - If Other, Describe: 5e. For this pipeline, are there operational factors which significantly complicate the execution of an internal inspection tool run? If Yes, Which operational factors complicate execution? (select all that all - Excessive debris or scale, wax, or other wall buildup 	Yes Remotely Controlled Manual 63,589 Yes (select all that apply) No pply)

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 Low flow or absence of flow 	
 Incompatible commodity 	
- Other -	
- If Other, Describe:	
5f. Function of pipeline system:	> 20% SMYS Regulated Trunkline/Transmission
6. Was a Supervisory Control and Data Acquisition (SCADA)-based	
system in place on the pipeline or facility involved in the Accident?	Yes
If Yes -	
6a. Was it operating at the time of the Accident?	Yes
6b. Was it fully functional at the time of the Accident?	Yes
6c. Did SCADA-based information (such as alarm(s),	
alert(s), event(s), and/or volume calculations) assist with	Yes
the detection of the Accident?	
6d. Did SCADA-based information (such as alarm(s),	
alert(s), event(s), and/or volume calculations) assist with	Yes
the confirmation of the Accident?	
7. Was a CPM leak detection system in place on the pipeline or facility	Yes
involved in the Accident?	
- If Yes:	
7a. Was it operating at the time of the Accident?	Yes
7b. Was it fully functional at the time of the Accident?	Yes
7c. Did CPM leak detection system information (such as	
alarm(s), alert(s), event(s), and/or volume calculations) assist	Yes
Zd Did CPM look detection overlam information (such as	
/d. Did CPIM leak detection system information (such as	Ves
with the confirmation of the Accident?	res
8 How was the Accident initially identified for the Operator?	Controllor
of now was the Accident initially identified for the Operator ?	Controller
8a If "Controller" "Local Operating Personnal" including	
contractors" "Air Patrol" or "Guard Patrol by Operator or its	Operator employee
contractor" is selected in Question 8 specify the following:	operator employee
	No, the Operator did not find that an investigation of the
9. Was an investigation initiated into whether or not the controller(s) or	controller(s) actions or control room issues was necessary
control room issues were the cause of or a contributing factor to the	due to: (provide an explanation for why the Operator did not
Accident?	investigate)
- If No, the Operator did not find that an investigation of the	Determined controllers actions did not contribute to the
controller(s) actions or control room issues was necessary due to:	release
(provide an explanation for why the operator did not investigate)	
 If Yes, specify investigation result(s): (select all that apply) 	
 Investigation reviewed work schedule rotations, 	
continuous nours of service (while working for the	
Operator), and other factors associated with fatigue	
 Investigation did NOT review work schedule rotations, 	
Operator) and other factors appeciated with fatigue	
Provide an explanation for why pot:	
Provide all explaination identified no control room issues	
 Investigation identified no controller issues 	
 Investigation identified incorrect controller action or 	
controller error	
- Investigation identified that fatious may have affected the	
controller(s) involved or impacted the involved controller(s)	
response	
 Investigation identified incorrect procedures 	
 Investigation identified incorrect control room equipment 	
operation	
 Investigation identified maintenance activities that affected 	
control room operations, procedures, and/or controller	
response	
 Investigation identified areas other than those above: 	
Describe:	and an and a second a second a se
PART F - DRUG & ALCOHOL TESTING INFORMATION	
1. As a result of this Accident, were any Operator employees tested	n mann chann a shi kanna a Narara sa na damara aka a sa kana ka ka sa sananganda nganda nganda na sa sa sa sa s
under the post-accident drug and alcohol testing requirements of DOT's	No
Drug & Alcohol Testing regulations?	
- If Yes:	
ra Specify now many were rested:	
1b Specify how many failed:	
To. Opecity now many railed.	

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2 As a result of this Accident were any Operator contractor employees	
tested under the post-accident drug and alcohol testing requirements of	No
DOT's Drug & Alashal Tasting regulations?	NO
If Voc:	
- II Tes.	
2a. Specify now many were tested:	
2b. Specify how many failed:	
PART G – APPARENT CAUSE	
	a an and the present and the set of the providence in the set of the
Select only one box from PART G in shaded column on left represen the questions on the right. Describe secondary, contributing or root	ting the APPARENT Cause of the Accident, and answer causes of the Accident in the narrative (PART H).
Apparent Cause:	G5 - Material Failure of Pipe or Weld
G1 - Corrosion Failure - only one sub-cause can be picked from sha	ded left-hand column
External Corrosion:	
Internal Correction:	
Internal Control of	
If External Corrosion;	and de martine de la la Tarte de Martine de la companya de la companya de la companya de la companya de la comp
1. Results of visual examination:	
- If Other, Describe:	
2. Type of corrosion: (select all that apply)	
- Atmospheric	
- Stray Current	
- Microbiological	
- Selective Seam	
- Other:	
- If Other, Describe:	
The type(s) of corrosion selected in Question 2 is based on the following	ng: (select all that apply)
- Field examination	
- Determined by metallurgical analysis	
- Other:	
- If Other, Describe:	
4. Was the failed item buried under the ground?	
- If Yes :	
24a. Was failed item considered to be under cathodic	
protection at the time of the Accident?	
If Yes - Year protection started:	
4b. Was shielding, tenting, or disbonding of coating evident at	
the point of the Accident?	
4c. Has one or more Cathodic Protection Survey been	
conducted at the point of the Accident?	
If "Yes, CP Annual Survey" - Most recent year conducted:	
If "Ves Cless Interval Survey" Most recent year conducted:	
If IVer Other OD Surroull Martinet the state	
IT "Yes, Other CP Survey" - Most recent year conducted:	
- IT NO:	
4d. was the failed item externally coated or painted?	
5. was there observable damage to the coating or paint in the vicinity of	
the corrosion?	
- In Internal Corrosion:	der her einen sterne Samether er einer sone and Same einer sone einer sterne Sameter anderen sone anderen sone
6. Results of visual examination:	
- Other:	
7. Type of corrosion (select all that apply): -	
- Corrosive Commodity	
- Water drop-out/Acid	
- Microbiological	
- Erosion	
- Other:	
- If Other, Describe:	
8. The cause(s) of corrosion selected in Question 7 is based on the follow	ving (select all that apply): -
- Field examination	
 Determined by metallurgical analysis 	
- Other:	
- If Other, Describe:	
9. Location of corrosion (select all that apply): -	
- Low point in pipe	
- Eltow	
- Other:	

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- If Other, Describe:	
10. Was the commodity treated with corrosion inhibitors or biocides?	
12. Were cleaning/dewatering pigs (or other operations) routinely	
13. Were corrosion coupons routinely utilized?	
Complete the following If any Corrosion Failure sub-cause is selected AND Question 3) is Tank/Vessel.	the "Item Involved in Accident" (from PART C,
14. List the year of the most recent inspections:	and maintain the standard and the standard and standard and standard and standard and standard and standard and
14a. API Std 653 Out-of-Service Inspection	
- No Out-of-Service Inspection completed	
- No In-Service Inspection	
Complete the following if any Corrosion Failure sub-cause is selected AND Question 3) is Pipe or Weld.	the "Item Involved in Accident" (from PART C,
15. Has one or more internal inspection tool collected data at the point of the Accident?	and a state of the second s
15a. If Yes, for each tool used, select type of internal inspection tool and - Magnetic Flux Leakage Tool	indicate most recent year run: -
Most recent year:	
- Ultrasonic	
Most recent year:	
- Geometry Most recent year:	
- Caliper	
Most recent year:	
- Crack	
Most recent year:	
- Hard Spot	
- Combination Tool	
Most recent year:	
- Transverse Field/Triaxial	
Most recent year:	
- Other Most recent year:	
Describe:	
16. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?	
If Yes -	
Most recent year tested:	
Test pressure:	
17. Has one or more Direct Assessment been conducted on this segment?	
- If Yes, and an investigative dig was conducted at the point of the Accident Most recent year conducted:	
- If Yes, but the point of the Accident was not identified as a dig site:	
Most recent year conducted:	
 Has one or more non-destructive examination been conducted at the point of the Accident since January 1, 2002? 	
18a. If Yes, for each examination conducted since January 1, 2002, select typ recent year the examination was conducted:	e of non-destructive examination and indicate most
- raulography Most recent year conducted:	
- Guided Wave Ultrasonic	
Most recent year conducted:	
- Handheld Ultrasonic Tool	
Most recent year conducted:	
- Wet Magnetic Particle Test Most recent year conducted:	
- Dry Magnetic Particle Test	
Most recent year conducted:	
- Other Most recent year conducted:	
Describe:	
G2 - Natural Force Damage - only one sub-cause can be picked from sh	aded left-handed column
Natural Force Damage - Sub-Cause:	
If Earth Movement, NOT due to Heavy Reine/Electro	
1 Specify	

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- If Other, Describe:	
- If Heavy Rains/Floods:	2. μ. το το το διατικό το
2. Specify:	
- If Other, Describe:	
- If Lightning:	and the second se
3. Specify:	
4. Specify:	a constration of the second
- If Other, Describe:	
- If High Winds:	a sa
- If Other Natural Force Damage:	a second distribution and the second dimension of the second dimension of the second distribution of the second dimension of the second distribution of the second dimension of the second distribution of the sec
5. Describe:	a define a product de la construction de la production de la construction de la const
Complete the following if any Natural Force Damage sub-cause is sele	cted.
Were the natural forces causing the Accident generated in	
conjunction with an extreme weather event?	
- Hurricane	
- Tropical Storm	
- Tornado	
- Other	
- If Other, Describe:	
G3 - Excavation Damage - only one sub-cause can be picked from si	naded left-hand column
Excavation Damage – Sub-Cause:	
- If Excavation Damage by Operator (First Party):	
- If Excavation Damage by Operator's Contractor (Second Party):	
- If Excavation Damage by Third Party:	
- If Previous Damage due to Excavation Activity:	n an
Complete Questions 1-5 ONLY IE the "Item Involved in Accident" (from	PART C. Question 3) is Pipe or Weld
1. Has one or more internal inspection tool collected data at the point of	
the Accident?	d to director or a to a constant of the second se
Ta. If Yes, for each tool used, select type of internal inspection tool a	nd indicate most recent year run: -
- Magnetic Flux Leakage Most recent year conducted:	
- Ultrasonic	
Most recent year conducted:	
- Geometry	
Most recent year conducted:	
- Galiper Most recent year conducted:	
- Crack	
Most recent year conducted:	
- Hard Spot	
Nost recent year conducted:	
- Combination Tool	
Most recent year conducted:	
- Transverse Field/Triaxial	
Most recent year conducted:	
- Other Most recent year conducted:	
Describe:	
2. Do you have reason to believe that the internal inspection was	
completed BEFORE the damage was sustained?	
3. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?	
- IT Yes:	
Test pressure (psid)	
4. Has one or more Direct Assessment been conducted on the pipeline segment?	
- If Yes, and an investigative dig was conducted at the point of the Acci	dent:
Nost recent year conducted:	
- If Yes, but the point of the Accident was not identified as a dig site:	
Most recent year conducted:	

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5. Has one or more non-destructive examination been conducted at the	
point of the Accident since January 1, 2002?	
5a. If Yes, for each examination, conducted since January 1, 2002,	select type of non-destructive examination and indicate most
- Radiography	
Most recent year conducted:	
- Guided Wave Ultrasonic	
Most recent year conducted:	
- Handheld Ultrasonic Tool	
Most recent year conducted:	
- Wet Magnetic Particle Test	
Nost recent year conducted:	· · · · · · · · · · · · · · · · · · ·
- Dry Magnetic Faiticle Test Most recent year conducted:	
- Other	
Most recent year conducted:	
Describe:	
Complete the following if Excavation Damage by Third Party is select	ed as the sub-cause.
6. Did the operator get prior polification of the excevation activity?	
6a. If Yes, Notification received from: (select all that apply) -	
- One-Call System	
- Excavator	
- Contractor	
- Landowner	Million war a same and a same and a same and a same and a same
Complete the following mandatory CGA-DIRT Program questions if an	v Excavation Damage sub-cause is selected.
7. Do you want DHMSA to unload the following information to CCA	an manual and the summariant pattern to the state of the second state of the state
7. Do you want PHMSA to upload the following information to CGA- DIRT (www.cga.dirt.com)?	
8 Right-of-Way where event occurred: (select all that apply) -	
- Public	
- If "Public", Specify:	
- Private	
- If "Private", Specify:	
- Pipeline Property/Easement	
- Power/Transmission Line	
- Railroad	
- Dedicated Public Oliny Easement	
- Data not collected	
- Unknown/Other	
9. Type of excavator:	
10. Type of excavation equipment:	
11. Type of work performed:	
12. Was the One-Call Center notified?	
12a. If Yes, specify ticket number:	
exists list the name of the One-Call Center notified	
13. Type of Locator:	
14. Were facility locate marks visible in the area of excavation?	
15. Were facilities marked correctly?	
16. Did the damage cause an interruption in service?	
16a. If Yes, specify duration of the interruption (hours)	
17. Description of the CGA-DIRT Root Cause (select only the one predo	minant first level CGA-DIRT Root Cause and then, where
available as a choice, the one predominant second level CGA-DIRT Root	
 If One-Call Notification Practices Not Sufficient specific 	
- If Locating Practices Not Sufficient, specify:	
- If Excavation Practices Not Sufficient, specify:	
- If Other/None of the Above, explain:	
G4 - Other Outside Force Damage - only one sub-cause can be	selected from the shaded left-hand column
Other Outside Force Damage – Sub-Cause:	
- If Nearby Industrial, Man-made, or Other Fire/Evolosion as Primary	Cause of incident:
- Interney moustral, man-made, or other presexplosion as enmany	Manoo Sellioladite
- If Damage by Car, Truck, or Other Motorized Vehicle/Equipment NG 1. Vehicle/Equipment operated by:)T Engaged in Excavation:
- If Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equip	ment or Vessels Set Adrift or Which Have Otherwise Lost

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2. Select one or more of the following IF an extreme weather event was a	factor:
- Hurricane	
- I ropical Storm	
- Tomado	
- Other	
- If Other, Describe:	
- If Routine or Normal Fishing or Other Maritime Activity NOT Engage	d in Excavation:
- If Electrical Arcing from Other Equipment or Facility:	the second s
- If Previous Mechanical Damage NOT Palated to Evolution	and an interval of the second s
Complete Questions 3-7 ONLY IF the "Item Involved in Accident" (fro	m PART C, Question 3) is Pipe or Weld.
3. Has one or more internal inspection tool collected data at the point of	
The Accident?	diante mant voor sur
- Magnetic Flux Leakage	dicate most recent year run:
Most recent year conducted:	
- Ultrasonic	
Most recent year conducted:	
- Geometry	
Most recent year conducted:	
- Caliper Most recent year conducted:	
- Crack	
Most recent year conducted:	
- Hard Spot	
Most recent year conducted:	
- Combination Tool	
Most recent year conducted:	
- Transverse Field/Triaxial	
Most recent year conducted:	
- Other Most recent year conducted:	
Most recent year conducted.	
4. Do you have reason to believe that the internal inspection was	
completed BEFORE the damage was sustained?	
5. Has one or more hydrotest or other pressure test been conducted	
since original construction at the point of the Accident?	
- If tes: Most recent year tested:	
Test pressure (psig):	
6. Has one or more Direct Assessment been conducted on the pipeline	
segment?	
- If Yes, and an investigative dig was conducted at the point of the Accident	
Most recent year conducted:	
- If yes, but the point of the Accident was not identified as a dig site:	
7. Has one or more non-destructive examination been conducted at the	
point of the Accident since January 1, 2002?	
7a. If Yes, for each examination conducted since January 1, 2002, s	elect type of non-destructive examination and indicate most
recent year the examination was conducted:	
- Radiography Most recent year conducted:	
- Guided Wave Ultrasonic	
Most recent year conducted:	
- Handheld Ultrasonic Tool	
Most recent year conducted:	
- Wet Magnetic Particle Test	
Most recent year conducted:	
Most recent vear conducted:	
- Other	
Most recent year conducted:	
Describe:	terreterreterreterreterreterreterreter
- If Intentional Damage:	
8. Specify:	
- If Other Outside Force Damage	an an Araba Araba Araba an Ara
9. Describe:	
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G5 - Material Failure of Pipe or Weld - only one sub-cause can be	e selected from the shaded left-hand column
Use this section to report material failures ONLY IF the "Item involve "Weld."	d in Accident" (from PART C, Question 3) is "Pipe" or
Material Failure of Pipe or Weld - Sub-Cause:	Construction-, Installation-, or Fabrication-related
1. The sub-cause selected below is based on the following: (select all the	at apply)
- Field Examination	Vas
- Determined by Metallurgical Analysis	Yes
- If "Other Analysis". Describe:	
 Sub-cause is Tentative or Suspected; Still Under Investigation (Supplemental Report required) 	
If Construction, Installation, or Fabrication-related: List contributing factors: (select all that apply)	
- Fatigue or Vibration-related	
Specify:	
- If Other, Describe:	
- Mechanical Stress:	Yes
- Other	
- If Other, Describe:	
If Original Manufacturing-related (NO1 girth weld or other welds for 2. List contributing factors: (select all that apply) 5-thereas) the thereast the terms of terms of the terms of terms o	
- Fatigue or Vibration-related:	
- If Other Describe:	
- Mechanical Stress:	
- Other	
- If Other, Describe:	
- If Environmental Cracking-related:	
3. Specify:	
- Other - Describe:	
Complete the following if any Material Failure of Bine or Wold sub-on	ise is coloriad
complete the following it any material rantite of ripe of weld sub-cat	as is selector.
Additional factors: (select all that apply):	
- Dent	
- Gouge	
- Pipe Bend	
- Arc Burn	
- Lack of Fusion	
- Lamination	
- Buckle	
- Wrinkle	
- Misalignment	
- Burnt Steel	
- Other:	Yes
- If Other, Describe:	Subsidence
5. Has one or more internal inspection tool collected data at the point of the Accident?	Yes
ba. If Yes, for each tool used, select type of internal inspection tool a	and indicate most recent year run:
- Magnetic Flux Leakage	
- Ultrasonic	
Most recent year run:	
- Geometry	
Most recent year run:	
- Caliper	
Most recent year run:	
- Crack	
Most recent year run:	
- Hard Spot	
Most recent year run:	
- Combination Tool	Yes
Most recent year run:	2007
- Transverse Field/Triaxial	Yes
Most recent year run:	2010
- Otheri	
Most recent year run:	

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Describe:		
6. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?	Yes	
- If Yes:		
Most recent year tested:	1996	
Test pressure (psig):	1,816.00	
Has one or more Direct Assessment been conducted on the pipeline segment?	No	
- If Yes, and an investigative dig was conducted at the point of the Acci	dent -	
Most recent year conducted:		
- If Yes, but the point of the Accident was not identified as a dig site -		
Most recent year conducted:		
 Has one or more non-destructive examination(s) been conducted at the point of the Accident since January 1, 2002? 	No	
8a. If Yes, for each examination conducted since January 1, 2002, so recent year the examination was conducted: -	elect type of non-destructive examination and indicate most	
- Radiography		
Most recent year conducted:		
- Guided Wave Ultrasonic		
Most recent year conducted:		
- Handheid Uitrasonic Tool		
Most recent year conducted:		
- vvet Magnetic Particle Test		
Most recent year conducted:		
- Dry Magnetic Particle Test		
Most recent year conducted:		
- Other		
Most recent year conducted:		
Describe:		
G6 - Equipment Failure - only one sub-cause can be selected from t	he shaded left-hand column	
Equipment Failure – Sub-Cause:		
If Malfunction of Control/Pailof Equipment:	a service and the service of the ser	
1 Specify: (select all that apply) -	ni in 19 mili anna anna anna anna anna anna anna a	
- Control Valve		
- Instrumentation		
- SCADA		
- Communications		
- Block Valve		
- Check Valve		
- Baliaf Valve		
- Power Failure		
- Stopple/Control Fitting		
- ESD System Failure		
- Other	-	
if Other Describer		
- If Other – Describe:	a na sa	
2 Specify	n na fan men fan fan ste de gereffen fan mennemen fan de fan it 1930 - Er en een ste ste ste ste ste ste ste st	
z. opeoliy.		
- If Other – Describe:		
- IT Inreaded Connection/Coupling Failure:		
3. Specify:		
- If Other – Describe:		
- If Non-threaded Connection Failure:	de la contra de la c	
4. Specify:		
- If Other Describe:		
- If Defective or Loose Tubing or Fitting:		
- If Fallure of Equipment Body (except Pump), Tank Plate, or other M	aterial:	
If Other Equipment Failure:		
5. Describe:		
Complete the following if any Equipment Failure sub-cause is selected	L	
6 Additional factors that contributed to the equipment failure: (select all thet apply)		
- Evocesive vibration	ar appiy/	
- Overpressurization		
- No support or loss of support		
- Manufacturing defect		

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- Loss of electricity	
- Improper installation	
- Mismatched items (different manufacturer for tubing and tubing	
fittings)	
- Dissimilar metals	
 Breakdown of soft goods due to compatibility issues with transported commodity 	
- Valve vault or valve can contributed to the release	
- Alarm/status failure	
- Misalignment	
- Thermal stress	
- Other	
- If Other, Describe:	
G7 - Incorrect Operation - only one sub-cause can be selected from	the shaded left-hand column
Incorrect Operation - Sub-Cause:	
Damage by Operator or Operator's Contractor NOT Related to	
Excavation and NOT due to Motorized Vehicle/Equipment Damage	No
Tank, Vessel, or Sump/Separator Allowed or Caused to Overfill or Overflow	No
1. Specify:	
Kot - P - *	
- If Other, Describe:	
Valve Left or Placed in Wrong Position, but NOT Resulting in a Tank, Vessel, or Sump/Separator Overflow or Facility Overpressure	No
Pipeline or Equipment Overpressured	No
Equipment Not Installed Properly	No
Wrong Equipment Specified or Installed	No
Other Incorrect Operation	No
2. Describe:	
Complete the following if any incorrect Operation sub-cause is select	ed.
3. Was this Accident related to (select all that apply): -	
- Inadequate procedure	
- No procedure established	
- Failure to follow procedure	
- Uther:	
4 What category type was the activity that caused the Accident?	
5. Was the task(s) that led to the Accident identified as a covered task	
in your Operator Qualification Program?	
5a. If Yes, were the individuals performing the task(s) qualified for the task(s)?	
G8 - Other Accident Cause - only one sub-cause can be selected fr	rom the shaded left-hand column
Other Accident Cause – Sub-Cause:	1
- If Miscellaneous:	2
1. Describe:	Later weight and the second
- If Unknown: 2. Specify:	
PART H - NARRATIVE DESCRIPTION OF THE ACCIDE	NT
	ана на селото на село На селото на
Kiefner Report The failure was located in the Lawson Junction-to-Pecos River segment at Station 2 a girth weld. A portion of the upstream and downstream joints, including both sides of determine the cause of failure.	:647+52 (MP 50.16). A complete circumferential separation occurred at of the failed girth weld, was sent to Kiefner & Associates, Inc. (KAI) to

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*The root cause of the girth weld separation was external forces likely due to soil movement. The fracture initiated at a location of incomplete weld penetration in an acetylene girth weld. There was no evidence that the girth weld flaw had enlarged in service over time or that the pipe had been leaking prior to the rupture event. The fracture initiated in a ductile manner and propagated within and around the circumferential weld.

*In the absence of evidence of a time-dependent degradation mechanism, the likely explanation for such a failure is an increase in external loading on the pipeline. The county adjacent to where the failure occurred has experienced subsidence in the past as a result of sink holes developing. Subsidence can impart significant axial loads on buried pipelines. It is unknown whether subsidence recently occurred near to this failure.

*Internal pressure was not the root cause of failure.

PART I - PREPARER AND AUTHORIZED SIGNATURE

		and a second
Preparer's Name	Joel E Kohler	
Preparer's Title	Sr. Staff Engineer	
Preparer's Telephone Number	7133814830	
Preparer's E-mail Address	jkohler@eprod.com	
Preparer's Facsimile Number	7133816660	
Authorized Signature's Name	Joel E Kohler	
Authorized Signature Title	Sr. Staff Engineer	
Authorized Signature Telephone Number	7133814830	
Authorized Signature Email	jkohler@eprod.com	
Date	03/21/2012	

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APPENDIX C

exceed \$100,000 for each violation for each day that such violation persists exceed \$100,000 for each violation for each day that such violation persists exceed \$1,000,000 as provided in 49 USC 60122.	cept that the maximum civil	OMB NO: 2137-0047 EXPIRATION DATE: 01/3	1/2013
1	Report Date:	03/13/201	12
U.S Department of Transportation	No.	20120070 - 1	6511
Pipeline and Hazardous Materials Safety Administration	· · · · · · · · · · · · · · · · · · ·	(DOT Use Or	nly)
ACCIDENT REPORT - HAZARDOUS LIQUID PIPELINE SYSTEMS			
A federal agency may not conduct or sponsor, and a person is not required to with a collection of information subject to the requirements of the Paperwork R OMB Control Number. The OMB Control Number for this information collectio to be approximately 10 hours per response (5 hours for a small release), inclu completing and reviewing the collection of information. All responses to this c burden estimate or any other aspect of this collection of information, including Officer, PHMSA, Office of Pipeline Safety (PHP-30) 1200 New Jersey Avenue INSTRUCTIONS	respond to, nor shall a person Reduction Act unless that collec on is 2137-0047. Public reportin ding the time for reviewing inst ollection of information are mar suggestions for reducing this b o, SE, Washington, D.C. 20590.	be subject to a penalty for fail lon of information displays a ig for this collection of informa uctions, gathering the data ne idatory. Send comments rega urden to: Information Collectio	ure to comply current valid ation is estimate seded, and arding this on Clearance
Important: Please reed the seperate instructions for completing this form bef examples. If you do not hava a copy of the instructions, you can obtain one fr http://www.phmsa.dot.gov/pipeline.	fore you begin. They clarify the om the PHMSA Pipeline Safety	information requested and pr Community Web Page at	rovide specific
PART A - KEY REPORT INFORMATION	an all an		
Report Type: <i>(select all that apply)</i>	Original:	Supplemental:	Final:
Last Revision Date:	03/21/2012	163	100
1. Operator's OPS-issued Operator Identification Number (OPID):	31618		
2. Name of Operator	ENTERPRISE PRO	DUCTS OPERATING LL	С
3. Address of Operator:			
3a. Street Address	1100 Louisiana Str	eet	
3D. City 20. State	Toyas		
3d Zin Code	77002		
4. Local time (24-br clock) and date of the Accident:	12/28/2011 17:00		
5. Location of Accident:			
Latitude:	31.78341		
Longitude:	-103.46442		
6. National Response Center Report Number (if applicable):			
 Local time (24-hr clock) and date of initial telephonic report to the National Response Center (if applicable): 			
8. Commodity released: (select only one, based on predominant volume released)	HVL or Other Flam Ambient Conditions	mable or Toxic Fluid which	n is a Gas at
- Specify Commodity Subtype:	LPG (Liquefied Pet	roleum Gas) / NGL (Natu	Iral Gas
- If "Other" Subtype, Desc	cribe:		
 If Biofuel/Alternative Fuel and Commodity Subtype is Ethanol Blend, then % Ethanol Blend: 	×		
 If Biofuel/Alternative Fuel and Commodity Subtype is Biodiesel, then Biodiesel Blend (e.g. B2, B20, B100): 	- %.		
9. Estimated volume of commodity released unintentionally (Barrels 10. Estimated volume of intentional and/or controlled release/blowd): lown		
11 Estimated volume of commodity recovered (Barrels):			
12. Were there fatalities?	No		
- If Yes, specify the number in each category:			
12a. Operator employees			
12b. Contractor employees working for the Operator			
12c. Non-Operator emergency responders			
12d. Workers working on the right-of-way, but NOT			
associated with this Operator			
12e. General public 12f. Total fatalities (sum of above)			
13. Were there injuries requiring inpatient hospitalization?	Yes		
- If Yes, specify the number in each category:			
13a. Operator employees	1		
13b. Contractor employees working for the Operator	0		
13c. Non-Operator emergency responders	0		

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13d. Workers working on the right-of-way, but NOT	0	
associated with this Operator	0	
13e. General public	0	
13f. Total injuries (sum of above)	1	
14. Was the pipeline/facility shut down due to the Accident?	Yes	
- If No, Explain:		
- If tes, complete Questions 14a and 14b: (Use local time, 24-hr clock)	10/00/0011 17:00	
14b. Local time bineline/facility restarted:	01/12/2012 10:55	
- Still shut down? (* Supplemental Report Required)		
15. Did the commodity ignite?	Yes	
16. Did the commodity explode?	No	
17. Number of general public evacuated:	0	
18. Time sequence (use local time, 24-hour clock):		
18a. Local time Operator identified Accident:	12/28/2011 21:10	
18b. Local time Operator resources arrived on site:	12/28/2011 21:11	
PART B - ADDITIONAL LOCATION INFORMATION		
1. Was the origin of Accident onshore?	Yes	
If Yes, Complete Ques	tions (2-12)	
If No, Complete Questi	ons (13-15)	
- If Onshore:		
2. State:	Texas	
3. Zip Code:	79745	
4. City	Kermit	
5. County or Parish	Loving	
6. Operator-designated location:	Milepost/Valve Station	
Speciry:	50.16 Dia Oranda Directina	
Pipeline/Facility name: Segment name/ID:		
9. Was Accident on Federal land, other than the Outer Continental Shelf		
	No	
10. Location of Accident:	Pipeline Right-of-way	
TT. Area of Accident (as found):	Underground	
- If Other Describe:	Onder som	
Depth-of-Cover (in):	22	
12. Did Accident occur in a crossing?	No	
- If Yes, specify below:		
- If Bridge crossing -		
Cased/ Uncased:		
- If Railroad crossing -		
Cased/ Uncased/ Bored/drilled		
- If Road crossing -		
Cased/ Uncased/ Bored/drilled		
- If Water crossing -		
Cased/ Uncased		
- Name of body of water, if commonly known:		
 Approx. water depth (ft) at the point of the Accident: 		
- Select:		
- If Offshore:		
13. Approximate water depth (tt) at the point of the Accident:		
14. Origin of Accident:		
- In State waters - Specify:		
- State.		
- Alea.		
- Nearest County/Parish		
- On the Outer Continental Shelf (OCS) - Specify:	I	
- Area:		
- Block #:		
15. Area of Accident:		
PART C - ADDITIONAL FACILITY INFORMATION		
1. Is the pipeline or facility:	Interstate	
2. Part of system involved in Accident:	Onshore Pipeline, Including Valve Sites	
- If Onshore Breakout Tank or Storage Vessel, Including Attached	4	
Appurtenances, specify:		
	Other	

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- If Pipe, specify:	
3a. Nominal diameter of pipe (in):	
3b. Wall thickness (in):	
3c. SMYS (Specified Minimum Yield Strength) of pipe (psi):	
3d. Pipe specification:	
3e. Pipe Seam , specify:	
- If Other, Describe:	
3f. Pipe manufacturer:	
3g. Year of manufacture:	
 Pipeline coating type at point of Accident, specify: 	
- If Other, Describe:	
 If Weld, including heat-affected zone, specify: 	
- If Other, Describe:	
- If Valve, specify:	
- If Mainline, specify:	
- If Other, Describe:	
3i. Manufactured by:	
J. Fed of Manufacture.	
- If Other Describer	
- If Other describe:	Fire from Soil Contamination
4. Year item involved in Accident was installed:	1929
5. Material involved in Accident:	Material other than Carbon Steel
- If Material other than Carbon Steel, specify:	Product Ignition from Soil
6. Type of Accident Involved;	Other
- If Mechanical Puncture - Specify Approx size:	o di ol
in (axial) by	
in (circumferential)	
- If Leak - Select Type:	
- If Other, Describe:	
- If Rupture - Select Orientation:	
- If Other, Describe:	
Approx size: in (widest opening) by	
Approx. size. in. (widest opening) by	
in. (length circumferentially or axially)	
- If Other – Describe:	Soil containing product ignited
- If Other – Describe:	Soil containing product ignited
- If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION	Soil containing product ignited
- If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION Mildlife impact:	Soil containing product ignited
- If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply:	Soil containing product ignited
- If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: Eich/aquatic	Soil containing product ignited
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic Bisda	Soil containing product ignited
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds	Soil containing product ignited No
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial	Soil containing product ignited No
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination:	Soil containing product ignited No Yes
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned:	Soil containing product ignited No Yes No
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation:	Soil containing product ignited No Yes No No No
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply:	Soil containing product ignited No Yes No No No
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water Croundwater Conventione	Soil containing product ignited No Yes No No No
in. (length circumferentially or axially) in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil	Soil containing product ignited No Yes No No No
in. (length circumferentially or axially) in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Vegetation - Vegetation - Surface water - Soil - Vegetation - Vegetation - Surface water - Soil - Vegetation - Surface water - Soil - Vegetation - Vegetation - Surface water - Soil - Vegetation - Surface water - Surface water - Soil - Surface water - Surface wa	Soil containing product ignited No Yes No No No
in. (length circumferentially or axially) in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife	Soil containing product ignited No Yes No No No
in. (length circumferentially or axially) in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION Wildlife impact: 1a. If Yes, specify all that apply:	Soil containing product ignited
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply:	Soil containing product ignited No Yes No No No No No No No
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater	Soil containing product ignited No Yes No
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface	Soil containing product ignited No Yes No
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater	Soil containing product ignited No Yes No No No No No No
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Surface - Surface - Surface - Surface - Surface - Surface - Surface - Drinking water: (Select one or both)	Soil containing product ignited No Yes No No No No No No
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Surface - Groundwater - Surface - Surface - Surface - Drinking water: (Select one or both) - Private Well	Soil containing product ignited No No Yes No No No No No
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Surface - Fixing water: (Select one or both) - Private Well - Public Water Intake	Soil containing product ignited No Yes No No No No No No
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Surface - Fixing water: (Select one or both) - Private Well - Public Water Intake 5b. Estimated amount released in or reaching water (Barrels):	Soil containing product ignited No Yes No
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Surface - Private Well - Private Well - Private Well - Private Mell - Public Water Intake 5b. Estimated amount released in or reaching water (Barrels): 5c. Name of body of water, if commonly known:	Soil containing product ignited No Yes No
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Surface - Private Well - Private Well - Private Well - Private Mell - Public Water Intake 5b. Estimated amount released in or reaching water (Barrels): 5c. Name of body of water, if commonly known: 6. At the location of this Accident, had the pipeline segment or facility	Soil containing product ignited
Apprior. size: In: (widestopening) by in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION Wildlife impact: 1a. If Yes, specify all that apply: 	Soil containing product ignited
Apprior. size: In: (widestopening) by in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION Wildlife impact: 1a. If Yes, specify all that apply: 	Soil containing product ignited
Apprior. size: In: (widestoppining) by in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Drinking water: (Select one or both) - Private Well - Public Water Intake 5b. Estimated amount released in or reaching water (Barrels): 5c. Name of body of water, if commonly known: 6. At the location of this Accident, had the pipeline segment or facility been identified as one that "could affect" a High Consequence Area (HCA) as determined in the Operator's Integrity Management Program? 7. Did the released commodity reach or occur in one or more High Conservation - Coccur - Cocur - Co	Soil containing product ignited No Yes No
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Surface - Surface - Surface - Surface - Drinking water: (Select one or both) - Private Well - Public Water Intake 5b. Estimated amount released in or reaching water (Barrels): 5c. Name of body of water, if commonly known: 6. At the location of this Accident, had the pipeline segment or facility been identified as one that "could affect" a High Consequence Area (HCA) as determined in the Operator's Integrity Management Program? To id the released commodity reach or occur in one or more High Consequence Area (HCA)? Too if Yees, reporting the component of the pipeline segment or facility been identified as one that "could affect" a High Consequence Area (HCA) as determined in the Operator's Integrity Management Program? To id the released commodity reach or occur in one or more High Consequence Area (HCA)?	Soil containing product ignited No Yes No No
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Vegetation - Wildlife 5. Water contamination: Sa. If Yes, specify all that apply: - Corean/Seawater - Surface - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: Sa. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Surface - Groundwater - Soil - Vegetation - Wildlife 5. Water contamination: Sa. If Yes, specify all that apply: - Ocean/Seawater - Surface - Groundwater - Drinking water: (Select one or both) - Private Well - Drinking water, if commonly known: 6. At the location of this Accident, had the pipeline segment or facility been identified as one that "could affect" a High Consequence Area (HCA) as determined in the Operator's Integrity Management Program? 7. Did the released commodity reach or occur in one or more High Consequence Area (HCA)? 7a. If Yes, specify HCA type(s): (<i>Select all that apply</i>) - Commercially Naviaable Waterway.	Soil containing product ignited No Yes No
in. (length circumferentially or axially) - If Other – Describe: PART D - ADDITIONAL CONSEQUENCE INFORMATION 1. Wildlife impact: 1a. If Yes, specify all that apply: - Fish/aquatic - Birds - Terrestrial 2. Soil contamination: 3. Long term impact assessment performed or planned: 4. Anticipated remediation: 4a. If Yes, specify all that apply: - Surface water - Groundwater - Soil - Vegetation - Vegetation - Wildlife 5. Water contamination: 5a. If Yes, specify all that apply: - Ocean/Seawater - Groundwater - Surface - Groundwater - Drinking water: (Select one or both) - Private Well - Public Water Intake 5b. Estimated amount released in or reaching water (Barrels): 5c. Name of body of water, if commonly known: 6. At the location of this Accident, had the pipeline segment or facility been identified as one that "could affect" a High Consequence Area (HCA) as determined in the Operator's Integrity Management Program? 7. Did the released commodity reach or occur in one or more High Consequence Area (HCA)? 7a. If Yes, specify HCA type(s): (Select all that apply) - Commercially Navigable Waterway: Was this HCA identified in the "could affect"	Soil containing product ignited No Yes No

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determination for this Accident site in the Operator's	
Integrity Management Program?	
- High Population Area:	
Was this HCA identified in the "could affect"	
determination for this Accident site in the Operator's	
Other Populated Area	
Was this HCA identified in the "could affect" determination	
for this Accident site in the Operator's Integrity	
Management Program?	
- Unusually Sensitive Area (USA) - Drinking Water	
Was this HCA identified in the "could affect" determination	
for this Accident site in the Operator's Integrity	
Management Program?	
- Unusually Sensitive Area (USA) - Ecological	
Was this HCA identified in the "could affect" determination	
for this Accident site in the Operator's Integrity	
Management Program?	
8. Estimated Property Damage:	
8a. Estimated cost of public and non-Operator private property	\$ 0
damage	Ψ Ū
8b. Estimated cost of commodity lost	\$ 0
oc. Estimated cost of Operator's property damage & repairs	\$ 0
80. Estimated cost of Operator's emergency response	\$ 10,500
8e. Estimated cost of Operator's environmental remediation	\$ 0
81. Estimated other costs	\$ 0
Describe:	0 10 500
og. Total estimated property damage (sum or above)	\$ 10,500
PART E - ADDITIONAL OPERATING INFORMATION	
1. Estimated pressure at the point and time of the Accident (psig):	1,338.00
2. Maximum Operating Pressure (MOP) at the point and time of the	1 440 00
Accident (psig):	1,440.00
Describe the pressure on the system or facility relating to the Accident (psig):	Pressure did not exceed MOP
4. Not including pressure reductions required by PHMSA regulations	
(such as for repairs and pipe movement), was the system or facility	
relating to the Accident operating under an established pressure	No
restriction with pressure limits below those normally allowed by the	
MOP?	
- If Yes, Complete 4.a and 4.b below:	
4a. Did the pressure exceed this established pressure	
Ab Was this process restriction manifeted by DUMCA on the	
40. Was this pressure restriction mandated by PHMSA of the State2	
5 Was "Onshore Pipeline Including Valve Sites" OR "Offshore	
Pipeline Including Riser and Riser Bend" selected in PART C. Question	Ves
2?	105
- If Yes - (Complete 5a, - 5f, below)	
5a. Type of upstream valve used to initially isolate release	
source:	Remotely Controlled
5b. Type of downstream valve used to initially isolate release	Manual
source:	Manual
5c. Length of segment isolated between valves (ft):	63,589
5d. Is the pipeline configured to accommodate internal	Yes
Inspection tools?	
- II NO, Which physical features limit tool accommodation?	(select all (nat apply)
Presence of unsuitable mainline values	
- Tight or mitered pipe hends	
- Other passage restrictions (i.e. unbarred tee's	
projecting instrumentation, etc.)	
- Extra thick pipe wall (applicable only for magnetic	
flux leakage internal inspection tools)	
- Other -	
- If Other, Describe:	
5e. For this pipeline, are there operational factors which	
significantly complicate the execution of an internal inspection tool	NO
If Yes Which operational factors complicate evention? (select all that a	nnlu)
- I 100, WHICH Operational actors complicate execution? (Select all that a	
 Excessive debris or scale, wax, or other wall buildup 	

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 Low operating pressure(s) 	
 Low flow or absence of flow 	
- Incompatible commodity	
- Other -	
- If Other, Describe:	
5f. Function of pipeline system:	> 20% SMYS Regulated Trunkline/Transmission
6. Was a Supervisory Control and Data Acquisition (SCADA)-based	
system in place on the pipeline or facility involved in the Accident?	Yes
If Yes -	
6a Was it operating at the time of the Accident?	Vec
6h Was it fully functional at the time of the Accident?	Vas
60. Was it fally functional at the time of the Accident:	
oc. Did SCADA-based miorination (such as alarm(s),	Ver
the detection of the Assident?	res
Cd Did COADA beset information (and the coat	
bd. Did SCADA-based information (such as alarm(s),	N
alert(s), event(s), and/or volume calculations) assist with	Yes
the confirmation of the Accident?	
7. Was a CPM leak detection system in place on the pipeline or facility	Yes
involved in the Accident?	
- If Yes:	
7a. Was it operating at the time of the Accident?	Yes
7b. Was it fully functional at the time of the Accident?	Yes
7c. Did CPM leak detection system information (such as	
alarm(s), alert(s), event(s), and/or volume calculations) assist	Yes
with the detection of the Accident?	
7d. Did CPM leak detection system information (such as	
alarm(s), alert(s), event(s), and/or volume calculations) assist	Yes
with the confirmation of the Accident?	
8. How was the Accident initially identified for the Operator?	Local Operating Personnel, including contractors
- If Other, Specify:	
8a, If "Controller", "Local Operating Personnel", including	
contractors", "Air Patrol", or "Guard Patrol by Operator or its	Operator employee
contractor" is selected in Question 8, specify the following:	
9. 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	No, the facility was not monitored by a controller(s) at the
Accident?	time of the Accident
- If 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)	
- If Yes, specify investigation result(s): (select all that apply)	
 Investigation reviewed work schedule rotations 	
continuous hours of service (while working for the	
Operator) and other factors associated with fatigue	
 Investigation did NOT review work schedule rotations 	
continuous hours of service (while working for the	
Operator) and other factors associated with fatigue	
Provide an explanation for why not:	
Investigation identified no control room issues	
- investigation identified no controllor issues	
- Investigation identified incompation study	
- Investigation identified incorrect controller action or	
- Investigation identified that fatigue may have affected the	
controller(s) involved or impacted the involved controller(s)	
response	
- investigation identified incorrect procedures	
- investigation identified incorrect control room equipment	
operation	
 Investigation identified maintenance activities that affected 	
control room operations, procedures, and/or controller	
response	
 Investigation identified areas other than those above: 	
Describe:	
PART F - DRUG & ALCOHOL TESTING INFORMATION	-

1. As a result of this Accident, were any Operator employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations?	Yes
- If Yes:	
1a. Specify how many were tested	3
1b. Specify how many failed:	0
2. As a result of this Accident, were any Operator contractor employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations?	Yes
2a Specify how many were tested:	6
2b. Specify how many failed:	0
PART G - APPARENT CAUSE	
Select only one box from PART G in shaded column on left represen the questions on the right. Describe secondary, contributing or root	ting the APPARENT Cause of the Accident, and answer causes of the Accident in the narrative (PART H).
Apparent Cause:	G8 - Other Incident Cause
G1 - Corrosion Failure - only one sub-cause can be picked from sha	ded left-hand column
External Corrosion:	
Internal Corrosion:	
- If External Corrosion:	
1. Results of visual examination:	
- If Other, Describe:	
2. Type of corrosion: (select all that apply)	1
- Atmospheric	
- Stray Current	
- Microbiological	
- Selective Seam	
- Other:	
 If Other, Describe: The type(s) of corrosion selected in Question 2 is based on the following 	ng: (select all that annly)
- Field examination	
- Determined by metallurgical analysis	
- Other:	
- If Other, Describe:	
4. Was the failed item buried under the ground?	
□4a. Was failed item considered to be under cathodic	
protection at the time of the Accident?	
If Yes - Year protection started:	
4b. Was shielding, tenting, or disbonding of coating evident at the point of the Accident?	
4c. Has one or more Cathodic Protection Survey been	
If "Yes, CR Annual Survey" - Most recent year conducted:	
If "Ves Close Interval Survey" - Most recent year conducted:	
If "Yes, Other CP Survey" - Most recent year conducted:	
- If No:	
4d. Was the failed item externally coated or painted?	
5. Was there observable damage to the coating or paint in the vicinity of	
the corrosion?	
Results of visual examination:	- Constant and a second s
- Other:	
7. Type of corrosion (select all that apply): -	
- Corrosive Commodity	
- Water drop-out/Acid	
- Microbiological	
- Closion	
- If Other, Describe:	
8. The cause(s) of corros ion selected in Question 7 is based on the follow	wing (select all that apply): -
- Field examination	

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- Determined by metallurgical analysis		
- Other:		
- If Other, Describe:		
9. Location of corrosion (select all that apply): -		
- Low point in pipe		
- Elbow		
- Other:		
- If Other, Describe:		
11. Was the interior coated or lined with protective coating?		
12. Were cleaning/dewatering pigs (or other operations) routinely		
utilized?		
13. Were corrosion coupons routinely utilized?		
Complete the following if any Corrosion Failure sub-cause is selected / Question 3) is Tank/Vessel.	AND the "Item Involved in Accident" (from PART C,	
14. List the year of the most recent inspections:		
14a. API Std 653 Out-of-Service Inspection		
- No Out-of-Service Inspection completed		
14b. API Std 653 In-Service Inspection		
- No In-Service Inspection completed		
Complete the following if any Corrosion Failure sub-cause is selected / Question 3) is Pipe or Weld.	AND the "Item Involved in Accident" (from PART C,	
15. Has one or more internal inspection tool collected data at the point of	the	
Accident?		
Toa. If Yes, for each tool used, select type of internal inspection tool	and indicate most recent year run: -	
- Magnetic Hux Leakage 1001		
Most recent ye	ear:	
- Ultrasonic		
- Geometry		
- Geometry Most recent ve	aar:	
- Caliper	501.	
Most recent ve	par:	
- Crack		
Most recent ye	ear:	
- Hard Spot		
Most recent ye	ear:	
- Combination Tool		
Most recent ye	ear:	
- I ransverse Field/ I riaxial		
Most recent ye	ear:	
- Other		
Most recent ye		
16. Has one or more hydrotest or other pressure test been conducted since		
original construction at the point of the Accident?		
If Yes -		
Most recent year test	ed:	
Test pressur	e:	
17. Has one or more Direct Assessment been conducted on this segment	?	
- If Yes, and an investigative dig was conducted at the point of the Acciden	t::	
Most recent year conducted:		
 If Yes, but the point of the Accident was not identified as a dig site: 		
Most recent year conducted:		
18. Has one or more non-destructive examination been conducted at the		
point or the Accident since January 1, 2002 / 18a If Ves, for each examination conducted circo. Ionucry 1, 2002, colore	t type of non-destructive exemination and indicate most	
recent year the examination was conducted since January 1, 2002, selec	r type or non-destructive examination and indicate most	
- Radiography		
Most recent vear conducted:		
- Guided Wave Ultrasonic		
Most recent year conducted:		
- Handheld Ultrasonic Tool		
Most recent year conducted:		
- Wet Magnetic Particle Test		
Most recent year conducted:		
Dry Magnetic Particle Test		
Most recent year conducted:		
Wost recent year conducted:		

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Descri	be:
G2 - Natural Force Damage - only one sub-cause can be picked from	i shaded left-handed column
Natural Force Damage – Sub-Cause:	
- If Earth Movement, NOT due to Heavy Rains/Floods:	
1. Specify:	
- If Heavy Rains/Floods:	an a
2. Specify:	
- If Other, Describe:	
3. Specify:	
- If Temperature:	
4. Specify:	
- If High Winds:	
If Other Natural Ferre Damager	
5. Describe:	Anna an
Complete the following if any Natural Force Damage sub-cause is sele	cted.
6. Were the natural forces causing the Accident generated in	
conjunction with an extreme weather event?	
- Hurricane	
- Tropical Storm	
- Tornado	
- Other - If Other Describe:	
G3 - Excavation Damage - only one sub-cause can be picked from sh	naded left-hand column
Excavation Damage – Sub-Cause:	na kanala n
- If Excavation Damage by Operator (First Party):	· · · · · · · · · · · · · · · · · · ·
If Execution Demons by Operated a Contraction (Operand Detty)	
- If Excavation Damage by Operator's Contractor (Second Party):	the second s
- If Excavation Damage by Third Party:	
- If Previous Damage due to Excavation Activity:	en e
Complete Questions 1-5 ONLY IF the "Item Involved in Accident" (from	PART C. Question 3) is Pipe or Weld.
1. Has one or more internal inspection tool collected data at the point of the Accident?	
 If Yes, for each tool used, select type of internal inspection tool a Magnetic Flux Leakage 	nd indicate most recent year run: -
Most recent year conducted:	
- Ultrasonic	
- Geometry	
Most recent year conducted:	
- Caliper	
Most recent year conducted:	
Most recent year conducted:	
- Hard Spot	
Most recent year conducted:	
- Complitation 1001 Most recent year conducted:	
- Transverse Field/Triaxial	
Most recent year conducted:	
- Other	
Most recent year conducted: Describe:	
2. Do you have reason to believe that the internal inspection was completed BEFORE the damage was sustained?	
3. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?	

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Most recent year tested:	
Test pressure (psig):	
4. Has one or more Direct Assessment been conducted on the pipeline	
seament?	
- If Yes, and an investigative dig was conducted at the point of the Acc	dent:
Most recent year conducted:	
If Ves, but the point of the Accident was not identified as a dia site:	
- It res, but the point of the Accident was not identified as a dig site.	
Wost recent year conducted:	
5. Has one of more non-destructive examination been conducted at the	
For If Von for each eventiantian conducted since January 4, 2002?	
5a. If Yes, for each examination, conducted since January 1, 2002,	select type of non-destructive examination and indicate most
recent year the examination was conducted:	
- Radiography	
Most recent year conducted:	
- Guided Wave Ultrasonic	
Most recent year conducted:	
- Handheld Ultrasonic Tool	
Most recent year conducted:	
- Wet Magnetic Particle Test	
Most recent year conducted:	
- Dry Magnetic Particle Test	
Most recent year conducted:	
- Other	
Most recent year conducted:	
Niosi recent year conducted.	
Complete the following if Excavation Damage by Third Party is select	ed as the sub-cause.
6. Did the operator get prior patification of the excevation activity?	and the prover of the second
6. If Ves. Natification received from: (colort all that enally)	
One Cell System	
- Excavator	
- Contractor	
- Landowner	
Complete the following mandatory CGA-DIPT Program questions if an	Excavation Damage sub-cause is selected
complete the following mandatory CGA-Dikit Program questions if an	Excavation Danage sub-cause is selected.
7. Do you want PHMSA to upload the following information to CGA-	
DIRT (www.cga-dirt.com)?	
8. Right-of-Way where event occurred: (select all that apply) -	
- Public	
- If "Public", Specify:	
- Private	
- If "Private" Specify:	
- IT Thvate , Opeenly.	
Pipeline Property/Essement	
- Pipeline Property/Easement	
- Pipeline Property/Easement - Power/Transmission Line	
Pipeline Property/Easement Power/Transmission Line Railroad	
- Pipeline Property/Easement - Power/Transmission Line - Railroad - Dedicated Public Utility Easement	
- Pipeline Property/Easement - Power/Transmission Line - Railroad - Dedicated Public Utility Easement - Federal Land	
Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected	
Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other	
Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavator:	
Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavator: 10. Type of excavation equipment:	
Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavator: 10. Type of excavation equipment: 11. Type of work performed:	
Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavator: 10. Type of excavation equipment: 11. Type of work performed: 12. Was the One-Call Center notified?	
Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavator: 10. Type of excavator: 11. Type of excavation equipment: 11. Type of work performed: 12. Was the One-Call Center notified? 12a. If Yes, specify ticket number:	
Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Pederal Land Data not collected Unknown/Other Unknown/Other Type of excavation equipment: 10. Type of excavation equipment: 11. Type of work performed: 12. Was the One-Call Center notified? 12a. If Yes, specify ticket number: 12b. If this is a State where more than a single One-Call Center	
 Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other Type of excavation equipment: 10. Type of excavation equipment: 11. Type of work performed: 12. Was the One-Call Center notified? 12a. If Yes, specify ticket number: 12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified: 	
 Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavator: 10. Type of excavator: 11. Type of excavation equipment: 11. Type of work performed: 12. Was the One-Call Center notified? 12a. If Yes, specify ticket number: 12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified: 13. Type of Locator: 	
 Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavation equipment: 10. Type of excavation equipment: 11. Type of work performed: 12. Was the One-Call Center notified? 12a. If Yes, specify ticket number: 12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified: 13. Type of Locator: 14. Were facility locate marks visible in the area of excavation? 	
 Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavator: 10. Type of excavator equipment: 11. Type of work performed: 12. Was the One-Call Center notified? 12a. If Yes, specify ticket number: 12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified: 13. Type of Locator: 14. Were facility locate marks visible in the area of excavation? 	
 Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavation equipment: 10. Type of excavation equipment: 11. Type of work performed: 12. Was the One-Call Center notified? 12a. If Yes, specify ticket number: 12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified: 13. Type of Locator: 14. Were facility locate marks visible in the area of excavation? 15. Were facilities marked correctly? 	
 Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavator: 10. Type of excavator: 11. Type of excavator: 12. Was the One-Call Center notified? 12a. If Yes, specify ticket number: 12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified: 13. Type of Locator: 14. Were facility locate marks visible in the area of excavation? 15. Were facilities marked correctly? 16. Did the damage cause an interruption in service? 	
 Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavator: 10. Type of excavator: 11. Type of excavator: 12. Was the One-Call Center notified? 12a. If Yes, specify ticket number: 12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified: 13. Type of Locator: 14. Were facility locate marks visible in the area of excavation? 15. Were facilities marked correctly? 16. Did the damage cause an interruption in service? 16. If Yes, specify duration of the interruption (hours) 	
 Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavation equipment: 10. Type of excavator: 10. Type of excavation equipment: 11. Type of work performed: 12. Was the One-Call Center notified? 12a. If Yes, specify ticket number: 12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified: 13. Type of Locator: 14. Were facility locate marks visible in the area of excavation? 15. Were facilities marked correctly? 16. Did the damage cause an interruption in service? 16a. If Yes, specify duration of the interruption (hours) 17. Description of the CGA-DIRT Root Cause (select only the one predouter the predoute	ninant first level CGA-DIRT Root Cause and then, where
 Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavator: 10. Type of excavator: 11. Type of work performed: 12. Was the One-Call Center notified? 12a. If Yes, specify ticket number: 12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified: 13. Type of Locator: 14. Were facility locate marks visible in the area of excavation? 15. Were facilities marked correctly? 16. Did the damage cause an interruption in service? 16a. If Yes, specify duration of the interruption (hours) 17. Description of the CGA-DIRT Root Cause (select only the one predou available as a choice, the one predominant second level CGA-DIRT Root 	ninant first level CGA-DIRT Root Cause and then, where Cause as well):
 Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other Type of excavator: Type of excavator: Type of excavator equipment: Type of excavation equipment: Type of work performed: Was the One-Call Center notified? 12. Was the One-Call Center notified? 12. If Yes, specify ticket number: 12. If Yes, specify ticket number: 12. If Yes, specify ticket number: 13. Type of Locator: Were facility locate marks visible in the area of excavation? Were facilities marked correctly? Did the damage cause an interruption in service? 16a. If Yes, specify duration of the interruption (hours) Description of the CGA-DIRT Root Cause (select only the one predou available as a choice, the one predominant second level CGA-DIRT Root Root Cause: 	ninant first level CGA-DIRT Root Cause and then, where Cause as well):
 Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavator: 10. Type of excavator: 11. Type of work performed: 12. Was the One-Call Center notified? 12a. If Yes, specify ticket number: 12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified: 13. Type of Locator: 14. Were facilities marked correctly? 16. Did the damage cause an interruption in service? 16a. If Yes, specify duration of the interruption (hours) 17. Description of the CGA-DIRT Root Cause (select only the one predou available as a choice, the one predominant second level CGA-DIRT Root Root Cause: If One-Call Notification Practices Not Sufficient, specify: 	ninant first level CGA-DIRT Root Cause and then, where Cause as well):
 Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavator: 10. Type of excavator equipment: 11. Type of work performed: 12. Was the One-Call Center notified? 12a. If Yes, specify ticket number: 12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified: 13. Type of Locator: 14. Were facility locate marks visible in the area of excavation? 15. Were facilities marked correctly? 16. Did the damage cause an interruption in service? 16a. If Yes, specify duration of the interruption (hours) 17. Description of the CGA-DIRT Root Cause (select only the one predox available as a choice, the one predominant second level CGA-DIRT Root Root Cause: If One-Call Notification Practices Not Sufficient, specify: If Locating Practices Not Sufficient, specify: 	ninant first level CGA-DIRT Root Cause and then, where Cause as well):
 Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavator: 10. Type of excavator: 11. Type of excavator equipment: 12. Was the One-Call Center notified? 12a. If Yes, specify ticket number: 12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified: 13. Type of Locator: 14. Were facility locate marks visible in the area of excavation? 15. Were facilities marked correctly? 16a. If Yes, specify duration of the interruption (hours) 17. Description of the CGA-DIRT Root Cause (select only the one predou available as a choice, the one predominant second level CGA-DIRT Root Root Cause: If One-Call Notification Practices Not Sufficient, specify: If Locating Practices Not Sufficient, specify: 	minant first level CGA-DIRT Root Cause and then, where Cause as well):
 Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavator: 10. Type of excavator: 11. Type of excavator: 12. Was the One-Call Center notified? 12a. If Yes, specify ticket number: 12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified: 13. Type of Locator: 14. Were facility locate marks visible in the area of excavation? 15. Were facilities marked correctly? 16. Did the damage cause an interruption in service? 16a. If Yes, specify duration of the interruption (hours) 17. Description of the CGA-DIRT Root Cause (select only the one predor available as a choice, the one predominant second level CGA-DIRT Root Root Cause: If One-Call Notification Practices Not Sufficient, specify: If Locating Practices Not Sufficient, specify: If Excavation Practices Not Sufficient, specify: If Cher/None of the Above, explain: 	ninant first level CGA-DIRT Root Cause and then, where Cause as well):
 Pipeline Property/Easement Power/Transmission Line Railroad Dedicated Public Utility Easement Federal Land Data not collected Unknown/Other 9. Type of excavator: 10. Type of excavation equipment: 11. Type of work performed: 12. Was the One-Call Center notified? 12a. If Yes, specify ticket number: 12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified: 13. Type of Locator: 14. Were facility locate marks visible in the area of excavation? 15. Were facilities marked correctly? 16. Did the damage cause an interruption in service? 16a. If Yes, specify duration of the interruption (hours) 17. Description of the CGA-DIRT Root Cause (select only the one predou available as a choice, the one predominant second level CGA-DIRT Root Root Cause: If One-Call Notification Practices Not Sufficient, specify: If Locating Practices Not Sufficient, specify: If Excavation Practices Not Sufficient, specify: If Other/None of the Above, explain: 	ninant first level CGA-DIRT Root Cause and then, where Cause as well):

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Other Outside Force Damage – Sub-Cause:	
- If Nearby Industrial, Man-made, or Other Fire/Explosion as Primary	Cause of Incident:
- If Damage by Car. Truck, or Other Motorized Vehicle/Equipment NO	T Engaged in Excavation
1. Vehicle/Equipment operated by:	
- If Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equips Their Mooring:	ment or Vessels Set Adrift or Which Have Otherwise Lost
 Select one or more of the following IF an extreme weather event was a - Hurricane 	a factor:
- Tropical Storm	
- Tornado	
- Heavy Rains/Flood	
- Other Describe:	
- If Routine or Normal Fishing or Other Maritime Activity NOT Engage	ed in Excavation:
- If Electrical Arcing from Other Equipment or Facility:	
- If Previous Mechanical Damage NOT Related to Excavation:	
Complete Questions 3-7 ONLY IF the "Item Involved in Accident" (fro	om PART C. Question 3) is Pipe or Weld.
3. Has one or more internal inspection tool collected data at the point of the Accident?	
3a. If Yes, for each tool used, select type of internal inspection tool and in	ndicate most recent year run:
- Magnetic Flux Leakage	
Most recent year conducted:	
- Otrasonic Most recent year conducted:	
- Geometry	
Most recent year conducted:	
- Caliper	
- Crack	
Most recent year conducted:	
- Hard Spot	
Most recent year conducted:	
- Combination ool	
- Transverse Field/Triaxial	
Most recent vear conducted:	
- Other	
Most recent year conducted:	
Describe:	
completed BEFORE the damage was sustained?	
5. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?	
- If Yes:	
Most recent year tested:	
6. Has one or more Direct Assessment been conducted on the pipeline	
segment?	
- If Yes, and an investigative dig was conducted at the point of the Accident	
If Yes, but the point of the Accident was not identified as a dig site:	
Most recent year conducted:	
7. Has one or more non-destructive examination been conducted at the	
point of the Accident since January 1, 2002? 7a. If Yes, for each examination conducted since January 1, 2002, s	select type of non-destructive examination and indicate most
recent year the examination was conducted:	
Most recent year conducted:	
- Guided Wave Ultrasonic	
Most recent year conducted:	
- Handneid Uitrasonic 1 ool Most recent year conducted:	
- Wet Magnetic Particle Test	
Most recent year conducted:	
- Dry Magnetic Particle Test	
Iviost recent year conducted:	

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- Other	
Most recent year conducted:	
Describe:	
- If Intentional Damage:	
8. Specify:	n fenn hlefti felden in den henden den der der Seiter auf der Berneten der einen der einen der einen der einen s
- If Other, Describe:	
- If Other Outside Force Damage:	
9. Describe:	
G5 - Material Failure of Pipe or Weld - only one sub-cause can be	selected from the shaded left-hand column
Use this section to report material failures ONLY IF the "Item Involve "Weld."	d in Accident" (from PART C, Question 3) is "Pipe" or
Material Failure of Pipe or Weld – Sub-Cause:	
1. The sub-cause selected below is based on the following: (select all the	at apply)
- Field Examination	
- Determined by Metallurgical Analysis	
- Other Analysis	
- If "Other Analysis", Describe:	
 Sub-cause is Tentative or Suspected; Still Under Investigation (Supplemental Report required) 	
- If Construction, Installation, or Fabrication-related:	hina and a second s
2. List contributing factors: (select all that apply)	
- Fatigue or Vibration-related	
Specify:	
- If Other. Describe:	
- Mechanical Stress:	
- Other	
- If Other, Describe:	
- If Original Manufacturing-related (NOT girth weld or other welds for	med in the field):
2. List contributing factors: (select all that apply)	
- Fatigue or Vibration-related:	
Specify:	
- If Other, Describe:	
- Mechanical Stress:	
- Other	
- If Other, Describe:	
If Environmental Cracking-related:	
3. Specify:	
- Other - Describe:	
Complete the following if any Material Failure of Pipe or Weld sub-cau	ise is selected.
4. Additional factors: (select all that apply):	
- Dent	
- Gouge	
- Pipe Bend	
- Arc Burn	
- Crack	
- Lack of Fusion	
- Lamination	
- Buckle	
- Wrinkle	
- Misalignment	
- Burnt Steel	
- Utter:	
- If Other, Describe:	
the Accident?	
5a. If Yes, for each tool used, select type of internal inspection tool a	and indicate most recent year run:
- Magnetic Flux Leakage	
Most recent year run:	
- Ultrasonic	
Most recent year run:	
- Geometry	
Most recent year run:	
- Caliper	
Most recent year run:	fi disante
- Crack	
Most recent year run:	

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Most recent year run:	
- Combination Tool	
Mast	
Most recent year run:	
- Transverse Field/Triaxial	and a second
Most recent year run:	
- Other	
Most recent year run:	
Describe	
6. Has one or more hydrotest or other pressure test been conducted since	
original construction at the point of the Accident?	
- If Yes:	
Most report uppr tested.	
wost recent year tested:	
l est pressure (psig):	
7. Has one or more Direct Assessment been conducted on the pipeline	
segment?	
 If Yes, and an investigative dig was conducted at the point of the Acc 	ident -
Most recent year conducted:	
- If Yes, but the point of the Accident was not identified as a dig site -	
Most recent year conducted:	
8. Has one or more non-destructive examination(s) been conducted at the	
point of the Accident since January 1, 2002?	
8a If Yes for each examination conducted since January 1 2002 s	elect type of non-destructive examination and indicate most
recent year the examination was conducted and build and 1, 2002, a	or the second of the examination and indicate most
- Radiography	
- readingraphy Most recent user and ust de	
Cuided Weve Literaceria	
- Guidea wave Ultrasonic	
Most recent year conducted:	
- Handheld Ultrasonic Tool	
Most recent year conducted:	
- Wet Magnetic Particle Test	
Most recent year conducted:	
- Dry Magnetic Particle Test	
Most recent year conducted:	
- Other	
Most recent year conducted:	
Describe:	
G6 - Equipment Failure - only one sub-cause can be selected from	
ee Equipinent i anare en jone sub-badas can be selected nom	he shaded left-hand column
A second s	the shaded left-hand column
Faulterarth Fallure - Rule Causes	he shaded left-hand column
Equipment Failure – Sub-Cause:	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment:	the shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) -	the shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve	the shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation	the shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA	the shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications	the shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve	the shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve	the shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Relief Valve	the shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Relief Valve - Relief Valve	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Power Failure - Other Litting	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Power Failure - Stopple/Control Fitting	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Relief Valve - Stopple/Control Fitting - ESD System Failure	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Power Failure - Stopple/Control Fitting - ESD System Failure - Other	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Relief Valve - Power Failure - Stopple/Control Fitting - ESD System Failure - Other - If Other – Describe:	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Relief Valve - Relief Valve - Stopple/Control Fitting - Stopple/Control Fitting - ESD System Failure - Other - If Other – Describe:	the shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Relief Valve - Power Failure - Stopple/Control Fitting - ESD System Failure - Other - If Other – Describe: - If Other – Describe:	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Relief Valve - Relief Valve - Stopple/Control Fitting - ESD System Failure - Other - If Other – Describe: - If Other – Describe:	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Relief Valve - Relief Valve - Power Failure - Stopple/Control Fitting - ESD System Failure - Other - If Other – Describe: - If Other – Describe:	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Power Failure - Stopple/Control Fitting - ESD System Failure - Other - If Other – Describe: - If Pump or Pump-related Equipment: 2. Specify: - If Other – Describe:	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Relief Valve - Power Failure - Stopple/Control Fitting - ESD System Failure - Other - If Other – Describe: - If Pump or Pump-related Equipment: 2. Specify: - If Other – Describe: - If Other – Describe:	
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Relief Valve - Power Failure - Stopple/Control Fitting - ESD System Failure - Other - If Other – Describe: - If Othe	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Relief Valve - Relief Valve - Power Failure - Stopple/Control Fitting - ESD System Failure - Other - If Other – Describe: - If Other – Describe:	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Relief Valve - Relief Valve - Stopple/Control Fitting - ESD System Failure - Other - If Other – Describe: - If Other – Describe:	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Relief Valve - Relief Valve - Relief Valve - Stopple/Control Fitting - ESD System Failure - Other - If Other – Describe: - If Other – Describe:	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Relief Valve - Power Failure - Stopple/Control Fitting - ESD System Failure - Other - If Other – Describe: - If Other – Describe:	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Power Failure - Stopple/Control Fitting - ESD System Failure - Other - If Other – Describe: - Other – Descri	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Relief Valve - Power Failure - Stopple/Control Fitting - ESD System Failure - Other - If Other – Describe: - Other - O	he shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Relief Valve - Power Failure - Stopple/Control Fitting - ESD System Failure - Other - If Other – Describe: - Other - If Other – Describe: - If Other – Describe: - Other - Describe: - Other - Oth	ine shaded left-hand column
Equipment Failure – Sub-Cause: - If Malfunction of Control/Relief Equipment: 1. Specify: (select all that apply) - - Control Valve - Instrumentation - SCADA - Communications - Block Valve - Check Valve - Check Valve - Relief Valve - Relief Valve - Power Failure - Stopple/Control Fitting - ESD System Failure - Other - If Other – Describe: - If Othe	he shaded left-hand column

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5. Describe:	
Complete the following if any Equipment Failure sub-cause is selected	d.
6. Additional factors that contributed to the equipment failure: (select all the	hat apply)
- Excessive vibration	
- Overpressurization	
- No support or loss of support	
- Manufacturing defect	
- Loss of electricity	
- Improper installation	
- Mismatched items (different manufacturer for tubing and tubing	
fittings)	
- Dissimilar metals	
- Breakdown of soft goods due to compatibility issues with	
transported commodity	
- Valve vault or valve can contributed to the release	
Alarm/atatus failure	
- Alami/status lahule	
- Misaighment	
- I nermai stress	
- Other	
- It Other, Describe:	
G7 - Incorrect Operation - only one sub-cause can be selected from	the shaded left-hand column
Incorrect Operation – Sub-Cause:	
Damage by Operator or Operator's Contractor NOT Related to	
Excavation and NOT due to Motorized Vehicle/Equipment Damage	No
Tank, Vessel, or Sump/Separator Allowed or Caused to Overfill or Overflow	No
1 Specify:	
r, opecity.	
- If Other, Describe:	
Valve Left or Placed in Wrong Position, but NOT Resulting in a Tank, Vessel, or Sump/Separator Overflow or Facility Overpressure	No
Pipeline or Equipment Overpressured	No
Equipment Not Installed Properly	No
Wrong Equipment Specified or Installed	No
Wong Equipment operation of mataneo	
Other Incorrect Operation	No
2. Describe:	
Complete the following if any incorrect Operation sub-cause is select	ed.
3. Was this Accident related to (select all that apply): -	1
- Inadequate procedure	
- No procedure established	
- Failure to follow procedure	
- Ullet.	
4. What category type was the activity that caused the Accident?	
5. Was the task(s) that led to the Accident identified as a covered task	
in your Operator Qualification Program?	
5a. If Yes, were the individuals performing the task(s) qualified for the task(s)?	
G8 - Other Accident Cause - only one sub-cause can be selected for	rom the shaded left-hand column
Other Accident Cause – Sub-Cause:	Miscellaneous
-If Miscellaneous:	and and a second sec
1. Describe:	Soil containing product ignited upon removal of the pipeline

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	segment within the ditch.	
- If Unknown:		
2. Specify:		

PART H - NARRATIVE DESCRIPTION OF THE ACCIDENT

On December 27, 2011, at approximately 9:30pm, Pipeline Control (PLC) made notification to Texas NGL personnel of a suspected leak on the Rio Grande Pipeline between Lawson Junction and Delaware Stations. PLC indicated the Supervisory Control and Data Acquisition (SCADA) system showed a large pressure loss on several pressure transmitters. The Rio Grande Pipeline which was carrying a propane/butane mix (approx. 90% propane/10% butane) was shutdown and isolated.

Field Operations personnel responded to the suspected line segment and confirmed a line failure at mile post 50.5 at approximately 3:00am December 28, 2011. The 8 inch propane/butane pipeline had a complete weld seam failure, resulting in release of propane/butane to the surrounding soil and atmosphere. The line segment was blocked in at valves located at mile posts 47.7 and mile post 58.8.

Field Operations secured the area, and began taking steps to clear and repair the line segment. The residual hydrocarbons were purged with Nitrogen from the upstream and downstream valve locations. The area was excavated with a back-hoe to expose enough pipe to facilitate the repair. After the line was confirmed to be free of hydrocarbons, onsite contractors (S&S Construction) proceeded to cold cut the East side of the line. The first cold cut was successful and approximately 20 feet of pipe was removed.

Two Enterprise employees and four contractors were in the trench working on various tasks, such as removing additional soil with shovels, taking measurements and evaluating the amount of additional pipe that needed to be removed from the west side of the weld failure.

At approximately 5:00pm on December 28, 2011, a flash fire occurred in the trench when a concentration of hydrocarbons exceeding the Lower Flammability Limit (LFL) for the hydrocarbon mixture was ignited. Four individuals were in the proximity of of the flash fire. One of those individuals required over night hospitalization.

PART I - PREPARER AND AUTHORIZED SIGNATURE

Preparer's Name	Joel E Kohler	
Preparer's Title	Sr. Staff Engineer	
Preparer's Telephone Number	7133814830	
Preparer's E-mail Address	jkohler@eprod.com	
Preparer's Facsimile Number	7133816660	
Authorized Signature's Name	Joel E Kohler	
Authorized Signature Title	Sr. Staff Engineer	
Authorized Signature Telephone Number	7133814830	
Authorized Signature Email	jkohler@eprod.com	
Date	03/21/2012	

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Appendix D

Incident Investigation Report

This document is on file at PHMSA